

An Empirical Analysis of Chinese Undergraduates' Green Consumption Behavior

Liu Lu, Zhou Hui, Jiang Kaili

Modern Economics & Management College, Jiangxi University of Finance and Economics, China

ABSTRACT: *Based on green consumption consciousness and green purchase behavior, a questionnaire is designed to analyze the green consumption behavior of Chinese undergraduates. It is found that, Chinese undergraduates' cognition of green consumption is not high, their green consumption ability is weak, and herd mentality is prevalent. At last, some suggestions are proposed to solve these problems.*

KEYWORDS: *green consumption; consumption consciousness; consumption behavior; Chinese undergraduates*

I. INTRODUCTION

In recent years, with the continuous improvement of people's material living standards, environmental pollution has become increasingly serious, and environmental protection has become the consensus of all countries in the world. Many countries have formulated relevant laws and regulations to require enterprises to produce environment-friendly green products to reduce the damage to the environment caused by human consumption. At the same time, the government or public welfare organizations guide consumers to consume green products through various forms of advertising. These measures have enhanced consumers' environmental awareness and greatly changed their consumption behavior [1]. Green products are products that use renewable, non-toxic and degradable resources in design and production, and can improve the environmental impact or reduce the damage of toxic substances to the ecological environment throughout the life cycle [2]. Green consumption is a sustainable and more socially responsible way of consumption, and human beings can achieve sustainable economic development in green consumption. At the same time, it is also an attitude of being responsible for the ecological environment [3]. Green consumption can reduce the discharge of waste and pollutants in the consumption process, so as to improve people's quality of life [4]. Therefore, in real life, we regard people's use of green products or their consumption will not harm

the environment as green consumption. In developed countries, people have a strong sense of green consumption. Relevant surveys show that as early as the beginning of this century, about 80% of Germans would consider environmental protection when shopping, 77% of Americans' consumer behavior was affected by the corporate environmental image, and 66% of Britons were willing to pay high prices for green products [5]. In 2016, the German Ministry of Environmental Protection carried out a survey on "which is your favorite, environmental protection or driving a car", and 91% of Germans chose environmental protection [6]. However, in China, although the government is advocating green consumption and has issued relevant policies to give certain government subsidies or policy support to manufacturers of green products, the green consumption concept of Chinese residents is still relatively backward. Prakash found that green consumption behavior is affected by consumer preferences in terms of price, quality and consumption habits [7]. Wang J. et al explored the green consumption attitude-intention gap in China with behavioral reasoning theory, and found that green consumption behavior was affected by positive attitudes towards green consumption [8].

In order to implement the concept of green development and promote green consumption, China issued the Guiding Opinions on Promoting Green Consumption on February 17, 2016. In the guidance, it is explicitly required to integrate the green and

low-carbon concept into student education, focus on improving their green consumption awareness, advocate a green lifestyle and encourage green product consumption with students as the starting point. As a pure consumer group at the end of education, undergraduates' green consumption concept and behavior largely determine whether they will choose green products or ordinary products in the future. Their consumption behavior is crucial to the cultivation of green markets and even green development. Therefore, it is of great practical significance to empirically analyze the status of undergraduates' green consumption behavior, explore the deep-seated reasons that restrict green consumption, find problems and propose effective solutions to improve the green purchasing power of this group.

II. QUESTIONNAIRE DESIGN AND SURVEY

From the perspective of the connotation of green consumption, China's consumer association believes that green consumption should include three parts [9]: (1) advocating consumers to choose green products that are not polluted or harmless; (2) Pay

attention to the impact on the environment in the process of consumption, and minimize the discharge of pollutants; (3) Guide people to hold the consumption concept of green and sustainable consumption. For the investigation and analysis of green consumption behavior, literature [10,11] designed a questionnaire. Using these questionnaires for reference and combining the characteristics of undergraduates, we designed questionnaires from two aspects of green consumption awareness and green purchase behavior to study undergraduates' green consumption behavior. The measurement of undergraduates' green consumption consciousness is mainly designed from three aspects: environmental sensitivity, environmental crisis and environmental responsibility, and the green purchase behavior is mainly designed from three aspects: reducing pollution behavior, buying green products behavior and saving resources behavior. Considering that the sense of environmental responsibility is closely related to the behavior of reducing pollution, the same survey content is set up for the two. The questionnaire is anonymous, and the specific questionnaire is shown in Table 1.

