

## A review of green consumption research

Meng Liu<sup>1, a,\*</sup>, Yan Du<sup>2, b</sup>

<sup>1</sup>School of Economics and management, Southwest Petroleum University, Chengdu 610000, China

<sup>2</sup>School of Economics and management, Southwest Petroleum University, Chengdu 610000, China

<sup>a</sup>2992250528@qq.com, <sup>b</sup>1228426407@qq.com

### Abstract

Consumers are the key participants in environmental protection actions, and green consumption is the concrete practice of environmental protection concept in daily life consumption. Although there is no lack of attention and discussion on green consumption in the academic circle, systematic summary and analysis are rare. This paper fills this gap. By reviewing the basic concept and core essence of green consumption, this paper systematically sorts out three aspects, including the green consumption characteristics of consumers, the factors affecting green consumption decision-making, and the reasons leading to the deviation between consumers' environmental protection attitude and actual purchase behavior. Finally, the paper points out the limitations of existing research and looks forward to the potential direction of green consumption research in the future.

### Keywords

Green consumption, sustainable consumption, environmental protection.

### 1. Introduction

In today's society, environmental problems are becoming more and more serious, and resources are becoming increasingly scarce. Green consumption has become a new trend leading the future trend of life. It is not only a choice of consumer behavior, but also a responsible attitude towards life on the earth, reflecting the wisdom and pursuit of harmonious coexistence between human and nature. Green consumption is to give priority to its impact on the environment when purchasing products and services, and choose products that are environmentally friendly, renewable and low-carbon emissions, so as to reduce the consumption of natural resources and environmental pollution. The rise of this concept is an inevitable product of the development of the times. With the advancement of science and technology and the awakening of global environmental awareness, people are beginning to realize that traditional consumption patterns are unsustainable and must seek a sustainable development path. Green consumption encourages consumers to promote the transformation of production mode and promote the transformation of industrial structure to green and low carbon through rational and environmentally friendly choices while meeting the needs of life. At present, although many studies have focused on green consumption, there is still a lack of systematic summary and combining of green consumption research. Therefore, this paper reviews the research on green consumption, aiming to provide new insights for future research.

## 2. Concept of green consumption

Green consumption can be understood as the degree to which consumers consider the environmental impact of their own behavior when purchasing, using or disposing of products, minimize the negative impact on the environment, and increase the positive impact on the environment. The main difference between green consumption and traditional consumption is that it upholds the principle of altruism and emphasizes a long-term perspective : altruism encourages individuals to contribute to the well-being of the natural ecological environment and society while pursuing personal well-being ; the long-term orientation emphasizes the balance between short-sighted interests and long-term effects when using natural resources, and is willing to take actions to protect the environment and reserve space for sustainable development for future generations.

Early green consumption research mainly focused on the characteristics of green consumers, including demographic characteristics, values, compassion ,gender characteristics<sup>[1]</sup>etc. High-income, high-education and young groups have higher participation in low-carbon consumption, and middle-income groups account for the largest proportion of green commodity purchases <sup>[2],[3]</sup> ; consumers with independent egos prefer green advertising with egoistic appeals, while consumers with dependent egos prefer green advertising with altruistic appeals <sup>[4]</sup> ; feminine traits positively promote green consumption behavior. On the contrary, masculine traits have an inhibitory effect. The green consumption tendency from high to low is feminine consumers, androgynous consumers, and masculine consumers.

With the development of time, the factors that promote or hinder green consumption have gradually attracted the continuous attention of scholars.

## 3. Influencing factors of green consumption

### 3.1. Personal factors

For example, environmental cognition has a positive impact on green consumption behavior, and its impact on green consumption shows regional heterogeneity <sup>[5]</sup>. In addition, consumers ' self-concept, beliefs and attitudes and compensatory psychological level<sup>[8]</sup>will have an impact on green consumption behavior. Consumers with a high level of compensatory psychology prefer green products with a good brand green image, and their willingness to purchase green products is stronger.

### 3.2. Social factors

Social norms<sup>[7]</sup> and social crowding<sup>[8]</sup> will affect green consumption intention through different mechanisms. Social norms can be divided into descriptive norms, dynamic descriptive norms and imperative norms. These three types of social norms have a significant role in promoting green consumption. Social crowding can be divided into out-group crowding and in-group crowding. In the context of out-group crowding, green advertising with specific appeals enables consumers to show more positive purchase intention ; in the context of crowded out-group, abstract appeals make consumers show more positive purchase intention.

