

## Research Article

# The Influence of Green Marketing on Brand Trust: The Mediation Role of Brand Image and the Moderation Effect of Greenwash

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For the purpose of understanding the effect of green marketing on brand image, this paper has added mediation variable namely brand image into the research model; meanwhile, in order to better discuss about this issue in the context of green marketing, the paper considers that greenwash is an indispensable element in adjusting green marketing's effect on the brand. The paper has used the method of a questionnaire survey to distribute questionnaires on online social platforms. A total of 500 questionnaires have been distributed, and 415 valid questionnaires have been collected with an effective collection rate of 83%. In this paper, SPSS 24 and AMOS 23 are applied to verify its theoretical model and structural model. The result manifests that the design of the questionnaire is well reliable and highly effective; meanwhile, variables are significantly correlated. Besides, it concludes that the relationship between green marketing and brand trust differentiate in the following two dimensions: spontaneity and compulsion. Moreover, brand image plays an obviously intermediary role between green marketing and brand trust, which also proves that greenwash works as a significantly negative regulatory role.

## 1. Introduction

The core of green marketing is to select and confirm the strategy of marketing mix according to the principle of environmental protection and ecology, and it is an operational mode which is based on green technology, green market, and green economy and gives response to human's concerns on ecology. Enterprises are based on the premise of long-term development like the optimization of resource allocation and protection of ecological balance, during the process of product or service design, research and development, manufacturing, sales, and after-sales, and the strategy of green marketing is specifically represented in green positioning, green pricing, green logistics, green promotion, and green alliance [1]. Therefore, enterprises have both satisfied consumers' basic demands for products and fulfilled their responsibility of environmental protection. Green marketing is a significant method of replying to consumers who concern about ecological issues and improving the image of the green brand so as to make their

products distinguishable [2–4]. In research on brand asset of the green brand, brand image and brand trust are important factors [5].

With the penetration of the market and consumers' awareness of environmental protection, strong supervision by regulatory authorities and demand for green purchasing are gradually growing. In this process, in order to rapidly increase the market share, greenwash emerges one after another in some companies [6]. Greenwash is widely used to explain the dishonest and misleading statements made by some companies about the green attributes of products or services [7]. These companies often conceal and neglect product information, overly beautify their green behaviors, and even fabricate environmental protection behaviors that they have not done out of nothing. By adopting these means, consumers have a favorable impression on products, and they are apt to purchase them. The rise of greenwash will lead consumers to doubt the brand's green ideas. As greenwash has been constantly exposed to the public, consumers will further distrust all green ideas in the market.

Previously, scholars' research on green marketing was often limited to the field of green products. This paper will further broaden the research field, take all brands that are engaged in marketing activities under the premise of caring for the environment, and explore the relationship between green marketing and brand trust. Meanwhile, it has tried to lay a theoretical foundation for green marketing under the broader brand research. Besides, academic circles pay insufficient attention to greenwash in the marketing field [2, 8, 9], and this paper tries to fill the gap of this part. Then, it discusses the influence of green marketing on brand trust under the mediation of brand image and the adjustment of greenwash. The second part of the paper reviews the research on variables in the literature and raises assumptions. The third part explains the method of data collection and the operational definition of each variable. The fourth part reports the reliable, effective, and model-verified results of the structural equation model (SEM). At the same time, this paper adopts the regulated intermediary analysis method proposed by Hayes, and the results are also presented in this part. The research results of this paper are explained in the fifth part. The sixth part expounds the significance and limitations of the research.

## 2. Literature Review

*2.1. Green Marketing and Brand Image.* Green marketing is a governance process with responsibility and inclusiveness, which is able to detect, predict, and meet the expectations from stakeholders, but at the same time, it will not have a negative impact on the natural environment and human health [10]. This marketing model is a process of designing, manufacturing, and selling products or services based on environmental benefits, such as using recycled raw materials to manufacture products. Green marketing is no more a trend, but a major change in an enterprise's operational mode. As a form of social marketing, it requires cooperation with providers, traders, partners, and competitors to realize sustainable environmental development in the whole value chain and then achieve the best solution that can bring about profits and make positive contributions to the environment through the cooperation of all business functions [11]. As for enterprises, the purpose of green marketing is to satisfy consumers' preference for environmental protection and make them interested in products; therefore, enterprises can fulfill their social responsibilities and gain a good reputation. In terms of consumers, green consumption embodies their own values of environmental protection, so as to distinguish themselves from other people.

