ASEAN International Sandbox Conference 2026 AISC Proceedings, Volume 8, 2026
http://aseansandbox.org

Impact of Green Brand Image on Consumer Purchase Intention —Customer Trust as a Mediating Variable

Wenjie Tan

International Chinese College, Rangsit University, Pathum Thani, Thailand
E-mail:278185327@qq.comTan

Abstract

This paper examines the impact of green brand image on consumers' purchase intentions. Green brand image is divided into five dimensions: green product image, green corporate image, green humanized image, green symbolic image, and green functional image—and customer trust is introduced as a mediating variable to explore its relationships with consumers' purchase intention and customer trust. Drawing on the Theory of Planned Behavior, Consumer Perception Theory, and Trust Theory, this study constructs a theoretical model of "green brand image–customer trust–consumers' purchase intention." Using the electronic technology industry as the research context, data were collected through questionnaires and analyzed empirically. The results show that green brand image and its five dimensions all have a significant positive effect on consumers' purchase intention, and that customer trust plays a mediating role between green brand image and consumers' purchase intention.

Keywords: *Green Brand Image, Consumer Purchase Intention, Customer Trust*

1. Introduction

In recent years, issues such as environmental pollution, climate change, and resource crises on a global scale have led to increasing attention from all sectors of society to environmental protection and sustainable development. Governments in various countries have successively promulgated laws and regulations related to environmental protection to promote the development of a green economy. For example, the Chinese government has proposed the "dual-carbon" goals, advocating green and low-carbon consumption among consumers and strengthening regulation of enterprises' environmentally responsible behaviors. Wei and Xiong (2022) argue that with the introduction of policies such as "carbon peaking" and "carbon neutrality," green consumption has become a mode of consumption strongly promoted at the national level. Policy orientations across countries have prompted enterprises to place greater emphasis on their green image and environmental responsibility in business operations, and to meet market demand through the construction of a green brand image. Against this background, the electronic technology industry faces problems such as excessive resource consumption and significant environmental impact, and is in urgent need of green transformation. As consumers' environmental awareness gradually increases, the influence of green brand image on consumers' purchase intention in this industry has become increasingly evident. Building on existing studies of brand image, this research introduces green and environmental factors into brand image research and, with customer trust as a mediating variable, constructs a research model of the impact of green brand image on consumers' purchase intention, further discussing the effects and mechanisms among the three variables.

Brand image is an important component of corporate image and serves as a superordinate concept of green brand image. Green brand image represents an extension and deepening of brand image after the integration of environmental protection and sustainable development concepts. Understanding and clarifying the definition and dimensions of brand image is the basis for delineating the connotation of green brand image and constructing a research framework. Brand image theory centers on brand associations, and numerous scholars have conducted research in this area. Aaker (1991) defined brand associations as various things that consumers associate with a brand name, dividing them into product-related and non-product-related associations, and proposed a unidimensional brand image model, emphasizing that brand image is a key component of brand equity.

Research on brand image dimensions has become a focal topic in the field, with differences among scholars' classifications. Park, Jaworski, and MacInnis (1986) were the first to propose a three-dimensional brand image model, dividing brand image into functional image, symbolic image, and experiential image, thereby

breaking away from the traditional product-centered perspective. Biel (1992) proposed that brand image comprises three dimensions—product image, consumer image, and corporate image—each of which can be further subdivided into functional and emotional attributes. Based on associative network memory theory, Krishnan (1996) proposed a four-dimensional model of brand image, including the number of brand associations, favorability, uniqueness, and sources. Chinese scholars Fan and Chen (2002) proposed a four-dimensional brand image model encompassing product image, corporate image, humanized image, and symbolic image; this classification is comprehensive and intuitive, covering the core emotional and rational factors of brand communication. Qin, Qiu, and Wu (2009) integrating the characteristics of Chinese enterprises, divided brand image into five dimensions, with particular emphasis on the importance of brand personality.

Green brand image has become an important topic in recent years in research on brand management and sustainable consumption, and many scholars have explored its concept. Dai (2008) pointed out that green brand image refers to consumers' perceptions and understandings of the degree to which a brand is "green." Chen (2010) clarified the concept of "green brand image," arguing that it reflects consumers' overall cognition of a brand's environmental commitments, environmental friendliness, and sustainable development, and that it has an impact on brand equity. At present, studies on the dimensions of green brand image are relatively limited, and most draw on traditional brand image dimensions in combination with green consumption contexts. He (2021) divided green brand image into green corporate image, green product image, green symbolic image, and green humanized image. He (2021) focusing on the field of rural tourism, divided green brand image into green brand tourism organization image, product hardware attributes, and product software attributes. He and Chen (2020) in research on green apparel brands, proposed a six-dimensional classification standard.

Green brand image refers to the positive cognitions and associations related to environmental protection and sustainable development that a brand forms in consumers' minds, and it has an important influence on consumers' purchase intention. Chen (2010) defined green brand image as consumers' overall cognition of a brand's environmental commitments, environmental responsibility, and green values, emphasizing its effect on consumer attitudes and purchase intention. Mourad and Ahmed (2012) found that green brand image has a significant positive effect on brand preference. Scholars from different perspectives have verified the relationship between the two: Chen and Chang (2013) confirmed that the stronger consumers' perceptions of a brand's green image, the higher their brand trust and purchase intention, and that green brand image can influence consumption decisions through green trust and perceived green value. Yadav and Pathak (2017) found that green marketing strategies can promote consumers' repeat purchase behavior, with particularly strong effects among younger consumer groups.

