The Influencing Factors of Green Purchase Intention Among Chinese College Students: A Mediator Analysis of Subjective Norms

Chen Kun[1], Chen Chuanming[2], Guo Shengqing[3], Ratneswary Rasiah[4]

[1] Postgraduate, Graduate School of Business, SEGi University, Petaling Jaya, Malaysia and Kunming City College, Yun Nan, China.

[2] Postgraduate, Graduate School of Business, SEGi University, Petaling Jaya, Malaysia and Kunming City College, Yun Nan, China.

[3] Postgraduate, Graduate School of Business, SEGi University, Petaling Jaya, Malaysia and Yunnan University Of Bussiness Management, Yun Nan, China.

[4] Assoc. Prof. Dr., Graduate School of Business, SEGi University, Petaling Jaya, Malaysia.

Email: [1]chenkun0709@gmail.com, [2]chenchen850709@gmail.com, [3]lqx15198965899@gmail.com

Orcid Id number: [1]0009-004-5998-6916, [2]0009-0004-6044-8525, [3]0009-0003-1497-0497, [4]0000-0002-9843-5074

Corresponding Author*: Chen Chuanming

ARTICLE INFO	ABSTRACT
	Protecting biodiversity, promoting low-carbon development and advocating green consumption have received global consensus of countries, in dealing with environmental issues. This study seeks to examine the impact of environmental knowledge, green perceived value, and perceived behavioral control on the green purchase intentions of Chinese college students, while also investigating the mediating effect of subjective norm in these relationships. The study employs quantitative research methods, utilizing a sample of 567 Chinese college students and collecting primary data through a questionnaire survey, conducted in strict accordance with ethical guidelines. This research utilized PLS-SEM to evaluate the precision of both the measurement and structural models. The research outcomes indicate that within the demographic of Chinese university students, the concepts of green perceived value and perceived behavioral control have substantial correlations with their inclination to participate in environmentally friendly buying behaviors, whereas environmental awareness does not emerge as a significant factor. Furthermore, subjective norms was found to act as a pivotal mediator, linking the aforementioned exogenous constructs-environmental knowledge, green perceived value, and perceived behavioral control-to the endogenous variable of green purchase intention. The results establish subjective norms as not only a mediator but a critical predictor of green purchase intention, providing an innovative contribution to the domain of green consumption research. This research contributes to the academic discourse by bridging the knowledge gaps in current scholarly works and offering novel perspectives on the factors influencing the propensity of college students to engage in green purchasing behaviors. Moreover, the findings present actionable strategies for government, academia, and industry, empowering them to more effectively shape and influence the pathways through which green purchase intentions develop among Chinese college students. This research marks a significant step forward in understanding the dynamics of sustainable consumer behavior.

1. INTRODUCTION

The continuous consumption of products on a global scale leads to problems such as global warming, waste and pollution generation (Jaiswal & Kant, 2018) , global ecosystems are under severe stress and threat. Protecting biodiversity, promoting circular economy and low-carbon development, sharing global responsibilities, and advocating public green consumption have become the consensus of countries around the world in dealing with environmental issues. Empirical studies have demonstrated that the creation, promotion, and consumption of environmentally friendly products can effectively lessen harmful consequences. Acknowledging the critical role that environmentally conscious consumer actions play in preserving the sustainability of our environment, a global array of organizations is dedicating resources to fostering a more eco-centric consumer mindset (Kumar et al., 2023). The emphasis on sustainable green consumption patterns is critical to the lasting well-being of our planet, and it is increasingly valued as a key aspect of assessing a company's commitment to social responsibility.

Globally, there is a rising trend among consumers to be mindful of the environmental consequences of their purchasing behaviors, and their increasing awareness of environmental issues is driving related industries to adopt more environmentally friendly production methods through the implementation of green innovations (Zayed et al., 2022). In fact, consumers are showing greater interest in purchasing environmentally friendly products, they have begun to adopt green practices. An increasing number of consumers integrate ecological concerns into their buying choices, while companies are becoming increasingly cognizant of the promising market opportunities presented by eco-friendly products, thereby demonstrating a propensity to advocate for green offerings (S. Wang et al., 2017). With a view to approach the consumption potential of the domestic green product market, the Chinese government spends part of its fiscal revenue on ecological and environmental protection awareness conferences every year, hoping to enrich consumers' knowledge of green consumption through awareness and education programmers, so as to encourage them to become green advocates and consumers. After continuous promotion and publicity, consumers' awareness of green consumption has been significantly improved, and the commitment to environmental preservation has been deeply rooted in people's hearts. With its excellent performance of energy saving and environmental protection, green products have won wide recognition and favor from consumers. However, while the public generally has a positive attitude towards environmentally friendly products, actual purchasing behavior is often at odds with the Green Purchase Intention (GPI). Limited by the price factors of green products, consumers' awareness and Green Perceived Value (GPV), Chinese consumers have not been fully motivated in green purchasing, leads to green products still holding a low market share.

The consequences of not buying environmentally friendly products are far-reaching. First, the lack of demand for green products hinders the development of renewable resources and environmentally friendly technologies, further exacerbating environmental problems. Secondly, consumers fail to adopt green purchasing behaviors, which perpetuate traditional production patterns, exacerbating pollution and resource waste. In addition, over-exploitation of resources can cause irreversible damage to ecosystems, ultimately affecting global biodiversity. What's more, the green industry is considered a key driver of future economic growth, and if consumers do not actively support green products, it actually undermines the potential of the overall economy to transition to sustainable development.

Therefore, understanding the factors that influence GPI is critical to addressing this issue. Previous research has indicated that consumers who tend to buy environmentally friendly products are more concerned about environmental issues than consumers who buy general goods. Individuals with greater environmental awareness tend to have a heightened GPI. GPV positively correlates with GPI,

which denotes the consumer's acknowledgment of the additional worth of eco-friendly products, impling that a heightened sense of perceived value is correlated with an enhanced GPI. Perceived Behavioral Control (PBC), as the core psychological driving force of consumer behavior, reflects that consumers have a high ability to control their own behavior, which makes them more likely to take environmental protection actions, and show a positive attitude and action tendency towards environmental protection. Additionally, Subjective Norm (SN) play a significant role in this dynamic process, and when consumers perceive that social norms tend to favor green consumption, they are more likely to increase their own GPI. Understanding and elucidating the factors and their interplay that shape GPI can effectively connect theoretical insights with practical applications, thus fostering the growth of sustainable consumption patterns.

This study is to deeply explore the intrinsic motivation driving Chinese college students' green consumption behavior, focusing on the specific impact of Environmental Knowledge (EK), GPV and PBC on college students' GPI. In addition, the study also examines the intermediary role of SN in relation to the aforementioned factors and their impact on GPI. It is expected that the conclusions can help the government to promote green consumption, guide enterprises to successfully carry out green publicity activities, and explore green sustainable strategies suitable for their own development.