Table 1 Questionnaire on Green Consumption Behavior of undergraduates

Classification	No.	Questions	Strongly agree	Basically agree	Not very consistent	Non conformance
(A) Environmental sensitivity	A1	I will turn off the tap when I see it is not tight				
	A2	Dissatisfied with others' behavior of destroying the environment				
	A3	I like to travel where there are mountains, water and beautiful environment				
	A4	The film of the end of the world will remind me of environmental damage				
	A5	If I have to do something to destroy the environment, I will feel very guilty				
(B) Sense of environmental crisis	B1	Limited resources, which may be consumed in our generation				
	B2	When existing resources are exhausted, it is unlikely to find alternative resources				
	B3	Movies like 《2012》 may become reality				
	B4	The climate anomaly is getting worse every year				
	B5	Less and less pure natural food				
(C) Environmental responsibility	C1	Do not often eat takeout				
	C2	Do not use disposable tableware frequently				
	C3	Go to the supermarket and bring shopping bags				
	C4	Do not use too much detergent when washing clothes				

	C5	Do not throw non degradable garbage everywhere
Buy green products (D)	D1	Conscious of buying organic food
	D2	Consciously buy recyclable goods
	D3	They are more willing to buy solid wood furniture than composite furniture
	D4	Prefer to ride a bike rather than take a bus
	D5	We will consider buying electric cars instead of gasoline cars in future
Resource saving behavior (E)	E1	Buy energy-saving bulbs
	E2	Turn off the switch or unplug the plug after using the appliance
	E3	Have the habit of garbage classification
	E4	Only when the phone is lost can we buy a new phone
	E5	Check whether the switch is turned off before going out

We made an electronic questionnaire through WeChat, and asked the head teacher of each grade to distribute the electronic questionnaire to the class group. We received 175 valid questionnaires in total. After receiving the questionnaire, 20 students were randomly selected for interview.

III. DESCRIPTIVE STATISTICS

Quantify the options of students with green consumption awareness (categories A, B and C). If

the selection is inconformity, it means that there is no green consumption awareness, 0 point; if the selection is inconformity, it means that there is weak green consumption awareness, 1 point; if the selection is basically consistent, it means that there is moderate green consumption awareness, 2 points; if the selection is very consistent, it means that there is strong green consumption awareness, 3 points. Descriptive statistics of green consumption awareness are shown in Table 2.

Table 2 Descriptive Statistics of the Meaning of Green Consumption

No.	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5
Mean	2.52	2.50	2.67	2.48	2.35	1.53	1.65	1.37	1.75	1.88	1.43	1.27	1.48	1.15	1.09
St.d	0.58	0.57	0.54	0.60	0.57	0.55	0.72	0.73	0.32	0.23	0.69	0.67	0.63	0.88	0.35

It can be seen from Table 2 that:

(1) On the whole, the mean value of A>the mean value of B>the mean value of C, and the variance difference is not obvious. It shows that undergraduates are most concerned about the quality of the surrounding environment, and the behavior of others will affect the mood of undergraduates. Because the environment is the prerequisite for human survival, and protecting the environment is the basic guarantee for human survival and development. As students, everyone expects a better living and learning environment from the heart. The beautiful environment is conducive to the physical and mental health of students, and can provide spiritual comfort after intense study and work.

(2) When it comes to the urgency of

environmental protection, undergraduates' sense of crisis is not strong enough. This is mainly because undergraduates often have optimistic expectations about the future, believing that scientists can always find solutions to environmental pollution in the future, which can solve the energy and resource crisis.