Green brand image also has an important impact on customer trust, and this relationship has been widely validated. Jin (2005) pointed out that customer trust is consumers' high level of confidence and reliance on a specific brand's competence and attitudes, constituting a comprehensive form of trust. The impact of green brand image on customer trust is reflected in two dimensions: cognitive trust and affective trust. Chen and Chang (2013) showed that when enterprises build a strong environmentally friendly brand image, consumers perceive the products as more credible, thereby enhancing cognitive trust. Akturan (2018) proposed that green brand image can reflect a firm's social responsibility and moral commitment, reduce customers' perceived risk, and strengthen trust, thereby broadening the pathways through which green brand image exerts its influence.

Customer trust has a certain influence on consumers' purchase intention. Pavlou and Gefen (2004) argued that customer trust is an important psychological factor affecting purchase intention; in B2C e-commerce platforms, consumers' trust in merchants can reduce concerns about fraud and information security, thereby enhancing purchase intention. Morgan and Hunt (1994) proposed that once consumers establish trust in a brand, they are more willing to purchase its products or services and pay less attention to competing brands.

Customer trust plays a mediating role between green brand image and consumers' purchase intention. In everyday consumption, consumers find it difficult to participate in firms' production processes and to establish trust directly with firms; however, the construction and communication of brand image can help facilitate the establishment of a trust relationship between the two sides. Gao and Li (2013) pointed out that in online shopping contexts, the provision of services by websites enhances consumers' trust, which in turn more readily motivates consumers to make purchases.

Therefore, based on the existing literature and taking the electronic technology industry as the research context, this study divides green brand image into five dimensions—green product image, green corporate image, green humanized image, green symbolic image, and green functional image—and examines the relationships

among green brand image, consumers' purchase intention, and customer trust. The study aims to provide a reference for further research on the relationship between green brand image and consumers' purchase intention, and to offer theoretical support for enterprises' green marketing practices.

2. Research Objectives

1) To examine whether the green brand image influences consumers' purchase intention
2) To explore the relationship and effects that exist between green brand image and customer trust
3) To examine customer trust, as a mediating variable, play a mediating role between green brand image and consumers' purchase intention

3. Research Materials and Methods

This study is grounded in the Theory of Planned Behavior, Consumer Perception Theory, and Trust Theory to explore the impact of green brand image on consumers' purchase intention. The Theory of Planned Behavior proposed by Ajzen (1991) explains how green brand image influences purchase intention through attitudes, subjective norms, and related factors. Consumer Perception Theory as articulated by Zeithaml (1988) explains how green brand image affects purchase intention through perceived quality, perceived value, and related perceptions. Trust Theory proposed by Morgan and Hunt (1994) supports the notion that green brand image can promote purchase intention by enhancing trust. Together, these three theories provide key theoretical support for the present study.

Fan and Chen (2002) proposed a four-dimensional brand image model, including product image (consumers' perceptions of product attributes such as functionality, materials, and place of origin), corporate image (consumers' perceptions of the brand-owning firm's market position, innovativeness, social responsibility, and reputation), humanized image (the human-like characteristics consumers attribute to a brand, reflecting their cognition of the brand–consumer relationship), and symbolic image (consumers' perceptions and cognitions of brand identifiers such as packaging, logos, and colors). Park et al. (1986) proposed a three-dimensional brand image model, in which functional image (the practical utility value conveyed by a brand through its products or services, mainly reflected in performance, quality, safety, and practicality) is an important dimension. Patrick, MacInnis, and Folkes (2002) argued that creating green brands can help firms gain consumer trust and achieve market differentiation. Yang and Hu (2008) suggested that green certification signifies environmental protection, safety, and health, and that brands with green certification are more likely to gain consumers' trust. In the context of green and environmental protection, this study, drawing on Fan Xiucheng's brand image composition model and the functional image dimension in Park's model, divides green brand image into five dimensions—green product image, green corporate image, green humanized image, green symbolic image, and green functional image—and discusses their respective effects on consumers' purchase intention and customer trust.

Customer trust refers to consumers' reliance on the reliability, honesty, and competence of a particular brand or firm. This reliance influences consumers' attitudes toward the brand and plays a decisive role in consumers' purchasing behavior. Sweeney and Swait (2008) pointed out that brand trust can effectively enhance customers' purchase intention and reduce price sensitivity. Yu, Chen, and Yu (2009) in examining the relationship between customer trust and consumer behavior, found that consumer behavior is influenced by trust-related factors.

Based on the above studies, this paper proposes the following hypotheses:

H1: Green brand image and its five dimensions have a positive effect on consumers' purchase intention.

H2: Green brand image and its five dimensions have a positive effect on customer trust.

H3: Customer trust has a positive effect on consumers' purchase intention.

H4: Customer trust plays a mediating role between green brand image and consumers' purchase intention.

