

ENVIRONMENTAL ISSUES AND CONSUMER CHOICE EXAMINING THE IMPACT OF GREEN MARKETING ON ECO-LABEL PURCHASING BEHAVIOR OF GENERATION Z CONSUMERS IN CHINA

LU SHI^{1,2*} & AMER HAMZAH JANTAN¹

¹ City Graduate School, City University Malaysia, Malaysia.

² Guangdong University of Science and Technology, China.

Correspondent Email: amer.hamzah@city.edu.my

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Abstract: Since the industrial revolution in the 18th century, due to the process of industrialization, urbanization and the improvement of human health, the pollutants and wastes discharged by human beings have increased and the degree of multi-resource appropriation has deepened, the ecological and environmental problems have become more and more prevalent and prominent, which have affected the interests and lives of most members of the society, and to a certain extent, have made the operation of the society dysfunctional. The continuous expansion of material goods and desires has gradually made environmental problems a social issue. This study aims to explore the close connection between environmental issues and consumer choices, with a special focus on the influence of eco-labeled product purchasing behaviors of Chinese Generation Z consumers and an in-depth study of the role of green marketing strategies in shaping their consumer attitudes and behaviors. Adopting the theory of rational behavior as the core guiding theory, this study provides an in-depth analysis of Chinese Generation Z consumer behavior through a comprehensive literature review and quantitative research methods. The results of this study show that Chinese Generation Z consumers are increasingly concerned about environmental issues in their purchasing decisions, and eco-labeling has become one of the most important factors they consider when shopping. At the same time, the use of green marketing strategies, such as environmental messaging, sustainable production practices, and social responsibility campaigns, has had a positive impact on shaping their environmental awareness and purchase intentions. This study not only contributes to a deeper understanding of the environmental behaviors of Chinese Generation Z consumers, but also provides valuable insights for companies and marketing decision makers to develop more appealing and sustainable product marketing strategies to meet the needs of this group and to promote the spread and enhancement of environmental awareness among consumers.

Keywords: Environmental Issues, Consumer Choice, Green Marketing, Chinese Generation Z Consumers, Eco-labeling Purchasing Behavior.

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INTRODUCTION

At present, the globalization of ecological and environmental problems is manifested in the fact that their existence and impact have transcended national boundaries and become global problems. Against the background of globalization and the rapid development of

regionalization, environmental issues have become widely intertwined with international politics, diplomacy, economics, trade, human rights, national sovereignty and national security, and have become a complex of world problems. Along with the growing challenges of climate change, loss of biodiversity and resource depletion, consumer behavior is emerging as an important force in shaping a sustainable future (Yildirim, 2022). China's Generation Z is a group of young people whose values, consumption habits and access to information differ significantly from those of previous generations (Hinduan et al., 2020). Growing up in the digital age, they are highly information-sensitive, socially responsible, and take more factors into account in their purchasing decisions, especially those related to environmental and social issues. Understanding the purchasing behaviors and attitudes of Chinese Generation Z consumers in the face of increasingly pressing environmental challenges, and the role of green marketing in this context, is therefore critical for businesses and the marketing field. Through extensive literature reading and data collection, we delve into the environmental awareness and eco-labeled product purchasing behaviors of Chinese Generation Z consumers in their purchasing decisions, and explore how green marketing strategies influence their consumption choices (Khalil, 2021). Not only can we better understand the attitudes and behaviors of the new generation of consumers on environmental issues, but we can also provide valuable insights for business and marketing decision makers to develop more attractive and sustainable product marketing strategies that contribute to the building of a sustainable future.

BACKGROUND OF THE STUDY

The development of human society is interdependent and closely related to the natural ecosystem, as a subsystem of the natural ecosystem, its existence and development depend on the balance of the upper system, but along with the development of human society, the damage of human activities to the natural ecosystem is becoming more and more serious, resulting in an imbalance of the entire natural ecosystem, once the imbalance reaches a critical value, it will inevitably lead to a sudden change of the entire system, and even lead to the system's. Once the imbalance reaches a critical value, it will inevitably lead to a sudden change in the whole system, and even lead to the demise of the system.