Green marketing works as an enterprise's environment-friendly policy, strategy, and strategic marketing, and also a management process that meets with the demands of consumers and the environment so as to realize profits and sustainable management [12]. Brand image is consumers' subjective perception when enterprises shape and convey brand image through various ways, and consumers will make purchase decisions in accordance with their cognition of brand image, so as to determine whether it satisfies

their needs and expectations or not [13]. In line with the "4P" theory of marketing, enterprises impel consumers to hold a good impression on the brand through product design, price positioning, distribution channels, and promotion means. As a result, for the purpose of promoting the green concept of their brands, during the process of product or service design, research and development, manufacturing, sales, and after-sales, enterprises will apply long-term developments like optimization of resources allocation and protection of ecological balance to satisfy with consumers' fundamental appeals and establish a positive brand image. With regard to empirical research, many scholars have studied the relationship between green marketing and brand image. For example, in the research on green restaurants, scholars show that the green behavior of restaurants significantly affects customers' views on brand image [14]. Hence, the paper draws the following hypothesis.

H1: Green marketing has a significantly positive impact on brand image.

*2.2. Brand Image and Brand Trust.* Brand image is defined as the aggregation of brand association in consumers' memory, which guides consumers to produce brand awareness and brand associations that include brand attributes and brand attitudes [15]. Trust is the key variable to develop and maintain long-term relationships, and brand trust manifests consumers' commitment and satisfaction to certain brands [16]. Brand image is the psychological effect of a certain brand as it is purchased and used by consumers, and it is a general name of emotional reactions that have a slight impact on sales [17]. The formation of positive brand image is very important because the brand image provides a standard for consumers when they do not have enough discrimination on the quality characteristics of products and services and thus becomes a decisive factor for consumers to make purchase decisions.

The empirical research has proved that brand image poses a direct impact on brand trust [20], and brand image is the main reason why consumers trust brands [19]. Consumers' perception of brand and brand trust belongs to psychological feelings, namely the psychological approval of brand value, so as to believe and accept the connotation of brand image. As a result, the brand image may affect consumers' trust in the brand [20]. The paper puts forward the following hypothesis.

H2: Brand image has a significantly positive impact on brand trust

*2.3. Green Marketing and Brand Trust.* Brand trust is an important factor to help customers to be loyal to brands. Consumers' trust in a brand is the brand's ability to be trusted, which is originated from consumers' confidence on products' capacity to realize commitment value. It is based on consumers' trust in the brand, and it is considered as a brand that can give priority to consumers' interests [21].

Brand trust is viewed as a vital factor to measure brand value, and consumers have an emotional connection with brands through trust. As consumers have confidence in the brand, their sensitivity to the price relatively decreases, which is an essential part of consumers' brand loyalty [22].

The positive influence of marketing activities on brand trust has been gradually verified; for instance, traditional marketing methods have posed many effects on consumers' perception and reaction, which are specifically reflected in brand loyalty, brand trust, brand participation, brand attitude, and so on [23, 24]. As for new marketing, marketing has a significant impact on brand trust; for example, mass media marketing has been proved to make consumers greatly rely on brands [21, 25]. As a new marketing method, green marketing's relation with brand trust is proposed in the following content.

H3: Green marketing has a significantly positive impact on brand trust

**2.4. The Mediating Role of Brand Image.** Brand image represents consumers' perception of a brand, which can help consumers to integrate specific brand information and then generate positive emotions about the brand. This whole process stimulates consumers to purchase products [26]. Brand trust is a decisive factor of brand loyalty, and consumers are able to build a deeper emotional connection with brands through trust. Once consumers have a sense of trust in the brand, the influence of product price on consumers' purchase will relatively fall [27]. Therefore, the premise for consumers to have a profound sense of trust in the brand is to have a good impression and association with the brand. This paper draws the following hypothesis.

H4: As a mediation variable, brand image has influenced the relationship between green marketing and brand trust.

**2.5. The Moderation Effect of Greenwash.** Green marketing requires companies to disclose information relating to products based on their "green value." Being lack of "green information," consumers are less likely to be persuaded to select their products; meanwhile, they will doubt about make the "green value" of their products [28]. In the long run, environmental protection will lose support from the market and unable to make progress on a large scale [29]. Greenwash is an obstacle to the formulation of a green marketing strategy, and brand's greenwashing will have a negative word-of-mouth effect and then reduce consumers' trust in the brand [30]. Therefore, this paper holds that greenwash plays an obviously negative role in the process of brand green marketing affecting brand trust and draws the following hypothesis.

