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The Impact of Green Purchase Intention on Compensatory Consumption: The Regulatory Role of Pro-Environmental Behavior

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Abstract: Green purchasing behavior refers to the potential of consumers to reduce the impact on the environment and the excessive loss of natural resources in the procurement process as far as possible under the premise of meeting their own needs. This behavior is not only helpful in alleviating environmental problems but also is an important way to achieve sustainable development. However, whether consumers will increase non-green or excessive compensatory consumption behaviors due to the "moral permission" psychological tendency, present after purchasing green products, is an important question in the current research. This study explores the effect of green purchase intention on compensatory consumption behavior, with special attention to the moderating role of pro-environmental behavior in this relationship. With the increasingly severe global environmental problems, green consumption, as a pro-environmental behavior, has gradually become the focus of social attention. By analyzing the relationship between consumers' green purchase intention and their subsequent compensatory consumption behavior, this study further reveals the important role of pro-environment behavior in the consumption decision-making process.

Keywords: green purchase intention; compensatory consumption; pro-environmental behavior

Citation: Chen, C.; Li, D.; Qian, J.; Li, Z. The Impact of Green Purchase Intention on Compensatory Consumption: The Regulatory Role of Pro-Environmental Behavior. *Sustainability* **2024**, *16*, 8183. https://doi.org/10.3390/su16188183

Academic Editor: Zhilin Yang

Received: 23 July 2024
Revised: 12 September 2024
Accepted: 18 September 2024
Published: 19 September 2024

1. Introduction

As the importance of consumption for economic growth becomes increasingly prominent, various countries' consumer groups and consumption levels are also rising. This has led to various phenomena of overconsumption and irrational consumption, resulting in the waste of resources and energy, as well as exacerbating the deterioration of the ecological environment. Yuriew (2020) [1] indicated that this situation has raised people's early concerns about sustainable development. In response to these concerns, some scholars, such as Ajzen (1991) [2], began academic explorations of the seemingly contradictory relationship between economic growth and environmental protection. By the end of the 20th century, with the appearance of ecological problems such as the depletion of natural resources, frequent climate change, and environmental pollution, countries began to realize that environmental destruction would hinder development. To raise public awareness of environmental issues, all sectors of Chinese society actively participate in environmental protection actions. Kilbourne et al. (2005) [3] proposed that social norms play an important role in shaping the public's cognitive framework and attitude towards environmental issues. Many scholars, such as Dodds (1991) [4], have actively integrated green concepts into various fields of research and practice, with green purchasing intention being an important aspect reflecting consumers' preference for green products or services.

In recent years, China has begun to focus on promoting green development. In 2021, the State Council put forward an opinion on establishing a green, low-carbon, and circular economic development system, emphasizing the comprehensive promotion of green planning, design, investment, construction, production, circulation, living, and

consumption. The concept of the green economy is not a new one, with its historical origins tracing back to the 1970s; however, since 2009, it has gradually become a global focus. The key to this transition is that international authoritative organizations actively advocate for global companies to adopt and implement economic strategies aimed at reducing carbon footprints and promoting the renewable energy, injecting strong momentum into the vigorous development of the green economy [5]. According to the report "Green Prospects: China's New Era" released by the Chinese State Council Information Office in January 2023, China has preliminarily established a green spatial pattern. While actively promoting green consumption in China, leading enterprises in various industries are also studying the consumption habits of consumers. Tsarenko (2013) believes that environmentally friendly consumption habits are equally important as the environmental sustainability that enterprises adhere to [6]. This study incorporates green purchase intention, compensatory consumption and the pro-environment behavior into the same research framework, which enriches the research content in related fields and provides new perspectives and ideas for future research. The object of this research is the consumers who have a green purchase intention. Green purchase intention refers to the psychological tendency of consumers to choose environmentally friendly and sustainable products or services in the purchase-decision-making process. This tendency reflects consumers' emphasis on environmental protection and sustainable development, as well as their psychological motivation to pay higher prices for environmentally friendly products or services.

The research gap of the green purchase intention, compensatory consumption and the pro-environmental behavior can be summarized in two aspects: (1) Firstly, there is limited literature related to green consumption in compensatory consumption research. Balaskas et al. (2023) [7] indicate that one of the motivations for consumers to purchase green products is to make up for past unethical behavior, restore their image, and regain self-affirmation. So, is there a correlation between green product purchases and compensatory consumption in general? What is the mechanism of action between them? Are there other factors at play? In response to these questions, this study conducts corresponding research. (2) Secondly, compensatory consumption is a neglected topic. The research on compensatory consumption is still weak and it is still focused on the definition of the concept, the dimension division, and the scale design and development [8]. The highlight of this paper involves combining this with other fields. As a kind of spending behavior derived from psychological needs, with the arrival of the third consumption era, compensatory consumption will gradually become a new focus in the current consumption field, which helps to explain various irrational spending behaviors, especially those with symbolic significance [9]. This paper focuses on the impact of consumers' green purchase intention on compensatory consumption, so as to promote the in-depth development and innovation in this field. (2) Thirdly, in the research field of exploring green consumption and pro-environment behavior, planned behavior theory and normative activation theory models are widely recognized as two widely used and relatively mature theoretical frameworks [10]. However, few scholars have integrated the two into a unified framework for in-depth research. This paper integrates the planned behavior theory and normative activation theory into a unified TPB-NAM model, taking consumer behavior as the main research direction and integrating the knowledge points of psychology, consumer behavior and the other interdisciplinary fields, aiming to explore the variables affecting consumers' compensatory consumption.

2. Theoretical Model and Research Hypotheses

2.1. Theory of Planning Behavior

The theory of planned behavior (TPB) was proposed by Ajzen (1991) [2] as a psychological theory to explain and predict people's behavior decisions and intentions. The TPB model states that human behavior is influenced by three factors: behavioral beliefs, normative beliefs, and control beliefs which further lead to certain outcomes, such as attitudes towards the behavior, subjective norms, and perceived behavioral control collectively

shaping the formation of behavioral intentions. The theory of planned behavior provides a framework for a deeper understanding of individual behavior decisions and the formation of behavioral intentions, where individual behavioral attitudes, subjective norms, and perceived behavioral control collectively influence individual behavioral intentions, allowing for a better prediction and explanation of people's behavioral choices in specific situations. Shi et al. (2017) [11] stated that the theory of planned behavior has been widely used in researching purchase intentions and actual behavior, and this theory can effectively explain consumers' green purchasing behavior.

Personal behavior attitude (attitude). Ajzen (1991) [2] believes that attitude is the individuals' evaluation of specific behaviors. Personal attitude consists of individuals' cognition, evaluation, and emotions towards the behavior, including the goodness or badness of the behavior, importance, expected outcomes, and the values. Attitude is an important antecedent variable for purchase intention. According to Ru et al. (2018) [9], the more positive consumers' attitudes towards purchasing environmentally friendly products are, the stronger their intention to purchase. In terms of the subjective norm, Ajzen (1991) [2] suggests that the subjective norm includes important others' attitudes towards specific behaviors and social pressures, indicating that people are inclined to be influenced by social norms and others' opinions. Subjective norm is an important variable that positively affects participation in green consumption. Recent studies indicate that once consumers perceive that the "important others" around them tend to choose green products, they will demonstrate a stronger intention to purchase. Perceived behavioral control involves the ease or difficulty that a person perceives to exist around performing a specific behavior [12]. Perceived behavioral control includes an individual's assessment of their abilities, resources, and environmental conditions, as well as their confidence and control over implementing the behavior. When consumers believe they have enough money or other transaction resources and perceive no obvious purchase barriers from external factors throughout the entire decision-making process, they are more likely to decide to purchase green products through self-perceived behavior control. As Wang's (2019) research indicates, when consumers believe they can control these factors, they may engage in green purchasing behavior [13,14]. Regarding behavioral intention, behavioral intention reflects the readiness of an individual to perform a specific behavior. Ajzen (2002) [2] states that behavioral intention is a direct antecedent of behavior; the more favorable the attitude towards the behavior, the more favorable the subjective norm, and the stronger the perceived behavioral control, the stronger the individual's intention to perform the behavior.

2.2. Green Purchase Intention and Pro-Environmental Behavior

In consumer psychology, the concept of purchase intention originates from individual willingness, referring to the consumers' tendency and subjective attitude towards specific products or services. Purchase intention reflects the likelihood of individuals engaging in purchasing behavior, revealing the probability of consumers willing to purchase specific products or services. Different scholars have different views on the definition of green purchase intention [10].

Ajzen (1991) [2] put forward a theory on consumers' purchase intention, explaining consumers' purchasing behavior tendency and the psychological drive behind green products. This tendency is not only about the purchase itself but also about the effort and cost that may go into it [2]. With the popularity of the concept of environmental protection, consumers' preference for environmentally friendly products is also increasing [10]. Scholars have studied this phenomenon mainly from the perspectives of "attitude" and "behavioral tendency" [15–17]. Schneider (2001) [18] pointed out in his study that green purchase intention includes not only consumers' attitude towards environmentally friendly products but also their intention towards actual purchase behavior. The green purchasing intention defined in this paper refers to consumers' purchasing attitude towards green products and their purchasing tendency towards the green products [19]. In today's society,

environmental protection has become a hot topic of global concern, and the publicity of the government and the media has promoted this concept [19]. Therefore, the intention to buy green has become an important topic in academic research, and the environmental awareness of ordinary people has gradually increased. In this context, it is easy to foresee that there is a clear correlation between consumers' environmental intentions and environmental behavior [20–22].

