



Impact factors for the Determinants of Proactive Sustainable Consumption Behavior

Yulin Lu

Wellington College International Shanghai, Shanghai, 200000, China

Jolin.lu.2025@wellingtoncollege.cn

Abstract. As the basic economic problem states, human has unlimited wants however the resources are scarce. The resources cannot meet and satisfy infinite needs. Additionally, as the global economy flourishes, the purchasing power of consumers gradually increases, resulting in more demand and more pollution generated through production to supply. As a result, countries and firms have started to produce more sustainable and environmentally friendly products, while research has started to focus on observing the buying behavior of consumers. With mainly utilizing questionnaires, researchers as structured questions and then analyze through different variables. The research discovered that there are many different determinants affecting the proactive buying behavior of consumers while consuming sustainable goods. Moreover, this study mainly focus on how environmental awareness, green perceived quality, and income level act as impact factors for the determinants of proactive sustainable consumption behavior. This paper provides insights into the factors influencing sustainable consumption which provides perspectives for future research.

Keywords: Green Consumption Acknowledgment; Green Consumption Behavior; Gain and Loss Frame

1 INTRODUCTION

In 2015, all United Nations Member States adopted the 2030 Agenda for Sustainable Development, which serves as a collaborative plan for achieving peace and prosperity for both people and the planet, both presently and in the future. The concept of sustainability is crucial for ensuring that the current way of life does not compromise the well-being of future generations. By adopting sustainable practices, people can improve the quality of their lives, protect their fragile ecosystems, and preserve their natural resources. Sustainability is not just about meeting human's current needs, but also about ensuring that people leave behind a healthy and thriving planet for future generations to enjoy. It is a responsibility that humans all share and must be taken seriously if people want to ensure a sustainable future for human beings and the planet.

As technology advances and more sustainable products appear on the market, to support the demand for sustainable products, figuring out the elements and factors that affect consumers' purchase behavior is fatal to producers and firms. It can let them stay

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in the market instead of shutting down and leaving the market due to revenue loss, moreover, it can let them capture the consumers by having an understanding of consumer psychology.

2 ENVIRONMENTAL AWARENESS

Previous research revealed the relationship between environmental awareness and consumption willingness. Those results provide implications for the development of marketing strategies. A study conducted explored how consumers' environmental awareness affects their proactive purchase behavior [1]. The study aimed to identify the factors that trigger consumers to purchase eco-friendly products and to examine the interrelationships among Environmental Knowledge, Environmental Concern, Green Attitude, and Perceived Behavior. The researchers administered a structured questionnaire through an online survey to a purposive and convenience sample of 514 Indian respondents. The findings revealed that a high level of Environmental Knowledge could lead to improved environmental efficiency performance. Individual Environmental Knowledge has a significant impact on environmental problems and is linked to Environmental Concern, Green Attitude, and Perceived Behavior, particularly having a strong impact on Environmental Concern and Green Attitude. This suggests a positive interrelationship between the variables. However, what ultimately affects consumers' proactive sustainable purchase behavior is Environmental Concern. Strong Environmental Concern helps to boost Green Attitude for green procurement, reflecting their efforts to resolve ecological concerns through eco-sustainable procurement.

The implications of the research are significant, especially for firms that want to promote proactive sustainable purchase behavior. Firms can enhance their understanding of all the variables mentioned in the research and their intricate interrelationships to utilize them in their strategic planning. Similarly, if sustainable products are easily accessible to consumers, this can boost the demand for such products. Producers can increase transparency to increase procurement. This paper also addressed courses of action for policymakers, revealing that advertising and activities that highlight the polluted environment and deteriorated ambient surroundings can increase perception and Environmental Knowledge of the current situation, and are likely to have a positive impact on proactive sustainable consumption. In the long term, after sustainable products become mainstream and affect personal sustainable purchase intention, attitude, and behavior, they can lead to revenue. This paper provides sufficient suggestions for firms and producers, including increasing the popularity of sustainable products and a firm's reputation, strategically planning and managing economies of scale to maintain its market power, market share, and market competitiveness.