H5: Greenwash has obviously adjusted green marketing's influence on brand trust.

A research model (as shown in Figure 1) has been established based on literature reviews and the above hypotheses.

### 3. Research Method

**3.1. Data Collection.** In this study, the quantitative method was used to test the model and hypothesis by means of a questionnaire survey. The questionnaire has applied Likert scale 5 to evaluate the project. Its design refers to the scale design in previous empirical analysis, which consists of four parts and 28 questions: the first part examines respondents' views on green marketing, the second part reflects respondents' perception of the greenwash phenomenon, the third part shows respondents' sense of identity with brand image, and the last part reflects brand trust. Respondents answer questions in the questionnaire according to their own experience and knowledge. The author has altogether distributed 500 questionnaires on social media and collected 415 valid questionnaires with an effective collection rate of 83%. Among all respondents, women account for 53%, and men account for 47%. Respondents aged 26–35 years old occupy the most, accounting for 38%, respondents aged 15–25 years account for 21%, respondents aged 36–45 years old occupy 18%, those aged 46–55 years old is 13% of the total, those who are younger than 18 years old account for 6%, and those who are older than 55 years old occupy 4% of the total.

**3.2. The Measurement of the Constructs.** This paper focuses on the influence of brand green marketing motivation on brand trust, so it has referred to the research of Wang et al. [31], which has divided green marketing into two dimensions, namely, spontaneity and coerciveness. Spontaneity: Enterprises spontaneously and actively promote environmental protection activities and establish a close relationship between brand and environmental protection. Coerciveness: Enterprises will undertake corporate social responsibility under the supervision of industry and government.

Brand image: By referring to the research of Han et al. [35], the paper has divided the brand image into three dimensions: brand value, brand characteristics, and brand association. The brand value represents the value of brand functionality, which is the consumer's perception of the brand's basic characteristics. Brand characteristics are consumer's perception of brand's characteristics, which are different from other brands, and also the embodiment of brand's core competitiveness. Brand association refers to consumers' perception and attitude towards other products and services of the brand.

Brand trust: The paper has referred to the scale design by Kabadayi and Alan [36] and [34], and the scale design has defined brand trust on the following four dimensions: brand's satisfaction with consumers' expectation, brand's integrity, brand's reliability, and consumers' trust in brand.

Greenwash: By referring to the research of Horiuchi and Schuchard [35] and Laufer [36] and Chen and Chang [6] on greenwash, the paper has defined greenwash as a brand's exaggeration of its environmental protection behavior; the brand has covered some of product's attributes and made it have more characteristics of green; brand may mislead its publicity of environmental protection behavior; brand

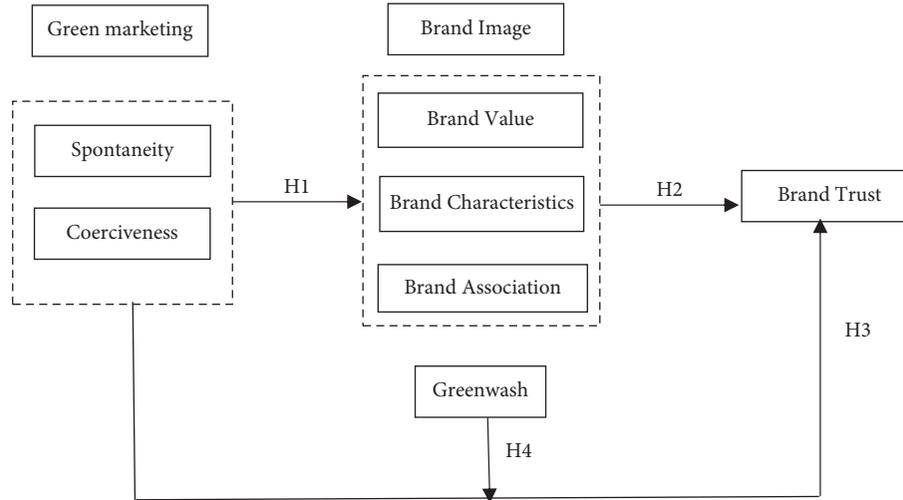


FIGURE 1: Research model.

discusses vaguely about its statement of environmental protection.

## 4. Results

**4.1. Results of the Measurement Model.** This research has applied SEM to analyze the proposed research model [37] and used bootstrap to study intermediary effect and adjustment effect. Data analysis is completed in SPAA version 24 and AMOS version 23.

