

A CAUSAL MODEL OF CHINESE CONSUMERS' DEMOGRAPHIC PROFILE VALUE-ATTITUDE ENHANCING NEW FIRST-TIER CITIES' GREEN FURNITURE CONSUMPTION MARKET

Chen Ling*, Prin Laksitamas

Business Administration Program in Marketing, Siam University

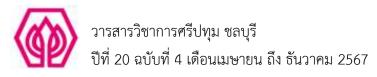
*Corresponding Author e-Mail: chenlingth2007@gmail.com

(Received: 2024, April 15; Revised: 2024, June 8; Accepted: 2024, June 13)

ABSTRACT

This study examined the effects of Chinese consumers' crucial demographic attributes on consumption values and scrutinized the impact of these values on attitudes and their consumption choice behaviors toward green furniture products in the People's Republic of China (PRC)'s new first-tier cities market. This quantitative research employed 36-factor questionnaires on research samples consisting of 832 Chinese consumers from China's four major new first-tier cities (Chengdu, Hangzhou, Xi'an, and Wuhan) which were collected by stratified sampling technique. The data underwent analysis through several statistical methods, including one-way analysis of variance (ANOVA), independent t test, confirmatory factor analysis (CFA), path analysis, and structural equation modeling (SEM). The results indicated that demographic attributes of the residence city, income, and marital status significantly influenced Chinese consumers' values. Product value (β =0.61) and eco-friendly system value (β =0.06) positively affected Chinese consumers' attitudes. Product value (β = 0.82) and eco-friendly system value (β =0.52) also positively affected consumption behaviors. Chinese customers' consumption behavior on green furniture could also be predicted by attitude (β =0.65) in the PRC's new first-tier cities market. The paper's final section proposed recommendations for diverse stakeholders, encompassing consumers, enterprises, and government organizations.

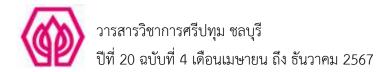
Keywords: Green Furniture; Green Consumption Behavior; PRC New First-Tier Cities



INTRODUCTION

Furniture has emerged as a fundamental requisite in consumers' daily routines. The World Health Organization (WHO) has highlighted the importance of green furniture in reducing environmental impact and enhancing consumer's quality of life (Xiong, Ma, Wu & Zhang, 2020, p. 2). Green furniture or eco-friendly furniture offers numerous environmental, social, business, and consumer benefits. It is mostly made from organic and biodegradable materials, reducing greenhouse gas emissions and promoting resource utilization. The green furniture industry also creates job opportunities, improving the environment and cultivating better economic performance for enterprises in the long run (Bassetti, Blasi & Sedita, 2021, pp. 9-11). Businesses can access a new market of green consumers, increasing their competitive advantage and improving their public image. Additionally, green furniture is cost-effective, reducing energy consumption and promoting consumer's physical and mental health. These attributes make green furniture increasingly important in today's consumer market. Grand View Research reported that the global market for environmentally sustainable furniture reached a value of USD 43.26 billion in 2022 and is projected to reach USD 83.76 billion by 2030 (Grand view research, Online, 2022). The PRC, the world's second-largest economy, is a prominent producer and exporter of green furniture, with the sector expected to reach USD 10.5 billion by 2027, growing at an 8.5% CAGR (Grand view research, Online, 2021). In PRC's 19th National Congress Report, the word "beauty" was proposed for the first time and it declared a carbon-neutral economy plan in September 2020 which indicated that PRC's governments are paying more attention to environmental issues and green products than before. There is increasing environmental awareness among Chinese consumers, particularly for children's furniture in the PRC (Wan, Zhang & Ye, 2018, p. 318). Some prior scholars further indicated that more than 90% of PRC respondents were keen to buy green furniture (Xu, Wang & Yu, 2020, p. 4).