(3) When the sense of crisis is not strong enough, the students' enthusiasm for green consumption is not high, especially when green consumption will add other burdens to themselves. Most students believe that protecting the environment will not bring them great benefits immediately, and occasional damage to the environment will not cause too much harm to themselves. Of course, they think that protecting the

environment is something that the state or government functional departments should consider rather than the students can do. Of course, this has a lot to do with the current construction of social material civilization and spiritual civilization, which is also the reason why everyone has difficulty in environmental protection.

Make the same numerical treatment on the survey results of green purchasing behavior (categories C, D and E) to obtain descriptive statistics of green purchasing behavior, as shown in Table 3.

Table 3 Descriptive Statistics of Green Buying Behavior

No.	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	E1	E2	E3	E4	E5
Mean	1.43	1.27	1.48	1.15	1.09	1.32	1.28	1.46	1.34	1.51	2.38	2.45	1.68	2.20	2.28
St.d	0.69	0.67	0.63	0.88	0.35	0.68	0.83	0.87	0.52	0.49	0.55	0.72	0.73	0.32	0.23

From Table 3, we see that:

(1) The average value of E is significantly higher than C and D in undergraduates' green purchase behavior. This shows that undergraduates' green purchase behavior is mainly composed of resource saving behavior, followed by reducing pollution and purchasing green products.

(2) The formation of resource saving behavior is mostly influenced by the concept of "thrift and thrift" in the traditional culture of the Chinese nation. Undergraduates have been indoctrinated with such consumption concept since childhood, and their consumption habits are influenced imperceptibly by their parents and elders, so they will practice green consumption from the perspective of saving. In the resource saving behavior, there are relatively few students who have the habit of garbage classification. Through an exclusive interview with 20 randomly selected students, it is found that 98% of them do not know how to classify garbage and the importance of garbage classification, nor can they distinguish recyclable garbage from non-recyclable garbage.

distinguish between degradable and non-degradable garbage, nor do they know how garbage should be classified and discarded. They will not choose to buy green products specifically to protect the environment, or even pay attention to whether the products are green. Undergraduates' lack of awareness of green consumption, on the one hand, is because they do not understand the true meaning and connotation of green consumption, on the other hand, because they do not have a good channel to publicize green knowledge around them. The lack of undergraduates' awareness of green consumption has led them not to spontaneously carry out green consumption, thereby reducing their green purchasing power.

(2) The green consumption ability of undergraduates is weak. In the answers to the student questionnaire, it can also be seen that the students' unwillingness to use green products is also affected by the convenience and price. This can be seen from the fact that there are more students eating takeout and they often use disposable tableware. In order to avoid washing chopsticks and dishes, many students will choose to eat takeout, so that takeout boxes and disposable tableware become non degradable garbage. In addition, because the price of green products is much higher than that of ordinary products, and the income level of students is very low, they are unwilling to pay more capital costs for environmental protection, which leads to unsalable green products, and further leads to enterprises being unable to form large-scale production to reduce the cost of green products, which has become a vicious circle.

(3) Undergraduates generally have a herd mentality. During face-to-face communication with randomly selected students, they made it clear that if most of the students around choose to buy green

IV. RESEARCH CONCLUSIONS AND COUNTERMEASURES

4.1 Empirical analysis conclusion

Through the above analysis, we can draw the following three conclusions:

(1) Undergraduates' awareness of green consumption is not high. Through the questionnaire survey on students, it can be found that most of the students have weak green consumption awareness. Their green consumption is more due to their environmental sensitivity and crisis awareness than to their responsibility to protect the environment. In addition, many students are vague about some green commonsense concepts, and most students cannot

products first, they would also like to try to buy them. This is a kind of psychology that the minority obeys the majority and lacks rational thinking and analysis. Some students admit that they will have the impulse to change their mobile phones when they see others change their mobile phones, regardless of whether they need to change their mobile phones. When eating in a restaurant, if people who eat together choose to use disposable chopsticks, they will also use disposable chopsticks. The following psychology of undergraduates needs to be correctly guided, which can make them develop green purchasing behavior imperceptibly. Without supervision and improvement, it will only lead to a vicious circle of non-green consumption behavior.

