

CONSUMPTION VALUES AND ATTITUDES AFFECTING CHENGDU CONSUMERS' CONSUMPTION BEHAVIOR OF GREEN FURNITURE

Chen Ling^{1*} and Prin Laksitamas²

^{1,2}Doctor of Business Administration Program in Marketing, Siam University

Received: June 29, 2024 / Revised: November 9, 2024 / Accepted: November 19, 2024

Abstract

Although market participants and academics have recognized the importance of green products globally, few studies focused on the PRC's new first-tier cities market such as Chengdu. In contrast, most studies are conducted in Western developed countries or PRC's first-tier megacities (e.g. Beijing, Shanghai, Guangzhou, Shenzhen). From the standpoint of product categories, research on consumer perceptions or behaviors toward specific green furniture remains limited. This study examined a comprehensive set of epistemic functional technology values toward green furniture consumption in Chengdu city-one of the most important cities considered to have the greatest potential to become PRC's new metropolis center in the near future-using a mix of qualitative and quantitative methodology. Qualitative research was conducted through semi-structured interviews with nine experts currently employed at a multinational furniture company specializing in green furniture products. Quantitative research was conducted by collecting questionnaires from Wenjuanxing (www.wjx.cn)-an online questionnaire collection platform in the PRC. The population comprised consumers, aged 22 years and up, who had purchased green furniture in Chengdu, and the sample size was decided by using the number of observed variables. The researcher finally received 417 questionnaires for the data analysis in this research. The results indicated that epistemic and functional values significantly and positively influenced attitude and consumption behavior. In contrast, technology value affected attitude but did not directly influence consumption behavior. Furthermore, Chinese Chengdu consumers' attitude could predict their consumption behaviors. This study was one of the recent empirical applications of Chinese consumer values to the context of green furniture experiences in PRC's new first-tier cities. It offered valuable insights into marketing strategies for the furniture industry and provided practical recommendations for the promotion of green furniture.

Keywords: PRC Chengdu, Green Furniture, Consumer Value, Attitude, Consumption Behavior

*Corresponding Author

E-mail: chenlingth2007@gmail.com

Introduction

Furniture is now essential for improving quality of life (Xiong et al., 2020). And increasing environmental and health concerns have further driven demand for green furniture (Xu et al., 2020b; Shahsavari et al., 2020). Sheth et al. (1991) consumption value theory identifies functional, emotional, social, conditional, and epistemic values as key factors influencing consumer behavior. This theory has been supported in the green product sector. For instance, Rana and Solaiman (2023) found these values significantly predicted green purchase behavior in Iran's energy-efficient electronics market, while Roh et al. (2022) demonstrated a positive impact of green perceived value on organic food purchases in Korea. Nikhashemi et al. (2021) highlighted the positive effect of technology, such as augmented reality, on consumer satisfaction and purchasing decisions. Similar results were found in China, Cao et al. (2022) and Yang et al. (2022) found that functional value and epistemic values have positive influences on consumers' organic food and electric vehicle consumption, with sustainable attitudes further moderating behavior. Therefore, understanding how perceived value influences attitudes and behavior is crucial for analyzing consumer choices.

Traditionally, Beijing, Shanghai, Guangzhou, and Shenzhen have been the PRC's key first-tier cities, driving political and economic activities (Fang et al., 2022). However, due to the PRC's large population, new first-tier cities, like Chengdu, have emerged as potential

metropolitan centers (Yeh & Chen, 2020). Chengdu consistently ranks first among new first-tier cities based on factors like lifestyle diversity and business resources (Yi et al., 2021). With low birth rates and an aging population, attracting young talent is crucial for urban growth. Chengdu has become a top destination for graduates and, by 2021, had a population of 21.912 million, positioning it as a major transportation hub with future expansion plans (Guo, 2022; Thepaper, 2022).

Given that most previous research has focused on Western countries or PRC's first-tier cities. There is a limited research study on green furniture in Chengdu, despite the growing importance of new first-tier city markets. In addition, existing studies often lack empirical analysis of modern PRC consumer value systems, especially from qualitative perspectives within the furniture industry. Key factors like awareness of green furniture and technology value on consumer attitudes have not been thoroughly examined (Le-Anh & Nguyen-To, 2020). While there are some arguments about attitudes can predict consumer behavior (Cao et al., 2022; ElHaffar et al., 2020; Busalim et al., 2022). To address these knowledge gaps in academia and create long-term benefits for the furniture industry, consumers, and environment, a deeper grasp of the PRC Chengdu consumer's value-attitude model to enhance the new first-tier city's furniture consumption market is needed. This study examined the effects of epistemic functional technology values on their consumption behavior via attitudes toward

green furniture products in one of the PRC's new first-tier city markets-Chengdu from internal personnel qualitative and analytical perspectives in the furniture industry. The current study also attempts to validate the attitude-behavior gap in green furniture products practice by adding contemporary technology value to the model. The sample consists of consumers aged 22 years and up who have purchased green furniture products in one of PRC's emerging new first-tier cities-Chengdu.

Objectives

This study examined the effects of Chengdu consumers' green furniture epistemic functional technology values on their attitude and consumption behavior with the following objectives:

1. To study Chinese Chengdu consumers' epistemic functional technology values, and to examine the value factors that influence Chinese consumers' attitudes and consumption behavior.
2. To seek the Chinese Chengdu consumer's value-attitude causal model which enhances its green furniture consumption behavior in the new first-tier cities' Chinese market.

Literature Review and Hypothesis

Consumption Value Theory

This study adopts the consumption value theory as its grounded theory. According to this theory, consumer choice behavior is influenced by several types of consumption values: functional, social, emotional, epistemic, and conditional (Sheth et al., 1991; Lee et al., 2015).

Functional value refers to the perceived benefits related to the functionality or physical attributes of a product (Han et al., 2017). Social value pertains to the benefits gained from association with one or more social groups (Gonçalves et al., 2016). Emotional value is characterized by the perceived benefit that elicits emotional responses or feelings from consumers (Khan & Mohsin, 2017; Lin & Huang, 2012). Epistemic value is defined as the perceived utility derived from stimulating interest, creating novelty, or fulfilling a desire for knowledge (Rahnama & Rajabpour, 2017). Lastly, conditional value refers to the perceived benefit that arises from a specific situation or set of circumstances (Lin & Huang, 2012).

