How do Consumers' Self-concept Cognition Differences Affect Their Green Consumption Choices

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Abstract: In order to explore the influence mechanism of consumers' green purchasing behavior, green cognition was divided into three categories: system cognition, action cognition and effectiveness cognition. By introducing the degree of green involvement, a structural equation model of the mechanism of different types of green cognition on green purchasing behavior was established. The results show that only the effectiveness cognition directly drives the green buying behavior, while the system cognition and action cognition can only indirectly affect the green buying behavior through the green involvement degree. The effect of green product involvement and green affective involvement on green buying behavior is different. Action cognition has a significant positive effect on both green product involvement and green affective involvement, while system cognition only has a positive effect on green affective involvement, while effectiveness cognition has no effect on the two kinds of involvement. Government or media propaganda and education should promote the generation of green buying behavior according to the action mechanism of different cognitive types.

Keywords: Green cognition; Green involvement

It has gradually become a hot topic among scholars. The influencing factors of green product purchasing behavior mainly include psychological factors, economic factors, situational factors, and human statistics factors. Among them, green cognition, as an important factor in individual psychology, has attracted the attention of many scholars on its influence on green consumption behavior. However, whether green cognition has a positive impact on green consumption behavior There has always been controversy, that is, green cognition does not directly have a positive impact on consumers' green purchasing behavior, but there is a "gap" between cognition and behavior. Therefore, to explore the conduction mechanism between green cognition and green purchasing behavior is the key breakthrough to minimize the cognitive dissonance. In the context of the continuous improvement of Chinese consumers' environmental green cognition, scholarsPeople have gradually begun to pay attention to the influence of green cognition on green purchasing behavior. Although a few scholars try to introduce green emotion as an intermediary variable, quantitative studies on the transmission mechanism are seriously insufficient. In view of this, on the basis of combing relevant literature, this study proposes a conceptual model of green recognition, green involvement and consumers' green buying behavior, examines the mediating role of green involvement between green cognition and green buying behavior, and further clarifies the influence effect, action mechanism and formation mechanism of green cognition on green buying behavior.

When consumers perceive that a particular green product is highly correlated with their own green demand, they will pay more attention to green products, and are willing to learn about green products and collect relevant information about green products through various channels, which is manifested as high product involvement, and then produce purchase behavior. Emotional involvement refers to the feeling and emotion stimulated by external stimuli, which is a subjective and conscious feeling state. According to the theory of Planned behavior (TPB), attitude is the first psychological variable affecting behavior. When consumers have positive state experience of resource saving and environmental protection behavior, they will arouse their own emotional appeals and emotional

identification, that is, they will have emotional involvement in green and low-carbon behavior, thus leading to green purchase.

The higher the cognition degree of consumers on green system, action and effectiveness, the more they agree with the values conveyed by green products. Thus, they feel that the product or service fits better with themselves, and they tend to spend more time and effort to understand the product information through various channels. The idea that recognition is the basis of emotion generation has been widely accepted by psychologists. According to the cognitive theory, when individual consumers have the corresponding green knowledge and carry out thinking processing, their sensitivity to environmental issues will be improved .Sensibility refines cognition into emotion, so as to generate positive attitude experience towards green purchasing behavior. Therefore, the following hypothesis is proposed: H3: the three types of green cognition have a positive effect on the involvement degree of green products. The system cognition has a positive effect on the involvement degree of green products .

In this study, questionnaire survey was adopted to collect data. Considering the understanding and acceptance of respondents, the questions involved in this questionnaire were embodied into cognition, involvement and purchase of energy-saving household appliances, so as to get close to the daily life of respondents. First of all, according to the research topic, the preliminary design of the questionnaire content, and then through the preliminary survey to adjust the content and structure of the questionnaire, the final form of a formal questionnaire. The formal questionnaire consists of three parts with a total of 16 questions (see Table 1). The first part is the description of the questionnaire, which mainly informs the purpose of the questionnaire survey. The second part is about the demographic characteristics of the respondents such as gender, age, occupation, education background; The third part is about system cognition, action cognition, effectiveness recognition, green product involvement degree, green emotion involvement degree, green purchase line into 6 dimensions of the scale. The 6 dimensions are Likert5-level scale form, 1-5 respectively represent completely disagree, disagree, uncertain, agree, fully agree.

