

Article

Revealing the Key Determinants of Green Purchase Intentions: Insights from an Extended UTAUT2 Model

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Abstract

In this study, we extend the UTAUT2 model to explore the determinants of green purchase intention in Taiwan. By incorporating environmental concern, government support, and green trust, the model highlights how contextual and trust-based factors shape sustainable consumption. Based on 590 valid survey responses, analysis using covariance-based structural equation modeling reveals that performance expectancy, effort expectancy, social influence, price value, environmental concern, government support, and green trust all positively influence green purchase intention. Notably, green trust also mediates the relationship between the core UTAUT2 constructs and green purchase intention. In contrast, hedonic motivation and habit show no significant effects, suggesting that sustainable consumption has not become habitual or emotionally driven behavior in Taiwan. These findings emphasize the importance of rational evaluation, social context, and policy support in driving green behavior and offer practical implications for promoting sustainable consumption.

Keywords: UTAUT2; green purchase intention; green trust; environmental concern; government support



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1. Introduction

Environmental issues such as pollution, resource depletion, and climate change have increasingly challenged global social and economic development. The United Nations introduced the Sustainable Development Goals (SDGs) in 2015 to respond to these challenges. Among them, “Responsible Consumption and Production (SDG 12)” and “Climate Action (SDG 13)” emphasize promoting sustainable consumption through policies and market mechanisms to reduce the ecological impact. To lessen their effects on the environment and encourage the adoption of sustainable consumption, governments and corporations worldwide have implemented sustainability strategies and regulations to stimulate the adoption of green products and services and motivate customers to lessen their adverse environmental impact. For instance, policies such as the European Union’s European Green Deal, Japan’s Green Transformation (GX), and South Korea’s Green Growth Strategy promote corporate social responsibility (CSR) and establish standards for green products to stimulate their purchase. These initiatives also drive sustained growth in the green market, motivating businesses to develop such products actively and further advancing the global green economy.

Taiwan has actively promoted ecologically informed policies and regulations to increase market acceptance of green products in response to global trends in sustainable

consumption. The government of Taiwan has implemented eco-labeling systems, green procurement policies, and waste management regulations to encourage businesses to produce sustainable products and guide consumers toward their consumption. In addition, the government promotes sustainable consumption through educational activities, policy subsidies, and incentives. Despite the government's continued involvement, the purchase intention in terms of green products has not grown as expected. This situation indicates that these policies still need improvement to enhance consumers' eco-friendly purchase intentions. Therefore, understanding the critical determinants influencing green purchase intention (GPI) will contribute to optimizing policies and promoting market development.

Numerous studies have investigated consumers' GPI; however, research on enhancing this intention within a policy-driven environment remains limited. For example, Feng et al. (2025) [1] examined the influence of environmental regulations on consumers' GPI and found that government policies significantly enhanced the explanatory power of key green consumer dimensions and improved their model's predictive capability. In contrast, Su and Li (2024) [2] investigated the impact of green marketing strategies on GPI and found that in the absence of policy factors, the level of environmental knowledge weakened the relationship between environmental attitudes and purchase intentions. These contrasting findings highlight the critical role of regulatory support in strengthening green consumption behavior. Additionally, many studies on sustainable consumption behavior have employed theoretical frameworks such as the theory of planned behavior (TPB), the technology acceptance model (TAM), and the stimulus–organism–response (SOR) model [3–11], primarily focusing on individual factors or specific contexts. Prior research has rarely utilized the unified theory of acceptance and use of technology 2 (UTAUT2) framework to explore green purchase intentions and behaviors, and most studies have not simultaneously considered critical variables such as green trust (GT), environmental concern (EC), and government support (GS). Therefore, in this study, we extend the UTAUT2 framework to comprehensively examine the critical factors influencing GPI among Taiwanese consumers.

The principal objective of this research is to apply an extended UTAUT2 model to investigate Taiwanese consumers' purchase intentions toward green products. This provides new insights into the key determinants influencing GPI while also addressing gaps in the current literature. This study utilizes covariance-based structural equation modeling (CB-SEM) to analyze the data and examine the hypotheses. The findings will assist the Taiwanese government in making policies that promote sustainable consumption, raise green product adoption, facilitate market transformation, and support sustainable development.

2. Theoretical Background and Hypotheses

2.1. UTAUT2 and Extended Model

Preliminary research on user technology adoption behaviors has led to the development of various theories and models. Venkatesh et al. (2003) [12] synthesized several prominent theories to formulate the unified theory of acceptance and use of technology (UTAUT), which encompasses performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FCs). This framework explains and predicts user acceptance and usage of new technologies. However, the limited scope of the user types in the UTAUT constrains its ability to predict behavioral intentions effectively. To address this limitation, Venkatesh et al. (2012) [13] introduced the UTAUT2 framework, which incorporates additional constructs, such as hedonic motivation (HM), price value (PV), and habit (HT). Applicable to general usage and consumer behavior studies, this enhanced model significantly improves the explanation of behavioral intentions.