2. LITERATURE REVIEW

2.1 GPI

GPI can be interpreted as the inclination of students to buy environmental protection products and sometimes it can be considered as the main reference factor to measure consumers' green purchase behavior (Zayed et al., 2022). To better grasp consumer behavior, several academics have looked at consumers' green buying patterns from many aspects. Global research also indicates that heightened environmental awareness among consumers has resulted in shifts in their purchasing preferences, prompting a reassessment of the products they choose to buy. More and more consumers are now more inclined to invest in products that meet environmental criteria, even if it means paying higher prices, demonstrating genuine support for environmental initiatives. The demand for environmentally friendly products was examined in the spectrum of wealthy and less developed nations and revealed that a greater percentage of people in developing nations tended to use green products, indicating a willingness to spend an extra 10% of their budget on environmentally friendly alternatives (Lavuri et al., 2024). At present, domestic and foreign scholars' research on GPI mainly focuses on three aspects: first is to study the influencing factors of GPI, second is to explore the driving mechanism of GPI, and third is to explore the relationship between GPI and subsequent consumption behavior. Factors affecting GPI included environmental awareness, environmental literacy, price and attitude, openness and self-promotion (Hadi et al., 2024).

In the Indian consumer market, the primary mechanism of GPI was investigated, and it was determined that environmental consciousness and EK had an impact on consumption attitudes, SN, and cognitive control. Consequently, this influence led consumers to produce GPI (Yadav & Pathak, 2016). It was suggested that the GPI was a significant factor that influenced the current and prospective purchases of green products by customers (Yang et al., 2024). GPI can be assessed through three items, which involve considering the purchase of green products, shifting to alternative brands, and opting for green products due to ecological concerns. The majority of researchers have acknowledged and validated the use of GPI as a crucial indicator to explain and forecast green consumption behavior.

2.2 EK and GPI

EK significantly influences consumer behavior and is crucial for making informed consumption decisions. Prior to purchasing, consumers must acquire product information and assess the value attributes of products, with EK guiding these choices. Research established a direct positive linkage between environmental awareness and the propensity for green purchasing activities, indicating that a well-informed consumer base is more inclined toward sustainable acquisition patterns. According to

H. Wang et al. knowledge significantly influences behavioral choices. Prior to making consumption decisions (H. Wang et al., 2019), consumers must acquire product information and develop corresponding understandings. Simultaneously, they must perceive the value attributes of products as they accumulate knowledge, guiding their consumption choices. Furthermore, Jaiswal & Kant underscored the pivotal role of ecological literacy in shaping GPI, revealing that consumers routinely leverage their EK during the evaluation and acquisition of eco-friendly products (Jaiswal & Kant, 2018). Another study found that consumers with more EK are prudent consumers who consider the safety risks posed by environmental depletion when choosing alternatives. Green consumption knowledge encompasses two aspects: EK and green product knowledge, both of which are essential in predicting green behavior (Yang et al., 2024). Research indicates that a higher level of EK leads consumers to integrate environmental responsibility into their daily consumption patterns (Lin & Niu, 2018). This knowledge forms the foundation of green consumption psychology and is pivotal for developing GPI (Sang et al., 2020). Research conducted by Khan et al . indicated that consumers' awareness and acceptance of green consumption increased with their understanding of ecological concerns such as pollution and global warming (Khan et al., 2020). Conversely, a lack of environmental protection knowledge significantly diminished the likelihood of engaging in green consumption behaviors. Conversely, a lack of EK hampers engagement in eco-friendly behaviors. From an environmental cognitive perspective, the accumulation of enhancing the interpretative and predictive power of GPI. Overall, the current research highlights the significant impact of EK on influencing consumers' perspectives and actions regarding sustainable purchasing practices. Therefore, this study has hypothesized that:

H1: EK significant and positive relationship with GPI.

2.3 GPV and GPI

Consumer purchasing decisions are known to be heavily influenced by GPV, with intentions to repurchase being strongly influenced by the subjective assessment of product value qualities, as noted by Stampa et al. and Tahir highlighted that consumers are positive to consume when they think tangible benefits from a product (Stampa et al., 2020; Tahir, 2021). According to recent studies, people who have a higher GPV are more likely to show interest in and make purchases of green items (Indrajaya et al., 2024). Scholars like Zhang & Dong consider green value attributes to be the objective properties internal in green products (Zhang & Dong, 2020); consumers, based on their cognitive basis, subjectively perceive these attributes. Indeed, for consumers to fully endorse green products, it is essential that they perceive the value attributes and grasp the overall consumption efficiency, as well as the distinctions between green and traditional products, which in turn fosters the emergence of GPI. The current research landscape shows an increased focus on the impact of GPV on GPI, especially concerning the double-edged sword effect of green attribute information communication and consumer decision-making. While the bulk of consumers show concern for societal and ecological well-being, but green qualities are not always advantageous and that their impact varies depending on the product category and benefit value type (Liao et al., 2020). GPV exerts a notably impact on GPI, and if a product is considered to be a high-value environmentally friendly product, the purchase intention of that product will be increased (Sabono & Murwaningsari, 2022). These results highlight how important GPV is in promoting GPI and offer fresh viewpoints and theoretical justification for comprehending consumer behavior. Therefore, this study has hypothesized that:

H2: GPV shows a substantial positive connection with GPI.

2.4 PBC and GPI

A key component of the theory of Planned Behavior, PBC is recognized as a pivotal factor exerting substantial influence on GPI, according to the literature. PBC, in tandem with SN, shapes consumer attitudes and their beliefs about their capability to join in green buying behaviors. Researchers such as Zhuang et al. have noted that SN and PBC significantly affect green purchase behaviors, mediated by peer influence, social expectations, and the perspectives of reference groups (Zhuang et al., 2021).

Lavuri et al.also identifies PBC and SN as essential factors in fostering GPI, primarily through their indirect effects on consumer attitudes and perceived effectiveness (Lavuri et al., 2024). Consistently, research has demonstrated that attitudes toward green products, shaped by SN and PBC, are key predictors of GPI. According to Amoako et al. attitudes are the most powerful indicators of intentions to make green purchases (Amoako et al., 2020), followed by SN and PBC. PBC positively impacts by reflecting consumers' belief in their capacity to perform green behaviors (Majeed, 2023). Aseri & Ansari note that although PBC is a major predictor of GPI, additional factors that could obstruct the decision-making process mean that it does not always result in actual green purchase behavior (Aseri & Ansari, 2023). The following hypothesis is put forth:

H3: PBC has significant and positive relationship with GPI.

2.5 SN and GPI

SN which pertains to the perceived societal expectations to participate in environmentally conscious purchasing behaviors, are a significant determinant of GPI. Essiz & Mandrik highlights that peer influence, social expectations, and reference group views strongly affect green purchasing behavior, implying that individuals more prefer to buy green products when they feel societal pressure to act sustainably (Essiz & Mandrik, 2021). Arif found that SN, environmental involvement, and green advertising significantly influence GPI, reinforcing that social expectations from influential groups drive consumers toward greener choices (Arif, 2019). However, L. Wang et al. indicated that SN could negatively influence GPI, with green purchase attitude mediating the relationship, suggesting that social pressure may discourage green purchases in certain conditions (L. Wang et al., 2019). Research by Ham et al. and Yadav & Pathak , consistently demonstrated a active impact of SN on GPI (Ham et al., 2015; Yadav & Pathak, 2016). Alalei & Jan confirmed this in Algerian consumers, where SN and EK strongly predicted GPI, although attitudes played a lesser role (Alalei & Jan, 2023). In contrast, Tilahun et al. found SN insignificant, with digital communication being the strongest predictor in some markets (Tilahun et al., 2023). Chairunnisa & Perdhana found that SN positively impacted green hotel purchase intentions (Chairunnisa & Perdhana, 2020), but their subsequent study indicated no direct effect on GPI in the Bangladesh green hotel sector. Although the majority of research supports a positive correlation between SN and GPI, the effect differs depending on the product type and circumstance. Therefore, this study has hypothesized that:

H4: SN acts as a mediate variable between EK and GPI.