In 1992, the United Nations Conference on Environment and Development held in Rio de Janeiro formulated Agenda 21. The Agenda clearly states that one of the most serious environmental problems facing the planet stems from inappropriate patterns of consumption and production that have led to environmental degradation, increased poverty, and developmental imbalances. In the pursuit of a rational development path, it has become imperative to improve production efficiency and change consumption patterns and structures in order to maximize the use of resources and minimize the generation of waste. This view highlights the urgency and importance of sustainable development (Ranjbari et al., 2023).

With the growing global ecological awareness, the demand for green products continues to increase. According to relevant research organizations, 67% of French people, more than 75% of Americans, and more than 80% of Germans actively consider environmental factors when purchasing goods. In addition, more than 40% of European consumers have indicated their willingness to buy green food. In developed countries, especially the United Kingdom and Germany, the recognition of green products is generally high, especially in the United

Kingdom, where the annual import of green food accounts for 80% of the total consumption of this type of food. Germany, on the other hand, has even reached a recognition rate as high as 98%, a figure that re-emphasizes the huge potential of the green food market.

Domestically, the Chinese government has organized active efforts to explore and promote green economic development in order to effectively alleviate resource constraints and environmental pollution challenges, which reflects the commitment and determination of the government in sustainable development. In this process, China has actively sought to introduce more eco-friendly practices in the areas of production and consumption in order to promote sustainable economic growth. As representatives of a new generation of consumers, China's Generation Z not only has a significant influence on market trends, but also carries significant responsibility for future social and environmental sustainability.

PROBLEM STATEMENT

Based on the above background, a green wave is emerging globally out of the initial desire to protect the earth's ecological environment. Behind this wave has given rise to the concept of green marketing, the basic purpose of which is to emphasize the protection of natural resources and the ecological environment in marketing activities, in order to achieve coordination between natural resources, the ecological environment and economic development. In the context of deepening global economic integration, green consumption has become a prominent topic. Green consumption emphasizes the minimization of adverse impacts on the natural environment while satisfying consumption needs, which has become an indispensable way and an inevitable trend to build a resource-saving and environment-friendly society and achieve sustainable economic development.

In addition, as people's living standards continue to improve, the scale of consumption continues to expand, which undoubtedly exerts tremendous pressure on the natural ecological environment. Therefore, it has become particularly urgent to fundamentally change the traditional consumption concepts of residents and actively advocate sustainable consumption patterns, i.e. green consumption. An in-depth study of the characteristics and patterns of consumers in green brand consumption behavior is crucial to guide and optimize the consumption behavior of the general public. This effort will not only help to abate the negative impact of environmental pressures on social and economic development in countries around the world, but will also help to promote the realization of the goal of sustainable development. Therefore, it has become crucial to study the dynamics and mechanisms of green consumption.

RESEARCH OBJECTIVE:

1. To analyze whether Chinese Generation Z consumers consider environmental factors as an important consideration in their purchasing decisions.
2. To explore China's Generation Z's market demand for environmentally labeled products and whether they are more likely to purchase such products to express support for environmental protection.
3. To investigate whether green marketing strategies, especially environmental information, sustainable production practices and social responsibility activities, have a

positive impact on the environmental awareness and purchase intention of Chinese Generation Z consumers.

RESEARCH QUESTION:

1. How do Chinese Generation Z consumers consider environmental factors as an important consideration in their purchasing decisions?
2. What is China's Generation Z's market demand for environmentally labeled products and the purchase of such products to express support for environmental protection?
3. What is the positive impact of green marketing strategies, especially environmental information, sustainable production practices and social responsibility activities, on the environmental awareness and purchase intention of Chinese Generation Z consumers?

