

# The Impact Mechanism and Strategy Analysis of Green Consumption Behavior of Chinese Residents under the Dual Carbon Target

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## ABSTRACT

Consumption is the terminal of carbon emissions, and achieving the "dual carbon" goal cannot be achieved without the joint efforts of consumers. In the context of actively promoting energy conservation, environmental protection, green and low-carbon sustainable development in the whole society, green development is one of the five development concepts in China. Promoting green economic development and improving residents' green consumption level are of utmost importance. How residents, as consumers, can improve their level of green consumption is an urgent issue that needs to be addressed. This article is based on the theory of planned behavior and embeds an analysis of behavioral externalities. It elaborates on the path that residents form green consumption intentions driven by their consumption attitudes, subjective factors, and behavioral control factors, and explains the mechanism by which consumption intentions promote consumption behavior. Finally, policy recommendations are proposed to enhance the green consumption level of Chinese residents, promote green consumption behavior among residents, leverage the protective role of laws and regulations, and enhance the supply of green consumer goods by enterprises, in order to achieve sustainable economic development from the perspective of the "dual carbon" goal.

## KEYWORDS

Dual carbon; Resident consumption; Green consumption.

## 1. INTRODUCTION

Striving to achieve carbon peak by 2030 and carbon neutrality by 2060, the "dual carbon" goal is China's commitment to the world and also demonstrates China's determination to develop a low-carbon and green economy. Improving residents' green consumption level is an indispensable part of achieving the "dual carbon" goal. Under the constraints of environmental resources and the "dual carbon" target, how to improve the consumption level of residents and promote sustainable economic development is a problem that China must solve in the new era, and improving the green consumption level of residents is one of the ways to solve the above problems. Therefore, from the perspective of planned behavior theory, this article analyzes the behavioral motivations of green consumption among Chinese residents, and based on the analysis of the driving mechanism of green consumption, proposes behavioral strategies to promote green consumption among residents, in order to achieve the integrated development of resident consumption and green.

Regarding the research on green consumption behavior, most existing literature uses questionnaire surveys and empirical research methods to analyze the factors that affect residents' green consumption. Du Xin's (2020) empirical analysis found that consumer innovation affects residents' green consumption behavior, and consumer attitudes towards green consumption, subjective norms, and

intuitive control of consumption are intermediate variables between the two. Pan Ya (2019) believes that the moral norms, subjective tendencies, information promotion, and green cognition of green consumption are subjective factors that affect consumer green consumption behavior, and has established theoretical mechanisms and channels. Ji Junrong (2019) believes that consumer values have a significant impact and dominance on consumer motivation and behavior, and environmental attitudes have a positive promoting effect on consumer behavior. Zheng Jingling and Xu Bingquan (2020) pointed out that green development is a development model that integrates ecological civilization construction and socio-economic construction. Under the concept of green development, green consumption in China has become a new consumption concept, profoundly affecting the transformation of consumption patterns. Jin Yu (2021) analyzed the development of green consumption in the Yangtze River Delta region from the supply side and found that there is an upward trend in the coordinated development of green production and green consumption, but the development level is relatively low, and the level of green consumption lags behind that of green production.

In summary, China's green consumption behavior is influenced by various factors such as green consumption attitudes, subjective norms, consumption values, green production, and ecological civilization construction, and most of these influencing factors have been empirically tested. However, existing literature mostly overlooks the externalities of behavior, that is, changes in the behavior of others and the external environment often also affect individual behavior decisions. Therefore, based on the theory of planned behavior, this article embeds externality analysis and uses normative analysis to study the factors and externalities that affect residents' green consumption. Finally, based on theoretical mechanism research, strategies are proposed to promote green consumption behavior among Chinese residents, in order to improve their green consumption level, achieve the "dual carbon" development goal, and promote sustainable economic development.

## **2. ANALYSIS OF GREEN CONSUMPTION ISSUES AMONG CHINESE RESIDENTS**

This article attempts to analyze the problems of green consumption among Chinese residents from the perspectives of green travel, green consumption awareness, supply of green consumer goods, and market mechanism of green consumer goods.

### **2.1. Weak awareness of green consumption and serious extravagance and waste**

The current awareness of green consumption among residents is not high, and many residents have a habit of extravagance and waste. On the one hand, constrained by China's bad habits, most of the residents have the habit of holding wedding banquet, birthday banquet and college entrance banquet. The concept of big event is still rooted in the minds of the residents. For the sake of the so-called face, they think that Clean Your Plate Campaign at the banquet is an unseemly practice, and 30% -50% of the food will be wasted at many banquets, which is completely contrary to the concept of thrift and thrift of green consumption. On the other hand, the trend of comparison among young people is prevalent, and young girls will buy a large number of clothes, even wearing different clothes every day. Many clothes will no longer be worn after being worn once, leading to serious resource waste and weak awareness of green consumption.