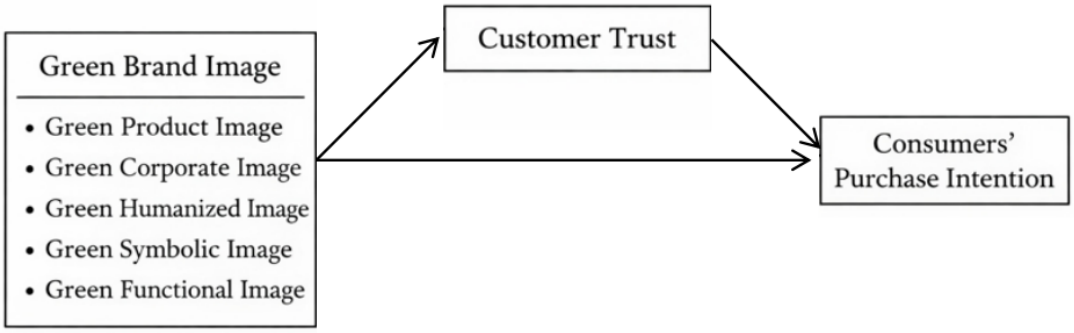

Figure 1 Theoretical Model

To collect relevant data, this study conducted an online questionnaire survey. The questionnaires were distributed and completed via platforms such as WeChat, QQ, and web-based channels from September to October 2025. SPSS 31.0 and AMOS software were used for data processing and analysis. Specifically, descriptive statistical analysis, reliability analysis, validity analysis, correlation analysis, regression analysis, and mediation effect testing were performed.

4. Results and Discussion

4.1 Research Results

In this study, formal questionnaires were distributed via platforms such as Wenjuanxing and WeChat. A total of 375 questionnaires were collected. After screening and removing invalid questionnaires, 332 valid questionnaires were obtained, yielding an effective response rate of 88.53%.

Table 1 Descriptive Statistical Analysis of Demographic Variables

Variable	Category	Frequency	Percentage (%)
Gender	Male	136	40.96
	Female	196	59.04
Age	Under 18	1	0.30
	18–25	156	46.99
	26–35	59	17.77
	36–45	40	12.05
	45 and above	76	22.89
Educational level	High school or below	29	8.73
	Junior college	49	14.76
	Bachelor's degree	189	56.93
	Master's degree or above	65	19.58
Monthly income (RMB)	Below 3,000	128	38.55
	3,001–6,000	93	28.01
	6,001–10,000	89	26.81
	Above 10,000	22	6.63
Occupation	College student	125	37.65
	Enterprise employee	62	18.67
	Civil servant or public institution employee	66	19.88
	Self-employed	43	12.95
	Other	36	10.84

Source: Compiled by the author.The same applies hereinafter.

According to Table 1, the total number of valid samples in this survey reached 332. In terms of gender, there were 136 males (40.96%) and 196 females (59.04%), with the proportion of females being approximately 1.5 times that of males. Regarding age distribution, the 18–25 age group accounted for 156 respondents (46.99%), forming the main group, which is consistent with the characteristics of the primary consumer group for electronic technology products and green consumption, namely younger consumers; the proportions of the other age groups were relatively lower. In terms of educational attainment, respondents with a bachelor's degree accounted for 56.93%, and those with a master's degree or above accounted for 19.58%; together, those with a bachelor's degree or above comprised 76.51%, indicating a generally high educational level among respondents. In terms of income, those earning below RMB 3,000 accounted for 38.55%, and those earning RMB 3,001–10,000 accounted for 54.82%, indicating a generally moderate income level, which is consistent with the current trend that the main green consumption market consists of young consumers with medium incomes. Occupations were mainly college students, enterprise employees, and civil servants or public institution employees, together accounting for 76.20%, which aligns with the requirements for the target respondents of this study.

This study used SPSS 31.0 software to conduct reliability analysis. As shown in Table 2, the overall Cronbach's α coefficient of the independent variable scale for green brand image is 0.901, which is greater than 0.8, indicating high overall internal consistency of the scale. Green brand image consists of five dimensions. As shown in the table, the corrected item–total correlation (CITC) values of all items are greater than 0.4, and more than 80% of the items have CITC values greater than 0.5, indicating that the green brand image scale has a high level of reliability. For the dependent variable, the overall Cronbach's α coefficient of the consumer purchase intention scale is 0.888, which is greater than 0.7, indicating that the overall reliability of the scale is acceptable. As shown in the table, the CITC values of all items measuring consumer purchase intention are greater than 0.5, indicating high reliability of the scale. For the mediating variable, the overall Cronbach's α coefficient of the customer trust scale is 0.872, which is greater than 0.7, indicating good overall reliability. As shown in the table, the CITC values of all items in the customer trust scale are greater than 0.5, indicating a good level of reliability. Regarding the "Cronbach's α if item deleted," it can be seen that deleting any item from any of the three scales does not lead to a significant increase in the reliability coefficient, indicating that all items should be retained. The analysis results show that all three scales demonstrate good reliability, indicating that the research data have good internal consistency.