Consumption value theory provides a comprehensive framework for understanding the factors that influence consumers' purchasing decisions, product usage, and preferences across different product categories. Its application to the context of green furniture is particularly appropriate, as it recognizes the multidimensional nature of consumer values, thereby mitigating the limitations associated with a single-dimensional perspective. This study focuses primarily on the epistemic and functional dimensions of consumption value, while also integrating technology value into the model.

Epistemic Value

Epistemic value relates to customers' desires for information, knowledge, and novelty experience (Rahnama & Rajabpour, 2017).

Although the concept of green furniture

has been introduced for several decades, consumers still lack sufficient knowledge about green furniture and often struggle to distinguish its authenticity from conventional ones. This leads to counterfeit green furniture products being widespread in the PRC furniture market (Qin et al., 2018). Consequently, consumers are more inclined to satisfy their curiosity and demand for novelty by purchasing authentic green furniture products that can provide them with epistemic value.

Functional Value

Functional value refers to the perceived benefits derived from a product's functionality or physical performance, which is regarded as a decisive factor influencing consumer purchase decisions and consumption behavior (Williams & Soutar, 2009).

In the context of green furniture products, functional value is mostly related to the quality, price, comfort, and health aspects (Yadav & Pathak, 2016; Han et al., 2017; Xu et al., 2020a).

Technology Value

Technology value is described as the consumer's perceived benefits generated by the use of technology (Khosrow-Pour, 2005; Oyman & Ozer, 2022).

Hoyer et al. (2020) highlighted those new technologies, such as the Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), virtual assistants, chatbots, and robots—often driven by Artificial Intelligence (AI)—are significantly reshaping the customer purchasing experience. Rangaswamy et al. (2022) also argued that

new technologies play a critical role in transforming the consumer experience across all major stages of the shopping journey, including the pre-transaction, transaction, and post-transaction phases (Rangaswamy et al., 2022).

Attitude

Previous research has indicated that these values significantly impact consumers' consumption behavior. Meanwhile, consumer values were frequently associated with attitudes and behaviors (Long & Schiffman, 2000; Govaerts & Olsen, 2023).

An individual's attitude is described as a consistent inclination to respond favorably or adversely to a product or service, encompassing both positive and negative tendencies (Kim et al., 2020). There are three main dimensions of attitude: cognitive, affective, and conative. Cognitive refers to the consumer's awareness, knowledge, beliefs, and ideas (Schiffman & Kanuk, 2004; Liao et al., 2017), while affective refers to the customer's emotions and feelings (Fazal-e-Hasan et al., 2017; Duffett, 2020). At the Conative (or behavioral) stage, the consumer converts feelings and emotions into behavior (Huitt & Cain, 2005; Michael et al., 2018). In some literature, it is called the CAC model of attitudes.

According to prior research, attitude is a direct factor that influences customer behavior, making it one of the most important types of research on customer behavior (Mosavi & Ghaedi, 2012; Khan et al., 2023).

Consumption Behavior

Consumption behavior, sometimes

described as purchase behavior, refers to consumers' responses and activities in response to an organization's marketing activities.

This research focuses on the consumption dimensions of willingness to buy, recommend, and repurchase green furniture in Chengdu, an emerging new first-tier city in China. Willingness to buy refers to a consumer's preference for one product over another (Sivapalan et al., 2021). Willingness to recommend involves sharing positive feedback about a product, which is crucial for attracting potential customers, both through traditional word-of-mouth and electronic messages (Yoon & Uysal, 2005; Hennig-Thurau et al., 2004). Willingness to repurchase, or repurchase intention, is the decision to buy a product again (Hellier et al., 2003). Previous research has suggested that consumption behaviors are influenced by factors such as price, innovation, attitudes, and satisfaction (Choe & Kim, 2018; Nguyen et al., 2020; Kim et al., 2021).

Relationship between Consumption Value and Attitude toward Green Furniture

Epistemic value is relevant to stimulate interest, create curiosity and novelty, and satisfy the desire for epistemic information, knowledge, and experience. There is some evidence in previous studies suggested that epistemic value can influence consumer choice behavior by creating positive attitudes. Choe and Kim (2018) investigated the impact of consumption value on foreign tourists' perceptions of local food in Hong Kong and discovered that tourists' attitudes toward local food and behavioral intentions are

well explained by their consumption values, specifically taste/quality value and epistemic value. Adhitiya and Astuti (2019) investigated the green consumer behavior for green products in Indonesia and found that epistemic value had a significant influence on attitude, and they further indicated that epistemic value can be mediated between attitude and green consumption behavior. Similarly, Riptiono (2022) and Hussain et al. (2023) also claimed that epistemic value will form a positive attitude toward electric cars and local food through the effects of environmental concern. These findings mean that epistemic value is an important value that can create a positive attitude toward products. Based on the above prior research findings, hypothesis 1 was proposed:

Hypothesis 1: Epistemic value positively affects Chinese Chengdu consumers' attitudes toward green furniture.

Functional value pertains to the perceived advantages in terms of physical performance, functionality, usefulness, or utility of a certain product. This value is considered the main driver of consumer choice behavior, in particular, in the initial research stages of consumer behavior. Han et al. (2017) found in their research that functional attributes such as comfort, performance, pollution level, driving range, charging time, and convenience significantly influence consumers' attitudes and acceptance of electric vehicles. Similarly, Yu and Lee (2019) propose that functional value positively correlates with attitudes toward upcycled products. Lee et al. (2013) investigated the

functionalities of smartphones and concluded that the perceived functional diversity of convergent products positively influences product attitudes and purchase intentions. Based on the explanation above, the hypothesis 2 proposed is:

Hypothesis 2: Functional value positively affects Chinese Chengdu consumers' attitudes toward green furniture.

Given the fast growth of smart technology applications in home decoration, encompassing augmented reality, applications, artificial intelligence, virtual catalogs, computer-generated imagery, and smart labels, it becomes imperative for both academic researchers and enterprises to grasp consumer responses to these technological innovations. Rivera et al. (2015) investigated the relationship between consumer perceptions toward the adoption of mobile technology in the hospitality industry and found that technology experience, the usefulness of mobile applications, and attitude toward mobile applications can be used to explain timeshare owners' intentions to use a mobile application. Kim et al. (2017) reported similar research findings by suggesting that smart in-store technology settings have positive effects on consumer attitudes in the fashion retailing context. Drawing from the preceding discussion, the following hypothesis 3 is formulated:

Hypothesis 3: Technology value positively affects Chinese Chengdu consumers' attitudes toward green furniture.