It is worth noting that the paper focused on South India and developed in-depth research and analysis. However, this can also be seen as a limitation since it is challenging to generalize outside South India due to the limited sample. Future research can focus on other aspects, such as culture, economy, and societal background. Moreover, cross-cultural investigations can deepen understanding across different generations. Research

can also focus on specific generations and populations. Similar research conducted in other areas of India, such as rural areas, can also be considered.

A new study has examined how Malaysians' pro-environmental attitudes influence their intention to purchase hybrid vehicles [2]. The research found that certain factors, including perceived green value, perceived behavioral control, and subjective norm, had a positive impact on purchase intention. Furthermore, the study showed that environmental knowledge played a moderating role in the relationship between perceived green value and purchase intention. The implications and limitations of the study are similar to those of previous research.

A study highlighted the significance of environmental awareness in proactive sustainable purchase behavior [3]. The study aimed to propose an extended model of the theory of planned behavior to investigate the purchase intention of young Chinese consumers toward organic food. The theory of planned behavior predicts human behavior by suggesting that behavioral intentions influence individual behavior. The study employed a survey questionnaire to young Chinese consumers using a convenience sampling method. All of the respondents were consumers of organic food, and there were no clear restrictions on gathering sufficient data. The questionnaire was sent to targeted areas utilizing assistants who were well-versed in the domestic values, principles, and language to collect data more easily. Out of 600 questionnaires, only 515 were used because some participants did not answer all questions or chose multiple answers. The study found that personal attitude and social pressure play a crucial role in whether young Chinese consumers support organic food or not. The next influencing factors are attitude and perceived behavioral control. Consumers with advanced environmental awareness have a stronger willingness to support organic food.

This research provides a new contribution to the Theory of Planned Behavior that can be used by firms and producers to save costs and attract more consumers for organic food. However, the study's limitation is similar to previous studies, which focused on Chinese consumers in a few Chinese cities. Future research can focus on combining the willingness to purchase of young Chinese consumers with their actual proactive purchase behavior. Further, the research can take place in developed, Least developed countries, and underdeveloped countries, although it suits developed countries to a greater extent.

It turns out that when consumers have higher environmental awareness, they're more likely to value sustainable products over normal products due to their environmentally friendly properties, therefore the ability to proactively purchase sustainable products boosts.

3 INCOME LEVEL

The study also found that the ability to consume organic food is directly related to the income level of consumers [3]. Although most consumers are aware of the benefits of organic food, they tend to opt for normal food due to its affordability and accessibility [3]. Normal food appears to have a better cost-performance ratio. However, some consumers are willing to pay a higher price for organic food, primarily due to its nutritional

value. Promoting the purchase of organic food might involve educating customers about the benefits of eating organic food for the environment and its nutritional worth through a variety of initiatives and commercials. By influencing the purchasing habits of the younger generation in particular, governments should take a more proactive approach to encouraging proactive and sustainable purchasing behavior.

4 GREEN PERCEIVED QUALITY

Customers' opinions of green quality are important considerations when deciding between conventional and sustainable items. This has to do with how consumers perceive the quality and sustainability of the product. This perspective has a big impact on how happy shoppers feel after making a purchase. Additionally, it may have an impact on their purchasing behaviors since consumers are more likely to acquire well-made, reasonably priced things. A study looked into the green product decisions made by young, well-educated consumers in Bangladesh [4]. The study combined quantitative and qualitative data to give a complete picture of the overall condition of customers. Convenience sampling was used to get 638 trustworthy samples for the investigation. The biographical information, perceived level of sustainability knowledge, and experiences buying sustainable products were all questioned of the respondents. Concern for the environment, perceived benefits, perceived quality, pricing awareness, readiness to purchase going green, estimation of going green in the future, and decision to purchase going green were among the other characteristics that were looked at.

The study found that green perceived quality had a positive influence on consumers' green purchase decisions. It was also hypothesized that green perceived quality has a positive impact on the proactive purchase behavior of educated young consumers. The study's authors encourage firms to provide information about environmentally friendly products, highlight their benefits, promote sustainable lifestyles, and boost brand image through advertisements and signs. All information should be easy to comprehend, and these activities can help build consumer awareness of environmental issues.

