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Investigation into the Factors Affecting the Green Consumption Behavior of China Rural Residents in the Context of Dual Carbon

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Abstract: The achievement of the dual-carbon objective and China's green and sustainable development are both heavily reliant on green consumption. This research paper employs the Likert scale method to construct a questionnaire encompassing internal and external factors that influence green consumption behavior, as well as various types of consumption behavior. It then administers the questionnaire to 1004 rural residents residing in the eastern, central, western, and northeastern regions of China, with the objective of gathering pertinent data on green consumption behavior. Drawing from the aforementioned, structural equation modeling was employed to investigate the impact of three external factors—market incentives, social pressure, and information boost—and two internal factors—environmental awareness and psychological factors—on diverse forms of green consumption behavior. The objective was to identify the most influential factors of various green consumption behaviors to facilitate the effective promotion of green consumption. The research findings indicate that internal factors exert a more substantial influence on green consumption behaviors compared to external factors. Specifically, market incentives ranks highest among the external determinants of green consumption behavior, and environmental protection cognition rank highest among the internal determinants of green consumption behavior.

Keywords: dual carbon; Likert scale; green consumption behavior; rural residents; influencing factors; structural equation modeling

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1. Introduction

During the 1940s, Western nations witnessed the rise of green consumption, most notably the environmental protection movement and the green wave in Europe. During the 1980s, Shridhar Laval, an American scholar, argued that "the matter of consumption constitutes the fundamental cause of the environmental crisis, as the consequences of human influence on the biosphere are exerting strain on the environment and endangering its capacity to sustain life" [1]. From the late 20th to the early 21st centuries, the topic of green consumption evolved progressively from theory to practice, with the prevalence of relevant products increasing concurrently with the perfection of the pertinent theory [2]. The advancement of green consumption, which follows the path to sustainable development, is the current global and Chinese priority to reach the sustainable development objective by 2030 [3]. Since the turn of the 21st century, China has implemented a multitude of green consumption policies. The 17th Party Congress introduced perspectives on the establishment of an ecological civilization for the first time in 2007. These perspectives encompass energy, the environment, and other domains. In 2012, the 18th Party Congress incorporated the "construction of an ecological civilization" into the "five-in-one" policy, designating "beautiful China" as the overarching objective of ecological civilization construction. The 19th Party Congress proposed the development concepts "green water and green hills are golden mountains" and the notion of "harmonious coexistence between human beings and nature". In 2020, during the United Nations General Assembly, China vowed to the international community that China would work towards attaining carbon neutrality by

2060 and a carbon peak by 2030, this objective is also referred to as the 'dual-carbon' goal. The 20th Party Congress in 2022 underscored the need for China to expedite the transition to a green development mode while actively promoting a low-carbon and environmentally sustainable way of living among its populace.

As a result of the swift economic growth in China and the incremental rise in residential consumption, carbon emissions from residential activities have surpassed those from industrial production. Consequently, residential consumption has emerged as the primary driver of carbon dioxide emissions. Therefore, there is an urgent need to transition to green consumption practices [4–8]. Presently, China's economy is undergoing a critical period of structural transformation. Therefore, expanding domestic demand is a crucial task of the current economic effort. However, expanding domestic demand inadvertently results in an increase in carbon dioxide emissions [9]. Those who wish to achieve the dual-carbon goals face an enormous challenge, as they must contend with the dual pressures of economic development and emission reduction. Simultaneously, the population's consumption structure is shifting from fundamental material necessities including clothing, food, housing, transportation, and use, to high-quality material necessities and cultural requirements including health, going green, and environmental protection. Green consumption, as defined, pertains to a consumption pattern that endeavors to mitigate the adverse environmental effects associated with individual actions during product acquisition, utilization, and disposal [10]. It is a mode of sustainable consumption that, once consumers are cognizant of environmental issues, strikes an effective equilibrium between achieving the intention of the purchase and minimizing environmental damage [11]. It can be seen that green consumption and green finance can effectively promote the construction of ecological civilization and solve environmental problems [12].

According to the report of the 20th Party Congress, High-quality development is the primary task of building a modern socialist country in an all-round way, and the countryside will undertake the most arduous and onerous task [12]. Ecological revitalization is an essential component of the rural revitalization strategy. Rural revitalization focuses on rural inhabitants; therefore, fostering a green consumer consciousness among rural inhabitants is a crucial component of China's rural revitalization strategy, an inexorable prerequisite for fostering rural ecological consciousness, and an intrinsic necessity for the transformation of agricultural ecology. Further, the examination of the rural consumer market is a prevalent subject in contemporary economic research owing to the substantial rural population and enormous potential for consumption [13]. The rural green development transformation in China continues to encounter numerous obstacles and challenges. Certain customs and practices continue to influence the consumption patterns of rural inhabitants. Ensuring accurate guidance and regulation of rural residents' consumption behavior is a critical and challenging challenge along the path to green development in rural China [14–16].

While most Chinese people have engaged in some form of environmental conservation, very few truly adopt a green lifestyle [17,18]. This is particularly true for those living in rural areas, for which the following are the key causes: First, Due to their lower levels of education and income, Low incomes can lead to the need for rural residents to economize on the cost of living, which will force people to engage in non-green and environmentally harmful activities like burning firewood and felling trees. Poorer education will cause rural populations to lack access to green education about environmentally friendly consumption, which will therefore result in pertinent features of low environmental awareness; Secondly, the concept of "green consumption" is not widely understood by farmers, and most rural residents do not consider the energy-saving and environmental protection aspects of the products they consume [19]. Thirdly, cultural practices in the countryside influence the living habits of the local people and as the standard of living in the countryside improves, the luxury of ostentation and ostentation still exists in the countryside.

According to the affluence hypothesis, a society's level of wealth is correlated with its citizens' awareness of and behavior regarding green consumption, and economic growth will encourage these behaviors [20]. This theory leads to the conclusion that when economic

conditions improve, people's green purchasing habits will rise. as a result, it is expected that China's urban population will exhibit far higher levels of green consumption than its rural counterpart. Second, the social control system that separates urban and rural areas has long existed. This, along with quality breaks in science and culture and other dualistic features, further shatters the values held by urban and rural residents. As a result, there is a high likelihood that the consumption values of these two populations will differ, which will cause inconsistent green consumption practices in both [21]. Furthermore, research has shown that there are differences in the consumption patterns of urban and rural populations, with urban residents consuming greener products and services at a considerably higher rate than rural ones [22].

The idea of "green consumption" is predicated on a high level of economic development, but it also applies to areas of agriculture and animal husbandry that are less developed than urban areas. In these cases, encouraging green consumption has greater practical significance. Due to careless project development and overdevelopment, several agricultural and animal husbandry areas have experienced severe water resource contamination and desertification of their land. Furthermore, the majority of contaminated or fake goods are made in impoverished rural regions; as a result, it is more important and focused on cultivating green consumption among rural populations [23].

In conclusion, research on the factors influencing rural populations' green consumption behavior is imperative and highly relevant to real-world issues. To effectively promote the green consumption behaviors of rural residents and subsequently advance China's sustainable development, this paper employs quantitative research methods such as structural equation modeling and the Likert scale method to study the factors that influence the green consumption behaviors of Chinese rural residents. The goal is to identify the maximum number of factors that influence different types of green consumption behaviors.