Table 2 Reliability Test of Variables and Dimensions

Variable	Measurement Item	Corrected Item–Total Correlation (CITC)	Cronbach's α if Item Deleted	Cronbach's α
Green Brand Image	B4	0.584	0.894	0.901
	C1	0.613	0.894	
	C2	0.531	0.896	
	C3	0.548	0.895	
	D1	0.425	0.900	
	D2	0.515	0.897	
	D3	0.475	0.899	
	E1	0.559	0.895	
	E2	0.596	0.894	
	E3	0.611	0.893	
Consumer Purchase Intention	F1	0.681	0.875	0.888
	F2	0.772	0.854	
	F3	0.696	0.871	
	F4	0.673	0.876	
	F5	0.824	0.841	
Customer Trust	G1	0.651	0.856	0.872
	G2	0.740	0.834	
	G3	0.776	0.825	
	G4	0.571	0.874	
	G5	0.759	0.830	

Note: A = green product image; B = green corporate image; C = green humanized image; D = green symbolic image; E = green functional image; F = consumers' purchase intention; G = customer trust. The same abbreviations are used in subsequent tables.

The items of each dimensional scale in the questionnaire were adapted from previously validated and mature studies. The logic is sound, the wording is standardized, and the content validity is high. In addition to content validity, factor analysis is required to assess construct validity. Before conducting exploratory factor analysis (EFA), the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity must be used to determine whether the data are suitable for factor analysis. Generally, the KMO value should be greater than 0.7, with values above 0.8 considered good; data with KMO values below 0.5 should be discarded. In Bartlett's test of sphericity, a significance level of 0.00 indicates that the correlations among variables are appropriate and that factor analysis is suitable. As shown in Table 3, the KMO value is 0.916 and the significance probability of Bartlett's test is 0.000, indicating that this scale is suitable for factor analysis.

Table 3 KMO and Bartlett's Test of Sphericity

KMO value		0.916
Bartlett's test of sphericity	Approximate chi-square	5098.488
	df	351
	p-value	0.000

As shown in Table 4, a total of seven factors were extracted through exploratory factor analysis. The cumulative variance explained by the seven factors is 70.686%, which is greater than 50%. The factor loadings of all measurement items are above 0.50, indicating good convergent validity among the items. At the same time, based on the item fit and in full consistency with the dimensional structure of the reference scales adopted in this study, the results identify five dimensions for the independent variable—green product image, green corporate image, green humanized image, green symbolic image, and green functional image; one dimension for the dependent variable—consumers' purchase intention; and one dimension for the mediating variable—customer trust.

Table 4 Exploratory Factor Analysis Results

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Eigenvalue	Variance Explained (%)
A1				0.532					
A2				0.745				2.611	9.670
A3				0.749					
A4				0.768					
B1			0.736						
B2			0.774					2.967	10.990
B3			0.756						
B4			0.746						
C1					0.769				
C2					0.814			2.328	8.624
C3					0.804				
D1							0.761		
D2							0.821	2.162	8.007
D3							0.749		
E1						0.745			
E2						0.800		2.254	8.348
E3						0.758			

Table 4 Exploratory Factor Analysis Results (continued)

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Eigenvalue	Variance Explained (%)
F1	0.707								
F2	0.794								
F3	0.674							3.466	12.835
F4	0.690								
F5	0.859								
G1		0.649							
G2		0.779							
G3		0.811						3.297	12.212
G4		0.544							
G5		0.813							

Confirmatory factor analysis (CFA) was conducted using AMOS software to evaluate the overall goodness of fit of the measurement model in this study. As shown in Table 5, the ratio of chi-square to degrees of freedom is 1.905, which is less than 3; the RMSEA value is 0.052, which is less than 0.10; the GFI value is 0.886; the CFI value is 0.944; the NFI value is 0.890; and the NNFI value is 0.935. All these indices are greater than 0.8 and close to 0.9, indicating a good fit between the empirical data and the measurement model.

Table 5 Model Fit Indices

Index	$\chi 2$	df	p	χ^2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI
Criterion	-	-	>0.05	<3	>0.9	<0.10	<0.05	>0.9	>0.9	>0.9
Value	577.209	303	0.000	1.905	0.886	0.052	0.080	0.944	0.890	0.935

As shown in Table 6, the AVE values of each dimension of the measurement model are all greater than 0.5, and the CR values are all greater than 0.7, which effectively indicates good convergent validity of this study.

Table 6 AVE and CR Results of the Model

Variable	Average Variance Extracted (AVE)	Composite Reliability (CR)
Green Product Image	0.543	0.826
Green Corporate Image	0.585	0.849
Green Humanized Image	0.671	0.859
Green Symbolic Image	0.548	0.782
Green Functional Image	0.638	0.841
Consumers' Purchase Intention	0.622	0.891
Customer Trust	0.590	0.876

As shown in Table 7, the AVE values of each dimension are greater than the inter-factor correlation coefficients, indicating good discriminant validity.

