

## Willingness to Pay Premium for Green Agricultural Products

Lu Suo and Yue Huang\*

Doctoral Program, Graduate School, Stamford International University, Thailand

Email: suo.lu@stamford.edu and huangyue15877930213@gmail.com\*

\*Corresponding author

(Received: 29 April 2023, Revised: 27 June 2023, Accepted: 7 July 2023)

<https://doi.org/10.57260/rcmrj.2023.264981>

### Abstract

From the perspective of green brand experience, this study classifies green brand experience into five dimensions: cognitive experience, product experience, communication experience, emotional experience, and association experience. The study aims to investigate the influence of these five dimensions on consumers' willingness to pay premium (WTPP) for green agricultural products. Meanwhile, the mediating effect of green brand attitude on the relationship between green brand experience and WTPP for green agricultural products was investigated as well. To collect data for this study, a quantitative research design was employed, and an online questionnaire was administered using Google Forms. The questionnaire was distributed to 444 Chinese consumers who are 18 years old or older and have made purchases of green agricultural products. The participants were conveniently sampled from four first-tier cities in China, namely Beijing, Shanghai, Guangzhou, and Shenzhen. The proposed model was tested using structural equation modeling (SEM) through AMOS 24. The research results show that cognitive experience, and communication experience, emotional experience, and association experience all had positive effects on WTPP; among them, association experience having the greatest influence on WTPP. Second, cognitive experience, product experience, communication experience, emotional experience, and association experience all have positive effects on green brand attitude. Additionally, green brand attitudes have a positive effect on WTPP; finally, green brand attitude partially mediates the relationship between cognitive experience, communication experience, emotional experience and association experience and WTPP, and fully mediates the relationship between product experience and WTPP. The results of this study can help businesses manage and promote the development of green agricultural products market, thus enhancing consumers' willingness to purchase.

**Keywords:** Green agricultural products, Green brand attitude, Green brand experience, WTPP

## Introduction

With the rise of global green and health consciousness among consumers, there has been an increase in consumer interest in the "green living" movement and green products (Royne et al., 2011; Thøgersen et al., 2015). Moreover, the COVID-19 pandemic has further emphasized the importance of food safety and health, increasing the demand for green products. This has presented a business opportunity for businesses to innovate and gain a competitive advantage through green branding, which appeals to consumers' environmentally friendly preferences (Suki, 2016). The development of green brands has become a crucial aspect of embracing sustainable development and green marketing practices for businesses.

Green agricultural products are of primary concern to consumers in the green food industry. The entire process of producing, planting, processing, and distributing of green agricultural products is subject to strict standards. These criteria encompass various aspects of the product's lifecycle, including organic farming practices, genetic purity, hygienic processing, reliable distribution, and independent certification. These criteria collectively contribute to building consumer trust and confidence in the quality, safety, and environmental sustainability of green agricultural products (Lazaroiu et al., 2019). In China, the certification and development of green agricultural products have undergone a 30-year journey, resulting in 36,345 certified green foods and 15,984 certified enterprises as of December 2019 (Huang, 2021). China has the most active market for ecological products globally, with an annual growth rate of 30% (Kucher et al., 2019). However, the sales and popularity of green agricultural products in China are not yet fully mature, partly due to significantly higher pricing than ordinary or conventional agricultural products of the same sort (Huang, 2021). This pricing differential is the result of the stringent regulations over the production, development, certification, and marketing processes of green agricultural products (Food and Agriculture Organization of the United Nations, 2017). The high prices pose a significant barrier to the selling of green agricultural products, despite representing consumers' efforts to protect their environmental and food safety and health rights (Huang, 2021).

The experience economy has emerged as a crucial economic trend in the contemporary world. In this economy, brand experience has become a significant consideration for consumers, with experiences' perceived value frequently exceeding that of products and driving consumers to pay premium pricing (Li & Li, 2020). Companies across the product value chain are increasingly providing chances for consumers to engage in experiences and interactions. These experiences shape consumers' subjective and behavioral responses, influencing their future behavioral intentions through their long-term memory (Brakus et al., 2009).

The purpose of this study is to investigate the effect of green brand experience on consumers' willingness to pay a premium for green agricultural products. The study also investigates the mediating role of green brand attitude and the moderating role of food safety concern from the perspective of green brand experience. The findings aim to provide novel insights and practical recommendations for businesses and governments to promote the development of the green agricultural products market.

### Theory of Planned Behavior (TPB)

TPB, first introduced by Ajzen in 1991 (Ajzen, 2001), proposes that individuals generate behavioral intentions prior to engaging in corresponding behaviors, making behavioral intention a crucial indicator for predicting consumer behavior. Within marketing, willingness to pay and willingness to buy are commonly used to predict consumers' consumption behavior for a specific product. However, the TPB suggests that willingness to

act is not solely voluntary but influenced by a combination of internal and external factors. Among the internal factors is the consumer's personal attitude, which reflects their perception of a behavior. A more favorable attitude towards a behavior leads to a stronger willingness to engage in that behavior. External factors include subjective norms and perceived behavioral control, both of which significantly impact consumers' willingness to act. As the application of the TPB become more widespread, following scholars have refined and extended the theory. For instance, Hagger & Chatzisarantis (2005) established the concepts of "injunctive norms" and "descriptive norms" to better understand subjective norms. Greaves et al. (2013) and Conner & Armitage (1998) argued for the relationship between self-efficacy and perceived behavioral control. In the context of green consumption, Yadav & Pathak (2017) have explored the impact of the TPB on consumers' green consumption behavior, providing a solid theoretical foundation for investigating consumers' willingness to pay.