The UTAUT2 framework is used to research technology adoption behavior and demonstrates superior predictive and explanatory power for behavioral intentions [14]. The model has been applied in different scholarly fields, providing strong empirical insights into usage and purchase intentions. Its applications include technology usage intention [15–19], travel intention [20], and purchasing behavior [21–25], indicating its sufficient understanding of consumer motivations.

Although the UTAUT2 has demonstrated high applicability in studies of technology acceptance behavior, its explanatory and predictive power in specific consumer behavior contexts—such as green product purchasing—can be enhanced by incorporating new variables tailored to different scenarios [13,14]. Researchers must prioritize crucial social and environmental elements to understand consumers' intentions and behaviors regarding green purchasing better. Among these, many scholars argue that GT and EC effectively capture consumers' trust in and sense of responsibility toward green products [3,7,11,26–28]. GS is also recognized as a significant factor influencing sustainable consumption behavior [29–31], mainly through policy incentives and subsidies that effectively encourage consumers to choose green products.

Building on the UTAUT2 framework, this study incorporates GT, EC, and GS as extended variables. This approach is consistent with the recommendations in the literature [14,32]. It enriches the theoretical framework for evaluating sustainable consumption behavior and tries to increase the model's applicability and explanatory power for green purchasing behavior. This study systematically surveys the psychological, environmental, and policy factors related to GPI through this framework. The research results facilitate the promotion of green products and provide broad insights for Taiwanese government units and businesses. In summary, subsequent sections will elucidate the relationships among these variables within the context of sustainable consumption behavior.

With environmental issues receiving increasing attention, the Taiwanese government has actively integrated sustainable consumption and production into its policy framework to promote sustainable habits among consumers and support the growth of a circular economy. Green products are recyclable, produce low pollution, and use resources efficiently. The government supports these green products with certifications like the Green Mark and Energy Label, which help build trust and acceptance in the market. Research indicates that consumers are increasingly proactive in protecting and preserving the environment and are inclined to pay more for sustainable products [26]. Despite the growing promotion of green products, a lack of consumer awareness and limited intentions to purchase them continue to pose significant obstacles [33]. These constraints and changes indicate the necessity of investigating the factors influencing green product purchasing behavior [34]. Future research could utilize the UTAUT2 framework to investigate the key determinants of intentions to consume sustainable products and the underlying mechanisms involved.

In this study, we examine the extent to which the latent variables of the UTAUT2 influence green product purchasing decisions. These variables are based on the definitions proposed by Venkatesh et al. (2012) and Venkatesh et al. (2016) [13,32] and have been modified to fit the context of green product purchasing behavior. Numerous empirical studies have demonstrated that the seven latent variables significantly positively affect behavioral intention [19,35–38]. GPI has been conceptualized in various research studies as the likelihood and willingness of consumers to prioritize products with environmentally friendly attributes over conventional alternatives during purchase decisions [2,26,39], with most studies interpreting GPI as consumers' inclination to purchase green products [3].

PE is an important feature of the UTAUT and UTAUT2 frameworks, closely related to the perceived personal benefits of adopting a new technology or product [12,13]. This study defines PE as the belief that consumers who purchase green products expect envi-

ronmental benefits, such as reduced carbon emissions, less pollution, energy conservation, and improved health and quality of life. When consumers expect such products to deliver these benefits effectively, their green purchase intention is significantly strengthened [2,21]. Prior research has consistently confirmed that the environmental and personal benefits of purchasing green products are key drivers of sustainable consumption [10,34,39,40].

EE is closely related to perceived ease of use (PEOU) [13]. This variable pertains to the perception that consumers have when purchasing green products, referring to the perceived product availability and the clarity of the information provided. When purchasing green products is made more straightforward and convenient, it significantly enhances consumers' green purchase intention [23,41].

SI is key to determining consumers' environmentally conscious behaviors. It includes the belief that influential people in social circles support using new products or technologies [13]. In the context of this study, SI is defined as the impact of social groups and prevailing public opinion on consumers, presenting purchasing green products as a behavior that is socially endorsed by communities rather than merely a personal decision. The power of recommendations can be particularly significant; advice from family, friends, social media influencers, or even celebrities can profoundly impact consumers' purchasing decisions [23,41,42].

FCs are critical to increasing customers' willingness to make green purchasing decisions. This dimension entails offering enough support, including green certification knowledge, environmental product details, sales channels, and product support provided by retailers [13], to assist consumers in making such choices. When consumers perceive that retailers offer sufficient knowledge, resources, and infrastructure, the barriers to green purchasing are effectively reduced and their intentions are strengthened [23,38,41].