Relationship between Consumption Value and Consumer's Consumption Behavior

Epistemic value is proven to effectively influence consumer purchasing behavior toward green products directly in some previous evidence. According to Lin and Huang (2012), Gonçalves et al. (2016), green purchasing behaviors are enhanced by integrating functional and epistemic values. Rahnama and Rajabpour (2017) reveal that epistemic value had a significantly favorable impact on green product selection in Iran and that epistemic value is one of the most important elements in consumers' green product selection behavior. Gonçalves et al. (2016) found that emotional, conditional, and epistemic values are significant for green product purchasing behaviors, but only when combined with the other values. Biswas and Roy (2015) identified perceived value-for-money and epistemic value as significant predictors of green consumption behavior. According to findings in these studies, epistemic value has a positive direct effect on consumer consumption behavior. Thus, below hypothesis 4 was proposed:

Hypothesis 4: Epistemic value positively affects Chinese Chengdu consumers' consumption behavior toward green furniture.

Besides traditional consumption values, technology has also been found an important value factor to has effects on consumption behaviors of green products in recent studies. The emergence of new technology applications in green products creates new market

opportunities and influences customer decision-making nowadays (Friedman & Hendry, 2019). Poushneh and Vasquez-Parraga (2017) report in their research on virtual objects as well as the information provided by AR can increase user satisfaction, and user experience, and then further lead to increasing willingness to purchase behaviors. Based on the above previous studies, hypothesis 5 was proposed:

Hypothesis 5: Technology value positively affects Chinese Chengdu consumers' consumption behavior toward green furniture.

Relationship between Attitude toward Green Furniture and Consumption Behavior

In addition to consumer values mentioned above, attitudes have also been found to be related to consumer consumption behavior by many previous scholars (Mosavi & Ghaedi, 2012). Attitude is an enduring psychological tendency toward to certain objective (people, ideas, emotions, products, or events., etc.) (Kim et al., 2020). This psychological tendency encompasses the subjective appraisal of the individual and may result in behavioral tendencies. Attitude was found as a mediating factor between values and consumption behavior in some previous research work (Yeon Kim & Chung, 2011; Im et al., 2015). Consumer behaviorists also believe that customer's attitude can predict their consumption

behaviors (Zhao et al., 2014). Yadav and Pathak (2016) attempted to find factors that impact Indian young consumers' purchase intention on green products. Their finding showed that consumers' intention to buy green products can be predicted by attitude and environmental concern. Choe and Kim (2018) illustrate that consumers' positive attitudes towards Hong Kong's local food are associated with intentions to recommend Hong Kong food to tourists. Similarly, a strong relationship between customers' attitude and their repurchase intentions is found in Jiménez and San-Martin (2017) and Bupalan et al., (2019) studies. Based on the above discussion, hypothesis 6 was proposed:

Hypothesis 6: Chinese Chengdu consumers' attitude toward green furniture positively affects consumption behavior.

Conceptual Framework

This framework is grounded in the consumption value theory (Sheth et al., 1991) and incorporates a contemporary technology value into the model.

The Research Framework and the Corresponding

Hypotheses are presented in Figure 1: The research framework for Consumption values and attitudes affecting Chengdu consumers' consumption behavior of green furniture.

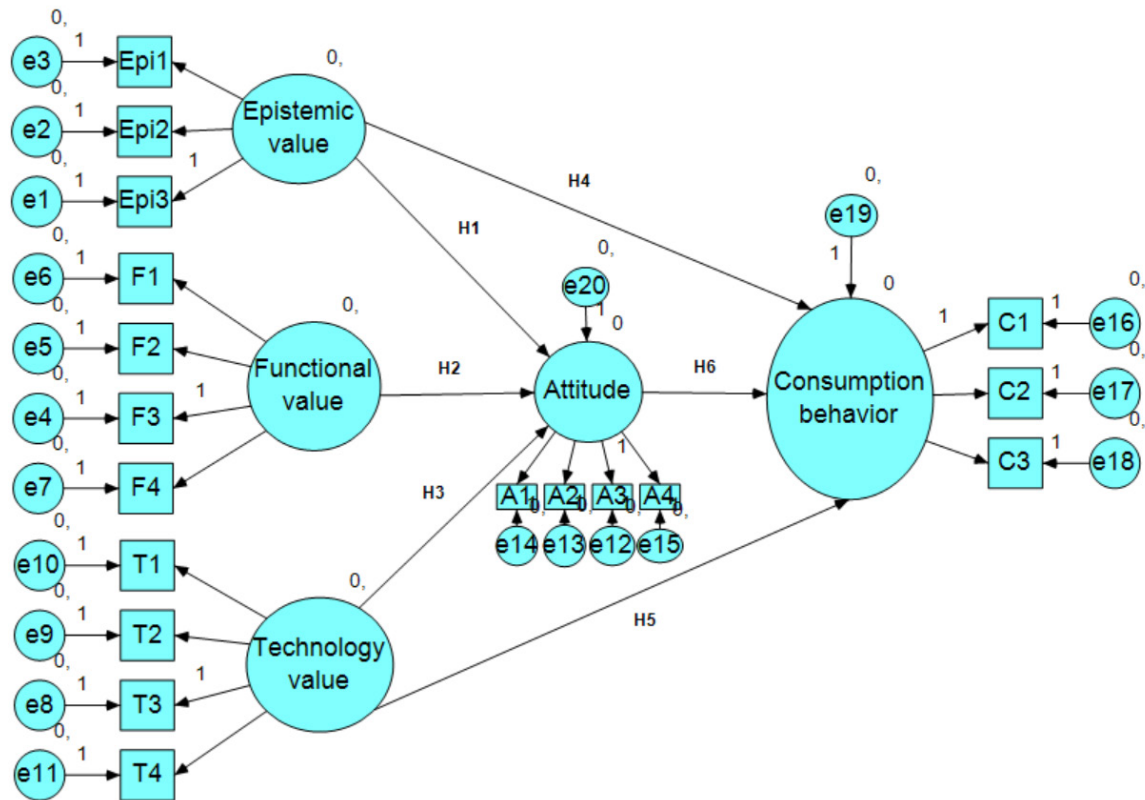


Figure 1 The Research Framework for Consumption Values and Attitudes Affecting Chengdu Consumers' Consumption Behavior of Green Furniture