SPSS is applied to analyze the questionnaire, and the Cronbach's alpha of each variable item is greater than 0.8, which indicates that the questionnaire issued in this study has good internal credibility. Meanwhile, AMOS software is applied to construct a structural equation model, and confirmatory factor analysis is adopted on seven variables. Confirmatory factor analysis (CFA) is used to evaluate the suitability of the model. In the paper, the average variance extracted (AVE) is adopted to assess convergent validity. The results are shown in the following table. AVE values of spontaneity, coerciveness, brand value, brand characteristics, brand association, brand trust, and greenwash are all larger than 0.6, and the combined validity CR is greater than 0.8 (as shown in Table 1), which illustrates that the convergence validity is ideal.

It can be known from the result that all latent variables are significantly related, and the relative coefficients are all smaller than the square root of the corresponding AVE, so all latent variables are certainly correlated and somewhat discriminant, which means that discriminant validity of scale data is ideal (refer to Table 2).

**4.2. Results of the Structural Model.** After analyzing the overall fitting degree, the fitting degree is shown in Table 3. The value  $X^2/df$  is 2.588, less than 3, which is ideal for fitting. RMSEA value is 0.062, less than 0.08, which is acceptable. GFI is 0.881, greater than 0.8, which is acceptable. NFI, CFI, IFI, and TLI are 0.939, 0.961, 0.962, and 0.955, respectively. As a whole, the structural model of this paper fits well.

TABLE 1: Reliability and validity analysis.

Constructs	AVE	C.R.	Cronbach's alpha
Spontaneity	0.604	0.859	0.857
Coerciveness	0.792	0.938	0.938
Brand value	0.774	0.932	0.928
Brand characteristics	0.757	0.925	0.921
Brand association	0.764	0.928	0.924
Brand trust	0.834	0.953	0.951
Greenwash	0.846	0.957	0.954

This paper verifies three causal logics of relationships in the structural model: the effect of green marketing on brand image, the influence of brand image on brand, and the relationship between green marketing and brand trust (as shown in Table 4). The results show that green marketing has a significant impact on brand image, among which spontaneous green marketing poses a significantly positive impact on brand image. Compulsory green marketing has a significantly negative impact on brand image. Brand image has an obviously positive influence on brand trust in aspects of brand value, brand characteristics, and brand association. The influence of green marketing on brand trust is reflected variously in two dimensions, in which spontaneous green marketing has not been proved to pose a great impact on brand trust; on the contrary, compulsory green marketing has a markedly positive impact on brand trust.

Therefore, H1 of green marketing has an obviously positive effect on brand image partly stands.

H2 of brand image has a significantly positive impact on brand trust stands.

H3 of green marketing poses an obviously positive influence on brand trust partly stands.

**4.3. Green Marketing and Brand Trust: Verification of an Adjustable Intermediary Model.** According to Hayes [38], Wen and Ye [40], brand image's intermediate effect between green marketing and brand trust is tested by model 4 of the SPSS macroprogram process. This paper has, respectively,

TABLE 2: Discriminant validity analysis.

Constructs	1	2	3	4	5	6	7
1 Spontaneity	0.777						
2 Coerciveness	0.728**	0.890					
3 Brand value	0.758**	0.539**	0.880				
4 Brand characteristics	0.595**	0.485**	0.648**	0.870			
5 Brand association	0.677**	0.500**	0.825**	0.614**	0.874		
6 Brand trust	0.660**	0.654**	0.715**	0.717**	0.691**	0.913	
7 Greenwash	-0.050	-0.243**	-0.248**	-0.362**	-0.291**	-0.539**	0.920

Note. \*\* $P < 0.01$ . (1) Off-diagonal elements are correlations between constructs; (2) diagonal elements are the square root of average variance extracted.

TABLE 3: Research model fit analysis.

X2/df	RMSEA	GFI	NFI	CFI	IFI	TLI
2.588	0.062	0.881	0.939	0.961	0.962	0.956

TABLE 4: Result of the structural model.

Path	Path coefficient	Result
Spontaneity ---> Brand value	1.513***	+
Spontaneity---> Brand characteristics	1.274***	+
Spontaneity ---> Brand association	1.558***	+
Spontaneity ---> Brand trust	-0.675	Not supported
Coerciveness --->Brand value	-0.412***	-
Coerciveness ---> Brand characteristics	-0.220*	-
Coerciveness ---> Brand association	-0.430***	-
Coerciveness ---> Brand trust	0.549***	+
Brand value ---> Brand trust	0.467**	+
Brand characteristics ---> Brand trust	0.396***	+
Brand association ---> Brand trust	0.313***	+

Note. \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$

introduced spontaneous green marketing and compulsory green marketing into model 4, and the final results are shown in Tables 5 and 6.