HM refers to the emotional rewards that consumers derive from acquiring or utilizing green products and utilitarian or functional factors [13]. Consumers may be pleased when green product aspects are consistent with their beliefs [43]. Empirical research indicates that when consumers perceive that green products provide emotional rewards or boost social recognition, their green purchase intention is significantly enhanced [23,42].

PV is defined as consumers' subjective assessment of the trade-off between the price of green products and their perceived benefits [13]. It reflects consumers' comparison of a product's price with the functional or environmental value it provides [43]. This association is visible in various contexts, including e-commerce [23], omnichannel retail [24], and smart cities [38]. Consumers believe that the environmental benefits of green products justify the higher price, so they are more likely to purchase them. Therefore, balancing price and value to ensure the attractiveness of green products is crucial to promoting green purchasing behavior.

HT is an automatic and repetitive behavioral pattern based on consumers' past purchasing experiences [13]. Once they develop a habit of using environmentally friendly products, they are more likely to continue selecting such products in the future. For example, individuals who regularly use reusable shopping bags are often more inclined to purchase other green products. Research suggests that habit is a significant predictor of behavioral intention [23,24,44]. When sustainable consumption becomes integrated into daily life and evolves into a natural choice, this habit transforms into a stable, long-term consumption behavior, thereby reinforcing GPI. Based on the theoretical models and empirical evidence, the following hypotheses are proposed:

H1. *PE exerts a positive influence on GPI.*

H2. *EE exerts a positive influence on GPI.*

H3. *SI exerts a positive influence on GPI.*

H4. *FCs exert a positive influence on GPI.*

H5. *HM exerts a positive influence on GPI.*

H6. *PV exerts a positive influence on GPI.*

H7. *HT exerts a positive influence on GPI.*

2.2. The Role of GT in the Model

GT is an important mediator in decision-making when purchasing green products. It is defined as consumers' willingness to rely on such commodities, stemming from their beliefs or expectations about the credibility, benevolence, and performance of products or services regarding the environmental impact [11,45]. Trust is equally indispensable in sustainable consumption as the fundamental determinant of purchasing decisions across various product categories. A lack of confidence in green products' claims and environmental benefits is usually a major barrier to their adoption [7,8,26]. Conversely, increasing GT is essential for promoting consumers' sustainable consumption [5].

In the sustainable consumption research, certain studies indicate that GT is a significant mediator between GPI and various antecedents. These include corporate social responsibility, green perceived value, social presence, green perceived quality, and others [5,7,8,34]. Furthermore, empirical research indicates that latent factors based on the UTAUT2 significantly impact GT. This enhances the effect between antecedents and purchase intention by boosting consumers' trust in green products, confirming its usefulness as a mediator [14,46–48]. Thus, the following hypotheses are proposed:

H8. *PE exerts a positive influence on GT.*

H9. *EE exerts a positive influence on GT.*

H10. *SI exerts a positive influence on GT.*

H11. *FCs exert a positive influence on GT.*

H12. *HM exerts a positive influence on GT.*

H13. *PV exerts a positive influence on GT.*

H14. *HT exerts a positive influence on GT.*

H15. *GT exerts a positive influence on GPI.*

2.3. EC and GS

EC motivates consumers to adopt sustainable behaviors; it is an important psychological motivator in the sustainable consumption research. Research demonstrates that as environmental awareness grows, EC significantly reduces the barriers consumers perceive regarding the time and resources required for sustainable consumption [3]. EC has led consumers to purchase green products and encouraged them to pay more attention to healthy lifestyles [49]. When consumers have strengthened awareness and concern about environmental issues, they are more inclined to choose products that mitigate pollution or resource waste, underlining the important role of EC in shaping sustainable consumption

behavior [50]. This perception motivates businesses to promote green products and services [27]. Therefore, businesses must implement more environmentally friendly practices, which significantly impact customers' decision-making processes.

With the apparent rise in green product consumption, EC has emerged as a critical factor for businesses to develop environmental strategies and encourage consumer participation in sustainable practices [28]. EC is the degree of an individual's concern for environmental issues and motivation to take relevant actions [3,26], and empirical studies consistently demonstrate that it exerts a significant direct influence on intentions to purchase green products. For consumers with heightened environmental sensitivity, sustainable consumption is considered a tangible commitment to environmental protection [26,28,51,52]. Thus, EC is a driving force behind sustainable consumption behavior and a vital link connecting individual values to concrete actions. As a result, the following hypothesis is formulated:

H16. *EC exerts a positive influence on GPI.*

GS is a policy tool that fosters innovation and sustainability. Its mechanisms include policy frameworks, economic subsidies, tax incentives, and other measures to lower the barriers to implementing green behavior [19,53,54]. Offering tax breaks and subsidies, for example, can encourage consumers to purchase green products, generating favorable conditions for the market and decreasing the economic burden. According to the sustainable consumption research, GS is a key driver in advancing the adoption of innovative technologies and sustainable practices. It promotes creating and implementing environmentally friendly initiatives, laying a supportive foundation for green consumption [53,54]. Studies demonstrate that GS effectively reduces the uncertainties associated with sustainable consumption, boosts consumer confidence in environmentally friendly products and services, and encourages participation through incentive mechanisms [19,30,54]. In summary, it can reduce consumers' barriers to purchasing green products and enhance their GPI. The following hypothesis is therefore proposed for consideration:

H17. *GS exerts a positive influence on GPI.*

This research introduces a model based on the theoretical background and variable relationships. The research framework has eleven constructs, as shown in Figure 1: PE, EE, SI, FCs, HM, PV, HT, GT, EC, GS, and GPI.

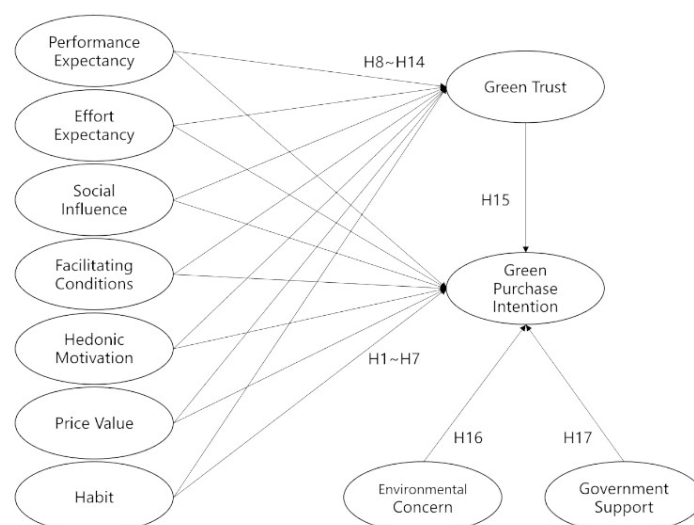


Figure 1. Research framework.

3. Methodology

3.1. Data Collection and Analysis Methods

In this study, we gathered data through an online survey targeting consumers in major cities because these individuals are more likely to be exposed to environmental information and green products. An anonymous survey was used to protect respondents' privacy and enhance the authenticity of their feedback, and it was conducted from March to April 2025. Out of 600 responses received, 10 were excluded because they were incomplete or invalid. Consequently, the final number of valid questionnaires was 590, with an effective response rate of 98.3%. The sample structure is summarized in Table 1, and descriptive statistics were calculated by employing SPSS 22.0. Regarding the sample characteristics, 41.5% of respondents were male and 58.5% were female. The largest age group was older than 45 years old, accounting for 34.1%, with over 89.7% holding a university/college degree or higher. Additionally, 73.7% of respondents reported a monthly income of more than TWD 30,000.

Table 1. Sample's structure.

Item	Classification	Frequency (n = 590)	%
Gender	Male	245	41.5
	Female	345	58.5
Age	Younger than 18 years old	19	3.2
	18–25 years old	101	17.1
	26–35 years old	110	18.6
	36–45 years old	159	26.9
	Older than 45 years old	201	34.1
Education	Senior high school	61	10.3
	University/college	351	59.5
	Graduate school	178	30.2
Monthly Income	Less than TWD 30,000	155	26.3
	TWD 30,001–40,000	126	21.4
	TWD 40,001–50,000	114	19.3
	TWD 50,001–60,000	71	12.0
	More than TWD 60,000	124	21.0

In this study, we employed structural equation modeling (SEM) for the subsequent statistical analysis. SEM is commonly used in various fields, including the social sciences, marketing, and educational research, because it can thoroughly analyze the causal relationships among variables within a framework and provide precise parameter estimates [55]. In the context of sustainable consumption behavior research, two predominant SEM approaches are commonly applied: covariance-based structural equation modeling (CB-SEM) [2,4,7,27,41,56] and partial least-squares structural equation modeling (PLS-SEM) [11,34,42,43,51,57,58]. CB-SEM is well suited for validating established theoretical models, whereas PLS-SEM is more appropriate for theory development and predictive analysis [59]. Based on these considerations, we adopted CB-SEM for the model validation, utilizing AMOS 22.0 as the statistical software and following a two-stage analytical approach for the data analysis [60,61]. The initial stage involved the measurement model, which evaluated the appropriateness of the variable indicators by conducting confirmatory factor analysis (CFA), reliability and validity assessments, and goodness-of-fit testing. The second stage employed the structural model, which utilized path analysis to test the proposed hypotheses among the variables, thereby assessing the research model's explanatory and predictive power.

