



# Informational or emotional? The influencing mechanism of digital corporate social responsibility related interactive content on product purchase intention

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## ABSTRACT

Digitalization has transformed the way enterprises communicate corporate social responsibility (CSR) initiatives, highlighting the critical role of interactive content in the realm of digital CSR (DSR). This research investigates the influence of informational and emotional DSR content on consumer perceptions and behavioral outcomes through two experimental studies. Study 1 employed a one-factor between-subjects design (informational vs. emotional) with 50 participants in each condition. Study 2 utilized a  $2 \times 2$  factorial design (content type: informational vs. emotional; product quality certification: present vs. absent), with 50 participants assigned to each of the four conditions. The results demonstrate that informational content significantly enhances consumers' perceptions of competence and positively influences purchase intentions. In contrast, emotional content primarily evokes perceptions of warmth but does not directly impact purchase intentions. However, the presence of product quality certification amplifies the effectiveness of emotional content, creating a "warm glow" effect that enhances warmth perceptions and fosters consumer engagement. These findings underscore the importance of combining emotional content with informational details, such as time, place, amount, and channel, to balance warmth and competence in DSR communications. By integrating the Stereotype Content Model and the "warm glow" effect into DSR research, this study provides theoretical advancements and practical insights for optimizing DSR-related interactive content strategies to maximize consumer engagement and purchase behavior.

## 1. Introduction

In today's digital era, brands have begun using technologies such as the Internet, computer-mediated communication, and interactive media to demonstrate corporate social responsibility (CSR) to stakeholders and devise effective strategies for digital corporate social responsibility (DSR) interaction. This type of interaction can contribute to sustainable brand development (Gupta et al., 2021; Okazaki et al., 2020). DSR interaction enables brands to strategically express their economic, social, and environmental accountability. These attributes can bolster brands' reputations and operational legitimacy (Pirsch et al., 2007). Essentially, DSR interaction refers to the process by which a brand communicates its social responsibility efforts or outcomes to stakeholders. Such interaction can thus improve consumers' attitudes toward

brand-associated DSR (Zhao, Zhang, et al., 2024).

Digital CSR (DSR) interactions enable firms to disseminate CSR-related information to consumers instantaneously, emphasizing the critical importance of accuracy in communication. A notable example is Hongxing Erke, a Chinese lifestyle and sportswear brand, which faced public scrutiny in 2022 following its announcement of a 100-million-yuan donation. Public reactions were polarized: some accused the company of engaging in charity marketing, while others criticized the donation's composition, noting that it primarily consisted of inventory materials, leading to speculation that the initiative was a destocking strategy. Furthermore, the company's intentions were called into question due to its failure to communicate effectively and promptly with the public (Dai et al., 2024). Digital platforms represent highly convenient channels for CSR interaction. The birth of these platforms has in turn

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fostered DSR interaction (Du et al., 2011). The Internet and social media have expedited enterprises' DSR interactions with stakeholders; these communications are efficient, can reach broad audiences, and are therefore widely used (Chu et al., 2020). DSR interaction exploits digital media characteristics such as openness, information exchange, and transparency. Research on this form of interaction has covered topics such as establishing DSR information credibility (Eberle et al., 2013); enhancing consumers' brand trust (Kollat & Farache, 2017); and promoting positive brand-related emotions (Chu et al., 2020), evaluations, and word of mouth among customers (Gupta et al., 2021). The effects of different types of DSR-related interactive content on consumers remain comparatively neglected (Yang, 2024).

CSR has been classically defined as organizations' voluntary assumption of responsibilities in economic, social, and environmental domains through philanthropic donations, environmental stewardship, and workforce protections, ultimately aiming to enhance corporate reputation and societal welfare through ethical practices (Kuokkanen & Sun, 2024). DSR represents an extension and reconceptualization of CSR in the digital era, encompassing any efforts, initiatives, or activities undertaken by individuals, groups, or organizations to implement or post the concept of corporate social responsibility through online digital platforms. (Puriwat & Tripopsakul, 2022). Traditional CSR communication predominantly employs unilateral dissemination methods such as annual reports, press briefings, and conventional media campaigns (Tench & Jones, 2015), an approach criticized for relegating consumers to passive information recipients due to its lack of immediate feedback mechanisms (Crane & Glozer, 2016). In contrast, DSR facilitates bidirectional engagement through interactive digital interfaces—including social media platforms and corporate websites—that enable real-time user interactions through commentary features, content endorsements, and live chat functions (Puriwat & Tripopsakul, 2022). This paradigm shift significantly enhances consumer perceptions of CSR authenticity and participatory engagement. By leveraging digital technologies, DSR dismantles information asymmetries and establishes dynamic dialogic systems (Fatma et al., 2020), while accelerating CSR information diffusion through real-time updates on social platforms (Tao & Wilson, 2016). Compared to traditional CSR reporting's periodic disclosures that risk accusations of selective presentation (Xiong, 2024), DSR enhances transparency through continuous micro-updates of social media content, fostering sustained stakeholder engagement.