Lastly, as for innovation, this paper's research subject is limited to rural residents, and prior investigations have not conducted comprehensive analyses of the determinants that impact the green consumption conduct of rural residents. Furthermore, this paper presents a more systematic classification of influencing factors, examining the impact of both internal and external factors on the green consumption behavior of rural residents. In contrast, previous studies merely selected a portion of the influencing factors and did not quantitatively analyze all of them. Thirdly, this paper investigates the determinants of various categories of green consumption behavior and classifies green consumption behavior. As time progresses, green consumption behavior has expanded to include new concepts such as the sharing economy in addition to daily environmental behavior and the consumption of green products. Currently, there is a significant gap between the various types of green consumer behavior, and their influencing factors are not identical; therefore, previous research rarely considered the aforementioned content.

2. Literature Review

There has been a notable increase in research pertaining to green consumption. Initially, scholars concentrated primarily on the purchase and usage behavior of green products [24,25]. However, since the 21st century, this field of study has broadened to encompass not only the purchase of green products and services but also their use and disposal throughout the entire life cycle. Furthermore, the scope of concern has extended beyond food to encompass clothing, housing, transportation, and travel [26]. In recent years, academics have placed greater emphasis on the emerging environmentally conscious consumer behaviors associated with the digital economy, including the use of shared bicycles and cars, among others, which have become a significant component of environmentally conscious consumer behavior. The sharing economy can efficiently decrease transaction and logistics expenses, broaden information-sharing channels, and increase the market share occupied by the exchange of the right-to-use goods [27]. Some scholars have summarized the general situation and characteristics of the sharing economy and pointed out the advantages in its development process, as well as possible problems in future development [28–30].

The research conducted both domestically and internationally demonstrates that green consumption patterns can be categorized into three distinct groups. The first mode is consumption substitution, which aims to reduce pollution and consumption by replacing the initial consumption. Its specific behaviors include the replacement of conventional home appliances with energy-efficient ones and traditional oil vehicles with new energy vehicles, among others [31,32]. The second mode is green consumption, which encompasses the entire life cycle of the product and aims to maximize environmental protection. Furthermore, the full life-cycle green consumption model aims to optimize resource conservation and environmental protection throughout the entire life cycle of a product, including its purchase, use, and disposal [33]. To achieve this, waste reduction in catering and waste classification are implemented as components of this model. Lastly, the green recycling model of the consumption process seeks to mitigate pollution during the consumption phase through the implementation of new technologies and social advocacy. Its tangible examples include shared travel and food self-sufficiency [34–36].

Other academics have investigated the mechanism by which social norms influence consumers' green consumption behavior and have determined that social norms can effectively encourage consumers to adopt environmentally friendly practices [37]. There are also scholars who believe that the environmentally friendly, fast, secure, and convenient services offered by logistics companies will increase consumers' inclination to engage in green consumption behavior. In addition to this, green finance can also be effective in promoting green development, which in turn promotes green consumer behavior [38].

In summary, although a number of scholars have studied green consumer behavior, the majority of these studies focus on the influence of internal factors and are primarily directed toward urban residents or all residents. Research on the factors that influence the green consumer behavior of rural residents is lacking. Existing studies on the green consumption behavior of rural residents mainly include the following aspects. First, some academics contend that internal factors—such as environmental sensitivity, knowledge, and awareness—can encourage people to adopt a green lifestyle. In addition, people may be more likely to engage in green consumption behaviors to win the approval of others because they want to save face, thus creating a conscious environmental behavior [39–43]. Furthermore, several demographic factors may influence the green purchasing habits of rural inhabitants. For instance, a higher level of education and money can encourage rural residents to adopt a green lifestyle [44]. Third, green advertising has the potential to encourage environmentally friendly consumption habits among rural populations; advertisements promoting green lifestyles have the greatest impact in this regard [45]. In conclusion, there are no articles that systematically study the various types of influences on the different types of green consumption behavior of rural residents.

The way of life that people in rural areas lead differs greatly from people in urban areas. Since rural inhabitants in China make up about 40% of the country's total population, research on this demographic is vital since their lifestyle is more cut off from the outside world than that of urban people and is more influenced by local group dynamics. The research from both internal and external sources is compiled and expanded upon in this paper. Furthermore, the influencing factors are examined in greater detail in this paper. As the content of green consumer behavior has not been categorized in previous research, this paper will do just that. It will also define the influencing factors associated with each category of green consumer behavior.

In the third section of the paper, the relevant hypotheses are discussed along with the questionnaire design and data collection scheme. Moving on to the fourth section, descriptive statistics, reliability and validity tests, normality tests, and structural equation modelling are presented based on the collected data. The fifth and sixth sections of the paper delve into the results of the data processing, provide a summary, and offer policy recommendations.

3. Materials and Methods

3.1. Hypothesis

From the perspective of social learning theory, it is evident that green consumption behavior is jointly influenced by external and individual factors. The proponents of the theory assert that individual behavior is not only unilaterally influenced by external or internal influences, but also that individual behavior, subjective cognition, and the social environment are dynamically interacting and determining each other.

In terms of demographic characteristics, the majority of studies indicate that females, individuals with higher education, youth, and those with middle incomes will engage in more environmentally friendly consumption behaviors. However, there are also studies that conclude that the aforementioned factors are not significantly associated with green consumption behaviors [46]. Furthermore, certain scholars have also determined that occupation has a substantial impact on green consumption behavior. Specifically, employees of state-owned enterprises and civil servants exhibit a higher level of green consumption behavior, whereas unemployed residents exhibit the lowest rates of green consumption behavior. Nevertheless, there are no pertinent hypotheses, as the demographic characteristics of the attributes are not aptly described on a scale.

Psychological factors, such as moral reflection and a sense of responsibility, can reflect an individual's altruistic values. Individuals with strong altruistic values will weigh the benefits of green consumption from the perspective of the social group and will sacrifice their personal interests to protect the environment when their personal interests are at odds with the interests of society [47]. Furthermore, the perception of social responsibility can also impact the consumption decisions of residents, and those who prioritize environmental and social responsibility are more likely to engage in environmentally friendly consumption habits. The Theory of Planned Behavior posits that an individual's behavioral intention is influenced by attitudes, subjective norms, and perceived behavioral control. Attitudes refer to an individual's overall assessment of a behavior, subjective norms to an individual's perceived social pressures, and perceived behavioral control to an individual's beliefs about their capacity to execute the behavior. The Theory of Planned Behavior can be used to infer the impact of psychological factors on green consumption behaviors [48–50]. Research has indicated that environmentally conscious consumers are more inclined to acquire green products, regardless of their increased cost in comparison to comparable non-green products [51]. Additionally, it has been determined that green consumer behavior can be positively impacted by ethical reflection, trust in the product, and individual responsibility [52]. Furthermore, environmental emotions and collectivist values can also substantially and positively influence green consumption intentions, thereby influencing green consumption behavior [53,54]. Consequently, in this investigation, we suggest the subsequent hypotheses: H1–H4: Psychological factors have a significant positive effect on green consumption behavior.