However, the study has some limitations, as it only focused on one region, Bangladesh, and had a small sample size. Therefore, it may not be generalizable to other regions or populations. Nonetheless, the study's findings provide valuable insights into the importance of green perceived quality in influencing consumers' green purchase decisions and the role that firms can play in promoting environmentally friendly products.

A study explored how green perceived quality impacts green purchase intention, highlighting the connection between environmental awareness and various other variables, such as green perceived quality [5]. The authors found that consumers with environmental awareness tend to consider a product's contribution to eco-friendliness, which can increase demand and proactive purchase behavior. However, if consumers perceive potential risks associated with buying a green energy saver, their proactive buying behavior decreases. Additionally, the study found that environmentally aware consumers may have a risk perception that the product or service they are using will not meet the claims made by the company, which can lower their intention to buy.

The study provides recommendations for academicians and marketers, emphasizing the need to increase awareness about the environment and usage of green products to build trust and lower risk perception. The authors suggest that organizations should develop strategies to enhance awareness about efficient energy savers and other green products, which are still relatively new to consumers in Pakistan. By doing so, customers will be more likely to trust the product, resulting in lower risk perception and higher quality perception, ultimately increasing the purchase intent for green products.

While the study is limited to households in southern Punjab, the authors suggest that future research could expand to other cities and include additional constructs to gauge purchase intention, such as green perceived value, eco-labels, marketing mix elements, positioning strategies, packaging, and service elements, especially in the green services sector.

The study investigates Chinese consumers' trust in food certification and how perceived quality affects their purchase intention [6]. The study aims to assess the extent to which Chinese consumers trust food certification and to introduce green perceived quality into the theory of planned behavior. The study used stratified sampling and analyzed 844 Chinese consumers from different cities. The results of the study can provide valuable insights for the government, as it highlights which food certification Chinese consumers trust and which they do not. By analyzing consumers' intention to purchase certified food based on perceived quality, the study can help assess the effectiveness of food certification in informing consumers about product quality and the impact of certification bodies' reputation on consumers' trust levels. This study is the first to combine these two variables, providing a deeper understanding of Chinese consumers' trust in food certification. However, the study's limitation is its small sample size, making it only applicable to domestic conditions. It is recommended that future studies expand their sample size to obtain more representative results.

Prior studies have proved the impact of green consumption knowledge on green product purchase intention. While selecting the control variable for the experiment design, the author used references from past research and chose sex, age, education level, monthly income level, and occupation type as the control variable and then imported the research model [7]. For sex, the control considered two genders: male and female. For age, the control variable considered all ages older than 18. For occupation, there are civil servants, institutional workers, enterprise workers, students, and others. The educational level included inferior to high school, high school or technical secondary school, undergraduate or junior college, master or above. For monthly income level, the partition is 3000 RMB and below, 3000-6000 RMB, 6000-10000 RMB, 10000 RMB, and above. After the layout of the primary questionnaire, with the supervision of professors, the author edited and altered some parts for example the code of language to fit Chinese consumers since the author originally referenced foreign paper and scale. 9 university students and 9 workers filled out the primary questionnaire and gave feedback for further improvements, some said that the phrasing of options is sometimes too deterministic, and some said that they're not familiar enough with sustainable products and suggested the researcher provide more information about it. The writer rephrased some confusing phrasing but did not provide more information about sustainable products since it might affect the results of the experiment.

The findings of the paper suggest that the knowledge of green consumption impacts the willingness to purchase sustainable products fundamentally. Knowing sustainability and sustainable products stimulates the incentive of sustainable buying behavior. This buying behavior includes a sense of protection towards the environment or a specific need for a property or sustainable product. The knowledge of sustainability also allows consumers to form a positive attitude towards a subjective perception of brand comprehensive consumption effectiveness.

