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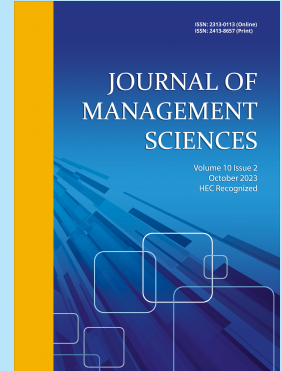
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How CSR Communication can Effectively Improve Consumers' Brand Attitudes?

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Abstract: This paper examines the effectiveness of different CSR communication messages in improving consumers' brand attitudes. Drawing from interaction theory, media richness theory, and social identity theory, we investigate the effects of CSR identification and brand attitude as key factors influencing the effectiveness of CSR communication. Through the analysis of 354 valid questionnaires collected from two experiments, we find that communication interactivity positively influences consumers' brand attitudes, with CSR identification partially mediating this relationship. Moreover, we observe that media richness enhances the positive relationship between CSR communication interactivity, CSR identification, and brand attitudes. This study contributes to the existing research on CSR communication by exploring its effectiveness on social media from the perspective of interactivity. It offers theoretical insights and practical guidance on how companies can effectively communicate CSR on social media platforms.

Keywords: CSR communication; interactivity; media richness; CSR identification; brand attitude.

Introduction

Corporate social responsibility (CSR) has become increasingly important in linking corporate goals with social values for the purpose of achieving competitive differentiation. Extensive research has focused on the nature, role, and dynamics of CSR, recognizing its strategic advantage and contribution to sustainable development (Tamvada, 2020). Companies believe that the reputation created by CSR activities bestows strategic competitive advantage and sustainable development. Consumers are progressively becoming more concerned about CSR, and raising their expectations for companies to maintain a high level of social ethics, and are keen to learn more about how companies are implementing CSR (Ramesh, Saha, Goswami, Sekar, & Dahiya, 2019). When consumers are fully aware of CSR activities, their recognition and attitude toward the brand will increase sig-

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nificantly and influence their purchase intention (Ham & Kim, 2020). Therefore, effective CSR communication has become one of the most important factors affecting corporate branding in today's business environment.

The lack of consumer awareness of CSR activities may have a negative impact even if a company carries out social responsibility activities, and this problem can only be solved by companies actively communicating CSR activities to consumers (Boccia & Sarnacchiaro, 2018). The 50th statistical report on the development status of China's Internet by China Internet Network Information Center (CNNIC) shows. As of August 2022, the number of Chinese Internet users has reached 1.051 billion, and the Internet penetration rate reached 74.4%, among which the size of instant messaging users reached 1.027 billion, accounting for 97.7% of Internet users as a whole, with both enterprises and individuals being facilitated by digitalization. The development of digital technology has enhanced communication between companies and stakeholders, and digital communication channels are increasingly being used by companies for marketing and communication (Troise & Camilleri, 2021), and social media has become an important medium for CSR communication. It provides companies with the opportunity to deliver their CSR message and philosophy to different stakeholders (Lund, Cohen, & Scarles, 2018), thus triggering a positive evaluation of corporate image and reputation and gaining long-term consumer trust.

The main purpose of CSR communication on social media platforms is to attract the attention of stakeholders. However, the impact of CSR communication on social media is not always positive. Consumer trust in companies and products is often low in industries with a poor reputation, leading to high levels of risk perception and anxiety during the purchase decision-making process. In such cases, CSR communication may have a negative effect and trigger perceptions of corporate hypocrisy (Dai & Reich, 2023). Overemphasis on CSR, such as excessive advertising and promotions, can arouse suspicion regarding a company's intentions and even lead to accusations of "greenwashing" if transparency and substantial information are lacking. Previous studies have yielded varied conclusions on the choice of CSR communication approach. Some scholars suggest that framing CSR communication with positive attributes has a favorable impact on consumer attitudes and purchase intentions (Bartikowski & Berens, 2021; Zhang, Ahmed, & Salam, 2023), while others argue that a dialogical communication strategy is more effective than a monological approach in increasing willingness-to-buy and positive word-of-mouth; In contrast, the study by Kollat and Farache (2017) found that asymmetric strategy performed better than symmetric strategy when companies communicated with consumers on Twitter about CSR. The choice of communication strategy remains a crucial issue for companies seeking to achieve positive consumer responses and eliminate negative suspicion.

In light of the above, this paper addresses the following research questions: What kind of CSR communication approach attracts the most attention and brings the greatest value to the company? How can communication during CSR initiatives elicit positive consumer responses while alleviating negative suspicions? Existing research on CSR communication on social media has highlighted the importance of interactivity and stakeholder engagement (Gomez, 2021). However, empirical research on consumer responses to inter-

active and non-interactive communication strategies remains limited (Kollat & Farache, 2017). To bridge this research gap, our study employs an experimental method to explore the mechanisms and influencing factors of interactivity and media richness on consumers' brand attitudes in CSR communication on social media, drawing from interactivity theory and media richness theory.

Literature Review and Hypothesis Development

CSR and CSR Communication

Corporate Social Responsibility (CSR) involves companies assuming ethical responsibilities and considering the impact of their actions on social stakeholders (S. Y. Lee, Kim, & Kim, 2021). In recent years, CSR practices have intensified, and CSR communication has received increasing attention, with companies viewing CSR communication as a key strategic tool to improve their financial performance, ethical legitimacy and brand trust (Carlini & Grace, 2021).