When examining the influencing factors of pro-environmental behavior, we need to consider psychological attitudes, emotional involvement, personal norms, and social norms. Greaves et al. (2013) [23] applied the theory of planned behavior to analyze environmental behavior and confirmed the predictive role of personal attitudes in pro-environmental behavior. Despite the abundance of green products currently, consumers do not feel tired of them, but rather prefer these types of products. Consumers' attitudes towards green products partially reflect their purchase intentions, so it can be inferred that the willingness to purchase green products predicts pro-environmental behavior. Onel and Mukherjee (2016) [24] pointed out in their study that empathy towards environmental issues helps predict individuals' pro-environmental behaviors. Empathetic emotions make consumers more inclined to choose environmentally friendly products, thereby strengthening their willingness to purchase green products. In addition, Wan (2017) [25] emphasized the importance of personal norms in the decision-making process, as they help individuals make decisions that align with their values when facing ethical choices, encouraging active participation in social activities and environmental protection. Schwartz (1981) [26] elaborated on the critical role of a sense of responsibility in the subsequent stages following individuals' improper behaviors, considering it as a core indicator of individuals' cognitive depth and self-restraint towards their behaviors.

This perspective highlights that a sense of responsibility is not only the basis of moral judgment but also an important driving force for individual behavior adjustment. Furthermore, Kollmuss (2002) [27] deepened the discussion on this basis, proposing that personal moral norms are one of the specific manifestations of a sense of responsibility, which not only instills the individuals with a sense of pride for compliance but also reveals the feelings of guilt and self-blame that individuals will experience when moral norms are ignored. The triggering of these emotions has far-reaching implications for promoting the recovery and strengthening of moral behavior [28]. Therefore, personal norms are also one of the important factors predicting pro-environmental behavior. When individuals' norms are challenged by environmental ethics, consumers may increase their willingness to purchase green products when considering them, thereby participating in environmental protection behaviors [29]. In conclusion, it can be inferred that under the dual influences of personal norms and environmental empathy, there is a certain correlation between the willingness to purchase green products and pro-environmental behavior.

Based on the above discussions, this paper puts forward the following hypothesis:

Hypothesis 1 (H1). *Green purchase intention has a positive and significant impact on consumers' pro-environmental behavior*.

2.3. Pro-Environmental Behavior and Compensatory Consumption

The concept of pro-environmental behavior originates from pro-social behavior, which is one of the manifestations of the social factors driving individual behavior. Although scholars have slightly different definitions of pro-environmental behavior, the core viewpoint is consistent—that individuals have a positive impact on the environment. Pro-environmental behavior is defined as individual actions taken consciously under the guidance of social moral sense and a sense of responsibility to avoid or solve environmental problems [15,30,31]. From the perspective of environmental impact, Deng et al. (2019) [32] argue that consciously reducing negative impacts on the environment and natural resources and actively improving the harmonious coexistence between humans and nature can be classified as pro-environmental behavior. When exploring the motives and behaviors of

consumers choosing eco-friendly products, Kamalanon (2022) [33] deepened the existing theoretical framework, emphasizing that consumers' choice of green products stems not only from a deep concern for environmental protection but also the concrete manifestation of their social responsibility [34]. Consumers tend to view purchasing eco-friendly products as a moral obligation and social responsibility practice rather than simply environmental protection behavior, showing their willingness to pay a premium for eco-friendly products, which reflects their value recognition and pursuit of a sustainable lifestyle and harmonious coexistence [34–37]. The pro-environmental behavior defined in this study is an ecological, harmonious, balanced concept of environmental protection behavior aimed at actively taking measures to protect the environment [28,29]. Pro-environmental awareness is increasingly evident in modern populations, as knowledge spreads widely, people have a longer-term consideration for the future, and they deeply understand the close relationship between human survival and a stable environment [34]. Therefore, only by protecting the environment can we achieve more lasting and sustainable development [38,39].

Related research has found that psychological trauma (such as a damaged self-identity, a lack of control, and a lack of a sense of belonging) often leads to compensatory consumption behavior, while a moral sense is a part of self-worth, and feelings of moral deficiency can result in damaged self-worth [40–42]. A moral imbalance can significantly influence consumers' willingness to purchase green products, with feelings of moral guilt playing a mediating role while moral disengagement acts as a moderator in this relationship [43–45]. Currently, the destruction of the world's environment has brought about rapid economic development, with everyone enjoying the economic aspects but also finding it difficult to escape responsibility for the environment [46–48]. As Grunert (1993) [49] pointed out in his study on compensatory consumption models, any individual may engage in compensatory consumption behavior under specific circumstances, introducing the concept of "X-Y resources". For example, there are two items, an "X" item and a "Y" item, where normally the "X" item meets the needs of the "X" item, but adding the "Y" item can also fulfill the needs of the X item, known as compensation. When consumers face environmental destruction events, anxiety and negative emotions such as unease emerge due to the influence of pro-environmental behavioral norms. They desperately desire to relieve themselves from these negative emotions, often compensating by purchasing green products, thereby alleviating feelings of guilt and helplessness caused by environmental destruction [50–53]. In conclusion, it can be speculated that there is a correlation between pro-environmental behavior and compensatory consumption.

Hypothesis 2 (H2). *Pro-environmental behavior has a positive and significant impact on compensatory consumption*.

2.4. Green Purchase Intention and Compensatory Consumption

Due to the increasing diversification of green consumption forms in today's society, more and more consumers have come into contact with green products or engaged in green consumption to some extent [54]. Green consumption is not only an environmentally friendly behavior but also a complex social phenomenon, involving the shaping of individual identity and the pursuit of social group identity [55–57]. In today's society, environmental protection has become a core value, and adopting green consumption behavior is often seen as an expression of this value [58]. However, for those consumers who have not yet engaged in green consumption or purchased eco-friendly goods or services, there are cognitive barriers that distinguish them from those who have already made such purchases [58,59]. Lee and Shrum (2012) [60] pointed out that individuals may establish a sense of social belonging through consumption, and compensatory consumption becomes a way to alleviate a lack of belonging. Xia et al. (2020) [61] found through empirical research that individuals who experience social exclusion or rejection may lack a sense of belonging, which in turn increases their preference for environmental products and their willingness to engage in compensatory purchasing [62–64]. Through the compensatory

consumption of green products, those with low willingness to purchase green products in the past seek to integrate into specific social groups and gain a sense of social belonging [65]. The individuals who have not yet been exposed to green consumption or green products may feel a social pressure different from their communication circles [66,67]. However, with the increasing awareness of environmental protection and society's praise for green consumption, more and more consumers are unconsciously engaging in compensatory consumption to break through these cognitive barriers, increasing their willingness to purchase green products to achieve a sense of social belonging and identity [68,69].

Hypothesis 3 (H3). *Green purchase intention has a positive and significant impact on compensatory consumption.*

2.5. The Moderating Effect of Pro-Environmental Behavior on Green Purchase Intention and Compensatory Consumption

The relationship between the variables of green purchasing intention, pro-environmental behavior, and compensatory consumption are individual behavioral attitudes, individual norms, and behavioral intentions. These three are the important factors that drive individuals to implement altruistic intentions behaviors. Individual behavioral attitudes are the external manifestations of individuals' outcome consciousness and responsibility attribution [70,71]. Consumer green purchasing intention reflects consumers' responsibility attribution for environmental protection and the outcome consciousness that doing so is beneficial for sustainable development [72]. The norm activation theory model indicates that the process of activating individual norms through outcome consciousness and responsibility attribution is also the process by which individual behavioral attitudes and subjective norms play a role in the theory of planned behavior [73,74]. At the same time, the model of the theory of planned behavior indicates that individual behavioral attitudes, subjective norms, and perceived behavioral control jointly influence individual behavioral intentions, and a pro-environmental behavior consciousness will have a positive influence on behavior [75–78]. That is, when consumers realize that not engaging in pro-social behavior brings negative consequences to others or other things, and recognize their responsibility for not engaging in pro-environmental behavior, their individual norms will be effectively activated, thereby prompting individuals to engage in pro-social behavior, ultimately leading consumers to engage in compensatory consumption behavior [79,80].

The three variables of green purchase intention, pro-environmental behavior, and compensatory consumption are closely related to individual attitudes, norms, and behavioral intentions [81–83]. These factors all play important roles in driving individuals to engage in altruistic behaviors. Individual behavioral attitude is an external expression that reflects an individual's cognition of outcomes and responsibility attribution. For example, consumers' green purchase intention is the attitude manifested by their cognition of environmental responsibility and the benefits of sustainable development. The norm activation model reveals how individual norms are activated through the cognition of outcomes and responsibility attribution, which is consistent with the roles of individual behavioral attitude and subjective norms in the theory of planned behavior [84]. According to the theory of planned behavior, individual behavioral intentions are jointly influenced by individual behavioral attitude and subjective norms, and perceived behavioral control. In this study, it is shown that the norms of pro-environmental behavior positively influence compensatory consumption behavior. When consumers realize that not engaging in pro-social behavior will have adverse consequences for others or other things, and recognize their responsibility for environmental protection and their personal norms will be effectively activated, prompting them to engage in pro-social behavior, ultimately leading to compensatory consumption behavior [85].

Hypothesis 4 (H4). *Pro-environmental behavior has a positive moderating effect on green purchase intention and compensatory consumption*.