H5: SN acts as a mediate variable between GPV and GPI.

H6: SN acts as a mediate variable between PBC and GPI.

H7: SN has significant and positive relationship with GPI.

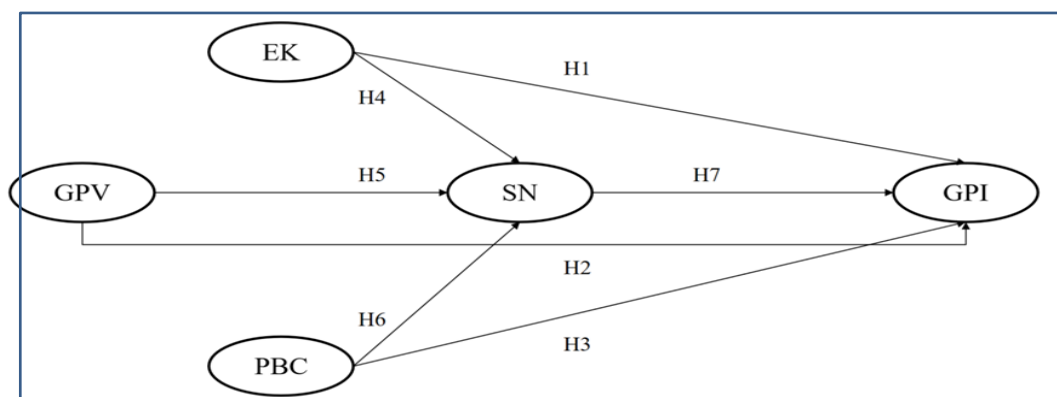Research framework is outlined .

Figure 1 Research Framework

3. METHODOLOGY

3.1 Samples and data collection

For a careful evaluation of the proposed hypothesis, the research amassed data via a self-administered questionnaire survey, meticulously executed within the geographical confines of China. The study's participant pool comprised 567 Chinese college students who were above the age of 18, an age bracket recognized for its advanced cognitive faculties to navigate the decision-making processes involved in purchasing sustainable products (Voorhees et al., 2016). These individuals are adept at grappling with the nuanced dimensions of EK, GPV, PBC and EC, incorporating their entrenched values and beliefs that exert a substantial influence on their consumer behavior. To garner a representative sample, the distribution of questionnaires was meticulously managed, ensuring a balanced demographic spread across sex, income, and occupation. The study engaged 567 respondents, recruited through a convenience sampling technique. The data collection was efficiently executed using the Wenjuanxing app, an instrumental platform for streamlined data aggregation and management.

First, A total of 721 questionnaires were gathered during the preliminary phase of this research. To ensure that all data used for subsequent analysis is reliable, we performed careful data cleaning on the original Excel data set using the STDEV.P function, based on two criteria: whether information was missing and whether there was variation in STDEV. In this step, we remove invalid data. Finally, 154 invalid questionnaires were removed from 721 respondents, and only 567 valid questionnaires were retained, and the response rate of N =567 was 78.64%. After the data cleaning, was imported into the SPSS software. The sociodemographic profile of the respondents is shown in Table1.

Table1 Socio-demographic Profile of Respondents

Item	Nominal scale	Frequency	Percent
Genter	1-Female	388	68.4%
	2-Male	179	31.6%
Age	1-18 and below	3	0.5%
	2-19 to 23	512	90.3%
	3-24 to 28	21	3.7%
	4-29 to 32	24	4.3%
	5-33 and above	7	1.2%
Education Level	1-Junior College	36	6.3%
	2-Pre-university	23	4.1%
	3-Degree	479	84.5%
	4-Master	14	2.5%
	5-PHD	15	2.6%
Monthly Allowance	1-RM 1000 and below	115	20.3%
	2-RM1001 to 1500	297	52.4%
	3-RM1500 to 2000	81	14.3%
	4-RM2001 to 3000	52	9.2%
	5-RM3000 to 4000	22	3.9%

	6->RM4000	8	1.4%
Total		567	100%

3.2 Measurement

The survey questionnaire has been compiled by integrating components from a broad spectrum of references. The scales included in the study are modifications of those employed in prior academic investigations, as referenced in Table 2. This methodological approach leverages established research frameworks while tailoring them to the specific requirements of the current project For the GPI variable, Scale of measurement adapted was employed from a former study from Cohen et al, the measurement scale of SN was adopted from adapted from Chan and Lau . The scale for PBC has been adapted from Adapted from Kim and Han The measurement of EK was adopted from adapted from Mostafa. The measurement of GPV was adopted from Adapted from Adapted from Chaudhuri, A.

The questionnaire design refers to scales developed by domestic and foreign scholars. To capture the respondents' viewpoints on the survey questions with greater precision, a 7-point Likert-type scale was utilized. Respondents were instructed to evaluate each statement on this scale, with "1" representing "strongly disagree" and "7" representing "strongly agree," allowing them to express the extent of their agreement with each question.

To ensure the stability of the research tool, all survey items were sourced from credible origins. The survey is bifurcated into two sections. The initial section pertains to demographic inquiries concerning gender, age, and similar factors, designed to collect essential information. The second part mainly measured the six variables, the total number of items was 26, among them, GPI contains 5 items (GPI1 to GPI5), The SN consists of 3 items (SN1 to SN3), The PBC contains 3 items (PBC1 to PBC3), The EK consists of 5 items (EK1 to EK5), The GPV contains 5 items (GPV1 to GPV5). The questionnaire items are shown in Table2.

Table2 Questionnaire Items

Variables	Items
Green Purchase Intention (Dependent variable) **Adapted from Kim et al. (2013); & Akbar et al. (2014)** **(5 items)** Kim, Y.J., Njite, D., Hancer, M., 2013. Anticipated emotion in consumers' intentions to select eco-friendly restaurants: augmenting the theory of planned behavior. Int. J. Hosp. Manag. 34, 255e262. Akbar, W., Hassan, S., Khurshid, SH., Niaz, M & Rizwan, M. (2014), 'Antecedents Affecting Customer's Purchase Intentions towards Green Products', Journal of Sociological Research, 5(1), 273-289.	GPI1: I will purchase green products for personal use. GPI2: I am willing to purchase green products for personal use. GPI3: I will make an effort to purchase green products. GPI4: My willingness to buy green products is high. GPI5: I have a high intention to buy green products.
Subjective Norm **Adapted from Chan and Lau**	SN1: Most people who are important to me would want me to purchase eco-friendly products for personal use.