Various strategies have been proposed for CSR communication. Morsing and Schultz (2006) describe three strategies: information, response, and involvement, each describing a different level of stakeholder engagement. Cho, Furey, and Mohr (2017) propose two CSR communication strategies: interactive and informational. Consistent with the one-way and two-way communication models in public relations, the interactive strategy emphasizes companies' engagement with the public in developing and implementing CSR programs, and the informing strategy is limited to one-way communication, in which organizations take this approach to "make the case" to the public. Golob et al. (2013) summarize two CSR communication paradigms, information-focused functionalism, which emphasizes transparency of information, and interaction-focused constructivism, which emphasizes co-negotiation between firms and stakeholders. The effectiveness of different communication methods in creating consumer awareness of CSR initiatives remains inconclusive (Kim & Ji, 2017).

CSR Identification

CSR identification refers to the alignment between consumers and companies in terms of emotions and self-concept (Dutton, Dukerich, & Harquail, 1994). According to social identity theory, individuals integrate values and emotions from a group to create their identity. Consumer-company identification reflects the perception of connection, closeness, and similarity between consumers and firms, satisfying self-defined needs. Xuqin (2021) argued that identification is the understanding, perception, and expectation of similarity between consumers and firms, namely, the degree of fit with the firm, which is manifested in three dimensions: sense of conformity; sense of belonging; and sense of efficacy. Consumers evaluate firms through a combination of external and internal factors, which leads to the formation of consumer-company identification. CSR identification represents consumers' recognition and agreement with the concepts and values conveyed through CSR messages (Liu & He, 2022).

Media Richness

Daft and Lengel (1986) introduced the term "media richness" and developed media richness theory (MRT), which is used to indicate the ability of medium process rich information and to change the understanding of information at a timely interval. Media richness theory (MRT) suggests that different media vary in their ability to convey information and cues, with richness measured by criteria like immediate feedback, information diversity, personalization, and authenticity. MRT suggests that several types of media differ in their ability to convey information and cues. The difference between the various media lies in the degree of richness they possess. So, some media are more effective than others in resolving ambiguous and uncertain information (Kaplan & Haenlein, 2010).

Consumers tend to process stimulus-based information at high media richness levels and memory-based information at low media richness levels (Maity, Dass, & Kumar, 2018). However, few empirical studies have explored the role of media richness in corporate performance, particularly in the marketing and operations management literature (Tseng & Wei, 2020).

Brand Attitude

A brand represents a corporate strategy that differentiates products and services, people evaluate brands not only by considering a company's product offering but in addition to functional value, consumers often focus on the emotional and social values associated with the brand (Ramesh et al., 2019). Attitude is one of the most important concepts in consumer behavior, and is the main basis for developing marketing strategies and studying the effectiveness of marketing strategies, as well as for summarizing judgments about brand-related information. Brand attitude, encompassing cognitive and affective measures, reflects consumers' overall evaluation of a brand. Understanding consumer needs through brand attitude is crucial for companies to determine their promotional objectives.

Previous research has recognized CSR as a vital component of corporate branding. Consumers tend to remain loyal to brands with socially responsible values. (Lynch & De Chernatony, 2004) argue that consumers will stick with brands that have more socially responsible values rather than switching to competing products that are similar to them. In this brand attitude, the researcher's brand attitude includes both cognitive and affective measures, that is, the willingness to buy and the degree of liking, so our study takes the degree of liking and reliance on the brand or company and its willingness to buy as the research dimensions of brand attitude.

Research Model and Hypothesis Development

CSR communication and brand attitude. CSR behavior brings positive evaluation and economic value to the company. The return of CSR depends on the stakeholders' awareness of CSR activities (Du, Bhattacharya, & Sen, 2010). Without effective communication, the value of CSR is limited, while well-communicated CSR activities can not only increase consumer trust and engagement with the company, but also trigger their brand

love and purchase intentions. With the rise of social media, interactive communication and engagement have become more prevalent (Peloza & Shang, 2011). Studies suggest that interactive CSR communication strategies, involving two-way communication, are more effective than one-way strategies in building consumer brand trust and reducing skepticism and enhance consumers' willingness-to-buy. Nevertheless, the impact of CSR communication on consumer emotion and behaviors remains underexplored (Gupta et al., 2021), and the impact of interactive vs non-interactive CSR communication would be an interesting avenue for future research, particularly in exploring the impact of CSR communication on corporate brand image and reputation (Lauritsen & Perks, 2015).

Information is the basis for forming attitudes, and consumers form certain attitudes based on information and facts. Consumers first receive CSR messages from brands, and after cognition and understanding, they form attitudes toward brands. Eberle, Berens, and Li (2013) define interactivity as "a two-way communication between a source and a receiver". In line with their research, we focus on user-company interactions rather than user-system or document interactions. According to interactivity theory, campaigns that employ interactive messages provide consumers opportunities to elaborate on those campaigns, and the positive impact of perceived interactions may extend to attitudes and behavioral intentions toward the company. When companies use interactive social responsibility communication, stakeholders are more likely to perceive the social network embodied by the company (McMillan, 2006) and interactive communication messages of CSR have higher credibility. If companies want to engage the consumers of the future, they need to communicate in a more direct and open manner (Schmeltz, 2012). Therefore, we propose the following hypotheses:

H₁: CSR communication significantly and positively influences consumers' brand attitudes.

H_{1a}: Consumer brand attitude is relatively high under interactive CSR communication.

H_{1b}: Consumer brand attitude is relatively low under non-interactive CSR communication.