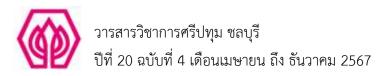
Ultimately, the concept of consumer value, its effects on attitude and consumption behaviors, and the effects of Chinese consumer's demographic attributes on various consumer value factors are critical to the research on green furniture products marketing. Limited research has been conducted on the emerging market of new first-tier cities within the PRC, with the majority of scholarly investigations concentrating on Western developed nations or the first-tier metropolitan areas within the PRC. However, it is noteworthy that these new first-



tier cities epitomize the ascension of China's burgeoning urban centers in forthcoming times. From the standpoint of product categories, research on consumer perceptions or behaviors toward specific green furniture has been limited. Little research is designed to explore a comprehensive set of more contemporary customer value systems, particularly, from an internal personnel qualitative analysis perspective in the furniture industry. Few studies link Chinese consumers' demographic attributes with consumers' values to the overall attitude and consumption behaviors toward green furniture products. To address these gaps, considerable attention and academic contributions should be devoted to green furniture consumption in the PRC's new first-tier cities market.

Green products, including green furniture, are becoming a global and PRC trend driven by customers, inspired by the government, and applied by industrial players (Xu, Wang & Yu, 2020, p. 4). Historically, four prominent Chinese megacities—namely Beijing, Shanghai, Guangzhou, and Shenzhen—often referred to as first-tier cities serve as focal points for the PRC's political, economic, and cultural centers. However, the rapid development of these traditional first-tier cities also created some new challenges, including escalating housing costs, heightened living expenses, elevated occupational stress levels, and exacerbated urban congestion. Consequently, a discernible cohort of individuals has elected to relocate from these conventional first-tier urban centers to a cluster of emerging first-tier cities, which embody China's prospective urban growth frontiers, anticipated to exhibit substantial developmental potential in forthcoming periods (Sohu, Online, 2023).

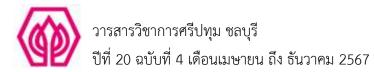
In the literature, consumers' demographic profiles, values, and attitudes affect their consumption behavior. Consumers with different demographic attributes may pursue different perception values, positive attitude leads to the intention or consumer's choice behavior toward green products. Demographic profiles, or socio-demographic characteristics, encompass the amalgamation of social and demographic variables that delineate individuals within a particular group or population. Extensive prior research has provided substantial evidence suggesting that demographic factors—such as gender, age group, educational attainment, income level, and marital status shape consumers' consumption behaviors (Fisher, Bashyal & Bachman, 2012, p. 181-182; Wan, Toppinen & Chen, 2014, p. 140-144; Rahim, Sulaiman, Chin, Arif & Hamid, 2017, p. 4-7)



In addition to demographic profiles, extant research has revealed that consumers' purchasing decisions are influenced by their assessments of the values inherent in products or services (Graf & Maas, 2008, p. 2). Therefore, marketing managers must devote effort to determining what kind of values customers truly want and what the organization can provide. Prior research has suggested that product value (functional, health, service) and eco-friendly system value (social, environmental, technology) influence consumers' attitudes and choice behavior (Finch, 2006, p. 14-16; Gonçalves, Lourenço & Silva, 2016, p. 1490; Hsu, Huang, Hsu & Huang, 2016, pp. 375-376; Wang, Fan, Zhao, Yang & Fu, 2016, pp. 136-138; Biswas, 2017, pp. 6-9; Poushneh & Vasquez-Parraga, 2017, p. 233; Xu, Hua, Wang & Xu, 2020, p. 18-19).

Consumer attitude is described as a person's psychological predisposition and persistent tendency to respond favorably or adversely to an object (Kim, Hall & Kim, 2020, p. 3). Consumer behaviorists believe that customer's attitude can predict their consumption behaviors and it is a direct factor that influences customers' choice behavior. This study focuses on consumer consumption behaviors in purchasing process from three dimensions: willingness to buy (Zhao, Gao, Wu, Wang & Zhu, 2014, p. 2), willingness to recommend (Sweeney & Soutar, 2001, p. 214), and willingness to re-purchase (Kim, Shin & Kim, 2021, p. 17).

In conclusion, green furniture is becoming growing in popularity globally, including in the PRC. This could be due to green furniture's eco-friendliness, higher health benefits for consumers, and better economic performance in the long run. In addition to rising consumer demand for green furniture, governments and industry associations have promoted green furniture products, contributing to its mainstreaming as well. Previous research has found that different consumer demographic characteristics (such as city of residence, gender, age group, income, marital status, and organization to buy) may have different impacts on green consumption behavior. Meanwhile, the value of green furniture (including functional value, health value, service value, social value, environmental value, and technology value) may also affect consumers' attitudes and their consumption behavior. After an extensive literature review, the researcher found that there is limited research on the value, attitude, and consumption behavior of green furniture products for different demographic attributes



consumers in the PRC's new first-tier cities market. This study attempts to fill this gap to make the academic and practical contributions.

