

**AN EMPIRICAL STUDY OF CHINESE CONSUMERS'
INTENTION TO PURCHASE GREEN HOME APPLIANCES:
THE INFLUENCE OF ENVIRONMENTAL AWARENESS
AND THE MEDIATING ROLE OF CONSUMPTION
MOTIVATION**

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Abstract

With the increase of people's awareness of environmental protection, Chinese consumers are also increasingly concerned about the contribution of commodities to environmental protection while pursuing the use value of commodities. However, due to the lack of research, the influence mechanism of environmental awareness on consumers' purchase of green and environmentally friendly home appliances is unclear. This paper first introduced the development status of green home appliances, and based on the results of literature research, elaborated consumers' Environmental Awareness (EA), Consumption Motivation (CM) and Purchase Intention of Green Home Appliances (PI of GHA), and carried out hypothesis development on the basis of literature review. The paper then completes a series of work such as survey scale research, questionnaire making and questionnaire survey. Finally, the paper analyzes the collected data and information, and uses IBM SPSS Statistics and AMOS software for statistical analysis and hypothesis verification. The conclusion is that consumers' environmental awareness has a certain impact on their intention to buy green home appliances, but it is not significant. However, their positive effects become more pronounced when mediated by the motivation to buy. This paper is an empirical study based on questionnaire survey and first-hand data collection. 255 consumers in Anhui, China were investigated to obtain relevant information about their intention to buy green home appliances. The research results of this paper can provide empirical experience from China for the relevant research of consumer behavior, especially in the field of home appliance consumption. At the same time, this study can provide market data experience for home

appliance enterprises to develop green and environmentally friendly home appliance products and enhance environmental soft power, and make some contributions to the cause of ecological environmental protection.

Keywords: Environmental Awareness; Consumption Motivation; Purchase Intention; Green Home Appliances

Funding:

Scientific Research Project of Hefei Technology College (2024SKB08).

1 Introduction

The rapid development of the global economy, the great progress of industrial technology and the emergence of intelligent technology, while benefiting human life, have also brought about a series of ecological and environmental problems, such as climate warming, environmental pollution or biological extinction[1]. How to improve the living environment with practical actions is an urgent problem for human beings to think about and solve. The problem of "harmonious coexistence" between human beings and the environment has been concerned by scholars, and it is also a topic of great concern to the public. The concept of "harmonious coexistence" promotes people to enhance environmental awareness, increase environmental knowledge and implement environmental behavior[2]. More and more consumers are concerned about the green value of a product, that is, how environmentally friendly a product is throughout its life cycle.

As early as in the 2020 Sustainable Development Goals report, the United Nations clearly proposed the need to ensure the existence of environmentally friendly consumption concepts and sustainable production modes in the public mind[3]. In order to study the impact of consumers' awareness of environmental protection on their intention to buy green and environmentally friendly home appliances, this study put forward a series of hypotheses on the basis of literature research, developed tools on the basis of empirical research by scholars from various countries, and carried out scale formulation, questionnaire production and investigation and analysis. Environmentally irresponsible industrial production has been blamed for global warming and ecological degradation[4]. The consumer sector is trying to promote the green development of industrial production by purchasing environmentally friendly products[5]. In this paper, consumers from all over Anhui Province of China are interviewed to obtain consumers' true feedback on their intention to buy green home appliances, as well as information on consumers' awareness of environmental protection and consumption motivation. The analysis of the survey data is helpful for researchers and household appliance manufacturers to think in both theory and practice.

2 Literature Review and Hypothesis Development

2.1 Green Household Appliances

The concept of green home appliances has long been proposed and studied by scholars from various countries. Green home appliances is the abbreviation of green environmental protection home appliances, is a general term for home appliances with environmental protection, energy saving and emission reduction and maintenance of ecological development characteristics, which is known as environmentally friendly home appliances. The researchers previously investigated the purchasing intention of Pakistani consumers on green home appliances[6]. Jamil studied and proposed that high prices would weaken consumers' enthusiasm for buying green home appliances[7]. In recent years, the home appliance manufacturing industry has shown a trend of green innovation[8]. In China, "green home appliances" is different from "white home appliances" and "black home appliances", and the product type of products with common characteristics in the field of household appliances is not to describe the product from the color characteristics. Green home appliances are endowed with environmental properties throughout their life cycle. In the design process, green home appliances integrate environmental protection concepts to specify product attributes. In the production process, environmentally friendly materials are used to reduce pollutant emissions when making green home appliances, and environmentally friendly production process materials are used to avoid source waste. In terms of quality, green home appliances pay more attention to health and energy saving, and provide consumers with a better sense of experience. In addition, green home appliances can be recycled after being scrapped to achieve the recycling of resources. Green home appliances are made of recycled materials or low-pollution materials, which prevents the vicious evolution of the environment[9].

The issue of how to promote industrial production to reduce greenhouse gas and harmful substances emissions has been concerned. Industrial production is usually accompanied by high carbon emissions, which will lead to many environmental problems and ecological deterioration, such as haze and ozone layer destruction[10]. Low-carbon economy is a green and environmentally friendly production mode, which can promote the double benefits of environment and economy, and is an effective measure to deal with the current severe environmental pollution problem. It has become the development trend of industrial enterprises in many countries to carry out green industry upgrading and improve the environmental benefits of production[11]. The Chinese government has also long been committed to guiding enterprises to transform and establish green supply chain management, so as to realize the upgrading of innovative green industries[12]. The green upgrading of

household appliance manufacturers is of great significance for reducing harmful gas emissions[13]. Green industry upgrading is an innovative environmental management model for enterprises under the new strategic background[14]. According to statistics, the retail volume of frequency conversion products in China's air conditioning market in 2021 accounted for 98.3%, of which, the retail sales of first-level energy efficient air conditioners increased by nearly 8 percentage points over the previous year, reaching 70.2%. The share of the retail volume of Grade 1 energy efficient air conditioners of the Casardi (Haier) brand and Hisense brand in the product series reached 99.3% and 75.6%, respectively. The Chinese government has been advocating that home appliance manufacturers reduce the use of ozone-depleting hydrochlorofluorocarbons (HCFCs)[15]. In view of the environmental problems caused by HCFCs used as refrigerants for air conditioning, China is working towards the goal of completely phasing out HCFCs by 2030 in accordance with the requirements of the Montreal Protocol. The environmental characteristics of household appliances are called "green properties". The term green home appliances reflects the concept of environmental protection, but also more image, easy to be understood by consumers, accepted and recognized. This paper uses green home appliances to refer to green environmental protection household appliances.