3.2. Measurement Instruments

This study's questionnaire content and measurement items were developed based on a literature review, ensuring consistency and applicability between the scales and the research variables. All the measurement items were assessed using a 5-point Likert scale. The latent variables of the UTAUT2 were modified from the scale developed by Venkatesh et al. (2012) [13], with adjustments tailored to the context of sustainable consumption. The GT, EC, and GPI constructs were based on the research scales proposed by Nhu et al. (2019) [26], while GS was derived from the scale by Shi et al. (2022) [19]. Table 2 summarizes the specific measurement items associated with each variable. To refine the measurement tools, this study conducted a consultation process with 14 expert scholars who participated in discussions to further optimize the scale design and overall structure of the questionnaire. All the experts unanimously agreed that its content and design demonstrated a high degree of appropriateness, establishing a solid foundation for subsequent empirical analysis.

Table 2. The measurement of the variables.

Variables	Items	References
PE	PE1: Using green products will positively impact my daily life. PE2: Purchasing green products helps me achieve my environmental objectives. PE3: Purchasing green products enhances my quality of life.	[13]
EE	EE1: Purchasing green products is convenient. EE2: Purchasing green products is not a burden for me. EE3: The process of selecting and purchasing green products is straightforward.	[13]
SI	SI1: My family and friends recommend purchasing green products. SI2: My family and friends support my decision to purchase green products. SI3: My family and friends prefer to purchase green products.	[13]
FC	FC1: I can easily search for channels, such as retail stores or online platforms, to purchase green products. FC2: I have sufficient resources, including financial and informational assets, to purchase and use green products. FC3: Green products align with my consumption habits and do not cause any inconvenience during use. FC4: I have access to essential guidance and support when selecting or using green products.	[13]
HM	HM1: Selecting and purchasing green products provides a sense of satisfaction. HM2: Selecting and purchasing green products is enjoyable. HM3: Selecting and purchasing green products can be highly entertaining.	[13]
PV	PV1: Purchasing green products is beneficial for individuals. PV2: The prices of green products are reasonable because they significantly benefit the environment. PV3: The price of green products reflects their actual value.	[13]
HT	HT1: I am accustomed to purchasing green products. HT2: I often select green products as my preferred option. HT3: I will continue to purchase green products, even without promotions or incentives.	[13]
GT	GT1: Green products comply with applicable environmental standards and regulations. GT2: The manufacturers' commitments and guarantees regarding green products are trustworthy. GT3: Green products can meet individual environmental performance expectations. GT4: Green products fulfill their commitments and responsibilities to environmental protection.	[26]

Table 2. Cont.

Variables	Items	References
EC	EC1: I am deeply concerned about the deteriorating quality of the environment. EC2: Environmental protection is an issue that I frequently emphasize. EC3: I actively engage in matters concerning environmental conservation. EC4: I often consider methods to improve environmental quality.	[26]
GS	GS1: The government actively encourages and promotes the use of green products. GS2: The government provides incentive mechanisms, including subsidies and tax incentives, to encourage the development of green products. GS3: The government has implemented clear regulations and standards to encourage the widespread adoption and use of green products.	[19]
GPI	GPI1: Based on environmental considerations, I would purchase green products. GPI2: I would choose to support more environmentally friendly green products. GPI3: I am committed to increasing the frequency of my purchases of green products in the future. GPI4: In the future, I will continue to purchase green products.	[26]

Notes: PE = performance expectancy, EE = effort expectancy, SI = social influence, FC = facilitating condition, HM = hedonic motivation, PV = price value, HT = habit, GT = green trust, EC = environmental concern, GS = government support, GPI = green purchase intention.

4. Research Analysis and Results

4.1. Measurement Model

In this phase, we used CFA and model the fit assessments to evaluate the goodness-of-fit, reliability, validity, and maximum likelihood (ML) to estimate the parameters. The research model demonstrates excellent fit indices, including CMIN/DF (χ^2/df) = 3.25; SRMR = 0.04; RMSEA = 0.06; GFI = 0.85; AGFI = 0.82; NFI = 0.89; TLI = 0.91; CFI = 0.92; and IFI = 0.92. These indices show better fit and alignment with the recommended measurement standards [62–66]. The CFA results are presented as standardized estimates for each item in Table 3. The standardized factor loadings (FLs) typically range from 0.70 to 0.95, and the p -values are highly significant. Both the simple matching coefficient (SMC) and the average variance extracted (AVE) for each item are equal to or greater than 0.5. The composite reliabilities (CRs) range from 0.84 to 0.95, indicating that the research model has good reliability and internal consistency. The above results meet the evaluation criteria [67], suggesting that the measurement model exhibits good convergent validity. The discriminant validity was assessed through bootstrapping, and the correlation coefficients between constructs within 95% confidence intervals were all below 1, indicating that the model possesses adequate discriminant validity [68].