### 3.3. Commercial marketing factors

Including advertising types<sup>[31]</sup>, green product development and design, brand strategy<sup>[1]</sup> and other marketing methods can effectively stimulate or guide consumers ' green consumption tendency. For example, when green advertising conveys personal interests, the use of ability information can trigger consumers ' more positive green purchase intention. Similarly, when the promotion of green products highlights the welfare improvement of others and the environment, starting the concept of individual time resources is more conducive to enhancing consumers ' willingness to purchase green products. When green product promotion

emphasizes information that is more conducive to consumers themselves and their families, initiating the concept of individual money resources can more effectively promote green consumption<sup>[31]</sup>. In addition, for practical green products, ability-based personification can stimulate consumers' green consumption willingness; for hedonic green product products, warm personification can stimulate consumers' willingness to consume green products. These research conclusions can help enterprises better promote their products.

### 3.4. Macro factors

These include government intervention, environmental threats<sup>[12]</sup>, etc. The government can directly or indirectly affect consumers' choice by setting carbon tax, providing green product subsidies, implementing energy efficiency labeling system, etc. When there are natural disaster threats such as extreme weather and earthquake disasters, consumers will have a certain sense of guilt and awe, thus promoting the willingness to buy green products. In addition, economic factors will also have a certain impact on green purchase behavior<sup>[13]</sup>.

### 3.5. Digital media

With the development of the Internet, some scholars have begun to pay attention to the impact of online social platforms and games on green consumption and the mechanism behind it. However, the impact of gamification design on green consumption is still inconclusive. Wang Jianming et al<sup>[14]</sup> found that green interaction on social platforms promotes consumers' participation in sharing green consumption. Among them, natural empathy is a key mediator, while natural connection positively regulates this process. Similar conclusions are also drawn that the continuous use of ant forests by users will significantly promote their offline green consumption<sup>[15]</sup>; gamification affordance has a significant positive impact on identity; identity can positively affect the willingness to continue to use, and then positively affect green consumption behavior<sup>[16]</sup>; however, some scholars have reached the opposite conclusion. Tong Zelin et al<sup>[17]</sup> found that gamification design in green consumption behavior will reduce consumers' subsequent green consumption behavior tendency. The mechanism is that the green consumption behavior stimulated by the current gamification design reduces consumers' perception of green goal commitment, thereby reducing the subsequent green consumption behavior tendency.

In addition, positive online word-of-mouth, intergenerational inheritance<sup>[18]</sup>, residents' environmental sensitivity<sup>[19]</sup>, and built environment<sup>[20]</sup> have a significant impact on green consumption intentions. Among them, the impact of the built environment on green consumption willingness is heterogeneous. Living facilities positively affect green consumption willingness, while leisure facilities negatively affect green consumption willingness.

## 4. Psychological mechanism of green consumption

With the increasing diversification and complexity of green consumption practices around the world, the academic community has increasingly focused on analyzing its deep psychological motivations. Some mainstream theoretical frameworks, such as rational behavior theory, planned behavior theory and value-belief-norm theory, have become key tools for analyzing the driving mechanism of green consumption behavior.

### 4.1. Rational behavior theory

This theory holds that people's behavior is based on a rational assessment of the results of behavior. In the context of green consumption, consumers will weigh the environmental benefits (such as reducing pollution, protecting natural resources) and personal costs (such as price, convenience) when deciding whether to buy green products. If they think the environmental benefits outweigh the additional costs, they are more likely to make green

choices. Lu Hongliang and Xie Huan<sup>[21]</sup> found that perceived behavioral control and green purchase implementation intention have a dual mediating effect between green purchase intention and behavior. In addition, the study points out that saving cognitive effort has a negative moderating effect on this chain mediating process, which means that when consumers try to reduce the cognitive burden in the process of thinking, they may weaken the transformation from intention to behavior.

#### **4.2. The Theory of Planned Behavior**

This theory emphasizes the influence of attitude, subjective norm ( perceived social pressure ) and perceived behavioral control ( individual 's confidence in their ability to perform a certain behavior ) on behavioral intention. In green consumption, positive environmental attitudes, environmental expectations from peers and society, and personal confidence in the ability to implement green behavior all strongly affect green consumption intentions and actual behaviors. For example, Xu Jiaqi et al. <sup>[22]</sup> found that individual recycling efforts have a positive spillover effect on green product purchase intention through mediating variables pride and environmental self-identity; the moderating effect of recycling cost is negative and only has an effect on pride.

#### **4.3. Value-belief-norm theory**

This theory illustrates how personal values are transformed into specific normative behaviors through beliefs. For green consumption, the individual 's ecological center values promote the formation of beliefs about the importance of environmental protection. These beliefs further form the norms that individuals should bear the responsibility of environmental protection and drive green consumption behavior.