2.2 Environmental Protection Awareness

Empirical research results show that when enterprises incorporate environmental protection concepts in improving production technology and packaging design, consumers will increase their favorable impression of corporate brands[16]. Taking the initiative to resist products that are harmful to the environment is the embodiment of consumers' awareness of environmental protection. The classic theory of Planned Behavior (TPB) explains the psychological decision-making process of goal-directed behavior[17], and is widely used in the research of consumer field, and is considered to be the best model to predict human behavior[18]. The core indicators of TPB model include attitude (ATT), subjective norm (SN) and perceived behavioral control (PBC), which refers to the tendency, feeling and self-judgment of an individual's ability to perform a specific behavior. ATT is an important predictor of consumers' intention to purchase environmentally friendly products[19]. SN is a consumer's comparative evaluation of self and reference objects in the social circle, which is derived from the expectations of friends or others[20]. PBC explains consumers' self-judgment in the execution of consumer behavior[20]. Previous studies have shown that ecological values among personal values can affect consumers' environmental behavior[21], and also put forward the mediating role of purchase intention. Inspired by TPB model, consumer environmental awareness (EA) is of great value in the field of consumer purchase intention.

Altruistic ecological values included in personal values will affect consumers' actual environmental behavior[21,22,23]. Perceived value is crucial to predicting consumers' intentions[24] and can better explain consumers' purchase preferences and behaviors in specific situations. From the perspective of sensibility, many past studies have confirmed that consumers' perception of special awareness needs affects their evaluation of the intrinsic value of products[25,26] and encourages them to feel new experiences brought by different products. Research on Chinese consumers confirms that green attitude promotes consumers' intention to buy green products[27]. Environmental responsibility has an impact on consumers' intention to buy green home appliances[28]. However, there are too few relevant studies in China, and we need to think about how environmental awareness as an independent variable affects consumers' purchase of green home appliances or whether it can directly affect them.

2.3 Purchase Intention

The likelihood of an individual purchasing a particular product is defined as purchase intent (PI)[29]. Consumers are the users of home appliance products, the terminal partners of home appliance manufacturers, and the most critical part of the business value chain. Purchase intention, also known as consumption intention, is the best predictor of purchase behavior[30]. There have been numerous previous studies on consumers' purchase intentions and behaviors. Teoh investigated that after-sales service had no significant impact on consumers' intention to buy green home appliances[31]. Another study shows that ATT has the greatest impact on the intention to purchase environmentally friendly home appliances, while SN has no significant impact on the intention to purchase[32]. Studies have confirmed that the sense of social responsibility of consumers in Pakistan cannot have a positive impact on their purchase intention of green home appliances[6]. Similar conclusions have been confirmed by studies that the high price of green products reduces consumers' purchasing enthusiasm[29].

In recent years, Chinese consumers tend to preferentially choose green products[33]. Governments around the country continue to introduce policies such as "old for new" and "preferential subsidies", which promote the behavior of consumers to replace green home appliances. Intelligent green home appliances have gradually become a popular trend in consumption[8]. Researchers refer to those people who think about whether their purchase behavior has a negative impact on the environment and modify their bad consumption behavior to reduce environmental pollution as green buyers[28]. In other words, green buyers have a stronger intention to buy environmentally friendly products. According to the statistics of China's Suning Tesco, the trade-in orders of its stores have doubled since 2023. The

change from "the best cost performance" to "the pursuit of quality and price ratio" shows that green home appliances are becoming the purchasing preferences of young consumers. The quality of green products, the information of green products[34], the degree of public cognition of green products[35] and the social value of green products[36] have all been studied and proved to have an impact on consumers' purchase intention. At present, consumers' purchase demand for green home appliances has promoted the upgrading of Chinese home appliance enterprises from traditional industries to green industries. Past studies tell us that the strong purchase intention of green home appliances will directly affect consumers' purchase behavior. The popularization of green home appliances is very important for environmental protection in China and even in the world. Therefore, it is necessary to study consumers' purchase intention of green home appliances.

2.4 Consumer Motivation

Motivation is a relatively stable psychological feature that reinforces and guides behavior. Consumption Motivation (CM) is the driving force for consumers to engage in purchasing behavior, and it is a unique psychological feature. Studies have shown that consumer motivation will affect their purchase intention and behavior[37]. A number of research results on the consumption motivation of Generation Z consumers show that such people regard self-development as the main motivation of food consumption or travel consumption because they are good at social interaction[38]. An interesting research conclusion is that in the post-epidemic era, consumers will increase their purchases of ride-sharing services due to self-protection motives[39].

Ryan believe that motivation is divided into intrinsic motivation and extrinsic motivation, and different forms of motivation do not exclude each other[40]. Some models are used to detect the difference between intrinsic and extrinsic motivation[41]. This paper mainly discusses the mediating effect of consumers' intrinsic motivation on variables. According to Self-determination Theory (SDT), the more an individual's inner needs are satisfied, the more freely he or she will act. Intrinsic motivation is the prototype of the act of self-determination and the motivation of the individual to perform the act for himself. Intrinsic motivation is an individual's instinct, which is manifested as the guiding effect of an individual's willpower, sense of honor and self-control on his thoughts or behaviors. Intrinsic motivation refers to the motivation that individuals take participation in activities to bring satisfaction and enjoyment as the driving force, including three psychological motivations, namely perceptual ability, perceived autonomy and relevance[42]. It has been proved that consumption motivation significantly affects consumers' access to promotional information[43]. This paper studies the

mediating effect of motivation between environmental awareness and the purchase intention of green home appliances. Therefore, it is reasonable to select the specific investigation content behind the design of the internal motivation index of consumer consumption motivation.

2.5 Research Hypothesis

Holmqvist and other scholars argue that consumption motives exert an influence on consumers' purchasing of retail goods and have also been proven to affect consumers' perceptions of store environments[44]. Demoulin posits that social factors are stimulating factors for utilitarian shopping, while environmental factors are more significant in hedonic shopping[43]. The mediating role of prosocial motives between personal motives in self-determination theory and knowledge sharing has been confirmed. Empirical research has also demonstrated that motives arise from egoism, principled, deontological orientation, and collectivism[45]. Prosocial motives represent an individual's concern for the well-being of others when performing actions[46]. Motives are generally associated with the degree of commitment adherence and play a crucial role in organizational output and workforce performance[47]. Consumers' motives for green purchasing intentions are gradually strengthening[48]. Research on consumer motives in the field of green home appliance consumption is nonexistent in China. Meanwhile, Hypothesis 3 proposed in this paper is about the mediating role of consumption motives between consumers' environmental protection awareness and the intentions to purchase green home appliances. Additionally, it is necessary to verify the relationships between consumers' consumption motives and their environmental awareness, as well as between their consumption motives and their intentions to purchase green home appliances. This paper puts forward Hypotheses 1 and 2.