Mediating role of CSR identification. The formation of personal identity is not an entirely natural process. It needs to be selected, created, and managed, and more specifically, positive identities need to be maintained, expressed, and disseminated. The two goals of CSR communication are to create awareness and reduce skepticism, both of which are critical factors in the success of a CSR strategy. This is done by building consumer awareness of CSR and enabling consumers to form positive identifications. CSR communication aims to create awareness and reduce skepticism, leading to positive identifications and stronger connections between consumers and companies (Crane & Glozer, 2016). The more consumers identification with CSR, the more they will trust the company and the more they will be willing to evaluate and promote the company positively, thus forming a positive brand attitude. In a study on CSR identification and corporate economic effects and brand reputation, Most consumers claim that it is important for companies to fulfill their CSR behavior, but they do not notice it in their daily lives. Consumers rarely actively seek CSR information and prefer companies to engage them explicitly in CSR

communication through interaction (Lauritsen & Perks, 2015). Interactive CSR communication is more likely to attract consumers' attention than non-interactive CSR communication, leading to their recognition and approval of CSR activities, because conspicuous CSR messages can convince consumers. Interactivity also leads to more positive CSR perceptions (Lew & Stohl, 2023); an increase in perceived interactivity leads to higher information credibility and stronger identification with the company (Troise & Camilleri, 2021); and an identification with CSR increases with increased interactivity.

Therefore, we propose the following hypotheses:

H₂: CSR communication influences consumers' brand attitudes by influencing consumers' CSR identification, which mediates the relationship between CSR communication and brand attitudes.

H_{2a}: Interactive CSR communication results in higher consumer CSR identification and leads to relatively high consumer brand attitudes.

H_{2b}: Non-interactive CSR communication results in lower consumer CSR identification and leads to relatively low consumer brand attitudes.

Moderating effect of media richness. With the growth of the Internet, companies are increasingly using social media to communicate about CSR, highlight CSR activities, and interact with consumers, rather than just disclosing information through traditional CSR reports. Based on this, our study asks the question: what factors influence the effectiveness of CSR communication on social media? Media richness theory (MRT) posits that media differ in their ability to convey information and cues, with richer media being more effective in resolving ambiguity and increasing communication effectiveness (Vickery, Droge, Stank, Goldsby, & Markland, 2004). Consumers engaging with CSR communication on social media are influenced by media richness, which affects their understanding of CSR activities and co-creation with companies. Korschun and Du (2013) showed that media richness will influence stakeholders' community identity under virtual CSR co-creation conditions. Rich media reduces the ambiguity of the message, and because it involves lower cognitive costs, consumers tend to be more receptive to the messages received through rich media. Consequently, CSR communication messages with high media richness can improve the accuracy of the message, and the more accurate the CSR message communication, the more it can enhance consumers' CSR recognition.

Therefore, we propose the following hypotheses:

H₃: Media richness plays a moderating role in CSR communication and CSR identification.

H_{3a}: Compared to messages with low media richness, CSR communication messages with high media richness will increase consumer CSR recognition under interactive CSR communication.

H_{3b}: Compared to messages with high media richness, CSR communication messages with low media richness can reduce consumer CSR identification under non-interactive CSR communica-

tion.

Media richness affects firm performance when firms interact in complex environments. This is because media richness conveys more information, so marketing advertisements with higher media richness usually positively influence consumer decision-making (Tseng & Wei, 2020). Media richness also influences consumer decision-making and satisfaction, with higher media richness positively influencing entertainment, information, social satisfaction, and loyalty to the company. As media richness increases, consumers' CSR knowledge improves, leading to enhanced brand attitudes and purchase intentions.

Therefore, we propose the following hypotheses:

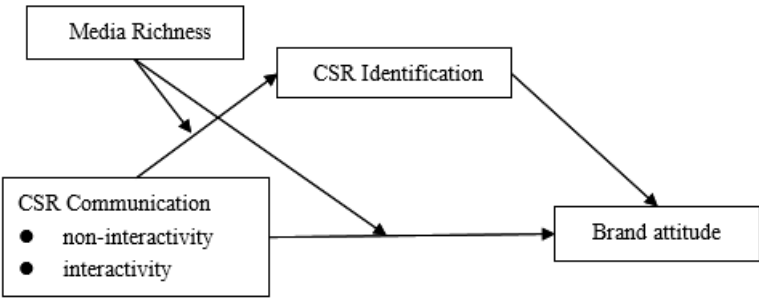
H₄: Media richness plays a moderating role between CSR communication and brand attitude.

H_{4a}: Compared to messages with low media richness, CSR communication messages with high media richness will increase consumer brand attitudes under interactive CSR communication.

H_{4b}: Compared to messages with high media richness, CSR communication messages with low media richness can reduce consumer brand attitudes under non-interactive CSR communication.

We draw from the literature to develop the hypothesized model shown in Figure 1.

Figure 1
Theoretical Model



Study 1

The aim of Study 1 was to examine the main effects of CSR communication on consumer brand attitudes and the difference between interactive and non-interactive CSR communication on consumer brand attitudes. Additionally, the study aimed to analyze the mediating role of CSR identification.

Participants and Procedure

Study 1 was conducted at a university in Chongqing, China, with 82 valid questionnaires collected from undergraduate economics students. The participants consisted of 47.6% males, aged between 19 and 25 years old, and 73.2% of them reported paying attention to CSR information. Before conducting the main experiment, a pre-experiment was conducted with 50 student participants to analyze their responses to the materials. The results indicated that the CSR communication interactivity group perceived significantly higher interactivity than the non-interactivity group (M interactive = 5.166, SD interactive = 0.952, M non-interactive = 3.902, SD non-interactive = 0.914, $t=6.763$, $p=0.000<0.01$).

