An Integrative Explanation Framework for the IntentionBehavior Gap in Green Consumption: Based on SOR Theory

Zhijun Liu [1], Xinhua Zhang [1], Huajing Liang [2]

[1] School of Economics and Management, Pu'er University, Pu'er 665000, China

[2] School of Economics and Management, Zhejiang Normal University, Jinhua 321004, China

Abstract. Against the backdrop of global dualcarbon goals and sustainable development strategies, green consumption has become a critical pathway to reduce resource waste, protect ecological environment, and promote the comprehensive green transformation of economy and society. However, the widespread intentionbehavior gap, namely "words over deeds", has become a prominent bottleneck restricting the popularization of green consumption. Existing studies have scattered identification of influencing factors, and lack a systematic integrative framework as well as a precise matching mechanism between causes and interventions. Based on the StimulusOrganismResponse (SOR) theory, this paper constructs an integrative explanation framework through systematic literature analysis. The results show that the intentionbehavior gap is jointly driven by external stimuli (product factors and environmental factors) and internal organismic factors (attitude, motivation, behavioral habit, and environmental sentiment). Correspondingly, three targeted intervention strategies are proposed: anthropomorphism, ecolabeling, and nudging. This study provides a unified analytical perspective for explaining the green consumption intentionbehavior gap, and offers actionable decision references for enterprises and government authorities.

Keywords: Green consumption; Intentionbehavior gap; SOR theory; Ecolabeling; Nudging strategy.

1. Introduction

With the deepening of global dualcarbon goals and sustainable development strategies, green consumption has evolved from a niche environmental initiative into a core driving force for economic and social green transformation. In China, a series of policy documents such as the Implementation Plan for Promoting Green Consumption have strongly boosted the green consumer market, with the scale of tradein of consumer goods exceeding 2.6 trillion yuan in 2025. Despite the rising public awareness of environmental protection and significantly enhanced green consumption intention, the proportion of consumers who consistently practice green consumption remains low [1-2]. The disconnection between intention and behavior, or "words over deeds", has become a realistic dilemma hindering the largescale popularization of green consumption [3].

Existing studies have explored multiple influencing factors of the intentionbehavior gap from perspectives such as product attributes, individual psychology and situational conditions, and have proposed intervention paths including economic incentives and information guidance [4-5]. However, two research gaps still exist: first, the classification of influencing factors is scattered, and there is a lack of a systematic integrative framework covering the whole chain of "external stimulusinternal processingbehavioral output"; second, the matching logic between intervention strategies and underlying causes is not clear, and localized studies adapted to China's consumer culture and market environment are insufficient [6].

To address the above issues, this paper takes SOR theory as the analytical framework, systematically sorts out and classifies the key causes of the green consumption intentionbehavior gap, and constructs an integrative explanation framework. On this basis, targeted intervention strategies are proposed corresponding to different types of influencing factors, so as to provide theoretical reference and practical guidance for bridging the intentionbehavior gap of green consumption [7].

2. Theoretical Basis and Research Methodology

2.1. Core Concept Definition

Green consumption in this paper covers the whole consumption process of green decision making, purchase, use and disposal, including not only the purchase of ecofriendly products, but also postpurchase behaviors such as product recycling and tradein, as well as daily environmental practices such as green travel, water and electricity conservation, and refusal of disposable products. The intention behavior gap refers to the phenomenon that consumers hold positive attitudes and high willingness towards green consumption, but fail to transform them into actual consumption behaviors, which is also described as "words over deeds" in this study [8].

2.2. SOR Theoretical Foundation

The StimulusOrganismResponse (SOR) theory was proposed by Woodworth in 1926, which improves the traditional StimulusResponse (SR) theory by introducing the internal organismic process. The core logic of SOR theory is that external environmental stimuli affect individual internal cognitive and emotional states, which in turn trigger specific behavioral responses. Among them, stimulus (S) refers to external input factors, organism (O) refers to individual internal psychological states, and response (R) refers to the final behavioral feedback [9].

In recent years, SOR theory has been widely used in consumer behavior research and has been recognized as a holistic framework with strong explanatory power in the field of green consumption. The formation mechanism of the green consumption intentionbehavior gap exactly conforms to the logic of "external stimulus → internal psychological processing → behavioral output deviation". Therefore, SOR theory provides a systematic theoretical perspective for this study to deconstruct the causes of the gap and construct an explanatory framework [10].

2.3. Research Methodology

This paper adopts systematic literature review methods. Literature sources include core databases such as Web of Science and CNKI, with the time range from 2015 to 2025. The search keywords include "green consumption", "intentionbehavior gap", "attitudebehavior gap", "SOR theory", "ecolabeling" and "nudging". After screening according to inclusion criteria such as journal quality and research relevance [11], 42 core literatures were finally obtained for coding and classification analysis. Based on the three dimensions of SOR theory [12], this paper inductively sorts out the influencing factors of green consumption intentionbehavior gaps and constructs an integrative explanation framework and matching intervention strategies.