#### **4.4. Emotion and motivation**

Emotional factors, such as empathy for nature, guilt or expected guilt, are powerful driving forces. Guilt may be derived from past non-green behaviors, prompting individuals to take compensatory green actions. For example, Liu Zhichao and Chen Yiyang<sup>[23]</sup> found that in the context of moral disorder, consumers ' preference for green products increased significantly, and guilt played a key mediating role in this process. Moral disengagement played a significant moderating role in this mediating relationship. And the mediating effect only has a greater effect on subjects with low moral disengagement, and the effect of subjects with high moral disengagement is not obvious.

#### **4.5. Self-concept and personality traits**

Dependent self-type consumers may be more inclined to maintain interpersonal relationships and social harmony through green consumption, while independent self-type consumers may be less affected by others, in which face consciousness plays a mediating role between dependent self-type consumers and green product purchase intention<sup>[24]</sup>. In addition, individuals with high environmental self-efficacy ( that is, they believe they can effectively participate in environmental activities ) are more likely to have green consumption behavior. Consumers ' proactive personality has a significant positive impact on the purchase intention of green products, and environmental self-efficacy plays a partial mediating role. The green brand image of the product moderates the relationship between environmental self-efficacy and green product purchase intention, and further moderates the mediating role of environmental self-efficacy<sup>[25]</sup>.

#### **4.6. Situational factors and default options**

The external environment, including policies, marketing strategies ( such as default green options ) and social pressure, can significantly affect green consumption decisions. For example, some studies have found that the default green consumption option set by the hotel has

effectively promoted the customer 's environmental consumption tendency, especially when the default state is to withdraw actively rather than join, the boosting effect is more significant. In this process, customers ' guilt about not taking green action plays an intermediary role, which enhances the influence of default options, and the individual 's emphasis on environmental values moderates this path<sup>[26]</sup>. Green consumption intention is also affected by community greening and social pressure, and subjective norms partially mediate the relationship between the two. Values influence and regulate this process : self-interested values play a negative regulatory role between community environment and subjective norms, while altruistic and ecological values play a positive regulatory role<sup>[27]</sup>.

## 5. Green consumption attitude and behavior are inconsistent

In recent years, with the deepening of scholars ' research on green consumption behavior, the research from the perspective of ethics and responsibility appeals has highlighted the social value of green consumption, including social responsibility, moral identity, attitude and behavior contradiction <sup>[28]</sup>and other aspects. The research further emphasizes the importance of exploring green consumption behavior from the perspective of ethics and morality.

There are many reasons for the inconsistency between consumers ' green consumption attitudes and behaviors, including the inaction of green consumption caused by individuals ' preference to buy green products in the future rather than now <sup>[29]</sup>and behavioral costs<sup>[30]</sup>. In addition, resource scarcity will also significantly reduce consumers ' willingness to purchase green products, and the above effects are only significant when consumers have lower economic mobility perceptions. When consumers perceive a higher level of economic mobility, the negative impact of resource scarcity on consumers ' willingness to purchase green products will be effectively alleviated<sup>[31]</sup>.

## 6. Conclusion and prospect

Green consumption, as a way of shopping that focuses on environmental impact, emphasizes reducing the negative impact on the environment and promoting ecological protection. It transcends the traditional consumption pattern and is embodied in altruism and long-term perspective, aiming to balance the long-term needs of immediate interests and environmental protection. This paper reviews the various influencing factors of green consumption and the psychological mechanism behind it. At the same time, although the attitude of green consumption is generally positive, the actual behavior is not always consistent with it, which is affected by factors such as time preference, cost considerations and resource perception.

There are gaps in the current research field, which provides a broad space for subsequent exploration. First of all, the analysis of the influencing factors of green consumption is not comprehensive enough, ignoring some key variables, such as the role of psychological level and specific situation. There are still a lot of potential factors waiting to be explored in these fields.

Secondly, previous studies tend to focus on the prerequisites of green consumption, while ignoring the chain reaction after consumer behavior. In view of the fact that individual decision-making is deeply influenced by historical behavior patterns, understanding how the purchase of green products is fed back into consumers ' subsequent purchase decisions has become an urgent knowledge gap to be filled. Future research can go further in this direction.

In addition, it is still a major challenge to deeply analyze the internal incentive mechanism of green consumption, and to promote the extensive cultivation and deepening of green consumption habits through comprehensive strategies such as policy advocacy, market stimulation and cultural atmosphere construction. At the same time, with the rapid development of science and technology, especially in the context of the vigorous development



of digital and intelligent technology, how to make good use of these emerging technologies to accelerate the promotion of green consumption and the exploration of innovative models will be an important issue in the future academic and practical fields.

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