The paper proved that consumers gain knowledge of sustainability through daily life and learning, then form sustainable consumer psychology, and ultimately perceive the comprehensive consumption efficiency of green products. The knowledge of environmental protection has a positive relationship with the sentimental value and the ability to feel its eco-friendliness, however doesn't affect the perception of functional value, probably mainly due to the higher price of green products compared to normal products. The paper suggests companies extrude the functional advantage and relatively decrease the price to increase consumers' perception of the cost performance of green products. Firms can also educate the consumers to let them gain more knowledge of environmental protection therefore increasing the willingness to pay the spillover price of green products. Green perceived value has a direct effect on consumers' green purchase intention. Let green consumption become market mainstream requires the cooperation of firms, government, and more institutions. Firms need to advertise through different media, to let consumers notice the difference between green and normal products and enlarge the popularity of these brands. This can also positively shape the consumption impression of consumers towards green products. Firms can also popularize environmental protection and sustainability knowledge, not only boosting the satisfaction and favorability towards the firm but also gaining superiority of green products through daily life, ultimately bringing into daily consumption behavior. While marketing, firms should meet the needs of consumers to let consumers maximize delivered value. Firms also need innovation, to reduce cost and enhance the quality of the product to better fit the needs of consumers. Promoting the additional emotional value green products bring: the care for family, and health, portray a positive personal image, and inspire environmental awareness in consumers. From the perspective of the government, relevant governors should combine knowledge of environmental protection with education syllabi to increase the consumption of green products. Some more niche knowledge can also equip consumers with the ability to differentiate green products from sustainable products. The government can also use regulation to promote green products and subsidize firms that produce green products. These courses of action build a healthy market for sustainable products and fortify the consumption confidence of green products.

Another study tests the affecting factors and policy Paths of Consumers' Green Consumption Behavior [8]. In order to test the hypothesis, the author made a questionnaire to measure the variables. The sample of the research is workers from enterprise and public institutions rather than university students for three reasons. Firstly, green products are generally more expensive compared to normal goods, so participants need to have some buying power. Secondly, the usage of green products normally embedded in daily life, participants need to frequently evolve in family activities. Thirdly, there

are some questions about waste disposal that university students might not be familiar with. Therefore, due to these three reasons, the sample is toward the clerk.

There are five sections that constitute this questionnaire: consumption of green products in daily life, attitudes and perception towards green consumption, attitudes towards government intervention, attitudes towards green consumption with the presence of external factors, and background of the participants.

The paper analyzed green consumption and expanded the content of green consumption.

The paper integrated different mental stages of green consumption according to the decision theory of consumer behavior and information processing theory. Based on these two theories, the paper turns three green consumption behaviors into four stages, and different influencing factors are selected accordingly.

The paper builds a model based on the psychological attribution of consumption behavior. In this paper, the psychological attribution of consumers' green consumption and intervention policy variables are introduced into the model at the same time, and the mechanism of action of individual psychological variables and policy intervention variables on green consumption behavior is analyzed with an empirical method. At the same time, the relationship between policy intervention variables and individual psychological factors is deeply analyzed. On this basis, an integrated model of consumers' green consumption behavior is constructed, which is an integrated model of psychological attribution and policy intervention of green consumption behavior.

The policy intervention to promote green consumption has a variety of variables, which are embedded into the psychological level of individual green consumption in a multi-pathway and have an effect on green consumption behavior. The variables of policy intervention include policies and regulations, incentive mechanisms, and publicity and education.

Through empirical analysis, this paper constructs a policy intervention path based on individual psychology and policy intervention variability. At the same time, individual psychology and policy intervention variables are introduced into the model, so that the constructed policy intervention path and strategy have certain advantages in four aspects: the speed of behavior change, the universality of the applicable population, the universality of the applicable behavior and the durability of the policy effect.

The paper constructs the intervention strategy of green consumption from the two levels of government and individual consumer psychology. At the government level, they should standardize the green product certification mechanism, promote the application of emerging media, equip with perfect service facilities, improve the policy and regulation system, establish a comprehensive incentive mechanism, and promote green consumption. At the individual psychological level, green consumption should be promoted from two aspects: improving individual green consumption cognition and cultivating a positive green consumption attitude.