Study 1 utilized a between-subjects experimental design with a single factor (CSR communication: interactivity vs. non-interactivity). Because environmental and educational issues are popular topics in CSR activities, the study adapted real CSR activities related to green packaging and assistance to education in mountainous elementary schools conducted by a cosmetics company, with the corporate information blurred. The text is based on [Kollat and Farache \(2017\)](#) with the manipulation of symmetrical versus asymmetrical communication, and two experimental materials were prepared according to verbal dialogue as well as two-way communication. Key interactive messages were highlighted in bold and underlined. Interactive CSR communication materials contain the following key elements ([Cho et al., 2017](#)): (a) building social partnerships with stakeholders, (b) inviting open communication with stakeholders, and (c) receiving stakeholder evaluations of corporate CSR activities.

Stimulus Materials and Measures

The participants were randomly assigned to one of the two groups, with each group answering a different questionnaire. The first part of the questionnaire included explanations of terms related to the experiment, personal information, and the level of concern about CSR information. Subjects then read two passages of material in which the interactive CSR communication section is stated as including: "We invite you to protect the earth together"(Building Partnerships), "According to your suggestions, we will answer and respond to your concerns one by one!" (Invitation to Communication), and "Based on the positive comments and responses, Company A planned and launched the "Sprout Project" through initial opinion collection and adoption", "Please join us in witnessing the birth of the "Sprout Project", and feel free to continue leaving comments below!" (Acceptance of evaluation) and so on. The non-interactive CSR communication materials provided a descriptive account of the company's CSR activities.

The participants responded to questions regarding their perception of interactivity ([Kelleher, 2009](#)), CSR identification ([Bhattacharya & Sen, 2003](#)), and brand attitude using a Likert 7-level scale.

Manipulation Checks

A manipulation check was conducted to assess the effectiveness of the interactivity manipulation. The results of an independent samples t-test indicated that the high interactivity group of CSR communication perceived significantly higher interactivity compared to the low interactivity group (M interactive = 5.327, SD interactive = 0.922, M non-interactive = 4.182, SD non-interactive = 0.860, $t=9.000$, $P=0.000<0.05$).

Result

An analysis of variance (ANOVA) was performed to examine the influence of CSR communication on brand attitudes. The results indicated that CSR communication significantly influenced brand attitudes. Specifically, interactive CSR communication positively affected consumers' brand attitudes, suggesting that higher levels of interactivity in CSR communication lead to more favorable brand attitudes. The results support hypotheses H1, H1a, and H1b, as summarized in Table 1. As shown in Table 1, hypotheses H1, H1a, and H1b were tested.

Table 1
Impact of CSR communication interactivity on brand attitude

Variable	Interactivity	Case	Average	SD	F	df	P
Brand Attitude	High	45	5.227	0.914	20.244	81	0.000
	Low	37	4.479	1.001			

Using the PROCESS program in SPSS, Model 4 with Bootstrap was employed to test the mediating effects. A sample size of 5000 was chosen, and the test was conducted at a 95% confidence interval. The results of the analysis are presented in Table 2.

Table 2
The mediating effect of CSR identification

	Effect	Effect	LLCI	ULCI	t	P
Direct Effect	0.2172	0.094	0.0508	0.4251	2.5308	0.0134
Indirect Effect	0.3743	0.3567	0.2276	0.5079		

The results revealed a significant indirect effect, as the confidence interval did not include 0 ($LLCI=0.2276$, $ULCI=0.5079$). When controlling for the mediating variable CSR identification, CSR communication still had a significant effect on the dependent variable consumer brand attitude ($LLCI=0.00508$, $ULCI=0.4251$, $P=0.0134<0.05$), indicating a significant direct effect. In summary, it can be concluded that consumer CSR identification plays a partially mediating role between CSR communication style and consumer brand attitude, providing support for hypotheses H2, H2a, and H2b.

Study 2

The objective of Study 2 was to examine the main effects of CSR communication on consumer attitudes, the difference in interactivity on brand attitudes, and further explore the

mediating effect of CSR identification. Additionally, the study aimed to test the moderating effect of media richness between CSR communication style and CSR identification, as well as between CSR communication style and brand attitudes.

Participants and Procedure

In order to expand the sample source, Study 2 randomly selected participants from its sample pool using online questionnaire research platforms. Monetary rewards were offered to each participant. A total of 263 valid questionnaires were collected out of 292 questionnaires. The participants were divided into four scenarios, with 66, 64, 69, and 64 participants in each scenario, respectively. The sample consisted of 41.1% males, aged between 21 and 34 years old, and 97.2% of them reported paying attention to CSR information. Before conducting the main experiment, a pre-experiment was conducted with 50 student participants to analyze their responses to the materials. The results indicated that the high media richness group perceived significantly higher media richness compared to the low media richness group ($M_{high}=5.489$, $SD_{high}=1.071$, $M_{low}=3.713$, $SD_{low}=1.183$, $t=7.011$, $P=0.000;0.01$). The participants were randomly assigned to one of four groups, and the procedures were the same as in Study 1.

Stimulus Materials and Measure

Study 2 used a 2 (CSR communication: interactivity vs. non-interactivity) $\times$ 2 (media richness: high vs. low) between-group design. The interactivity scenario for CSR communication was manipulated as in Study 1. The media richness manipulation was based on a study by [Maity et al. \(2018\)](#) on consumer information search and choice. The participants read the same text in two different situations, with the difference being that the high media richness condition included images. The images and textual content were taken from actual content posted by the brand, with the brand information blurred.

The participants responded to scales measuring Perceived Interactivity, CSR Identification, Brand Attitude, and Perceived Media Richness ([Suh, 1999](#)). All variables were measured and assessed using a 7-point Likert scale.