Stern developed the value-belief-norm theory by integrating value theory and new environmental paradigm theory on the premise of norm activation theory [55]. The value-belief-norm theory commences with values, progresses through beliefs regarding the relationship between humans and nature, and ultimately culminates in the individual's beliefs regarding the repercussions of poor behavior and their personal responsibility. This ultimately activates personal norms and reinforces the individual's environmental behavior. The values-beliefs-norms theory expands the research value of environmental behavior by incorporating values and environmental responsibility into the analytical model, which are considered to be the primary variables in explaining green consumption [56]. The existing literature has extensively discussed the relationship between environmental cognition and environmental behavior, and environmental cognition is a quantitative expression of consumers' environmental knowledge and awareness. However, no unified conclusion has been reached. For instance, certain studies have indicated that environmental awareness is the most effective factor in influencing environmentally friendly behavior and can effectively encourage individuals to behave in an environmentally friendly manner. However,

other studies have discovered that this relationship may be weak [57–60]. The study of individual consumption behavior from the perspective of values has been widely embraced by academics, as it is a value-oriented behavior. Several studies have demonstrated that consumers' green consumption behavior can be substantially influenced by the adoption of accurate environmental values [61]. Environmental cognition has the potential to enhance residents' environmental awareness, reduce cognitive dissonance, and increase their sense of social responsibility. This, in turn, influences residents' lifestyle decisions. As consumers' environmental awareness improves, they will become more engaged in environmental issues and will pay more attention to them. Moreover, certain scholars contend that factors such as green consumption attitudes will serve as a chain mediating factor between the two [62,63]. In summary, environmental cognition objectively encourages the adoption and proliferation of green consumption behaviors and enhancing public environmental awareness is a critical method for promoting green consumption. Consequently, in this investigation, we suggest the subsequent hypotheses: H5–H8: Environmental awareness has a significant positive effect on green consumption behavior.

It's evident from supply and demand theory that price and consumption have an inverse relationship. Higher prices result in lower consumption, while lower prices lead to higher consumption. Market incentives for green consumption can be seen to make green products more affordable, which may encourage more people to engage in green consumption behavior [64]. According to the theory of diminishing marginal benefits, when consumption increases, the marginal utility initially increases but eventually reaches a point where it starts to decrease. These variations in economic development levels result in varying impacts of market incentives on different regions. Furthermore, market incentives are frequently influenced by government actions, which indirectly encourage environmentally friendly consumer behavior through policies like tax incentives for protecting the environment. As a result, consumers often choose to purchase subsidized green products due to their trust in the government. The correlation between market incentives and green consumption behavior has been investigated by numerous academicians. For instance, French scholars have discovered that the provision of economic subsidies for low-emission cars by the state results in an increase in the number of individuals purchasing such vehicles [65]. Additionally, there are scholars who, through economic and psychological analyses, believe that both time and money costs will have a certain impact on green consumption behavior and that enterprises and the government can leverage these resources to encourage residents to engage in green consumption behavior [66,67]. Certain studies have also discovered that consumers are frequently inclined to make purchases when the premium price of green products is low [68]. Consequently, in this investigation, we suggest the subsequent hypotheses: H9–H12: Market incentives have a significant positive effect on green consumption behavior.

According to the peer effect in psychology, individuals in a specific social milieu will alter their behavioral attitudes and other characteristics as a result of the influence of their peers [69]. In 1993, Manski proposed that the explanations for the tendency of different individuals within the same group to exhibit similar behaviors are divided into three categories: endogenous, exogenous, and correlative effects. The endogenous effect is the mechanism by which individual behavior is influenced by changes in group behavior, individual decisions are based on their interactions or interrelations with their peers. The exogenous effect is the mechanism by which individual behavior is influenced by changes in the characteristics of the group. The correlation effect is the mechanism by which individuals in the same group tend to exhibit similar behaviors due to their similar individual characteristics or being in similar environments [70]. The Theory of Planned Behavior also posits that subjective norms are the social pressure experienced by individuals. It posits that when members of a social group tend to purchase green products, other individuals will be influenced to conform to the social norms and develop a sense of social identity. Furthermore, groups that engage in green consumption behaviors establish a shared social identity, which in turn motivates them to adopt green consumption behaviors

and increases their sense of responsibility and desire to participate. Consequently, the efficacy of social pressure in encouraging consumers to adopt green consumption behaviors will be enhanced by the growing awareness of environmental issues and the proliferation of environmentally conscious organizations. Other academicians have discovered that consumers are more likely to purchase organic food when others are present or when the majority of individuals purchase organic food [71]. It has also been demonstrated that the act of purchasing in pairs has a beneficial effect on one's green consumption behavior, particularly when it is conducted with family members [72]. Consequently, we suggest the following hypothesis in this investigation: H13–H16: Social pressure can have a significant positive effect on green consumption behavior.

Green information is a critical external factor in the promotion of green consumption behavior, as it effectively presents consumers with information about green products and conveys green consumption and life concepts. The dissemination of green information can significantly increase consumers' self-efficacy and foster the belief that they can make a positive impact on the environment through green consumption. This sense of self-assurance can assist consumers in surmounting obstacles and doubts and implementing green consumption behaviors more actively [73]. Additionally, consumers are able to more effectively manage their own behavior by comprehending green information, which allows them to make purchasing decisions based on their own environmental values and rational judgment. Green information can also effectively influence consumers' psychological factors and environmental cognition, thereby promoting their green consumption behavior, to a certain extent. Some scholars have discovered that consumers' preferences and willingness to pay for green food are significantly increased by green identity labels when environmental information is implemented [74]. Additionally, the effective transmission of product environmental information is essential for the promotion of green consumption behavior [75]. In addition, residents' attitudes and behaviors regarding green consumption can be significantly influenced by government and media campaigns on environmental issues [76–78]. Additionally, companies can employ information interventions to direct consumers toward green consumption behaviors [79]. Winett et al. contend that media campaigns are a successful framework for behavioral change because they incorporate marketing, communication, social learning, and behavioral analysis. framework. In the same vein, the media's interactive, global, and rapid penetration enables the intertwining of individual norms and behaviors with those of others and society as a whole, thereby influencing individual behavior [80]. Consequently, we suggest the following hypothesis in this investigation: H17–H20: Information boosting has a significant positive effect on green consumption behavior.

The influencing factors of green consumption behavior are summarized by combining the five sets of hypotheses supported by the aforementioned theories and literature review, as well as the theoretical framework of planned behavior. The influencing factors of green consumption behavior are subsequently classified into two major types: internal and external factors. The internal factors include psychological factors and environmental cognition. Furthermore, the psychological factors in this study primarily reflect the residents' moral reflection, sense of individual responsibility, and level of trust in the organization. The environmental cognition primarily reflects the residents' environmental literacy, the extent of their environmental knowledge mastery, and a higher level of professionalism. Market incentives, social pressure, and information increases are all examples of external factors. Consequently, this investigation formulates a relationship diagram that illustrates the impact of psychological factors, environmental cognition, market incentives, social promotion, information bolstering, and a variety of green consumption behaviors. In conjunction with the three models of green consumption behavior mentioned earlier, this paper categorizes green consumption behavior into four categories. The first three categories are daily environmental protection behavior, consumption of green products, and participation in the sharing economy. Additionally, the composition of green consumption behavior includes green consumption for production, as a significant number of rural residents engage in

production activities, which is also one of the most significant differences between rural and urban residents. Figure 1 illustrates the structural paradigm of green consumption behavior.

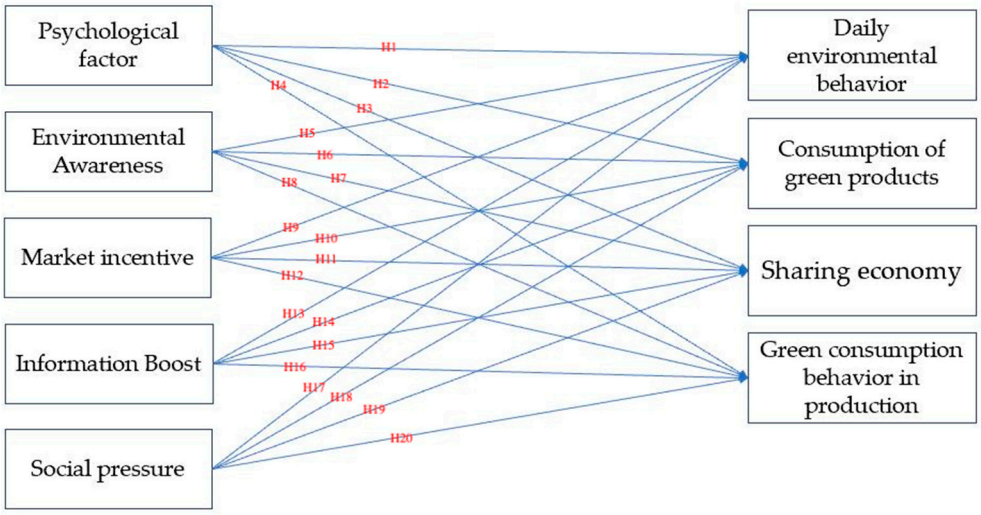

Figure 1. Green Consumption Behavior Structural Model Diagram.

