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Impact of Consumer Environmental Responsibility on Green Consumption Behavior in China: The Role of Environmental Concern and Price Sensitivity

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Abstract: Research on influence factors for green consumption has greatly advanced in recent years. However, little research has explored the effect of consumers' environmental responsibility on green consumption and how this effect was mediated by environmental concern and moderated by price sensitivity, especially when consumers simultaneously pay close attention to environmental and personal interests. This study investigates the impact of environmental responsibility on green consumption via the mediation of environmental concern and the moderation of price sensitivity. The questionnaire survey method was used to collect data from 680 Chinese consumers via an online questionnaire. The empirical results reveal that environmental responsibility can promote environmental concern and enhance green consumption. Specifically, environmental responsibility has a positive impact on environmental concern and also has different positive effects on green consumption intention. Environmental concern positively affects green consumption intention and plays a partial mediation role in the relationship between environmental responsibility and green consumption intention. Price sensitivity plays a negative moderation role in the relationship among environmental responsibility, environmental concern and green consumption intention. The theoretical and managerial implications of the findings were discussed.

Keywords: environmental responsibility; environmental concern; price sensitivity; green consumption; green marketing

1. Introduction

With the energy crisis, climate change and increasingly serious environmental problems, there has been increasing public concern about environmental issues [1]. In developing countries, especially in China, the rapid economic growth has led to excessive consumption of natural resources and aggravated deterioration of the ecological environment [2,3]. Green consumption is an environmentally responsible behavior characterized by advocating nature and protecting the ecology, which has attracted enterprises' and consumers' attention in recent years [4–6]. Buying green products in daily consumption is considered an effective way to solve environmental problems [3,7,8].

Existing research has mainly focused on the effect of corporate social responsibility (CSR) or corporate environmental responsibility (CER) on pro-environmental behavior and considered that green marketing is the source of sustainable competitive advantage for enterprises [9–11]. However, little research has explored the effect of consumer environmental responsibility on green consumption. The norm activation model claims that a sense of responsibility is the moral quality and mental

state of an individual for altruistic behavior under the constraint of personal norms [12]. The model assumes that when an individual internalizes social norms into personal norms, the individual's sense of responsibility will be activated, thus his or her altruistic behavior will be promoted. In the field of environmental behavior, environmental responsibility is considered to be the most basic and important psychological variable when individuals engage in pro-environmental behavior [13–15]. Environmental responsibility will drive individuals to pay close attention to environmental issues, motivate them to take the initiative to take responsibility for environmental protection and promote their positive practice of pro-environmental behavior. The theory of ascription of responsibility, originated from the norm activation model, provides insight into the forming and driving of green consumption behavior.

Environmental concern is commonly considered to be an immediate antecedent to green consumption intention, which refers to the degree of individual care for ecology and the environment [16–18]. However, the results of previous studies are somewhat inconsistent about the magnitude of the relationship between environmental concern and green consumption intention. An unresolved issue in the literature is whether the relationship between these two constructs depends on the presence of additional constructs [19,20]. This study posits that prior research neglects an important moderating variable, price sensitivity, which might exert important influence on consumers' green consumption decisions. It is uncontested that the price of green products, as a measure of individual sacrifice, has a strong influence in consumers' green purchasing decisions. Due to the general premium of green products, green consumption behavior requires certain sacrifices in personal interests (e.g., monetary payments) [21–23]. Notably, whether such personal interests exert influence on a consumer's overall environmental benefits evaluation has not been explored yet. Thus, our study constructs a moderated mediation model to examine the moderating role of price sensitivity in the relationship among environmental responsibility, environmental concern and green consumption intention.

2. Literature Review and Hypotheses

2.1. Green Consumption

Green consumption behavior refers to a kind of consumption behavior which minimizes the negative impact of consumption on the environment in the whole process of purchase, use and disposal, especially in the phase of purchasing environmentally friendly products [8,24]. According to classical theories in consumer behavior domain, specifically the theory of planned behavior, behavior of an individual can—to some extent—be reasonably deduced by his or her behavioral intention, and behavioral intention—the subjective possibility of a specific behavior—can be used as a measurement for a specific behavior [23,25]. Much research has concluded that green consumption intention can effectively profile green consumption behavior [8,23,26,27]. Moreover, the academic community has extensively explored the influence mechanism of green consumption intention [7,14,28–30], which can be classified into three mainstreams.