RESEARCH OBJECTIVES

To narrow down the aforementioned gaps, the research objectives below are set up for this study:

- 1. To investigate the demographic characteristics (city of residence, gender, age range, education level, income, marital status, organization to buy) of Chinese consumers who purchase green furniture
- 2. To study Green Chinese values (product value, eco-friendly system value), and attitudes (cognitive, affective, conative), and to investigate the value factors which impact Chinese consumer's consumption behavior (willingness to buy, willingness to re-purchase green furniture).
- 3. To present and develop the Chinese consumer's value-attitude causal model which enhances its green furniture consumption behavior in the new first-tier cities' Chinese market.

RESEARCH HYPOTHESIS

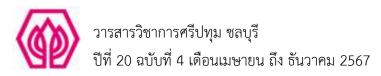
Reviewing the previous literature and the causal model framework of the key value factors affecting Chinese consumers' attitudes and green consumption behavior, the following hypotheses were made by the researcher:

H1: Demographic characteristics (city, gender, age group, education level, income, marriage status, and organization to buy) have positively affected the influence on Green Chinese values.

H2: Green Chinese values have a positive affective influence on Chinese consumers' attitudes.

H2a: Product values (functional, health, and service) have positively affected Chinese consumers' attitudes.

H2b: Eco-friendly system values (social, environmental, and technology) have positively affected Chinese consumers' attitudes.



H3: Attitude (Cognitive, affective, and conative) has positively affected Chinese consumers' consumption behavior.

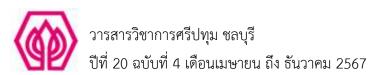
H4: Green Chinese values have positively affected Chinese consumers' consumption behavior toward green furniture.

H4a: Product values (functional, health, and service) have positively affected Chinese consumers' consumption behavior toward green furniture.

H4b: Eco-friendly system values (social, environmental, and technology) have positively affected Chinese consumers' consumption behavior toward green furniture.

CONCEPTUAL FRAMEWORK

The foundational conceptual framework is constructed upon three underlying grounded theories: the extended value-attitude-behavior hierarchy model (Cheung & To, 2019, p. 152), the consumption value theory developed (Sheth, Newman & Gross, 1991, p. 160), and the theory of planned behavior (TPB) (Ajzen, 2015, p. 126). Following an extensive literature review on green product studies, the research conceptual framework and relevant hypothesis are developed in Figure 1.



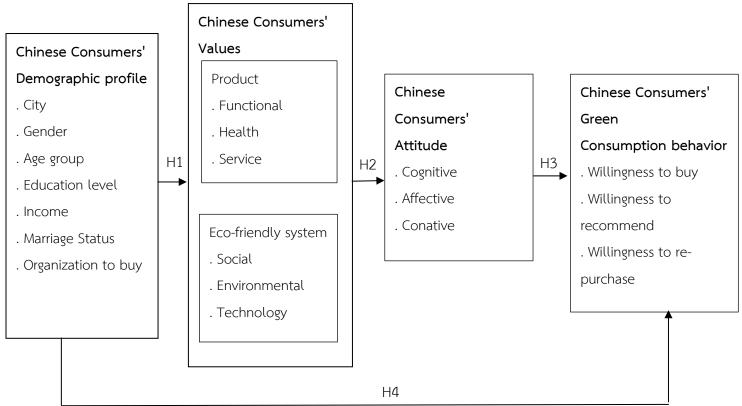


Figure 1. The research framework for A Causal Model of Chinese Consumers' Demographic Profile and Value-Attitude Enhancing New First-tier Cities' Furniture Consumption Market

RESEARCH METHODOLOGY

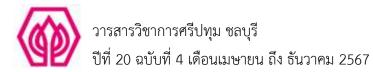
This study employed a mixed-methods approach integrating qualitative and quantitative methodologies. The qualitative component involved semi-structured face-to-face interviews conducted with nine experts currently employed in the furniture industry. The quantitative research employed self-administered questionnaires as the research tool by collecting questionnaires from Chinese consumers who purchased green furniture in four target sample cities (Chengdu, Hangzhou, Xi'an & Wuhan). The respondents are requested with aged 15 years and up to be treated as qualified respondents. A variety of statistical methodologies were employed, including validity and reliability measurements, confirmatory factor analysis, and path analysis. The examination of causal relationships among the variables was conducted using SPSS version 23.0 and AMOS version 22.0.