Since green consumer behavior is divided into four different categories, each of the five sets of hypotheses presented above has four different branches, so this paper proposes the following 20 specific hypotheses as follows: H1: psychological factors have a major beneficial impact on daily environmental behavior; H2: the consumption of green products is significantly positively influenced by psychological factors; H3: the sharing economy's engagement is significantly positively impacted by psychological factors; H4: psychological factors positively and significantly impact the green consumption behavior in production; H5: environmental awareness has a major positive impact on daily environmental behavior; H6: the consumption of green products is significantly positively impacted by environmental awareness; H7: environmental awareness significantly positively impact engagement in the sharing economy; H8: the green consumption behavior in production is significantly positively impacted by environmental awareness; H9: market incentives have a major positive impact on daily environmental behavior; H10: the consumption of green products is significantly positively impacted by market incentives; H11: the sharing economy's engagement is significantly positively impacted by market incentives; H12: the green consumption behavior in production is significantly positively impacted by market incentives; H13: daily environmental behavior is significantly positively impacted by social pressure; H14: the consumption of green products is significantly positively impacted by social pressure; H15: engagement in the sharing economy is significantly positively impacted by social pressure; H16: the green consumption behavior in production is significantly positively impacted by social pressure; H17: daily environmental behavior is significantly positively impacted by information boost; H18: consumption of green products is significantly positively impacted by information boost; H19: engagement in the sharing economy is significantly positively impacted by information boost; H20: the green consumption behavior in production is significantly positively impacted by the information boost.

3.2. Questionnaire Design and Collection

The participants of this research are income- and age-variable rural inhabitants hailing from the eastern, western, central, and northeastern regions of China. Following the determination of the target population, the sampling process took into account scientific validity, representativeness, cost, and other comprehensive considerations to ensure that the sampled units in the overall uniform distribution were representative. As shown in

Table 1, the sample size for each region in this paper is calculated using the proportion of rural residents in the four regions to the total number of rural residents in the country.

Table 1. Rural population in China by region and percentage.

Region	Rural Population/Million	Percent of Total Rural Population
Northeast	31.81	6.24
East	164.81	32.33
Central	149.51	29.32
West	163.65	32.11

The maximum allowable error of 5%, the confidence level of the estimates being 99%, which translates to a Z-statistic of approximately 2.68, and assuming that the population's overall standard deviation is equal to 0.5, we require a minimum sample size of 666 according to the sample size Formula (1) to improve the precision of the estimates.

$$n_0 = \frac{\sigma^2 Z^2}{d^2} \quad (1)$$

Moreover, the number of questionnaires must be more than ten times the number of questions; since this questionnaire has 42 questions, the sample size must be more than 420. Using the two sample size determination techniques mentioned above, combined with the cost of time and the financial implications, this paper ultimately opted to gather roughly 1000 valid samples of data processing to guarantee the representation and accuracy of the data. Furthermore, it is important to ensure that the geographical distribution of the questionnaire respondents in this paper closely reflects the actual distribution of China's rural population. It is also crucial to maintain a balanced gender ratio, cover all age groups, and have educational and income levels that are representative of rural areas in China. Additionally, it is necessary to include a wide range of occupations to encompass all types of jobs.

The data collection period for this survey is from 1 February to 29 February 2024. The questionnaire data is collected using a combination of online and offline methods. The online questionnaire uses the Sojump platform. The online questionnaire uses the "whether you live in an urban or rural area" question to eliminate the questionnaire of urban residents. Regarding the online questionnaire's data quality control, to begin with, to prevent redundant responses from the same participant, each electronic device and IP address was restricted to providing an answer only once; Furthermore, surveys that were not meticulously completed were excluded (e.g., responses to similar questions that exhibited an excessive amount of variation, etc.). Ultimately, the questionnaires that had a higher number of missing values for scale data were excluded, while those with a lower number of missing values were filled in using the mean-filling method.

The survey scale for this study was the Likert scale, which is widely recognized and used both domestically and internationally. The majority of the scales were developed from mature scales in domestic and international literature, and a translation and back-translation method were used to ensure the accuracy of the scales in foreign literature. The scales measured nine different aspects in total, including environmental awareness, psychological factors, market incentives, social promotion, information boost, and the four categories of green consumption behaviors.

This investigation implemented a five-point Likert scale for scoring, with "1–5" representing "strongly disagree" to "strongly agree". The mean was computed to determine a score for each aspect [81]. This paper also divides green consumer behavior into four major parts, namely sharing economy, green consumption in production, consumption of green products, and daily environmental behavior. This is due to the fact that green consumer behavior encompasses a broad range of topics and the influencing factors of different aspects may vary to a certain extent. The questionnaire contains a total of 42 questions.

The pre-survey consisted of the collection of 90 valid questionnaires, which successfully passed the reliability test. The questionnaire questions were subsequently slightly modified in accordance with the data acquired during the pre-survey, and the final questionnaire was subsequently developed.

In terms of the psychological factors dimension scale, including personal responsibility and product trust, the scale is based on the 2018 China Comprehensive Social Survey questionnaire, which includes four questions, including "You trust organizations to rate green products" and "You believe that the quality of green products is higher than that of traditional products"; these questions are scored on a 5-point Likert scale, with "1–5" indicating "strongly disagree"—"strongly agree".

The environmental awareness dimension scale primarily assesses the environmental literacy and environmental values of residents. The scale is derived from the 2018 China General Social Survey questionnaire and comprises four inquiries, such as "All organisms in nature are interdependent" and "You are concerned with the environment and strive to preserve its quality". The responses to these inquiries were evaluated on a five-point Likert scale, with scores ranging from one to five representing "strongly disagree" to "strongly agree".

The market incentive dimension scale is derived from the 2018 China General Social Survey questionnaire, which is primarily utilized to evaluate the influence of price and price compensation on green consumption behavior. The questionnaire includes four questions, such as "If green products have price subsidies, it will make you want to buy them" and "You care a lot about the price of green products". These inquiries were evaluated on a five-point Likert scale, with scores ranging from one to five representing "strongly disagree" to "strongly agree".

The social pressure dimension scale is primarily based on the 2018 China General Social Survey questionnaire, which assesses the impact of peer effects on the green consumption behavior of residents. It comprises three inquiries, one of which is "You are more inclined to purchase environmentally friendly products when others are present". The responses to these inquiries are evaluated on a five-point Likert scale, with scores ranging from one to five representing "strongly disagree" to "strongly agree".

The information boost dimension scale is derived from the scale developed by Lee and Kim et al., which primarily assesses the influence of government or media publicity on environmental information and green consumption behavior. The scale comprises four items, such as "The media promotes the establishment of a sustainable living environment" and "You have access to a wealth of information regarding environmental protection and green consumption in your daily life". The responses to these inquiries were evaluated on a five-point Likert scale, with scores ranging from one to five representing "strongly disagree" to "strongly agree".