3. Methods

3.1. Sample and Data Collection

(1) Pre-survey and questionnaire improvement: The pre-survey variables do not match the formal survey variables. In the pre-survey stage, the research variables are green marketing strategies, prosocial behaviors, and compensatory consumption. The study selected green marketing strategies as the independent variable, and the compensatory consumption of consumers as the dependent variable, to study the relationship between them, and introduced prosocial behavior as a mediating variable. This pre-survey used a questionnaire survey to collect data, with consumers exposed to green marketing as the survey respondents. Through an online questionnaire survey, a total of 202 questionnaires were distributed. After deduplication and a logic review, a total of 178 valid questionnaires were collected, with an effective questionnaire rate of 88.12%, indicating the positive retrieval rate of the questionnaire.
Based on the results of the pre-investigation on the reliability analysis, the α value of the green marketing attitude scale is 0.796, the α value of the compensatory consumption scale is 0.884, and the α value of the pro-social behavior scale is 0.890. The reliability test results of each variable are close to or above 0.8, demonstrating high consistency and stability, and indicating good reliability. Based on the results of the preliminary validity analysis, the KMO value for the green marketing attitude scale is 0.745, the KMO value for the compensatory consumption scale is 0.893, and the KMO value for the pro-social behavior scale is 0.886. In addition, the significance level of Bartlett's sphericity test for the three scales is all less than 0.05, indicating that the design of the preliminary survey questionnaire is practical and the validity is good.

(2) Formal investigation: The starting point of the paper involves exploring the relationship between consumer green purchase intention, pro-environmental behavior, and compensatory consumption. After the in-depth literature review, organization, and communication with the supervisor, the focus of this study has shifted from green marketing strategies to consumer green purchase intention while subdividing pro-social behavior and transforming it into a pro-environmental behavior variable. This study utilized a questionnaire survey to collect data, with ordinary consumers in society as the subjects. A total of 453 questionnaires were distributed through online surveys. After deduplication and logical review, the total of 425 valid questionnaires were collected, with an effective questionnaire ratio of 93.81%. The questionnaire retrieval rate was good, which enhanced the credibility of the experimental results in this study.

(3) Distribution of samples: Among the 425 samples, males accounted for 48.2%, and females accounted for 51.8%, slightly more than the males. In terms of the age structure of the respondents, they were mainly concentrated between 21 and 40 years old, with a total of 259 within this range, accounting for 60.9%. In terms of the academic qualifications of respondents, junior college and undergraduate degrees accounted for more than 70%, reaching 76.7%. In terms of the occupation of the respondents, company staff comprised the most, 146 people, accounting for 34.4% of the total number. In the terms of respondents' income, more than 61.4 percent had a monthly income of more than 3000 yuan (Table 1).

Table 1. Distribution of samples.

Category	Classification	Sample Count (n = 425)	Percentage (%)	Category	Classification	Sample Count (n = 425)	Percentage (%)
Gender	Male	205	48.2	Occupation	Student	83	19.5
	Female	220	51.8		Self-employed	76	17.9
Age	Below 20	72	16.9		Company employee	146	34.4
	21–30	141	33.2		Freelancer	69	16.2
	31–40	118	27.8		Unemployed	51	12.0
	Above 40	94	22.1	Monthly income level	None	80	18.8
Education	Below high school	50	11.8		0–3000 RMB	84	19.8
	College diploma	130	30.6		3000–6000 RMB	109	25.6
	Undergraduate	196	46.1		6000–10,000 RMB	68	16.0
	Postgraduate and above	49	11.5		Above 10,000 RMB	84	19.8

3.2. Variable Measures

(1) The measurement of green purchasing intention: Building on Schneider's (2001) [18] theoretical framework, this study divides the green purchasing intention variable into two dimensions: green purchasing attitude and the green purchasing inclination. Regarding the measurement of the green purchasing attitude dimension, four items on attitude were developed based on the literature by Cheung (2017) [86], Ding (2017) [87] and Ding (2018) [88]. The measurement of the green purchasing inclination dimension uses their developed four items on intention.

(2) Measurement of compensatory consumption variables: Building on the theoretical foundation of Wang et al. (2023) [89], this paper divides compensatory consumption behavior into five dimensions: symbolic, enhancement, hedonic, emotion repair, and resilience. Specifically, the symbolic dimension is measured using four items, the enhancement dimension is measured using three items, the hedonic dimension is measured using three items, the emotion repair dimension is measured using three items, and the resilience dimension is measured using three items.

(3) Measurement of pro-environmental behavior variables: This article refers to the research of Hong (2006) [90], believing that the research scale is practicable; thus, it is chosen as the tool to measure the pro-environmental behaviors in this study, which developed eleven items (Table 2).

Table 2. Reliability and validity (n = 425).

Variable		Item	Number
Green Purchase Intention	Green Purchase Attitude (TD)	1. Buying green products/services to protect the environment is a wise choice	TD1
		2. I support buying green products/services	TD2
		3. Buying green products/services will not make me feel worse	TD3
		4. Buying green products/services will not bring me any harm	TD4
		5. I think buying green products/services is a good idea	TD5
	Green Purchase Inclination (QX)	1. I am willing to buy green products/services	QX1
		2. I plan to buy green products/services from now on	QX2
		3. I plan to buy green products/services in the future	QX3
		4. I am willing to pay more cash for green products/services	QX4
		5. The proportion of green products/services consumption in my future expenses will increase	QX5

Table 2. *Cont.*

Variable		Item	Number
Compensatory Consumption	Symbolic (XZ)	1. I usually buy green products/services to enhance positive evaluations from others	XZ1
		2. I am willing to buy green products/services if they can enhance my interpersonal attractiveness	XZ2
		3. I usually buy green products/services that reflect my environmental image	XZ3
		4. Green products/services that reflect environmental protection usually increase my purchasing interest	XZ4
	Elevating (TS)	1. I am willing to buy green products/services if they can enhance my personality charm	TS1
		2. I am willing to buy green products/services if they can enhance my social value	TS2
		3. I am willing to buy green products/services if they can improve my moral quality	TS3
	Hedonic (XL)	1. I will buy green products/services to increase topics and enhance relationships with friends and family	XL1
		2. I will buy green products/services to celebrate important moments	XL2
		3. I will buy green products/services to gain new experiences	XL3
	Emotion Repair (XF)	1. Buying and experiencing green products/services can repair my mood when I am not feeling well	XF1
		2. Buying and using green products/services can uplift my mood	XF2
		3. Buying and using green products/services can release my negative emotions	XF3
	Resilience (KN)	1. If the ideal self is very environmentally friendly and does not match the real self, I will reduce discomfort by buying green products/services	KN1
		2. If others focus on environmental protection, I will buy green products/services to reduce threats to their identity	KN2
		3. If green products/services can help reduce my worries about environmental damage, then I am willing to buy them	KN3
Pro-environmental Behavior (QHJ)		1. Publicly expressing support for environmental protection (such as speeches, essays, etc.)	QHJ1
		2. Discussing environmental issues with others	QHJ2
		3. Reusing plastic bags	QHJ3
		4. Actively participating in activities organized by schools or environmental organizations	QHJ4
		5. Bringing reusable shopping bags when purchasing daily necessities	QHJ5
		6. Actively participating in various forms of environmental awareness and education activities	QHJ6
		7. Actively following environmental issues or conservation information reported in the media	QHJ7
		8. Turning off lights or fans when leaving the room if no one is there	QHJ8
		9. Accumulating empty beverage bottles, wine bottles, etc., and then selling them	QHJ9
		10. Advising others to stop environmental damage behaviors (such as littering, discharging sewage, etc.)	QHJ10
		11. Reusing the other side of waste paper or printing paper	QHJ11

4. Empirical Test and Results

4.1. Measurement Reliability and Validity

4.1.1. Measurement Reliability

Reliability testing refers to the process used to evaluate the stability and consistency of measurement tools (such as questionnaires, tests, and observations), commonly used in statistics and quantitative research. This process ensures that the measurement tools can produce reliable and consistent results in different contexts. Methods of reliability testing

include test–retest, internal consistency testing (such as Cronbach's Alpha coefficient, denoted as α coefficient), and the split-half reliability method. This article uses the α coefficient as the standard for reliability analysis. Generally, when the α coefficient is below 0.7, it indicates low consistency among the items in the scale and requires revision; when the α coefficient is between 0.7 and 0.9, it suggests acceptable internal consistency within the scale; if the α coefficient is above 0.9, it indicates the very good reliability of the scale, ensuring the full guarantee of the questionnaire's validity and reliability.

According to Table 3, the α value of the green purchase intention scale is 0.855, the α value of the compensatory consumption scale is 0.858, and the α value of the pro-environmental behavior scale is 0.938. The α value of the green purchase intention scale for the green purchase attitude dimension is 0.880, and the value for the green purchase intention scale for the green purchase intention dimension is 0.880; The α value of the symbolic dimension of the compensatory consumption scale is 0.838, the α value of the enhancing dimension is 0.813, the α value of the enjoyment dimension is 0.809, the α value of the repairing dimension is 0.826, and the α value of the resisting dimension is 0.812. According to the reliability test results of the three variables, Cronbach's α values are all above 0.8, indicating that the measurement results of the scales used in this study are highly consistent, stable, and reliable.

Table 3. Reliability analysis of samples.