### **The Theory of Experiential Marketing**

The concept of the "experience economy" was initially introduced by Pine and Gilmore in the late 1980s, and they further elaborated on this emerging economic paradigm in their book titled *The Experience Economy*, published in 1999 (Pine & Gilmore, 1999). This new economy is similar to the service economy but it focuses on the consumer's emotions rather than the product itself. Experience marketing has become increasingly important in the context of the experience economy, which focuses on providing a positive experience for consumers. Hauser (2011) defines experiential marketing as the actual customer experiences with a brand, product, or service that have the potential to drive sales and enhance brand image and awareness. Similarly, You-Ming (2010) emphasizes that experiential marketing is a face-to-face communication approach that aims to evoke customers' physical and emotional sensations. It involves creating experiences that are relevant, interactive, and immersive, allowing customers to feel and engage with a brand on a deeper level. In addition, Tynan & McKechnie (2009) assert that experience marketing can deliver sensory, emotional, cognitive, behavioral and relational value to customers, to which social and informational based value can be added. With changing consumer preferences, the satisfaction of the consumption process is no longer based solely on the functional attributes of the product, but also on intangible factors such as culture and values. The keys to experiential marketing are understanding what consumers desire and providing relevant products and services that foster positive consumer emotions (Schmitt, 2010). Therefore, this study applies the theory of experiential marketing to focus on consumer emotions across various dimensions. This includes capturing consumers' sensory experiences, such as visual, olfactory, and gustatory perceptions of products, as well as addressing the cognitive aspect of consumer identity, which involves establishing a fit between consumers and products during the consumption process, thereby influencing and shaping consumer behavior.

### **The Concept of Green Agricultural Products**

With the emergence and development of green marketing and green consumption, the concept of green brand has become a significant consideration for consumers when it comes to brand switching behavior (Jing & Li, 2007). Wei (2017) argued that a green brand is an intangible asset that embodies the principles of green and sustainable development, offering consumers a positive green experience and generating value-added green experiences. In the agricultural market, green agricultural products are considered as part of the green brand concept. Green agricultural products are produced utilizing environmentally friendly green agriculture technologies and are properly certified. They adhere to strict environmental standards during cultivation and require the rational use of inputs such as pesticides, fertilizers, and additives to avoid chemical contamination of agricultural products (Ge & Zhang, 1997).

Hence, green agricultural products are subjected to a special certification process in the study. In this study, green agricultural products are those that are produced using environmentally sustainable practices and methods. They are usually associated with reduced or minimal use of chemical fertilizers, pesticides and other harmful substances that may have a negative impact on the environment and human health.

### **The Concept of Green Brand Experience**

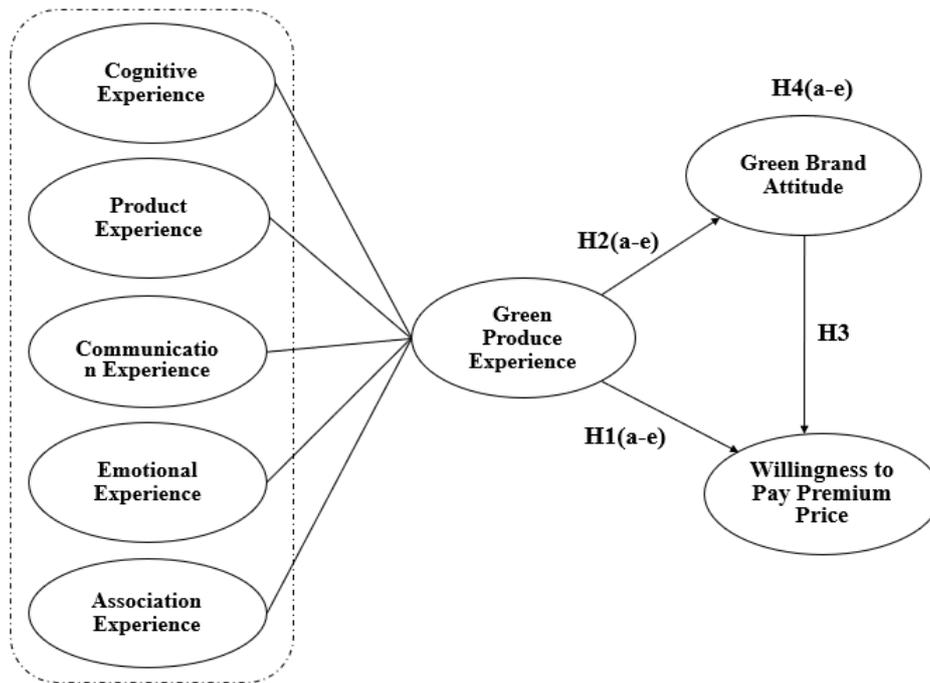
Brand experience is a crucial aspect of the experience economy, since it encompasses consumers' perceptions, feelings, and behaviors towards a brand. Brakus et al. (2009) identified four elements of brand experience: sensory, thinking, emotion, and behavior, while Song (2014) classified it into five dimensions: cognitive, product, communication, emotional, and association. This study applies Song's classification to green agricultural products, with cognitive experience referring to knowledge of the product's popularity, logo, and familiarity; product experience referring to the feeling of using the product's function and quality; communication experience referring to the indirect contact formed by the product's advertisement and word-of-mouth; emotional experience referring to the emotional reaction in consumers' use of the product; and association experience referring to the resonance between consumers' use of the product and society or group recognition.

### **The Concept of Green Brand Attitude**

According to Blackwell et al. (2006), attitudes indicate what customers like and dislike. Liu et al. (2012) argue that brand attitude refers to the automatic emotional response of consumers to an object and is the subjective feeling of consumers towards the brand as a whole, while brand attitude is a key factor in determining brand value. As stated by He et al. (2016), brand attitude as an important indicator of the degree to which consumer needs are satisfied. Chen et al. (2014) et al. combined brand attitudes with the concept of environmental sustainability and defined green brand attitudes as consumers' overall assessment of a brand's green performance. In this study, green brand attitude is defined as the overall evaluation and rational judgment of consumers on green brands.

### **The Concept of Willingness to Pay a Premium for Green Agricultural Products (WTPP)**

Green brands are often priced higher than traditional brands due to factors such as production costs, resource scarcity, and taxation (Dangelico & Vocalelli, 2017). The price premium is defined in economics as the price above the average profit, and the difference between the high and competitive pricing can be considered as a price premium (Rao & Monroe, 1996). In economics, a price premium is defined as the price over the average profit. The cost of green products is frequently perceived as a key deterrent by consumers (Han, 2013). Scholars typically use WTPP as a measure of whether consumers are willing to accept the premium or the level of acceptance of the premium. WTPP is not only an important indicator for accurately predicting consumers' purchasing behavior, but also a significant reference for companies when developing their product pricing strategies. In this study, WTPP represents consumers' willingness to pay a higher price for products that are perceived to be environmentally friendly, sustainable, or produced using eco-friendly practices.