Population and Sample Size The population in this study is consumers aged 15 years and up who have purchased green furniture in PRC's four emerging new first-tier cities markets named Chengdu, Hangzhou, Xi'an, and Wuhan. According to the 7th National Census of PRC held on November 1, 2020, the total population of consumers aged 15 and up in Chengdu, Hangzhou, Xi'an, and Wuhan is 18.16 million, 10.62 million, 10.92 million, and 10.72 million respectively. As a result, the total population of these four cities for the current study is 50.42 million (Table 1). The sample size for SEM analysis is frequently determined by the number of observing variables. For normal distribution data, 20 cases per observation per indicator variable are generally accepted rules of thumb in setting a sufficient number of samples for SEM analysis (Jackson, 2003, p. 132). As a result, this study is designed for 41 questions, thus, the total sampling size would be 820 (41x20) questionnaires using Jackson's (2003, p. 132) guidelines. Stratified sampling was used in this study to select samples from every subgroup according to their proportion in the entire population. Specifically, the whole population will be divided into 4 subgroups by cities which are Chengdu, Hangzhou, Xi'an, and Wuhan, and how many samples be selected from each city depend on its proportion of the total population. The author finally received 832 questionnaires back, given that the proportion of the questionnaires remained consistent with the author's expectation (Chengdu 36%, Hangzhou 21%, Xi'an 22%, and Wuhan 21%), thus, the author decided to use the actual 832 questionnaires for structural equation modeling (SEM) data analysis.

Table 1 Population data for target cities

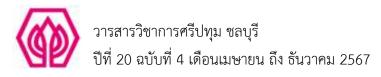
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City	Population age 15+	% (population aged 15 years and above)	Target samples for each city	Actual samples for each city	
Chendu	18,157,222.87	0.36	295	300	
Hangzhou	10,617,480.00	0.21	173	176	
Xi'an	10,925,771.15	0.22	178	180	
Wuhan	10,717,907.40	0.21	174	176	
	50,418,381.42	100%	820	832	

Source: National Bureau of Statistics of China (online, 2021).



Research Tools The quantitative study employed self-administered questionnaires for data collection. The comprehensive dataset was analyzed using SPSS version 23, and the assessment of model fit was conducted utilizing AMOS version 22. Likert five-point Scale (5-Point Scale) was used in the study to design the questionnaire. Respondents were tasked with expressing their stance on each observed variable by providing ratings on a 5-point scale: 5 (strongly agree), 4 (agree), 3 (neutral), 2 (disagree), and 1 (strongly disagree). The guestionnaires can be divided into four parts as follows: Part 1. The demographic attributes of respondents are city location, sex, age range, education level status, income, marital status, and types of organizations to buy. City information was used for categorizing questionnaires from different cities to meet the number of sample requests for each city in the research design. Part 2. Factors influence Green Chinese values toward green furniture consumption. In this part, green Chinese values in dimensions of product value (functional, health, service) and eco-friendly system value (social, environment, technology) were measured by selecting the 5-point Likert scale. Part 3. Factors influence attitude toward green furniture consumption. In this part, attitude in the dimension of cognitive, affective, and conative factors was measured by selecting the 5-point Likert-scale method to assess attitude from different angles and depths to help customers better understand attitude variables. Part 4. Factors influence on consumption behavior of Chinese consumers toward green furniture. This part will measure consumers' consumption behavior in terms of willingness and desire to purchase green furniture, willingness and desire to recommend, and willingness to repurchase green furniture by using a 5-point Likert scale.

Data Collection This study obtained data through a stratified sampling survey. The questionnaires were collected through wjx – a professional online questionnaire collection platform in the PRC. Before the main survey, 50 pilot tests (25 offline and 25 online) were made to modify the survey instruments. The quality of research tools was checked by content validity and reliability by using the statistical index. The validity was measured by the Index of Item-Objective Congruence (IOC) and make sure the IOC score was higher than 0.60 to meet the content validity requirement. The reliability of the questionnaire was measured by the index of Cronbach's Alpha (\mathbf{Q} , or coefficient alpha) >.60 to ensure the questionnaire's internal



consistency. The questionnaires were collected from 10 February to 15 March 2024 through PRC's professional online platform wxj.