Variable	Cronbach's Alpha of the Subscales	Dimension	Items	Cronbach's Alpha After Deletion	Cronbach's Alpha of Subscales
Willingness to Purchase Green Products	0.855	Attitude towards Green Purchases	TD1	0.840	0.880
			TD2	0.844	
			TD3	0.840	
			TD4	0.838	
			TD5	0.844	
		Green Purchasing Intention	QX1	0.844	0.880
			QX2	0.842	
			QX3	0.843	
			QX4	0.839	
			QX5	0.841	
Compensatory Consumption	0.858	Symbolic	XZ1	0.850	0.838
			XZ2	0.849	
			XZ3	0.852	
			XZ4	0.852	
		Enhancement	TS1	0.850	0.813
			TS2	0.850	
			TS3	0.851	
		Hedonic	XL1	0.852	0.809
			XL2	0.852	
			XL3	0.851	
		Emotion Repair	XF1	0.848	0.826
			XF2	0.847	
			XF3	0.847	
		Resilience	KN1	0.850	0.812
			KN2	0.854	
			KN3	0.852	
Pro-Environmental Behavior	0.938	Pro-Environmental Behavior	QHJ1	0.879	0.938
			QHJ2	0.879	
			QHJ3	0.883	
			QHJ4	0.882	
			QHJ5	0.884	
			QHJ6	0.881	
			QHJ7	0.880	
			QHJ8	0.879	
			QHJ9	0.880	
			QHJ10	0.877	
			QHJ11	0.875	

4.1.2. Measurement Validity

Validity testing is used to assess whether a measuring tool accurately measures the desired concepts or traits. This process aims to examine whether the items effectively express the conceptual information of the research variables or dimensions. In contrast to reliability analysis testing the overall scale, validity analysis primarily examines the appropriateness of individual items within the scale. This study employs the KMO (Kaiser–Meyer–Olkin) measure and Bartlett's test of sphericity for validity analysis. The KMO measure is used to test the intercorrelations among variables, and a KMO value closer to 1 indicates stronger intercorrelations among variables. Bartlett's test of sphericity is used to test whether the sample comes from a population following a normal distribution, with a smaller significance level being more desirable. It is widely accepted in academia that, for validity analysis, the KMO value should be greater than 0.7, and the significance level of Bartlett's test of sphericity should be less than 0.05.

As shown in Table 4, the KMO value of the green purchase intention scale is 0.889, the compensatory consumption scale is 0.838, and the pro-environmental behavior scale is 0.964. In addition, the significance levels of Bartlett's sphericity tests for the three scales are all less than 0.05. Therefore, the validity of this survey questionnaire is good.

Table 4. Validity analysis of the samples.

Variable	KMO Value	Bartlett Sphericity Test Significance
Green purchasing intention	0.889	<0.05
Compensatory consumption	0.838	<0.05
Pro-environmental behavior	0.964	<0.05

4.2. Common Method Variance

This study conducted a Harman single factor test on the collected data, examining the 27 items of the three variables in the study. The results extracted seven factors with eigenvalues greater than 1, with the maximum factor variance explained to be 29.78% (less than 40%), indicating that there is no serious common method bias in this study.

4.3. Differentiation Analysis

According to the results in Table 5, independent samples *t*-tests were conducted to examine whether there were gender differences in green buying intention, compensatory consumption, and pro-environmental behavior. The results of the tests on green buying intention showed that, as the significance *p*-values were all greater than 0.05, there were no significant differences between genders in green buying intention, compensatory consumption, and pro-environmental behavior.

Age differences test: Using the one-way ANOVA test to analyze whether there are the age differences in green purchase intention, compensatory consumption, and pro-environmental behavior. As shown in Table 5, the significance of the green purchase intention scale and its dimension is $p > 0.05$, so there is no significant difference in green purchase intention among consumers of different ages; the significance of the compensatory consumption scale and its symbolic, enhancing, hedonic and restorative dimensions is $p > 0.05$, so there is no overall significant difference in compensatory consumption behavior among consumers of different ages, but because the resilience dimension of compensatory consumption is significant at $p < 0.05$, there is a significant difference in consumers' resilience in compensatory consumption; the significance of the pro-environmental behavior scale is $p < 0.05$, so there are significant differences in pro-environmental behavior among consumers of different ages.

Table 5. Analysis of differences in samples.

Variable	Gender	*n*	M ± SD	*t*	Significance *p*				
					Gender	Age	Education	Occupation	Income
Green purchasing intention (GPI)	Male	205	3.70 ± 0.79	0.938	0.349	0.954	0.954	0.611	0.945
	Female	220	3.63 ± 0.88						
Green purchasing attitude (TD)	Male	205	3.69 ± 1.02	1.050	0.294	0.796	0.577	0.812	0.370
	Female	220	3.58 ± 1.07						
Green purchasing tendency (GPT)	Male	205	3.72 ± 1.01	0.451	0.652	0.398	0.785	0.641	0.798
	Female	220	3.68 ± 1.06						
Compensatory consumption (CC)	Male	205	3.72 ± 0.67	−0.507	0.613	0.149	0.922	0.129	0.663
	Female	220	3.75 ± 0.71						
Symbolic	Male	205	3.74 ± 1.02	−1.381	0.168	0.294	0.962	0.396	0.366
	Female	220	3.87 ± 0.94						
Enhancement	Male	205	3.93 ± 0.89	1.258	0.209	0.468	0.968	0.177	0.850
	Female	220	3.81 ± 1.09						
Hedonism	Male	205	3.73 ± 1.04	−0.430	0.667	0.609	0.906	0.976	0.979
	Female	220	3.78 ± 1.00						
Restoration	Male	205	3.57 ± 1.05	−0.410	0.682	0.496	0.905	0.094	0.647
	Female	220	3.61 ± 1.12						
Resilience	Male	205	3.60 ± 1.08	−0.387	0.699	0.016	0.408	0.131	0.385
	Female	220	3.65 ± 1.08						
Pro-environmental behavior (PEB)	Male	205	3.64 ± 1.00	−0.786	0.432	0.006	0.146	0.366	0.254
	Female	220	3.71 ± 0.97						

Analysis of educational differences: Using the one-way ANOVA test to analyze the existence of occupational differences in green purchase intention, compensatory consumption, and pro-environmental behavior. As shown in Table 5, because the significance level $p > 0.05$, there is no significant difference in green purchase intention, compensatory consumption, and pro-environmental behavior levels among consumers with different educational backgrounds.

Analysis of occupational differences: Using the one-way ANOVA test, we analyzed whether there are occupational differences in green purchase intention, compensatory consumption, and pro-environmental behavior. As shown in Table 5, because the significance level $p > 0.05$, there is no significant difference in green purchase intention, compensatory consumption level, and pro-environmental behavior level among consumers with different occupations.

Analysis of differences in monthly income levels: Using the one-way ANOVA, the analysis was conducted on whether there are the occupational differences in green purchasing intention, compensatory consumption and pro-environmental behavior. As shown in Table 5, since the significance level $p > 0.05$, there is no significant difference in green purchasing intention, compensatory consumption and the pro-environmental behavior among consumers with different monthly incomes.

4.4. Relevance Analysis

The correlation analysis of consumers' willingness to purchase green products, compensatory consumption, and pro-environmental behavior is shown in Table 6. In the table, * indicates $p < 0.05$, ** indicates $p < 0.01$, and *** indicates $p < 0.001$. The results show that there is the significant positive correlation between willingness to purchase green products and pro-environmental behavior ($p < 0.01$), supporting Hypothesis 1. Pro-environmental behavior is significantly positively correlated with compensatory consumption ($p < 0.01$), supporting Hypothesis 2. There is a significant positive correlation between willingness to purchase green products and compensatory consumption ($p < 0.01$), supporting Hypothesis 3.

Table 6. Correlation analysis of variables.

	GPI	TD	QX	CC	XZ	TS	XL	XF	KN	PEB
GPI	1									
TD	0.803 **	1								
QX	0.800 **	0.284 **	1							
CC	0.566 **	0.486 **	0.421 **	1						
XZ	0.341 **	0.268 **	0.278 **	0.683 **	1					
TS	0.370 **	0.336 **	0.256 **	0.662 **	0.304 **	1				
XL	0.393 **	0.347 **	0.282 **	0.638 **	0.269 **	0.285 **	1			
XF	0.474 **	0.397 **	0.362 **	0.721 **	0.359 **	0.337 **	0.389 **	1		
KN	0.324 **	0.292 **	0.227 **	0.635 **	0.216 **	0.354 **	0.249 **	0.335 **	1	
PEB	0.312 **	0.260 **	0.240 **	0.567 **	0.190 **	0.301 **	0.244 **	0.310 **	0.881 **	1

** indicates $p < 0.01$.

4.5. Regression Analysis

There is a significant relationship between consumers' willingness to purchase green, compensatory consumption, and pro-environmental behavior, which preliminarily confirms the research hypothesis of this paper. To further examine the causal relationships between these variables, regression analysis is needed. This paper plans to use linear regression to test the causal relationships between these variables and has established two indicators as regression standards, including the significance of F-test and R^2. When the p value is less than 0.05, it indicates that the regression model is effective. The higher the value of R^2, the better the model's goodness of fit. If the VIF is less than 5, it proves that there is no multicollinearity between variables.

Regression analysis of green purchasing intention on pro-environmental behavior: This linear regression takes two dimensions of green purchasing intention, green purchasing attitude and green purchasing tendency, as independent variables, and views pro-environmental behavior as the dependent variable. The data in Table 7 shows that the F value is 22.871, and the statistical significance p is less than 0.001, confirming the validity of the regression model. The VIF values are all less than 5, indicating that there is no multicollinearity between the two independent variables. Since the regression coefficient is 0.195 greater than zero, this indicates that green purchasing attitude has a significant positive impact on pro-environmental behavior. Since the regression coefficient is 0.170 greater than zero, this indicates that green purchasing tendency has a significant positive impact on pro-environmental behavior, both of which support Hypothesis H1.

Table 7. Regression analysis of green purchase intention on pro-environmental behavior.