**Figure 1** Conceptual Framework of the Research

### Green Produce Experience and WTPP

Abstract concepts such as logos, identities, and supplier images of green agricultural products can form brand nodes in consumers' memories, which are often closely related to the environmental attributes, environmental commitments, and health commitments of the products (Laroche et al., 2001; Marcus & Fremeth, 2009). On the other hand, the consumers' cognitive experience of green brands is the accumulation of knowledge and familiarity with these memory nodes (Keller, 1993). Therefore, a positive cognitive experience can influence consumers' recognition and trust in brand promise and brand image, and improve their purchasing confidence. Consumers connect most directly with green agricultural goods when they buy and consume them, and they may intuitively understand the purchase service process, functional utility, and other unique qualities of the products. (Song, 2014). Positive communication activities related to the brand's green attributes can induce a more positive perception of the green brand and shape the consumer's communication experience. Especially in the information age, consumers often receive relevant information about brands either passively or unintentionally. In the case of incomplete consumer market information, the accumulation of brand information can simplify the consumer's purchase choice process and reduce consumer risk (Dawar, 2004). Often, consumers will feel a sense of identification with groups that share their values, environmental awareness, and health consciousness. The need for self-expression leads consumers to contribute to the group and enhance their image through certain behaviors, such as purchasing environmentally friendly products (Hwang & Choi, 2018). Green agricultural products can create brand associations in consumers' minds. The strong brand associations can lead to higher prices for products, whereas differentiated associations formed through comparison with other similar products can create unique perceived value for the products (Dwivedi et al., 2018). Consumers' willingness to pay increases when green products better express the pro-social behavior they associate with or better align with the image they want to project. The brand experience that is created throughout the consumption process helps to build and strengthen the connection between the consumer and the brand by stimulating the consumer's senses and triggering corresponding emotions. A positive and continuous relationship that consumers maintain with a branded product makes

them less sensitive to the price of that brand (Thomson et al., 2005). Based on this, this paper proposes:

*H1: Green product experience (cognitive experience, product experience, communication experience, emotional experience, association experience) positively influences consumers' WTPP.*

### **Green Produce Experience and Green Brand Attitude**

Keller (1993) documented that a consumer's brand experiences shape their brand perceptions. Positive consumer attitudes toward a brand are developed as a result of several favorable consumer experiences with the brand (Solomon et al., 2019). The influence of green brand experience on consumers' green brand attitudes is reflected in the fact that green brands reduce negative environmental impact and increase environmental concerns, thereby creating a positive impression on consumers (Hartmann & Ibáñez, 2006). Positive brand perception and brand familiarity can lead to positive brand attitudes. Brand experience creates a unique emotional and sensory connection between products and consumers, and can establish brand emotional attachments, which can further enhance brand image recognition and influence consumers' attitudes and willingness to buy (Thøgersen et al., 2015). Positive consumer attitudes toward green brands are expressed in terms of consumer trust in greenness and green satisfaction (Chen & Chang, 2012). In addition, Wu & Ai (2016) and Keng et al. (2013) also point out that the quality of consumers' experience with green brands affects consumers' experience satisfaction, which in turn affects their consumption behavior. Based on this, this paper proposes that:

*H2: Green agricultural experience (cognitive experience, product experience, communication experience, emotional experience, association experience) positively influences consumers' attitude towards green brands.*

### **Green Brand Attitude and WTPP**

In social psychology, attitudes have long been recognized as an important predictor of individuals' behavioral intentions (Mostafa, 2006). As a result, attitudes are used in many consumer behavior research literatures to predict consumer behavior towards products or brands. The consumer-brand relationship can be maintained through the continuous accumulation of positive attitudes (Beerli et al., 2004). A positive consumer attitude toward a brand is a lasting good feeling and a key factor in the success of a branded product. Therefore, increasing consumers' attitude towards a brand is crucial in modern business marketing. Usually, when consumers like or trust a certain product, it motivates their behavior, i.e., they are more willing to buy a brand they like. Teng (2009) stated that consumers with positive attitudes towards a brand tend to have stronger purchase intentions for that brand. Suki (2016) confirmed that consumers' willingness to purchase green products is largely influenced by positive attitude. Similarly, Aulina & Yuliati (2017) found that consumers' attitudes affect their purchase intention to green products. Based on it, this paper proposes that:

*H3: Green brand attitudes have a positive impact on WTPP for green agricultural products.*

### **The Mediating Role of Green Brand Attitude**

Attitudes are commonly used as mediating variables to reflect consumer responses to products or brands. In a study investigating the mediating effect of attitudes towards green brands, Huang et al. (2014) found that increased knowledge about green brands was associated with more positive attitudes towards green brands and higher purchase intentions. Similarly, Chen et al. (2020) examined the mediating effect of green brand attitude between green brand association and green purchase intention. Building on this literature, the present study argues

that consumers' experiences with green agricultural products shape their WTPP by influencing their attitudes towards green brands. Therefore, this study proposes that:

*H4: Green brand attitude mediates between green product experience (cognitive experience, product experience, communication experience, emotional experience, and association experience) and WTPP.*

## Methodology

### Participants and Procedure

The population of this study consists of Chinese consumers who are 18 years old or older and have previous experience consuming green agricultural products, such as green vegetables, green fruits, green aquatic products, green poultry, and livestock products, etc. Non-probability convenience sampling was employed, as this method is rational and minimizes bias (Sekaran & Bougie, 2016). Participation in the study was entirely voluntary, and individuals aged 18 years or older who were interested in participating were allowed to complete the online questionnaire without any compensation. The responses were collected using Google Forms, a reliable online survey platform. The questionnaire link was posted on various online communities, including local BBS and forums, in four first-tier cities in China: Beijing, Shanghai, Guangzhou, and Shenzhen. These cities represent the most developed areas of the country with affluent and sophisticated consumers. They are large, densely populated urban metropolises that exert significant economic, cultural, and political influence in China, providing access to a large number of potential respondents for the study. To ensure that respondents belonged to the target audience for this study, two screening questions were included at the beginning of the survey to determine user eligibility (i.e., excluding consumers under the age of 18 and those with no experience purchasing green agricultural products). The sample size meets the minimum requirement of at least 384 samples, calculated using the Cochran (1953) formula for a sample with an unspecified population size, with a 95% confidence level and a 5% margin of error. Data collection took place in March 2023, and a total of 473 questionnaires were collected. A subset of 444 sampling replies was taken into consideration for analysis after false or incomplete answers were eliminated.