Previous studies have demonstrated that digital platforms enhance the effectiveness of CSR communication. Through digital tools such as company websites and social media accounts, stakeholders can be informed about corporate social responsibility initiatives (Amankona et al., 2024). The digital transformation has significantly reshaped the way companies implement social responsibility programs. Advances in social networking and digital technology have enabled companies to establish virtual brand communities, facilitating customer support and knowledge exchange (Lobschat et al., 2021; Wirtz et al., 2023). Unlike traditional CSR interactions, DSR interactions are characterized by high efficiency and transparency (van der Merwe & Al Achkar, 2022). Given this context, further research is needed to explore how DSR interactions can more effectively foster communication with consumers and enhance consumer attitudes in the digital era.

Brand-consumer interactions often rely on content that is either informational or emotional in nature (Wahid & Gunarto, 2022). When online brand content incorporates CSR-related details, it constitutes digital CSR (DSR) informational content, encompassing specifics such as the time, location, amount, channel, target, and utilization of charitable donations. This type of content aids consumers in understanding the brand's stance on CSR initiatives (Bilgin & Kethüda, 2022). In contrast, content with a reduced emphasis on detailed information often employs emotional appeals designed to evoke sensory or emotional responses, thereby enhancing the content's resonance and appeal (Dubé et al., 1996). Emotional DSR content aims to communicate the company's CSR contributions while fostering a sense of warmth toward the brand,

which, in turn, is expected to elicit positive emotional perceptions among consumers (Yang, 2024). Some scholars have asserted that informational content satisfies consumers' need to seek information and can promote purchase intention (Lin & Lu, 2011; Park et al., 2009). However, emotional content does not seem to significantly influence purchase intention (Cheung et al., 2020; Wahid & Gunarto, 2022). Emotional content is thought to more effectively arouse consumers' emotional perceptions: because informational content is typically more serious, emotional content can ignite consumers' purchase intentions better than informational content (Dolan et al., 2016; Muntinga et al., 2011). In an effort to clarify discrepancies in current research, we address DSR-related interactive content via a pair of in-depth studies concerning the mechanism of DSR purchase intention. We also refer to the stereotype model to depict the mediating mechanism behind the role of DSR-related interactive content on product purchase intention. We further verify the mediating effects of perceived warmth and perceived competence in our proposed framework. Finally, we find that product quality certification moderates the impact of DSR-related interactive content while a 'warm glow' feeling mediates emotional content, perceived warmth, and product purchase intention (Ma et al., 2024).

The remainder of this article is organized as follows. Section 2 provides a theoretical foundation for our hypotheses. Sections 3–5 respectively describe our pretest and two studies to examine the mechanisms by which different DSR interactions affect product purchase intention. In Study 1, we introduced a stereotype model to analyze the mediating roles of perceived warmth and perceived competence on different forms of DSR-related interactive content and product purchase intention. In Study 2, we analyzed the moderating effect of product quality certification and the mediating effect of a 'warm glow' feeling on warmth perceptions and product purchase intention. Finally, our findings and their theoretical and managerial implications are summarized in Section 6.

## 2. Theoretical framework

### 2.1. Informational and emotional content

For this study, a brand's online statements regarding its CSR initiatives are categorized as digital CSR (DSR) informational content, encompassing details such as the time, location, amount, channel, target, and purpose of charitable donations. Such content fulfills consumers' need to comprehend a brand's DSR efforts (Bilgin & Kethüda, 2022; De Vries et al., 2012) and typically reflects the brand's competence in these endeavors, including attributes like quality, responsibility, creativity, and efficiency (Fiske et al., 2007). For example, Hongxing Erke, a Chinese brand, once published a microblog post announcing that the Shanxi Charity Federation had donated 20 million yuan to support disaster-affected areas in Shanxi Province, China (Zhao, Guan, et al., 2024).

DSR Interaction has implemented blockchain technology to enhance information traceability, transparency, and reliability within its systems (Farooqi et al., 2024). As an innovative distributed ledger technology, blockchain addresses fundamental challenges in DSR interactions through its novel approach to data recording and storage (Rinne, 2022). The technology's chain-based architecture and decentralized network enable comprehensive documentation of data throughout its lifecycle - from generation to dissemination - thereby establishing an immutable audit trail. It improves the traceability of information and strengthens consumers' trust in information (Zhu et al., 2021). Traditional information tracking systems rely on centralized data storage models, where control over data modification resides exclusively with system administrators (Fan et al., 2022). This centralized approach creates inherent vulnerabilities, as custodians of the system may alter stored information when it conflicts with their interests. Blockchain technology addresses these limitations through decentralized data management, ensuring enhanced visibility and transparency while establishing effectively

immutable records. Blockchain technology strengthens consumer trust in the information that DSR interaction with by explicitly protecting consumer data, information transparency and social responsibility, thus increased their purchase intention (Silva & Moro, 2021).