(2002) (3 items) Chan, R. Y., & Lau, L. B. (2002). Explaining green purchasing behavior: A cross-cultural study on American and Chinese consumers. Journal of international consumer marketing, 14(2-3), 9-40.	SN2: Most people who are important to me would think I should purchase green products for personal use.
	SN3: Most people who are important to me think I should be an environmentally-responsible consumer.
Perceived Behavioral Control **Adapted from Kim and Han (2010)** **(3 items)** Kim, Y., & Han, H. (2010). Intention to pay conventional-hotel prices at a green hotel–a modification of the theory of planned behavior. Journal of Sustainable Tourism, 18(8), 997-1014.	PBC1: Whether or not I buy green product at place of conventional non-green product is completely up to me.
	PBC2: I have resources, time and opportunities to buy green product.
	PBC3: I am confident that if I want, I can buy green product at place of conventional non-green product.
Environmental Knowledge **Adapted from Mostafa (2007)** **(5 items)** Mostafa, M. M. (2007). Gender differences in Egyptian consumers? Green purchase behaviour: The effects of environmental knowledge, concern and attitude. International Journal of Consumer Studies, 31(3), 220–229.	EK1: I know that I buy products and packages that are environmentally safe.
	EK2: I know more about recycling than the average person.
	EK3: I am very knowledgeable about environmental issues.
	EK4: I understand the various phrases and symbols related to environment on product package.
	EK5: I know how to select products and packages that reduce the amount of waste dumping.
Green Perceived Value **Adapted from Chaudhuri, A. (1997)** **(5 items)** Chaudhuri, A. (1997). Consumption emotion and perceived risk: A macro-analytic approach. Journal of Business Research, 39(2), 81-92.	GPV1: Green products give me extra value.
	GPV2: Green products have high value.
	GPV3: Green products give me more benefits than other products.
	GPV4: Green products environmental functions provide good value to me.
	GPV5: Green products have more environmental concern than non-green products.

3.3 Data analysis

This quantitative research endeavor is designed to elucidate the existence and typology of relationships between variables. To this end, SEM serves as the analytical instrument of choice. The analysis is methodically segmented into preliminary and advanced stages. The preliminary stage was instrumental in ascertaining the psychometric properties, ensuring their validity and reliability, and in conducting thorough data cleansing. The advanced stage was dedicated to the stringent examination of the hypotheses that were meticulously constructed.

4. RESULTS AND DISCUSSION

4.1 Construct reliability and validity

The table provides a summary of the psychometric properties for five constructs: EK, GPI, GPV, PBC, and SN. These constructs show strong reliability and convergent validity, essential for valid empirical measurements. The Cronbach's alpha scores range from 0.814 for PBC to 0.925 for GPI, exceeding the 0.8 threshold for internal consistency. Additionally, all AVE values are over 0.7, indicating convergent validity by comparing variance to measurement error, with SN exhibiting the highest at 0.832. This shows that each construct accounts for a substantial amount of the variance in its indicators, beyond what would be expected by measurement error alone. Collectively, these metrics underscore the high quality of measurement for the constructs in question, providing confidence in the consistency and validity of the research findings.

Table3 Reliability and validity

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EK	0.882	0.889	0.913	0.678
GPI	0.925	0.929	0.943	0.769
GPV	0.916	0.919	0.937	0.749
PBC	0.814	0.823	0.890	0.730
SN	0.899	0.899	0.937	0.832

4.2 HTMT

The Heterotrait-Monotrait Ratio (HTMT) method is widely recognized. This technique determines the distinctiveness of constructs by examining the relationship between their average variance extracted (AVE) and their correlation. Typically, an HTMT score below 0.85 is interpreted as evidence of good discriminant validity, signifying that the constructs are well-separated. An HTMT score within the range of 0.85 to 0.90 suggests moderate discriminant validity; while scores above 0.90 imply that the constructs may not be clearly differentiated, potentially requiring a reevaluation of the constructs' definitions or the measurement techniques used. (Voorhees et al., 2016).

In the provided table 4, HTMT values between various constructs of different variables indicate their level of discriminant validity. For instance, the HTMT values between SN and GPI is 0.545, demonstrating good discriminant validity as it falls well below the 0.85 threshold. Similarly, the HTMT values between GPV and PBC (0.564) and between GPV and SN (0.589) suggest strong discriminant validity, confirming that these constructs are distinct. The HTMT values for PBC and other constructs, such as GPI (0.728), GPV (0.693), and SN (0.787), further indicate good discriminant validity. The highest HTMT value, 0.823, occurs between SN and GPI. Although this value is relatively high, it still falls within the acceptable range, indicating moderate discriminant validity between these two constructs.

In conclusion, most of the constructs demonstrate good discriminant validity, meaning they can be reliably measured as distinct entities. While the discriminant validity between SN and GPI is slightly lower compared to other constructs, it remains within the acceptable threshold, indicating that these constructs are still distinguishable.

Table 4 HTMT

Variable	EK	GPI	GPV	PBC	SN
EK					
GPI	0.545				
GPV	0.657	0.564			
PBC	0.817	0.728	0.693		
SN	0.658	0.823	0.589	0.787	

4.3 R² and Adjusted R²

R² value of 0.80 implies that 80% of the variability in the dependent variable is accounted for by the model. However, R² has a drawback in that it can inflate as additional independent variables are incorporated into the model, even if these do not substantially enhance the predictive accuracy (Cohen et al., 2015). To counteract this, the Adjusted R-Square is employed, particularly in regression models featuring a multitude of predictors. This adjusted metric takes the number of predictors into consideration and adjusts for the degrees of freedom, thus preventing the overestimation of model fit when non-significant variables are included. Nduneseokwu et al. assert that in the context of predictive modeling, Adjusted R-Square is deemed more dependable than R-Square, as it helps to avoid over fitting that arises from excessive model complexity (Nduneseokwu et al., 2017).

Table 5 provides the R² and Adjusted R² for GPI and SN regression models. An R² value of 1 would indicate perfect prediction of the dependent variable's variability around its mean. In the context of the table, the GPI model's R² value is 0.606, suggesting that 60.6% of the dependent variable is predictable from the model's independent variable(s). The SN model's R² value is 0.500, indicating that 50% of the variance is predictable.

The Adjusted R² modifies the traditional R² to account for the number of predictors in a model, which is important for a more accurate evaluation of its explanatory strength. It penalizes the inclusion of unnecessary predictors, thus offering a more honest view of a model's performance, especially when comparing models with different numbers of predictors. For the GPI model, the Adjusted R²is 0.603, and for the SN model, it's 0.498. These figures are marginally lower than their R²counterparts, suggesting that the extra predictors do not substantially enhance the models' explanatory power.

Table 5 R-SQUARE

Variable	R-square	R-square adjusted
GPI	0.606	0.603
SN	0.500	0.498

4.4 Fornell

In the field of structural equation modelling, the Fornell-Larcker criterion is a key tool for assessing the discriminant validity between different constructs. Discriminant validity is the degree to which a construct is clearly distinguished from others within a measurement model. For a construct to be considered to have strong discriminant validity by the Fornell-Larcker criterion, the square root of its average variance extracted (AVE) should be greater than its correlation coefficients with other constructs. In essence, discriminant validity is confirmed when the square of the correlation between any two constructs is lower than their respective AVEs. This criterion emphasizes that the square root of a construct's AVE should surpass its correlations with every other construct, ensuring that each construct is empirically distinct and not redundant with others

in the model. This process is vital for ensuring that the constructs are not only reliable but also distinct from one another, which is a fundamental requirement for valid and meaningful measurement in structural equation modelling. (Fornell & Larcker, 1981).

As shown in table, it can be concluded that, aside from the slightly elevated correlation between GPI and SN, the other constructs exhibit strong discriminant validity, as their self-correlations are consistently higher than their correlations with other constructs. This result highlights the uniqueness and reliability of the study structure.