The impact of environmental awareness on consumers' intention to buy green home appliances is still unclear. Compared with traditional home appliances, the price of green home appliances is more expensive due to the use of environmentally friendly materials, which may reduce consumers' enthusiasm for purchase[49]. The price in green marketing has an impact on consumers' intention to buy environmentally friendly products[50]. Some scholars have also proposed that consumers with a strong perception of green value are more willing to pay an environmental premium for products[51]. Consumption behavior is crucial to the development of the earth's ecological environment, and the purchase intention before the actual behavior is even more critical. Therefore, researchers have been paying attention to consumers' attitudes towards environmental degradation and ecological destruction[52]. Graca compared the differences between consumers in developed countries and developing countries in implementing green purchasing behaviors, and found that consumer attitude is a

direct influencing factor[53]. Considering the factors of consumers themselves, environmental awareness has a significant impact on consumers' intention to buy environmentally friendly products[54]. Scholars such as Raza conducted a survey on hotel consumers in Pakistan, believing that consumers are aware of environmental deterioration and willing to relieve the pressure caused by environmental damage through green consumption behaviors[55]. Health consciousness makes those consumers who attach great importance to environmental protection issues be stimulated to develop green cognition when they are aware of environmental problems[56]. Purchase intention can fully mediate the influence of attitudes and subjective norms on purchase behavior[57]. Psychological factors such as green self-identity are key predictors of green purchase intention[58]. It is necessary to study the relationship between Chinese consumers' awareness of environmental protection and their intention to buy green home appliances. Therefore, hypothesis 3 is proposed in this paper.

In summary, this paper proposes Environmental Awareness (EA) as independent variable, Consumption Motives (CM) as mediating variable, and Purchase Intention of Green Home Appliances (PI of GHA) as dependent variable, and formulates hypotheses predicting the relationships among them, namely Hypothesis 1 (H1), Hypothesis 2 (H2), Hypothesis 3 (H3), and Hypothesis 4 (H4).

H1: Consumers' environmental awareness has an impact on their consumption motives.

H2: Consumers' consumption motives have an impact on their intentions to purchase green home appliances.

H3: Consumption motives play a mediating role between consumers' environmental awareness and their intentions to purchase green home appliances.

H4: Consumers' environmental awareness has an impact on their intentions to purchase green home appliances.

2.6 Theoretical Framework

TPB and SDT model have been widely used in the research field of consumer intention and behavior[18,19,40, 41,43]. This study takes consumer motivation as the intermediate variable, environmental awareness as the independent variable, and intention to buy green home appliances as the reaction variable. Based on the above analysis, the framework and comprehensive model of this study are derived, as shown in Figure 1.

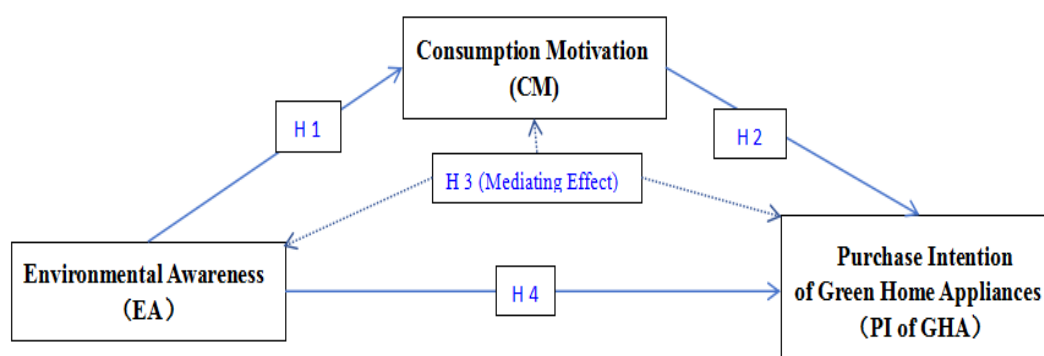


Figure 1. Framework and synthesis model.

3 Materials and Methods

3.1 Background and Methods

The paper aims to explore the relationship between consumer environmental awareness and consumer purchase intention of green home appliances. At the same time, this study analyzes the intermediary role of consumer consumption motivation. The study advances its work using quantitative methods, collecting primary data through self-administered questionnaires [59].

3.2 Samples and Procedures

To collect the primary data for the survey, the online questionnaire [60] was shared via survey software (Survey Stars) through email and social media messages. The use of social media and the Internet helps to improve the randomness and diversity of respondents' characteristics. The survey was conducted from June to December 2024. Respondents to the survey were informed that participation was voluntary and unpaid, that the data collected would be analyzed anonymously and used for academic purposes only. In this way, a total of 263 questionnaires from various regions of Anhui, China were recovered. Excluding the cases that do not meet the requirements, the number of valid questionnaires is 255. The study sample size meets the requirements[59]. The specific contents are shown in Table 1.

Table 1 Sociodemographic data for the sample by sex and age.

		Age of 21-35	Age of 36-50	Age over 50	Total
Man	Count	85	50	1	136
	%of the total	33.3%	19.6%	0.4%	53.3%
Woman	Count	80	35	4	119
	%of the total	31.4%	13.7%	1.6%	46.7%

Total	Count	165	85	5	255
	%of the total	64.7%	33.3%	2%	100.0%

Source: Self-collated.

The target population of the questionnaire survey is residents aged 21 and above as of June 2024. Typically, Chinese citizens over the age of 20 have stable jobs and salaries, and thus have the economic ability to buy household appliances. In the sample, there were 165 participants aged 21-35 (64.7%), followed by 85 participants aged 36-50 (33.3%), and fewer respondents aged over 50 (2%). Previous studies have shown that the green consumption structure of urban residents in China has reached a relatively high level, with the proportion of green consumption reaching 29.75%[60,61]. The age restriction is mainly to exclude the influence of the objective factor of economic purchasing power, so it is very necessary. In all the questionnaires collected, we excluded the questionnaire information of the younger respondents (<20 years old). Therefore, the final number of questionnaires that met the requirements was 255. The sample data is overwhelmingly male. There were 126 male participants (53.3%), followed by 119 female participants (46.7%). Table 1 shows the Sociodemographic data of the sample for this study.

3.3 Measures

In order to construct this research model, the project content draws on previous research. In order to evaluate the environmental awareness of consumers, the empirical research experience of previous scholars[62,63,64] was referred to and measures were proposed (See Table 2). The semantic verification of the questionnaire was completed through discussion between the author and his tutors, Chinese professional research institutes with professorship qualifications and translators with professional translation qualifications. Experts specialising in the fields of business management, marketing and environmental studies assessed questionnaires to validate scales and items.

The final questionnaire is divided into two parts. The first part deals with demographic data such as gender, age and income. Participants are reminded that the information is protected. The second part is about the consumer's survey on the field of green home appliances purchase. Specifically, this section builds content based on the variables analyzed. These constructs include: Environmental Awareness (Ea) Consumption Motivation (Cm) and and Purchase Intention of Green Home Appliances (PI of GHA). Each item was written in statement form for assessment (Table 2), using a five-point Likert scale. The values are: 1 (completely disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (completely agree). On this basis, each number and item were illustrated by all interviewed participants so that they could

understand and respond appropriately. EA4 was designed by the author based on discussion with experts, but the experimental effect was not good ($RMSEA = 0.082$), so the fitting index of the initial model was low. In this study, it is necessary to exclude item EA4 in order to make the model fit well. The best model fitting degree was obtained after modification ($RMSEA = 0.038$; $CFI = 0.986$). Therefore, we believe that excluding items from the builder has a positive impact on the validity and reliability of the results.

Table 2. Structure.