Table 3. The results of the confirmatory factor analysis.

Variable	Item	Standardized FL	S.E.	C.R.	p	SMC	CR	AVE
PE	PE1	0.79				0.62		
	PE2	0.75	0.05	17.78	***	0.56	0.84	0.64
	PE3	0.86	0.05	20.52	***	0.74		
EE	EE1	0.70				0.49		
	EE2	0.82	0.07	16.59	***	0.67	0.84	0.63
	EE3	0.86	0.08	17.02	***	0.74		
SI	SI1	0.92				0.84		
	SI2	0.92	0.03	37.08	***	0.84	0.95	0.85
	SI3	0.93	0.03	37.83	***	0.86		

Table 3. Cont.

Variable	Item	Standardized FL	S.E.	C.R.	<i>p</i>	SMC	CR	AVE
FC	FC1	0.77				0.60	0.88	0.65
	FC2	0.86	0.05	22.40	***	0.74		
	FC3	0.78	0.06	18.38	***	0.61		
	FC4	0.82	0.06	19.82	***	0.67		
HM	HM1	0.91				0.83	0.95	0.86
	HM2	0.95	0.03	40.77	***	0.90		
	HM3	0.92	0.03	37.35	***	0.85		
PV	PV1	0.70				0.49	0.85	0.65
	PV2	0.86	0.09	16.48	***	0.73		
	PV3	0.85	0.09	16.24	***	0.72		
HT	HT1	0.77				0.60	0.84	0.64
	HT2	0.79	0.05	19.01	***	0.62		
	HT3	0.85	0.06	20.30	***	0.73		
GT	GT1	0.82				0.68	0.90	0.70
	GT2	0.81	0.04	23.05	***	0.66		
	GT3	0.80	0.05	22.33	***	0.64		
	GT4	0.91	0.04	27.13	***	0.82		
EC	EC1	0.73				0.54	0.86	0.61
	EC2	0.78	0.05	17.92	***	0.60		
	EC3	0.80	0.06	18.11	***	0.64		
	EC4	0.82	0.05	18.96	***	0.67		
GS	GS1	0.84				0.71	0.88	0.71
	GS2	0.81	0.04	22.37	***	0.66		
	GS3	0.87	0.04	24.13	***	0.76		
GPI	GPI1	0.75				0.57	0.87	0.62
	GPI2	0.83	0.06	20.32	***	0.69		
	GPI3	0.78	0.06	18.53	***	0.60		
	GPI4	0.78	0.06	18.43	***	0.61		
Fit Indices	CMIN/DF = 3.25			GFI = 0.85		TLI = 0.91		
	SRMR = 0.04			AGFI = 0.82		CFI = 0.92		
	RMSEA = 0.06			NFI = 0.89		IFI = 0.92		

Notes: PE = performance expectancy, EE = effort expectancy, SI = social influence, FC = facilitating condition, HM = hedonic motivation, PV = price value, HT = habit, GT = green trust, EC = environmental concern, GS = government support, GPI = green purchase intention, FL = factor loading, S.E. = standard error, C.R. = critical ratio, *** $p < 0.001$, SMC = simple matching coefficient, CR = composite reliability, AVE = average variance extracted, CMIN = chi-square minimum, DF = degrees of freedom, SRMR = standardized root mean square residual, RMSEA = root mean square error of approximation, GFI = goodness of fit index, AGFI = adjusted goodness of fit index, NFI = normed fit index, TLI = Tucker–Lewis index, CFI = comparative fit index, IFI = incremental fit index.

4.2. Structural Model

After verifying the measurement model through the goodness of fit indices and CFA, we established a structural model and performed path analysis to evaluate the hypothesized relationships between the variables. The results of the path analysis are presented in Table 4. The findings indicate that PE ($\beta = 0.11$; $p < 0.05$), EE ($\beta = 0.21$; $p < 0.001$), SI ($\beta = 0.12$; $p < 0.05$), PV ($\beta = 0.26$; $p < 0.001$), EC ($\beta = 0.11$; $p < 0.05$), GS ($\beta = 0.12$; $p < 0.01$), and GT ($\beta = 0.23$; $p < 0.001$) all have positive and significant relationships with GPI, confirming that H1, H2, H3, H6, H15, H16, and H17 are supported. Conversely, no significant effects are observed between FCs ($\beta = 0.004$; $p > 0.05$), HM ($\beta = 0.01$; $p > 0.05$), HT ($\beta = 0.10$; $p > 0.05$), and GPI, indicating that H4, H5, and H7 are not supported.