Reliability, Validity Tests and Manipulation Checks

The reliability and validity of the scales used in the study were assessed. The Cronbach's α coefficients of 0.778, 0.925, 0.829, and 0.892 were greater than 0.7, and CR values of 0.8053, 0.9259, 0.8301, and 0.8939 were greater than 0.8. The validation factor analysis of the scale using AMOS showed that the AVE values were 0.5238, 0.7143, 0.55, and 0.6784 were all greater than the standard value of 0.5. The scales used in this study have been previously validated in other studies, confirming their content validity.

Manipulation Inspection: Manipulation checks were conducted to ensure the effectiveness of the experimental manipulations. Independent samples' t-test results indicated that the perceived interactivity of the high interactivity group of CSR communication was significantly higher than that of the non-interactivity group of CSR communi-

cation (M interactivity =5.4250,SD interactivity =1.166,Mnon-interactivity=4.1711,SDnon-interactivity=1.045,t=13.913,P=0.000<0.01).Consumer perception of media richness was significantly higher in the high media richness group than in the low media richness group (M high =5.8444,SDhigh =0.858,Mlow=3.8672,SDlow=1.159,t=19.922, P=0.000<0.01). Thus, this experimental scenario manipulation met the expectation.

Results

Mediation Effect

To further verify the mediating role of CSR identification, this study uses a sequential test to verify the mediating role of CSR identification.

Step 1, regression analysis of CSR communication interactivity and consumer brand attitudes. Table 3 and Table 4 show the results of the regression analysis of CSR communication interactivity and consumer brand attitudes. The significance coefficient $P=0.000;0.05$ indicates that the model fits well (see Table 3) the influence of CSR communication interactivity and brand attitude, the $\beta > 0$, and the significance coefficient is $0.000 < 0.05$ (see Table 4) It means that CSR communication interactivity positively influences consumers' purchase intentions. The results showed a significant positive effect of CSR communication interactivity on consumer brand attitudes, supporting H1, H1a, and H1b.

Table 3

Model summary of the impact of CSR communication interactivity on consumer brand attitudes

Model	R	R^2	Adjusted R^2	Error in standard estimation	Variation statistics				
					R2	F	df1	df2	P
1	0.474	0.225	0.222	0.90275	0.225	75.588	1	261	0.000

Table 4

Coefficient of influence of CSR communication interactivity on consumers' brand attitude

Model	Unstandardized regression coefficient		Standardized regression coefficient	T	p
	β	Standard error	coefficient		
Constant term	2.502	0.283		8.537	0.000
X	0.504	0.058	0.474	8.694	0.000

Step 2, regression analysis of CSR communication interactivity and CSR identification. Table 5 and Table 6 show the results of the regression analysis of the interactivity of CSR communication and CSR identification. The significance coefficient $P=0.000<0.05$, indicates that the model fits well (see Table 5). The effect of CSR communication interactivity and brand attitude is $\beta > 0$ and the significance coefficient is $P=0.000 < 0.05$ (see Table 6). It means that CSR communication interactivity positively affects CSR identification. The results revealed a significant positive effect of CSR communication interactivity on CSR identification, confirming H2, H2a, and H2b.

Table 5

Model summary of the impact of CSR communication interactivity on CSR identification

Model	R	R^2	Adjusted R^2	Error in standard estimation	Variation statistics				
					R2	F	df1	df2	P
1	0.524	0.275	0.272	0.765	0.275	98.957	1	261	0.000

Table 6

Coefficient of the impact of CSR communication interactivity on CSR identification

Model	Unstandardized regression coefficient		Standardized regression coefficient	T	P
	β	Standard error	coefficient		
Constant term	2.849	0.240		11.877	0.000
X	0.488	0.049	0.524	9.948	0.000

Step 3, the mediating effect of CSR identification Table 7 illustrates that the positive effect of CSR communication interactivity on consumer brand attitudes persists after the inclusion of CSR identification ($p=0.023<0.05$), and consumer CSR identification partially mediates the effect between CSR communication interactivity and brand attitudes. That is, compared to non-interactivity CSR communication, interactivity CSR communication increases consumer CSR identification and thus consumer brand attitude. In summary, the mediating effect of CSR identification is once again verified by the tests. H2, H2a and H2b were verified.

Table 7

Coefficients of CSR communication and CSR identification on consumers' brand attitude

Model	Unstandardized regression coefficient		Standardized regression coefficient	T	P
	β	Standard error	coefficient		
Constant term	0.238	0.260		0.913	0.362
X	0.116	0.050	0.109	2.294	0.023
M	0.795	0.054	0.696	14.687	0.000

Moderating Effects

The moderating effects of media richness were analyzed using ANOVA. Interactivity was coded as 1, non-interactivity was coded as 0, high media richness was coded as 1, and low media richness was coded as 0. The ANOVA is shown in Table 8, $p=0.004<0.05$, indicating that the process of CSR communication interactivity influencing CSR identification is influenced by the role of media richness, which plays a moderating role in CSR communication plays a moderating role in the influence mechanism of CSR communication and consumer CSR identification. The results of the measurement of CSR identification show that in the scenario of high interactivity in CSR communication, CSR identification is significantly higher with high media richness than with low media richness (M high=5.9394, M low=5.3125, $P<0.01$). H3a is confirmed, contrastingly, in the scenario of low interactivity in CSR communication, consumer CSR identification is respectively low (M high=5.2790, M low=4.1914, $P<0.01$). It is evident that low media richness reduces consumer