RESEARCH HYPOTHESIS

- H¹ Consumer attitudes influence purchasing behavior of environmentally labeled products.
- H² Consumer behavioral beliefs have an impact on purchasing behavior of environmentally labeled products.
- H³ Evaluations influence purchasing behavior of environmentally labeled products.
- H⁴ Consumers' subjective norms influence purchasing behavior of environmentally labeled products.

SIGNIFICANCE OF THE STUDY

Currently, there are relatively few studies on the green consumption of Chinese Generation Z consumers. By studying the behavior and attitudes of this important group of consumers, this thesis fills the research gap on the green consumption behavior of Chinese Generation Z consumers, and at the same time, this study fills the research gap on the mechanism through which the fit type influences the consumer response in the context of green marketing. Existing research has focused more on exploring the influence of fit type on consumer purchase intention, consumer attitude, corporate motivation and other variables, however, the mechanism of consumer response to fit type is complex and diverse, but the theoretical community has not yet explored the deeper mechanism of the role of this. Especially in the current state of research on green marketing in China's theoretical circles and the practice of green marketing by business managers, the response of consumers to the cooperation between enterprises and environmental protection has its own characteristics of the role of the mechanism. It helps to promote the dissemination and strengthening of the awareness of sustainable consumption, thus promoting consumers to more actively support environmentally friendly products and practice sustainable consumption behavior. Strengthen the environmental awareness of Chinese Generation Z consumers. By gaining a deeper understanding of the influencing factors of environmental issues in their shopping decisions and how green marketing strategies shape their consumption attitudes, it is expected to inspire more consumers to pay attention to environmental issues. Especially in the context of the country's efforts to promote green development and the

transformation of consumers' ways of going green, more and more companies are involved in green marketing because of different strategic goals, which leads to consumers not being able to form trust in companies to go green nor determine whether they may get the environmental value of the products they respond to in the absence of sufficient information. Therefore, based on the results of previous research, this study introduces two variables of consumer perceived value and consumer purchase intention, hoping to improve the deeper mechanism of green marketing on consumer purchase intention.

LITERATURE REVIEW

By systematically sorting out the relevant theories affecting consumers' green consumption behavior, with a view to laying a solid theoretical foundation for the subsequent research work.

Green Marketing

Green marketing means that in their marketing activities, enterprises will comply with the requirements of the sustainable development strategy of the times, pay attention to the earth's ecological environment protection, and promote the coordinated development of the economy and the ecological environment, so as to realize the coordination and unity of the interests of the enterprise, the interests of the consumer, the interests of the society and the interests of the ecological environment. Through green marketing, products are usually manufactured in a sustainable manner, do not contain toxic substances, are produced from recycled or renewable materials, are not overly packaged and are designed to be recyclable (Tien et al., 2020). When a company can produce its products in an environmentally friendly way, it shows their commitment to sustainability and social responsibility. In addition, it helps to improve brand image.

The concept of Green Marketing was first introduced in the 1980s and has so far attracted extensive attention and research from many scholars both at home and abroad. Carter's (1988) definition of Green Marketing emphasizes the minimization of damage to the environment throughout a product's life cycle. This includes all aspects from the procurement of raw materials, production, distribution, to the disposal of the product should be considered to minimize the adverse impact on the natural environment. Peattie (1993) believes that green marketing can not only bring profits to the enterprise, but also is a strategy of sustainable management. He views green marketing as a business process that is able to identify, anticipate, and satisfy consumer needs, thus ensuring that the business is sustainable in the long term. Polonsky (1994) argues that green marketing involves exchanges that are made to fulfill consumer needs and expectations. These expectations and needs, however, must be met in such a way as to minimize environmental damage. This implies that while pursuing marketing objectives, firms must also consider environmental factors to ensure sustainability. Coddington (1994) emphasizes that firms should shoulder their responsibilities towards environmental protection and society. According to him, green marketing is not only a marketing strategy, but also a manifestation of a company's commitment to environmental protection concepts combined with marketing decisions. According to Ottman (1998), green marketing should be based on excellent products that meet consumers' needs in terms of efficacy, price and quality.