3. Integrative Explanation Framework of IntentionBehavior Gap

Based on SOR theory, this paper constructs a threelayer integrative explanation framework for the green consumption intentionbehavior gap [13]. The external stimulus layer (S) is composed of product factors and environmental factors, which are the preconditions triggering the gap; the internal organism layer (O) includes individual attitude, motivation, behavioral habit and environmental sentiment, which is the core mediating mechanism; the behavioral response layer (R) presents the final result of intentionbehavior deviation [14]. The three layers form a complete logical chain of cause and effect.

3.1. External Stimulus Layer (S): External Barriers

External stimuli are the direct external triggers that hinder the transformation of green consumption intention into behavior, including productrelated stimuli and environmental stimuli.

3.1.1. Productrelated Stimuli

As the material carrier of green consumption, the attributes of green products themselves constitute the core external stimuli, which directly affects the conversion efficiency from intention to behavior.

Convenience: The inconvenience of green products in decisionmaking, use and disposal increases consumers' energy cost. For example, the lack of supporting facilities such as community garbage classification makes consumers abandon green choices even with positive intention.

Accessibility: Insufficient supply of green products, limited purchase channels and high search cost will significantly inhibit actual purchase behavior. In the intention formation stage, consumers rarely consider availability factors, resulting in a gap when implementing behaviors.

Quality perception: When consumers perceive that the functional quality of green products is inferior to nongreen alternatives, the predictive effect of intention on behavior will be greatly weakened. The immature green production technology also increases consumers' perceived functional risk [15].

Price premium: Green products generally have higher prices than nongreen products. For pricesensitive consumers, premium payment is a major obstacle, and many consumers only buy green products when there are discounts [16].

Brand ambiguity: The lack of differentiated brand strategies for green products makes it difficult for consumers to identify the differences between green and nongreen brands in environmental value and functions, which hinders the transformation of purchase intention.

3.1.2. Environmental Stimuli

Environmental factors shape consumers' willingness and behavior through external context constraints, including market environment and social environment.

Market environment: First, greenwashing is widespread. Enterprises' false green propaganda will reduce consumers' trust in green products and even generate general distrust of all green marketing. Second, information asymmetry exists. The environmental attributes of green products are highly hidden, and consumers have difficulty distinguishing the authenticity of green products, which easily leads to cognitive bias and trust crisis.

Social environment: On the one hand, social norms such as materialist consumption concepts and face culture weaken the motivation of green practice; on the other hand, subjective norms, namely individuals' perception of social pressure, also affect green decisions [17]. Negative voices from reference groups will make consumers more likely to give up buying green products.

3.2. Internal Organism Layer (O): Internal Mediating Mechanism

Under the action of external stimuli, individual psychological differences play a mediating role, which is the internal cause of the intentionbehavior gap.

3.2.1. Attitude

Positive attitude is not a sufficient condition for green consumption behavior. The effect of attitude on behavior is regulated by attitude strength, ambivalent attitude and the inconsistency between implicit and explicit attitudes [18]. Consumers with low attitude strength are more likely to have contradictory attitudes due to complex product information, which affects actual purchase. In addition, some consumers show preference for green products at the explicit level but turn to nongreen products at the implicit level.

3.2.2. Consumption Motivation

Green consumption motivation is divided into internal motivation and external motivation. Consumers driven by internal motivation can effectively transform intention into behavior; while those driven by external motivation (such as saving money, gaining praise) only show green behavior in specific situations [19]. Once the social situation changes, the behavior will be difficult to maintain, which essentially weakens the connection between environmental awareness and green consumption behavior.

3.2.3. Behavioral Habit

Habit interferes with the guiding effect of intention on behavior. When the habit is strong, the correlation between intention and behavior is low [20]. On the one hand, habitual behaviors do not depend on conscious intention guidance; on the other hand, longterm dependence on nongreen products and loyalty to nongreen brands will weaken the impact of green purchase intention on actual behavior.

.3.2.4. Environmental Sentiment

Both positive and negative environmental sentiments can affect green consumption, but there are also boundary conditions. Positive sentiment helps to enhance green consumption behavior, while negative sentiment such as ecological anxiety can also stimulate green purchase. However, excessive negative sentiment may lead to a sense of powerlessness about environmental issues, and eventually make consumers give up green consumption.

3.3. Behavioral Response Layer (R): IntentionBehavior Deviation

Under the joint action of external stimulus barriers and internal psychological mechanisms, consumers' actual green consumption behavior is significantly lower than their willingness level, forming the typical "words over deeds" phenomenon. This deviation is not caused by a single factor, but the result of the interaction of product attributes, market environment, social context and individual psychological characteristics.

4. Targeted Intervention Strategies

Corresponding to the three types of influencing factors in the SOR framework, this paper proposes three targeted intervention strategies: anthropomorphism strategy matching product factors, ecolabeling strategy matching environmental factors, and nudging strategy matching individual factors. The three strategies complement each other and form a synergistic intervention system.