In this study, Guangzhou was taken as the survey site, and the questionnaires were distributed by a combination of online and offline methods. It lasted nearly one month, 560 questionnaires were distributed and 428 were recovered. After sorting out the questionnaires, 23 invalid questionnaires were eliminated, and 405 valid questionnaires were retained, with effective recovery rate of 94.6%. Female respondents accounted for 53% of the total, slightly higher than male respondents. Young and middle-aged people over 30 years old become the main force of consumption of energy-saving household appliances, and most of the respondents have college education or above, indicating that there is a positive correlation between education level and cognition level of energy-saving household appliances.

Latent variables	Observed variables	Measurement question item
System cognition (X1)	X11 X12 X13	One of the main causes of Hou warming The excessive emission of CO2 and other greenhouse gases is global gas of CO2 is consumed by household electricity Energy emission The energy consumption levels of household appliances are divided into 1, 2, 3, 4 and 5 in total Grades
Action cognition (X2)	X21 X22 X23 X31	Appliances in standby mode still consume power Opening and closing the refrigerator door frequently increases the refrigerator's power consumption Summer air conditioning temperature is raised on the basis of national advocacy Under the same use conditions, frequency conversion air conditioning is better than fixed frequency air conditioning More power saving
Effectiveness perception (X3) Green products Involvement (X4)	X32 X33 X41 X42	Replace incandescent bulbs with high quality CFLS and not only reduce Power consumption, but also improve lighting effect Energy saving washing machine than ordinary washing machine energy saving 50% Water 60% Before buying energy efficient refrigerators, air conditioners, washing machines, I I search the Internet for information about the products See a lot of people buying, both online and offline I will also consider buying energy-saving home appliances Energy-saving home appliances are very attractive to me I'm interested in energy-saving refrigerators, air conditioners and washing machines
Green Emotion Involvement (X5) Green buying (X6) Behavior	X51 X52 X61 X62 X63	I will convince my family to buy energy-saving products based on energy consumption rating Appliances I would convince my family to buy a change compared to a fixed frequency air conditioner Frequency air conditioner After this survey, I will convince my family to buy an energy saver Electric products

1. Reliability and validity analysis

（1）Confirmatory factor analysis was performed on the questionnaire by Amos 23.0 to test the aggregate validity and discriminative validity of the scale. (2) The theoretical model was fitted and modified by Amos 23.0, and the optimal model was obtained. (3) Verify the validity of relevant hypotheses according to the optimized model. (4) bootstrap method was used to test the mediating effect of green product involvement degree and green emotion involvement degree, and analyze the effective action path of three types of green cognition on green purchasing behavior.

2. Reliability and validity analysis

Cronbach's α coefficient was used in this study to test the reliability of the scale. It can be seen from the test that the α value of the scale as a whole is 0.975. Among them, the α values of system cognition, action cognition, effectiveness cognition and green buying behavior all exceeded 0.8, while the involvement degree of green emotion exceeded 0.7, and the involvement degree of green products was the lowest, but also exceeded the threshold of 0.6. According to the results of confirmatory factor analysis, except the factor load of X42 variable in the involvement degree of green products is 0.67, the normalized factor load of other variables is more than 0.7. In this study, the average variation extraction (AVE) of all latent variables exceeded 0.5 except that the involvement degree of green products was 0.485 (close to the threshold of 0.5), indicating that the aggregation validity of this measurement model was good (see Table 2).