Table 6 Fornell-larcker

	EK	GPI	GPV	PBC	SN
EK	0.823				
GPI	0.503	0.877			
GPV	0.591	0.522	0.865		
PBC	0.704	0.637	0.597	0.854	
SN	0.594	0.754	0.537	0.677	0.912

4.5 Cross loadings

"Cross loadings" is a term used in confirmatory factor analysis (CFA) to describe how different indicators load onto multiple constructs. Cross loadings indicate the degree to which a variable associates with constructs other than its intended one. Optimally, a variable should exhibit a substantially stronger loading on its designated construct compared to other constructs, signifying that it clearly differentiates its target construct from others (Lin & Niu, 2018). This distinction is essential for establishing the construct validity within the CFA framework.

Table 7 demonstrates that the majority of the indicators show substantially higher loadings when associated with their intended constructs as opposed to other constructs, indicative of robust discriminant validity (Henseler et al., 2016). Notably, the indicators under the SN construct show particularly high loadings, underscoring their specificity in reflecting the SN construct. (Izah et al., 2024).

Table 7 Cross loadings

Variable	EK	GPI	GPV	PBC	SN
EK1	0.810	0.511	0.507	0.673	0.564
EK2	0.871	0.430	0.452	0.621	0.507
EK3	0.830	0.386	0.469	0.525	0.459
EK4	0.818	0.356	0.444	0.519	0.419
EK5	0.786	0.356	0.558	0.526	0.467
GPI1	0.414	0.834	0.418	0.488	0.610
GPI2	0.385	0.858	0.425	0.491	0.598
GPI3	0.455	0.905	0.458	0.590	0.670
GPI4	0.446	0.893	0.476	0.602	0.688
GPI5	0.495	0.891	0.504	0.606	0.725

GPV1	0.543	0.413	0.828	0.498	0.466
GPV2	0.503	0.433	0.875	0.527	0.422
GPV3	0.529	0.481	0.891	0.501	0.468
GPV4	0.508	0.494	0.904	0.524	0.517
GPV5	0.475	0.434	0.826	0.534	0.443
PBC1	0.513	0.484	0.487	0.796	0.512
PBC2	0.631	0.565	0.525	0.880	0.613
PBC3	0.652	0.578	0.518	0.883	0.604
SN1	0.513	0.700	0.462	0.567	0.918
SN2	0.530	0.700	0.473	0.596	0.925
SN3	0.581	0.663	0.533	0.686	0.894

4.6 Collinearity Statistics

VIF (Variance Inflation Factor) is a diagnostic metric employed to quantify the degree of multicollinearity present among the predictor variables within a regression analysis framework. Multicollinearity is present when predictor variables exhibit strong correlations with each other, which can compromise the precision of the estimates derived from ordinary least squares (OLS) regression (O'brien, 2007). VIF values serve as an indicator of this correlation, helping researchers determine the severity of multicollinearity within their models.

In this context, the VIF values are calculated for various indicators across multiple constructs, including EK1, EK2, EK3, EK4, EK5, GPI1, GPI2, GPI3, GPI4, GPI5, GPV1, GPV2, GPV3, GPV4, GPV5, PBC1, PBC2, PBC3, SN1, SN2, and SN3. Generally, VIF values below 1.5 indicate a low risk of multicollinearity, values between 1.5 and 3 suggest a moderate risk, and values above 3 indicate a high degree of multicollinearity (Hadi et al., 2024).

According to table 8, the analysis suggests that most indicators, especially those within the GPI construct, present VIF values above the acceptable threshold, highlighting potential multicollinearity issues that could compromise the stability of regression coefficients. In contrast, the lower VIF values associated with PBC indicators imply a more reliable model in terms of multicollinearity. To address the high VIF values, it may be necessary to consider removing or combining certain indicators or employing alternative statistical techniques to mitigate multicollinearity concerns (Cohen et al., 2015).

Table 8 Collinearity Statistics

ITEM	VIF
EK1	1.885
EK2	2.708
EK3	2.397
EK4	2.228
EK5	1.903
GPI1	3.065
GPI2	3.466

GPI3	3.606
GPI4	3.906
GPI5	3.718
GPV1	2.210
GPV2	2.878
GPV3	3.245
GPV4	3.500
GPV5	2.178
PBC1	1.550
PBC2	2.042
PBC3	2.066
SN1	3.180
SN2	3.309
SN3	2.340

4.7 Model Fit

The "Model Fit" data presents two essential statistical gauges for evaluating the congruence of the structural equation model, a critical component in assessing a model's capacity to accurately reflect the underlying data is the use of specific statistical measures. SRMR and NFI are pivotal in this assessment process. The SRMR, which is based on the root mean square , indicates a better fit with lower values; on the other hand, the NFI assesses the comparative fit of the model against a baseline model with no hypothesized relationships, with values nearing 1 reflecting a more optimal fit (Hu & Bentler, 1999; Kline, 2018).

The data shows that the SRMR is 0.055, which is considered good as it falls below 0.08 that is typically accepted as satisfactory. The NFI value stands at 0.868, indicating a satisfactory model fit, yet there is potential for further enhancement. In terms of SRMR interpretation, a score below 0.05 signifies an excellent fit, whereas a score ranging from 0.05 to 0.08 is indicative of a good fit. For NFI, a value above 0.9 is typically regarded as indicating good model fit, while values between 0.8 and 0.9 suggest average fit that may require further adjustment (Schreiber et al., 2006). Based on the values of SRMR and NFI, it can be determined that the model aligns with the data to a satisfactory extent overall, particularly with the favourable SRMR value. However, the NFI value indicates that there is potential for further enhancement of the model. Researchers should consider modifying the model structure or exploring alternative models to improve the overall fit.

4.8 STRUCTURAL MODEL

4.8.1 Direct Effect

The "Direct Impact" table shows how strong the direct effects are between different variables and whether these effects are statistically significant. It includes the original sample effect values, the average values of the samples, how much the values vary (standard deviations), a measure of how extreme the effects are (T statistics), and the probability that these effects are not due to chance (P values). The core variables under consideration are EK, GPI, GPV, PBC, and SN, with direct effects noted from EK, GPV, PBC, and SN to both GPI and SN.

Based on the statistical data provided, we conducted hypothesis testing to assess if the differences between original values and sample means were statistically significant. The results indicate that the P-value for the EK -> GPI path is 0.168, which is above 0.05. Thus, we do not reject the null

hypothesis, indicating that there is no substantial difference between the sample mean and the original value for this particular path. In contrast, the P-values for the EK -> SN, GPV -> GPI, GPV -> SN, PBC -> GPI, PBC -> SN, and SN -> GPI paths are all below 0.05, indicating that there are significant differences between the sample means and original values for these paths. Specifically, the P-value for EK -> SN is 0.005, while those for GPV -> GPI and GPV -> SN are 0.005 and 0.003, respectively. The P-values for PBC -> GPI and PBC -> SN are both 0.001, and the lowest P-value is observed for SN -> GPI, which is 0.000. This further emphasizes the significance of the differences observed between the sample means and original values for these paths. These results suggest that, statistically, we can conclude that the differences between the sample means and original values for these paths are not due to random variation but are of practical significance.