Conversely, content with less emphasis on detailed information often incorporates emotional appeals, which are designed to elicit sensory or emotional responses that resonate deeply with consumers (Dubé et al., 1996). Emotional DSR content allows brands to project an image of generosity and warmth, fostering positive emotional perceptions. Emotional expressions in DSR can take various forms, including emotion-related words (e.g., “sad,” “pleased”; (Labroo & Ramanathan, 2007) adjectives that amplify sentiment (e.g., “very,” “special”; (Harris & Paradice, 2007), or emojis (e.g., smiley faces; (Ames & Johar, 2009; Small & Verrochi, 2009). These emotional cues often convey prosocial attributes such as friendliness, sincerity, trustworthiness, and morality. An illustrative example is another post by Hongxing Erke, which stated: “Hongxing Erke staff came to the nursing home, spent a pleasant afternoon with the elderly, and even the air is filled with the smell of happiness and joy.” The post was accompanied by a photograph showing employees interacting with residents. Smiling individuals in the image complemented the emotional language used in the post, such as “pleasant,” “joy,” and “happiness,” portraying the brand's sincerity and warmth to its audience (Wang et al., 2017).

Although scholars have contemplated how informational content and emotional content influence people's intentions to buy products, more studies are needed (Lin & Lu, 2011). Compared with emotional content, informational content provides specific details about brands' CSR. Consumers may subsequently appraise a company's abilities and strengths. These assessments can reinforce people's purchase intentions (Crisafulli et al., 2020; Wojnicki & Godes, 2017; Duan & Li, 2023). Conversely, a brand's friendliness and sincerity, as perceived (Wojnicki & Godes, 2008) through emotional content, can diminish these intentions because people may struggle to objectively evaluate the company (Barasch et al., 2014). We thus presume that informational content will enhance product purchase intention more than emotional content:

**H1.** Compared with DSR-related emotional interactive content, DSR-related informational interactive content generates stronger purchase intention.

#### Perceived competence and warmth.

The stereotype content model originated from social psychology. It maintains that, when faced with information constraints and decision uncertainty, people usually simplify external information based on competence and warmth to make choices quickly (Bordalo et al., 2016). Competence reflects one's opinions about others' confidence, wisdom, and skills. Warmth refers to the cordiality, kindness, and sincerity that individuals sense from others (Fiske et al., 2007; Wu et al., 2024).

Brand competence refers to the skills a brand possesses in meeting consumer needs, such as competitiveness and intelligence (Cuddy et al., 2008; Judd et al., 2005). Research has shown that brand content with high informational value performs well online, as it stimulates greater cognitive processing among consumers and enhances perceptions of brand competence (Stieglitz & Dang-Xuan, 2013; Wojnicki & Godes, 2008).

Digital platforms enable the real-time dissemination of information about CSR initiatives while also allowing consumers to provide feedback. This transparency strengthens brand credibility and reinforces consumer perceptions of brand capability (Balaguru et al., 2024). For instance, when companies publicly share their CSR efforts on social media in real time, consumers can directly observe these initiatives, which helps cultivate a professional brand image and enhances perceive competence (Singh et al., 2024).

These perceptions correlate to the enterprise's apparent geniality and authenticity, thereby increasing consumers' perceptions of brand competence. Individuals are normally more willing to buy products from a brand they deem competent (Aaker et al., 2012; Crisafulli et al., 2020;

Kolbl et al., 2019). The stronger consumers' perception of a brand's competence, the more likely they are to believe that the brand can deliver high-quality products or services. This perception reduces their perceived risk associated with purchasing the brand's offerings, thereby strengthening their trust in the brand. Trust, in turn, is a crucial factor influencing consumer purchase decisions (Wang et al., 2023). Based on this, we propose that, compared to emotional content, informational content is more effective in establishing perceptions of brand competence, ultimately leading to a higher purchase intention (Xu et al., 2024).

**H2a.** DSR-related informational interactive content evokes competence perceptions and significantly influences purchase intention.

Brand warmth can be defined as consumers' views of a brand's good intentions (e.g., friendliness, earnestness, and willingness to help humanity). When a brand's DSR-related interactive content evokes emotional reactions (e.g., regarding the company's sincerity, friendliness, and other attributes), consumers perceive the brand warmly and typically support its CSR activities (Barasch et al., 2014; Hu, Zhang, et al., 2024; Small & Loewenstein, 2003). A brand's informational content that describes DSR typifies the company's initiatives in this respect and increases consumers' confidence (i.e., via stronger perceived brand competence).

Yet some consumers' purchase intentions do not increase despite stronger perceptions of brand warmth (Aaker et al., 2010; Wang et al., 2025). For instance, people may have trouble judging a company's competence and view the brand's products as less effective than alternatives due to perceived warmth (Lin & Chang, 2012). Individuals' intentions to buy from the enterprise could then wane.

On the contrary, we anticipate emotional content to be more closely tied to warmth perceptions; these perceptions are unlikely to have mediating effects on emotional content or purchase intention. Stated formally:

**H2b.** By contrast, DSR-related emotional interactive content evokes warmth perceptions and has no significant impact on purchase intention.