### Measurement

The measurement items employed in this study were obtained through an extensive review of the relevant literature. The questionnaire was created using the multiple-item approach, where each item was evaluated on a five-point Likert scale that ranged from "1=strongly disagree" to "5=strongly agree". Table 1 outlines how measurements from various researchers were modified to fit the objectives of this research.

**Table 1** Measurement item of questionnaire

Variable	Items	Source
<b>Cognitive Experience (CNE)</b>	Green agricultural products have high visibility. I know the logo of green agricultural products. I know the supplier of the green produce. I know the origin of this green produce.	
<b>Product Experience (PE)</b>	The green produce looks very original. Easy and convenient cleaning and consumption of green produce. Green agricultural products have higher nutritional and safety functions. The quality of green agricultural products is guaranteed in the industry.	
<b>Communication Experience (CME)</b>	I often see advertisements for green produce. Green agricultural products have a good reputation in the market. I often follow the official website and official store of this green produce. I like the environment and atmosphere of the green produce store.	Schmitt (1999); Brakus et al. (2009); Song (2014)
<b>Emotional Experience (EE)</b>	Eating green produce can arouse my interest and good emotions. Eating green produce will make me feel at ease and committed. I think green agricultural products are not just a logo, but have feelings. I'm emotionally attracted to green produce.	
<b>Association Experience (AE)</b>	I feel like I have a similar attitude and outlook on life as other people who buy green produce. I feel like I have something in common with other people who buy green produce. I would be more inclined to interact and engage with people who like to buy green produce. Buying and eating green produce can create an image of me as environmentally friendly and healthy in the eyes of others.	
<b>Green Brand Attitude (GBA)</b>	I think green produce has a solid reputation for environmental protection and food safety. I think the environmental and safety performance of green agricultural products are generally reliable. I think the environmental and health claims of green produce are generally trustworthy. The concern and performance of green produce for the environment and consumer health meets my expectations. Green agricultural products keep their environmental and food safety commitments and fulfill their environmental and food safety responsibilities.	Suki (2016)
<b>Willingness To Pay Premium (WTPP)</b>	I would spend more money on green produce than other produce. In my opinion, despite the high price of green produce, it is worth buying. I am willing to buy green produce at a high price.	Dwivedi et al. (2018)

## Data Analysis Methods

In the data analysis process, SPSS 26 and AMOS 24 were utilized to answer the research questions and test the hypotheses. Firstly, SPSS 26.0 was utilized for descriptive analysis to analyze the results of the participants' demographic characteristics. Furthermore, confirmatory factor analysis (CFA) was conducted using AMOS 24 to evaluate the reliability, validity, and model fit of the measurement items. Finally, structural equation modeling (SEM) was employed to test all the hypotheses and mediation effect in the study.

## Results

### Descriptive Statistics

From the results of 444 completed questionnaires (Table 2), it was found that the proportion of male and female respondents was close, with males accounting for 51.58% of the total and females accounting for 48.42%. The highest proportion of respondents were between the ages of 18 and 25, accounting for 43.47% of the total. In terms of education level, the majority of participants had obtained a university bachelor's degree, accounting for 46.40% of the total. The largest proportion of respondents reported a monthly income between 3001 and 6000 Yuan, accounting for 44.59%.

**Table 2** Demographic profile

	<b>Variable</b>	<b>Frequency</b>	<b>% (n=444)</b>
<b>Gender</b>	Male	229	51.58
	Female	215	48.42
<b>Average age</b>	18-25	193	43.47
	26-30	152	34.23
	31-40	64	14.41
	41-50	25	5.63
	51 and above	10	2.25
<b>Educational attainment</b>	High school or below	41	9.23
	Diploma	82	18.47
	Bachelor's degree	206	46.40
	Master's degree	110	24.77
	Doctoral degree	5	1.13
<b>Average monthly income (Chinese Yuan)</b>	≤3,000	29	6.53
	3,001-6,000	198	44.59
	6,001-8,000	149	33.56
	8,001-10,000	41	9.23
	≥10,001	27	6.08

### Measurement Model

Before measuring the model, it is crucial to perform reliability and validity analysis. According to Nunnally (1978), Cronbach's alpha and combined reliability (CR) are important reliability indicators. The scales' reliability was examined using SPSS 25 analysis, and it was found to be good as Cronbach's alpha and CR were greater than 0.7 for each construct, in line with the suggestions of Hair et al. (2010). Convergent validity was assessed using the average extracted variance (AVE), with values greater than 0.5 indicating good convergent validity. To assess discriminant validity, the square root of AVE was compared with the correlation coefficient of each construct, following the guidelines of Fornell & Larcker (1981). The study results, presented in Table 3, show that each variable's standardized factor loadings for each question item were greater than 0.7, and AVE values for all potential variables were well above 0.5, indicating good convergent validity. Table 4 further indicates that the AVE square root values were greater than the correlation coefficients for each variable, implying good discriminant validity among the variables.

**Table 3** Results of validity and reliability analysis

Construct	Items	Factor Loadings	CR	AVE	Alpha
<b>Cognitive Experience (CNE)</b>	<b>CNE1</b>	0.804	0.884	0.655	0.884
	<b>CNE2</b>	0.766			
	<b>CNE3</b>	0.833			
	<b>CNE4</b>	0.833			
<b>Product Experience (PE)</b>	<b>PE1</b>	0.697	0.824	0.540	0.825
	<b>PE2</b>	0.772			
	<b>PE3</b>	0.758			
	<b>PE4</b>	0.709			
<b>Communication Experience (CME)</b>	<b>CME1</b>	0.799	0.841	0.572	0.842
	<b>CME2</b>	0.607			
	<b>CME3</b>	0.848			
	<b>CME4</b>	0.751			
<b>Emotional Experience (EE)</b>	<b>EE1</b>	0.783	0.915	0.731	0.915
	<b>EE2</b>	0.900			
	<b>EE3</b>	0.892			
	<b>EE4</b>	0.839			
<b>Association Experience (AE)</b>	<b>AE1</b>	0.843	0.893	0.678	0.893
	<b>AE2</b>	0.744			
	<b>AE3</b>	0.784			
	<b>AE4</b>	0.913			
<b>Green Brand Attitude (GBA)</b>	<b>GBA1</b>	0.812	0.904	0.701	0.905
	<b>GBA2</b>	0.791			
	<b>GBA3</b>	0.882			
	<b>GBA4</b>	0.862			
<b>Willingness To Pay Premium Price (WTPP)</b>	<b>WTPP1</b>	0.904	0.876	0.703	0.876
	<b>WTPP2</b>	0.856			
	<b>WTPP3</b>	0.748			