Model	Unstandardized Coefficients		Standardized Coefficients Beta	*t*	Significance	Collinearity Statistics	
	B	Standard Error				Tolerance	VIF
(Constant)	2.336	0.204	0.209	11.476	0.000	0.919	1.088
Green Purchase Attitude	0.195	0.045		4.329	0.000		
Green Purchase Intention	0.170	0.045	0.181	3.751	0.000	0.919	1.088
		R^2			0.098		
		Adjusted R^2			0.094		
		F			22.871		
		p			<0.001		

Regression analysis of parental environmental behavior on compensatory consumption: This linear regression takes parental environmental behavior as the independent variable and views compensatory consumption as the dependent variable. The data in Table 8 shows that the F value reaches 200.689, with a statistically significant p less than 0.001, confirming the validity of this regression model. Since the regression coefficient

is 0.567 and greater than zero, this indicates that parental environmental behavior has a significant positive impact on compensatory consumption, supporting Hypothesis H2.

Table 8. Regression analysis of filial piety behaviors on compensatory consumption.

Model	Unstandardized Coefficients		Standardized Coefficients Beta	*t*	Significance	Collinearity Statistics	
	B	Standard Error				Model	B
(Constant)	2.268	0.107	0.567	21.186	0.000	1.000	1.000
Pro-environmental behavior	0.399	0.028		14.166	0.000		
		R^2			0.322		
		Adjusted R^2			0.320		
		F			200.689		
		p			<0.001		

Green purchase intention and the return analysis of compensatory consumption. This linear regression takes green purchase intention as the independent variable and views compensatory consumption as the dependent variable. As shown in Table 9, the F value reaches 100.675, with a statistical significance of *p* less than 0.001, confirming the validity of the regression model. The VIF values are all less than 5, indicating the absence of multicollinearity between the two independent variables. Since the regression coefficient is 0.262 greater than zero, this indicates that the green purchase attitude has a significant positive impact on compensatory consumption. Since the regression coefficient is 0.203 greater than zero, this indicates that green purchase tendency has a significant positive influence on compensatory consumption which supports Hypothesis H3.

Table 9. Regression analysis of purchase green products on compensatory consumption.

Model	Unstandardized Coefficients		Standardized Coefficients Beta	*t*	Significance	Collinearity Statistics	
	B	Standard Error				Model	B
(Constant)	2.029	0.124	0.399	16.374	0.000	0.919	1.088
Green Purchase Attitude	0.262	0.027		9.545	0.000		
Green Purchase Intentions	0.203	0.028	0.307	7.351	0.000	0.919	1.088
		R^2			0.323		
		Adjusted R^2			0.320		
		F			100.675		
		p			<0.001		

The mediating role of environmental behavior: This study utilized Bootstrap statistical techniques to explore the mediating role and conducted an in-depth empirical analysis of the mediating effect of environmental behavior using the fourth model of the SPSS 26.0 software Process plugin. The Bootstrap test relies on the range of the indirect effects (BootLLCI, BootULCI) to determine the presence of the mediating effect by whether it surrounds 0. Specifically, when the range of the indirect effect excludes 0, it indicates a significant mediating effect; conversely, if it includes 0, the mediating effect is not significant. Furthermore, when the indirect effect is significant, if the range of the direct effect (BootLLCI, BootULCI) includes 0, it means the mediating variable plays a fully mediating role; whereas if the range of the direct effect does not include 0, it indicates the mediating variable is a partial mediator.

As shown in Table 10, the indirect interval of green purchase intention and compensatory consumption is (0.078, 0.1453), with the indirect interval not including 0, the direct interval is (0.2952, 0.4137), and the direct interval also does not include 0. This indicates

that pro-environmental behavior plays a partially mediating role between green purchase intention and compensatory consumption, supporting Hypothesis H4.

Table 10. Testing the mediating effect of pro-environmental behavior.

	Effect	**se**	***t***	***p***	**LLCI**	**ULCI**
Total effect	0.4657	0.033	14.1152	0	0.4009	0.5306
Direct effect	0.3545	0.0301	11.7603	0	0.2952	0.4137
Indirect effect						
Effect	Boot SE		Boot LLCI		Boot ULCI	
0.1112	0.017		0.078		0.1453	

5. Discussion

Based on a comprehensive review of the literature in the areas of green purchase intention, pro-environmental behavior, and compensatory consumption, this paper constructs a new theoretical model and proposes corresponding research hypotheses. The theoretical model is empirically tested using a mediation model, leading to a series of empirical analysis results. This chapter will summarize the research conclusions based on these empirical findings, providing guidance for governments and businesses on managing consumer compensatory behaviors. Additionally, the paper outlines future research directions and analyzes the limitations of the study.

5.1. The Effect of Green Purchase Intention on Pro-Environmental Behavior

In today's society, environmental protection has become a hot topic of global concern. The publicity of the government and the media has promoted this concept, ensuring it is deeply rooted in the hearts of people, and the environmental awareness of ordinary people has gradually increased. Therefore, green purchase intention has become an important subject of academic research. In this context, it is easy to foresee a clear correlation between consumers' green purchase intention criteria and pro-environmental behavior norms. Under today's social norms that focus on environmental protection, consumers may increase their willingness to buy green when making green decisions so that more and more people will adopt personal norms of environmental behavior and make positive behaviors in order to protect the environment and reduce environmental damage. Empirical studies have confirmed the positive impact of green purchase intention on pro-environmental behavior. This impact is not only reflected in consumers' willingness to buy environmentally friendly products but also in practical actions, such as reducing energy consumption, waste sorting, and choosing renewable resources.

Between the purchasing decision and behavior practice, consumers' choice constitutes a close link between green purchasing intention and pro-environment behavior. The awareness and attitude towards environmental protection have a direct impact on consumers' green purchase intention. When they are aware of the environmental impact of their purchasing decisions, they are more likely to choose environmentally friendly products. This perception is not only driven by an individual's internal moral code, but is also shaped by social circumstances such as family education, peer influence, and media advocacy. However, we must note that there is a gap between green buying intentions and actual environmental behavior. Although consumers express a willingness to buy environmentally friendly products, actual action can be influenced by a variety of factors, including product price, convenience and quality.

5.2. The Effect of Pro-Environmental Behavior on Compensatory Consumption

With the government's support and promotion of green policies, the wide spread of green concepts and the increasingly visible pro-environmental behavior norms among modern people have been encouraged. People have the more long-term consideration for the future and know that human survival is closely related to a stable environment, so only

by protecting the environment can we achieve more lasting and sustainable development. When consumers are faced with environmental damage events, due to the normative influence of pro-environmental behavior awareness, anxiety and other negative emotions will emerge, and the heart is eager to get rid of such negative emotions, so people often compensate for this themselves by buying green products and carrying out other behaviors, so as to alleviate the guilt and helplessness caused by environmental damage. This kind of compensatory consumption behavior is facilitated by individual pro-environmental behavior norms which reflects consumers' concern and sense of responsibility for environmental issues.

When a person begins to recognize that their actions may have an impact on the environment, they will often be inclined to take positive environmental actions to counteract this negative impact. Buying green products is not only an action performed for personal needs but also as a positive response to the environment. It can meet the needs of individuals while minimizing the damage to the environment. Therefore, the pro-environment behavior code has a positive impact on the compensatory consumption of consumers. Consumer environmental awareness and behavior often go hand in hand. They are willing to express their concern and support for the environment by purchasing green products, thus practicing environmental protection concepts in their daily lives. This positive behavior not only reflects the individual's sense of environmental responsibility but also provides impetus and support for society to establish more sustainable consumption patterns.

However, it is important to note that compensatory consumption, while it can alleviate an individual's environmental anxiety, is not a substitute for actual pro-environmental actions. Merely relying on the purchase of green products to alleviate negative emotions, without changing their lifestyle and consumption habits, ultimately cannot fundamentally solve environmental problems. Therefore, with today's social norms for environmental protection gradually imperceptible and eventually internalized into the individual norms of consumers' pro-environment behaviors, governments and enterprises should continuously optimize consumers' moral feedback experience in compensatory consumption so as to better predict and control this consumption trend.

5.3. The Effect of Green Purchase Intention on Compensatory Consumption

Green purchase intention has a positive impact on compensatory consumption. Green consumption is not only an environmentally friendly behavior but also a complex social phenomenon. It involves the shaping of individual identity and the pursuit of social group identity. In today's society, environmental protection has become a value, and adopting green consumption behavior is often seen as an expression of this value. However, for consumers who have not yet dabbled in green consumption or purchased environmentally friendly goods or services, there is a certain cognitive barrier that sets them apart from those who have. Individuals may establish a sense of social belonging through consumption, and when the sense of belonging is lacking, compensatory consumption becomes a way of relief. In today's society, an individual's sense of belonging is often affected by social exclusion or rejection which has led to an increase in preference for and compensatory purchases of environmentally friendly products. By increasing the willingness to buy green, and eventually leading to the actual behavior of compensatory consumption, this way can enable consumers who are not very interested in this before to integrate into a specific social group so as to obtain the required social identity. Therefore, the social consumption performance of the masses in contemporary society, in which the high-standard green purchase intention is transformed into compensatory consumption behavior, has become an important way for individuals to pursue social identity.

6. Conclusions

6.1. Theoretical Contributions

The study on the impact of green purchase intention on compensatory consumption has important theoretical contributions in broadening the perspective of consumer behavior

research, deepening the understanding of the mechanism of pro-environmental behavior, revealing the changing trend in consumer values, promoting the formation and the development of green consumption market, and enriching relevant theoretical applications. These contributions not only help us to understand the diversity and complexity of consumer behavior more comprehensively, but also provide an important theoretical basis and practical guidance for formulating scientific and reasonable consumption policies and promoting the development of green consumer market. The study of the effect of green purchase intention on compensatory consumption, especially in exploring the moderating effect of pro-environmental behavior, has important theoretical contributions. These contributions are mainly reflected in the following aspects:

(1) Broadening the perspective of consumer behavior research: Traditional consumer behavior research focuses on the influence of individual factors (such as demand, motivation, attitude, etc.) on consumer behavior. The study of green purchase intention and compensatory consumption extends the perspective to a broader field such as environmental protection and social responsibility. This helps us to understand the diversity and complexity of consumption behavior more comprehensively and provides a theoretical basis for formulating more scientific and reasonable consumption policies.