Table 7 Pearson Correlations and Square Roots of AVE

Variable	Green Product Image	Green Corporate Image	Green Humanized Image	Green Symbolic Image	Green Functional Image	Consumers' Purchase Intention	Customer Trust
Green Product Image	0.737						
Green Corporate Image	0.564	0.765					
Green Humanized Image	0.472	0.427	0.819				
Green Symbolic Image	0.386	0.351	0.347	0.740			
Green Functional Image	0.493	0.497	0.463	0.383	0.799		
Consumers' Purchase Intention	0.513	0.480	0.488	0.412	0.512	0.789	
Customer Trust	0.556	0.477	0.475	0.429	0.497	0.551	0.768

Correlation analysis is used to measure the degree of association between two or more variables and is a prerequisite for regression analysis. This study used the Pearson correlation model to verify whether green brand image and its dimensions are significantly correlated with consumers' purchase intention and customer trust, as well as the correlation between customer trust and consumers' purchase intention. As shown in Table 8, the Pearson correlation coefficients between green product image, green corporate image, green humanized image, green symbolic image, green functional image, and consumers' purchase intention are 0.513, 0.480, 0.488, 0.412, and 0.512, respectively, with a significance level of $p < 0.01$. This indicates that green brand image and its five sub-dimensions are significantly positively correlated with consumers' purchase intention at the 0.01 level. Hypothesis H1 is initially supported. The Pearson correlation coefficients between green product image, green corporate image, green humanized image, green symbolic image, green functional image, and customer trust are 0.556, 0.477, 0.475, 0.429, and 0.479, respectively, with $p < 0.01$, indicating that green brand image and its five sub-dimensions are significantly positively correlated with customer trust at the 0.01 level. Hypothesis H2 is initially supported. The Pearson correlation coefficient between customer trust and consumers' purchase intention is 0.551, with $p < 0.01$, indicating a significant positive correlation at the 0.01 level. Hypothesis H3 is initially supported.

Table 8 Correlation Analysis Results

	Green Product Image	Green Corporate Image	Green Humanized Image	Green Symbolic Image	Green Functional Image	Consumers' Purchase Intention	Customer Trust
Green Product Image	1						
Green Corporate Image	0.564**	1					
Green Humanized Image	0.472**	0.427**	1				
Green Symbolic Image	0.386**	0.351**	0.347**	1			
Green Functional Image	0.493**	0.497**	0.463**	0.383**	1		
Consumers' Purchase Intention	0.513**	0.480**	0.488**	0.412**	0.512**	1	
Customer Trust	0.556**	0.477**	0.475**	0.429**	0.497**	0.551**	1

Note: * $p < 0.05$, ** $p < 0.01$; correlation is significant at the 0.01 level (two-tailed).

Since the above correlation analysis cannot fully reflect the relationships among all variables, regression analysis is conducted in this section to further explore causal relationships and test the hypotheses proposed in this study. SPSS 31.0 software was used to construct regression models to ensure the rationality and validity of the research results.

As shown in Table 9, linear regression analysis was conducted with green product image, green corporate image, green humanized image, green symbolic image, and green functional image as independent variables, and consumers' purchase intention as the dependent variable. The model R^2 is 0.422, indicating that this model can explain 42.2% of the variance in purchase intention. The model VIF values are all below 5, indicating no multicollinearity; the Durbin–Watson (D-W) value is 1.971, close to 2, indicating no autocorrelation in the conceptual model and good model fit. The regression coefficients and test results for each dimension are as follows: green product image 0.186 ($t = 3.340$, $p = 0.001 < 0.01$), green corporate image 0.159 ($t = 2.545$, $p = 0.011 < 0.05$), green humanized image 0.217 ($t = 3.845$, $p = 0.000 < 0.01$), green symbolic image 0.127 ($t = 3.041$, $p = 0.003 < 0.01$), and green functional image 0.219 ($t = 3.861$, $p = 0.000 < 0.01$). From these regression coefficients and test results, it can be seen that green brand image and its five dimensions all have a significant positive effect on purchase intention.

Table 9 Regression Analysis of Green Brand Image and Consumers' Purchase Intention

	Unstandardized Coefficients		Standardized Coefficients	t	p	Collinearity Diagnostics	
	B	Std. Error	Beta			VIF	Tolerance
Constant	0.260	0.209	-	1.244	0.214	-	-
Green Product Image	0.186	0.056	0.186	3.340	0.001**	1.743	0.574
Green Corporate Image	0.159	0.062	0.138	2.545	0.011*	1.665	0.601
Green Humanized Image	0.217	0.056	0.196	3.845	0.000**	1.467	0.682
Green Symbolic Image	0.127	0.042	0.145	3.041	0.003**	1.283	0.779
Green Functional Image	0.219	0.057	0.205	3.861	0.000**	1.597	0.626
R 2	0.422						
Adjusted R 2	0.413						
F	F (5,326)=47.641,p=0.000						
D-W	1.971						

Note: Dependent variable = Consumers' purchase intention * p<0.05 ** p<0.01

As shown in Table 10, linear regression analysis was conducted with green product image, green corporate image, green humanized image, green symbolic image, and green functional image as independent variables, and customer trust as the dependent variable. The model R^2 is 0.436, indicating that this model can explain 43.6% of the variance in customer trust. The model VIF values are all below 5, indicating no multicollinearity; the D-W value is 1.876, close to 2, indicating no autocorrelation and good model fit. The regression coefficients and test results for each dimension are as follows: green product image 0.255 ($t = 4.861$, $p < 0.01$), green corporate image 0.125 ($t = 2.118$, $p = 0.035 < 0.05$), green humanized image 0.175 ($t = 3.280$, $p < 0.01$), green symbolic image 0.137 ($t = 3.476$, $p = 0.001 < 0.01$), and green functional image 0.173 ($t = 3.232$, $p < 0.01$). Green brand image and its five dimensions all have a positive effect on customer trust.