Table 2 Reliability and aggregation validity analysis of the measured model

Latent variables	Observation variable	Standardization Factor loading	Cronbach's α	AVE average Variation extraction
System cognition (X1) Action cognition (X2) Effectiveness cognition (X3) Green products Involvement (X4)	X11 X12 X13 X21 X22 X23 X31 X32 X33 X41 X42	0.807 0.769 0.802 0.837 0.777 0.789 0.827 0.834 0.788 0.723 0.669	0.835 0.839 0.856 0.650	0.629 0.642 0.667 0.485
Green Emotion Involvement (X5)	X51 X52	0.769 0.796	0.759	0.612
Buy Green Behavior (X6)	X61 X62 X63	0.866 0.853 0.802	0.874	0.707

3. Data analysis and results

It can be seen from Table 3 that the indirect effect of system cognition (X1) → green purchasing behavior (X6) obtained by Percentile method and Bias-correc-ted method does not include 0 within the 95% confidence interval, and the direct effect of system cognition on green purchasing behavior is 0, therefore, green situation The degree of perceived involvement plays a complete mediating role between the system cognition and consumers' green buying behavior. By the same method, the indirect effect of action cognition (X2) → green purchasing behavior (X6) is obtained with 95% confidence intervals 0, and the direct effect of action cognition on consumers' green purchasing behavior is 0. Therefore, the two variables of green product involvement and green emotion involvement can be considered as 。Bias - in action cognition and green purchasing behavior The 95%confidence interval of the indirect effect of efficacy cognition (X3) → green buying behavior (X6) does not include 0, but the Percentile confidence interval is [-0. 008,0. 148], including 0, which shows the mediating effect of green product involvement degree between efficacy cognition and green buying behavior.irect effect of efficacy cognition (X3) → green buying behavior (X6) obtained by Percentile bia-cor-rected method is 95%, and the confidence interval does not include 0. It is concluded that efficacy cognition directly and positively affects green buying behavior, and there is no indirect effect.

4. Conclusions and policy recommendations

In this study, green cognition is divided into three categories: system cognition, action cognition and effectiveness cognition. By introducing the degree of green involvement, an intermediary model of the action mechanism of different green cognition on green purchasing behavior is established. It is found that different types of green cognition have significant effects on consumers' green purchasing behavior

The research shows that there are significant differences in the action path of system cognition, action cognition and effectiveness cognition on the elimination of green purchasing behavior of spenders. Among the three types of green cognition, only the effectiveness cognition directly drives green buying behavior, while the system cognition and action cognition can only indirectly affect green buying behavior through the degree of green involvement.

Consumers' green buying behavior is driven by green product involvement and green emotion involvement, and there are significant differences in the effects of the three types of green cognition on green product involvement and green emotion involvement. Action cognition has a significant positive effect on both green product involvement and green emotion involvement, while system cognition only has a positive effect on green emotion involvement, while effectiveness cognition has no driving effect on the two types of involvement. In terms of the mediating effect of green involvement, action cognition was significantly greater than system cognition. Therefore, to improve consumers' green involvement, the first two types of cognition, especially action cognition, should be brought into play.

There are differences in the effects of green product involvement and green affective involvement on consumers' green buying behavior. The effect intensity of green affective involvement on green purchasing behavior ($\beta = 0.364$) was greater than that of green product involvement ($\beta = 0.157$). In order to form a long-term mechanism of green consumption, more attention should be paid to stimulating consumers' green emotion.

One is to distinguish three types of green cognition and strengthen the dissemination and education of effective knowledge. With the help of various media, public service advertisements, educational videos and community activities can be used to popularize the green effectiveness knowledge of "which way is more conducive to resource conservation and environmental protection" for consumers, so as to play the direct role of effectiveness cognition in promoting green purchasing behavior.

The second is to pay attention to the training of consumers' action cognition level, so as to improve their involvement in green products and emotional involvement. The effect of the two types of involvement between action cognition and green purchasing behavior is far greater than system cognition and effectiveness cognition. Therefore, in green education and communication, it is necessary to continuously strengthen the publicity of action knowledge about "how to bring about resource conservation and environmental protection", so as to increase consumers' involvement degree of green products and emotional involvement degree.

The government or media publicity "know what" system knowledge, should pay attention to consumer green emotion stimulation and guidance, publicity should focus on the green consumption can bring to their own or family benefits, so that consumers have a more positive attitude experience and higher perceived value; In the publicity of action knowledge, in addition to stimulate consumers' green emotion, more attention should be paid to green product design concept, quality, performance and other publicity, in order to improve consumers' perceived value of green products, increase their product involvement, so as to promote the frequency and intensity of the public green purchase behavior.

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