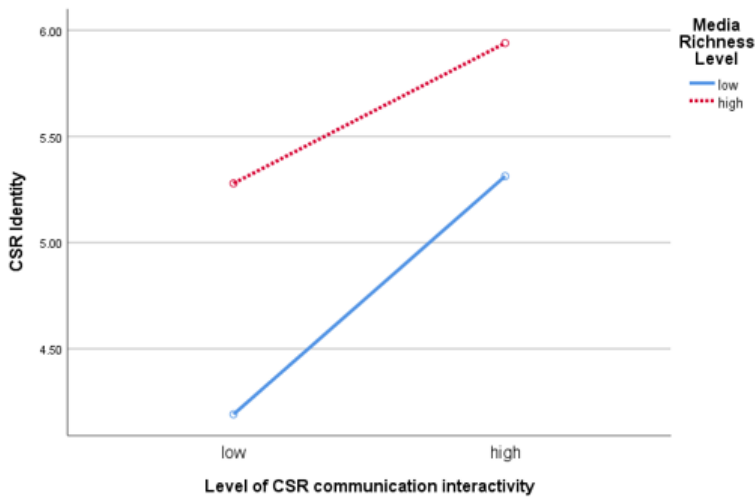
CSR identification relative to high media richness H3b is confirmed and the moderating effect is shown in Figure 2.

Table 8
Between-subjects effect test

	Sum of squares	df	Mean square	F	P
CSR communication interactivity	52.119	1	52.119	124.796	0.000
Media Richness	48.271	1	48.271	115.582	0.000
CSR communication interactivity × Media Richness	3.43500	1	3.485	8.345	0.004
Random error	108.167	259	0.418		
Total	7289.875	263			
Corrected Total	210.558	262			

Figure 2

Trend graph of media richness moderating CSR communication interactivity on CSR identification

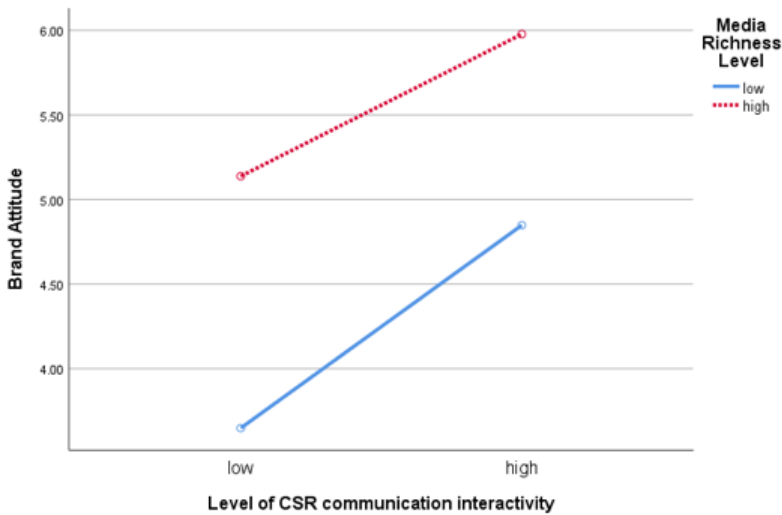


As shown in Table 9, $P=0.016 < 0.05$, indicate that the process of CSR communication interactivity influencing consumer brand attitudes received with the effect of media richness, and media richness plays a moderating role in the mechanism of CSR communication and consumer brand attitude influence. Simple effect analysis was then conducted, and the results of measuring consumer brand attitudes showed that consumer brand attitudes under high interactivity of CSR communication were significantly higher under high media richness than under low media richness ($M_{high}=5.9735$, $M_{low}=4.8477$, $p<0.01$). H4a was confirmed, contrarily, in the scenario of low interactivity of CSR communication, consumer brand attitudes were low ($M_{high} = 5.1377$, $M_{low} = 3.6484$, $p<0.01$), which shows that high media richness increases consumer brand attitudes relative to low media richness. H4b was confirmed, and the moderating effect is shown in Figure 3.

Table 9
Between-subjects effect test

	Sum of squares	df	Mean square	F	P
CSR communication interactivity	68.262	1	68.262	189.19	0.000
Media Richness	112.628	1	112.628	312.154	0.000
CSR communication interactivity $\times$ Media Richness	2.124	1	2.124	5.886	0.016
Random error	93.45	259	0.361		
Total	6628.688	263			
Corrected Total	274.305	262			

Figure 3
Media richness moderates the trend of CSR communication interactivity on brand attitude



Discussion and Conclusion

In an era when the rapid development of social media has led to the rapid dissemination of information and CSR is gaining increased attention from companies and the public, companies are gradually choosing to announce their social responsibility activities on social media. Based on interactivity theory, media enrichment theory, and social identity theory, our study explored the mechanisms of the effect of CSR communication styles on brand attitudes through two experiments. The following main conclusions were drawn. CSR communication has a direct impact on consumer brand attitudes, and there are differences in consumer brand attitudes depending on the CSR communication approach. Specifically, interactive CSR communications have a stronger positive impact on brand attitudes than non-interactive CSR communications. When communicating, companies should make full use of the interactive features of social media to establish two-way symmetrical communication, so that consumers can not only receive CSR information but also

function as decision makers and designers of corporate implementation of social responsibility activities, thus strengthening the connection between them and the consumers.

CSR identification partially mediates the effect of CSR communication on brand attitudes, while CSR communication styles have an influence on CSR identification. In other words, the more interactive the CSR communication is, the higher the CSR recognition of consumers. Conversely, the less interactive the CSR communication is, the lower the CSR recognition of consumers. Media richness moderates the impact of CSR communication styles on CSR identification and CSR communication style on brand attitude. When communicating CSR, compared to low media richness, high media richness increases consumer CSR recognition and improves consumer brand attitudes.