Table 10 Regression Analysis of Green Brand Image and Customer Trust

	Unstandardized Coefficients		Standardized Coefficients	t	p	Collinearity Diagnostics	
	B	Std. Error	Beta			VIF	Tolerance
Constant	0.426	0.197	-	2.166	0.031*	-	-
Green Product Image	0.255	0.052	0.267	4.861	0.000**	1.743	0.574
Green Corporate Image	0.125	0.059	0.114	2.118	0.035*	1.665	0.601
Green Humanized Image	0.175	0.053	0.165	3.280	0.001**	1.467	0.682
Green Symbolic Image	0.137	0.039	0.164	3.476	0.001**	1.283	0.779
Green Functional Image	0.173	0.054	0.170	3.232	0.001**	1.597	0.626
R 2	0.436						
Adjusted R 2	0.427						
F	F (5,326)=50.387,p=0.000						
D-W	1.876						

Note: Dependent variable = Customer trust * p<0.05 ** p<0.01

As shown in Table 11, linear regression analysis was conducted with customer trust as the independent variable and consumers' purchase intention as the dependent variable. The model R^2 is 0.303, indicating that customer trust accounts for 30.3% of the variance in consumers' purchase intentions. All VIF values in the model are below 5, indicating no multicollinearity. The Durbin–Watson (D-W) value is 1.908, close to 2, indicating no autocorrelation and no association among the sample data, suggesting a good model fit. The regression coefficient for customer trust is 0.577 ($t = 11.986$, $p = 0.000 < 0.01$), indicating a significant positive relationship between customer trust and consumers' purchase intention.

Table 11 Regression Analysis of Customer Trust and Consumers' Purchase Intention

	Unstandardized Coefficients		Standardized Coefficients	t	p	Collinearity Diagnostics	
	B	Std. Error	Beta			VIF	Tolerance
Constant	1.405	0.168	-	8.363	0.000**	-	-
Customer Trust	0.577	0.048	0.551	11.986	0.000**	1.000	1.000
R 2				0.303			
Adjusted R 2				0.301			
F				F (1,330)=143.653,p=0.000			
D-W				1.908			

Note: Dependent variable = Consumers' purchase intention

* p<0.05 ** p<0.01

A mediating effect model was constructed with green brand image to examine the mediating role of customer trust in the mechanism through which green brand image affects consumers' purchase intention. Let green brand image be the independent variable X, consumers' purchase intention be the dependent variable Y, and customer trust be the mediating variable M. In this framework, c represents the regression coefficient between X and Y, i.e., the total effect; a represents the regression coefficient between X and M; b represents the regression coefficient between M and Y; ab represents the mediating effect. 95% BootCI indicates the 95% confidence interval of ab obtained via bootstrap sampling; if this interval does not include 0, the effect is significant. If a and b are significant, and c' is not significant, this indicates a full mediation effect; if a and b are significant, c' is also significant, and a*b and c' have the same sign, this indicates a partial mediation effect.

As shown in Table 12, the 95% confidence interval of the mediating effect a*b does not include 0, indicating significance. This shows that the mediating effect exists in the pathway from independent variable X to dependent variable Y. In addition, the direct effect c' is also significant, indicating a partial mediation effect. Therefore, the mediating role of customer trust is valid, supporting hypothesis H4.

Table 12 Mediating Effect Test Results

Item	Symbol	Meaning	Effect Value	95% CI	Std. Error	z/t	p	Conclusion
Green Brand Image => Customer Trust => Consumers' Purchase Intention	a*b	Indirect Effect	0.203	0.072 – 0.224	0.039	5.155	0.000	
Green Brand Image => Customer Trust	a	X => M	0.872	0.764 – 0.981	0.055	15.796	0.000	Partial Mediation
Customer Trust => Consumers' Purchase Intention	b	M => Y	0.233	0.121 – 0.345	0.057	4.084	0.000	
Green Brand Image => Consumers' Purchase Intention	c'	Direct Effect	0.697	0.548 – 0.846	0.076	9.212	0.000	
Green Brand Image => Consumers' Purchase Intention	c	Total Effect	0.900	0.785 – 1.015	0.058	15.397	0.000	

Based on the above research results, hypotheses H1, H2, H3, and H4 are all supported. All proposed hypotheses are supported by the data analysis.

4.2 Discussion

The results of the above data analysis indicate:

1) Green brand image has a positive effect on consumers' purchase intention. Green brand image and its five dimensions all exert a significant positive effect on consumers' purchase intention. Among these, the effects of green product image, green humanized image, and green functional image are most pronounced. As the tangible carrier of the brand, the green product image attracts environmentally conscious consumers through features such as energy efficiency, environmental protection, and low carbon emissions. In the electronics and technology industry, the advantage of low long-term usage costs and consumers' attention to product performance and environmental attributes significantly enhances purchase intention. Green corporate image reflects the company's environmental protection, social responsibility, and sustainable development performance. Companies that actively practice environmental concepts are more likely to gain consumers' trust and goodwill. During the green brand development stage in the electronics and technology industry, corporate green image becomes a core competitive factor, indirectly promoting purchase intention. Green humanized image integrates environmental attributes with high-quality user experience. Through health-conscious design and attention to consumer needs, it evokes emotional resonance and trust. Its perceivable green performance and emotional value have a more significant effect on purchase intention. Green symbolic image relies on logos, packaging, and other elements to convey environmental concepts. Highly recognizable green symbols can quickly establish a positive brand impression and meet consumers' environmental psychological needs. In the highly competitive electronics

industry, this can easily attract consumers and enhance purchase intention. Green functional image focuses on practical green values such as energy efficiency and durability, aligning with consumers' quality and sustainability needs. Functional features of electronic products, such as low energy consumption and high efficiency, can reduce usage costs and demonstrate brand strength, directly enhancing consumer satisfaction and trust, and significantly stimulating purchasing behavior.