Variabe	Code	Measurement Items	Source
Environmental Awareness (EA)	EA1	I am interested in taking part in public service activities to protect the environment[62].	Al-Kumaim, N. H. et al. (2021)
	EA2	I believe that people and the environment are interdependent[63].	Sun, Y., & Xing, J. (2022)
	EA3	I prefer to bring my own eco-friendly shopping bag when purchasing goods[63,65].	Sun, Y., & Xing, J. (2022); Wang, J. M., & Li, Y. Q. (2022)
	EA4	I'd like to sort the garbage.	by the Author
Consumption Motivation (CM)	CM1	I like eco-friendly brand home appliances[64].	Armutcu, B. et al. (2024)
	CM2	I support healthier ways of consuming[66].	Zameer, H., & Yasmeen, H. (2022)
	CM3	Buying greeny products meets my environmental awareness requirements[67].	Nikou, S. A., & Economides, A. A. (2017)
Purchase Intention of Green Home Appliances (PI of GHA)	PI of GHA1	I am prepared to buy appliances that reduce harmful emissions[68].	Jain, S., & Mishra, S. (2020)
	PI of GHA2	I am inclined to buy appliances made of recyclable materials[69].	Hameed, I. et al. (2021)
	PI of GHA3	I continue to pay attention to the environmental features of green home appliances[70].	Jalees, T. et al. (2021).
	PI of GHA4	I recognize the environmental characteristics of green home appliances[66].	Zameer, H., & Yasmeen, H. (2022)

3.4 Statistical Analysis

The reliability and validity of the model were evaluated by statistical process. Specifically, Cronbach's Alpha(CA), KMO and Bartlett Sphericity tests were used in this study to measure the reliability of latent variables and the internal consistency of the project. Subsequently, confirmatory factor analysis (CFA) was applied to check the fit of the model and the measurement effect. Two kinds of statistical software were used in this study. The first is IBM SPSS Statistics software, which is primarily used for descriptive statistical analysis. Second, AMOS software was selected to check convergence validity and discriminative validity, and the hypotheses were tested by multi-group structural equation models (SEM). SEM is considered a suitable method for such research. First, the method is highly recommended for evaluating causality in descriptive models[71]. Secondly, SEM is a perfect method to test the effects of dependencies, correlations and moderating variables[72]. Finally, the study applied SEM analysis and demonstrated the robustness of measurement and structural evaluation[73].

4 Results

In this section, the study presents the results of the reliability analysis and validity analysis of the hypothesis in general and the structural equation model estimation. Therefore, the results were carried out for the whole sample, i.e., for a total sample of 255 people, in addition to mediating effects analysis.

4.1 Reliability and Validity Analysis

In order to assess the reliability of the scale, Cronbach's α (CA) coefficient was used, which is the most commonly used indicator for validation of the scale[74]. The level at which CA is considered appropriate is the potential variable value greater than 0.60[71]. The results of this study are satisfactory, as all indicators meet the requirements (see Table 3). To evaluate the validity of the scale, KMO and Bartlett sphericity tests (KMO/Sig.) were used. The level at which KMO is considered appropriate is when the latent variable value is greater than 0.50 when the Bartlett Sig.<0.05. The results of this study all meet the above requirements (see Table 3).

Table 3. Cronbach's Alpha, KMO and Bartlett Test, AVE value extraction of scale items.

Constructs	CA	KMO	Sig.	CR	AVE
Environmental Awareness (EA)	0.673	0.654	<0.001	0.68	0.41
Consumption Motivation (CM)	0.754	0.692	<0.001	0.75	0.51
Purchase Intention of Green Home Appliances	0.775	0.785	<0.001	0.76	0.46

(PI of GHA)

Source: Self-collated. Note: CA=Cronbach's Alpha; KMO/Sig. = KMO and Bartlett Sphericity Test; CR = Composite Reliability; AVE = Average Variance Extraction.

In order to verify the fit degree and measurement effect of the model, confirmatory factor analysis (CFA) method was applied in this study. Composite Reliability (CR) is the ability to test for combination validity and is generally considered to represent structural consistency (>0.7). In this study, the performance of EA was basically acceptable ($CR=0.68$), while the performance of CM and PI of GHA was better ($CR=0.75$; $CR=0.76$). AVE tests the convergence effect of experimental scale items, usually indicating the explanatory ability of potential variables to observed variables ($>0.5, 0.36-0.5$ Acceptable). In this study, CM performed well ($AVE=0.51$), while EA and PI of GHA performed well ($AVE=0.41$; $AVE=0.36$). In summary, the results of this study meet the requirements (see Table 3).

Table 4 shows the indicators of the model measured by the research Model scale, which were observed to meet the requirements.

Table 4. Statistical Goodness of Fit Index of the Measurement Model ($n = 255$).

Fit Indices		Model	
Measure	Threshold	Estimate	Interpretation
ChiSq	—	43.672	—
DF	—	32	—
ChiSq/DF	<3	1.365	Excellent
GFI	>0.9	0.967	Excellent
AGFI	>0.9	0.944	Excellent
CFI	>0.95	0.986	Excellent
RMSEA	<0.06	0.038	Excellent

Source: Self-collated.

4.2 SEM Estimation for General Assumptions

The results show that the measurement model provides good fitting values. Specifically, the chi-square value (χ^2)/degrees of freedom = 1.365 (43.672/32) is an acceptable value of less than 3. For incremental values, CFI (comparative fit index) >0.95 [75] is considered a good fit. The reduced index fits well into a valuable model: RMSEA (approximate error root mean square) <0.06 [75]. The results showed that the goodness of fit was satisfactory: CFI = 0.986,

RMSEA = 0.038.

According to the impact of environmental awareness (EA) on consumption motivation (CM), studies show that there is a positive and significant relationship between the two (EA→CM; C.R. =6.58 ***; SE = 0.11). According to the influence of consumption motivation (CM) on the intention to purchase green home appliances (PI of GHA), the research shows that there is also a positive and significant relationship between the two (CM→PI of GHA; C.R. =5.12 ***; SE = 0.14). According to the impact of environmental awareness (EA) on the intention to purchase green home appliances (PI of GHA), the study revealed that there was a positive relationship between the two, but it was not significant (EA→PI of GHA; CR = 2.19; p-value = 0.03; SE = 0.27). Since p-value < 0.05 is an acceptable value, it indicates that there is a positive but not significant relationship between the observed variables. Therefore, it can be said that this study supports hypotheses H1, H2, and H4 (see Table 5 and Figure 2).

According to the above results, the model verifies that the mediating variable (CM) has a significant influence on both the independent variable (EA) and the dependent variable (PI of GHA), while the positive relationship between the independent variable (EA) and the dependent variable (PI of GHA) is only acceptable. The mediating variables have significant value in the model, but it is impossible to infer the specific performance of the mediating effect between the independent variables and the dependent variables. Therefore, H3 needs to be further verified by Sobel Test.

Table 5. SEM Estimates for Hypothesis Tests.

H	Hypothesis	Estimate	S.E.	C.R.	p	Decision
H1	EA → CM	0.71	0.11	6.58	***	supported
H2	CM → PI of GHA	0.72	0.14	5.12	***	supported
H4	EA → PI of GHA	0.27	0.13	2.19	0.03	acceptable

Source: Self-collated. Note: EA= environmental awareness; CM= consumption motivation; PI of GHA= purchase intention of green home appliances; p-value = *** p < 0.01.