## 2.2. Product quality certification

Product quality certification is based on an inspection of an enterprise's quality management system (Hu, Qiu, et al., 2024). Tests are often run to confirm whether the company's products, processes, or services meet specific requirements and whether the firm can consistently create products in line with established standards and provide written proof. Consumption value theory holds that product quality certification is significantly positively correlated with consumers' opinions about product competence (Aqueveque, 2006). People judge various attributes of products or services during consumption. When little information is available with which to evaluate a company's offerings, consumers rely on cues that signal certain characteristics. Product quality certification can guide one's decisions in addition to one's cognitive processing and behavior (Zhao et al., 2023).

Signaling theory posits that product quality certification provides ample context, such as about product excellence and a brand's reputation (Kirmani & Rao, 2000; Rao et al., 1997). These cues help distinguish high- and low-quality products (Kirmani & Rao, 2000; Mishra, 2006). Product quality certification can grant companies a valuable advantage (Rusjan & Alič, 2010) along with identification tools (Moschini et al., 2008), thereby helping brands attract new customers and retain existing ones (Moschini et al., 2008; Walker & Johnson, 2009). Some explained that product quality certification exemplifies the applicability of products and services, reduces customer costs, and improves customer satisfaction (Al-Hawary & Abu-Laimon, 2013). Some other researchers claimed that product quality certification symbolizes reliable, consistent product and service quality, including rapid provision and short delivery

times (Mathews, 2005). The overall company image of brands possessing this type of certification improves as a result. A higher-quality brand image arguably represents the most compelling way that a firm can increase consumer satisfaction (Awan & Ishaq Bhatti, 2003; Douglas et al., 2003; Hao, Xin, et al., 2023; Mathews, 2005). The perceived credibility of service and staff also rises due to positive word of mouth from satisfied customers (Burrill & Ledolter, 1999; Hao, Jiali, et al., 2023).

Product quality certification thus embodies a promotional tool (Karapetrovic & Willborn, 2001; Martínez Fuentes et al., 2003) as evidenced by greater confidence in the quality of a company's services (Medase & Abdul Basit, 2023) and an enhanced reputation in the eyes of stakeholders. Customers then tend to be willing to pay higher prices for the company's products (Burrill & Ledolter, 1999).

A 'warm glow' feeling refers to being pleased with oneself after engaging in prosocial behavior (Andreoni, 1989). Consumers are attracted to opportunities that inspire this feeling (Andreoni, 1989). Simply put, doing good makes people feel good (Isen, 1970). Individuals normally expect to experience a sense of warmth as well as pleasant feelings upon acting charitably (Strahilevitz, 1999). Consumers' trust in a brand's competence has been shown to increase when product quality certification is provided. Individuals may be inspired to make donations or take part in brand-initiated green public welfare programs upon learning about companies' CSR activities (Dong, 2023). Through participating in CSR, consumers feel that they are helping others. Thus, a strong 'warm glow' feeling is generated, which strengthens as participation or donation behavior increases (Koschate-Fischer et al., 2012). Consumers' intentions to buy products have been shown to increase as this 'warm glow' intensifies (Andrews et al., 2014).

When product quality certification is provided and a brand's DSR-related interactive content is emotional, the company's CSR behavior induces perceived warmth among consumers. They also see a capable brand as willing to engage in CSR and become inclined to support such behavior. These reactions elicit a 'warm glow' feeling and stronger purchase intentions. By contrast, when product quality certification is provided and DSR-related interactive content is informational, consumers will acknowledge a brand's competence but will not sense more warmth. Their product purchase intentions therefore will not increase (Zhu, 2023).

Product quality certification plays a crucial role in enhancing consumer trust in a brand. High-quality certification helps alleviate consumer anxiety and reduces perceived purchase risk, thereby strengthening their warm perception of the brand. Research has shown that brand quality certification effectively lowers consumers' concerns about potential product disappointment, fostering greater affinity and trust toward the brand (Jing et al., 2024).

Moreover, a brand's commitment to quality certification—particularly when it includes social responsibility guarantees such as environmental sustainability or philanthropic initiatives—can evoke the Warm Glow Feeling in consumers. When consumers perceive that their purchase not only fulfills personal needs but also contributes to social or environmental well-being, they tend to experience a heightened sense of accomplishment and happiness. This positive emotional response, in turn, further strengthens their purchase intention (Pan & Xu, 2025).

We propose that product quality certification plays significant moderating roles in emotional interactive content and purchase intention. Coupled with product quality certification, emotional content should further stimulate consumers' warmth perceptions and 'warm glow' feelings, thereby improving their purchase intentions. However, product quality certification should have no significant impacts on informational content and purchase intention as postulated:

**H3a.** When providing product quality certification, DSR-related emotional interactive content (compared with DSR-related informational interactive content) evokes warmth perceptions and a 'warm glow' feeling, resulting in stronger purchase intention. These effects are

not significant in the absence of product quality certification.

**H3b.** When product quality certification is provided, the effect of informational interactive content (compared with emotional interactive content) does not significantly differ from that in H2.

Our hypothesized model is pictured in Fig. 1.