Table 4. The results of the path analysis.

Hypothesized Path		Standardized Estimate	S.E.	C.R.	<i>p</i>	Result
H1	PE → GPI	0.11	0.03	2.36	*	Supported
H2	EE → GPI	0.21	0.04	3.76	***	Supported
H3	SI → GPI	0.12	0.03	2.13	*	Supported
H4	FC → GPI	0.00	0.04	0.07	0.946	Not Supported
H5	HM → GPI	0.01	0.01	0.24	0.812	Not Supported
H6	PV → GPI	0.26	0.05	4.24	***	Supported
H7	HT → GPI	0.10	0.04	1.70	0.089	Not Supported
H8	PE → GT	0.15	0.03	3.37	***	Supported
H9	EE → GT	0.33	0.04	6.94	***	Supported
H10	SI → GT	0.23	0.03	4.49	***	Supported
H11	FC → GT	0.32	0.03	7.01	***	Supported
H12	HM → GT	0.02	0.01	0.80	0.422	Not Supported
H13	PV → GT	0.32	0.04	6.31	***	Supported
H14	HT → GT	0.07	0.04	1.38	0.168	Not Supported
H15	GT → GPI	0.23	0.06	3.45	***	Supported
H16	GS → GPI	0.12	0.02	2.70	**	Supported
H17	EC → GPI	0.11	0.06	2.03	*	Supported

Notes: PE = performance expectancy, EE = effort expectancy, SI = social influence, FC = facilitating condition, HM = hedonic motivation, PV = price value, HT = habit, GT = green trust, EC = environmental concern, GS = government support, GPI = green purchase intention, S.E. = standard error, C.R. = critical ratio, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Furthermore, PE ($\beta = 0.15$; $p < 0.001$), EE ($\beta = 0.33$; $p < 0.001$), SI ($\beta = 0.23$; $p < 0.001$), FCs ($\beta = 0.32$; $p < 0.001$), and PV ($\beta = 0.32$; $p < 0.001$) all have a positive and significant impact on GT, thereby providing strong support for H8, H9, H10, H11, and H13. However, HM ($\beta = 0.02$; $p > 0.05$) and HT ($\beta = 0.07$; $p > 0.05$) show no significant effects on GT; H12 and H14 are unsupported. The squared multiple correlations (SMCs) for GT and GPI are 0.69 and 0.67, indicating that the research model demonstrates a good level of explanatory power.

The mediation effect was further tested after verifying the hypothesized relationships among the variables. We employed the bootstrapping method for the analysis [69]. When the 95% confidence interval value does not include zero, it means that the path relationship has a significant mediating effect. The analysis results are shown in Table 5. The bias-corrected percentile method (BC) and percentile method (PC) used for PE, EE, SI, FCs, and PV give values that do not contain zero, and the p -value is less than 0.05, indicating that these variables significantly mediate the effect on GPI. In addition, the mediating relationship between HM, HT, and GPI does not reach a significant level, indicating no significant mediating effects between their path relations.

Table 5. Bootstrap test for the mediation effect.

Path Relation	Indirect Effect	S.E.	Bias-Corrected Percentile Method (BC)			Percentile Method (PC)		
			Lower	Upper	<i>p</i>	Lower	Upper	<i>p</i>
PE → GT → GPI	0.034	0.017	0.009	0.088	**	0.005	0.071	*
EE → GT → GPI	0.076	0.028	0.030	0.140	**	0.020	0.133	*
SI → GT → GPI	0.053	0.025	0.014	0.117	**	0.008	0.110	*
FC → GT → GPI	0.075	0.028	0.025	0.140	**	0.017	0.129	*
HM → GT → GPI	0.005	0.008	−0.006	0.026	0.313	−0.009	0.021	0.474
PV → GT → GPI	0.072	0.032	0.022	0.158	**	0.021	0.156	*
HT → GT → GPI	0.017	0.018	−0.009	0.066	0.161	−0.020	0.052	0.370

Notes: PE = performance expectancy, EE = effort expectancy, SI = social influence, FC = facilitating condition, HM = hedonic motivation, PV = price value, HT = habit, GT = green trust, EC = environmental concern, GS = government support, GPI = green purchase intention, S.E. = standard error, ** $p < 0.01$, * $p < 0.05$.

5. Discussion

Firstly, the initial-stage results reveal that PE, EE, SI, and PV all have significant and positive effects on GPI. This implies that when consumers perceive green products as practical, easy to use, supported by others, and reasonably priced [41,70], they are more inclined to engage in green purchasing behavior. This finding emphasizes that consumers usually consider product functionality, perceptual value, and social expectations when making purchasing decisions, aligning with the viewpoints proposed by several researchers [13,41,71]. In contrast, FCs, HM, and HT do not have a significant impact on GPI; this result contradicts previous studies [13,23,24,38,41,42,44]. A possible explanation is that sustainable consumption has not yet become habitual or associated with hedonic value, and the supporting infrastructure may still be insufficient to influence consumer decisions significantly [72]. Therefore, in Taiwan, these variables may not noticeably influence GPI, indicating that sustainable consumption remains a rational purchasing decision rather than one driven by habit or emotion.