Theoretical Contributions

The theoretical contributions of this study are as follows: Firstly, it expands the understanding of the influence of CSR communication on consumer behavior and attitudes. Existing research has not fully explored the impact of CSR communication by companies through social media on consumer emotions and behaviors (Gupta et al., 2021). Based on interactivity theory, this study explores the positive effects and differences of CSR communication methods on consumer cognitive emotions from the message interactivity perspective.

Furthermore, this study supplements the research on CSR communication within the framework of social identity theory. It emphasizes the role of CSR identification as a mediating mechanism between CSR communication and brand attitudes. The study recognizes the importance of consumer identification in attitude formation, adding to the understanding of how CSR communication shapes consumer perceptions (Crane & Glozer, 2016).

Finally, the factors affecting the effectiveness of CSR communication are further explored. From a media richness perspective, the moderating role of media richness between CSR communication and CSR identification as well as brand attitude is analyzed, and the conception of mechanism of CSR communication's effect on consumer behavior and emotion has been enhanced.

Practical Implications

The findings of this study have practical implications for companies engaged in CSR activities. First, Our findings provide some important insights into CSR communication styles as a factor in shaping brand attitude differentiation. when companies communicate CSR, interactivity is one of the key factors that lead to communication effectiveness. Choosing interactive communication methods such as using conversational communication language and allowing stakeholders to comment and interact and participate in CSR decision making implementation, can improve the level of consumer CSR recognition and thus raise consumers' attitude toward the company.

Then, from a management perspective, business managers should recognize that maximizing the effectiveness of CSR communication is not only based on how it is commu-

nicated, but is also driven by what is communicated, and that a better understanding of this mechanism will provide guidance to companies conducting CSR activities. Companies should consider the use of diverse media formats to enhance the effectiveness of CSR communication. Utilizing images, audio, and video content related to CSR activities can enrich the communication experience and enhance the authenticity of the information (Chen, Shi, Zuo, Fu, & Sun, 2021). This, in turn, can lead to more productive CSR communication and generate greater economic and reputational value for the company.

Finally, by establishing consumer identification as a key mediating factor to identify an effective way to maximize CSR communication effectiveness, it is critical for companies to increase customer identification with CSR, and a strong consumer identification can insulate companies from challenge.

Limitations and Future Research

Despite the contributions of this study, there are some limitations that should be addressed in future research. First of all, our study avoids the influence of consumers' brand attitudes due to brand awareness and original brand image by blurring the real information of the company, whereas in real life, one of the purposes of CSR activities is to improve brand reputation to form reputable brand value and establish an upright. To achieve this, real brand information is disclosed in the CSR communication process, making it difficult to ensure that consumers are not influenced by it. Therefore, future research can further explore the effects of original brand awareness, brand country of origin and firm size in CSR communication.

Secondly, our study mainly explored the positive effects of CSR communication style, and it has been found that consumers' questioning of CSR messages brings negative effects (Skarmeas & Leonidou, 2013), while the internal mechanisms of their negative consequences are not yet discussed. Future research can further explore the reasons for the emergence of negative effects in CSR communication.

Lastly, since our study was conducted in universities and online platforms, the subjects were mainly younger generation consumers, future research could be conducted in social practice to increase the age coverage of the subjects and even further consider the different responses of different generations of consumers to CSR interactivity. Because according to the "generation cohort theory", each generation, such as Millennials, Gen Xers and Baby Boomers, has a unique value system and will process different information based on their unique needs and motivations (Y.-J. Lee & Haley, 2020).

References

- Bartikowski, B., & Berens, G. (2021). Attribute framing in csr communication: doing good and spreading the word—but how? *Journal of Business Research*, 131, 700–708.
- Bhattacharya, C. B., & Sen, S. (2003). Consumer–company identification: A framework for understanding consumers’ relationships with companies. *Journal of Marketing*, 67(2), 76–88.
- Boccia, F., & Sarnacchiaro, P. (2018). The impact of corporate social responsibility on consumer preference: A structural equation analysis. *Corporate Social Responsibility and Environmental Management*, 25(2), 151–163.
- Carlini, J., & Grace, D. (2021). The corporate social responsibility (csr) internal branding model: Aligning employees’ csr awareness, knowledge, and experience to deliver positive employee performance outcomes. *Journal of Marketing Management*, 37(7-8), 732–760.
- Chen, Q., Shi, Z., Zuo, Z., Fu, J., & Sun, Y. (2021). Two-stream hybrid attention network for multimodal classification. In *IEEE International Conference on Image Processing (ICIP)* (pp. 359–363).
- Cho, M., Furey, L. D., & Mohr, T. (2017). Communicating corporate social responsibility on social media: Strategies, stakeholders, and public engagement on corporate facebook. *Business and Professional Communication Quarterly*, 80(1), 52–69.
- Crane, A., & Glozer, S. (2016). Researching corporate social responsibility communication: Themes, opportunities and challenges. *Journal of Management Studies*, 53(7), 1223–1252.
- Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science*, 32(5), 554–571.
- Dai, W., & Reich, A. Z. (2023). The differential impact of monological and dialogical corporate social responsibility communication strategies on brand trust in the credence goods market. *Asia Pacific Journal of Marketing and Logistics*, 35(1), 231–248.
- Du, S., Bhattacharya, C. B., & Sen, S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. *International Journal of Management Reviews*, 12(1), 8–19.
- Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational images and member identification. *Administrative science quarterly*, 239–263.
- Eberle, D., Berens, G., & Li, T. (2013). The impact of interactive corporate social responsibility communication on corporate reputation. *Journal of Business Ethics*, 118, 731–746.
- Golob, U., Podnar, K., Elving, W. J., Ellerup Nielsen, A., Thomsen, C., & Schultz, F. (2013). Csr communication: quo vadis? *Corporate Communications: An International Journal*, 18(2), 176–192.
- Gomez, L. M. (2021). The state of social media research in csr communication. *The Palgrave Handbook of Corporate Social Responsibility*, 577–598.
- Gupta, S., Nawaz, N., Alfalah, A. A., Naveed, R. T., Muneer, S., & Ahmad, N. (2021). The relationship of csr communication on social media with consumer purchase