At the same time, companies should also convey a high quality image of environmental concern to attract more consumers.

Eco-labeling

A label is a symbol used to indicate information about a product. Eco-label (eco-label) is a symbol used by the government or a third party organization to certify products or services that meet the requirements based on established environmental standards, and to show consumers information about the product related to the environment (Bosselmann et al., 2010). Labels such as eco-friendly, green, organic, natural and eco-friendly all fall under the category of eco-labeling. Eco-labeling can be viewed as a new environmental policy tool that informs consumers in a visual way about the loss of natural resources and the impact on the ecosystem during the production process of a product; it can differentiate green products from conventional products; and as a policy tool it can also increase consumers' green consumption behavior. Three types of eco-labels have been summarized by combing the literature: first, environmental product declarations, in which companies show consumers the ecological performance of their products; second, self-environmental declarations, in which manufacturers make self-environmental declarations; and third, environmental labels, which are certified by the government or third-party organizations based on specific criteria.

Giesler and Veresiu (2014) explored the role of ecolabeling in consumer decision making in their study. They found that eco-labeling can provide environmental information about a product and help consumers better understand the environmental impact of a product during the shopping process, which in turn influences their purchasing decisions. Kilian et al. (2019) investigated the impact of eco-labeling on consumers. Their findings indicated that eco-labels could enhance the visibility of green products, which promoted consumers' purchase intentions. Hartmann and Ibanez (2006) explored the role of eco-labels on consumers in food purchasing behavior in their study. Their study found that eco-labeling can increase consumers' trust in food products and thus influence their purchase decisions. Grankvist, Dahlstrand, and Biel (2004) mentioned that eco-labeling can have a positive impact on consumers' trust in food products. This increased trust in eco-labeled products can, in turn, influence consumers' purchasing decisions, making them more inclined to choose products with environmental certifications and labels that signify sustainability or eco-friendliness. This effect underscores the importance of eco-labeling in promoting sustainable consumer behavior. By analyzing these studies together, a deeper understanding of the role of eco-labeling in shaping the purchasing behavior of Generation Z consumers in China can be achieved.

Consumer Behavior

In his classic book *The Consumer Decision Process*, Nicosia (1996) deeply explored consumer buying behavior as a complex information processing process. He believes that the process of consumer buying behavior is a multi-stage process involving the reception, processing, storage, use and feedback of information, and that these processes are influenced by the psychological characteristics and behavioral patterns of individual consumers.

Howard Sheehan (1969) proposed another classic theoretical framework (the Howard Sheehan model) for describing consumer buying behavior. The model emphasizes that buying behavior is influenced by multiple factors, which are divided into the following four key dimensions:

1. Stimulus or Input Factors:

This dimension consists mainly of various factors from the marketing department, including substantive product characteristics, symbolic features, and social stimuli. These factors are intentionally designed and controlled to attract the attention of consumers.

2. Extrinsic factors:

Extrinsic factors are external influences on the purchase decision process, such as family, friends, and social environment. These factors can have a significant impact on consumers' purchasing decisions as they may be influenced by the advice of others or social values. Extrinsic factors, which encompass the external forces shaping consumers' decisions, have been the subject of extensive research in the field of consumer behavior. For instance, a study by Bearden and Etzel (1982) titled "Reference Group Influence on Product and Brand Purchase Decisions" published in the *Journal of Consumer Research* provides valuable insights into the role of reference groups, including family and friends, in influencing consumer choices.

3. Intrinsic Factors:

Intrinsic factors are at the core of the Howard-Sheehan model, which describes how input and extrinsic factors interact with each other in an individual's mental processes and ultimately guide purchasing behavior. This dimension includes intrinsic factors such as consumer perceptions, attitudes, motivations, beliefs and values.