Table 9 Direct Effect

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV)**	**P values**
EK -> GPI	-0.067	-0.065	0.048	1.381	0.168
EK -> SN	0.178	0.183	0.063	2.836	0.005
GPV -> GPI	0.119	0.120	0.043	2.793	0.005
GPV -> SN	0.159	0.158	0.054	2.933	0.003
PBC -> GPI	0.220	0.219	0.066	3.312	0.001
PBC -> SN	0.456	0.455	0.060	7.604	0.000
SN -> GPI	0.580	0.579	0.055	10.479	0.000

Most direct effects among the variables are statistically significant, particularly the influence of PBC and SN on GPI, as well as PBC's influence on SN, both of which are highly significant. These results indicate significant direct relationships among the variables under study, which is crucial for understanding the dynamics between them and for constructing effective predictive models (Hadi et al., 2024; Hu & Bentler, 1999).

4.8.2 Specific Indirect Effect

The "Specific Indirect Effect" table illustrates the magnitude and statistical significance of indirect effects among variables, specifically focusing on how certain variables influence outcomes through mediating variables. Indirect effects take place when a variable influences another by the way of a third variable, which is is called a mediator (Preacher & Hayes, 2004). In this analysis, the core variables are EK, SN, and GPI, with the indirect effects measured as follows: the effect of EK on GPI through SN is 0.104 (T = 2.929, p = 0.003), the effect of GPV on GPI through SN is 0.093 (T = 2.800, p = 0.005), and the effect of PBC on GPI through SN is 0.265 (T = 5.670, p = 0.000).

When interpreting the results of this study, the standard benchmarks for P values are utilized: significance is assumed for P values less than 0.05, a strong significance is indicated when P values fall below 0.01, and an exceptionally strong significance is observed at P values below 0.001 (Shan et al., 2024).

The findings reveal that both EK and GPV exhibit statistically significant indirect effects on GPI through SN, particularly highlighting the robust effect of PBC. These results emphasize the importance of the mediating variable SN to test the relationships of the variables, underlining its critical role in the predictive model (Hayes, 2013; Preacher & Hayes, 2008).

Table 10 Specific Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
EK -> SN -> GPI	0.104	0.105	0.035	2.929	0.003
GPV -> SN -> GPI	0.093	0.092	0.033	2.800	0.005
PBC -> SN -> GPI	0.265	0.264	0.047	5.670	0.000

4.8.3 Total Effect

The "Total Effect" table delineates the overall effect magnitude and its statistical significance across various variables, encompassing initial sample effect sizes, sample averages, standard deviations, T-values, and respective P-values. The total effect refers to the cumulative impact of one variable on another, encompassing both direct and indirect influences, and is critical for understanding the relationships between variables.

The key variables analyzed include EK, GPI, GPV, PBC, and SN. The table data indicate the total effects from EK, GPV, and PBC to GPI and SN as follows:

After analyzing the stats, we tested if the original sample values (O) and sample means (M) differ significantly. The T-statistics, found by dividing O-M by the standard deviation (STDEV), and their P-values, help us understand if these differences matter. For the EK -> GPI path, a P-value of 0.574, above 0.05, means no significant difference between the sample mean and original values. In contrast, the EK -> SN, GPV -> GPI, GPV -> SN, PBC -> GPI, PBC -> SN, and SN -> GPI pathways all exhibit P-values below 0.05, indicating that the observed differences between the sample means and original values are statistically significant. Specifically, the T-statistics for these pathways are 2.836, 3.575, 2.933, 7.636, 7.604, and 10.479, respectively, which correspond to their P-values of 0.005, 0.000, 0.003, 0.000, 0.000, and 0.000. These findings underscore the robustness of the observed differences, which are unlikely to be attributed to random variation. Collectively, these results indicate that, with the exception of the EK -> GPI pathway, the sample means significantly deviate from the original sample values for the remaining pathways under investigation.

Based on the data in the table, most total effects among the variables are statistically significant, particularly the effects from GPV and PBC to GPI and SN, as well as SN to GPI, which exhibit very high significance. However, the overall impact of EK on GPI does not reach statistical significance, indicating that the effect of EK on GPI might be minor or even negligible. These results highlight the importance of both direct and indirect connections among the variables under study, which are essential for grasping the interactions among these variables and for developing accurate predictive models.

Table 11 Total Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
EK -> GPI	0.037	0.040	0.065	0.562	0.574
EK -> SN	0.178	0.183	0.063	2.836	0.005
GPV -> GPI	0.211	0.211	0.059	3.575	0.000
GPV -> SN	0.159	0.158	0.054	2.933	0.003

PBC -> GPI	0.485	0.483	0.064	7.636	0.000
PBC -> SN	0.456	0.455	0.060	7.604	0.000
SN -> GPI	0.580	0.579	0.055	10.479	0.000

4.8.4 Path Diagram

The Path Diagram illustrates the theoretical connections between different constructs and their respective measures within the framework of a structural equation model (SEM). This diagram visually illustrates the pathways and their respective standardized coefficients, along with P values, which indicate the strength and significance of these relationships. In SEM, a standardized coefficient reflects the relationship's effect size, while the P value assesses the statistical significance of these effects.

In Figure 2, various constructs such as EK, PBC, GPV, SN and GPI are connected through directional arrows, representing assumed causal relationships. For example, the significant path from PBC to SN, with a coefficient of 0.456 and a P value of 0.000, indicates a strong positive relationship. Conversely, the paths from constructs like EK to their indicators may show non-significant coefficients, suggesting a lack of evidence for those relationships.
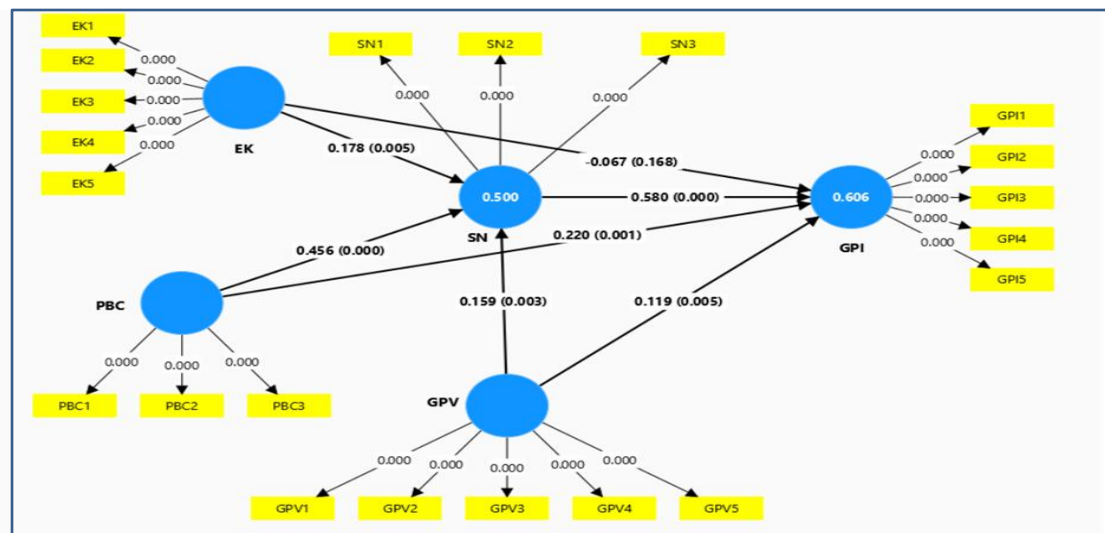

Figure 2 Path Diagram

In conclusion, the path diagram serves as an essential tool for visualizing and understanding the structural relationships within the model. It aids researchers in identifying significant connections and areas for further inquiry, contributing to the development of more robust predictive models.