The first branch explores the differences between green consumers to identify the individual characteristics of green consumers through market segmentation tools [22,30–33]. Previous studies show that there are significant differences in the green consumption behavior of different consumers, such as sex, age, education, family size and family income [22,32,33], but some scholars believe that a simple analysis of the relationship between the demographic variables and the green consumption behavior is not enough to reach a meaningful valuable conclusion [30,31]. The second branch explores the psychological mechanism of consumers' green consumption behavior based on the classic theory in consumer behavior [34–38]. For example, researchers have introduced new psychological variables, such as “perceived green value”, “environmental knowledge” and “perceived self-identification” to expand the theory of planned behavior in order to effectively predict green consumption behavior [36–38]. However, the research based on the theory of planned behavior has not taken into account the

interference of external situational factors, consequently, it is difficult to interpret the complex process of green consumption. Third, the decision-making process of consumers' green consumption behavior is discussed on the basis of decision-making theory to explore the logic of the decision of buying environmentally friendly products [39–43]. Among them, rationalism, behaviorism and empiricism respectively describe an effective way for consumers to make purchasing decisions and explain the decision rule for consumers to buy green products [39,40]. The rationalism viewpoint believes that consumers will collect as much information as possible when considering green purchasing to make reasonable decisions [41,44]. However, consumers may not carry out this complex and elaborate process of collecting information every time and may not make rigorous logical purchases in reality. The behaviorist point of view is that consumers own a set of strategic skills and knowledge that will estimate the effort required to make a green purchasing decision and then match a suitable strategy for the level of effort [42,45]. However, behaviorism might be lacking in explanatory power in the context of green purchasing with higher involvement of consumers. Empiricism believes that consumers make green purchasing decisions based on their overall emotional preferences for green products or services, focusing on the influence of emotional factors on green purchasing decisions instead of rational factors [43,46]. Taken together with the above three branches, existing research basically only emphasizes that green consumption behavior is a consumption behavior, and rarely recognizes it is an important environmentally responsible behavior. Moreover, the possible influence that consumers' environmental responsibility (specifically, in a Chinese context) on green consumption intention has not yet been fully investigated.

2.2. Environmental Responsibility and Green Consumption Intention

Environmental responsibility is derived from the norm activation model within social psychology and has been applied to multiple disciplines including environmental education, environmental sociology and consumer behavior [12,47]. Environmental responsibility refers to “a state in which a person expresses an intention to take action directed toward remediation of environmental problems—acting not as an individual consumer with his or her own economic interests, but through a citizen-consumer concept of societal-environmental well-being” [48]. Prior study has shown that consumers' environmental responsibility is closely related to environmental education, which varies across different nationalities and cultures [47,49]. The positive relationship between consumers' environmental responsibility and green consumption behavior has been examined in some different countries. For example, Kaiser and Scheutle [50] suggested that there existed a positive relationship between consumer environmental responsibility and environmentally friendly behavior among Swiss residents. Meanwhile, Attaran and Celik [51] further found individuals with a high level of environmental responsibility are more likely to show a favorable attitude and purchase intention towards green buildings in the USA. In China, there has also been mounting emphasis on environmental consumerism, however, very few studies have been involved under a Chinese cultural context. Therefore, it is necessary to devote empirical studies to investigate the relationship between consumers' environmental responsibility and green consumption behavior in the context of Chinese culture.

Previous research has shown that environmental behavioral intention can be predicted more accurately by integrating environmental responsibility into the model of the theory of planned behavior [13,52,53]. For example, Hines, et al. [13] put forward a responsible environmental behavior model, which indicates that the individual's sense of responsibility is closely related to his or her environmental behavior. Stern, et al. [53] also showed that there was a high correlation between environmental responsibility and pro-environmental behavior, that is, if individuals have a stronger sense of environmental responsibility, they will be more willing to engage in pro-environmental behavior. Environmental responsibility can reflect the spiritual quality—such as courage, perseverance, self-restraint and public spirit—of the individual in solving ecological problems. In line with this reasoning, environmental responsibility will be a powerful driving force that motivates individuals

to bear environmental responsibility and engage in pro-environmental behavior [14,15]. This study assumes that as a typical pro-environmental behavior, there is a significant connection between environmental responsibility and green consumption. That is, environmental responsibility is the obligation of the individual when he or she is willing to make an effort to solve environmental issues, which are also an important predictor of green consumption behavior. Hence, we propose:

Hypothesis 1: *Environmental responsibility is positively associated with green consumption intention.*

2.3. The Mediating Role of Environmental Concern

Environmental concern is often regarded as an important predictive variable of environmentally friendly behavior and directly motivates environmental purchase intention, which is widely used to explain pro-environmental behavior, sustainable behavior, etc. [16,17,24,54,55]. Research on environmental concern can be traced back to the 1960s. In the early years, scholars did not clearly define environmental concern, even equating environmental concern with environmental attitudes [18,56,57]. Some scholars believe that environmental concern is a self-evident concept, while others find it difficult to give an abstract concept of environmental concern [58,59]. Thus, the concept of environmental concern is mostly an operational definition, and different research has had different operational concepts. Dunlap and Van Liere [57] developed the New Ecological Paradigm (NEP) scale, which is considered to be the earliest quantitative definition of environmental concern. Thus far, environmental concern has been divided into two categories: environmental concern for specific environmental issues (e.g., attitude toward the disposal of garbage or water pollution), and environmental concern that is comprehensive and universal (e.g., views on a variety of ecological crisis issues and attitudes toward the relationship between humans and the environment). We adopted the latter definition—which considers environmental concern as a comprehensive and universal view of environmental issues—for our study.

Previous research on pre-environmental behavior has suggested an important link between environmental responsibility and environmental concern [16,60]. For example, Sadachar et al. [16] demonstrated that people with higher environmental responsibility paid more attention to environmental problems and supported green products because they believed that human beings are responsible for the emergence of environmental problems. White and Simpson [60] also argued that individuals with a high sense of environmental responsibility tend to focus on environmental benefits, and they tend to think that human beings are closely connected to the environment, particularly when they are responsible for the fragile ecological environment, and would be more likely to solve environmental problems. According to the argument above, a higher the environmental responsibility causes a higher degree of environmental concern. Hence, we propose:

Hypothesis 2: *Environmental responsibility is positively associated with environmental concern.*

Previous studies have posited that environmental concern can have a direct positive effect on green consumption intention [17,61,62]. Generally speaking, people with a higher degree of environmental concern are more willing to respond to environmental problems and take actions in environmental protection [17]. Mostafa [61] emphasized the importance of environmental concern in the variables of predicting consumers' green consumption and found that there was a significant difference in environmental concern between green consumers and non-green consumers. Mohd Suki [62] showed that the strong environmental concern of consumers can be reflected in the nature of their products, while people with high environmental concern were more willing to buy green products. On the basis of China's comprehensive social survey, people who were more concerned about the environment were more willing to take action for environmental protection. Moreover, consumers' environmental concern had the crucial impact on their willingness to pay for environmentally friendly products [42].

According to these studies, environmental concern has a positive effect on green consumption intention. Hence, we propose:

Hypothesis 3: *Environmental concern is positively associated with green consumption intention.*

Based on the above logical relationship among environmental responsibility, environmental concern and green consumption intention, this study assumes that environmental responsibility can influence environmental behavior, such as green consumption, through environmental concern. According to a survey of Swiss consumers, Kaiser and Scheutle [50] showed that adding responsibility to the original Theory of Planned Behavior (TPB) model greatly enhanced the explanatory power of the attitude variables, indicating that the sense of responsibility was an effective predictor of environmental attitudes, and subsequently environmental behavior was influenced by environmental attitudes. Young et al. [28] also examined consumers who had a sense of responsibility for current environmental problems and found that these consumers were more concerned about environmental problems and were more likely to buy products and services that were less harmful to the environment. Accordingly, the impact of environmental responsibility will go through environmental concern first before it reaches green consumption intention. Hence, we propose:

Hypothesis 4: *Environmental concern plays a mediating role between environmental responsibility and green consumption intention.*