### 2.3. Pretest

#### 2.3.1. Participants and procedures

We conducted a pretest to confirm the accuracy of the informational content and emotional content materials prior to initiating our formal studies. Representative DSR-related interactive content on social media was collected and adapted to develop experimental materials, drawing on relevant research on informational and emotional content. These materials were then categorized into informational and emotional content for use in the experiment. The informational content contains specific details of the donation, such as the type of donated materials, donation channels, donation purposes, follow-up assistance, etc. The emotional content includes some emotion-related words or adjectives that amplify sentiment. Examples include "the shoulders of responsibility," "build a solid fortress," "beautiful home." Questionnaire items were designed based on established scales measuring informational and emotional content. At the beginning of the questionnaire, a brief introduction to DSR-related interactive content was provided to ensure that participants had a clear understanding of DSR interactions, enabling them to accurately respond to the questionnaire items.

Pretest data were gathered by administering 100 questionnaires on the Credamo platform (Mage = 28.89, SD = 7.35, 64 % women). All participants were randomly assigned across a one-factor (informational vs. emotional) between-subjects design (50 participants per group). At the start of the pretest, participants were asked to imagine they had opened their microblogging site as usual to find that a brand had announced having donated materials to a disaster-stricken area. Participants responded to a series of questions after reading the scenario.

#### 2.3.2. Method

With reference to studies by some researchers (Tellis et al., 2019), we designed informational and emotional materials to serve as DSR-related interactive content (see Appendix I for details). Each piece of content contained approximately 100 words to mitigate potential interference effects attributable to different scenario lengths. After reviewing their respective materials, participants in each group answered the question, "Do you think the above content is informational content or emotional content?" They were next asked to evaluate the content (informational: "Do you feel that the above content has enabled you to obtain more effective information?"; adapted from (Bazi et al., 2023); emotional: "Do you feel that the above content resonates with you emotionally?"; adapted from (Sawaftah et al., 2021). Participants assigned scores using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Demographic information such as gender and age was collected at the end of the survey.

### 3. Results and discussion

Within the informational content group, 42 participants (84 %) deemed the material informational; within the emotional content group, 44 participants (88 %) believed the material was emotional. An independent samples *t*-test further revealed that the scores for the informational content group and the emotional content group differed significantly [ $t(98) = 2.21, p < 0.001$ ] when assessing informational content (items adapted from Bazi et al., 2023). The informational content group (Minformational = 5.78, SD = 0.79) also had higher scores than the emotional content group (Memotional = 5.26, SD = 1.47). The two groups' scores were again significantly different [ $t(98) = 3.74, p < 0.001$ ] when appraising emotional content (items adapted from



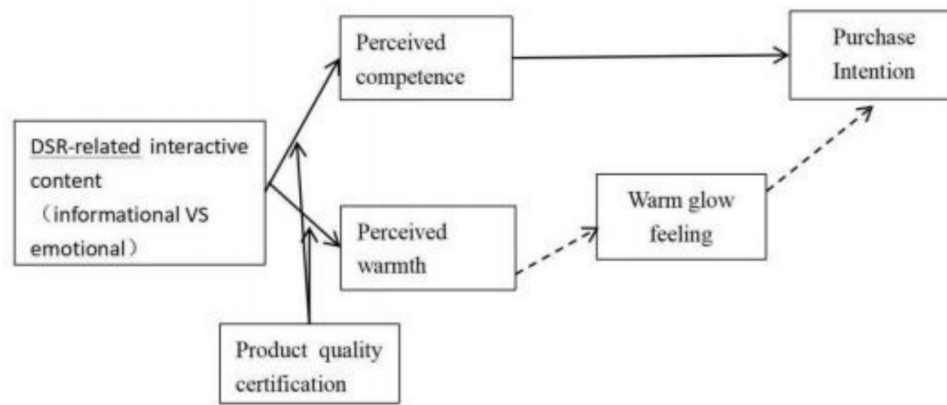


Fig. 1. Hypothesized model.

(Sawaftah et al., 2021). The score for the emotional content group (Memotional = 5.26, SD = 1.47) exceeded that for the informational content group (Minformational = 5.06, SD = 0.93). The study materials therefore met the control requirements.

### 3.1. Study 1

#### 3.1.1. Participants and procedures

Study 1 was intended to verify (a) the effects of different types of DSR-related interactive content on product purchase intention and (b) the mediating roles of perceived warmth and perceived competence. Data were obtained from surveys administered via Credamo. One hundred questionnaires were issued (Mage = 32.1, SD = 9.13, 59 % women).

The participants were randomly assigned across a one-factor (informational vs. emotional) between-subjects design with 50 individuals per group. At the start of the study, participants were asked to imagine opening their microblogging site as usual to find that a brand had announced it would be donating materials to a disaster-stricken area; the focal company produced drinking water. Participants responded to scenario-related questions after reading the scenario. The experimental materials were identical to those used in the pretest.