(2) Deepening the understanding of the mechanism of pro-environmental behavior: Pro-environmental behavior not only reflects consumers' concern and sense of responsibility for environmental protection but also may have a positive impact on subsequent compensatory consumption behavior. By exploring the influence of green purchase intention on compensatory consumption and the regulating role of pro-environment behavior in this process, we can further understand the mechanism of pro-environment behavior and reveal its internal psychological and social motivations.

(3) Revealing the changing trend in consumer values: The increased willingness to buy green reflects the changing trend in consumer values; that is, from pure material pursuit to a direction that is more environmentally friendly and socially responsible. This change is not only reflected in the purchase behavior but also may affect the overall lifestyle and consumption concept of consumers. By studying the influence of green purchase intention on compensatory consumption, we can grasp the changing trend in consumer values more clearly, and provide a useful reference for the product development and market positioning of enterprises.

(4) Promoting the formation and the development of green consumer market: The enhancement of green purchase intention and the popularization of pro-environment behavior are important driving forces to promote the formation and the development of green consumption market. By studying the impact of green purchase intention on compensatory consumption, we can reveal the potential demand and development, indicated by the trend in a green consumption market, and provide theoretical support and practical guidance for the government the enterprises and all sectors of society to jointly promote the development of a green consumption market.

(5) Enriching the application of planned behavior theory and other related theories: The research on green purchase intention and compensatory consumption can draw on the planned behavior theory, the attitude–behavior–situation theory, and other relevant theories, and verify the applicability of these theories in the field of green consumption through empirical research, and further enrich and improve these theories. For example, the theory of planned behavior holds that behavioral intention is an important prerequisite for the occurrence of behavior, and green purchase intention, as a manifestation of behavioral intention, can indirectly promote the formation and the development of green consumption market by influencing consumers' compensatory consumption behavior.

6.2. Practical Implications

In conclusion, the study on the impact of green purchase intention on compensatory consumption provides implications for management practice. By strengthening the awareness of green consumption, optimizing the supply of green products, promoting the formation of pro-environmental behaviors, paying attention to the changes in consumer psychology, and building a green consumption ecosystem, we can promote the formation and the development of green consumption market and achieve a win–win situation for economy, society and the environment. The study of the influence of green purchase intention on compensatory consumption, especially the moderating role of pro-environmental behavior in this process, provides important implications for management practice. Here are some management lessons:

(1) Strengthening the awareness of green consumption: The first is education and publicity. Enterprises should increase their efforts to promote the concept of green consumption and communicate the importance and benefits of green consumption to consumers through various channels, such as advertising, social media, and corporate websites. The government and social organizations can also participate in creating a social atmosphere for green consumption. The second is the spread of knowledge. Improve consumer awareness of green products so that they understand the characteristics and advantages of green products. Through holding lectures, exhibitions, activities and other methods, let consumers personally experience the advantages of green products so as to enhance their green purchase willingness.

(2) Optimizing the supply of green products: The first is product innovation. Enterprises should continue to develop and innovate green products, improve the environmental performance and cost performance of products, and meet the diversified needs of consumers for green products. At the same time, focus on product quality and brand image to improve consumer trust and loyalty to green products. The second is market segmentation. According to the needs of different consumer groups, market segmentation and the positioning are carried out, and green products suitable for different consumer groups are developed. For example, for young consumers, more fashionable and convenient green products can be launched; for high-income consumer groups, more high-end, high-quality green products can be launched.

(3) Promoting the formation of pro-environmental behavior: The first is the incentive mechanism. Establish an effective incentive mechanism to encourage consumers to carry out green consumption. For example, consumers can obtain certain benefits and rewards when buying green products through points and discounts. In addition, green consumption awards can be set up to recognize consumers who have made outstanding contributions to green consumption. The second is social acceptance. Strengthen the guidance of public opinion and improve the social recognition of green consumption. Through media publicity, demonstrations by public figures, etc., make green consumption a fashion and trend so as to attract more consumers to participate.

(4) Paying attention to changes in consumer psychology: The first is to understand consumer needs. An in-depth understanding of consumer psychological changes and demand changes, and the timely adjustment of marketing strategy and product strategy. For example, when the consumer demand for green products increases, enterprises should increase the production and sales of green products; When consumers' doubts about certain green products increase, enterprises should actively respond and explain. The second is to improve service quality. In the process of sales and service, focus on improving the quality of service to meet the expectations and needs of consumers. Through the provision of high-quality pre-sale consultation, sales service, and after-sales service, consumers feel more satisfied and assured with the purchase and use of green products.

(5) Building a green consumption ecosystem: The first is cooperation and a win–win scenario. We will promote multi-party cooperation among governments, enterprises and social organizations to jointly build a green consumption ecosystem. Through

policy guidance, market regulation, social supervision and other means, the formation and the development of green consumption market can be promoted. The second is sustainable development. In the process of promoting green consumption, focus on sustainable development through energy conservation, emission reduction, resource recycling and other ways, to reduce environmental pollution and resource consumption in the production process.

6.3. Limitations and Future Research

There are many shortcomings in this study which need to be further explored and analyzed by future scholars. By summarizing the article, future research can be further explored in the following aspects:

(1) First, the existing studies did not consider the setting of control variables when constructing the mediation model. Future studies can add other appropriate moderating variables as control variables when examining the mediating effects of green purchase intention, compensatory consumption and the pro-environmental behavior, so as to observe the experimental results more accurately. For example, factors such as gender and age can be considered to comprehensively consider the impact of these variables on the relationship, so as to better understand the relationship between them.

(2) Second, the data samples in this paper are insufficient, and the experiment has accidental bias. Future studies need to use more repeated experiments to prove the authenticity of the conclusions. By expanding the sample size and increasing the number of repetitions of the experiment, the reliability and generalization ability of the study can be improved, so as to verify the validity of the model more accurately.

(3) Third, the results only show the mediating role of pro-environmental behavior in promoting green purchase intention and inhibiting compensatory consumption and the other possible roles of pro-environmental behavior in this relationship are not fully studied. For example, the study did not delve into whether pro-environmental behaviors play a moderating role between the two.

(4) Fourth, the main weakness of this article is the assumption that people have a clear idea of what is "green" and what is not. If such a clear assignment of right and wrong does not exist in individual cases, then the model is no longer valid. To solve this problem, the future research can be improved from the two aspects of questionnaire survey design and in-depth interview. In terms of the questionnaire and the survey, scholars can design scientific and reasonable questionnaires, covering consumers' cognition, attitude, behavior and the discrimination of green consumption behavior. The questionnaire design should ensure the clarity, comprehensiveness, and objectivity of the questions, and adopt an appropriate scale or scoring system to quantify the responses of the respondents. Sending questionnaires using online or offline methods to collect sufficient sample data. In terms of in-depth interviews, scholars can select some representative respondents to conduct in-depth interviews to further understand their views on green consumption behavior, confusion, and the influencing factors in the identification process. In-depth interviews can provide more detailed and in-depth information, which is helpful in supplementing the deficiencies of the questionnaire.