Data Analysis The data was analyzed through various statistical techniques, including one-way analysis of variance (ANOVA), independent t tests, confirmatory factor analysis (CFA), path analysis, and structural equation modeling (SEM). Data analysis was performed through the application of AMOS 22.0 to test the overall model fitness.

RESEARCH RESULTS

This study investigated the influences of demographic characteristics, product value, and eco-friendly system value on Chinese consumers' attitudes and green furniture consumption behavior in the PRC's new first-tier cities market. The findings of this study confirmed that different demographic backgrounds of PRC consumers play a role in the green furniture consumption process. Consumers from Hangzhou and Wuhan, married couples with children, and consumers with high incomes of 7,001 yuan up are some significant consumer groups to which marketers should pay special attention when implementing segmentation strategies. This study also identified major consumer values and investigated the extent to which these values influence Chinese consumers' attitudes and consumption behavior. The study found that "product value" (β =0.60*) had a favorable impact on "attitude". "Attitude" positively influenced "consumption behavior" (β =0.65*). Furthermore, "product value" (β =0.81*) has a significant positive effect on "consumption behavior". Product value can be emphasized to Chinese consumers since it has strongly positive effects on both attitude and green consumption behaviors.

Descriptive Statistical Analysis

Table 2 delineates the demographic characteristics of the respondents, encompassing information regarding their city of residence, gender, age group, educational attainment, income level, marital status, and preferences regarding purchasing organization types.

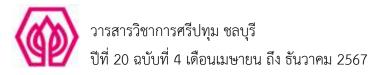
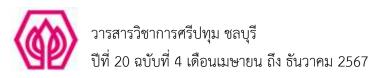


Table 2 Demographic characteristics of respondents (n=832)

Category		Frequency	Percentage
City	Wuhan	176	21.20
	Xi'an	180	21.60
	Hangzhou	176	21.20
	Chengdu	300	36.10
Sex status	Male	348	41.80
	Female	484	58.20
Age range	15-29	363	43.60
	30-44	423	50.80
	45-59	30	3.60
	60 and above	16	1.90
Education	Senior school and below	65	7.80
	Undergraduate	683	82.10
	Postgraduate and above	84	10.10
Income per month			
(yuan)	Under 3000	69	8.30
	3001-5000	151	18.10
	5001-7000	237	28.50
	Above 7001	375	45.10
Marriage condition	Single and stay alone	154	18.50
	Single and stay with family	111	13.30
	Married without children	74	8.90
	Married with one child	414	49.80
	Married with two or more children	79	9.50
Organization types	nization types Chinese local-based enterprise		91.50
to buy	International based enterprise	60	7.20
	Multinational based enterprise	11	1.30



Validity and Reliability

Validity was assessed using the Index of Item-Objective Congruence (IOC) with a threshold set at >.60, as recommended by Rovinelli and Hambleton (1977, p. 29-35) and corroborated by Vonglao (2017, p. 340). The IOC score of this study ranges from .67 to 1 which has passed the cutoff criterion of .60 means that questions in this study could effectively evaluate the test items in the expert's judgments. Items that have IOC scores lower than .60 were revised. After that, the researcher checked normality by using the Kolmogorov-Smirnov test (p>.05), skewness (ranging from -0.384 to -1.488), and kurtosis (ranging from -0.422 to 2.144) within the acceptable thresholds of ± 2 for skewness and ± 3 for kurtosis to make sure that data in the model is normally distributed (Kline, 2023, p. 254).

The questionnaire underwent a pretest administered to a representative sample of the population, with a sample size of n=832. The questionnaire's reliability was assessed utilizing Cronbach's Alpha coefficient (\mathbf{Q} , or coefficient alpha), with a criterion set at >.60 to ensure internal consistency (Kütükcü et al., 2021, p. 2306). The alpha value in this study ranges from .601 to .823 which has surpassed the recommended threshold of .60 and demonstrated good reliability. The Kaiser-Meyer-Olkin (KMO) values, exceeding the recommended threshold of .70 at .94, alongside Bartlett's test of sphericity, demonstrating a significance level of .00, lower than the conventional threshold of .05 as indicated by Pallant (2007, p. 201). Consequently, the present study adheres to the prescribed criteria of KMO and Bartlett's Test for conducting factor analysis.