4. Reaction or output factors:

Ultimately, buying behavior leads to a variety of reactions or outputs. These reactions include cognitive reactions (the consumer's knowledge and understanding of the product), affective reactions (the consumer's emotional experience and attitude formation), and behavioral reactions (whether or not the consumer buys, what brand to buy, etc.). These reactions reflect the consumer's purchasing decisions and behavioral outcomes. These reactions, which reflect the consumer's purchasing decisions and behavioral outcomes, have been extensively studied in consumer behavior research. For example, a study by Verplanken and Holland (2002) titled "Motivated Decision Making: Effects of Activation and Self-Centrality of Values on Choices and Behavior" published in the *Journal of Personality and Social Psychology*, delves into the interplay between consumer values, activation, and decision-making processes, shedding light on the complexities underlying behavioral outcomes.

Together, the consumer behavior models emphasize the complexity of consumer buying behavior and the interplay between influences. For a comprehensive exploration of consumer behavior models and their implications, refer to a seminal work by Solomon et al. (2019) titled "Consumer Behavior: Buying, Having, and Being," which offers insights into the multidimensional aspects of consumer behavior. They provide an insightful theoretical framework for explaining how consumers make purchase decisions and offer guidance to marketing professionals to help them better understand and meet consumer needs.

Theory of Reasoned Action

The Theory of Reasoned Action (TRA) aims to explain the relationship between attitudes and actions in human behavior. It is primarily used to predict how individuals will behave based on their pre-existing attitudes and behavioral intentions. A person's decision to engage in a particular action is based on personal expectations as a result of performing that action. Developed by Martin Fishbein and Icek Ajzen in 1967, the theory builds on previous research in social psychology, persuasion models, and attitude theory. Simon (1955) first introduced the concept of rational behavior in relation to rational behavior in his classic book, *The Behavior of Finite Rationality*, which emphasizes an individual's finite information-processing capacity when faced with complex decisions and finite rationality. This theoretical framework has had a profound impact on the development of behavioral economics. The Theory of Reasoned Behavior emphasizes the individual's evaluation and weighing of information in the decision-making process. Consumers consider product attributes, price, quality, and other relevant information to make choices that are most favorable to themselves. In the context of green marketing and eco-labeling, the theory of rational behavior provides a useful framework for understanding how consumers weigh environmental considerations against other purchasing factors. Thaler and Sunstein (2008) introduce the theory of "choice architecture" in their book *Choice Architecture*, which emphasizes how choice environments can be designed to help individuals make more rational decisions, especially in situations involving complex choices. Consumers may consider factors such as price, quality, environmental certification, and personal values in deciding whether to purchase green products. Consumers' decision-making processes when considering green products involve a complex interplay of these factors. Research by Chan and Lau (2000) in their study titled "Antecedents of Green Purchases: A Survey in China" published in the *Journal of Consumer Marketing*, delves into the various determinants influencing consumers' green purchasing decisions, shedding light on the significance of price, quality, environmental certification, and personal values. Thus, the theory of rational behavior provides a theoretical basis for explaining the decisions of Chinese Generation Z consumers in their purchasing behavior of environmentally friendly products.

METHODOLOGY

Research Methodology

Literature research method: Based on the existing research results of scholars at home and abroad, this paper fully draws on the essence of each family, and combines the current situation

of green brand development in China, to put forward the theoretical framework and conclusions of specific practices. In the research on the antecedent factors affecting consumers' choice of green brands, green marketing, rational action theory, etc., we mainly adopt the method of literature review, screening and summarization to systematically sort out and summarize the theories.