2) Green brand image has a positive effect on customer trust. Green brand image and its five dimensions exert a positive effect on customer trust. During the process of building a green brand image, a company can effectively enhance consumers' trust in the brand by demonstrating proactive practices in environmental protection, resource conservation, and sustainable development. Consumers generally perceive that companies that actively pursue green initiatives have a strong sense of social responsibility and are more trustworthy. By implementing green production, energy-saving design, eco-friendly packaging, and sustainable supply chain management, companies demonstrate their environmental commitment, thereby enhancing customer trust. When purchasing products, consumers are often concerned about product quality, performance, and health and safety. A green brand image communicates reliability and high-quality information, reducing consumers' uncertainty and increasing trust. At the same time, customer trust can reinforce the green brand image. Once consumers trust a brand, they are more willing to recognize its green image and continue supporting it in their consumption.

3) Customer trust has a positive effect on consumers' purchase intention. Customer trust refers to consumers' recognition of the reliability, honesty, and competence of a brand, product, or company during purchase decision-making. When consumers develop trust, they are more decisive, increasing purchase frequency and loyalty, reducing perceived risk, alleviating decision-making pressure, and forming dependence, making them willing to repurchase. Companies can build and maintain customer trust by improving product quality, optimizing services, enhancing brand transparency, and fulfilling promises, thereby facilitating consumer purchasing decisions.

4) Customer trust plays a mediating role in the effect of green brand image on consumers' purchase intention. In the process where the independent variable green brand image influences the dependent variable consumers' purchase intention, customer trust serves as a partial mediator. This indicates that green brand image can directly and positively affect purchase intention, and can also indirectly reinforce purchase intention by enhancing customer trust. Customer trust reduces consumers' risk perception and helps them acknowledge the brand's environmental commitments. It is a core factor in establishing long-term relationships between brands and consumers, strengthens emotional dependence and brand loyalty, and serves as an important basis for consumer decision-making in the green market. Customer trust is the key link between green brand image and consumers' purchase intention.

5. Research Conclusions

Based on the empirical analysis presented earlier, this study draws the following conclusions. The above findings indicate that green brand image and its five dimensions have a positive effect on consumers' purchase intention, and customer trust plays a partial mediating role between them. Based on these conclusions, the following countermeasures and suggestions are proposed for enterprises to implement green marketing practices:

1) Adopt multiple measures to advance implementation and strengthen the shaping of green brand image. Empirical results show that green brand image has a significant positive effect on consumers' purchase intention, with core dimensions covering product, corporate, humanized, symbolic, and functional attributes. Enhancing a single dimension alone is insufficient to strengthen core competitiveness. Electronics and technology companies need to comprehensively shape their green brand image by increasing investment in environmental technology innovation, establishing green product certification systems, optimizing green packaging, implementing green supply chain management, and improving green transparency. This will convert the green brand image into high-quality brand equity, reinforce consumer memory, and stimulate purchase intention.

2) Promote green marketing communication to enhance consumers' perception of the brand's environmental attributes. Customer trust has a significant positive effect on purchase intention and plays a

mediating role. In the information age, based on ensuring green brand image and customer trust, enterprises need to convey green concepts through effective marketing strategies. In the electronics and technology industry, companies can create authentic green brand stories to communicate environmental concepts and innovation journeys, enhancing consumers' emotional resonance. Enterprises can also adopt multi-channel green marketing strategies, using social media, brand collaborations, and green exhibitions to expand influence and allow consumers to experience green achievements. At the same time, "greenwashing" must be strictly avoided, and genuine green practices should be used to maintain consumer trust.

3) Combine policy guidance to promote industry-wide green standardization. Corporate green marketing should align with policies and regulations, actively respond to environmental policies, support carbon neutrality goals, develop carbon reduction strategies, and seek policy support and incentives. Enterprises should collaborate with industry associations to participate in green standard-setting, promote green technological innovation, jointly advance the standardization of electronic products, and coordinate upstream and downstream to build a complete green industry chain, thereby improving the industry's sustainable development level.

6. Research Limitations and Future Research Directions

6.1 Research Limitations

Although this study achieved its intended objectives through rigorous design, there remain some limitations: 1. Sample collection limitations: The survey questionnaires used in this study were collected via WeChat, Wenjuanxing mini-programs, and other online social platforms, and were distributed only online. The target respondents were primarily university students and young professionals, which results in a relatively concentrated sample distribution that may limit the generalizability of the findings. 2. Measurement scale limitations: There are currently few mature five-dimension green brand image measurement scales. The green brand image scale used in this study is based on authoritative scales in the brand image field, incorporating environmental factors and referencing previous scales created by many scholars. It was appropriately modified according to the research objectives of this study. Although the questionnaire's reliability and validity fall within an acceptable range, there remains room for improvement. 3. Industry-specific limitations: Considering current consumer awareness of green products, this study selected the electronics and technology industry as a representative sector for green consumption. However, it did not focus on any specific brand or product in depth. 4. Scope limitations: This study only explored the mediating role of customer trust between green brand image and consumers' purchase intention. Other potential factors affecting consumer behavior were not considered, and the model's comprehensiveness needs further improvement.