Confirmatory Factor Analysis

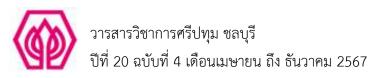
The researcher utilized SPSS version 23.0 and AMOS version 22.0 to perform confirmatory factor analysis (CFA) within the measurement model. The scaled factor loading for each item fell between .400 to .688, which surpasses the criterion of 0.4. Calculations of the average variance extracted (AVE) yielded values exceeding 0.50 for all variables, thereby affirming the attainment of convergent validity. The CFA results showed that the overall model fit was acceptable at X2= 588.767 [degrees of freedom(df)=277, p<.001], Normed Fit Index (NFI) =.905, Tucker Lewis Index (TLI) =.937, Comparative Fit Index (CFI) =.947, and Root Mean Square Error of Approximation (RMSEA) =.037. The NFI, TLI, and CFI values exceed the suggested threshold of 0.90 (Kline, 2023, p. 191). The RMSEA value is less than 0.05 was

supported as an acceptable model fit (Tennant & Pallant, 2012, p. 15). Finally, 21 observed variables have been identified as suitable for further analysis within the framework of structural equation modeling (SEM). Comprehensive details are provided in Table 3.

Table 3 Factor loading and model goodness fit statistics for the measurement model of Chinese consumers' consumption behavior toward green furniture (n=832)

Unobserved	Observed	Factor Loading: λ				
variables	variables	AVE	α	St.Loading Factor	Z	р
-	PV1					
	PV2					
Dra di cati calica	PV3	.51 .66		.43	7.705	.00
Product value	PV9		.00			
	PV10					
	PV11					
	EFV1			.53	10.168	
	EFV2	.58 .82				.01
	EFV3					
Eco-friendly	EFV4		02			
system value	EFV5		.02	.55		
	EFV7					
	EFV8					
	EFV11					
	ATT1					
Attitude	ATT2	.54	.60	.49	4.88	.01
Attitude	ATT3	.54	.00			
	ATT4					
Consumption	CB1	.56	.60	.58	8.48	.00
Behavior	CDI	.50	.00	.JU	0.40	.00

^{*}p<.05, **p<.01, ***p<.001



Results of Hypotheses Testing

All hypotheses were accepted within the current study, demonstrating proposed paths significant at p<.05. The estimates and results of these hypotheses are synthesized in Table 4.

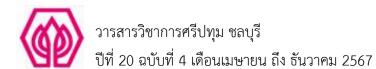
Table 4 Summary of structural paths, total effect, direct effect, indirect effect, and hypothesis testing results (n=832)

-							
			Hypothesis results				
Н	From	То	Total	Direct	Indirect	Hypothesis	Hypothesis
			effect	effect	effect	relation	support
H2a	PV	ATT	.60*	.60*	.00	positive	Accepted
H2b	EFV	ATT	.05*	.05*	.00	positive	Accepted
Н3	ATT	СВ	.65*	.65*	.00	positive	Accepted
Н4а	PV	СВ	.87*	.81*	.05*	positive	Accepted
H4b	EFV	СВ	.54*	.51*	.02*	positive	Accepted

^{*}p<.05, **p<.01, ***p<.001

DISCUSSION

The findings of this study corroborate the significance of various demographic factors such as city of residence, marital status, and income level among PRC consumers influencing green furniture consumption behavior (H1). The important demographic characteristics of Chinese consumers who purchase green furniture in PRC's new first-tier are Hangzhou consumers, married couples with children, and consumers with high incomes at 7,001 yuan and up. This may be because of Hangzhou's better economic development conditions when compared to other PRC's new first-tier city markets, causing consumers to pay more attention to product eco-friendliness rather than other traditional value factors. This finding aligns with prior research suggesting a positive impact of income level, married couples, and parents on eco-friendly behaviors. Product value (β =0.60*) and eco-friendly system value (β =0.05*) had a positive effect on attitude (H2) were supported. These findings are similar to those presented