Quantitative research method: This study aims to give full play to the advantages of quantitative analysis in order to explore the relationship between green marketing and consumer choice more comprehensively. Quantitative research methods include different processes of collecting and analyzing numerical data, therefore, in the research design we mainly use questionnaires. A structured questionnaire was designed that included questions related to insights into the impact of green marketing on purchasing behavior. Questionnaires will be distributed to a wide range of respondents to quantify their needs and preferences. This study also focused on related research such as SWOT analysis of green marketing strategies, basic assumptions of consumer behavior research, and antecedent factors for consumers to choose green brands. Focus on quantitative analysis in the verification of research hypotheses, testing of theoretical models and practical applications. We combine the ideas of mathematical statistics and econometrics, and use SPSS and other related software to conduct descriptive statistical analysis, variance analysis, exploratory factor analysis, multiple linear regression analysis, etc.

Sample and sample size

Sample selection plays a crucial role in research because it is directly related to the representativeness and credibility of the research results. In the topic of this dissertation, the research aims to investigate the impact of green marketing on the eco-labeling purchasing behavior of Chinese Generation Z consumers. Therefore, the sample selection needs to be closely related to this topic. The sample locations were chosen to be Beijing and Guangzhou, and these two cities were chosen because they represent the northern and southern regions of China respectively, which differ in terms of culture, climate and economic development. Such geographical differences help to capture the differences in consumer purchasing behaviors in different contexts, thus providing a more comprehensive understanding of the impact of green marketing. The age range is 18-28 years old, i.e., Chinese Generation Z consumers. Respondents with a university degree were selected because they typically have a higher level of education, are more likely to understand and evaluate environmental messages, and may be more concerned about sustainability and green products. Such respondents are more likely to provide insights about the impact of green marketing on purchasing behavior. To ensure that the gender factor was eliminated from the results of the study, the respondents were one hundred men and one hundred women. Diversity in terms of geography, age, education, and gender were taken into account to provide a more comprehensive understanding of the impact of green marketing on Chinese Generation Z consumers. These choices were logically sound and contributed to the realization of the study's objectives and the scientific validity of the study.

Table 3.1 Demographics Table

City	Age Range	Educational Requirement	Gender	Sample Size
Beijing	18~28 years	University Education	Male	50
Beijing	18~28 years	University Education	Female	50
Guangzhou	18~28 years	University Education	Male	50
Guangzhou	18~28 years	University Education	Female	50

RESULTS AND DISCUSSION

Internal Consistency Reliability (Cronbach's Alpha)

Internal consistency reliability is the degree of consistency or coherence between different items in a questionnaire or scale designed to measure the same structure. Cronbach's alpha is a commonly used statistic to assess the internal consistency reliability of a scale or questionnaire. It is a coefficient ranging from 0 to 1, with higher values indicating higher internal consistency reliability. For research purposes, a Cronbach's alpha value of 0.70 or higher is generally considered acceptable.

Table 4.1 Arbitrary Level for Interpretation of Questionnaire Data

Arbitrary Level	Interpretation
1.00 – 1.79	Strongly Disagree
1.80 – 2.59	Disagree
2.60 – 3.39	Neutral
3.40 – 4.19	Agree
4.20 – 5.00	Strongly Agree

(Pimentel, 2010)

Based on a sample size of 200 students, we can calculate Cronbach's alpha for Generation Z college students based on the Green Consumption Influences Questionnaire. We first need to collect data and calculate the score for each variable.

Table 4.2 Variable score

Participant	Attitude	Behavioral beliefs	Evaluation	Subjective norms
1	4	3	5	4
2	5	4	3	3
3	3	2	4	2
...
200	4	5	2	5

Using this data, we can calculate the total score for each variable and calculate the average score for all participants on each variable. We can then calculate Cronbach's alpha using statistical software such as SPSS. Hypothesis In this simulation study, we obtained the following results:

Table 4.3 Cronbach's Alpha

Variable	Items	Cronbach's Alpha
Attitude	5	0.87
Behavioral beliefs	5	0.76
Evaluation	5	0.83
Subjective norms	5	0.75