The scale of green consumption behavior is composed of four components, and its design is informed by the 2018 China Comprehensive Social Survey questionnaire and the research of Lee and Han et al. [82]. Firstly, it primarily assesses the level of participation of residents in daily environmental behavior, which includes three questions such as "You have the habit of saving water and electricity in your daily life". Secondly, it primarily assesses residents' willingness to engage in green product consumption, which includes four questions, such as "You will select solar lamps and renewable energy products to replace traditional energy products to the greatest extent possible". Thirdly, it primarily assesses residents' willingness to participate in the sharing economy, which includes four questions, such as "When traveling a shorter distance, you will opt to walk or share a bike instead of a car". Fourthly, it primarily assesses the willingness of residents to engage in green consumption in production, which encompasses three items, including "If you were a farmer, you would use green fertilizer whenever possible". The Likert scale was used to evaluate these items, with scores ranging from one to five representing "strongly disagree" to "strongly agree".

4. Result

4.1. Descriptive Statistics

Excluding questionnaires completed by urban residents and those lacking logical coherence, a distribution of 1687 questionnaires resulted in the acquisition of 1004 valid scales, representing a validity rate of 59.51%.

Table 2 presents the geographical distribution of the 1004 respondents. It indicates that 331 individuals (representing 32.97 percent of the sample) reside in the eastern region of China, 299 individuals (representing 29.78 percent) in the central region, 301 individuals (representing 29.98 percent) in the western region, and 73 individuals (representing 7.27 percent) in the northeastern region. The distribution of respondents by region closely aligns with the actual distribution of our rural population, which makes the comparison statistically significant. With regard to gender, the interviewees comprised 479 men and 525 women. The age distribution of respondents is as follows: 146 individuals (or 14.54%) were under the age of 22; 245 individuals (24.40%) were between the ages of 22 and 31; 329 individuals (32.77%) were between the ages of 32 and 40; 191 individuals (19.02%) were between the ages of 41 and 60; and 93 individuals (9.26%) were over the age of 61. It is noteworthy that the age group of 22 to 40 years old comprised the largest proportion of all the interviewees. With regard to their marital status, the following percentages were represented among the interviewees: 168 (or 16.73 percent) were married without children, 292 (or 29.08 percent) were unmarried, and 544 (or 54.18 percent) were married with children. The educational attainment of the respondents is as follows: 353 respondents had junior high school education or below, 235 had senior high school education, 192 had secondary or technical school education, 135 had a college education, 82 had a university education, and 7 had a master's degree or higher. These percentages represent 35.16%, 23.41%, 19.12%, 13.45%, 8.17%, and 0.70% of the total respondents, respectively. Those with a junior high school education or below comprise nearly 40 percent of the respondents, and less than 10% hold a bachelor's degree or higher. The educational attainment of the respondents, who hold a bachelor's degree or higher, is comparable to that of the rural populace in China. A majority of the participants reported an average monthly disposable income below RMB 2000, while a minority of less than ten percent reported an average monthly disposable income exceeding RMB 8000. This finding suggests that the revenue level of the respondents is similar to that of rural inhabitants in China, thus improving the questionnaire's representativeness. The sample of respondents to the questionnaire represented a wide range of occupations, which enhanced the overall representativeness of the data.

Table 2. Table of demographic characteristics of the sample.

		People	**Percentage**
Region	Eastern	331	32.97
	Central	299	29.78
	Western	301	29.98
	Northeast	73	7.27
Gender	Male	479	47.71
	Female	525	52.29
Age	Below 22	146	14.54
	22–31	245	24.40
	32–40	329	32.77
	41–60	191	19.02
	Above 60	93	9.27
Marital status	Unmarried	292	29.09
	Married without children	168	16.73
	Married with children	544	54.18

Table 2. *Cont.*

		People	Percentage
Educational attainment	Junior high school and below	353	35.16
	High school	235	23.41
	Secondary or technical school	192	19.12
	College	135	13.45
	Undergraduate	82	8.17
	Master's degree and above	7	0.70
Average Monthly Disposable Income	Below 1001 yuan	195	19.42
	1001–2000 yuan	329	32.77
	2001–5000 yuan	287	28.59
	5001–8000 yuan	131	13.05
	8001–20,000 yuan	42	4.18
	Above 20,000 yuan	20	1.99
Occupation	Students	118	11.75
	Enterprise staff	99	9.86
	Institution staff	85	8.47
	Self-employed businessmen	187	18.63
	Retired persons	72	7.17
	Freelancers	82	8.17
	Agricultural and animal husbandry workers	270	26.89
	Others	91	9.06

Table 3 shows the distribution of respondents' access to information related to green consumption. Based on the results of the multiple-choice survey, it is evident that the primary sources of information regarding green consumption for the majority of respondents are product advertisements, mass media, and television networks. Conversely, education in schools and community and village committee publicity provide the least amount of information regarding green consumption. This suggests that environmental protection education is not adequately incorporated into China's general examination curriculum. The deficiency in China's general examination-based education pertains to the omission of environmental protection information, including green consumption. Furthermore, the dissemination of pertinent information by village and community committees is inadequate.

Table 3. Distribution of respondents' access to information related to green consumption.

	People	Percentage
School education	249	24.80
Advertising of products	576	57.37
Networking with friends and family	513	51.10
Mass media such as television and internet	638	63.55
Community or village council sensitization	418	41.63
The rest	123	12.25

4.2. Reliability and Validity Test

A reliability and validity test is an essential component of structural equation modelling. Only after the scale has successfully passed the reliability test can it be subjected to structural equation modeling for analysis. If the scale fails the reliability and validity test, it is probable that the structural equation model will have a reduced level of fitness.

Because the primary variables were assessed using measures in this investigation, the data quality was scrutinized to guarantee that the subsequent analyses would carry significance. To begin, an assessment of the dimensions' internal consistency was conducted utilizing the KronBach coefficient reliability test. The Kronbach coefficient is a measure

that evaluates the reliability of a scale or test. It estimates the internal consistency of a test using a specific formula. This test employs a value between 0 and 1, with a higher value indicating greater reliability. The findings of the study's reliability analysis are presented in Table 4. The coefficients of reliability for the influencing factors, green consumption behaviors, and each secondary dimension fall within the range of 0.8 to 1. This suggests that all of the scales utilized in the research exhibit satisfactory internal consistency. The formula for calculating the Kronbach factor is as follows:

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum S_i^2}{S_x^2}\right) \quad (2)$$

Table 4. Influencing Factors and Green Consumption Behavior Scale Reliability Test.

Variant	Kronbach Factor	Item Count
Psychological factor	0.854	4
Environmental Awareness	0.871	4
Market incentive	0.865	4
Social pressure	0.824	3
Information Boost	0.869	4
Factor	0.900	19
Daily environmental behavior	0.812	3
Consumption of green products	0.881	4
Sharing economy	0.863	4
Green consumption behavior in production	0.823	3
Green consumer behavior	0.875	14

Table 5 shows the results of the model fit test. One important fit metric in CFA is the CMIN/DF (Cardinality Degree of Freedom Ratio), which is calculated by dividing the cardinality value by the degrees of freedom. In this case, the CMIN/DF is 1.095, which is considered to be an ideal value as it is less than 3. RMSEA, or Root Mean Square Error of Approximation, measures the accuracy of a model by calculating the average difference between predicted and actual values. A smaller RMSEA indicates a better fit between the model and the data. The CMIN/DF and RMSEA for the data of this study are in the excellent range. Furthermore, CFI represents the comparative fit index while TLI stands for the standardized fit index. These indices gauge the model's fit in relation to the benchmark model, with a higher value indicating a better fit. The test results of TLI and CFI in this study indicate a high level of 0.9 or above, suggesting that the CFA model of influencing factors fits well.