**Table 4** Discriminant validity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>(1) CNE</b>	<b>0.809</b>						
<b>(2) PE</b>	0.482	<b>0.735</b>					
<b>(3) CME</b>	0.539	0.402	<b>0.756</b>				
<b>(4) EE</b>	0.462	0.571	0.438	<b>0.855</b>			
<b>(5) AE</b>	0.558	0.614	0.319	0.492	<b>0.823</b>		
<b>(6) GBA</b>	0.439	0.496	0.622	0.435	0.549	<b>0.837</b>	
<b>(7) WTPP</b>	0.527	0.588	0.574	0.617	0.663	0.609	<b>0.838</b>

**Note:** CNE= Cognitive Experience, PE= Product Experience, CME= Communication Experience, EE= Emotional Experience, AE= Association Experience, GBA=Green Brand Attitude, WTPP= Willingness to Pay Premium

### Structural Model

Six key indices were used to evaluate the adequacy of the model fit. The results of these indices, as presented in Table 5, indicate that all threshold values were met, suggesting a satisfactory fit of the model and supporting the acceptability of the structural model.

**Table 5** Fit Indices of Measurement and structural models

Fit indices	$\chi^2$ /df	GFI	AGFI	IFI	NFI	CFI	RMSEA
<b>Recommended</b>	<3	>0.9	>0.8	>0.9	>0.9	>0.9	<0.08
<b>Structural Model</b>	2.897	0.928	0.901	0.935	0.927	0.935	0.059

**Note:**  $\chi^2$ = chi-square, df= Degrees of Freedom, GFI= Goodness-of-fit Index, AGFI=Adjusted goodness-of-fit, IFI=Incremental Fit Index, NFI=Normed Fit Index, CFI= Comparative Fit Index, RMSEA=Root Mean Square Error of Approximation

### Hypothesis Testing

Table 6 revealed that cognitive experience ( $\beta=0.160$ ,  $p<0.001$ ), communication experience ( $\beta=0.161$ ,  $p<0.001$ ), emotional experience ( $\beta=0.660$ ,  $p<0.001$ ), and associative experience ( $\beta=0.764$ ,  $p<0.001$ ) had a significant positive impact on consumers' WTPP, supporting H1a, H1c, H1d, and H1e. However, product experience ( $\beta=0.012$ ,  $p>0.05$ ) did not significantly affect consumers' WTPP, rejecting H1b. H2a, H2b, H2c, H2d, and H2e are confirmed as all five dimensions of green brand experience, including cognitive experience ( $\beta=0.466$ ,  $p<0.001$ ), product experience ( $\beta=0.715$ ,  $p<0.001$ ), communication experience ( $\beta=0.724$ ,  $p<0.001$ ), emotional experience ( $\beta=0.807$ ,  $p<0.001$ ), and association experience ( $\beta=0.762$ ,  $p<0.001$ ), had significant positive effects on consumers' attitudes toward green brands. H3 is supported as green brand attitude ( $\beta=0.685$ ,  $p<0.001$ ) was found to have a significant positive effect on WTPP.

**Table 6** Result of hypothesis test

Hypothesis	Path	$\beta$	Unstd.	S.E.	C.R.	p	Result
H1a	CNE→WTPP	0.160	0.167	0.049	3.413	***	Accepted
H1b	PE→WTPP	0.012	0.016	0.067	0.241	0.809	Rejected
H1c	CME→WTPP	0.161	0.190	0.040	4.723	***	Accepted
H1d	EE→WTPP	0.660	0.427	0.038	11.103	***	Accepted
H1e	AE→WTPP	0.746	0.895	0.055	16.271	***	Accepted
H2a	CNE→GBA	0.466	0.495	0.051	9.700	***	Accepted
H2b	PE→GBA	0.715	0.863	0.049	17.426	***	Accepted
H2c	CME→GBA	0.724	1.380	0.107	12.856	***	Accepted
H2d	EE→GBA	0.807	0.997	0.058	17.148	***	Accepted
H2e	AE→GBA	0.762	0.800	0.042	19.223	***	Accepted
H3	GBA→WTPP	0.685	0.706	0.040	17.763	***	Accepted

**Note:** CNE= Cognitive Experience, PE= Product Experience, CME= Communication Experience, EE= Emotional Experience, AE= Association Experience, GBA=Green Brand Attitude, WTPP= Willingness to Pay Premium

\* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$

### Mediation Effect

Table 7 displays the results of a mediation analysis that aimed to examine the role of green brand attitude as a mediator between the green product experience (including cognitive experience, product experience, communication experience, emotional experience, and association experience) and WTPP. The bootstrapping process, a widely accepted method for testing mediation and other intervening effects (Biesanz et al., 2010), was employed to evaluate the mediation effects. A total of 5000 samples were randomly selected to estimate the bias-corrected bootstrapping confidence interval at a 95% level of confidence. The presence of a mediating effect was established by checking if the confidence interval of the estimated effect excluded zero, which indicates significance (Hayes, 2009). The findings from both Table 7 and Table 6 reveal that green brand attitudes play a partially mediated role in the relationship between cognitive experience (effect: .319, 95% CI [0.305,0.579]), communication experience (effect: .496, 95% CI [0.069,0.223]), affective experience (effect: .553, 95% CI [0.286,0.539]) and associative experience (effect: .522, 95% CI [0.196,0.384]) and willingness to pay premium, while fully mediated between product experience (effect: .490, 95% CI [0.246,0.517]) and WTPP. Therefore, hypotheses H4a, H4b, H4c, H4d, and H4e are all accepted.