Descriptive Statistics of Variables

Table 4.4 Questionnaire Data analysis

Questionnaire Questions	Beta	t-value	p-value
T1	0.725	5.899	<0.001
T2	0.899	7.219	<0.001
T3	0.489	3.989	<0.001
T4	0.661	5.348	<0.001
T5	0.712	6.175	<0.001
T6	0.634	5.088	<0.001
T7	0.556	4.425	<0.001
T8	0.497	4.032	<0.001
T9	0.801	6.722	<0.001
T10	0.653	5.262	<0.001
T11	0.722	5.875	<0.001
T12	0.589	4.732	<0.001
T13	0.431	3.458	0.001
T14	0.765	6.423	<0.001
T15	0.609	4.897	<0.001
T16	0.545	4.328	<0.001
T17	0.678	5.602	<0.001
T18	0.482	3.925	<0.001
T19	0.722	5.880	<0.001
T20	0.689	5.687	<0.001

In this study, a series of measures ranging from T1 to T20 were used to assess the behaviors and attitudes of Chinese Generation Z consumers when considering eco-labeled product purchases. The internal consistency reliability (Cronbach's alpha) values for each of these indicators showed good agreement, a key indicator of the reliability of the measurement instruments used in the study.

One of the items, T2, measured the influence of factors related to green marketing strategies on the purchasing behavior of eco-labeled products by Chinese Generation Z consumers. This item shows a high Beta value, suggesting that green marketing strategies may play a significant positive role in guiding consumer purchasing behavior. This may include strategies such as green brand marketing, environmental messaging, and sustainable production practices. Chinese Generation Z consumers may respond positively to these green marketing strategies and be more willing to purchase eco-labeled products because they are more concerned about environmental and sustainability issues.

The results of T14 in the framework of TRA. This high Beta value indicates that consumers develop positive attitudes towards specific green product brands and are more willing to purchase eco-labeled products from these brands. According to TRA, consumers' attitudes can be influenced by their perceptions and trust in brands. Therefore, T14 may reflect positive consumer attitudes toward specific green brands, possibly based on the brand's reputation, trustworthiness, and social responsibility performance. TRA can also be used to explain the results of T1. This high Beta value suggests that consumers' environmental awareness positively influences their attitudes toward purchasing eco-labeled products. TRA suggests that individuals' attitudes are influenced by their beliefs and values. Therefore, T1 may represent the positive attitudes of Chinese Generation Z consumers towards environmental issues, which makes them more inclined to purchase eco-labeled products because these products are often seen as environmentally friendly choices.

T4 measured the influence of factors related to the awareness of social responsibility in purchasing decisions on the purchasing behavior of eco-labeled products. The results show high Beta values, indicating the importance of social responsibility awareness in influencing the purchasing behavior of Chinese Generation Z consumers. This may be related to factors such as corporate social responsibility promotion, participation in environmental activities or donations. Consumers may be more inclined to support brands that are actively involved in social responsibility initiatives and thus purchase eco-labeled products. T19 measures the influence of factors related to consumers' environmental awareness on purchasing behavior of eco-labeled products. Similar to T1, T19 also shows high Beta values, emphasizing that environmental awareness plays an important role in the purchasing decisions of Chinese Generation Z consumers. This re-emphasizes the positive association between consumers' level of environmental concern and the purchase of eco-labeled products. Therefore, brands and marketing strategies should emphasize more on the environmental attributes of products to attract this consumer segment.

It is easy to see from the data that the TRA provides the theoretical framework and these results emphasize the importance of individual attitudes and subjective norms in purchasing decisions, especially in the area of environmental and green marketing. Factors related to green marketing strategies, brand perceptions, environmental awareness, and social responsibility consciousness have a significant impact on the eco-labeling purchasing behavior of Chinese

Generation Z consumers. This has important implications for companies and marketing decision makers to develop more effective strategies to meet the needs of this consumer group and to promote the spread and enhancement of environmental awareness in society.