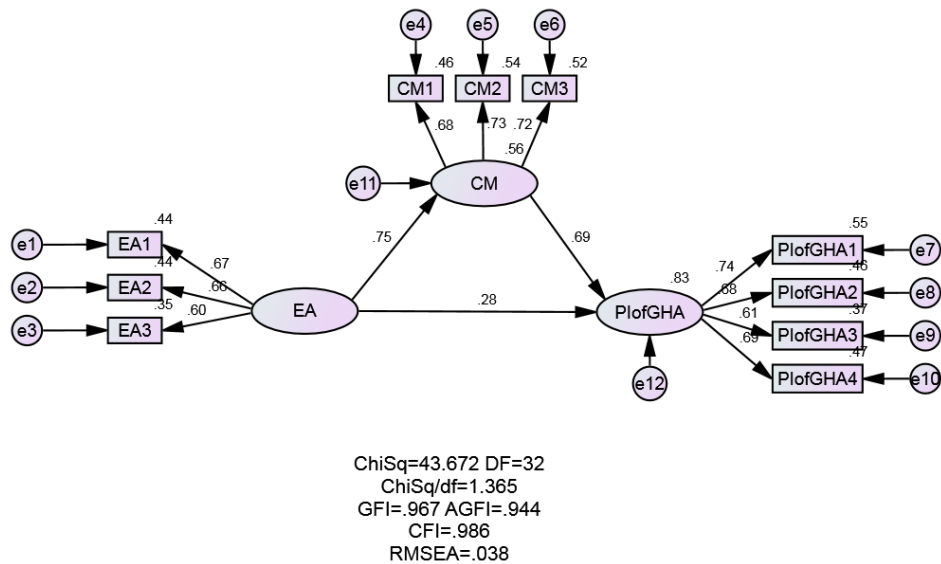


Figure 2. Structural model.

4.3 Analysis of Mediating Effects

According to the above analysis results, consumption motivation (CM), as an intermediary variable, is significantly affected by the independent variable environmental awareness (EA), and also significantly affects the dependent variable purchasing intention of green home appliances (PI of GHA). At the same time, the independent variable environmental awareness (EA) has no significant effect on the dependent variable purchasing intention of green home appliances (PI of GHA). Based on the above experience, Sobel Test is needed to further verify the mediating effect of CM between EA and PI of GHA.

According to the requirements of Sobel Test statistics method, we need to understand the non-standardized coefficient values and standard error data between independent variables, intermediate variables and dependent variables. The above data can be found in Table 5. We design the non-standardized coefficient value of EA→CM as a (EA→CM; $a = 0.71$; $SEa = 0.11$), and the non-standardized coefficient value of CM→PI of GHA is designed as b (CM→PI of GHA; $b = 0.72$; $SEb = 0.14$). The results are calculated according to the following calculation formula. When $\alpha=0.05$, $Z\text{-value} > |1.96|$ is significant [76].

$$Z = \frac{ab}{SE_{ab}}$$

$$SE_{ab} = \sqrt{a^2 SE_b^2 + b^2 SE_a^2}$$

According to the above calculation formula, the result of this calculation is $Z\text{-value} = 4.02 > 1.96$. According to this result, H_3 is tested to be valid, indicating that the mediating variable (CM) plays a mediating role between the independent variable (EA) and the dependent variable (PI of GHA). Considering that EA has an effect on PI of GHA ($p\text{-value} = 0.03$) (see Table 5), it is concluded that CM plays a partial mediating role between EA and PI of GHA. That is, CM enhanced the degree of EA's influence on PI of GHA.

5 Discussion

5.1 Theoretical Contribution

The purpose of this study was to empirically evaluate the relationship between environmental awareness (EA), consumption motivation (CM) and consumer purchase intention of green home appliances (PI of GHA). A total of 263 valid responses were received. 8 participants under the age of 20 were excluded, and 255 valid questionnaires were determined to be used. Structural equation model (SEM) was used to analyze the data, and the results confirmed the influence of EA on CM and PI of GHA, the influence of CM on PI of GHA, and the partial mediating effect of CM.

This study confirms the impact of environmental awareness (EC) on consumer purchases intention of green home appliances (PI of GHA) in Anhui, China. This result is consistent with previous studies[77,78] that indicate that environmental knowledge significantly and positively influences green purchase intentions. Our results show that the effect is direct but not significant. This finding is important because it follows that when consumers are more environmentally conscious, they are more likely to buy green home appliances. It is important to emphasize that the results show that the relationship between consumer environmental awareness (EA) and intention to buy green home appliances (PI of GHA) has a positive impact across all respondents, regardless of gender. Green products have become a development trend in various industries, which makes consumers pay more attention to responsible consumption when purchasing environmental protection products[79]. To be sure, sustainable consumption has become an important issue in the minds of consumers.

However, this study also intuitively shows the insignificance of the above effects. Consumers' environmental awareness may not directly lead them to buy green home appliances. This inspired researchers to consider the influence of mediating factors. Therefore, from the empirical data survey of this study, consumption motivation (CM) plays a very important intermediary role between environmental awareness (EC) and Anhui consumers' intention to

buy green home appliances (PI of GHA). This finding is also important, because it can be asserted that when the consumption motivation is strong enough, consumers' environmental awareness directly affects their choice of green home appliances. This is consistent with previous research, that is, consumption motivation is the intermediary factor connecting consumer attitude and purchase intention.

It should be emphasized that the conclusion of the above partial mediating effect is based on the results of test verification[76], that is, when environmental awareness (EA) has a positive impact on the intention to buy green home appliances (PI of GHA), it is tested that the intermediary variable consumption motivation (CM) plays a mediating effect between the two. At the same time, environmental awareness (EA), as an independent variable, positively and significantly affected the intermediary variable consumption motivation (CM), and consumption motivation (CM), as an intermediary variable, positively and significantly affected the dependent variable purchase intention of green home appliances (PI of GHA). This finding is critical because it confirms that environmental awareness (EA) has little incentive to purchase green appliance intentions (PI of GHA) in the absence of consumption motivation (CM). In other words, in the case of no consumption motivation (CM) connection, even if the consumer has environmental awareness, it cannot be asserted that they have the intention to buy green home appliances. When the Consumption Motivation (CM) appears, consumers tend to buy green home appliances in order to achieve certain self-satisfying conditions, such as the need to buy home appliances or the need to meet the constraints of self-environmental awareness. The above conclusions provide empirical cases, data experience and valuable conclusions from Anhui, China for further research on environmental protection issues, consumer behavior issues or behavioral motivation issues.

5.2 Management Significance

This study has implications for household appliance manufacturers and government departments in management. Our research shows that consumer environmental awareness directly affects consumers' intention to buy green home appliances when their consumption motivation is clear. At present, irresponsible industrial production causes pollution and damage to the human environment[4]. This research tries to solve the problem from the perspective of consumers, which is an innovative behavior. In other words, from the consumer field to guide enterprises to green production, this may be a good way to crack the problem.