Table 5. Model fit test l.

Norm	Reference Standard	Actual Results
CMIN/DF	1–3 is excellent	1.095
RMSEA	<0.05 is excellent	0.010
TLI	>0.9 is excellent	0.998
CFI	>0.9 is excellent	0.999

The satisfactory discriminant validity between the dimensions is indicated by the fact that the standardized correlation coefficients between the two dimensions in this test of discriminant validity are less than the square root of the AVE values corresponding to the dimensions (Table 6).

Table 6. Distinctive validity test for each dimension of the impact factor scale.

	Psychological Factor	Environmental Awareness	Market Incentive	Social Pressure	Information Boost
Psychological factor					
Environmental Awareness	0.520				
Market incentive	0.454	0.476			
Social pressure	0.400	0.397	0.405		
Information Boost	0.439	0.409	0.371	0.464	
AVE value	0.593	0.627	0.617	0.610	0.622

Based on the outcomes of the model fitness evaluation presented in Table 7, the RMSEA is 0.017 and the CMIN/DF (chi-square degrees of freedom ratio) is 1.293; both values fall within the outstanding range. Furthermore, it is noteworthy that the test outcomes of ITI, TLI, and CFI all attained a commendable level of 0.9 or higher. This collectively indicates that the CFA model pertaining to green consumer behavior exhibits a satisfactory degree of fit.

Table 7. Model fit test II.

Norm	Reference Standard	Actual Results
CMIN/DF	1–3 is excellent	1.293
RMSEA	<0.05 is excellent	0.017
ITL	>0.9 is excellent	0.997
TLI	>0.9 is excellent	0.996
CFI	>0.9 is excellent	0.997

Considering the satisfactory fit of the CFA model for the influencing factors, additional scrutiny will be given to the convergent validity (AVE) and combinatorial reliability (CR) of each specific item on the scale. Subsequently, the values of convergent validity and combinatorial reliability for each dimension can be derived using the formulae for AVE and CR. When it comes to the AVE value, it's important to note that measures assessing the same latent variable will consistently align with a common factor and show strong correlations between the measurement questions. On the other hand, the CR value indicates the reliability of a combined variable, with satisfactory convergent validity and combinatorial reliability indicated by AVE and CR values of at least 0.5 and 0.7, respectively. The results of the validity test for the impact factor scale are presented in Table 8. The AVE value for each dimension exceeds 0.5, and the CR value exceeds 0.7. These values indicate that the dimensions possess strong convergent validity and combined reliability.

Table 8. Convergent validity and combined reliability tests for each dimension of the scale.

Pathway Relationship			Estimate	AVE	CR
XL1	<---	Psychological factor	0.755	0.593	0.854
XL2	<---	Psychological factor	0.775		
XL3	<---	Psychological factor	0.777		
XL4	<---	Psychological factor	0.774		
HB1	<---	Environmental Awareness	0.814	0.627	0.87
HB2	<---	Environmental Awareness	0.775		
HB3	<---	Environmental Awareness	0.787		
HB4	<---	Environmental Awareness	0.791		
SC1	<---	Market incentive	0.784	0.617	0.866
SC2	<---	Market incentive	0.792		

Table 8. *Cont.*

Pathway Relationship			Estimate	AVE	CR
SC3	<---	Market incentive	0.816		
SC4	<---	Market incentive	0.749		
SH1	<---	Social pressure	0.78	0.61	0.824
SH2	<---	Social pressure	0.771		
SH3	<---	Social pressure	0.792		
XX1	<---	Information Boost	0.79	0.623	0.869
XX2	<---	Information Boost	0.81		
XX3	<---	Information Boost	0.774		
XX4	<---	Information Boost	0.784		
JY1	<---	Daily environmental behavior	0.783	0.592	0.813
JY2	<---	Daily environmental behavior	0.75		
JY3	<---	Daily environmental behavior	0.774		
LS1	<---	Consumption of green products	0.798	0.649	0.881
LS2	<---	Consumption of green products	0.809		
LS3	<---	Consumption of green products	0.805		
LS4	<---	Consumption of green products	0.811		
GX1	<---	sharing economy	0.795	0.612	0.863
GX2	<---	sharing economy	0.778		
GX3	<---	sharing economy	0.765		
GX4	<---	sharing economy	0.791		
SCZ1	<---	Green consumption behavior in production	0.765	0.609	0.823
SCZ2	<---	Green consumption behavior in production	0.786		
SCZ3	<---	Green consumption behavior in production	0.789		

The satisfactory discriminant validity between the dimensions is indicated by the fact that the standardized correlation coefficients between the two dimensions in this test of discriminant validity are less than the square root of the AVE values corresponding to the dimensions (Table 9).

Table 9. Distinctive validity test for each dimension of the green consumption behavior scale.

	Daily Environmental Behavior	Consumption of Green Products	Sharing Economy	Green Consumption Behavior in Production
Daily environmental behavior				
Consumption of green products	0.435			
Sharing economy	0.432	0.422		
Green consumption behavior in production	0.383	0.422	0.445	
AVE value	0.592	0.649	0.612	0.609

Furthermore, the exploratory factor analysis reveals that the KMO test yields a coefficient of 0.928, which is close to 1. Excellent validity characterizes the questionnaire, and the significance level of this test is infinitesimally small. Rejection of the initial hypothesis occurs (Table 10).

Table 10. Results of exploratory factor analysis.

KMO and Bartlett's Test		
KMO Sampling Appropriateness Quantity		0.928
Bartlett's test of sphericity	Cardinality of last reading	17,026.828
	df	528
	significance	0.000

4.3. Normality Test

The results of the normality test for each factor in this study are presented in Table 11. The normality test for each measurement item is conducted utilizing skewness and kurtosis, in accordance with the criteria established by Kline (1998). If the absolute values of the skewness and kurtosis coefficients fall within the ranges of 3 and 8, respectively, the data can be considered to conform to the characteristics of an approximate normal distribution. The findings of the analysis presented in Table 4 indicate that the data for each measurement item in the present study meet these criteria. Since the absolute values of the skewness and kurtosis coefficients for each measurement item fall within the standard range, the data for each measurement item can be considered to follow an approximation of a normal distribution.

Table 11. Results of exploratory factor analysis.

Dimension	Measurement Item	Skewness	Kurtosis
Psychological factor	XL1	−0.118	−1.046
	XL2	−0.136	−1.092
	XL3	−0.123	−1.159
	XL4	−0.140	−1.164
Environmental awareness	HB1	−0.101	−1.169
	HB2	−0.117	−1.100
	HB3	−0.149	−1.097
	HB4	−0.133	−1.112
Market incentive	SC1	−0.072	−1.109
	SC2	−0.073	−1.160
	SC3	−0.110	−1.096
	SC4	−0.093	−1.128
Social pressure	SH1	−0.008	−1.182
	SH2	0.049	−1.151
	SH3	0.001	−1.196
Information Boost	XX1	−0.073	−1.157
	XX2	−0.042	−1.209
	XX3	−0.085	−1.149
	XX4	−0.036	−1.123
Daily environmental behavior	JY1	−0.118	−1.076
	JY2	−0.159	−0.997
	JY3	−0.080	−1.124
Consumption of green products	LS1	−0.108	−1.121
	LS2	−0.078	−1.105
	LS3	−0.084	−1.157
	LS4	−0.072	−1.122
Sharing economy	GX1	−0.089	−1.134
	GX2	−0.113	−1.155
	GX3	−0.156	−1.127
	GX4	−0.236	−1.059

Table 11. *Cont.*

Dimension	Measurement Item	Skewness	Kurtosis
Green consumption behavior in production	SCZ1	−0.082	−1.113
	SCZ2	−0.087	−1.169
	SCZ3	−0.058	−1.120

4.4. Structural Equation Modeling (SEM)

Based on the outcomes of the model fitness assessment presented in Table 12, the RMSEA is 0.047 and the CMIN/DF (chi-square degrees of freedom ratio) is 3.240; both of these values fall within the outstanding or good range. Furthermore, it is noteworthy that the test outcomes for ITI, TLI, and CFI all attained a commendable threshold of 0.9 or greater. In conclusion, the CFA model is a good fit.