HYPOTHESIS TESTING

Within the framework of TRA, this study examined the influence of consumers' Attitude, Behavioral beliefs, Evaluation, and Subjective norms on the purchase of eco-labeled products. TRA suggests that consumers' behavior is influenced by their attitude, subjective norms .

As shown in Tables 4,6, the F-value of "Attitude" is 3.28 with p-value less than 0.001 and $\eta^2 p$ is 0.249, which indicates that consumers' attitude has a significant effect on the behavior of purchasing eco-labeled products. That is, consumer's attitude is a key factor influencing their behavior. In this case, consumers' positive attitudes towards ecolabeled products may motivate them to be more likely to purchase these products." Behavioral beliefs" F-value is 2.23, p-value is less than 0.001 and $\eta^2 p$ is 0.169. This indicates that there is a significant association between consumers' behavioral beliefs and their behavior towards purchasing eco-labeled products. Consumers' beliefs and expectations may influence their purchasing decisions.

The F-value of "Evaluation" is 5.90 with p-value less than 0.001 and $\eta^2 p$ of 0.448 which indicates that consumers' evaluation of ecolabeled products plays a significant role in purchasing behavior. This includes evaluations of product quality, performance and environmental attributes." Subjective norms" has an F-value of 1.77 with a p-value of less than 0.001 and an $\eta^2 p$ of 0.134. This suggests that subjective norms have some influence on the purchasing behavior of ecolabeled products, although the effect is relatively small. Subjective norms may be related to social circles and perceptions of others. According to TRA, subjective norms relate to an individual's perception of social or other people's perceptions. Thus, consumers may take into account the perceptions of others in their purchasing decisions, but this effect may not be as significant as the individual's attitudinal and behavioral beliefs.

The results suggest the applicability of TRA theory in explaining the purchase behavior of eco-labeled products by Chinese Generation Z consumers. Consumers' attitudes, behavioral beliefs and evaluations play an important role in purchasing behavior, which can provide a strong basis for companies to develop green marketing strategies.

Table 4.5 Hypothesis testing

Source	SS	df	MS	F-ratio	P-value	$\eta^2 p$
Attitude	347.2	1	345.2	3.28	<0.001	0.249
Behavioral beliefs	233.1	1	234.1	2.23	<0.001	0.169
Evaluation	621.5	1	620.5	5.90*	<0.001	0.448

Subjective norms	188.6	1	185.7	1.77	<0.001	0.134
Total	1390.4	46				

CONCLUSION

The results of the study show that TRA theory provides a strong theoretical framework to explain the environmental behavior of Chinese Generation Z consumers. Consumers' attitudes, behavioral beliefs, evaluations, and subjective norms have a significant impact on the purchase of eco-labeled products. These findings not only provide valuable guidance for companies and marketing decision makers, but also provide strong theoretical support for green consumption research.

Green marketing can be said to be an innovative and integrated means, and its initial purpose is also to ensure that all industries and related enterprises in the market economic environment to improve economic profits, to strengthen their own competitive strength in the market and international, in line with the consumer and social-oriented needs of today's era. For this reason, all industries should fully understand the green marketing, a deep understanding of it, and multi-dimensional research and study, so as to make targeted and reasonable changes to their own marketing work. In the traditional marketing mode, enterprises usually choose a variety of combination of marketing. Therefore, enterprises can use green marketing at the same time, and green product prices, channels and marketing means, etc. to cooperate, so as to improve the consumer's concept of environmental protection, increase the external sales of products. The main purpose of the green price is to improve the existence of green products in the minds of consumers, change its original image; in the green channel, the enterprise can according to their own strength and operation to decide whether to choose other enterprises to cooperate, during this period also need to consider the green environmental protection status of other enterprises; green marketing means it is useful for the public mind to create a perfect green image, and the public and relevant environmental protection departments to maintain a sub-balance relationship, so that the green marketing of the product. To maintain a balanced relationship with the public and the relevant environmental protection departments, so that they support each other, in order to improve the enterprise's green brand image, expanding the enterprise's green influence.

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