2.4. The Moderating Role of Price Sensitivity

Researchers in the consumer behavior domain define price sensitivity as the extent to which individuals differ in their reaction to price changes and price differences of the product (or service) [63–65]. Much of the research regards price sensitivity as a direct or indirect antecedent of the purchasing intention of an environmentally friendly product [26,65,66], but fewer studies explore its moderating role between consumers' environmental responsibility or environmental concern and green consumption intentions. In fact, although consumers claim they are concerned about the environment, they may not adopt pro-environmental behavior in actual purchases because the price of green products is generally higher than that of traditional products [20]. Hsu et al. [67] found that price sensitivity was an important factor affecting purchasing intentions, and consumers with lower price sensitivity are more likely to pay for electric vehicles [66]. Cicia et al. [68] showed that when the price of organic products did not exceed 20% of the average price of agricultural products, up to 78% of the respondents would buy organic products in real life. A survey by Kilbourne and Beckmann [69] found that 30% of consumers claimed they would give priority to pro-environmental products and services, but only 3% of consumers made green purchasing decisions in fact, and 27% of consumers failed to purchase pro-environmental products due to the premium price of products, which weakened their environmental beliefs. In other words, consumers with a positive attitude toward green consumption may not turn this positive attitude into real consumption behavior, reasoning the cost of the green consumption behavior is too high [29]. According to previous studies, consumers with a high degree of price sensitivity may be less likely to impose their environmental consciousness and beliefs on green consumption intention. Hence, we have two additional hypotheses as well:

Hypothesis 5: *Price sensitivity plays a negative moderating role between environmental responsibility and green consumption intention.*

Hypothesis 6: *Price sensitivity plays a negative moderating role between environmental concern and green consumption intention.*

Based on the above, the antecedent of the research framework was environmental responsibility and the consequent was green consumption intention, while environmental concern was a partial mediator and price sensitivity played a moderating role. The research framework is shown in Figure 1.

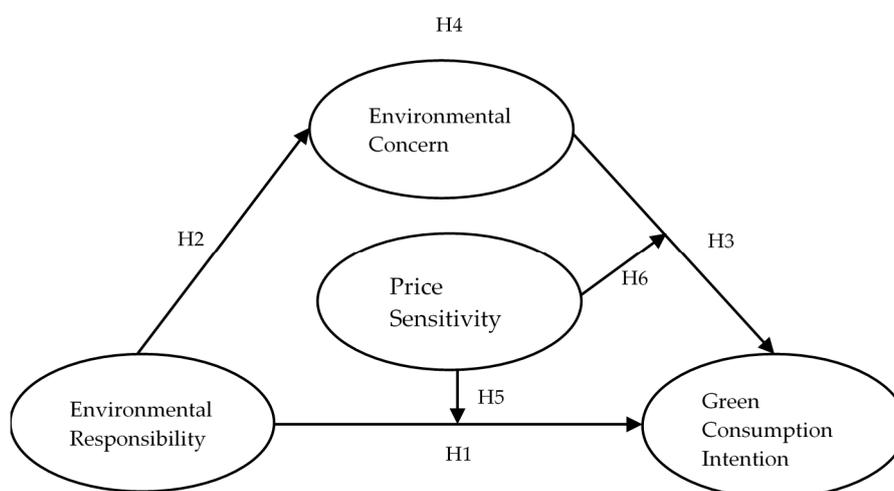


Figure 1. Research framework.

3. Methodology and Measurement

3.1. Measurements of Variables

The questionnaire was divided into two sections. In the first section we measured four variables: environmental responsibility, environmental concern, price sensitivity and green consumption intention. In the second section, we collected demographic information including gender, age, education, average monthly income. The measurement of the questionnaire items in this study used a 5-point Likert scale ranging from strongly disagree to strongly agree. To ensure the validity of the scale used in the survey, the items were adapted from the relevant research and existing literature to fit the theme and context of this study. As for the measurement of environmental concern and green consumption intention, we directly use the scales which had been translated by Chinese scholars. These scales have been widely used by Chinese scholars and verified in the context of Chinese people, so the validity of these measurement items can be guaranteed. As for the measurement of environmental responsibility and price sensitivity, we implemented back-translations to ensure accuracy. Furthermore, we invited 120 consumers to take a pre-survey and refined the wording of items according to their response. The measurements of the four constructs were as follows.

According to Stern, et al. [70], environmental responsibility is measured with a four-item scale. It is included as follows: (1) my actions impact the health of the environment; (2) I have the power to protect the environment; (3) I can learn how to improve the environment; and (4) I will work to make my surrounding environment a better place.