#### 3.1.2. Method

After reading the materials, participants in both groups reported how likely they would be to buy the product if they saw the brand in the supermarket. The purchase intention scale (Dodds et al., 1991) included the following items: “How likely are you to consider buying the brand product?” (1 = very unlikely, 7 = very likely), “Are you willing to buy this brand?” (1 = very reluctant, 7 = very willing), and “Would you recommend this brand to others?” (1 = very reluctant, 7 = very willing). Next, participants responded to questions regarding perceived warmth and perceived competence (Aaker et al., 2010) using 7-point Likert-type scales. Items related to competence perceptions were “Do you feel that this brand is a competent brand?” (1 = completely incompetent, 7 = completely competent), “Do you feel this brand to be an efficient brand?” (1 = very inefficient, 7 = very efficient), and “Do you feel the brand’s CSR behaviors to be quite effective?” (1 = very ineffective, 7 = very effective). Perceived warmth was measured with the following items: “Do you perceive warmth from the brand?” (1 = very unwarm, 7 = very warm), “Do you perceive generosity from this brand?” (1 = very ungenerous, 7 = very generous), and “Do you perceive kindness from this brand?” (1 = very unkind, 7 = very kind). Participants provided their demographics (e.g., gender and age) in closing.

## 4. Results and discussion

A one-way analysis of variance (ANOVA) was carried out to determine the influence of DSR-related interactive content on purchase intention. The effects of informational content and emotional content on product purchase intention varied significantly,  $F(1,98) = 17.43$ ,  $p < 0.001$ , with the impact of the former (Minformational = 6.37, SD = 0.51) being more pronounced than the latter (Memotional = 5.77, SD = 0.87). H1 was thus supported.

A one-way ANOVA was also performed to analyze the effects of DSR-related interactive content on perceived warmth and perceived competence. The two content types’ impacts on competence perceptions were significantly different,  $F(1,98) = 24.16$ ,  $p < 0.001$ : informational content (Minformational = 6.3, SD = 0.35) was more influential than emotional content (Memotional = 5.69, SD = 0.81). The effects of the two types significantly varied for warmth perceptions as well,  $F(1,98) = 27.7$ ,  $p < 0.001$ : emotional content (Memotional = 6.36, SD = 0.49) played a more pronounced role in perceived warmth compared with informational content (Minformational = 5.82, SD = 0.53). In other words, informational content was more likely to generate competence perceptions whereas emotional content was more likely to generate warmth perceptions.

A bootstrap test was conducted using PROCESS Model 4 (e.g., Hayes) with 5000 samples and a 95 % confidence interval (CI). The independent variable consisted of DSR-related interactive content (either informational or emotional); purchase intention was the dependent variable; participants’ perceptions of competence and warmth were mediators; and participants’ gender and age served as control variables. We observed a significant indirect effect from DSR-related interactive content to competence perceptions to product purchase intention, as the CI did not contain 0 ( $\beta$  indirect =  $-0.35$ , SE = 0.1, 95 % CI:  $[-0.57, -0.17]$ ). The indirect effects from DSR-related interactive content to warmth perceptions to product purchase intention were not significant, as the CI contained 0 ( $\beta$  indirect = 0.12, SE = 0.08, 95 % CI:  $[-0.03, 0.28]$ ). Overall, perceived competence exerted significant mediating effects on DSR-related interactive content and product purchase intention; perceived warmth did not significantly mediate DSR-related interactive content or product purchase intention. H2 was supported as a result.

### 4.1. Study 2

#### 4.1.1. Participants and procedures

Study 2 was meant to verify the moderating effects of product quality certification and the mediating effects of a ‘warm glow’ feeling on emotional content, perceived warmth, and product purchase intention. Data were gathered via 200 questionnaires distributed on Credamo

( $M_{age} = 31.02$ ,  $SD = 9.65$ , 57 % women).

Participants were randomly divided into four groups and randomly assigned using a 2 (content type: informational vs. emotional)  $\times$  2 (product quality certification: present vs. absent) between-subjects design (50 participants per group). The experimental scenarios were identical to those in Study 1. Participants in the 'product quality certification' condition were further informed that the drinking-water brand held a "China famous trademark" and had been included in the "2023 top 100 annual brand list." This group of participants was also told that the brand's products bore a food safety management system certification and an environmental system certification. Participants in the 'no product quality certification' condition did not receive this supplementary information.

## 5. Method

After viewing the materials, participants rated how likely they would be to buy the product if they saw the brand in the supermarket based on a purchase intention scale (Dodds et al., 1991) and questions about perceived warmth and perceived competence (Aaker et al., 2010). All items were identical to those in Study 1 and were scored on 7-point Likert-type scales. Participants then answered questions related to a 'warm glow' feeling (Giebelhausen et al., 2016) "Are you proud of the brand's CSR behavior?" (1 = not proud at all, 7 = very proud), "Are you correct in the brand's CSR behavior?" (1 = very incorrect, 7 = very correct), and "Do you feel the brand's CSR behavior is ethical?" (1 = very unethical, 7 = very ethical). Participants' demographic information (e. g., gender and age) was solicited in closing.

## 6. Results and discussion

We tested the interaction effect via PROCESS Model 1 with 5000 samples and a 95 % CI. DSR-related interactive content, namely informational and emotional content, served as the independent variable; product quality certification acted as a moderator. DSR-related interactive content had a significant interaction effect on quality certification,  $F(1,95) = -1.1$ ,  $p < 0.001$ ,  $\eta^2 = 0.14$ .