Methodology

This research is equipped with qualitative and quantitative mix methodology. The questionnaire was drafted after reviewing the extensive literature. Saunders et al. (2018) recommended a range of 5 to 25 for semi-structured interviews. In line with this guideline, the current qualitative research employed semi-structured, in-depth face-to-face interviews with 9 experts currently working in the furniture industry. The criteria for selecting these 9 experts are that these 9 experts possess extensive knowledge and experience in the green furniture sector, having accumulated many years of professional involvement within an international furniture enterprise that specializes in green furniture product

categories. Their insights offer a valuable insider's perspective. The results from qualitative semi-structured interviews were used to refine survey questions for greater accuracy.

Before the main survey, 50 online pilot tests were made to modify the survey instruments. During the pilot test, the validity ($\text{IOC} > 0.6$) and reliability (Cronbach's Alpha, $\alpha > 0.7$) were checked. The IOC score for each question in this study ranged from 0.671 to 0.893 which is greater than 0.6 indicating that these questions could effectively evaluate the test items in the expert's judgments. The summary of Cronbach's alpha for all observed variables, which ranged from 0.731 to 0.823, indicates that the reliability statistics requirements were met.

Ultimately, the primary survey was conducted to gather information. The quantitative research used Confirmatory Factor Analysis (CFA) to confirm significant independent variables in the model and Structural Equation Modeling (SEM) to test the hypotheses and check the causal relationship among the variables using SPSS version 23.0 and AMOS version 22.0.

Population and Sampling Design

This research targets consumers aged 22 and above in the PRC Chengdu as the population, as they have likely completed their bachelor's education and gained purchasing power to some extent, making them suitable respondents for studying green furniture consumption behavior (Ling et al., 2024). According to the 7th National Census of PRC held on November 1, 2020, the total population of consumers aged 22 and up in Chengdu is 18.16 million (National Bureau of Statistics of China-Chengdu, 2021). The sample size was decided by the number of observing variables. In this study, the researcher will use 20 cases per observation per indicator variable in setting a sufficient number of samples for SEM analysis. As this study is designed for 18 questions, the total sampling size would be 360 (18x20) questionnaires using Jackson's (2003) guidelines. Purposive sampling was employed to select respondents based on specific criteria, including their characteristics, knowledge, and experiences (Andrade, 2021).

The Research Tools

The questionnaire, consisting of four parts, was developed through a literature review (Biswas & Roy, 2015; Choe & Kim, 2018;

Adhitiya & Astuti, 2019; Wang et al., 2021), expert interviews, and validity and reliability checks. It covers demographic attributes, factors influencing green values and attitudes, and factors affecting green furniture consumption behavior in Chengdu. Scales were adapted to suit the PRC context, and the questionnaire was translated into Chinese by a native expert. A 5-point Likert scale was used for measurement, with responses ranging from “strongly disagree (1)” to “strongly agree (5)”.

Data Collection

The questionnaire was collected through the Wenjuanxing platform which is a famous professional online questionnaire collection tool in PRC (Yang et al., 2021; Liang et al., 2022). The questionnaire was collected from March to May 2024. One screening question was set up “Have you ever purchased green furniture?” Respondents who answered this question negatively were excluded from further participation in the survey. Following these exclusions, 417 questionnaires were collected as the sample for the data analysis.

Results

The frequency analysis demonstrated that 257 respondents were female counting 61.6%. The age range was as follows: 22-32 (44.8%), 33-43 (48%), 44-54 (6%), and 55 and above (1.2%). Respondents with undergraduate degrees made up 85.4%, and with postgraduate and above education leave count for 9.4%. 192 respondents reported a monthly income of 7,001 yuan or more (46%), 115 respondents reported a monthly income between 5,001

and 7,000 yuan (27.6%), and 86 respondents reported a monthly income between 3,001 and 5,000 yuan (20.6%). 220 respondents are married with one child (52.8%), 79 respondents are single and stay alone (18.9%), and 46 respondents are single and stay with family (11%).

Confirmatory Factor Analysis

CFA was conducted on a dataset (N = 417) using Amos 22.0, showing satisfactory goodness-of-fit indices. Standardized factor loadings ranged from 0.41 to 0.69, meeting the 0.4 threshold (Shrestha, 2021). AVE values exceeded 0.5, confirming convergent validity, and CR

values were above 0.7, indicating internal consistency (Lee et al., 2014; Cheung et al., 2024). Fit indices, including RMSEA (0.037), GFI (0.935), CFI (0.942), and TLI (0.905), met established criteria (Kline, 2023), confirming a robust model fit and allowing for structural model testing.

Structural Equation Modeling (SEM)

In Table 1, all the fit indices surpass the established benchmarks for acceptable model fit. Moreover, the summarized structural paths and their corresponding estimates, along with the results of hypotheses testing are also presented in Table 1.

Table 1 Summary of Structural Paths, Total Effect, Direct Effect, Indirect Effect, and Hypothesis Testing Results (n = 417)

H	From	To	Hypothesis Results					
			Total Effect	Direct Effect	Indirect Effect	Hypothesis Relation	P Value	Hypothesis Support
H1	EV	ATT	0.730	0.730	0.000	Positive	0.000	Accepted
H2	FV	ATT	0.550	0.550	0.000	Positive	0.000	Accepted
H3	TV	ATT	0.530	0.530	0.000	Positive	0.000	Accepted
H4	EV	CB	0.867	0.867	0.000	Positive	0.000	Accepted
H5	TV	CB	0.375	0.120	0.255	Positive	0.162	Rejected
H6	ATT	CB	0.480	0.480	0.000	Positive	0.020	Accepted

Note: $\chi^2 = (519.217, P < 0.000)$, CFI = 0.942, TLI = 0.905, RMSEA = 0.037, GFI = 0.935

Discussion

All hypotheses were evaluated employing structural equation modeling. Five out of six hypotheses (H1-H4, H6) were statistically significant, while one hypothesis (H5) was statistically insignificant and was subsequently

rejected in this study. Hypothesis 1: Epistemic value positively affects Chinese Chengdu consumers' attitudes toward green furniture, was assessed through the examination of the path coefficient linking epistemic value to PRC Chengdu consumers' attitudes toward green

furniture products ($\beta = 0.730$, $p < 0.001$). The result showed that Chinese Chengdu consumers who perceived high epistemic value tended to exhibit positive attitudes toward green furniture. This outcome aligns with previous research demonstrating that epistemic value had a significantly favorable effect on attitudes in consumer's product selection process (Choe & Kim, 2018; Adhitiya & Astuti, 2019; Hussain et al., 2023).