Environmental concern is assessed with the NEP scale developed by Dunlap et al. [58]. The NEP is divided into five aspects—natural balance, anthropocentrism, human exceptionalism, ecological crisis and growth limitation—and consists of 15 items. It is included as follows: (1) we are approaching the limit of the number of people the Earth can support; (2) humans have the right to modify the natural environment to suit their needs; (3) when humans interfere with nature it often produces disastrous consequences; (4) human ingenuity will insure that we do not make the Earth unlivable; (5) humans are seriously abusing the environment; (6) the Earth has plenty of natural resources if we just learn how to develop them; (7) plants and animals have as much right as humans to exist; (8) the balance of nature is strong enough to cope with the impacts of modern industrial nations; (9) despite our special abilities, humans are still subject to the laws of nature; (10) the so-called “ecological crisis” facing humankind has been greatly exaggerated; (11) the Earth is like a spaceship with very limited

room and resources; (12) humans were meant to rule over the rest of nature; (13) the balance of nature is very delicate and easily upset; (14) humans will eventually learn enough about how nature works to be able to control it; and (15) if things continue on their present course, we will soon experience a major ecological catastrophe.

We refer to Lichtenstein et al. [63] and Sinha and Batra [64] to measure price sensitivity. Our scale consisted of eight items, which are divided into price importance and price search intention. It is included as follows: (1) when I choose a product, the price is the most important factor; (2) I rely on the price to judge the worth of something I buy; (3) when I buy a product, I will select the cheapest; (4) I always buy the lowest price. Price search intentions consisted of four aspects: (5) before making a purchasing decision, I will enter more than one store to compare prices in order to find a lower price; (6) I think it's worthwhile to spend energy on many stores and find low-priced products; (7) I think it is worth it to take time to go into a number of stores to look for a low-cost product; and (8) before making a purchasing decision, I need to collect a lot of information on the price of the product.

Green consumption intention is measured with a four-item scale adopted from Sheng et al. [8]. It is included as follows: (1) I intend to collect and learn more about energy saving air conditioners; (2) I intend to recommend an energy saving air conditioner to my relatives and friends; (3) I intend to introduce and recommend an energy saving air conditioner to my family; and (4) I will buy an energy saving air conditioner if I need it.

3.2. Data Collection and the Sample

Structured questionnaires were distributed to consumers using an online questionnaire on a Chinese professional online survey platform named Sojump (<https://www.wjx.cn>), which has had more than 2.6 million respondents all over China. Each respondent was randomly selected in the platform's sample pool. Moreover, participants who used to purchase air conditioners and are familiar with air conditioners were eligible to participate in the survey, and each respondent could participate in a lottery to win prizes such as shopping coupons and an online fitness course as a token of gratitude. The environmentally friendly product selected for the questionnaire was a green air-conditioner which touted energy conservation and environmental protection. There were three reasons to focus on air conditioning products. First, the Chinese government offers a subsidy for home appliances in the countryside. Hence, our research could provide a valuable reference for practitioners and researchers. Second, air conditioners are used commonly in the general public and in family life. Hence, Chinese consumers are familiar with the energy consumption and environmental trends with respect to air conditioners. Third, China's consumer market has great potential—perhaps more than any other in the world. Hence, our study results could contribute to the value of emerging markets. Finally, we sent 710 questionnaires and 696 were returned, of which 680 were valid for an effective response rate of 97.7% within three months. As shown in Table 1, nearly half of the participants (45.4%) were male, and 72.8% of participants were between the ages of 20 and 49 years. Undergraduate students represented 24.4% of the respondents, graduate students represented 26.0%, and the remaining respondents were below undergraduate level. The majority of participants (49.7%) reported average monthly consumption between 3000 RMB and 7000 RMB, with the remaining participants having average monthly consumption below (26.9%) or above (23.4%) this range.

Table 1. Respondent demographics (N = 680).

Items	Classification	Sample Amounts	Percentage (%)
Gender	Male	309	45.4
	Female	371	54.6
Age	Under 20	75	11.0
	20–29	193	28.4
	30–39	200	29.4
	40–49	102	15.0
	50 and above	110	16.2
Education	Junior middle school or below	172	25.3
	Senior high school	165	24.3
	Junior college or bachelor's degree	166	24.4
	Master's degree or PhD	177	26.0
Monthly consumption (RMB)	Less than 3000	183	26.9
	3000–5000	172	25.3
	5001–7000	166	24.4
	Above 7000	159	23.4

4. Empirical Results

4.1. Reliability and Validity Analysis

Reliability of this study was tested by examining the Cronbach's α coefficients of each part of the construct. In general, the minimum requirement of Cronbach's α coefficient is 0.7. Table 2 shows that Cronbach's α coefficient of environmental responsibility, environmental concern, price sensitivity and green consumption intention were 0.843, 0.770, 0.869 and 0.926, respectively, all above the critical value of 0.7, indicating the reliability of the measurements was acceptable.