- intention and brand admiration. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1217–1230.
- Ham, C.-D., & Kim, J. (2020). The effects of CSR communication in corporate crises: Examining the role of dispositional and situational CSR skepticism in context. *Public Relations Review*, 46(2). doi: 10.1016/j.pubrev.2019.05.013
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! the challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68.
- Kelleher, T. (2009). Conversational voice, communicated commitment, and public relations outcomes in interactive online communication. *Journal of Communication*, 59(1), 172–188.
- Kim, S., & Ji, Y. (2017). Chinese consumers' expectations of corporate communication on csr and sustainability. *Corporate Social Responsibility and Environmental Management*, 24(6), 570–588.
- Kollat, J., & Farache, F. (2017). Achieving consumer trust on twitter via CSR communication. *Journal of Consumer Marketing*, 34(6), 505–514.
- Korschun, D., & Du, S. (2013). How virtual corporate social responsibility dialogs generate value: A framework and propositions. *Journal of Business Research*, 66(9), 1494–1504.
- Lauritsen, B. D., & Perks, K. J. (2015). The influence of interactive, non-interactive, implicit and explicit CSR communication on young adults' perception of UK supermarkets' corporate brand image and reputation. *Corporate Communications: An International Journal*, 20(2), 178–195.
- Lee, S. Y., Kim, Y., & Kim, Y. (2021). Engaging consumers with corporate social responsibility campaigns: The roles of interactivity, psychological empowerment, and identification. *Journal of Business Research*, 134, 507–517.
- Lee, Y.-J., & Haley, E. (2020). How do generational differences drive response to social-issue ads?: The effect of value orientations across generations in the US. *Journal of Advertising Research*, 60(3), 271–289.
- Lew, Z., & Stohl, C. (2023). What makes people willing to comment on social media posts? the roles of interactivity and perceived contingency in online corporate social responsibility communication. *Communication Monographs*, 90(1), 1–24.
- Liu, X., & He, H. (2022). Csr disclosures and knowledge-sharing behavior: The impacts of CSR Altruistic Attribution and CSR identification. *Journal of Management Sciences*, 9(2), 32–45.
- Lund, N. F., Cohen, S. A., & Scarles, C. (2018). The power of social media storytelling in destination branding. *Journal of Destination Marketing & Management*, 8, 271–280.
- Lynch, J., & De Chernatony, L. (2004). The power of emotion: Brand communication in business-to-business markets. *Journal of Brand Management*, 11(5), 403–419.
- Maity, M., Dass, M., & Kumar, P. (2018). The impact of media richness on consumer information search and choice. *Journal of Business Research*, 87, 36–45.
- McMillan, S. J. (2006). Exploring models of interactivity from multiple research traditions: Users, documents, and systems. *The Handbook of New Media*, 205–229.
- Morsing, M., & Schultz, M. (2006). Corporate social responsibility communication: stakeholder information, response and involvement strategies. *Business ethics: A European*

- Review*, 15(4), 323–338.
- Peloza, J., & Shang, J. (2011). How can corporate social responsibility activities create value for stakeholders? a systematic review. *Journal of the Academy of Marketing Science*, 39, 117–135.
- Ramesh, K., Saha, R., Goswami, S., Sekar, & Dahiya, R. (2019). Consumer's response to csr activities: Mediating role of brand image and brand attitude. *Corporate Social Responsibility and Environmental Management*, 26(2), 377–387.
- Schmeltz, L. (2012). Consumer-oriented csr communication: focusing on ability or morality? *Corporate Communications: An International Journal*, 17(1), 29–49.
- Skarmeas, D., & Leonidou, C. N. (2013). When consumers doubt, watch out! the role of CSR skepticism. *Journal of Business Research*, 66(10), 1831–1838.
- Suh, K. S. (1999). Impact of communication medium on task performance and satisfaction: an examination of media-richness theory. *Information & Management*, 35(5), 295–312.
- Tamvada, M. (2020). Corporate social responsibility and accountability: a new theoretical foundation for regulating CSR. *International Journal of Corporate Social Responsibility*, 5(1), 1–14.
- Troise, C., & Camilleri, M. A. (2021). The use of digital media for marketing, csr communication and stakeholder engagement. In *Strategic corporate communication in the digital age* (pp. 161–174). Emerald Publishing Limited.
- Tseng, C.-H., & Wei, L.-F. (2020). The efficiency of mobile media richness across different stages of online consumer behavior. *International Journal of Information Management*, 50, 353–364.
- Vickery, S. K., Droge, C., Stank, T. P., Goldsby, T. J., & Markland, R. E. (2004). The performance implications of media richness in a business-to-business service environment: Direct versus indirect effects. *Management Science*, 50(8), 1106–1119.
- Zhang, H., Ahmed, M., & Salam, J. (2023). The legitimacy theory: Whether CSR activities foster consumers' intention to purchase and pay the price premium? *Journal of business research*, 10(1), 1-23.