**Table 7** Analysis of mediating effect

Paths	Effect	Bias-corrected 95% CI		Whether Mediating?
		Lower	Upper	
H4a: CNE→GBA→WTPP	0.319	0.305	0.579	Yes (partially mediating)
H4b: PE→GBA→WTPP	0.490	0.246	0.517	Yes (fully mediating)
H4c: CME→GBA→WTPP	0.496	0.069	0.223	Yes (partially mediating)
H4d: EE→GBA→WTPP	0.553	0.286	0.539	Yes (partially mediating)
H4e: AE→GBA→WTPP	0.522	0.196	0.384	Yes (partially mediating)

## Discussions

This study investigates the influence of green brand experience on consumers' WTPP for green agricultural products. Data is collected through an online questionnaire survey to understand consumers' consumption behavior of green agricultural products and explore the mediating role of green brand attitude. Based on the analysis of the findings, the following conclusions are drawn:

The results of this study indicate that the four dimensions of green brand experience, including cognitive experience, communication experience, emotional experience, and association experience, significantly and positively impact consumers' WTPP for green agricultural products. The result is consistent with Hwang & Choi (2018); Dwivedi et al. (2018). Among these dimensions, association experience was found to have the strongest effect on WTPP. Association experience goes beyond sensory and emotional experiences, involving a deeper connection between consumers and social systems, establishing personal connections with ideal self, others, or culture (Schmitt, 1999). Drawing on the hierarchy of needs theory, a positive association experience helps consumers establish a favorable image in their social group, gain reputation, image, and status, thereby fulfilling their need for respect. As a result, association experience has the greatest influence on consumers' WTPP for green agricultural products.

Second, product experience in green brand experience was shown to have insignificant direct impact on consumers' WTPP. It is line with Huang (2021). One possible explanation for this could be the low perceived utility of consumers' product experience with green agricultural products. Previous research has also pointed out that low perceived utility is a main factor contributing to the inconsistency between consumers' words and actions in the green produce market (Sun et al., 2015). In general, there may be little noticeable difference in appearance between green and ordinary agricultural products, and consumers may not accurately perceive the short-term positive effects of consuming green agricultural products. Moreover, the positive effects of green agricultural products on the environment and society may be even less perceived by consumers. As a result, consumers might thus have greater confidence in and be more willing to purchase green agricultural products that have a good reputation in terms of communication or are more familiar to them. Furthermore, the proliferation of eco-labels in the agricultural market has led to consumer skepticism about the quality and utility of green agricultural products, which has negatively impacted consumer trust and willingness to purchase green foods (Yang, 2014; Brécard, 2014).

Third, the results of this study indicated that all five dimensions of green brand experience, namely cognitive experience, communication experience, emotional experience, association experience, and product experience, positively affect consumers' green brand attitudes. This implies that increasing each dimension of consumers' brand experience can lead to improved positive attitudes toward green agricultural products. It is line with Huang (2021) and Thøgersen et al. (2015). Among these dimensions, the emotional experience had the greatest impact on consumers' green brand attitudes. Specifically, emotional experience was found to evoke feelings of happiness and joy in the process of consuming green agricultural products, which directly influenced consumers' subjective feelings and led to more positive attitudes toward green agricultural products. Therefore, it can be concluded that a positive emotional experience can foster a stronger affinity and positive attitude toward green agricultural products among consumers.

Finally, the findings of this study suggest that green brand attitude plays a significant role in mediating the relationship between various dimensions of green brand experience and

consumers' WTPP for green products. This is supported by Huang (2021) and Chen et al. (2020). Specifically, cognitive experience, communication experience, emotional experience and association experience were found to partially mediate the relationship with WTPP, whereas product experience was found to fully mediate the relationship. This means that cognitive experience, communication experience, emotional and association experience influence consumers' WTPP by increasing their positive attitudes toward these products through the mediating effect of green brand attitude. On the other hand, product experience directly affects consumers' WTPP through its impact on green brand attitude. In other words, consumers' positive product experience with green agricultural products leads to a more favorable attitude toward these products, which in turn increases their WTPP. Overall, these findings highlight the important role of green brand attitude as a mediator between consumers' brand experience and their WTPP.

### **Conclusion and suggestions**

This study serves as a complementary addition to existing research on the factors influencing consumers' WTPP. Previous studies have primarily focused on demographic variables, environmental attitudes, perceived value, and green perceptions as influencing factors, with limited attention given to the role of green brand experience. This study examines the influence of brand experience theory across five aspects on customers' WTPP. Furthermore, while previous research has primarily examined the influence of consumers' brand attitudes on consumer behavior, there has been limited investigation into the mediating effect of green brand attitudes on the relationship between consumers' brand experience and WTPP. This paper introduces the mediating variable of green brand attitude into the relationship model to provide a more comprehensive understanding of the mechanism by which green brand experience impacts consumers' WTPP.

This study also has some managerial insights and suggestions. Firstly, companies should focus on building and enhancing consumers' holistic brand experience, particularly emphasizing association experience, which has the greatest influence on consumers' WTPP. Enterprises should emphasize the role of green agricultural products in promoting a green and healthy image, highlighting environmental protection, safety, and health attributes. By shaping consumers' perception of green agricultural products as embodiments of health, fashion, and self-esteem, companies can evoke emotional connections and foster positive brand associations. Furthermore, facilitating communication among customer groups through various social media platforms can expand the scope of consumer groups with green lifestyles, encouraging them to discuss and engage with green agricultural products. Additionally, the government has a major influence on guiding the concept of green life for the public. The government should also continuously strengthen the guidance and propaganda of green lifestyle for the public, so as to promote the formation of green life values for the whole society.

Secondly, companies should also focus on strengthening consumers' cognitive experience and improving their knowledge of green cognition and green agricultural products. Providing accessible information about environmental conditions, production processes, and farming practices can enhance consumers' understanding. Opening production and planting bases to consumers and utilizing modern media and offline marketing campaigns can further enhance consumers' product knowledge. Documentaries showcasing the planting process, providing origin and certification information, and highlighting manufacturers or sales stores associated with green agricultural products can effectively communicate the production process, certification procedures, and essential information to consumers.