Hypothesis 2: Functional value positively affects Chinese Chengdu consumers' attitudes toward green furniture, was validated through examination of the path coefficient between functional value and PRC Chengdu consumers' attitudes toward green furniture products ($\beta = 0.550$, $p < 0.001$). The findings revealed that the higher the functional value Chinese Chengdu customers perceived, the more positive attitude will be generated toward green furniture products. Prior research has shown some evidence to corroborate this claim, demonstrating that functional value has a significant positive impact on consumers' attitudes and their consumption behaviors (Lee et al., 2013; Han et al., 2017; Yu & Lee, 2019).

Hypothesis 3: Technology value positively affects Chinese Chengdu consumers' attitudes toward green furniture, was checked by investigating the path coefficient between technology value and PRC Chengdu consumers' attitudes toward green furniture products ($\beta = 0.530$, $p < 0.001$). The findings revealed that Chinese Chengdu consumers who evaluated high technology value had a favorable attitude

toward green furniture products. This finding is consistent with prior studies (Rivera et al., 2015; Kim et al., 2017).

Hypothesis 4: Epistemic value positively affects Chinese Chengdu consumers' consumption behavior toward green furniture, which was confirmed by examining the path coefficient between epistemic value and their consumption behavior ($\beta = 0.867$, $p < 0.001$). The findings revealed that Chinese Chengdu consumers who perceive positive epistemic value are more inclined to purchase green furniture products. The influence of epistemic value on consumer consumption behavior has been demonstrated in previous studies (Lin & Huang, 2012; Biswas & Roy, 2015; Rahnama & Rajabpour, 2017; Kim et al., 2021). The satisfaction of consumers' desire for information and novelty knowledge and experience was proved to be an effective factor influencing consumer purchasing behavior toward green products.

Hypothesis 5: Technology value positively affects Chinese Chengdu consumers' consumption behavior toward green furniture, was checked by investigating the path coefficient between technology value and PRC Chengdu consumers' consumption behavior toward green furniture products ($\beta = 0.375$, $p = 0.162$). The results showed that Chengdu consumers who perceived high technology value did not exhibit positive consumption behavior, contradicting previous studies where technology value significantly influenced green product consumption (Poushneh & Vasquez-Parraga, 2017; Friedman & Hendry, 2019). This may be due to limited implementation

of technologies like AR, AI, and virtual 3D models in the furniture industry, despite growing consumer interest. It is essential to apply these emerging technologies and educate consumers on differentiating authentic green furniture through tools such as QR codes, green labels, and augmented reality.

Hypothesis 6: Chinese Chengdu consumers' attitude toward green furniture positively affects consumption behavior, was tested by investigating the path coefficient between attitude and PRC Chengdu consumers'

consumption behavior toward green furniture products ($\beta = 0.480$, $p < 0.001$). The result showed that Chinese Chengdu consumers' attitude can predict their consumption behaviors, when they evaluate green furniture more positively, they are more inclined to purchase green furniture products. This finding aligns with previous research indicating that attitude mediates between customer value and consumption behavior (Zhao et al., 2014; Im et al., 2015; Yadav & Pathak, 2016; Choe & Kim, 2018; Bupalan et al., 2019).

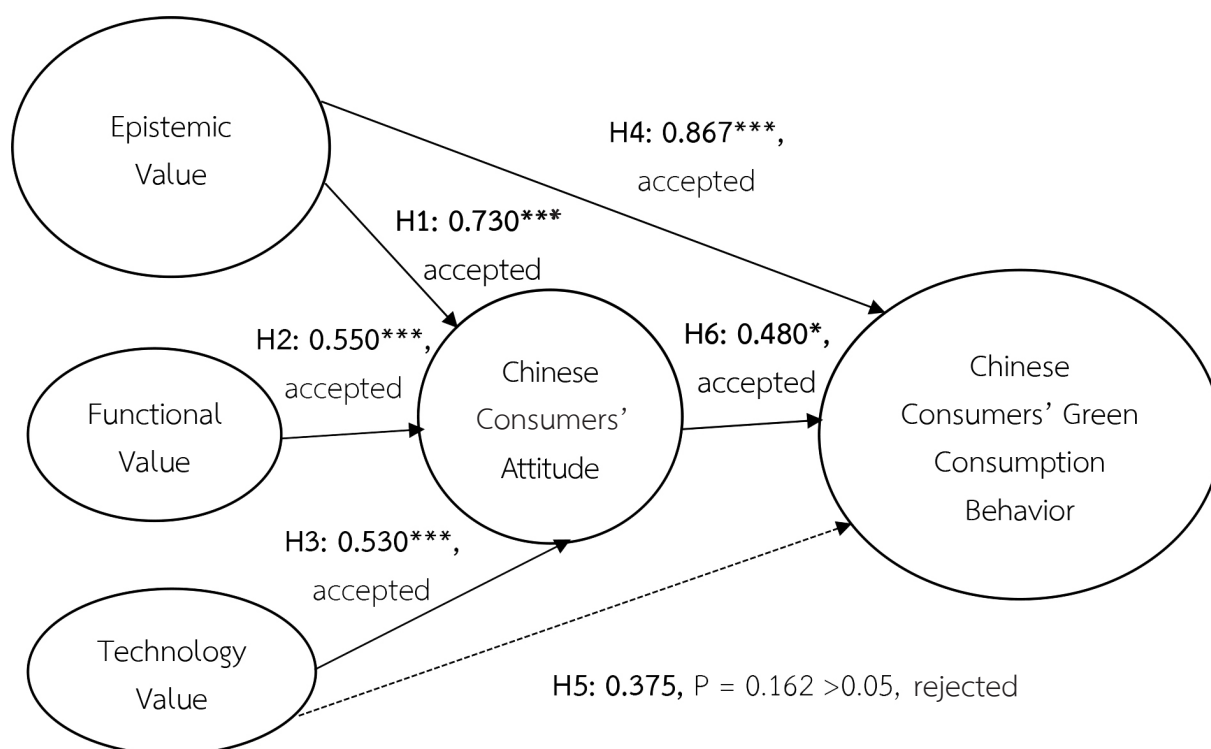


Figure 2 Results of the Direct Path for the Structural Model (n = 417)