In the field of consumption, more and more consumers are inclined to buy environmentally friendly products to promote the development of industrial production in a more green and

sustainable direction[5]. The rise of environmentally friendly products is forcing manufacturers to re-examine their production processes and adopt processes that are less polluting and more renewable. Inspired by this, enterprises should adopt advanced production processes and technologies to reduce the discharge of waste water, exhaust gas and solid waste and ensure that the production process meets environmental protection standards. Enterprises need to pay attention to whether the source of raw materials is environmentally friendly and avoid the use of toxic and harmful substances to reduce environmental pollution in the production process and health risks after product use. Enterprises should improve the energy efficiency of production equipment and reduce energy consumption and carbon emissions to reduce production costs and reduce pressure on the environment. Enterprises can also establish a sound recycling system for used household appliances, encourage consumers to participate in the old for new activities, and improve the recovery rate and resource utilization rate of used household appliances. In addition, there is a growing consumer interest in eco-labels, which often include organic certification, the Energy Star logo, and carbon footprint information. Enterprises can guide consumers to choose home appliances with high energy efficiency levels through the energy efficiency labeling system, reduce energy consumption and electricity costs during use, and guide consumers to pay attention to the impact of home appliances on human health during use, such as electromagnetic radiation, noise pollution, to ensure that products meet relevant health standards.

For the public sector, the government should publicize the environmental and social friendly value of green products or services through various channels, so as to meet the environmental awareness needs of citizens. For example, specific cases can be displayed through social media, TV advertisements and community activities to let the public understand the actual environmental benefits of green home appliances[80]. Governments should also develop a range of public policies to help achieve a more sustainable world, such as concrete measures to reduce pollution and incentives to encourage recycling. These policies can include tax incentives, subsidies and regulatory constraints to ensure that businesses and individuals are actively involved in environmental action[81]. In addition, the government should formulate strict public policies to ensure that enterprises reduce environmental pollution in order to strengthen the control of environmental damage. For example, the government has set up a special environmental regulatory agency to regularly inspect the environmental production behaviors of enterprises and punish violations[82].

5.3 Limitations

This research began as early as June 2024 and was finally completed in February 2025. Firstly, in order to ensure the rigor, comprehensiveness and accuracy of the research, this

study has gone through several processes including literature research, investigation design, information collection, data statistics, model validation and paper writing. The relatively long duration of this research is a limitation of this study. Secondly, in order to ensure the authenticity of the research and restore the statistical profile of the primary data, during the implementation of this study, a questionnaire survey was randomly conducted among citizens in Anhui Province, China. According to descriptive statistical analysis, the sample feedback shows that there are slightly more males than females among the participants. We analyze that in the field of environmental protection awareness, male consumers may have more rational thinking concepts. However, this inference is not certain. Therefore, we suggest conducting further investigation and research to consider the influence effect of gender as a moderating variable. Finally, limited by objective factors such as time, funds and staff, the survey samples of this study mostly originated from the area of Hefei City in central Anhui Province. The main reason for choosing Hefei City is that it is the central city of Anhui Province and has the largest population. We suggest conducting further investigations and research and adding more sample data from other regions of Anhui.

Despite the above limitations, the main contribution of this study is to reveal the influence of consumers' environmental awareness (EA), consumption motivation (CM), and intention to purchase green home appliances (PI of GHA). It provides some empirical data and empirical cases for the theoretical circle. It provides management suggestions and practical guidance for enterprises and the government. It is worth mentioning that the innovation of this study lies in the fact that the empirical research results have confirmed the existence of consumption motivation as a mediating influencing factor between consumers' subjective consciousness and purchasing intentions.

Reference

- [1] Butt, M. S., Saleem, J., Ishaq, M., Bukhari, G. M. J., & Faryal, J. (2022). Climate change vulnerability, adaptation assessment, and policy development for occupational health. *Avicenna*, 2022(2), 8.
- [2] Imiru, G. A. (2023). The mediating role of green purchase intention between antecedents of green purchase intention and consumer's green buying behaviour: Empirical evidence in Ethiopia. *International Journal of Marketing Studies*, 15(1), 31-58.
- [3] Guterres, A. (2020). The sustainable development goals report 2020. United Nations publication issued by the Department of Economic and Social Affairs, 1-64.
- [4] Mal, H., & Nehra, N. S. (2023). The impact of IOT characteristics, cultural factors and safety concerns on consumer purchase intention of green electronic products. *Sustainability*, 15(8), 6597.

- [5] Zhang, C., Tang, L., Zhang, J., & Wang, Z. (2023). Using social network analysis to identify the critical factors influencing residents' green consumption behavior. *Systems*, 11(5), 254.
- [6] Ali, M. R., Shafiq, M., & Andejany, M. (2021). Determinants of consumers' intentions towards the purchase of energy efficient appliances in Pakistan: An extended model of the theory of planned behavior. *Sustainability*, 13(2), 565.
- [7] Jamil, K., Dunnan, L., Awan, F. H., Jabeen, G., Gul, R. F., Idrees, M., & Mingguang, L. (2022). Antecedents of Consumer's purchase intention towards energy-efficient home appliances: an agenda of energy efficiency in the post COVID-19 era. *Frontiers in Energy Research*, 10, 863127.
- [8] Yin, S., & Yu, Y. (2022). An adoption-implementation framework of digital green knowledge to improve the performance of digital green innovation practices for industry 5.0. *Journal of Cleaner Production*, 363, 132608.
- [9] Carpinelli, C., Einarsson Reynis, E. T., Sigríður Islind, A., Stefánsson, H., & Óskarsdóttir, M. (2022). Green Intentions: Field Research and Data-Driven Analysis of Customers' Purchasing Patterns. *Sustainability*, 14(16), 9863.
- [10] Li, X. H., Shao, J. P., & Sun, Y. N. (2021). A research on vitality stimulating of low-carbon supply chain consumption market based on SD and tripartite game. *Industrial Engineering*, 24(04), 150-159.
- [11] Yin, S., Zhang, N., Ullah, K., & Gao, S. (2022). Enhancing digital innovation for the sustainable transformation of manufacturing industry: a pressure-state-response system framework to perceptions of digital green innovation and its performance for green and intelligent manufacturing. *Systems*, 10(3), 72.
- [12] Xi, J. P. (2022). Hold high the great banner of socialism with Chinese characteristics and work in Unity for the comprehensive construction of a socialist modernized country--report on the 20th National Congress of the CPC. *Create*, 30, 6-29.
- [13] Wang, Z., Sun, Q., Wang, B., & Zhang, B. (2019). Purchasing intentions of Chinese consumers on energy-efficient appliances: Is the energy efficiency label effective?. *Journal of Cleaner Production*, 238, 117896.
- [14] Mardani, A., Kannan, D., Hooker, R. E., Ozkul, S., Alrasheedi, M., & Tirkolaee, E. B. (2020). Evaluation of green and sustainable supply chain management using structural equation modelling: A systematic review of the state of the art literature and recommendations for future research. *Journal of cleaner production*, 249, 119383.
- [15] Cao, Y. L. (2022). Technology empowerment promotes the healthy development of the home appliance industry, China Industry News, 001.doi:10.28076/n.cnki.ncgyb.2022.001122.