We next analyzed data from the (informational content group vs. emotional content group)  $\times$  product quality certification group (Fig. 2). PROCESS Model 6 was used for bootstrapping with 5000 samples and a 95 % CI. DSR-related interactive content (informational and emotional) was again the independent variable, purchase intention was the dependent variable, perceived warmth and a 'warm glow' feeling were mediators, and participants' gender and age were control variables. The indirect effect of DSR-related interactive content on a 'warm glow' feeling was significant, and the CI did not include 0 ( $\beta$  indirect = 0.07,  $SE = 0.05$ , 95 % CI: [0.08, 0.19]). As such, when product quality certification was provided, emotional content generated warmth perceptions and a warm glow that led to stronger purchase intention. A one-way ANOVA revealed that neither emotional content nor informational content significantly affected purchase intention,  $F(1,98) = 82.07$ ,  $p < 0.001$ . Additionally, emotional content ( $M_{emotional} = 6.39$ ,  $SD = 0.46$ ) had a stronger effect on purchase intention than informational content ( $M_{informational} = 5.71$ ,  $SD = 0.73$ ). In summary, when product quality certification was present, emotional content yielded warmth perceptions and a 'warm glow' feeling. This type of content ultimately inspired stronger purchase intention than informational content.

Lastly, we analyzed data for (informational content group vs. emotional content group)  $\times$  the no quality certification group. Bootstrapping was completed using PROCESS Model 6 (5000 samples and a 95 % CI). DSR-related interactive content, namely informational content and emotional content, was taken as the independent variable. Purchase intention was the dependent variable, perceived warmth and a 'warm glow' feeling were mediators, and participants' gender and age were control variables. The indirect effect from DSR-related interactive content to a 'warm glow' feeling to purchase intention was not significant, as the CI contained 0 ( $\beta$  indirect =  $-0.01$ ;  $SE = -0.03$ , 95 % CI: [ $-0.04$ , 0.02]). Thus, in the absence of product quality certification, the mediating effects of perceived warmth and a 'warm glow' feeling on DSR-related interactive content and purchase intention were not significant. H3 was correspondingly supported.

Another one-way ANOVA showed a significant difference between purchase intention with and without product quality certification,  $F$

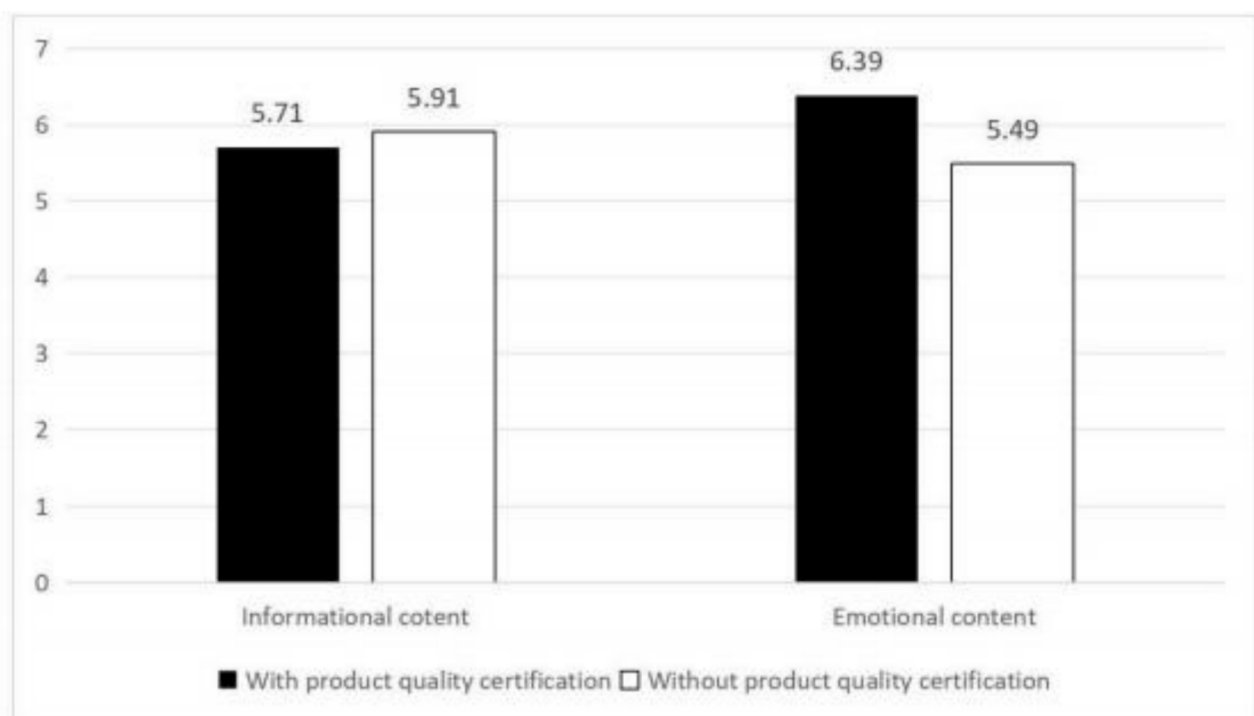


Fig. 2. Interaction of DSR-related interactive content and product quality certification on product purchase intention.