Table 2. Reliability, confirmatory factor analysis and discriminant validity analysis.

Constructs	Cronbach's α	Composite reliability (CR)	Average variance extracted (AVE)	The Square Root of AVE
1. Environmental responsibility	0.843	0.857	0.605	0.778
2. Environmental concern	0.770	0.782	0.428	0.654
3. Price sensitivity	0.869	0.859	0.450	0.671
4. Green consumption intention	0.926	0.930	0.769	0.877
Model fits	CMIN = 303.674, DF = 62, CMIN/DF = 4.898, GFI = 0.935, AGFI = 0.905, CFI = 0.951, RMSEA = 0.076			

This study assessed the validity via construct validity, content validity and criterion validity, which are three main types of validity. The construct validity of the scale was analyzed using discriminant validity and convergent validity. According to Fornell and Larcker [71], evidence for discriminant validity is present when the square root of the average variance extracted (AVE) for each construct exceeds the corresponding correlations between that and any other constructs. The results show that the largest correlation between any pair of constructs was 0.471—while the smallest square root of the AVE was 0.654—so the discriminant validity of the measurements was acceptable. In addition, if the AVE of a construct is more than 0.5 and the composite reliability (CR) of a construct is more than 0.7, then there is convergent validity for the construct. AVEs of the four constructs were approximately 0.5 or exceeded 0.5, and the CRs of the four constructs were all above 0.7, indicating that there was

convergent validity (see Table 2). Content validity was ensured by adopting the existing scales, which have been empirically tested and proven to be reasonable. Criterion validity was examined using correlation analysis, as shown in Table 3, which indicated the constructs perform in a credible way.

Table 3. Descriptive statistics and correlation analysis.

Variables	Mean	SD	1.	2.	3.	4.
1. Environmental responsibility	4.177	0.028	1			
2. Environmental concern	4.015	0.019	0.269 **	1		
3. Price sensitivity	3.247	0.031	0.275 **	−0.055	1	
4. Green consumption intention	3.923	0.033	0.471 **	0.236 **	0.307 **	1

Note: ** $p < 0.01$ (Two-tailed). N = 680.

In addition, the results of the model revealed that a measurement model comprising all study constructs had fit indices that met recommended values: CMIN = 303.674, DF = 62, CMIN/DF = 4.898 < 5, GFI = 0.935 > 0.9, AGFI = 0.905 > 0.9, CFI = 0.951 > 0.9, and RMSEA = 0.076 < 0.08.

4.2. Common Method Variance

If there is a common method variance (CMV) between data, it will suggest a false relationship between constructs. In our study, we used the single factor method of Harman and the correlation coefficient between two constructs to test the CMV. In the single factor method of Harman, using exploratory factor analysis, if the first factor variance interpretation of the first factor exceeds 50%, it will have a higher CMV. The initial eigenvalue of the first factor in this study was 22.172%—far less than 50%—and the CMV is not serious. In the correlation coefficient of the comparative structure, if the correlation coefficient is greater than 0.9, it will have a higher CMV. As shown in Table 3, the maximum value of the correlation coefficient was 0.471—well below 0.9—and the CMV was within the acceptable range. Therefore, the CMV of this study had a lower level.

4.3. Descriptive Statistics and Correlation Analysis

Table 3 shows the means and standard deviations of four variables and the correlation coefficient matrix. The correlation analysis suggested that environmental responsibility was significantly positively correlated with both environmental concern ($r = 0.269$, $p < 0.01$) and green consumption intention ($r = 0.471$, $p < 0.01$). Further, environmental concern was positively correlated with green consumption intention as well ($r = 0.236$, $p < 0.01$).