4.1. Anthropomorphism Strategy: Matching Product Factors

Anthropomorphism refers to the tendency to endow nonhuman subjects with human characteristics, motivations and emotions. As a marketoriented intervention strategy, it can narrow the psychological distance between consumers and green products, and offset the disadvantages of green products in price, quality and brand.

Brand image anthropomorphism: Endowing green brands with personality characteristics can enhance consumers' brand identity. For practical green products, matching with competenceoriented anthropomorphism has the best effect; for hedonic green products, warmthoriented anthropomorphism can better improve consumers' green consumption intention.

Marketing communication anthropomorphism: Compared with imperative language, euphemistic anthropomorphic communication can effectively reduce consumers' psychological resistance and enhance their willingness to accept green consumption suggestions. In the digital age, training AI customer service with anthropomorphic communication style can also achieve similar effect to human customer service.

4.2. Ecolabeling Strategy: Matching Environmental Factors

Ecolabeling is an informationbased intervention strategy, which provides standardized environmental attribute information for consumers, alleviates information asymmetry and greenwashing, and optimizes the market environment of green consumption.

Improve public awareness of ecolabels: At present, the popularity of ecolabels in China is relatively low. Relevant departments should expand the publicity of ecolabels through media and school education, and enterprises should strengthen the training of sales personnel, so as to improve consumers' cognitive participation in ecolabel certification.

Enhance the credibility of certification: The government should improve ecolabel certification standards covering the whole life cycle of products and conduct regular sampling and public supervision of certified products. For consumers with high doubt, thirdparty industry certification can play a greater role.

Optimize label design: Appropriately increase the size of ecolabels and adopt green tone to enhance visual visibility; simplify the information content of labels, and adopt singlelevel labels instead of complex multilevel labels, so as to reduce consumers' identification cost.

4.3. Nudging Strategy: Matching Individual Factors

Nudging strategy guides individuals to make expected decisions by designing choice architecture skillfully, without depriving individuals of free choice. It reduces the decisionmaking cost and implementation threshold of green consumption and breaks through the psychological and habitual obstacles at the individual level.

Default option setting: Setting green options as defaults by using consumers' inertial psychology can effectively guide green behavior. For example, setting doublesided printing as the default for printers and renewable energy as the default for power supply can significantly improve the proportion of green choices.

Information framing presentation: Lossframed information is more effective in stimulating green consumption intention than gainframed information, because it makes consumers perceive that environmental deterioration is the direct result of not practicing green consumption. For pricesensitive consumers, promotion information framing can also promote green purchase.

Social norm utilization: The practice of environmental behavior of reference groups will drive individuals to act in a similar way. The government can build green consumption communities to cultivate a good social atmosphere; public figures can also play an exemplary role in driving green consumption.

Feedback mechanism reminder: Positive feedback mechanism helps people break through consumption inertia. For example, gamified experiences such as Ant Forest enhance consumers' perception of the effect of their own behavior through carbon emission reduction feedback, and gradually cultivate green consumption habits.

5. Discussion

5.1. Theoretical Contributions

This study makes two main theoretical contributions:

First, based on SOR theory, this paper constructs a wholechain integrative explanation framework of "external stimulusinternal organismbehavioral response", which systematically classifies the scattered influencing factors in existing studies, and provides a unified analytical perspective for explaining the green consumption intentionbehavior gap.

Second, this paper establishes a precise matching relationship between causes and intervention strategies: anthropomorphism corresponds to product factors, ecolabeling corresponds to environmental factors, and nudging corresponds to individual factors, which makes up for the deficiency of unclear intervention logic in existing studies.

5.2. Practical Implications

For enterprises, they can combine anthropomorphic marketing and ecolabeling strategies to enhance consumers' emotional identity with green brands and reduce their information identification cost, so as to promote the transformation of purchase intention.

For government authorities, on the one hand, they should improve the ecolabel certification system and strengthen market supervision to curb greenwashing; on the other hand, they can widely use nudging policies such as default green options and carbon feedback mechanisms to reduce the threshold of public green consumption behavior.

5.3. Limitations and Future Research

This study still has some limitations: first, it is a theoretical framework construction based on literature review, which needs to be further verified by largescale empirical data; second, it does not distinguish the differences of intentionbehavior gap among different types of green products.

Future research can be carried out from the following aspects: first, conduct empirical research based on consumer survey data to test the effectiveness of the framework; second, explore crosscultural differences in the intentionbehavior gap; third, study the combined effect and dynamic adjustment of multiple intervention strategies.

6. Conclusion

Focusing on the intentionbehavior gap in green consumption, this paper takes SOR theory as the analytical framework and divides the influencing factors into three categories: product factors and environmental factors at the external stimulus level, and individual differences at the internal organism level. On this basis, three targeted intervention strategies, namely anthropomorphism, ecolabeling and nudging, are proposed, forming an integrative explanation framework covering "cause analysismechanism interpretationintervention response". The findings not only enrich theoretical research on green consumption behavior but also provide practical reference for enterprises and governments to promote the popularization of green consumption.

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