- [16]Shen, L., Chen, L. Y., & Su, A. T. (2021). User's willingness to pay for natural environment conservation and protection with commitment. *Landscape and Ecological Engineering*, 17, 339-349.
- [17]Xie, C., Wang, R., & Gong, X. (2022). The influence of environmental cognition on green consumption behavior. *Frontiers in Psychology*, 13, 988585.
- [18]Olawale, F. (2020). Factors Influencing the Purchase of Energy-Efficient Appliances by Young Consumers in South Africa. *Foundations of Management*, 12(1), 151-166.
- [19]Coşkun, A., Polonsky, M., & Vocino, A. (2023). Pro-environmental purchase intentions in a low-involvement context: the role of myopia and apathy. *Journal of Global Responsibility*, 14(3), 310-336.
- [20]Le, X. C., & Vu, T. T. L. (2023). The best is the earliest: a reflection of vaccination uptake amidst the pandemic in Vietnam. *Global Knowledge, Memory and Communication*, 72(6/7), 714-730.
- [21]Liao Qi, Qi Rui, Li Xian, Li Lin, Huang Yawei, Zhang Yiting... & Liu Zhuping.(2023-08-01). Research on the path and policy of carbon production factors driving green and high-quality development of manufacturing enterprises under the dual carbon target. 2025-04-15.
- [22]Gomes, G. M., Moreira, N., Bouman, T., Ometto, A. R., & Van der Werff, E. (2022). Towards circular economy for more sustainable apparel consumption: testing the value-belief-norm theory in Brazil and in The Netherlands. *Sustainability*, 14(2), 618.
- [23]Gu, S. (2022). The effects of subjective knowledge, altruistic value and consumer self-confidence on the green purchase attitudes and green purchase behaviour of Chinese customers. *Turyzm*, 32(2), 7-27.
- [24]Dong Dahai & Yang Yi (2008). Theoretical Analysis of Consumer Perceived Value in Network Environment. *Journal of Management Studies*, (06), 856-861.
- [25]Mathwick, C., Malhotra, N. K., & Rigdon, E. (2002). The effect of dynamic retail experiences on experiential perceptions of value: an Internet and catalog comparison. *Journal of retailing*, 78(1), 51-60.
- [26]Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77(2), 203-220.
- [27]Wang, J. M., & Li, Y. Q. (2022). Soft Economic Incentives and Soft Behavioral Interventions on the Public's Green Purchasing Behaviour-The Evidence from China. *Psychology Research and Behavior Management*, 2477-2499.
- [28]Zhang, X., & Dong, F. (2020). Why do consumers make green purchase decisions? Insights from a systematic review. *International journal of environmental research and public health*, 17(18), 6607.

- [29]Awan, F. H., Dunnan, L., Jamil, K., Gul, R. F., Anwar, A., Idrees, M., & Guangyu, Q. (2021). Impact of role conflict on intention to leave job with the moderating role of job embeddedness in banking sector employees. *Frontiers in psychology*, 12, 719449.
- [30]Jazairy, A., Pohjosenperä, T., Sassali, J., Juga, J., & von Haartman, R. (2023). Driving the talk: examining professional truck drivers' motivations to engage in eco-driving. *International Journal of Physical Distribution & Logistics Management*, 53(11), 98-124.
- [31]Teoh, C. W., Khor, K. C., & Wider, W. (2022). Factors influencing consumers' purchase intention towards green home appliances. *Frontiers in psychology*, 13, 927327.
- [32]Bhutto, M. Y., Soomro, Y. A., & Yang, H. (2022). Extending the theory of planned behavior: predicting young consumer purchase behavior of energy-efficient appliances (evidence from developing economy). *Sage Open*, 12(1), 21582440221078289.
- [33]Sun, Y., & Xing, J. (2022). The impact of social media information sharing on the green purchase intention among generation Z. *Sustainability*, 14(11), 6879.
- [34]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, 145-153.
- [35]Ahmad, W., & Zhang, Q. (2020). Green purchase intention: Effects of electronic service quality and customer green psychology. *Journal of cleaner production*, 267, 122053.
- [36]Caniëls, M. C., Lambrechts, W., Platje, J. J., Motylska-Kuźma, A., & Fortuński, B. (2021). Impressing my friends: The role of social value in green purchasing attitude for youthful consumers. *Journal of Cleaner Production*, 303, 126993.
- [37]Liu, H., & Sese, F. J. (2022). The impact of mobile app adoption on cross-buying: the moderating roles of product category characteristics and adoption timing. *Journal of Retailing*, 98(2), 241-259.
- [38]Orea-Giner, A., & Fusté-Forné, F. (2023). The way we live, the way we travel: generation Z and sustainable consumption in food tourism experiences. *British Food Journal*, 125(13), 330-351.
- [39]Cheng, X., Hou, T., & Mou, J. (2021). Investigating perceived risks and benefits of information privacy disclosure in IT-enabled ride-sharing. *Information & Management*, 58(6), 103450.
- [40]Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.
- [41]Nguyen, T. M., & Malik, A. (2020). Cognitive processes, rewards and online knowledge sharing behaviour: the moderating effect of organisational innovation. *Journal of*

- Knowledge Management, 24(6), 1241-1261.
- [42] Nikou, S. A., & Economides, A. A. (2017). Mobile-Based Assessment: Integrating acceptance and motivational factors into a combined model of Self-Determination Theory and Technology Acceptance. *Computers in Human Behavior*, 68, 83-95.
- [43] Demoulin, N., & Willems, K. (2019). Servicescape irritants and customer satisfaction: The moderating role of shopping motives and involvement. *Journal of Business Research*, 104, 295-306.
- [44] Holmqvist, J., & Lunardo, R. (2015). The impact of an exciting store environment on consumer pleasure and shopping intentions. *International Journal of Research in Marketing*, 32(1), 117-119.
- [45] Shah, J. Y., & Gardner, W. L. (Eds.). (2008). *Handbook of motivation science*. Guilford Press.
- [46] Grant, A. M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of management review*, 32(2), 393-417.
- [47] James, A. F., & Stoner, R. F. (2009). *Management*. patarang. Delhi, India: Dorling Kindersley.
- [48] Choi, D., & Johnson, K. K. (2019). Influences of environmental and hedonic motivations on intention to purchase green products: An extension of the theory of planned behavior. *Sustainable Production and Consumption*, 18, 145-155.
- [49] Gul, R. F., Dunnan, L., Jamil, K., Awan, F. H., Ali, B., Qaiser, A., & Aobin, Q. (2021). Abusive supervision and its impact on knowledge hiding behavior among sales force. *Frontiers in psychology*, 12, 800778.
- [50] Widhiarini, N. M. A. N., & Pradiani, T. (2023). Investigating the impact of green marketing on stay decisions: The mediating role of green consumer behavior. *International Journal of Social Science and Business*, 7(2), 435-447.
- [51] Vidal-Branco, M., Molinillo, S., Japutra, A., & Longaray, A. (2019). Organic food purchasing of the millennials generation: case of Brazil. *Omnichannel Marketing: Las Nuevas Reglas de la Distribución y el Consumo en un Mundo Omnicanal*, 331-348.
- [52] Wijekoon, R., & Sabri, M. F. (2021). Determinants that influence green product purchase intention and behavior: A literature review and guiding framework. *Sustainability*, 13(11), 6219.
- [53] Graça, S. S., & Kharé, V. P. (2023). An investigation of the impact of sustainability drivers and transformative mediators on green buying behavior in the US and Brazil. *Baltic Journal of Management*, 18(4), 428-449.
- [54] Hossain, I., Nekmahmud, M., & Fekete-Farkas, M. (2022). How do environmental knowledge, eco-label knowledge, and green trust impact consumers' pro-environmental