4.4. Hypotheses Testing

4.4.1. The Main Effect Analysis

To test the relationships between environmental responsibility, environmental concern and green consumption intention, this study used regression analysis in AMOS software (Version 21.0). Table 4 shows the results of the main effects analysis in our study. H1 predicted that environmental responsibility positively affected green consumption intention, which is supported ($\beta = 0.575$, $p < 0.001$). In addition, environmental responsibility positively affected environmental concern, which is consistent with H2 ($\beta = 0.212$, $p < 0.001$). The path coefficient between environmental concern and green consumption intention was positively significant ($\beta = 0.230$, $p < 0.01$), which supports H3. The findings suggest that enhancing consumers' environmental responsibility and environmental concern not only meets the green trends and the popular environmentalism of consumers, but also increases their green consumption intention.

Table 4. The results of the main effect analysis.

Hypothesis	Proposed Effect	Path Coefficient	S.E.	t-Value	Results
H ₁	+	0.575 ***	0.054	10.686	H ₁ is supported
H ₂	+	0.212 ***	0.029	7.279	H ₂ is supported
H ₃	+	0.230 **	0.084	2.754	H ₃ is supported

Note: *** $p < 0.001$, ** $p < 0.01$ (Two-tailed). N = 680.

4.4.2. The Mediating Effect Analysis

To test whether the relationship between environmental responsibility and green consumption intention was mediated by environmental concern, we used the bootstrap confidence intervals test method in AMOS software (Version 21.0) [72]. Table 5 shows the results of the mediating effects of environmental concern in this study. A bootstrap analysis with 5000 resamples indicated that the expected indirect of environmental responsibility on green consumption intention via environmental concern (effect = 0.040, SE = 0.019), with a confidence interval that didn't include zero (Bias-corrected 95% CI = 0.005 to 0.082, Percentile 95% CI = 0.001 to 0.076), was in support of H4. As shown in Table 5, environmental responsibility positively and directly affected green consumption intention, and positively affected it indirectly through the partial mediator, environmental concern.

Table 5. The results of the mediating effect analysis.

Path	Effects	Estimates	SE	Z-values	Bootstrapping			
					Bias-Corrected 95% CI		Percentile 95% CI	
					Lower	Upper	Lower	Upper
ER—EC—GCI	Total effects	0.514	0.072	7.139	0.378	0.659	0.379	0.660
	Indirect effects	0.040	0.019	2.105	0.005	0.082	0.001	0.076
	Direct effects	0.474	0.075	6.320	0.341	0.630	0.341	0.631

Note: ER is environmental responsibility; EC is environmental concern; GCI is green consumption intention.

4.4.3. The Moderating Effect Analysis

This study followed the moderated mediation approach by Hayes to analyze the moderating effects of price sensitivity using the PROCESS macro for SPSS (Model 15, n = 5000) [72]. Table 6 shows the results of the moderating effects of price sensitivity in this study. The interaction of environmental responsibility and price sensitivity did include zero (95% CI = −0.054 to 0.086), indicating that the moderating effect of price sensitivity between environmental responsibility and green consumption intention was not significant, which does not support H5. However, the interaction of environmental concern and price sensitivity did not contain zero (95% CI = −0.418 to −0.161) and the coefficient of interaction was negative ($\beta = -0.289$), indicating that price sensitivity did moderate the relationship between environmental concern and green consumption intention and it undermined the positive impact of environmental concern on green consumption intention, in support of H6. These findings indicate that consumers may not be disturbed by economic factors in the psychological stage of environmental responsibility to green consumption intention, while consumers will consider economic factors in the psychological stage of environmental concern to green consumption intention. That may be because environmental concern requires consumers to measure and evaluate how much effort they need to devote to solve environmental problems, such as time, energy, money, etc. [66], while environmental responsibility only requires the individual to make the attribution of responsibility and whether or not to take action [50,60].

Table 6. The results of the moderating effect analysis.

Model 15	Coefficient	SE	t-Values	p-Values	LLCI	ULCI
Constant	−3.048	0.821	−3.712	0.000	−4.660	−1.436
ER	0.342	0.112	3.046	0.002	0.122	0.563
EC	1.195	0.223	5.358	0.000	0.757	1.633
PS	1.320	0.258	5.115	0.000	0.813	1.827
Interaction 1	0.016	0.036	0.457	0.648	−0.054	0.086
Interaction 2	−0.289	0.066	−4.415	0.000	−0.418	−0.161

Note: ER is environmental responsibility; EC is environmental concern; GCI is green consumption intention; Interaction 1 is environmental responsibility and price sensitivity; interaction 2 is environmental concern and price sensitivity.