Author Contributions: Conceptualization, C.C.; Software, D.L.; Formal analysis, D.L.; Resources, C.C., J.Q. and Z.L.; Data curation, J.Q.; Writing—original draft, D.L.; Writing—review and editing, C.C. and Z.L.; Supervision, C.C.; Project administration, C.C.; Funding acquisition, J.Q. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by funding projects of: China Ministry of Education on Humanities and Social Science Research Youth Foundation Project (No. 23YJC630008); Jiangxi Social Science "14th Five-Year Plan" Foundation Project (No. 23GL33); Jiangxi Natural Science Management Science Foundation Project (Decision Consulting) (No. 23GL33); Jiangxi Universities Humanities and Social Sciences Key Research Base Project (No. JD21002).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Yuriev, A.; Dahmen, M.; Paillé, P.; Boiral, O.; Guillaumie, L. Pro-environmental behaviors through the lens of the theory of planned behavior: A scoping review. *Resour. Conserv. Recycl.* **2020**, *155*, 104660. [CrossRef]
2. Ajzen, I. The theory of planned behavior. *Organ. Behav. Hum. Decis. Process.* **1991**, *50*, 179–211. [CrossRef]
3. Kilbourne, W.E.; Polonsky, M.J. Environmental attitudes and their relation to the dominant social paradigm among university students in New Zealand and Australia. *Australas. Mark. J.* **2005**, *13*, 37–48. [CrossRef]
4. Dodds, W.B.; Monroe, K.B.; Grewal, D. Effects of price, brand, and store information on buyers' product evaluations. *J. Mark. Res.* **1991**, *28*, 307–319.
5. Majerova, J. Analysis of Slovak consumer's perception of the green marketing activities. *Procedia Econ. Financ.* **2015**, *26*, 553–560. [CrossRef]
6. Tsarenko, Y.; Ferraro, C.R.; Sands, S.; McLeod, C.S. Environmentally conscious consumption: The role of retailers and peers as external influences. *J. Retail. Consum. Serv.* **2013**, *20*, 302–310. [CrossRef]
7. Balaskas, S.; Panagiorarou, A.; Rigou, M. Impact of environmental concern, emotional appeals, and attitude toward the advertisement on the intention to buy green products: The case of younger consumer audiences. *Sustainability* **2023**, *15*, 13204. [CrossRef]
8. Abdalla, C.C.; Zambaldi, F. Ostentation and funk: An integrative model of extended and expanded self-theories under the lenses of compensatory consumption. *Int. Bus. Rev.* **2016**, *25*, 633–645. [CrossRef]
9. Chang, E.; Xie, C.; Fan, X.M. Defending the rules: How exposure to immoral behavior influences the boundary preference. *J. Bus. Res.* **2022**, *139*, 654–663. [CrossRef]
10. Kroker, V.; Lange, F. Financial and prosocial incentives promote pro-environmental behavior in a consequential laboratory task. *J. Environ. Psychol.* **2024**, *96*, 102331. [CrossRef]
11. Shi, H.X.; Wang, S.Y.; Zhao, D.T. Exploring urban resident's vehicular PM2.5 reduction behavior intention: An application of the extended theory of planned behavior. *J. Clean. Prod.* **2017**, *147*, 603–613. [CrossRef]
12. Ru, X.; Wang, S.; Chen, Q.; Yan, S. Exploring the interaction effects of norms and attitudes on green travel intention: An empirical study in eastern China. *J. Clean. Prod.* **2018**, *197*, 1317–1327. [CrossRef]
13. Wang, H.; Ma, B.L.; Bai, R.B. How does green product knowledge effectively promote green purchase intention? *Sustainability* **2019**, *11*, 1193. [CrossRef]
14. Malhotra, G.J.; Srivastava, H. Green purchase intention in omnichannel retailing: Role of environmental knowledge and price sensitivity. *J. State. Mark.* **2024**, *32*, 467–490. [CrossRef]
15. Cottrell, S.P.; Graefe, A.R. Testing a conceptual framework of responsible environmental behavior. *J. Environ. Educ.* **1997**, *29*, 17–27. [CrossRef]
16. Urban, J.; Bahnik, S.; Kohlova, M.B. Green consumption does not make people cheat: Three attempts to replicate moral licensing effect due to pro-environmental behavior. *J. Environ. Psychol.* **2019**, *63*, 139–147. [CrossRef]
17. Trivedi, R.; Patel, J.; Acharya, N. Causality analysis of media influence on environmental attitude, intention and behaviors leading to green purchasing. *J. Clean. Prod.* **2018**, *196*, 11–22. [CrossRef]
18. Schneider, T.R.; Salovey, P.; Apanovitch, A.M.; Pizarro, J.; McCarthy, D.; Zullo, J.; Rothman, A.J. The effects of message framing and ethnic targeting on mammography use among low-income women. *Health Psychol.* **2001**, *20*, 256. [CrossRef]
19. Choudhury, N.; Mukherjee, R.; Yadav, R.; Liu, Y.; Wang, W. Can machine learning approaches predict green purchase intention? -A study from Indian consumer perspective. *J. Clean Prod.* **2024**, *456*, 142218. [CrossRef]
20. Han, H.; Hsu, L.-T.; Sheu, C. Application of the theory of planned behavior to green hotel choice: Testing the effect of environmentally friendly activities. *Tour. Manag.* **2010**, *31*, 325–334. [CrossRef]
21. Geng, L.N.; Cheng, X.; Tang, Z.X.; Zhou, K.X.; Ye, L.J. Can previous pro-environmental behaviors influence subsequent environmental behaviors? The licensing effect of pro-environmental behaviors. *J. Pac. Rim Psychol.* **2016**, *10*, e9. [CrossRef]
22. Yue, B.B.; Sheng, G.H.; She, S.X.; Xu, J.Q. Impact of consumer environmental responsibility on green consumption behavior in China: The role of environmental concern and price sensitivity. *Sustainability* **2020**, *12*, 2074. [CrossRef]

23. Greaves, M.; Zibarras, L.D.; Stride, C. Using the theory of planned behavior to explore environmental behavioral intentions in the workplace. *J. Environ. Psychol.* **2013**, *34*, 109–120. [CrossRef]
24. Onel, N.; Mukherjee, A. Consumer knowledge in pro-environmental behavior. *World J. Sci. Technol. Sustain. Dev.* **2016**, *13*, 328–352. [CrossRef]
25. Wan, C.; Shen, G.Q.; Choi, S. Experiential and instrumental attitudes: Interaction effect of attitude and subjective norm on recycling intention. *J. Environ. Psychol.* **2017**, *50*, 69–79. [CrossRef]
26. Schwartz, S.H. Normative decision-making model of Altruism. *Adv. Exp. Soc. Psychol.* **1977**, *10*, 221–279.
27. Kollmuss, A.; Agyeman, J. Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environ. Educ. Res.* **2002**, *8*, 239–260. [CrossRef]
28. Loy, L.S.; Steppler, K.; Kliachko, I. A virtually-induced overview effect? How seeing the world from above through a simulated space tour is related to awe, global identity and pro-environmental behavior. *J. Environ. Psychol.* **2024**, *99*, 102428. [CrossRef]
29. Zaremohzzabieh, Z.; Ismail, N.; Ahrari, S.; Abu Samah, A. The effects of consumer attitude on green purchase intention: A meta-analytic path analysis. *J. Bus. Res.* **2021**, *132*, 732–743. [CrossRef]
30. Peng, J.; Chen, X.; Zou, Y.C.; Nie, Q. Environmentally specific transformational leadership and team pro-environmental behaviors: The roles of pro-environmental goal clarity, pro-environmental harmonious passion, and power distance. *Hum. Relat.* **2021**, *74*, 1864–1888. [CrossRef]
31. Workman, J.; Lee, S.H.; Jung, K. Fashion trendsetting, creative traits and behaviors, and pro-environmental behaviors: Comparing korean and us college students. *Sustainability* **2017**, *9*, 1979. [CrossRef]
32. Deng, Y.D.; Guo, L.; Lu, H. Behavioral review of pro-environment actions from the perspective of dual systems of decision making. *Chin. Psychol. Res.* **2019**, *12*, 8.
33. Kamalanon, P.; Chen, J.-S.; Le, T.-T.-Y. "Why do we buy green products?" An extended theory of the planned behavior model for green product purchase behavior. *Sustainability* **2022**, *14*, 689. [CrossRef]
34. Mavisakalyan, A.; Sharma, S.; Weber, C. Pro-environmental behavior and subjective well-being: Culture has a role to play. *Ecol. Econ.* **2024**, *217*, 108081. [CrossRef]
35. Huang, C.H.; Chang, T.W.; Ting, C.W.; Huang, S.Y.B. How does organizational leadership promote pro-environmental behavior? a moderated mediation model of environmental corporate social responsibility policies. *Sustainability* **2024**, *16*, 4716. [CrossRef]
36. Shao, J. Sustainable consumption in China: New trends and research interests. *Bus. Strateg. Environ.* **2019**, *28*, 1507–1517. [CrossRef]
37. Liang, J.F.; Li, J.J.; Lei, Q.Y. Exploring the influence of environmental values on green consumption behavior of apparel: A chain multiple mediation model among Chinese generation Z. *Sustainability* **2022**, *14*, 12850. [CrossRef]
38. Meyer, A. Does education increase pro-environmental behavior? Evidence from Europe. *Ecol. Econ.* **2015**, *116*, 108–121. [CrossRef]
39. Miao, L.; Wei, W. Consumers' Pro-Environmental Behavior and Its Determinants in the Lodging Segment. *J. Hosp. Tour. Res.* **2013**, *40*, 319–338. [CrossRef]
40. Kim, S.; Rucker, D.D. Bracing for the psychological storm: Proactive versus reactive compensatory consumption. *J. Consum. Res.* **2012**, *39*, 815–830. [CrossRef]
41. Reid-Partin, K.; Chattaraman, V. Social comparisons and compensatory consumption: The art of buying a superior self. *Sustainability* **2023**, *15*, 15950. [CrossRef]
42. Miocevic, D.; Zdravkovic, S. Expatriate consumers' adaptations and food brand choices: A compensatory control perspective. *J. Int. Mark.* **2020**, *28*, 75–89. [CrossRef]
43. Khan, S.N.; Mohsin, M. The power of emotional value: Exploring the effects of values on green product consumer choice behaviour. *J. Clean. Prod.* **2017**, *150*, 65–74. [CrossRef]
44. Shehawy, Y.M.; Ali Khan, S.M.F. Consumer readiness for green consumption: The role of green awareness as a moderator of the relationship between green attitudes and purchase intentions. *J. Retail. Consum. Serv.* **2024**, *78*, 103739. [CrossRef]
45. Maichum, K.; Parichatnon, S.; Peng, K.C. Application of the extended theory of planned behavior model to investigate pur-chase intention of green products among Thai consumers. *Sustainability* **2016**, *8*, 1077. [CrossRef]
46. Román-Augusto, J.A.; Garrido-Lecca-Vera, C.; Lodeiros-Zubiria, M.L.; Mauricio-Andia, M. Green marketing: Drivers in the process of buying green products-the role of green satisfaction, green trust, green WOM and green perceived value. *Sustainability* **2022**, *14*, 10580. [CrossRef]
47. De Leeuw, A.; Valois, P.; Ajzen, I.; Schmidt, P. Using the theory of planned behavior to identify key beliefs underlying pro-environmental behavior in high-school students: Implications for educational interventions. *J. Environ. Psychol.* **2015**, *42*, 128–138. [CrossRef]
48. Huang, H. Media use, environmental beliefs, self-efficacy, and pro-environmental behavior. *J. Bus. Res.* **2016**, *69*, 2206–2212. [CrossRef]
49. Grunert, S.C. Green consumerism in Denmark: Some evidence from the OKO foods-project. *Der Markt.* **1993**, *32*, 140–151. [CrossRef]
50. Bamberg, S.; Möser, G. Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *J. Environ. Psychol.* **2007**, *27*, 14–25. [CrossRef]