- (1) Spontaneous green marketing can remarkably predict brand image ( $a_1 = 0.78$ ,  $t_1 = 19.47$ ,  $p_1 < 0.001$ ;  $a_2 = 0.64$ ,  $t_2 = 13.53$ ,  $p_2 < 0.001$ ;  $A_3 = 0.80$ ,  $t_3 = 16.56$ ,  $p_3 < 0.001$ ), and after introducing spontaneous green marketing and brand image into the regression model, the direct predictive effect of spontaneous green marketing on brand trust is still marked ( $C' = 0.18$ ,  $t = 3.39$ ,  $p < 0.001$ ). Brand image can also predict brand trust in a significant way ( $b_1 = 0.18$ ,  $t_1 = 2.94$ ,  $p_1 < 0.001$ ;  $b_2 = 0.40$ ,  $t_2 = 9.57$ ,  $p_2 < 0.001$ ;  $b_3 = 0.24$ ,  $t_3 = 4.66$ ,  $p_3 < 0.001$ ). The corrected percentile bootstrap test shows that brand image plays an obvious intermediary role between spontaneous green marketing and brand trust (as shown in the table). Among them, the mediating effect of brand value as a mediating variable ( $ab = 0.14$ ,  $\text{Boot SE} = 0.07$ ) within 95% confidence interval [0.001, 0.29] has accounted for 15.56% of the total effect; as an intermediary variable ( $ab = 0.26$ ,  $\text{Boot SE} = 0.04$ ), the intermediary effect of brand characteristics within 95% confidence interval [0.18, 0.33] occupies for 25.49% of the total effect. As an intermediary variable ( $ab = 0.19$ ,  $\text{Boot SE} = 0.06$ ), the intermediary effect of brand association within

95% confidence interval [0.06, 0.31] accounts for 20% of the total effect.

- (2) Compulsory green marketing has a significant predictive effect on brand image ( $a_1 = 0.16$ ,  $t_1 = 3.03$ ,  $p_1 < 0.01$ ;  $a_2 = 0.14$ ,  $t_2 = 2.57$ , and  $p_2 < 0.05$ ;  $a_3 = 0.30$ ,  $t_3 = 5.14$ , and  $p_3 < 0.001$ ), and when both compulsory green marketing and brand image were put into the regression model, the direct prediction effect of compulsory green marketing on brand trust was still significant ( $c' = -0.07$ ,  $t = 1.99$ , and  $p < 0.05$ ). Brand image can also predict brand trust in a marked way ( $b_1 = 0.26$ ,  $t_1 = 4.50$ ,  $p_1 < 0.001$ ;  $b_2 = 0.43$ ,  $t_2 = 10.33$ ,  $p_2 < 0.001$ ;  $b_3 = 0.24$ ,  $t_3 = 4.55$ ,  $p_3 < 0.001$ ). The corrected percentile bootstrap test shows that brand image plays a significant intermediary role between compulsory green marketing and brand trust (as shown in the table). Among them, the mediating effect of brand value as a mediating variable ( $ab = 0.04$ ,  $\text{Boot SE} = 0.03$ ) within 95% confidence interval [0.001, 0.12] has accounted for 13.79% of the total effect. As an intermediary variable ( $ab = 0.06$ ,  $\text{Boot SE} = 0.02$ ), the intermediary effect of brand characteristics within 95% confidence interval [0.02, 0.12] accounts for 19.35% of the total effect. As an intermediary variable ( $ab = 0.07$ ,  $\text{Boot SE} = 0.03$ ), the intermediary effect of brand association in 95%

TABLE 5: The intermediary role of brand image (spontaneity).

Regression equation (N=415)		Fitting index			Coefficient significance	
Outcome variable	Predictive variable	R	R <sup>2</sup>	F (df)	B	t
Brand trust	Spontaneity	0.62	0.39	258.19	0.76***	16.07
Brand value		0.69	0.48	379.22	0.78***	19.47
Brand characteristics	Spontaneity	0.55	0.31	183.18	0.64***	13.53
Brand association		0.63	0.40	274.37	0.80***	16.56
	Brand value				0.18**	2.94
Brand trust	Brand characteristics	0.80	0.64	180.78	0.40***	9.57
	Brand association				0.24***	4.66
	Spontaneity				0.18***	3.39

Note. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

TABLE 6: The intermediary role of brand image (coerciveness).