6.2 Research Limitations

Regarding sample collection: Expand the scale of survey questionnaires, use random sampling, and combine online and offline methods to ensure coverage across age groups and occupations. This would further enhance sample diversity and representativeness, reduce research bias, and make results more scientific and applicable. 2. Regarding measurement scales: Continuously monitor the development of green brand image scales and update them accordingly. Scales can also be further adapted to the characteristics of the research industry to better suit the target population. 3. Regarding industry scope: Future studies can extend to different types of industries for cross-industry comparative analysis or focus on specific green brands or products to revalidate the model proposed in this study. 4. Regarding research scope: Future research can include additional variables to more comprehensively explain the mechanism through which green brand image influences consumer purchasing behavior.

7. References

Aaker, D. A. (1991). Managing brand equity: Capitalizing on the value of a brand name. *The Free Press.*

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Akturan, U. (2018). How does greenwashing affect green branding equity and purchase intention? An empirical research. *Marketing Intelligence & Planning, 36*(7), 809–824. https://doi.org/10.1108/MIP-12-2017-0339

Biel, A. L. (1992). How brand image drives brand equity. *Journal of Advertising Research, 32*(6), RC6–RC12.

Chen, Y.-S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics, 93*(2), 307–319. https://doi.org/10.1007/s10551-009-0223-9

Chen, Y.-S., & Chang, C.-H. (2013). Towards green trust: The influences of green perceived quality, green perceived risk, and green satisfaction. *Management Decision, 51*(1), 63–82. https://doi.org/10.1108/00251741311291319

Dai, M. (2008). The impact of green brand image on brand evaluation: A case study of Dulux (Master's thesis). *Guangdong University of Foreign Studies*, China.

Fan, X., & Chen, J. (2002). Comprehensive evaluation model of brand image and its application. J*ournal of Nankai University*, (3), 65–71.

Gao, S., & Li, L. (2013). Research on factors influencing online consumer purchase behavior. *Science, Technology and Industry*, (1), 137–142.

He, J. (2021). Research on the impact of green brand image on consumers' rural tourism intention. *Business Economics Research*, (19), 174–177.

He, L., & Chen, L. (2020). The impact of green apparel brand image on consumers' purchase intention. *Journal of Clothing, 5*(5), 455–462.

Jin, Y. (2005). Research on consumer brand trust (Master's thesis). *Dalian University of Technology*, China. http://dx.chinadoi.cn/10.7666/d.y714670.

Krishnan, H. S. (1996). Characteristics of memory associations: A consumer-based brand equity perspective. *International Journal of Research in Marketing, 13*(4), 389–405. https://doi.org/10.1016/S0167-8116(96)00021-3

Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing, 58*(3), 20–38. https://doi.org/10.1177/002224299405800302

Mourad, M., & Ahmed, Y. S. E. (2012). Perception of green brand in an emerging innovative market. *European Journal of Innovation Management, 15*(4), 514–537. https://doi.org/10.1108/14601061211272402

Park, C. W., Jaworski, B. J., & MacInnis, D. J. (1986). Strategic brand concept-image management. *Journal of Marketing, 50*(4), 135–145. https://doi.org/10.1177/002224298605000401

Patrick, V. M., MacInnis, D. J., & Folkes, V. S. (2002). Approaching what we hope for and avoiding what we fear: The role of possible selves in consumer behavior. *Advances in Consumer Research, 29*(1), 270–276.

Pavlou, P. A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information Systems Research, 15*(1), 37–59. https://doi.org/10.1287/isre.1040.0015

Qin, H., Qiu, H., & Wu, L. (2009). Research on the composition of brand image. *Modern Economy (Modern Property · Second Half Monthly), 8*(8), 100–101, 114.

Sweeney, J., & Swait, J. (2008). The effects of brand credibility on customer loyalty. *Journal of Retailing and Consumer Services, 15*(3), 179–193. https://doi.org/10.1016/j.jretconser.2007.04.001

Wei, M., & Xiong, X. (2022). The impact of consumers' green knowledge on green product purchase intention: The mediating role of perceived brand sustainability. *Journal of Changchun University of Science and Technology (Social Sciences Edition), 35*(1), 135–140.

Yang, X., & Hu, X. (2008). The impact of green certification on brand trust and purchase intention. *International Economic and Trade Exploration, 24*(12), 66–70. https://link.cnki.net/doi/10.13687/j.cnki.gjjmts.2008.12.001

Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics, 134, 114–122.* https://doi.org/10.1016/j.ecolecon.2016.12.019

Yu, K., Chen, L., & Yu, Y. (2009). The impact of customer trust on behavioral intention in cause-related marketing. *Economic Geographics*, *29*(5), 124–127. https://doi.org/10.15931/j.cnki.1006-1096.2009.05.020.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing, 52*(3), 2–22. https://doi.org/10.1177/002224298805200302