4.2 Countermeasures to Improve undergraduates' Green Consumption Behavior

(1) The government should strengthen the publicity of green consumption. The government plays a guiding and propaganda role in the formation process of undergraduates' green purchase behavior. As the government has a credibility image and position in the hearts of the people, it will have a significant effect on the dissemination of relevant concepts and ideas of green products. The government should consciously publicize the importance of green consumption through various official media platforms, so that students can realize their responsibilities and obligations for green consumption, not just for thrift.

(2) Schools should strengthen the education of green consumption for undergraduates. Schools play an instructive and supervisory role in the formation of green purchase behavior of undergraduates. The school is the place where undergraduates study and live, and the place where they are most likely to cultivate their ideas. Schools should convey the basic concept of green consumption to students through lectures, courses and other forms; Then, by guiding undergraduates to participate in green consumption activities and conducting green consumption related surveys, they can personally feel the benefits of green consumption behaviors to the environment; Finally, we will organize some competitions to strengthen the students' awareness of green purchase, so that they can develop the habit of green purchase.

(3) The government encourages enterprises to reduce the price of green products on a large

scale. The government has always given strong support to the production of green products. Although green products are beneficial to consumers' health and cause relatively little environmental pollution, their high price has become a major factor restricting consumers' purchase. From the perspective of consumers, there is no obvious difference between green products and ordinary products in the short term, but the price is much higher, which is the fundamental reason why consumers, including undergraduates, are less willing to buy green products. Therefore, the government wants to introduce relevant policies to support enterprises to implement economies of scale through mergers and acquisitions, restructuring, expansion and other measures to minimize the production costs of green products. Enterprises can also reduce the sales cost of green products and the terminal price of green products through direct sales or short channel sales, reducing packaging costs and other measures.

V. Acknowledgements

This paper was supported by the Science and Technology Research Project of Jiangxi Education Department of China under Grant No.GJJ218302.

REFERENCE

- [1] MatusosKanchanapibul, Ewelina Lacka, Xiaojun Wang, Hing Kai Chan. An empirical investigation of green purchase behaviour among the young generation[J]. Journal of Cleaner Production,2014,66(3):528-536.
- [2] Fabien Durif, Caroline Boivin, Charles Julien. In search of a green product definition [J]. Innovative Marketing, 2010, 6(1):24~33.
- [3] Peattie K, Crane A. Green marketing: legend, myth, farce or prophesy?[J]. Social Science Electronic Publishing, 2005, 8(4):357-370(14).
- [4] Hao Wenbing, Ren Yayuan. Cultivatingstrategyofgreenconsumptionconcept forcollegestudents[J]. HeilongjiangResearches on Higher Education, 2016(10):1-4.
- [5] Zhang Wei. On the green package of agricultural products[J]. Journal of Nantong Vocational University, 2003,17(3):39-41.

- [6] Gao Rongwei. Environmental protection in Germany[J]. Shanghai Rural Economics, 2017,(12):75-79.
- [7] Prakash A. Green marketing, public policy and managerial strategies[J]. Business Strategy & the Environment, 2002, 11(5):285-297.
- [8] Wang Jinhua, Shen Minmin, Chu May. Why is green consumption easier said than done? Exploring the green consumption attitude-intention gap in China with behavioral reasoning theory[J]. Cleaner and Responsible Consumption, 2021, 2:100015.
- [9] Cui Qiaohuan. Analysis on the influencing factors and countermeasures of implementing green consumption in China[J]. Journal of Socialist Theory Guide, 2007(10):116-118.
- [10] MaturrosKanchanapibul, Ewelina Lacka, Xiaojun Wang, Hing Kai Chan. An empirical investigation of green purchase behaviour among theyoung generation[J]. Journal of Cleaner Production, 2014,66(3):528-536.
- [11] JanineFleith de Medeiros, Jose Luis Duarte Ribeiro, Marcelo Nogueira Cortimiglia. Influence of perceived value on purchasing decisions of greenproducts in Brazil[J]. Journal of Cleaner Production,2015(110):158-169.