Regression equation (N=415)		Fitting index			Coefficient significance	
Outcome variable	Predictive variable	R	R <sup>2</sup>	F (df)	B	t
Brand trust	Coerciveness	0.21	0.43	18.49	0.25***	4.30
Brand value		0.15	0.02	9.17	0.16**	3.03
Brand characteristics	Coerciveness	0.13	0.02	6.60	0.14*	2.57
Brand association		0.25	0.06	26.43	0.30***	5.14
	Brand value				0.26***	4.50
Brand trust	Brand characteristics	0.79	0.63	175.74	0.43***	10.33
	Brand association				0.24***	4.55
	Coerciveness				0.07*	1.99

Note. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

TABLE 7: Verification of adjustable intermediary model.

	Brand trust				Brand trust		
	SE	B	t		SE	B	t
Spontaneity	0.05	0.27***	5.71	Coerciveness	0.04	0.09**	2.69
Brand value	0.05	0.20***	3.75	Brand value	0.05	0.29***	5.65
Brand characteristics	0.04	0.24***	6.42	Brand characteristics	0.04	0.34***	8.80
Brand association	0.04	0.16***	3.59	Brand association	0.05	0.17***	3.66
Greenwash	0.02	-0.28***	-12.24	Greenwash	0.02	-0.23***	-9.77
Spontaneity x greenwash	0.03	-0.13***	-4.10	Coerciveness x greenwash	0.03	-0.08***	-2.89
R <sup>2</sup>		0.74		R <sup>2</sup>		0.71	
F		193.81		F		164.34	

Note. \*\*P < 0.01, \*\*\*P < 0.001.

confidence interval [0.02, 0.13] occupies for 21.88% of the total effect.

Next, process model 5, which is an SPSS macroprogram compiled by Hayes, is used to inspect the moderation effect of greenwash. Adjustable intermediary model test needs to estimate parameters of three regression equations. Equation 1 estimates the predictive effect of green marketing on brand image. Equation 2 estimates the predictive effect of brand image on brand trust. Equation 3 estimates the total effect of green marketing on brand trust and the moderation effect of greenwash. To standardize all variables in each equation, the model is established if the following conditions are met: 1. In equation 1, the predictive effect of green marketing on brand image is remarkable. 2. In equation 2, the predictive effect of brand image on brand trust is significant. 3. In equation 3, the total effect of green marketing on brand trust is marked, and the interaction effect between greenwash and green

marketing is outstanding [38, 40]. By substituting data into model 5 to achieve equation 1 and equation 2, the corresponding effects are remarkable and equal to that of Tables 5 and 6. Having substituting the regulated variable greenwash into equation 3 (refer to Table 7), it is found that the predictive effect of spontaneous and compulsory green marketing on brand trust is significant, and the product terms of spontaneous and compulsory green marketing with greenwash are marked, respectively (spontaneity x greenwash:  $b = -0.13$ ,  $t = -4.10$ ,  $P < 0.001$ ; coerciveness x greenwash:  $B = -0.08$ ,  $t = -2.89$ ,  $P < 0.001$ ). It has shown that greenwash functions as a role of negative regulation in the direct prediction of brand trust by green marketing.

In order to further explain greenwash's effect of regulation, this paper has done a simple slope analysis. When the greenwash level is low (M-1SD), spontaneous and compulsory green marketing can significantly predict brand trust (such as Figure 2, spontaneity:  $B_{simple} = 0.42$ ,  $t = 8.15$ ,

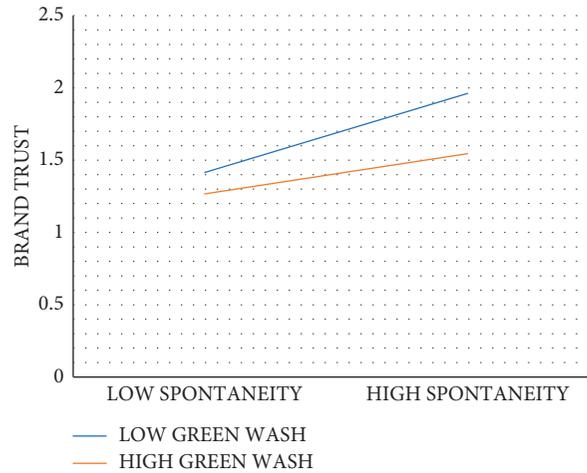


FIGURE 2: The moderation role of greenwash between spontaneous green marketing and brand trust.