### **2.2. Insufficient supply of green consumer goods and high prices**

The supply of green consumer goods should not only focus on the hard standards of green product production, but also on soft standards such as green logistics, green supply chain, and green electricity. Firstly, due to the relatively late development of green consumption, there are still technical barriers in the production of green consumer goods in China, and there has not been a mass production of

green consumer goods, resulting in high production costs and reduced purchasing willingness of residents. Secondly, there are obstacles in the development of green circulation in China, such as insufficient information sharing between upstream and downstream enterprises in the supply chain, which reduces the utilization rate of circulation resources and does not conform to the concept of green consumption development.

### **2.3. The scale of the green consumer goods market is small, and the market mechanism is not sound**

The 2019 Green Consumption Trend Development Report released by JD.com shows that there were over 100 million types of green consumer goods in China in 2019, and certain achievements have been made in the variety of green consumer goods. However, China has not yet formed a unified market for green consumer goods, and green consumption is still mixed with traditional consumption markets, which will inhibit the development of green consumption. At the same time, the development of green consumption in our country is also constrained by market systems. The government's compensation mechanism for green consumption is not perfect enough, and the incentive effect of institutional mechanisms on green consumption is not strong. The system has not played a role in promoting and ensuring green consumption, and cannot promote sustainable economic development. In summary, with the continuous improvement of environmental literacy among Chinese residents and the implementation of environmental protection concepts, the level of green consumption among Chinese residents is constantly increasing, reducing the emission of pollutants from the consumer end. However, there is still a weak awareness of green consumption among Chinese residents, and there is a serious phenomenon of extravagance and waste; Insufficient supply of green consumer goods and high prices; The market for green consumer goods is small in scale and lacks sound market mechanisms.

## **3. ANALYSIS OF THE MECHANISM OF GREEN CONSUMPTION BEHAVIOR AMONG RESIDENTS FROM THE PERSPECTIVE OF "DUAL CARBON" GOALS**

The green consumption behavior of residents is not only determined by their own attitudes, subjective norms, control factors, and behavioral intentions, but also influenced by externalities. This article is based on the planned behavior theory in Figure 1, embeds the externalities of behavior, analyzes the subjective factors of green consumption among residents, and uses normative analysis methods to analyze the formation motivation of green consumption behavior among residents, providing a theoretical basis for improving the level of green consumption among residents.

### **3.1. Beliefs in green consumption behavior influence residents' green consumption intentions**

The belief in green consumption behavior includes residents' understanding of the results of green consumption behavior and their estimation of the value of green consumption. Firstly, residents should have a correct understanding of the results of green consumption behavior and understand the functions of green consumption in promoting energy conservation, emission reduction, and environmental protection. Secondly, residents should have a correct understanding of the value of green consumption, understand the concept of "green mountains and clear waters are like mountains of gold and silver", correctly evaluate the impact of green consumption on sustainable economic development, and form a behavioral attitude towards green consumption. People's attitudes towards specific behaviors can affect their behavioral intentions. The more positive a consumer's attitude towards green consumption, the stronger their intention to execute green consumption behavior. The belief in green consumption behavior is the consumer's perception of the feasibility and effectiveness

of green consumption behavior, as well as the motivation for green consumption, which can well reflect the evaluation of green consumption behavior by residents. A strong belief in green consumption behavior means that consumers recognize the significant importance of green consumption in protecting the environment and promoting sustainable social development. As a result, consumer green consumption behavior can generate externalities, prompting society and the government to vigorously promote green consumption, forming a nationwide green consumption trend. At the same time, it forces government departments to establish a green consumer goods market, improve the construction of the green consumption market system and mechanism, and thereby enhance residents' green consumption intentions.

### **3.2. Subjective norms of green consumption affect residents' intention to consume green**

Subjective norms refer to the amount of pressure an individual experiences due to the influence of their surrounding environment, and are the result of their tendency to conform to subjective norms and beliefs. On the one hand, the clearer the consumer's understanding of the normative beliefs of green consumption behavior, the greater the pressure of social green consumption, and the stronger the subjective norms of consuming green products. On the other hand, consumers have a higher recognition of other consumers' green consumption behavior, that is, they have a high sense of identification with social green consumption behavior and are willing to take consistent action with green consumers, thereby improving the subjective norms of consumer green consumption.