5. General Discussion

This study aimed to shed light on how environmental responsibility increases willingness to pay for environmentally friendly products in the purchasing decision process. The data analysis results reveal that consumers' environmental responsibility significantly affects green consumption intention, that is, the consumer with stronger environmental responsibility will be more likely to buy environmentally friendly products. Additionally, environmental concern plays a partial mediating role in the effect of environmental responsibility on green consumption intention, indicating that green consumption intention can be realized by strengthening consumers' concern and attitude towards environmental issues. Meanwhile, price sensitivity plays a negative moderating role in the relationship between environmental concern and green consumption intention. That is, with the increase of environmental concern, individuals with low price sensitivity are more likely to purchase green products than those with high price sensitivity. However, the positive relationship between environmental responsibility and green consumption intention is not moderated by price sensitivity.

5.1. Theoretical Contributions

The findings of this study extend the research of green consumption in three important ways. First, our study extends existing research on the relationship between environmental responsibility and green consumption from the individual perspective, which also contributes to an emerging stream of research that explores the relationship above in a Chinese context. On the one hand, there is a growing literature focusing on the relationship between environmental responsibility and green consumption, but most of which merely focuses on the determinants from the perspective of organizational strategy and explores the effect of corporate social responsibility (CSR) or corporate environmental responsibility (CER) on green consumption [9–11]. On the other hand, though the role of consumers' environmental responsibility in promoting green consumption behavior has attracted the attention of scholars [51], studies in the Chinese context are still scarce. Second, this study proposes an important mechanism to explain the positive effect of consumers' environmental responsibility on green consumption intention, which specifically reveals that environmental concerns act as an important bridge in promoting green consumption. The result is consistent with many previous studies, which reveal that environmental concerns play a mediating role in green consumption [20,73,74]; however, the mediating effect of environmental concern between environmental responsibility and green consumption intention has not been fully discussed. Third, this study contributes to past studies by investigating the moderating role of price sensitivity in green consumption. Specifically, this study provides empirical evidence that consumers with a lower level of price sensitivity are more likely to be motivated by environmental concern, which ultimately promotes green consumption intention. The result is consistent with several previous research studies that supported the negative effect of price sensitivity [65], but the existing studies mainly regard price sensitivity as a direct or indirect antecedent of the green purchasing intention, neglecting the moderating effects of price sensitivity in green consumption.

5.2. Managerial Implications

This study also has some practical implications for policy designers. The results show the positive effects of environmental responsibility and environmental concern on green consumption intention. To boost green consumption, policymakers could integrate environmental education into the national education system to cultivate the environmental value of handling the relationship between human and nature correctly. Meanwhile, policymakers can enhance consumers' environmental responsibility and environmental concern through multiple communication channels to display various environmental issues, such as news media (e.g., TV) and social media (e.g., WeChat). Our findings also provide a new perspective for managers to develop green marketing strategy which aims at reducing the price sensitivity of consumers. The reason is that the results of this study indicate the negative effect of price sensitivity on green consumption. For example, compared with non-green products, enterprise should transfer consumers' attention to the price of green products through highlighting unique attributes and values of green products, such as healthy, low-carbon, organic, eco-friendly, etc. Additionally, setting a price comparison effect for consumers between different green products, such as displaying green products of different brands separately instead of comparing with non-green products, is important so that consumers can focus on comparing the differences and receive slight differences in prices between different green brands.

5.3. Limitations and Future Research Opportunities

There are two specific limitations to this study. First, the generalizability of our findings has yet to be confirmed. The internal logical relationship among environmental responsibility, environmental concern, price sensitivity and green consumption intention is empirically tested in the green air conditioner in China. However, it is necessary to investigate whether the conclusions are applicable to the other green products and other countries. In future research, samples from other or a wider range of green products in different countries can be collected to explore the general influencing mechanism of environmental responsibility on green consumption. Second, though our purpose was to explore whether and how consumer environmental responsibility affects green consumption intention, we only studied the mediating role of environmental concern and the moderating role of price sensitivity, with other possible mediating and moderating mechanisms, such as availability of green products, purchase convenience and policy intervention, neglected. In future research, we will further integrate these factors into consideration.

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