Another study examines the factors influencing green consumption from the perspective of a gain-and-loss framework [9]. Moreover, the moderator between the relation is also tested. The influence mechanism of gain and loss framework on green consumption intention. The paper uses experiments and questionnaires as research methods, The purpose is to explore the influence of the gain and loss framework on

consumers' green consumption intention and analyze the difference of gain and loss framework on consumers' green consumption decisions. At the same time, the moderating effect of group pressure on the relationship between gain and loss frame and consumers' green consumption intention is discussed, and different groups are analyzed. The research carrier is eco-friendly laundry detergent, while considering past objects being chosen as carriers in previous research and the participants will be asked about the use rate and acceptability of green products. Additionally, in order to clearly and straightforwardly demonstrate, it is presented through visual advertisement. For the gain framework, the study states that this laundry detergent is natural and many safety hazards of traditional laundry detergent are solved. Consumers will enjoy a natural, safe, healthier skin wash that saves them money. Consumers can also make a contribution to environmental protection while enjoying a discount. On the other hand, the losing framework presents traditional laundry detergent in a negative way: there are many safety hazards in traditional laundry detergent, such as soap-based residues, mixed fluorescent agents, bleach powder, and other harmful chemical components, making frequent clothing changes unsafe. If consumers do not purchase this eco-friendly laundry detergent, they will be missing out on a wash that is healthier for their skin and saves them money. It is also a lost opportunity to contribute to environmental protection and discounts.

When measuring green consumption intention, a description of the item that involves both self-intention and relating to others and the seven-level Likert scale was used. For measuring group pressure, it discusses how the environment and people around the participant affect their decision-making. The seven-level Likert scale was used.

The finding shows that compared to the loose framework; the gain framework can make consumers feel positive feedback information. Under the framework of loss, consumers tend to avoid and give negative feedback to the negative information of loss, which makes consumers more defensive and unwilling to change their existing choices, so they prefer the information expression under the framework of benefit in the purchase decision of green products. Under high group pressure, the benefit frame has a greater impact on consumers' green consumption intention than the loss frame. Compared with the benefit frame, the loss frame has a greater impact on consumers' green consumption intention under low group pressure. Compared with the gaining frame, the loss frame is more able to stimulate consumers to choose the status quo option, that is, the degree of deviation of settling for the status quo is greater. However, the higher content deviation will reduce consumers' willingness to buy green products, that is, content deviation has a significant negative predictive effect on consumers' willingness to consume green products. With the increase of group pressure, the negative prediction of consumers' satisfaction with the status quo bias on their green purchase intention decreases, that is, the higher the group pressure is, the consumers' satisfaction with the status quo bias will have a corresponding decrease on their green consumption intention, thus increasing their green purchase intention. This shows that the deviation of consumers' satisfaction with the status quo will hinder the development of green consumption, but the appropriate increase of group pressure can promote consumers' willingness to green consumption.

It adds the relevant research results of the psychological mechanism of green consumption and the deviation of complacency with the status quo and deepens the internal mechanism of the gain and loss framework on the green purchase intention of consumers. From the perspective of consumer psychology, this paper discusses the influence of the deviation of consumers' satisfaction with the status quo on their willingness to green consumption, which has enriched the relevant research on the psychological mechanism of green consumers. The paper also enriched the research vision and academic space of loss avoidance theory and information frame theory. Based on the theory of frame effect, this paper introduces the comfort with the status quo bias and promotes consumers' comfort with the status quo bias to different degrees through the benefit and loss frame. It explores the mechanism of how different expressions of information affect consumers' emotional inclination. The research results of frame effect theory are presented. This paper combines two types of information, namely the physical description information obtained by consumers from external advertisements and the description information obtained from groups such as friends, family, colleagues, etc., to explore the psychological mechanism of gain and loss framework and group pressure on consumers' consumption emotion, so as to study the influence mechanism of green consumption. In addition, scholars also employed other theoretical frameworks to discuss the impact mechanisms of sustainable consumption [10]. Thus, theoretical studies on sustainable consumption may need further comparative analyses.

5 CONCLUSION

This paper is dedicated to studying the behavior of voluntary purchase behavior of products that are being made for sustainability and environmental protection. It is obvious that there are a lot of different potential determinates of proactive buying behavior of sustainable goods, but the extent varies due to personal background, culture, society, etc. After reviewing these papers, the present study argues that there might be potential links and cause-and-effect relationships between these variables. For instance, consumers with more in-depth understanding might have more environmental awareness, leading to more potential for realizing the perceived quality of green products. Future studies can focus on areas that have the potential to develop more sustainable purchase behavior, especially areas that include sustainability within their education system and syllabus. The study can also be cross-culture or cross-generation, covering more population, increasing the external validity and ability to generalize.

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