Table 12. Model fit test II.

Norm	Reference Standard	Actual Results
CMIN/DF	1–3 is excellent, 3–5 is good	3.246
RMSEA	<0.05 is excellent, <0.08 is good	0.047
ITL	>0.9 is excellent, >0.8 is good	0.936
TLI	>0.9 is excellent	0.929
CFI	>0.9 is excellent	0.936

Figure 2 depicts the structural equation path diagram of the variables that influence green consumption behavior.

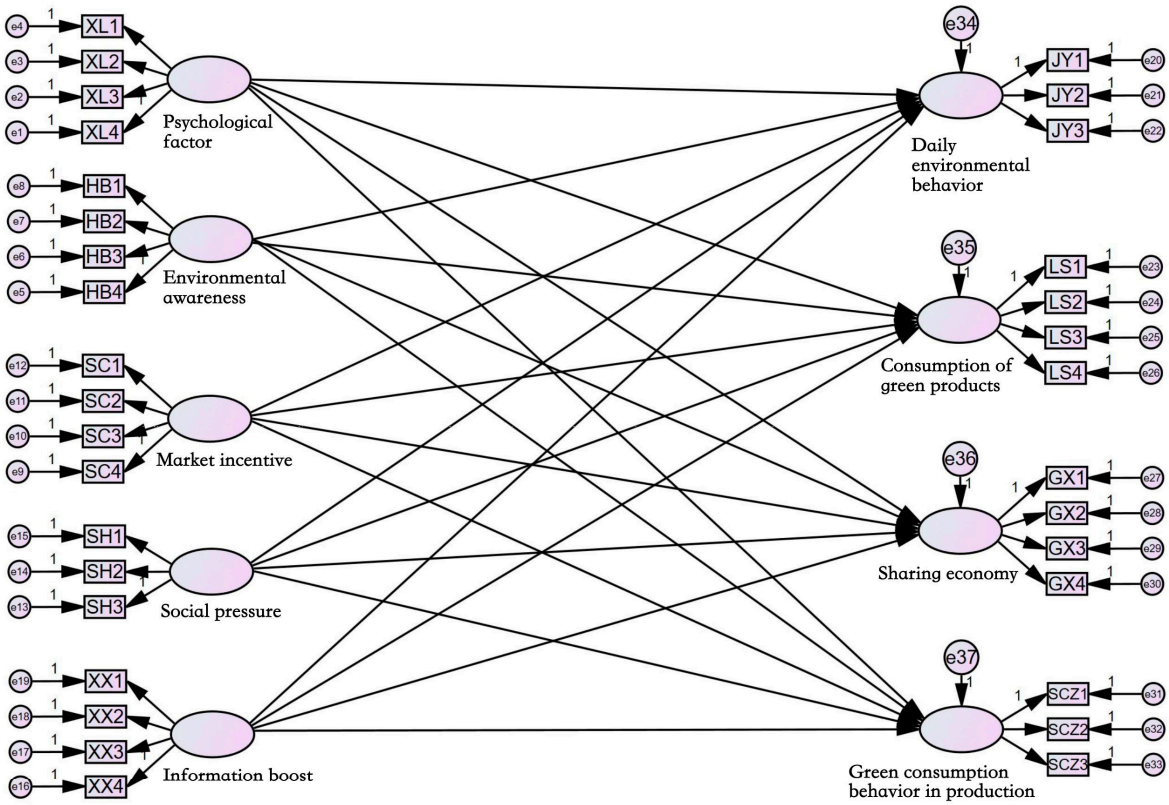

Figure 2. Structural equation modeling path diagram.

In the following β is a standardized estimate. The findings presented in Table 13 indicate that psychological factors exert a statistically significant positive influence on daily

environmental behavior, as determined by the path hypothesis relationship test of this investigation (β = 0.222, $p < 0.001$). Consequently, this supports the validity of H1. Likewise, psychological factors significantly and positively influence consumption of green products, the sharing economy, and green consumption behavior in production; therefore, H2, H3, and H4 are all supported. The effect of environmental awareness on daily environmental behavior is statistically significant and positive (β = 0.303, $p < 0.001$); therefore, H5 is supported. Likewise, environmental awareness significantly influences positively the sharing economy, the consumption of green products, and green consumption behavior in production; thus, H6, H7, and H8 are all supported. The impact of market incentives on daily environmental behavior is statistically significant and positive (β = 0.158, $p < 0.001$), thus supporting H9. Likewise, market incentives significantly influence the consumption of green products, the sharing economy, and green consumption behavior in production for the better; thus, H10, H11, and H12 are all supported. As a result of the significant positive effect of social pressure on daily environmental behavior (β = 0.159, $p < 0.001$), the hypothesis is supported. Likewise, social pressure has no discernible positive impact on the consumption of green products, the sharing economy, or green consumption behavior in production; therefore, H14, H15, and H16 are invalid. H17 is not supported by the lack of a significant positive effect of information boost on daily environmental behavior (β = 0.158, $p > 0.001$). Likewise, information boost significantly improves the sharing economy, consumption of green products, and green consumption behavior in production; therefore, H18, H19, and H20 are all supported.

Table 13. Results of SEM path relationship test for influencing factors of green consumption behavior.

Pathway Relationship			Estimate (Standardization)	Estimate	S.E.	C.R.	*p*
Daily environmental behavior	<---	Psychological factor	0.222	0.197	0.033	5.992	***
Daily environmental behavior	<---	Environmental Awareness	0.303	0.258	0.032	8.084	***
Daily environmental behavior	<---	Market incentive	0.159	0.142	0.033	4.378	***
Daily environmental behavior	<---	Social pressure	0.158	0.136	0.032	4.239	***
Daily environmental behavior	<---	Information Boost	0.079	0.066	0.031	2.209	0.027
Consumption of green products	<---	Psychological factor	0.184	0.171	0.033	5.307	***
Consumption of green products	<---	Environmental Awareness	0.250	0.234	0.032	7.169	***
Consumption of green products	<---	Market incentive	0.252	0.242	0.034	7.148	***
Consumption of green products	<---	Social pressure	0.094	0.085	0.032	2.693	0.007
Consumption of green products	<---	Information Boost	0.167	0.157	0.032	4.869	***
Sharing economy	<---	Psychological factor	0.225	0.209	0.033	6.382	***
Sharing economy	<---	Environmental Awareness	0.246	0.222	0.031	7.032	***
Sharing economy	<---	Market incentive	0.286	0.271	0.034	8.002	***
Sharing economy	<---	Social pressure	0.043	0.040	0.032	1.241	0.215
Sharing economy	<---	Information Boost	0.151	0.138	0.032	4.388	***
Green consumption behavior in production	<---	Psychological factor	0.235	0.200	0.032	6.395	***
Green consumption behavior in production	<---	Environmental Awareness	0.228	0.192	0.030	6.291	***
Green consumption behavior in production	<---	Market incentive	0.290	0.250	0.033	7.776	***

Table 13. *Cont.*

Pathway Relationship			Estimate (Standardization)	Estimate	S.E.	C.R.	*p*
Green consumption behavior in production	<---	Social pressure	0.120	0.099	0.031	3.303	0.001
Green consumption behavior in production	<---	Information Boost	0.132	0.114	0.030	3.715	***

*** means statistically significant.

5. Discussion

The analysis of the correlation between different factors and green consumption behavior yields several significant findings.