5. CONCLUSION AND LIMITATION

In this study, the effects of EK, PBC and GPV on GPI were studied using SN as the intermediary. By collecting 567 questionnaires from Chinese college students, we confirmed the hypothesis and demonstrated that PBC and GPV positively influenced GPI, while EK had no significant effect. In addition, the study's findings reveal a marked correlation that ties SN to GPI, and SN plays an intermediary role in the above relationship. By leveraging the measurement and structural models, we put forth seven hypotheses, of which 6 were positively and significantly supported and 1 was not. PBC, GPV and SN had significant positive effects on GPI, while EK had no significant effect on GPI. This

finding can provide some important basis for organizations to carry out green marketing, scholars to study consumer purchasing behavior, government decision-making and so on.

First, GPV markedly influences GPI in a positive direction. The research revealed that enterprises actively carry out green publicity activities have become an effective way to maintain public relations, establish a good image, and take into account economic interests and social benefits. By conveying green messages, enterprises can increase the perceived value of their products and services to consumers. For consumers, if they can perceive the high value of green products, their purchasing attitude will become positive. Therefore, enterprises should actively demonstrate the green attributes of products and their contribution to environmental protection through a variety of channels to augment consumer recognition of the significance of green products. At the same time, Inviting consumers to contribute to the collective knowledge on green products through sharing their experiences can not only enhance the trust of other potential consumers, but also promote the spread of green buying behavior.

Secondly, PBC markedly influences GPI in a positive direction. Consistent feedback behaviors of college students in the decision-making phase of purchasing are indicative of their behavioral control characteristics. which indicates their ability to self-regulate and align their behavior with their intentions and goals. This positive impact underscores the importance of PBC in shaping the GPI of the college student population. That said, they tend to do in-depth research on the product before buying it. Therefore, marketers should use the power of the media to actively demonstrate the environmental benefits and performance advantages of green products, and create a positive product or brand image, which is also the responsibility of enterprises and businesses in promoting green consumption. Through effective information dissemination, it is possible to enhance the attractiveness of young consumers to advertisements, thereby increasing their GPI. If the message is conveyed correctly, young consumers are easily attracted by the advertisement.

Third, SN will affect consumers' GPI. This means that college students' purchasing decisions are often influenced by those around them, including family, friends, and opinion leaders on social media. Consequently, marketers can leverage strategies such as maintaining regular contact with customers or employing word-of-mouth marketing to encourage consumers to engage in green purchasing behavior. For instance, leveraging social media platforms to incentivize individuals to endorse eco-friendly products to their peers or kinfolk can be an effective strategy. Additionally, employing influential figures or renowned academics to disseminate messages through public service announcements, highlighting the imperatives of environmental conservation and providing insights on transitioning from non-eco-friendly to green products, can significantly bolster the green purchasing behavior among college students. Such initiatives are crucial for fostering a market environment that not only encourages but also accelerates the adoption of environmentally sustainable products.

In particular, we notice that although consumers are aware of the importance of environmental issues, empirical research shows that EK does not materially affect GPI in a positive way. In other words, while consumers are cognizant of environmental concerns, this consciousness does not always result in a proactive attitude towards buying green products. This can be attributed to many factors, such as the lack of tangible incentives, the high cost of green products or doubts about the authenticity of green statements. Considering these outcomes, we advise that marketing tactics be geared towards the elimination of these obstructions. For example, sales promotion can provide more information about the long-term benefits and cost-effectiveness of green products, or provide incentives such as discounts to make green products more accessible. In addition, enhancing trust through the communication of reliable green product attributes may improve consumer perception of utility and, as a result, could boost GPI. For example, digital communication channels are powerful tools to reach a broad audience, including college students, so the content delivered through these platforms should be tailored to the specific concerns and motivations of the target population. Moreover, it is crucial to communicate to college students the advantages and disadvantages of green brands and how they differ from traditional products, which can help them make more informed purchasing decisions.

This study expands GPI's body of literature and provides a substantial contribution to the discourse on green marketing and corporate sustainability. It deepens scholarly comprehension of the function

of consumer EK and the distinctive influence of GPI. Second, this study examined whether multiple influencing factors contribute to GPI enhancement in younger generations. In addition, the mediating role of SN was also discussed. Recommendations can help brand and marketing managers' design, establish, implement and maintain green marketing strategies at the company level, so that green strategies can be integrated into the overall marketing campaign.

Although this study provides many important inspirations, there are still limitations. First, The study's snapshot nature prevents us from drawing conclusions about cause and effect or tracking changes in GPI over time; a longitudinal approach could provide better insights into GPI's development. The sample mainly consisted of college students, which might restrict the applicability of the findings to this group; future research could include a more diverse demographic to make the results more widely applicable. Lastly, the study looked at the overall trend of Chinese college students' green product purchases without accounting for variations between different products.. Future studies can explore the differences of preferences for different types of green products. Finally, PLS-SEM is picked to smooth the way for ensuing investigative work, in the future, different analysis methods can be selected to analyze these relationships from different angles, and more reliable results can be obtained. Green consumption is an important support to promote the green way of life and production, which helps to reduce environmental burden, promote sustainable development, improve health and quality of life, support the development of environmental protection and shape social values, and is a consumption behavior that is beneficial to individuals, society and the environment. Today, with the vigorous development of green consumption, the young generation of consumers have an increasing demand for green products and services, and even regard green attributes as an important determinant of whether to buy. These shifts in values encourage companies to implement green development strategies, prioritize social ethical responsibilities, focus on green marketing approaches, and advance production technologies. This holds significant practical importance for the overall green transformation of the social production model.

6. ACKNOWLEDGEMENT

REFERENCES

[1]   Alalei, A., & Jan, M. (2023). Factors influencing the green purchase intention among consumers: An empirical study in Algeria. *Journal of Global Business Insights*, *8*(1), 49–65. https://doi.org/10.5038/2640-6489.8.1.1181

[2]   Amoako, G. K., Dzogbenuku, R. K., & Abubakari, A. (2020). *Do green knowledge and attitude influence the youth's green purchasing? Theory of planned behavior.*

[3]   Arif, H. W. A. (2019). *Factors Affecting Green Purchase Intention for Consumers in the Moderation Effect of Price Sensitivity. 3*(10).

[4]   Aseri, M., & Ansari, Z. A. (2023). Purchase Behaviour of Green Footwear in Saudi Arabia Using Theory of Planned Behaviour. *Sustainability*, *15*(6), 5045. https://doi.org/10.3390/su15065045

[5]   Chairunnisa, M. R., & Perdhana, M. S. (2020). The Roles of Environmental Concern, Green Perceived Value, Subjective Norms, and Green Trust Towards Green Hotel Purchase Intention. *Jurnal Sains Pemasaran Indonesia (Indonesian Journal of Marketing Science)*, *19*(1), 51–61. https://doi.org/10.14710/jspi.v19i1.51-61

[6]   Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2015). *Applied multiple regression correlation analysis for the behavioral sciences* (Third edition). Routledge Taylor & Francis Group.

[7]   Essiz, O., & Mandrik, C. (2021). *Intergenerational influence on sustainable consumer attitudes and behaviors: Roles of family communication and peer influence in environmental consumer socialization.*

[8]   Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 39. https://doi.org/10.2307/3151312

[9]   Hadi, M. Q. A., Budi, I. S., & Erziaty, R. (2024). *RELIGIOSITY AS CONSIDERED IN GREEN PURCHASE INTENTION AMONG MUSLIM CONSUMER. 7*(1).