(*** $p < 0.001$, ** $p < 0.01$, * $p \leq 0.05$)

Conclusions

This study examined the effects of PRC Chengdu consumers' green epistemic, functional, and technology values on their attitude toward green furniture products and consumption behavior. A Chinese Chengdu consumer's value-attitude causal model was developed to show significant value factors and attitudes that impact their green furniture consumption behavior in the market.

The findings of this study revealed a significant association among epistemic, functional, and technology values with the attitudes and consumers' green consumption behavior in the PRC Chengdu. Most of the hypothesized relationships in the model were confirmed, except for the relationship between technology value and consumption behavior. These results align with previous research, which has demonstrated that epistemic value positively influences attitudes and consumption behavior (Rahnama & Rajabpour, 2017; Choe & Kim, 2018; Hussain et al., 2023), and functional value has a significant positive effect on both attitude and behavior (Lee et al., 2013; Han et al., 2017; Yu & Lee, 2019). Consumers' attitudes positively affect their consumption behavior (Zhao et al., 2014; Yadav & Pathak, 2016; Bupalan et al., 2019). Additionally, technology value has a positive impact on attitudes (Rivera et al., 2015; Kim et al., 2017). However, this study found that technology value did not affect consumption behavior directly, a finding that contrasts with prior research, such as Poushneh and Vasquez-Parraga (2017), which suggested that

new technologies like AR can enhance consumer satisfaction and further lead to their purchase behavior.

The current study broadens on previous research regarding green furniture products in the PRC Chengdu's new first-tier cities market. Predominant prior research is focused on the supply side. This study contributes to the existing body of knowledge by elucidating the "demand" for green furniture consumption from the consumer perspective. The examination of consumers' experiences and perceptions related to green furniture in this study serves to bridge an extant research gap. Moreover, this study expanded existing theories of consumption value and contributes to theoretical development by integrating new green Chinese values such as technology value on the grounded theories and consider it as an important antecedent of consumption behavior for the new first-tier cities PRC Chengdu customers.

This is one of the first empirical studies conducted in PRC's new first-tier cities market-Chengdu and specially focused on green furniture product categories. It provides insights to furniture enterprises on devising and implementing effective marketing strategies to effectively communicate with Chinese consumers to achieve long-term sustainability development in the furniture industry. It also offers possible information for government officials, policymakers, and other relevant organizations to improve the legal system on the green furniture sector for the Chinese new first-tier cities market and also the international market.

The present study showed no empirical evidence that technology value influences PRC Chengdu consumers' consumption behavior toward green furniture directly. Therefore, government and industry associations must promote and educate consumers to understand the latest technological tools. Additionally, furniture industry practitioners should more widely integrate these new technologies into their green furniture products. This will enable consumers to experience the convenience and enjoyment of these technologies during the home decoration process, thereby enhancing their overall purchasing experience. In particular, epistemic value and functional value should be emphasized to PRC Chengdu consumers due to their strong positive effects on both Chinese consumers' attitudes toward green furniture and their consumption behavior.

Limitations & Recommendations for Future Research

Although this study makes a valuable contribution to the knowledge surrounding PRC's new first-tier cities Chengdu consumers'

consumption behavior on green furniture products, several limitations should be addressed. This study connects the marketing field of green furniture products regarding value, attitudes, and consumption behaviors from the consumer's perspective. This study is limited by its small sample size and it was only conducted in one of PRC's new first-tier cities named Chengdu from a total of fifteen first-tier cities. Therefore, the findings cannot be generalized to those that are not in the new first-tier cities list. The limitation pertains to the refinement of the Chengdu demographic profile in the PRC and the scale measuring green furniture consumption values. The measurement framework was developed based on the consumption value theory. However, the appropriateness of scale refinement may vary with distinct samples of green furniture products from different countries or regions. Consequently, the researcher recommends future researchers investigate the causal model in various countries and locations with diverse cultural backgrounds.

References

- Adhitiya, L., & Astuti, R. D. (2019). The effect of consumer value on attitude toward green product and green consumer behavior in organic food. *IPTEK Journal of Proceedings Series*, (5), 193-202.
- Andrade, C. (2021). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), 86-88.
- Biswas, A., & Roy, M. (2015). Leveraging factors for sustained green consumption behavior based on consumption value perceptions: Testing the structural model. *Journal of Cleaner Production*, 95, 332-340.

- Bupalan, K., Rahim, S. A., Ahmi, A., & Rahman, N. A. A. (2019). Consumers' repurchase intention towards counterfeit products. *International Journal of Supply Chain Management*, 8(3), 973-981.
- Busalim, A., Fox, G., & Lynn, T. (2022). Consumer behavior in sustainable fashion: A systematic literature review and future research agenda. *International Journal of Consumer Studies*, 46(5), 1804-1828.
- Cao, D., Zheng, Y., Liu, C., Yao, X., & Chen, S. (2022). Consumption values, anxiety, and organic food purchasing behaviour considering the moderating role of sustainable consumption attitude. *British Food Journal*, 124(11), 3540-3562.
- Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management*, 41(2), 745-783.
- Choe, J. Y. J., & Kim, S. S. (2018). Effects of tourists' local food consumption value on attitude, food destination image, and behavioral intention. *International Journal of Hospitality Management*, 71, 1-10.
- Duffett, R. (2020). The YouTube marketing communication effect on cognitive, affective, and behavioural attitudes among Generation Z consumers. *Sustainability*, 12(12), 5075.
- ElHaffar, G., Durif, F., & Dubé, L. (2020). Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions. *Journal of Cleaner Production*, 275, 122556.
- Fang, X., Shi, X., Phillips, T. K., & Gao, W. (2022). Comparative urban performance evaluation of sustainable urbanization in four typical megalopolises in China. *Buildings*, 12(9), 1422.
- Fazal-e-Hasan, S. M., Lings, I. N., Mortimer, G., & Neale, L. (2017). How gratitude influences customer word-of-mouth intentions and involvement: The mediating role of affective commitment. *Journal of Marketing Theory and Practice*, 25(2), 200-211.
- Friedman, B., & Hendry, D. G. (2019). *Value sensitive design: Shaping technology with moral imagination*. MIT Press.
- Gonçalves, H. M., Lourenço, T. F., & Silva, G. M. (2016). Green buying behavior and the theory of consumption values: A fuzzy-set approach. *Journal of Business Research*, 69(4), 1484-1491.
- Govaerts, F., & Olsen, S. O. (2023). Consumers' values, attitudes and behaviors towards consuming seaweed food products: The effects of perceived naturalness, uniqueness, and behavioral control. *Food Research International*, 165, 112417.
- Guo, Z. A. (2022). *Where graduates in the past three years have "lived"?* <https://www.yicai.com/news/101481100.html>