Firstly, Internal factors play a more significant role in influencing green consumption behavior than external factors. This research has found that psychological factors and environmental awareness play a crucial role in driving green consumption behavior. It is evident that personal responsibility and environmental awareness have a significant impact on consumer behavior when it comes to green consumption, as per the theory of planned behavior. On the other hand, when it comes to external factors, it seems that information boost does not play a major role in influencing daily environmental behavior. One possible explanation for this could be that the information about everyday environmental behavior is quite similar and doesn't have a profound impact on people's thinking. However, social pressure only has a notable impact on everyday environmental behavior. Ultimately, fostering the right environmental values and instilling a strong sense of personal social responsibility proves to be the most impactful methods for encouraging residents to adopt green consumption habits.

Secondly, out of all the internal elements impacting citizens' green consumption behavior, environmental awareness is the most significant. The β-value indicates from Table 13 indicates that environmental cognition has a greater influence than psychological factors. This could be because environmental cognition is a type of cognition that directly correlates with green consumption behaviors and can do so more successfully than psychological factors; as a result, enhancing residents' environmental cognition is a useful tactic to encourage green consumption behaviors.

Thirdly, the most important external element impacting consumers' green consumption behavior is market incentives. Given that rural residents typically come from lower socioeconomic backgrounds and therefore place a higher value on financial support and subsidies when it comes to their consumption choices, Table 13's β-values show that market incentives have the greatest influence on green behavior when compared to other influencing factors. As a result, offering financial incentives, such as price subsidies, is a useful tactic for encouraging green behavior. Furthermore, market incentives should have varying impacts in regions of different economic development. For instance, in more prosperous areas, residents with higher incomes may experience diminishing marginal benefits, resulting in a reduced role for market incentives. In economically disadvantaged areas, residents struggle to make ends meet and often resort to non-environmentally friendly behaviors. In this case, market incentives play a crucial role in encouraging residents to adopt green consumption habits.

Fourthly, social pressure was found to have the smallest influence among the factors that were analyzed. While social pressure does play a significant role in shaping daily environmental behavior, its influence on other forms of green consumption behavior is relatively limited. It appears that social pressure has minimal influence on overall green consumption behavior. This could be due to the low level of participation in green consumption among Chinese residents, which means they don't inspire others to join in through group dynamics. However, residents may still engage in daily environmental protection behaviors due to social pressure, in order to uphold their image among their peers or community.

Fifthly, as seen from the results of the study, among the influencing factors environmental perceptions have the greatest positive impact on daily environmental behavior, and market incentives have the greatest impact on the consumption of green products, the sharing economy, and green consumption behaviors in production, which is very similar to real-life experiences. High environmental awareness consumers will make every effort to engage in everyday environmental behaviors; but, to effectively encourage green consumption behaviors that are linked to economic consumption, some form of financial incentive is required. With the help of the two aforementioned influencing variables, policymakers may effectively encourage rural inhabitants' green consumption habits and so support China's sustainable development.

The above findings of this thesis are only relevant at the time the survey was conducted, which took place between 1 February and 29 February 2024.

There are three points that can be improved in this paper. Firstly, it is important to note that the data used in this paper are research data, not macroeconomic data. While efforts have been made to enhance the representativeness of the data through demographic characteristics and increasing the sample size, it is worth considering that the conclusions drawn from the data may still be somewhat biased. This is because the sample size does not reach a level that can cover a larger portion of the total population, given the limitations of individual ability. Nevertheless, because individuals are unable to gather a sample size that encompasses a significant portion of the total population, the conclusions derived from the data may still possess some bias. Subsequent studies may further expand the sample size if they have the capacity to do so in order to draw more accurate conclusions. Secondly, due to the large number of categories of influencing factors and green consumption behaviors explored in this paper, only the direct impacts of various types of influencing factors on various types of green consumption behaviors are discussed, and potential moderating and mediating variables are not examined. Additionally, the green consumption behavior in different regions of China (East, Central, West, and Northeast) may vary due to various factors. However, it is important to note that this paper's sample size is limited, with only 73 data points from the Northeast region. As a result, it is challenging to draw definitive conclusions. Future research should focus on conducting more extensive investigations in this area. In future research, I aim to address and enhance the aforementioned three deficiencies.

6. Conclusions

This paper makes a significant theoretical contribution by expanding the research method on green consumption behavior. It creatively classifies green consumption behavior in the new era and examines the influencing factors for each classification. This innovative approach can be applied in future research and has the potential to redefine green consumption behavior as times change. Previous studies have shown that rural residents are less likely to engage in green consumption behavior due to factors such as income and living habits. The value of this paper lies in its practical application, which can help the government and institutions promote green consumption behavior among rural residents. By doing so, we can enhance environmental protection and promote sustainable development.

The aforementioned study's findings conclude with the following observations:

To begin with, It is essential to prioritize the education of rural residents, particularly through diverse environmental education initiatives, in order to cultivate a strong ecological consciousness and encourage sustainable consumption habits. It is important for schools to enhance green education in a holistic way and consistently enhance students' understanding of environmental issues. In the context of the information age, it is important to actively explore a new education model that combines the Internet and education. This will help to effectively promote green consumption behavior among residents.

Secondly, the theory of supply and demand has had a significant impact on the market incentive mechanism, which plays a crucial role in shaping green consumption behavior. It is essential to address the issue of income disparity between urban and

rural areas and provide subsidies for rural residents to encourage their participation in green consumption. China has long struggled with the imbalance between urban and rural development, and finding an effective solution to this problem can help drive green consumption behavior among rural residents. Furthermore, market incentives can have a significant impact on encouraging environmentally friendly consumption habits in economically disadvantaged areas.

Thirdly, there is a need to enhance technological capabilities for producing eco-friendly products and lower the costs and prices associated with them. One way to encourage consumer purchases is by reducing taxes on these products and implementing regulations to control their prices. Furthermore, it should lower the expenses associated with consumers' eco-friendly habits and even offer incentives for their daily green consumption choices. This will allow residents to engage in green consumption practices at a more affordable price, ultimately encouraging a shift in overall consumption patterns.

Fourthly, it is of utmost importance to enhance the promotion of green consumption in schools, communities, and village councils, as these areas are identified as areas where knowledge about green consumption is not widely spread. By addressing these areas of improvement, we can effectively encourage residents to adopt more environmentally friendly consumption habits. It would be beneficial for the government to utilize the media and explore creative ways of promoting positive messages. For instance, using comic strips and short videos can effectively highlight the negative consequences of unsustainable consumption patterns. This approach can encourage individuals to reflect on their own behaviors and empower them to make greener choices. Ultimately, these efforts will contribute to the sustainable development of China.

Fifthly, the laws and regulations on waste recycling should be further improved. The law provides people with behavioral patterns and guides them to carry out correct behavior, and it serves to regulate people's daily life behavior; under the constraints of the laws and regulations, residents will definitely perform better in waste recycling and separation.

These insights can help the Chinese government to more effectively promote the green consumption behavior of rural residents, and thus promote China's sustainable development.

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