[10]   Ham, M., Jeger, M., & Frajman Ivković, A. (2015). The role of subjective norms in forming the intention to purchase green food. *Economic Research-Ekonomska Istraživanja*, *28*(1), 738–748. https://doi.org/10.1080/1331677X.2015.1083875

[11]   Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* The Guilford Press.

[12]   Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, *116*(1), 2–20. https://doi.org/10.1108/IMDS-09-2015-0382

[13]   Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

[14]   Indrajaya, N., Perizade, B., Wahab, Z., & Shihab, M. S. (2024). Mediating role of attitude in green purchase intention for solar power plants: A green marketing analysis. *Annals of Management and Organization Research*, *5*(2), 127–141. https://doi.org/10.35912/amor.v5i2.1870

[15]   Izah, S. C., Sylva, L., & Hait, M. (2024). *Cronbach's Alpha: A Cornerstone in Ensuring Reliability and Validity in Environmental Health Assessment.*

[16]   Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, *41*, 60–69. https://doi.org/10.1016/j.jretconser.2017.11.008

[17]   Khan, M. S., Saengon, P., Alganad, A. M. N., Chongcharoen, D., & Farrukh, M. (2020). Consumer green behaviour: An approach towards environmental sustainability. *Sustainable Development*, *28*(5), 1168–1180. https://doi.org/10.1002/sd.2066

[18]   Kline, R. B. (2018). Response to Leslie Hayduk's Review of Principles and Practice of Structural Equation Modeling, 4th Edition. *Canadian Studies in Population*, *45*(3–4), 188. https://doi.org/10.25336/csp29418

[19]   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. https://doi.org/10.3390/su15086426

[20]   Lavuri, R., Parida, R., & Singh, S. (2024). Unveiling ways to examine the purchase intension of green products in emerging markets. *Benchmarking: An International Journal*, *31*(5), 1385–1401. https://doi.org/10.1108/BIJ-06-2022-0379

[21]   Liao, Y.-K., Wu, W.-Y., & Pham, T.-T. (2020). Examining the Moderating Effects of Green Marketing and Green Psychological Benefits on Customers' Green Attitude, Value and Purchase Intention. *Sustainability*, *12*(18), 7461. https://doi.org/10.3390/su12187461

[22]   Lin, S.-T., & Niu, H.-J. (2018). Green consumption: Environmental knowledge, environmental consciousness, social norms, and purchasing behavior. *Business Strategy and the Environment*, *27*(8), 1679–1688. https://doi.org/10.1002/bse.2233

[23]   Majeed, S. (2023). Perceived green psychological benefits and customer pro-environment behavior in the value-belief-norm theory: The moderating role of perceived green CSR. *International Journal of Hospitality Management*.

[24]   Nduneseokwu, C., Qu, Y., & Appolloni, A. (2017). Factors Influencing Consumers' Intentions to Participate in a Formal E-Waste Collection System: A Case Study of Onitsha, Nigeria. *Sustainability*, *9*(6), 881. https://doi.org/10.3390/su9060881

[25]   O'brien, R. M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality & Quantity*, *41*(5), 673–690. https://doi.org/10.1007/s11135-006-9018-6

[26]   Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*(4), 717–731. https://doi.org/10.3758/BF03206553

[27]   Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

[28]   Sabono, D., & Murwaningsari, E. (2022). *THE INFLUENCE OF GREEN PERCEIVED VALUE, GREEN PERCEIVED QUALITY, AND GREEN PERCEIVED RISK ON GREEN REPURCHASE INTENTION WITH GREEN TRUST AS INTERVENING VARIABLE*.

[29]   Sang, P., Yao, H., Zhang, L., Wang, S., Wang, Y., & Liu, J. (2020). Influencing factors of consumers' willingness to purchase green housing: A survey from Shandong Province, China. *Environment, Development and Sustainability*, *22*(5), 4267–4287. https://doi.org/10.1007/s10668-019-00383-8

[30]   Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting Structural Equation Modeling and Confirmatory Factor Analysis Results: A Review. *The Journal of Educational Research*, *99*(6), 323–338. https://doi.org/10.3200/JOER.99.6.323-338

[31]   Shan, H., Wang, X., Yin, F., Zhou, Y., Mao, L., Zhu, X., & Liu, C. (2024). *Combination of transcriptome and Mendelian inheritance reveals novel prognostic biomarker of CTLA-4-related lncRNAs and protective role of nitrogen metabolism pathway in lung adenocarcinoma development*.

[32]   Stampa, E., Zander, K., & Hamm, U. (2020). *Insights into German Consumers' Perceptions of Virtual Fencing in Grassland-Based Beef and Dairy Systems: Recommendations for Communication*.

[33]   Tahir, M. (2021). *The Impact of Green Perceived Value and Its Additional Multidimensional Expanded Variables Effect on Customer Attitude and Purchasing Intention for Buying Green Food Products: A Case of Pakistan*.

[34]   Tilahun, M., Berhan, E., & Tesfaye, G. (2023). Determinants of consumers' purchase intention on digital business model platform: Evidence from Ethiopia using partial least square structural equation model (PLS-SEM) technique. *Journal of Innovation and Entrepreneurship*, *12*(1), 50. https://doi.org/10.1186/s13731-023-00323-x

[35]   Voorhees, C. M., Brady, M. K., Calantone, R., & Ramirez, E. (2016). Discriminant validity testing in marketing: An analysis, causes for concern, and proposed remedies. *Journal of the Academy of Marketing Science*, *44*(1), 119–134. https://doi.org/10.1007/s11747-015-0455-4

[36]   Wang, H., Ma, B., & Bai, R. (2019). How Does Green Product Knowledge Effectively Promote Green Purchase Intention? *Sustainability*, *11*(4), 1193. https://doi.org/10.3390/su11041193

[37]   Wang, L., Wong, P. P. W., Narayanan Alagas, E., & Chee, W. M. (2019). Green Hotel Selection of Chinese Consumers: A Planned Behavior Perspective. *Journal of China Tourism Research*, *15*(2), 192–212. https://doi.org/10.1080/19388160.2018.1553743

[38]   Wang, S., Li, J., & Zhao, D. (2017). The impact of policy measures on consumer intention to adopt electric vehicles: Evidence from China. *Transportation Research Part A: Policy and Practice*, *105*, 14–26. https://doi.org/10.1016/j.tra.2017.08.013

[39]   Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, *135*, 732–739. https://doi.org/10.1016/j.jclepro.2016.06.120

[40]   Yang, C.-H., Chuang, M.-C., & Chen, D.-F. (2024). Role of Higher Education Students' Environmental Awareness and Environmental Concern in the Purchase Intention of Circular Economy Products. *Sustainability*, *16*(5), 1979. https://doi.org/10.3390/su16051979

[41]   Zayed, M. F., Gaber, H. R., & El Essawi, N. (2022). Examining the Factors That Affect Consumers' Purchase Intention of Organic Food Products in a Developing Country. *Sustainability*, *14*(10), 5868. https://doi.org/10.3390/su14105868

[42]   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. https://doi.org/10.3390/ijerph17186607

[43]   Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the Factors Influencing Green Purchase Intention: A Meta-Analysis Approach. *Frontiers in Psychology*, *12*, 644020. https://doi.org/10.3389/fpsyg.2021.644020