- behaviour for energy-efficient household appliances?. *Sustainability*, 14(11), 6513.
- [55] Raza, A., & Farrukh, M. (2023). Going green: an application of personal value theory to understand consumers visiting intention toward green hotels in Pakistan. *International Journal of Contemporary Hospitality Management*, 35(9), 3322-3343.
- [56] Wasaya, A., Saleem, M. A., Ahmad, J., Nazam, M., Khan, M. M. A., & Ishfaq, M. (2021). Impact of green trust and green perceived quality on green purchase intentions: A moderation study. *Environment, Development and Sustainability*, 23(9), 13418-13435.
- [57] Ashraf, M. A. (2021). What drives and mediates organic food purchase intention: An analysis using bounded rationality theory. *Journal of International Food & Agribusiness Marketing*, 33(2), 185-216.
- [58] Kumar, R., Kumar, K., Singh, R., Sá, J. C., Carvalho, S., & Santos, G. (2023). Modeling environmentally conscious purchase behavior: Examining the role of ethical obligation and green self-identity. *Sustainability*, 15(8), 6426.
- [59] Hair, J.; Page, M.; Brunsveld, N. *Essentials of Business Research Methods*, 4th ed.; Informa UK Limited: New York, NY, USA, 2019; ISBN 97803671.
- [60] Wang, X. P. (2021). Characteristics and Evolution Mechanism of China's Green Consumption Structure from the Perspective of Supply and Demand. *J. Commer. Econ*
- [61] Xiong, P. (2022). Study on the Influencing Factors of Public Green Consumption Behavior under the Goal of Carbon Peak. *J. Commer. Econ*.
- [62] Al-Kumaim, N. H., Shabbir, M. S., Alfarisi, S., Hassan, S. H., Alhazmi, A. K., Hishan, S. S., ... & Abu Al-Rejal, H. M. (2021). Fostering a clean and sustainable environment through green product purchasing behavior: Insights from Malaysian consumers' perspective. *Sustainability*, 13(22), 12585.
- [63] Sun, Y., & Xing, J. (2022). The impact of social media information sharing on the green purchase intention among generation Z. *Sustainability*, 14(11), 6879.
- [64] Armutcu, B., Ramadani, V., Zeqiri, J., & Dana, L. P. (2024). The role of social media in consumers' intentions to buy green food: evidence from Türkiye. *British Food Journal*, 126(5), 1923-1940.
- [65] Wang, J. M., & Li, Y. Q. (2022). Soft Economic Incentives and Soft Behavioral Interventions on the Public's Green Purchasing Behaviour-The Evidence from China. *Psychology Research and Behavior Management*, 2477-2499.
- [66] Zameer, H., & Yasmeen, H. (2022). Green innovation and environmental awareness driven green purchase intentions. *Marketing Intelligence & Planning*, 40(5), 624-638.
- [67] Nikou, S. A., & Economides, A. A. (2017). Mobile-Based Assessment: Integrating acceptance and motivational factors into a combined model of Self-Determination Theory and Technology Acceptance. *Computers in Human Behavior*, 68, 83-95.

- [68]Jain, S., & Mishra, S. (2020). Luxury fashion consumption in sharing economy: A study of Indian millennials. *Journal of Global Fashion Marketing*, 11(2), 171-189.
- [69]Hameed, I., Hyder, Z., Imran, M., & Shafiq, K. (2021). Greenwash and green purchase behavior: An environmentally sustainable perspective. *Environment, Development and Sustainability*, 1-22.
- [70]Jalees, T., Qabool, S., Zaman, S. I., & Alam Kazmi, S. H. (2021). Effect of spirituality and ethics on green advertising, and the multi-mediating roles of green buying and green satisfaction. *Cogent Business & Management*, 8(1), 1920559.
- [71]Hair, J.R.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis*, 7th ed.; Pearson Prentice Hall: Hoboken, NJ, USA, 2010.
- [72]Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed.; Informa UK Limited: New York, NY, USA, 2017.
- [73]García-Salirrosas, E. E., Millones-Liza, D. Y., Esponda-Pérez, J. A., Acevedo-Duque, Á., Müller-Pérez, J., & Sánchez Díaz, L. C. (2022). Factors Influencing Loyalty to Health Food Brands: An Analysis from the Value Perceived by the Peruvian Consumer. *Sustainability*, 14(17), 10529. <https://doi.org/10.3390/su141710529>
- [74]Cronbach, L.J. Coefficient Alpha and the Internal Structure of Tests. *Psychometrika* 1951, 16, 297–334.
- [75]Hu, L.; Bentler, P.M. Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Struct. Equ. Model.* 1999, 6, 1–55.
- [76]Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, 13, 290-312.
- [77]Syadzwin, M.N.; Astuti, R.D. Linking Green Skepticism to Green Purchase Behavior on Personal Care Products in Indonesia. *IOP Conf. Ser. Earth Environ. Sci.* 2021, 716, 012045.
- [78]Rustam, A.; Wang, Y.; Zameer, H. Environmental Awareness, Firm Sustainability Exposure and Green Consumption Behaviors. *J. Clean. Prod.* 2020, 268, 122016.
- [79]Hasbullah, N.N.; Sulaiman, Z.; Mas'od, A.; Ahmad Sugiran, H.S. Drivers of Sustainable Apparel Purchase Intention: An Empirical Study of Malaysian Millennial Consumers. *Sustainability* 2022, 14, 1945.
- [80]Valenzuela-Fernández, L.; Guerra-Velásquez, M.; Escobar-Farfán, M.; García-Salirrosas, E.E. Influence of COVID-19 on Environmental Awareness, Sustainable Consumption, and Social Responsibility in Latin American Countries. *Sustainability* 2022, 14, 12754.
- [81]Zambrano-Monserrate, M.A.; Ruano, M.A.; Sanchez-Alcalde, L. Indirect Effects of COVID-19 on the Environment. *Sci. Total Environ.* 2020, 728, 138813.

- [82] Yue, B.; Sheng, G.; She, S.; Xu, J. Impact of Consumer Environmental Responsibility on Green Consumption Behavior in China: The Role of Environmental Concern and Price Sensitivity. Sustainability 2020, 12, 2074.