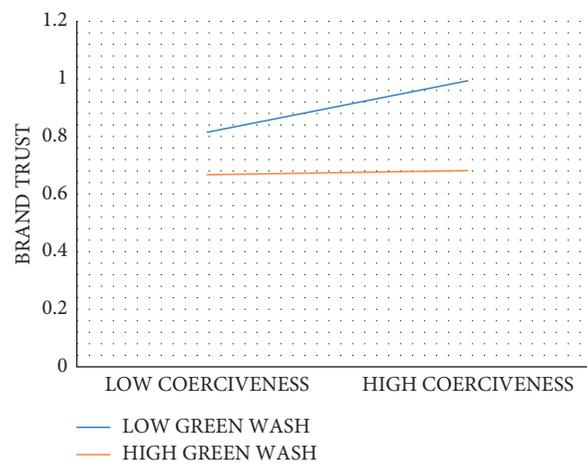


FIGURE 3: The moderation role played by greenwash between compulsory green marketing and brand trust.

$P < 0.001$ ; compulsory:  $B_{simple} = 0.18, t = 3.65, P < 0.001$ ). When the greenwash level is high ( $M+1SD$ ), although spontaneous green marketing can also predict brand trust (such as Figure 3), the effect is very small ( $B_{simple} = 0.13, t = 1.98, P < 0.05$ ). At the same time, the prediction of brand trust by compulsory green marketing is no longer obvious ( $B_{simple} = 0.002, t = 0.06, P > 0.05$ ). It shows that as the level of greenwash becomes higher, the influence of green marketing on brand trust gradually decreases.

Therefore, H4 of brand image plays an intermediary role between green marketing and brand trust stands.

H5 of greenwash has obviously regulated the effect of green marketing on brand trust stands.

## 5. Conclusion and Discussion

*5.1. The Intermediary Role Played by Brand Image.* Brands ultimately pursue to establish a close emotional connection with consumers. Brand trust works as the necessary emotional stage for customers to become loyal. Various marketing methods of brands can make consumers have confidence in brand ideas and products. On this basis,

the paper holds that brand image plays a certain role in this process. Consumers may acquire information about the brand from various platforms, so as to have some direct impressions on the brand. Influenced by a good brand image, consumers can easily have trust in the brand. Brand image is to collect brand information accepted by consumers, while brand trust is to build a deeper emotional connection with brands.

Brand image is viewed as an important factor of marketing, which can sufficiently target potential consumers [39]. From the view of general consumers, brand image can help them to decide whether specific brands can meet with elements with features of purchasing demands, so as to contribute to consumers' decisions and provide potentiality to the profound linkage between consumers and brands [41, 42]. As an intermediary variable, brand image improves brand behavior to produce consumers' trust; for example, the quality of brand service affects brand trust through the brand image [43]. In the green industry, this opinion has been verified in different researches; for instance, brand's greenwash can not only directly affect consumers' purchasing behavior but also pose an impact

on consumers' green behavior through the brand image [44]; brand behaviors of the green hotel can bring about well consequences by means of partially intermediary role of brand image [45]. As a brand claims that its products possess green attributes, it will make consumers feel good about its own sense of responsibility. Consumers hence regard that a brand that cares about the environment will definitely be responsible for consumers. This favorable impression has extended from brand culture to brand's products and services, and people who hold the same green idea are more willing to try its products. As if the brand's products and services can meet the consumers' expectations and their demand for environmental protection, consumers can easily build trust in the brand. As concluded in the paper, brand image plays an intermediary role that cannot be neglected in the relationship between green marketing and brand trust.

*5.2. The Moderation Effect of Greenwash.* The moderation role of greenwash has been focused by previous researches, in research on factors that influence green products' selection behavior based on the theory of consumption value in 2021, and greenwash is a relatively new concept to Chinese consumers and has not become the main barrier in green consumption [46]. However, the research on the influence of consumption values on green purchasing intention indicates that greenwash perception has an obvious moderating effect on the relationship between consumption values and green trust, which relate to functional value quality and cognitive value [47]. Scholars' research on the influence of environmental concern on green consumption consciousness of the postmillennial generation shows that the moderating effect of greenwash between environmental concern and green procurement is outstanding, and consumers' perception of greenwash has reduced the impact of environmental problems on green behavior [48]. So far, the concept of greenwash has gradually been perceived by consumers, and it has gradually played an important role in the field of green consumption. Through the discussion of the influence of green marketing and brand trust in this paper, it is known that greenwash has played an obvious role in moderation. When consumers perceive greenwash climbs to a greater extent, green marketing will bring about a less obvious brand trust effect in a positive way.