Organizational atmosphere perception is the collective perception of organizational practices and behaviors by organizational members, which reflects their group preferences and creates an invisible pressure on team members, affecting their behavior and motivation. On the one hand, when the depletion of social environment and resources begins to affect the production and life of residents, environmental protection issues will exert pressure on the internal organization, forcing the emergence of green production and consumption behavior, enhancing the subjective normative willingness of residents to green consumption, thereby increasing their green consumption intention, promoting green consumption, improving environmental quality, improving the living environment of residents, and enhancing their comfort in life. Encourage residents to continue increasing their willingness to consume green, forming a spiral trend of environmental protection and green consumption. On the other hand, when traditional consumption accelerates resource consumption and resource utilization continues to decline, it will increase resource scarcity, leading to a continuous increase in resource prices and increasing consumer costs for residents.

### **3.3. Control factors of green consumption behavior change green consumption intention**

People's behavioral intentions are not only influenced by individual subjects, but also by behavioral control factors. Firstly, the smaller the perceived barriers to green consumption by consumers, the stronger their intention to consume green. For example, the development of e-commerce has reduced the obstacles to green consumption among residents. According to the 2019 Green Consumption Trend Development Report, there are over 100 million types of green consumer goods in China, and the sales volume has increased by 18% compared to the entire JD website. This means that the development of sales technology has increased the willingness of residents to take action in green consumption. Secondly, consumers perceive that their green consumption ability is stronger, that is, they have income, concepts, and technologies that match green consumption, and are more likely to measure the intrinsic value of green consumption, thereby exercising the right to green consumption. Behavioral control factors refer to the impact of the environment on residents' green consumption behavior. When residents perceive that green consumption behavior is more likely to occur and their cost of green consumption behavior is lower, their intention to consume green will be stronger.

When the control factors in this region promote green consumption among residents and improve the quality of economic development, the policies promoting green consumption in this region will play an externality role, spill over to other regions, and provide policy measures to promote green consumption development to government departments in other regions, thereby promoting other regions to leverage their latecomer advantages, improve the national level of green consumption among residents, and promote sustainable economic development.

### **3.4. The impact of green consumption intention on residents' green consumption behavior**

Behavioral intention, as a decision before a specific behavior is executed, is a tendency to take a certain behavior, that is, the attitude of residents towards a specific behavior will determine a behavioral intention. Green consumption behavior is a rational and limited behavior, and the stronger the consumer's green consumption attitude, the stronger the intention to execute green consumption behavior. When residents have the intention of green consumption, they will actively pay attention to the results of green consumption. When they discover that green consumption can bring positive results to society and trust this result, they are more likely to turn green consumption intention into green consumption behavior. Green consumption behavior also has externalities. On the one hand, when residents increase their level of green consumption, improve the environment, and achieve positive results in green consumption behavior, it can change their subjective norms, form a certain demonstration effect, guide other residents to change their consumption methods, and improve the green consumption level of residents in the whole country. On the other hand, green consumption behavior will increase the social value of residents. Green consumer goods buyers who practice the purchasing concept of green consumption development will gain social image value and ecological environment protection value in interpersonal communication, thereby improving consumer satisfaction and driving other consumers to implement green consumption behavior.

## **4. STRATEGIC ANALYSIS OF ENHANCING RESIDENTS' GREEN CONSUMPTION BEHAVIOR FROM THE PERSPECTIVE OF "DUAL CARBON"**

### **4.1. Strengthen the promotion of green consumption and cultivate the concept of green consumption among residents**

Cultivating the concept of green consumption among residents focuses on guiding them to form correct consumption concepts and enabling them to have a correct understanding of the results of consumption. On the one hand, education on green consumption beliefs should be strengthened. Firstly, strengthen education on the basic national conditions of environmental resources, enable residents to deeply understand the scarcity of environmental resources, and vigorously promote the traditional virtues of diligence, thrift, and thrift of the Chinese nation. Carry out national green consumption education and improve residents' green consumption literacy. Secondly, to guide the correct consumption concept, we should start from a young age and integrate green and low-carbon living into all aspects of student life and learning. At the same time, green consumption should be an important content of student preschool education, ideological and political education, employee continuing education, and civil servant education. On the other hand, promoting the promotion of green consumption themes and deepening the belief in green consumption in people's hearts. Firstly, go deep into schools, communities, and various enterprises and institutions to promote the good virtues of energy conservation, emission reduction, and thrift, and improve residents' awareness of green consumption behavior. Secondly, organize activities to create green travel, green shopping malls, green scenic spots, energy-saving campuses, and energy-saving hospitals, and commend outstanding individuals in the activities, establishing typical representatives.