Additionally, companies should prioritize advertising efforts for green agricultural products to enhance consumers' communication experience. Organizing offline promotional activities, such as volume-based discounts, product trials, and distributing consumption coupons or shopping cards, can increase consumer participation. Utilizing television and mobile platforms for advertising and promotion can amplify brand awareness and exposure.

Finally, fostering consumers' emotional experience is crucial. Companies should establish ongoing communication channels to develop emotional connections between customers and green agricultural products. Online trading platforms can facilitate direct communication and interaction. Promptly attending to consumers' emotional feedback and responding to their needs is essential. Involving consumers in the planting process, allowing them to experience the authentic ecological life associated with green agricultural products, can deepen their emotional attachment to the brand.

### New knowledge and the effects on society and communities

To promote sustainable development and green development methods, it is essential to develop green agricultural products. This study proposes management insights and policy recommendations from the perspectives of green brand experience and green brand attitude. The goal is to increase consumers' WTPP for green agricultural products, which will not only boost the market for green agricultural products, but also increase the sales profits of green agricultural production enterprises. Consumer behavior is greatly influenced by their WTPP, which is an important indicator of their purchasing habits. An increase in consumers' WTPP for green agricultural products will lead to a significant increase in their purchases, promoting the development of green purchasing habits and a greener lifestyle for society as a whole.

### References

- Ajzen, I. (2001). Nature and Operation of Attitude. *Annual Review of Psychology*, 52(1), 27-58. <https://doi.org/10.1146/annurev.psych.52.1.27>
- Aulina, L., & Yuliati, E. (2017). The Effects of Green Brand Positioning, Green Brand Knowledge, and Attitude towards Green Brand on Green Products Purchase Intention. *International Conference on Business and Management Research (ICBMR-17)*. <https://doi.org/10.2991/icbmr-17.2017.50>
- Beerli, A., Martin, J. D., & Quintana, A. (2004). A Model of Customer Loyalty in the Retail Banking Market. *European Journal of Marketing*, 38(1/2), 253-275. <https://doi.org/10.1108/03090560410511221>
- Biesanz, J. C., Falk C. F., & Savalei, V. (2010) Assessing Mediation Models: Testing and interval estimation for indirect effects. *Multivariate Behavioral Research*, 45(4), 661-701. <http://dx.doi.org/10.1080/00273171.2010.498292>
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2006). *Consumer Behavior*. Thomson South-Western.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty? *Journal of Marketing*, 73(3), 52-68. <https://doi.org/10.1509/jmkg.73.3.52>
- Brécard, D. (2014). Consumer confusion over the profusion of eco-labels: lessons from a double differentiation model. *Resource and Energy Economics*, 37, 64-84. <https://doi.org/10.1016/J.RESENEECO.2013.10.002>

- Chen, J., Wang, Y., & Wang, F. H. (2014). A study on the difference of the influence of brand attitude on consumers' purchase intention in different product categories. *Modern Management Science*, 2, 12-14.
- Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502–520. <https://doi.org/10.1108/00251741211216250>
- Chen, Y., Chang, T., Li, H., & Chen, Y. (2020). The Influence of Green Brand Affect on Green Purchase Intentions: The Mediation Effects of Green Brand Associations and Green Brand Attitude. *International Journal of Environmental Research and Public Health*, 17(11), 4089. <https://doi.org/10.3390/ijerph17114089>
- Conner, M., & Armitage, C. (1998). Extending the Theory of Planned Behavior: A Review and Avenues for Further Research. *Journal of applied social psychology*, 28(15), 1429-1464. <http://dx.doi.org/10.1111/j.1559-1816.1998.tb01685.x>
- Dangelico, R. M., & Vocalelli, D. (2017). “Green Marketing”: An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner Production*, 165 (1), 1263-1279. <https://doi.org/10.1016/j.jclepro.2017.07.184>
- Dawar, N. (2004), 'What are brands good for?', *MIT Sloan Management Review*, 46(1), 31–37.
- Dwivedi, A., Nayeem, T., & Murshed, F. (2018). Brand experience and consumers' willingness-to-pay (WTP) a price premium: Mediating role of brand credibility and perceived uniqueness. *Journal of Retailing and Consumer Services*, 44, 100-107. <https://doi.org/10.1016/j.jretconser.2018.06.009>
- Food and Agriculture Organization of the United Nations. (2017). *The future of food and agriculture Trends and challenges*. Rome.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Ge, X. G., & Zhang, Z. M. (1997). *Green vegetable production*. China Agricultural Press.
- Greaves, M., Zibarras, L. D., & Stride, C. (2013). Using the theory of planned behavior to explore environmental behavioral intentions in the workplace. *Journal of Environmental Psychology*, 34, 109–120. <https://doi.org/10.1016/j.jenvp.2013.02.003>
- Hagger, M. S., & Chatzisarantis, N. L. (2005). First- and higher-order models of attitudes, normative influence, and perceived behavioural control in the theory of planned behaviour. *The British journal of social psychology*, 44 (Pt 4), 513-35. <https://doi.org/10.1348/014466604X16219>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*. 7<sup>th</sup> ed., Pearson, New York.
- Han, Z. B. (2013). Analysis of urban consumers' willingness to purchase organic agricultural products: a study of organic rice consumption. *Economy and Management*, 7, 40-45.
- Hartmann, P., & Ibáñez, V. (2006). Green value added. *Marketing Intelligence & Planning*, 24(6/7), 673-680. <https://doi.org/10.1108/02634500610711842>
- Hauser, E. (2011). *Experiential Marketing Forum*. Retrieved from <http://www.experientialforum.com>
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408–420. <https://doi.org/10.1080/03637750903310360>
- He, A. Z., Cai, L., & Gao, J. (2016). Research on the impact of branded self-media content marketing on consumers' brand attitude. *Journal of Management*, 13(10), 1534-1545.