Secondly, the results indicate that PE, EE, SI, FCs, and PV all significantly directly affect GT, which is formed based on functional assessments of the perceived usefulness, ease of use, price perception, and social recognition and the availability of external resources [11,73–75]. Simultaneously, GT mediates between these variables and GPI. In contrast, HM and HT do not significantly influence GT, reinforcing the notion that the formation of trust is grounded more in rational cognitive evaluations and structural support than in emotional gratification or habitual behavior. These results accentuate the mediating role of GT in connecting consumers' cognitive assessments, social influence, external facilitation, and value perceptions, which indirectly facilitate green purchasing behavior.

Finally, EC, GS, and GT all have significant positive effects on GPI, which indicates that Taiwanese consumers emphasize ecological issues and the environmental benefits of green products and perceive support from government policies [2,70,71,76]; they have enough confidence in companies' commitments and practices regarding environmental sustainability. This evidence reveals the important role of personal values, government policies, and consumer trust in sustainable purchasing decisions.

The sample was demographically skewed toward educated, urban-based consumers, with 89.7% holding a university degree or above and 34.1% being aged over 45. As the survey targeted consumers in major cities, the results may reflect the preferences and perceptions of populations more exposed to environmental information and green products.

6. Implications

6.1. Theoretical Implications

In this study, we advance the theoretical development of green consumer behavior by extending the UTAUT2 framework with three context-specific variables: environmental concern (EC), government support (GS), and green trust (GT). While previous studies have employed the UTAUT2 primarily in the domains of technology adoption, few have adapted it to sustainability-related consumer behavior, particularly in the context of green purchasing. By integrating EC and GS—two policy-relevant and externally driven constructs—and introducing GT as a cognitive–affective mediator, we respond to recent calls in the literature to better reflect the complexity of sustainable decision-making.

Furthermore, this research contributes to the theoretical discourse by revealing how both internal psychological mechanisms (e.g., trust) and external structural factors (e.g., government support) collectively shape sustainable purchase intentions. The empirical validation of this extended model not only supports the adaptability of the UTAUT2 to new behavioral contexts but also provides a more holistic framework for examining pro-environmental behavior. In doing so, this study fills key gaps in the sustainability

and behavioral intention literature and opens up new directions for theory-informed sustainability strategies.

6.2. Practical Implications

This study provides valuable insights for promoting sustainable consumption in Taiwan. At the government policy level, the results show that the government dramatically affects people's plans to purchase green products; therefore, policymakers should improve environmental education and promote sustainable consumption through multi-communication ways to build public trust in and acceptance of green products. Following current efforts, such as reductions in plastic use and energy change, this also suggests that government groups collaborate with both the public and private sectors to create a better environment for sustainable consumption.

At the corporate marketing level, the results show that consumers place high value on the functional performance of and the social support attached to green products. Businesses should emphasize product benefits and environmental features, using social media and influencer marketing to communicate green values and a positive social atmosphere. Moreover, companies should develop convenience and practicality-related green products, increasing consumers' purchasing motivation and developing habits.

From the consumer viewpoint, the results reveal that EE, PV, and GT are key psychological motivators of GPI. Therefore, it is necessary to enhance consumers' perception of the ease of use and value for money of green products while simultaneously strengthening trust through transparent communication, credible environmental labels, and reliable product utility so that the perceived risks can be diminished and a more favorable psychological environment could be created for sustainable consumption. As stated above, government policy, corporate marketing, and consumer psychology should be considered and integrated to promote green consumption toward building an ecosystem conducive to sustainable behavior, accelerating Taiwan's implementation of the SDGs.

6.3. Research Limitations and Future Research Directions

This study's survey sample primarily consisted of residents from major urban areas, with limited representation of consumers from non-urban regions. This limitation may restrict the generalizability and external validity of the findings. To address this issue and enhance the robustness of the green consumption research, future studies are encouraged to recruit more diverse and representative samples. Specifically, including participants from rural areas, older age groups, or individuals with limited access to digital technologies may help reveal alternative behavioral patterns that are not captured in urban-centered studies.

Moreover, this study is subject to several limitations, including its cross-sectional design, limited generalizability beyond the Taiwanese context, and potential sampling bias arising from the use of an online survey. Future research is encouraged to employ longitudinal approaches or conduct cross-cultural comparisons to improve the robustness and external validity of the findings.

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