#### **4.2. Promote green consumption behavior among residents and guide them to establish reasonable subjective norms for green consumption**

Guiding residents to practice a green consumption lifestyle and consumption model can not only enhance their green consumption beliefs, but also leverage the externalities of personal behavior and improve their subjective norms of green consumption. Firstly, promote circular consumption, carry out zero abandonment activities for old clothes, and build a community recycling system for renewable resources; Advocate for picking up cloth bags again, lifting vegetable baskets again, reusing shopping bags multiple times, reducing the production and use of disposable products, and improving the green consumption level of residents. Secondly, we will vigorously develop shared consumption, orderly promote shared consumption systems such as online carpooling and free car rental, and create a green shared consumption model. At the same time, improve the public transportation environment for residents, optimizing bus routes, increasing the utilization rate of public transportation tools, and promoting green travel consumption among residents. Finally, government agencies should play a leading role in green consumption, promote green office, improve the utilization rate of office supplies assets, promote information system construction and data sharing, and promote paperless development of office work. At the same time, we will improve the construction of a green consumption system, leverage the measurement and supervision role of the system, promote government units to implement green consumption behavior, and guide residents to establish correct subjective consumption norms.

#### **4.3. Give full play to the protective role of laws and regulations, and improve the control factors of green consumption among residents**

The control factors of green consumption are the support for green consumption by residents. To improve the external environment of green consumption by residents, the role of institutions, laws, and policies should be played, and the economic and institutional constraints of green consumption should be removed to promote green consumption by residents. Firstly, establish a sound legal and regulatory system, accelerate the introduction of laws such as the Energy Conservation Law and the Circular Economy Law, study and formulate regulations on energy conservation, water use, and the use and utilization of disposable products, resolutely implement management measures such as excessive packaging of goods and the recycling of scrapped motor vehicles, clarify the responsibilities and obligations of enterprises, individuals, and governments for green consumption, and enhance the role of laws and regulations in ensuring green consumption. Secondly, establish an executable identification authentication measurement system. Implement certification management methods for energy-saving products, strictly follow the certification catalog to carry out certification collection work, and promote low-carbon and organic product certification. Promote environmental labeling certification, improve the labeling of green buildings, green materials, and green products, improve the evaluation system for green hotels, green hotels, and green tourism, and promote the development of green enterprises and industries. Then, improve the policies for the development of green economy, and provide tax incentives and exemptions to enterprises and projects that meet the development of green consumption, thereby improving the economic benefits of green consumption product production enterprises. For new energy enterprises, product pricing policies should be improved to reflect market supply and demand and environmental development needs. Finally, strengthen financial support and implement green consumption finance policies. Financial institutions should actively carry out green consumption credit business, reduce financing costs for green consumption enterprises, encourage the development of green consumption product production enterprises, reduce green consumption costs for residents, and promote green consumption among residents.

#### **4.4. Increase the supply of green consumer goods for enterprises and improve the conversion rate from green consumption intention to behavior**

The stronger the intention of green consumption, the higher the demand for green consumption products. Therefore, in order to increase the conversion rate from green consumption intention to behavior, it is necessary to increase the supply of green consumer goods and support green consumption behavior from both supply and demand sides. Firstly, implementing innovation driven strategies, entrepreneurial and entrepreneurial enterprises utilize innovative platforms to increase their efforts in product research and manufacturing, increase the effective supply of green products, and improve the resource and environmental benefits of green products. At the same time, accelerate the development of rail transit, improve the convenience of rail transit for residents' travel, reduce their preference for private car travel, and promote the development of shared transportation modes. Secondly, enterprises should optimize the production process of green consumer goods, reduce the production cost of green consumer goods, gain price advantages in the market, and thereby increase the supply of green consumer goods. Finally, vigorously developing e-commerce, the 2016 China Green Consumer Report shows that online retail has saved energy and material consumption, reducing carbon dioxide emissions by 30 million tons. Therefore, encourage the integration of physical enterprises and e-commerce enterprises to promote the sales and services of green products, reduce the waste of resources in the process of commodity sales, play the role of Internet plus+logistics in economies of scale, improve resource utilization, improve residents' sense of green acquisition, and urge residents to convert green consumption intentions into green consumption behaviors, so as to achieve low-carbon green economic development.

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