- Huang, H. (2021). *Study on the Effect of Green Brand Experience on the Willingness to Pay Premium for Green Agricultural Products. Thesis*. Chengdu: Xihua University.
- Huang, Y. C., Yang, M. L., & Wang, Y. C. (2014). Effects of green brand on green purchase intention. *Marketing Intelligence & Planning*, 32(3), 250-268.  
<https://doi.org/10.1108/MIP-10-2012-0105>
- Hwang, J., & Choi, J. K. (2018). An Investigation of Passengers' Psychological Benefits from Green Brands in an Environmentally Friendly Airline Context: The Moderating Role of Gender. *Sustainability*, 10(1), 80. <https://doi.org/10.3390/su10010080>
- Jing, S. P., & Li, Y. D. (2007). Consumer brand switching behavior and green marketing. *Management World*, 12, 166-167.
- Keller, K. L. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57(1), 1–22. <https://doi.org/10.2307/1252054>
- Keng, C., Tran, V. D., & Thi, T. L. (2013). Relationships among Brand Experience, Brand Personality, And Customer Experiential Value. *Contemporary Management Research*, 9, 247-262. <https://doi.org/10.7903/CMR.11086>
- Kucher, A., Hełdak, M., Kucher, L., Fedorchenko, O., & Yurchenko, Y. (2019). Consumer willingness to pay a price premium for ecological goods: a case study from Ukraine. *Environmental & Socio-economic Studies*, 7(1), 38 - 49.  
<https://doi.org/10.2478/environ-2019-0004>
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting Consumers Who Are Willing to Pay More for Environmentally Friendly Products. *Journal of Consumer Marketing*, 18(6), 503-520. <http://dx.doi.org/10.1108/EUM00000000006155>
- Lazaroiu, G., Andronie, M., Uță, C., & Hurloiu, I. (2019). Trust Management in Organic Agriculture: Sustainable Consumption Behavior, Environmentally Conscious Purchase Intention, and Healthy Food Choices. *Frontier in Public Health*, 7, 1-7. doi: 10.3389/fpubh.2019.00340
- Li, H. S., & Li, Y. (2020). The understanding of the new shape of the economy: A microeconomic perspective. *China Industrial Economy*, 12, 159-177.
- Liu, F., Li, J., Mizerski, D., & Soh, H. C. (2012). Self-congruity, brand attitude, and brand loyalty: a study on luxury brands. *European Journal of Marketing*, 46(7/8), 922-937.  
<https://doi.org/10.1108/03090561211230098>
- Marcus, A. A., & Fremeth, A. R. (2009). Green Management Matters Regardless. *Academy of Management Perspectives*, 23(3), 17–26. <http://www.jstor.org/stable/27747523>
- Mostafa, M. M. (2006). A Hierarchical Analysis of the Green Consciousness of the Egyptian Consumer. *Psychology & Marketing*, 24(5), 455-473.  
<https://doi.org/10.1002/mar.20168>
- Nunnally, J. C. (1978). *Psychometric Theory*. 2<sup>nd</sup> ed.. McGraw-Hill, New York.
- Pine, B. J., & Gilmore, J. H. (1999). *The Experience Economy*. Edward Elgar.
- Rao, A. R., & Monroe, K. B. (1996). Causes and Consequences of Price Premiums. *The Journal of Business*, 69(4), 511–535. <http://www.jstor.org/stable/2353407>
- Royne, M. B., Levy, M., & Martinez, J. D. (2011). The Public Health Implications of Consumers' Environmental Concern and Their Willingness to Pay for an Eco-Friendly Product. *Journal of Consumer Affairs*, 45(2), 329-343.  
<http://www.jstor.org/stable/23859819>
- Schmitt, B. (2010). Experience Marketing: Concepts, Frameworks and Consumer Insights. *Foundations and Trends in Marketing*, 5(2), 55–112.  
<http://dx.doi.org/10.1561/17000000027>
- Schmitt, B. H. (1999). *Experiential Marketing. How to Get Customers to Sense, Feel, Think, Act, Relate to Your Company and Brands*. The Free Press, New York.

- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Solomon, M. R., Russell-Bennet, R., & Previte, J. (2019). *Consumer Behaviour: Buying, Having, and Being*. Pearson Australia.
- Song, M. Y. (2014). *Research on the influence of brand experience on consumers' purchase intention - taking the smartphone industry as an example*. Dissertation. Dalian: Dalian University of Technology.
- Suki, N. M. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal*, 18(12), 2893-2910. <https://doi.org/10.1108/BFJ-06-2016-0295>
- Sun, J., Li, J. J., & Yang, X. R. (2015). Why consumers do not match their words with their deeds: An investigation of the impediments to green consumption behavior. *Journal of Huazhong Agricultural University (Social Science Edition)*, 5, 72-81.
- Teng, L. (2009). A comparison of two types of price discounts in shifting consumers' attitudes and purchase intentions. *Journal of Business Research*, 62(1), 14-21. <https://doi.org/10.1016/J.JBUSRES.2007.11.014>
- Thøgersen, J., Barcellos, M. D., Perin, M. G., & Zhou, Y. (2015). Consumer buying motives and attitudes towards organic food in two emerging markets. *International Marketing Review*, 32(3/4), 389-413. <https://doi.org/10.1108/IMR-06-2013-0123>
- Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology*, 15(1), 77-91. [http://dx.doi.org/10.1207/s15327663jcp1501\\_10](http://dx.doi.org/10.1207/s15327663jcp1501_10)
- Tynan, C., & McKechnie, S. (2009). Experience Marketing: A Review and Reassessment. *Journal of Marketing Management*, 25(5), 501-517. <https://doi.org/10.1362/026725709X461821>
- Wei, X. M. (2017). Green brands and their assets: concepts, influencing factors and strategies. *Technology and Economic Market*, 96-97.
- Wu, H., & Ai, C. (2016). Synthesizing the effects of experiential quality, excitement, equity, experiential satisfaction on experiential loyalty for the golf industry: The case of Hainan Island. *Journal of Hospitality and Tourism Management*, 29, 41-59. <https://doi.org/10.1016/J.JHTM.2016.05.005>
- Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, 134, 114-122. <https://doi.org/10.1016/j.ecolecon.2016.12.019>
- Yang, B. (2014). *The problem of greenwashing in consumer goods market and its governance*. Beijing: Social Science Literature Press.
- You-Ming, C. (2010). Study On the Impacts of Experiential Marketing and Customers' Satisfaction Based on Relationship Quality. *International Journal of Organizational Innovation*, 3 (1), 189-209. <https://www.ijoi-online.org/index.php/back-issues/23-volume-2-number-4-spring-2010>