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generation shows that the moderating effect of greenwash between environmental concern and green procurement is outstanding, and consumers' perception of greenwash has reduced the impact of environmental problems on green behavior [48]. So far, the concept of greenwash has gradually been perceived by consumers, and it has gradually played an important role in the field of green consumption. Through the discussion of the influence of green marketing and brand trust in this paper, it is known that greenwash has played an obvious role in moderation. When consumers perceive greenwash climbs to a greater extent, green marketing will bring about a less obvious brand trust effect in a positive way.

Brands frequently exaggerate their environmental protection behavior and cover some product attributes, which leads to the misleading publicity of their environmental protection behavior, or present vaguely in its green statement to come to greenwash their products and services. Recently, behaviors of greenwash have been frequently exposed. For example, Volkswagen has admitted to installing "cheating devices" on its diesel vehicles to cheat emission tests. This event has caused Volkswagen to encounter a huge crisis of trust, and its share price has shrunk dramatically. The paper has concluded that greenwash may weaken the positive influence of green marketing on brand trust. With the continuous exposure of greenwash, consumers may have doubts about brands that have issued green statements in the market because they are unable to judge the authenticity of these green statements. Eventually, it will make environmental protection more difficult to sustain. Therefore, for the purpose of evading from negative effects that are possibly caused by greenwash, brands that have issued green statements should make their green marketing activities honest and transparent.

*5.3. Spontaneous and Compulsory Green Marketing.* In accordance with previous researches, marketing activity has an outstanding impact on brand image and brand trust [21, 23–25]. The paper has divided green marketing into spontaneity and compulsory. The result shows that these two dimensions vary greatly in their roles of brand image and brand trust.

As for the brand image, spontaneous green marketing makes consumers have a good impression on the brand, but compulsory green marketing will have an obviously negative impact on the brand image. Consumers are more willing to accept the company's initiative and make positive efforts to the environment, which makes consumers feel the sincerity of the brand's sustainable concept. On the contrary, when consumers think that the company's green statement is compulsory green marketing activity under outside supervision, consumers will generate a rebellious attitude towards the brand and wonder whether they will bear too much green cost for the brand.

The influence of green marketing on brand trust is also reflected in various aspects. Compulsory has an obviously positive impact on brand trust, but the influence of spontaneity on brand trust has not been verified in this paper, which may be brought by excessive marketing.

Hirschman [49] puts forward the importance of consumers' emotions when consumers purchase, and they not only rely on external stimulus but also have something to do with their internal consumption vision. If the brand overly exports its own green values, consumers may get bored, so the originally well-intentioned marketing won't bring about a positive impact on consumers. Therefore, this paper holds that companies should always concern about consumers' emotional reactions other than unilateral output in promoting their green products and ideas.

## 6. Implications and Limitations

### 6.1. Implications

- (1) Previously, scholars' studies on green marketing were mostly limited in the field of green products. This paper broadens the research field and holds that enterprises' efforts in optimizing resource allocation and environmental concern in the process of product or service design, research and development, manufacturing, sales, and after-sales disposal are all within the research scope of this paper. Green marketing mentioned here is more extensive.
- (2) The paper has added brand image as an intermediary effect when studying the relationship between green marketing and brand trust, so as to perfect the theoretical model and prove that dimensions of green marketing vary in presentation.
- (3) The paper has concluded that greenwash plays an outstandingly negative role of regulation on the relationship between green marketing and brand trust and added regulated variables into an intermediary model; therefore, the relationship between green marketing, brand image, and brand trust can be more specifically presented.

### 6.2. Limitations

- (1) By releasing questionnaires on social media, the paper has found that consumers who frequently use social media can acquire brand information more easily and be highly sensitive to greenwash. The following researches can apply various methods to release questionnaires and diversify respondents.
- (2) Data collected in the paper are unable to prove the impact of spontaneous green marketing on brand trust, so further researches can continue on discussing this issue by enlarging sample capacity or adding variables.

## Data Availability

The data from the questionnaire used to support the findings of this study are included within the supplementary information file (data-wulanmeng).

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## Supplementary Materials

The data from the questionnaire used to support the findings of this study are included within the supplementary information file (data-wulanmeng). (*Supplementary Materials*)

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