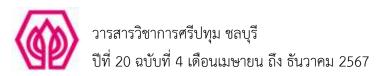


by Gonçalves, Lourenço & Silva (2016, p. 7) and Biswas & Roy (2015, p. 7) who claimed that product value and eco-friendly system value are important factors that have a significant influence on consumers attitude. Attitude had a positive influence on consumption behavior (β = 0.65*) (H3) was supported in the current study, which is in alignment with prior research indicating that consumer consumption behaviors can be predicted by attitude (Zhao, Gao, Wu, Wang & Zhu, 2014, p. 5). Furthermore, product value (β =0.81*) and eco-friendly system value (β =0.51*) significantly positively affect consumption behavior (H4) were supported in the current study. This finding is in line with earlier investigations that types of value factors (product values, eco-friendly system values) can affect their consumption behaviors (Zhao, Gao, Wu, Wang & Zhu, 2014, p. 5; Hsu, Huang, Hsu & Huang, 2016, pp. 375-376; Poushneh & Vasquez-Parraga, 2017, p. 233; Choe & Kim, 2018, p. 6; Xu, Hua, Wang & Xu, 2020, p. 43).

SUGGESTIION

Suggested Applications of Research Findings

The current study broadens on previous research regarding green furniture products in PRC's new first-tier cities market. Several managerial and practical implications strategies emerge from the empirical investigation. The recommendations for consumers: consumers are advised to acquire knowledge of green furniture products and cultivate a positive attitude towards their consumption. This includes continuously improving the ability to identify authentic green furniture, with the improvement of overall purchase experiences. Strategic recommendations for enterprises: increasing the overall value of green furniture in terms of functional, health, and service aspects, as well as delivering good quality and courteous service to PRC consumers. Recommendations to government organizations: PRC government organizations are recommended to prioritize disseminating knowledge regarding green furniture, standardizing industry guidelines, and endorsing authoritative national green certification and labeling systems. Furthermore, the enforcement of stringent measures and severe penalties is advocated to discourage adverse practices, such as counterfeit green furniture in the marketplace.

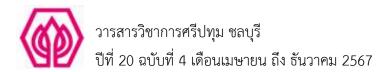


Suggestions for Future Studies

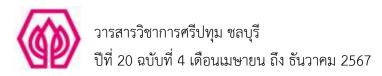
The present study is constrained by its small participant pool and mainly focused on PRC's four new first-tier city markets. Consequently, future research is recommended to broaden the study's scope to encompass all PRC's fifteen new first-tier cities with a larger group of participants. Furthermore, future investigations are also encouraged to evaluate the value scale across diverse countries or regions, thereby elucidating the relationships among consumer values, attitudes, and consumption behaviors on a broader scale. It is also advisable to undertake longitudinal research to gather data over an extended period.

REFERENCES

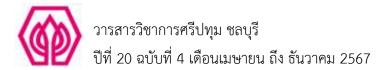
- Ajzen, I. (2015). Consumer attitudes and behavior: The theory of planned behavior applied to food consumption decisions. *Italian review of agricultural economics*, **70**(2), pp. 121-138.
- Bassetti, T., Blasi, S., & Sedita, S. R. (2021). The management of sustainable development: A itudinal analysis of the effects of environmental performance on economic performance. *Business Strategy and the Environment*, *30*(1), pp. 21-37.
- Biswas, A. (2017). A consumption value-gap analysis for sustainable consumption. *Environmental science and pollution research*, *24*(8), pp. 7714-7725.
- 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*, pp. 332-340.
- Cheung, M. F., & To, W. M. (2019). An extended model of value-attitude-behavior to explain Chinese consumers' green purchase behavior. *Journal of retailing and consumer services*, *50*, pp. 145-153.
- 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*, pp. 1-10.
- Finch, J. E. (2006). The impact of personal consumption values and beliefs on organic food purchase behavior. *Journal of Food Products Marketing, 11*(4), pp. 63–75.