51. Vicente-Molina, M.A.; Fernandez-Sainz, A.; Izagirre-Olaizola, J. Environmental knowledge and other variables affecting pro-environmental behaviour: Comparison of university students from emerging and advanced countries. *J. Clean. Prod.* **2013**, *61*, 130–138. [CrossRef]
52. Li, Z. Role of affective mediators in the effects of media use on pro-environmental behavior. *Sci. Commun.* **2020**, *43*, 64–90. [CrossRef]
53. Markowitz, E.M.; Goldberg, L.R.; Ashton, M.C.; Lee, K. Profiling the "Pro-environmental individual": A personality perspective. *J. Pers.* **2011**, *80*, 81–111. [CrossRef] [PubMed]
54. Chen, L.H.; Qie, K.X.; Memon, H.; Yesuf, H.M. The empirical analysis of green innovation for fashion brands, perceived value and green purchase intention-mediating and moderating effects. *Sustainability* **2021**, *13*, 4238. [CrossRef]
55. Limbu, Y.B.; Jalal Ahamed, A.F.M. What influences green cosmetics purchase intention and behavior? A systematic review and future research agenda. *Sustainability* **2023**, *15*, 11881. [CrossRef]
56. Mal, H.; Nehra, N.S. The impact of IOT characteristics, cultural factors and safety concerns on consumer purchase intention of green electronic products. *Sustainability* **2023**, *15*, 6597. [CrossRef]
57. Patak, M.; Branska, L.; Pecinova, Z. Consumer intention to purchase green consumer chemicals. *Sustainability* **2021**, *13*, 7992. [CrossRef]
58. Xie, C.; Wang, R.; Gong, X. The influence of environmental cognition on green consumption behavior. *Front. Psychol.* **2022**, *13*, 988585. [CrossRef]
59. Sun, Y.H.; Liu, N.N.; Zhao, M.Z. Factors and mechanisms affecting green consumption in China: A multilevel analysis. *J. Clean. Prod.* **2018**, *209*, 481–493.
60. Lee, J.; Shrum, L.J. Conspicuous consumption versus charitable behavior in response to social exclusion: A differential needs explanation. *J. Consum. Res.* **2012**, *39*, 530–544. [CrossRef]
61. Xia, T.S.; Shi, Z.M.; Lai, L.S. The relationship between social exclusion and prosocial consumption behavior in crowds. *Chin. J. Manag. Sci.* **2020**, *33*, 114–125.
62. Yu, S.L.; Zhong, Z.; Zhu, Y.L.; Sun, J. Green emotion: Incorporating emotional perception in green marketing to increase green furniture purchase intentions. *Sustainability* **2024**, *16*, 4935. [CrossRef]
63. De Silva, M.; Wang, P.J.; Kuah, A.T.H. Why wouldn't green appeal drive purchase intention? Moderation effects of consumption values in the UK and China. *J. Bus. Res.* **2021**, *122*, 713–724. [CrossRef]
64. Barbarossa, C.; De Pelsmacker, P. Positive and negative antecedents of purchasing eco-friendly products: A comparison between green and non-green consumers. *J. Bus. Ethics* **2016**, *134*, 229–247. [CrossRef]
65. Tewari, A.; Mathur, S.; Srivastava, S.; Gangwar, D. Examining the role of receptivity to green communication, altruism and openness to change on young consumers' intention to purchase green apparel: A multi-analytical approach. *J. Retail. Consum. Serv.* **2022**, *66*, 102938. [CrossRef]
66. Nekmahmud, M.; Naz, F.; Ramkissoon, H.; Fekete-Farkas, M. Transforming consumers' intention to purchase green products: Role of social media. *Technol. Forecast. Soc.* **2022**, *185*, 122067. [CrossRef]
67. Dampeyrou, C.; Goichon, A.; Ghienne, M.; Tschannen, V.; Schaack, S. Unsupervised separation of the thermosensitive contribution in the power consumption at a country scale. *Appl. Energ.* **2024**, *363*, 123097. [CrossRef]
68. Sheng, G.; Xie, F.; Gong, S.; Pan, H. The role of cultural values in green purchasing intention: Empirical evidence from Chinese consumers. *Int. J. Consum. Stud.* **2019**, *43*, 315–326. [CrossRef]
69. Gonçalves, H.M.; Lourenço, T.F.; Silva, G.M. Green buying behavior and the theory of consumption values: A fuzzy-set approach. *J. Bus. Res.* **2016**, *69*, 1484–1491. [CrossRef]
70. Hsu, C.L.; Chang, C.Y.; Yansritakul, C. Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating effects of country of origin and price sensitivity. *J. Retail. Consum. Serv.* **2017**, *34*, 145–152. [CrossRef]
71. Joshi, Y.; Uniyal, D.P.; Sangroya, D. Investigating consumers' green purchase intention: Examining the role of economic value, emotional value and perceived marketplace influence. *J. Clean Prod.* **2021**, *328*, 129638. [CrossRef]
72. Koles, B.; Wells, V.; Tadajewski, M. Compensatory consumption and consumer compromises: A state-of-the-art review. *J. Market. Manag. UK* **2018**, *34*, 96–133. [CrossRef]
73. Robertson, J.L.; Barling, J. Greening organizations through leaders' influence on employees' pro-environmental behaviors. *J. Organ. Behav.* **2013**, *34*, 176–194. [CrossRef]
74. Yarimoglu, E.; Binboga, G. Understanding sustainable consumption in an emerging country: The antecedents and consequences of the ecologically conscious consumer behavior model. *Bus. Strategy Environ.* **2019**, *28*, 642–651. [CrossRef]
75. Jabeen, G.; Ahmad, M.; Zhang, Q. Perceived critical factors affecting consumers' intention to purchase renewable generation technologies: Rural-urban heterogeneity. *Energy* **2021**, *218*, 119494. [CrossRef]
76. Kumar, B.; Manrai, A.K.; Manrai, L.A. Purchasing behaviour for environmentally sustainable products: A conceptual framework and empirical study. *J. Retail. Consum. Serv.* **2017**, *34*, 1–9. [CrossRef]
77. Lin, M.T.; Zhu, D.; Liu, C.R.; Kim, P.B. A meta-analysis of antecedents of pro-environmental behavioral intention of tourists and hospitality consumers. *Tour. Manag.* **2022**, *93*, 104566. [CrossRef]
78. Alam, M.M.; Lutfi, A.; Alsaad, A. Antecedents and consequences of customers' engagement with pro-environmental consumption-related content on social media. *Sustainability* **2023**, *15*, 3974. [CrossRef]

79. De Groot, J.I.M.; Steg, L. Value Orientations to Explain Beliefs Related to Environmental Significant Behavior. *Environ. Behav.* **2007**, *40*, 330–354. [CrossRef]
80. Liu, P.; Teng, M.; Han, C. How does environmental knowledge translate into pro-environmental behaviors? The mediating role of environmental attitudes and behavioral intentions. *Sci. Total Environ.* **2020**, *728*, 138126. [CrossRef]
81. Taufique, K.M.R.; Vaithianathan, S. A fresh look at understanding green consumer behavior among young urban Indian consumers through the lens of Theory of Planned Behavior. *J. Clean. Prod.* **2018**, *183*, 46–55. [CrossRef]
82. Muhammad, K.J.; Ma, D.G.; Talat, Q. Relation between Chinese consumers' ethical perceptions and purchase intentions: A perspective on ethical company brand management strategies. *Asia Pac. J. Mark. Logist.* **2019**, *31*, 1355–5855.
83. Wang, S.Y.; Wang, J.; Lin, S.F.; Li, J. Public perceptions and acceptance of nuclear energy in China: The role of public knowledge, perceived benefit, perceived risk and public engagement. *Energy Policy* **2019**, *126*, 352–360. [CrossRef]
84. Ajzen, I. Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *J. Appl. Soc. Psychol.* **2002**, *32*, 665–683. [CrossRef]
85. Fonteyne, L.; Duyck, W.; De Fruyt, F. Program-specific prediction of academic achievement on the basis of cognitive and non-cognitive factors. *Learn. Individ. Differ.* **2017**, *56*, 34–48. [CrossRef]
86. Cheung, L.T.; Chow, A.S.; Fok, L.; Yu, K.M.; Chou, K.L. The effect of self-determined motivation on household energy consumption behavior in a metropolitan area in southern China. *Energy Effic.* **2017**, *10*, 549–561. [CrossRef]
87. Ding, Z.H.; Wang, G.Q.; Liu, Z.H.; Long, R.Y. Research on differences in the factors influencing the energy-saving behavior of urban and rural residents in China-A case study of Jiangsu province. *Energy Policy* **2017**, *100*, 252–259. [CrossRef]
88. Ding, Z.H.; Wang, G.Q.; Liu, Z.H.; Long, R.Y. An empirical study of consumers' intention to use ride-sharing services: Using an extended technology acceptance model. *Transportation* **2018**, *47*, 397–415.
89. Wang, L.; Zhao, M.; Gao, H.X. Dimension exploration and scale development of compensatory consumption behavior. *Chin. J. Manag.* **2023**, *20*, 1837–1846.
90. Hong, D.Y. Measurement of environmental concern: Application evaluation of NEP scale in China. *Society* **2006**, *26*, 71–92.