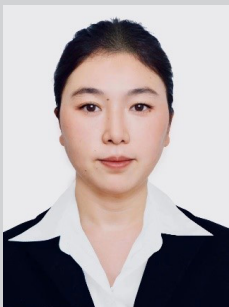
- Han, L., Wang, S., Zhao, D., & Li, J. (2017). The intention to adopt electric vehicles: Driven by functional and non-functional values. *Transportation Research Part A: Policy and Practice*, 103, 185-197.
- Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer repurchase intention: A general structural equation model. *European Journal of Marketing*, 37(11/12), 1762-1800.
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18(1), 38-52.
- Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing*, 51(1), 57-71.
- Huitt, W., & Cain, S. (2005). An overview of the conative domain. *Educational Psychology Interactive*, 3(4), 45.
- Hussain, K., Abbasi, A. Z., Rasoolimanesh, S. M., Schultz, C. D., Ting, D. H., & Ali, F. (2023). Local food consumption values and attitude formation: The moderating effect of food neophilia and neophobia. *Journal of Hospitality and Tourism Insights*, 6(2), 464-491.
- Im, S., Bhat, S., & Lee, Y. (2015). Consumer perceptions of product creativity, coolness, value, and attitude. *Journal of Business Research*, 68(1), 166-172.
- Jackson, D. L. (2003). Revisiting sample size and number of parameter estimates: Some support for the N: Q hypothesis. *Structural Equation Modeling*, 10(1), 128-141.
- Jiménez, N., & San-Martin, S. (2017). Attitude toward m-advertising and m-repurchase. *European Research on Management and Business Economics*, 23(2), 96-102.
- Khan, S. N., & Mohsin, M. (2017). The power of emotional value: Exploring the effects of values on green product consumer choice behavior. *Journal of Cleaner Production*, 150, 65-74.
- Khan, Y., Hameed, I., & Akram, U. (2023). What drives attitude, purchase intention, and consumer buying behavior toward organic food? A self-determination theory and theory of planned behavior perspective. *British Food Journal*, 125(7), 2572-2587.
- Khosrow-Pour, D. B. A. (2005). *Encyclopedia of information science and technology*. Igi Global.
- Kim, H. Y., Lee, J. Y., Mun, J. M., & Johnson, K. K. (2017). Consumer adoption of smart in-store technology: Assessing the predictive value of attitude versus beliefs in the technology acceptance model. *International Journal of Fashion Design, Technology and Education*, 10(1), 26-36.
- Kim, M. J., Hall, C. M., & Kim, D. K. (2020). Predicting environmentally friendly eating out behavior by value-attitude-behavior theory: Does being vegetarian reduce food waste? *Journal of Sustainable Tourism*, 28(6), 797-815.

- Kim, N. L., Shin, D. C., & Kim, G. (2021). Determinants of consumer attitudes and re-purchase intentions toward Direct-to-Consumer (DTC) brands. *Fashion and Textiles*, 8(1), 1-22.
- Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford Publications.
- Le-Anh, T., & Nguyen-To, T. (2020). Consumer purchasing behaviour of organic food in an emerging market. *International Journal of Consumer Studies*, 44(6), 563-573.
- Lee, C. K., Levy, D. S., & Yap, C. S. F. (2015). How does the theory of consumption values contribute to place identity and sustainable consumption? *International Journal of Consumer Studies*, 39(6), 597-607.
- Lee, S., Lee, J. H., & Garrett, T. C. (2013). A study of the attitude toward convergent products: A focus on the consumer perception of functionalities. *Journal of Product Innovation Management*, 30(1), 123-135.
- Lee, J. S., Lee, C. K., & Park, C. K. (2014). Developing and validating a multidimensional quality scale for mega-events. *International Journal of Hospitality Management*, 43, 121-131.
- Liang, L., Huang, W., Huang, S., & Weng, D. (2022). Combining SPSSAU and WJX.CN analysis to study the status quo of online and offline blended teaching model. In *2nd International Conference on Internet, Education and Information Technology (IEIT 2022)* (pp. 379-389). Atlantis Press.
- Liao, Y. K., Wu, W. Y., Amaya Rivas, A. A., & Lin Ju, T. (2017). Cognitive, experiential, and marketing factors mediate the effect of brand personality on brand equity. *Social Behavior and Personality: An International Journal*, 45(1), 1-18.
- Lin, P. C., & Huang, Y. H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values. *Journal of Cleaner Production*, 22(1), 11-18.
- Ling, P. S., Chin, C. H., Yi, J., & Wong, W. P. M. (2024). Green consumption behaviour among Generation Z college students in China: The moderating role of government support. *Young Consumers*, 25(4), 507-527.
- Long, M. M., & Schiffman, L. G. (2000). Consumption values and relationships: Segmenting the market for frequency programs. *Journal of Consumer Marketing*, 17(3), 214-232.
- Michael, N., James, R., & Michael, I. (2018). Australia's cognitive, affective, and conative destination image: An Emirati tourist perspective. *Journal of Islamic Marketing*, 9(1), 36-59.
- Mosavi, S. A., & Ghaedi, M. (2012). An examination of the effects of perceived value and attitude on customers' behavioral intentions in e-shopping. *African Journal of Business Management*, 6(5), 1950.
- National Bureau of Statistics of China-Chengdu. (2021). *Communiqué of the seventh national population Chengdu census*. <https://www.hongheiku.com/shijirenkou/1844.html>
- Nguyen, Q., Nguyen, H., & Le, T. (2020). Relationships among novelty seeking, satisfaction, return intention, and willingness to recommend of foreign tourists in Vietnam. *Management Science Letters*, 10(10), 2249-2258.