- Fisher, C., Bashyal, S., & Bachman, B. (2012). Demographic impacts on environmentally friendly purchase behaviors. *Journal of Targeting, Measurement and Analysis for Marketing, 20*, pp. 172-184.
- Grand view research. (2021). *The World's Largest Market Research Store* (Online). Available: https://www.researchandmarkets.com/ [2021, April 31].
- Grand view research. (2022). *Market Analysis Report* (Online). Available: https://www.grandviewresearch.com/industry-analysis/eco-friendly-furniture-market/toc [2022, December 31].
- 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), pp. 1484-1491.
- Graf, A., & Maas, P. (2008). Customer value from a customer perspective: a comprehensive review. *Journal für Betriebswirtschaft*, *58*, pp. 1-20.
- Hsu, W. C., Huang, K. I., Hsu, S. M., & Huang, C. H. (2016). A study of behavioral model on green consumption. *Journal of Economics, Business and Management, 4*(5), pp. 372-377.
- Jackson, D. L. (2003). Revisiting sample size and number of parameter estimates: Some support for the N: q hypothesis. *Structural Equation Modeling, 10*(1), pp. 128-141.
- 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), pp. 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), pp. 1-22.
- Kline, R. B. (2023). *Principles and practice of structural equation modeling*. New York: Guilford publications.
- Kütükcü, E. Ç., Çakmak, A., Kinaci, E., Uyaroğlu, O. A., Yağli, N. V., Güven, G. S., ... & Ince, D. I. (2021). Reliability and validity of the Turkish version of post-COVID-19 functional status scale. *Turkish journal of medical sciences*, *51*(5), pp. 2304-2310.



- National Bureau of Statistics of China. (2021). *Bulletin of the Seventh National Census*(Online). Available: https://www.gov.cn/guoqing/2021-05/13/content_5606149.htm
 [2021, May 11].
- Pallant, J. (2007). SPSS survival manual: A step by step guide to data analysis using SPSS for windows (3rd ed.). Maidenhead: Open University Press.
- 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*, pp. 229-234.
- Rahim, R. A., Sulaiman, Z., Chin, T. A., Arif, M. S. M., & Hamid, M. H. A. (2017). E-WOM review adoption: Consumers' demographic profile influence on green purchase intention. In *IOP Conference Series: Materials Science and Engineering* (p. 012020). Bali, Indonesial: IOP.
- Rovinelli, R. J., & Hambleton, R. K. (1977). *On the use of content specialists in the assessment of criterion referenced test item validity*. San Francisco, CA: Eric.
- Shahsavar, T., Kubeš, V., & Baran, D. (2020). Willingness to pay for eco-friendly furniture based on demographic factors. *Journal of cleaner production, 250*, p. 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), pp. 159-170.
- Sohu. (2023). Young people now choose to "escape from Beijing, Shanghai and Guangzhou", and new first-tier cities are "favored"? (Online). Available: https://www.sohu.com/a/650044384_121053954 [2023, March 6].
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, *77*(2), pp. 203-220.
- Tennant, A., & Pallant, J. F. (2012). The root mean square error of approximation (RMSEA) as a supplementary statistic to determine fit to the Rasch model with large sample sizes. *Rasch meas trans*, *25*(4), p. 1348.
- Vonglao, P. (2017). Application of fuzzy logic to improve the likert scale to measure latent variables. *Kasetsart journal of social sciences*, *38*(3), pp. 337-344.



- Wan, M., Toppinen, A., & Chen, J. (2014). Consumers' environmental awareness towards children's furniture in shanghai and shenzhen, China. In *scandinavian forest* economics: Proceedings of the biennial meeting of the scandinavian society of forest economics (pp. 137-145). Helsinki, Finland. University of Helsinki.
- Wan, M., Zhang, Y., & Ye, W. (2018). Consumer willingness-to-pay a price premium for ecofriendly children's furniture in Shanghai and Shenzhen, China. *Forest Products Journal*, *68*(3), pp. 317-327.
- Wang, S., Fan, J., Zhao, D., Yang, S., & Fu, Y. (2016). Predicting consumers' intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behavior model. *Transportation*, *43*(1), pp. 123-143.
- 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*, p. 121957.
- Xu, X., Hua, Y., Wang, S., & Xu, G. (2020). Determinants of consumer's intention to purchase authentic green furniture. *Resources, conservation and recycling, 156*, p. 104721.
- Xu, X., Wang, S., & Yu, Y. (2020). Consumer's intention to purchase green furniture: Do health consciousness and environmental awareness matter?. *Science of the total environment*, *704*, p. 135275.
- 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*, pp. 143-151.