- Nikhashemi, S. R., Knight, H. H., Nusair, K., & Liat, C. B. (2021). Augmented reality in smart retailing: A (n) (A) symmetric approach to continuous intention to use retail brands' mobile AR apps. *Journal of Retailing and Consumer Services*, 60, 102464.
- Oyman, M., Bal, D., & Ozer, S. (2022). Extending the technology acceptance model to explain how perceived augmented reality affects consumers' perceptions. *Computers in Human Behavior*, 128, 107127.
- Poushneh, A., & Vasquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction, and willingness to buy. *Journal of Retailing and Consumer Services*, 34, 229-234.
- Qin, Y., Shi, L. H., Song, L., Stöttinger, B., & Tan, K. F. (2018). Integrating consumers' motives with suppliers' solutions to combat Shanzhai: A phenomenon beyond counterfeit. *Business Horizons*, 61(2), 229-237.
- Rahnama, H., & Rajabpour, S. (2017). Identifying effective factors on consumers' choice behavior toward green products: The case of Tehran, the capital of Iran. *Environmental Science and Pollution Research*, 24(1), 911-925.
- Rana, S. S., & Solaiman, M. (2023). Moral identity, consumption values and green purchase behaviour. *Journal of Islamic Marketing*, 14(10), 2550-2574.
- Rangaswamy, E., Nawaz, N., & Changzhuang, Z. (2022). The impact of digital technology on changing consumer behaviours with special reference to the home furnishing sector in Singapore. *Humanities and Social Sciences Communications*, 9(1), 1-10.
- Riptiono, S. (2022). The effects of consumption value, environmental concerns, and consumer attitudes towards consumer purchase intentions of electric cars. *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, 8(1), 23-32.
- Rivera, M., Gregory, A., & Cobos, L. (2015). Mobile application for the timeshare industry: The influence of technology experience, usefulness, and attitude on behavioral intentions. *Journal of Hospitality and Tourism Technology*, 6(3), 242-257.
- Roh, T., Seok, J., & Kim, Y. (2022). Unveiling ways to reach organic purchase: Green perceived value, perceived knowledge, attitude, subjective norm, and trust. *Journal of Retailing and Consumer Services*, 67, 102988.
- Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, 52, 1893-1907.
- Schiffman, L. G., & Kanuk, L. L. (2004). *Consumer behavior* (8th ed.). Prentice-Hall Inc.
- Shahsavari, T., Kubeš, V., & Baran, D. (2020). Willingness to pay for eco-friendly furniture based on demographic factors. *Journal of Cleaner Production*, 250, 119466.

- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, 22(2), 159-170.
- Shrestha, N. (2021). Factor analysis as a tool for survey analysis. *American Journal of Applied Mathematics and Statistics*, 9(1), 4-11.
- Sivapalan, A., von der Heidt, T., Scherrer, P., & Sorwar, G. (2021). A consumer values-based approach to enhancing green consumption. *Sustainable Production and Consumption*, 28, 699-715.
- The Paper. (2022). 2022 City business attractiveness ranking: Hefei returns to the new first-tier cities list and ranking order are reshuffled. <https://m.thepaper.cn/>
- Williams, P., & Soutar, G. N. (2009). Value, satisfaction, and behavioral intentions in an adventure tourism context. *Annals of Tourism Research*, 36(3), 413-438.
- Xiong, X., Ma, Q., Wu, Z., & Zhang, M. (2020). Current situation and key manufacturing considerations of green furniture in China: A review. *Journal of Cleaner Production*, 267, 121957.
- Xu, X., Hua, Y., Wang, S., & Xu, G. (2020a). Determinants of consumer's intention to purchase authentic green furniture. *Resources, Conservation and Recycling*, 156, 104721.
- Xu, X., Wang, S., & Yu, Y. (2020b). Consumer's intention to purchase green furniture: Do health consciousness and environmental awareness matter? *Science of the Total Environment*, 704, 135275.
- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732-739.
- Yang, K., Liu, H., Ma, L., Wang, S., Tian, Y., Zhang, F., & Jiang, X. (2021). Knowledge, attitude, and practice of residents in the prevention and control of COVID-19: An online questionnaire survey. *Journal of Advanced Nursing*, 77(4), 1839-1855.
- Yang, Z., Li, Q., Yan, Y., Shang, W. L., & Ochieng, W. (2022). Examining influence factors of Chinese electric vehicle market demand based on online reviews under moderating effect of subsidy policy. *Applied Energy*, 326, 120019.
- Yeh, A. G. O., & Chen, Z. (2020). From cities to super mega city regions in China in a new wave of urbanisation and economic transition: Issues and challenges. *Urban Studies*, 57(3), 636-654.
- Yeon Kim, H., & Chung, J. E. (2011). Consumer purchase intention for organic personal care products. *Journal of Consumer Marketing*, 28(1), 40-47.
- Yi, P., Li, W., & Zhang, D. (2021). Sustainability assessment and key factors identification of first-tier cities in China. *Journal of Cleaner Production*, 281, 125369.

- Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: A structural model. *Tourism Management*, 26(1), 45-56.
- Yu, S., & Lee, J. (2019). The effects of consumers' perceived values on intention to purchase upcycled products. *Sustainability*, 11(4), 1034.
- Zhao, H. H., Gao, Q., Wu, Y. P., Wang, Y., & Zhu, X. D. (2014). What affects green consumer behavior in China? A case study from Qingdao. *Journal of Cleaner Production*, 63, 143-151.



Name and Surname: Chen Ling

Highest Education: D.B.A. (Marketing), Siam University

Affiliation: Siam University

Field of Expertise: Consumer Behavior and Green Consumption



Name and Surname: Prin Laksitamas

Highest Education: D.B.A. (Marketing), United States International University, U.S.A.

Affiliation: Siam University

Field of Expertise: Marketing, Consumer Analysis, and Strategy