(1,98) = 49.63,  $p < 0.001$ . Moreover, purchase intention rose with product quality certification (Mwith product quality certification = 6.39, SD = 0.46) versus without this certification (Mwithout product quality certification = 5.49, SD = 0.78). Therefore, product quality certification amplified the impact of informational content on product purchase intention.

A one-way ANOVA indicated no significant difference in purchase intention between product quality certification's presence (Mwith product quality certification = 5.71, SD = 0.73) and its absence (Mwithout product quality certification = 5.91, SD = 0.53),  $F(1,98) = 2.45$ ,  $p > 0.001$ . Product quality certification hence did not significantly influence the role of informational content on purchase intention. The impact of informational content also did not significantly differ from H2, lending support to H4.

### 6.1. General discussion

This research presents two studies designed to investigate the internal mechanisms and boundary conditions through which Digital Social Responsibility (DSR)-related interactive content influences product purchase intention. Several key conclusions emerge from our findings.

First, Study 1 explored the effects of different types of DSR-related interactive content (emotional vs. informational) on consumers' product purchase intentions, focusing on the mediating roles of perceived warmth and perceived competence. The results indicated that informational content was more effective at generating competence perceptions than emotional content, while emotional content was more likely to evoke warmth perceptions compared to informational content. These findings suggest that consumers may process informational and emotional content differently, with each type of content triggering distinct cognitive and affective responses. Moreover, our analysis revealed that perceived competence mediated the relationship between DSR-related interactive content and product purchase intention, whereas perceived warmth did not exhibit a significant mediating effect. This suggests that consumers' perceptions of a brand's competence, elicited by informational content, play a more pivotal role in influencing purchase intentions than their perceptions of warmth elicited by emotional content.

In Study 2, we investigated the moderating role of product quality certification in the relationship between DSR-related content and product purchase intention, as well as the mediating effect of the 'warm glow' feeling—an emotional response associated with altruistic behaviors. The results indicated that the presence of product quality certification enhanced the effect of emotional content on purchase intention. Specifically, when product quality certification was provided, emotional content (compared to informational content) more effectively evoked perceived warmth and triggered a 'warm glow' feeling, which, in turn, amplified purchase intention. This finding suggests that product quality certification can act as an important contextual factor that enhances the emotional appeal of DSR-related interactive content, further influencing consumer attitudes and behaviors. However, in contrast to emotional content, the certification did not significantly influence the impact of informational content on purchase intention, highlighting the unique role that certification plays in influencing emotional versus informational responses.

### 6.2. Theoretical implications

This research complements theoretical investigations on DSR-related interactive content. As mentioned, relevant literature is divided on the subject. Some scholars believe that informational content satisfies consumers' information-seeking motivations and can promote purchase intention (Lin & Lu, 2011). Others argue that emotional content can stimulate consumers' emotional perceptions better than informational content, which is more serious; emotional content is also thought to inspire consumers' purchase intentions more than informational content

(Dolan et al., 2016). We explored how DSR-related interactive content affects product purchase intention and discovered that, compared with emotional content, informational content increases this intention.

In addition, we have introduced the stereotype model into research on the role of DSR-related interactive content. This model classifies consumers' brand perceptions on the bases of warmth and competence (Cuddy et al., 2008). Informational content has been shown to readily engender competence perceptions, whereas emotional content more easily elicits perceptions of warmth (Barasch et al., 2014). Meanwhile, the mediating effects of these two perceptions on DSR-related interactive content and product purchase intention have not been described elsewhere. We accordingly assembled a mediating mechanism framework illustrating how DSR-related interactive content informs product purchase intention. We also verified the corresponding mediating effects of perceived warmth and perceived competence. Our work extends the body of literature on stereotype models (Bordalo et al., 2016). Informational content was found to be more apt to produce competence perceptions and significantly influenced product purchase intention. Emotional content appeared more likely to generate warmth perceptions and had no significant impact on purchase intention. We have therefore enriched the literature by unveiling the internal mechanism through which DSR-related interactive content affects consumers' product purchase intentions.

Finally, we considered the so-called 'warm glow' effect (Andreoni, 1989) with product quality certification as a moderator. Earlier studies indicated that product quality certification enhances consumers' confidence in brands' competence. Consumers who understand brands' CSR behavior generally want to contribute and experience a 'warm glow' feeling (Koschate-Fischer et al., 2012). However, prior work did not address the effects of different types of DSR-related interactive content on product purchase intention when product quality certification is present. We determined that this certification could promote perceived warmth and a 'warm glow' feeling from emotional content, in turn heightening product purchase intention. Contrarily, product quality certification did not significantly influence informational content's role in purchase intention. We have thus expanded research on how consumers see product quality. Our effort has enriched theoretical knowledge of the impact of DSR-related interactive content and specified boundary conditions for how product quality certification affects this form of content and product purchase intention. The two experiments unearthed novel insights into the relationships among product quality certification, DSR-related interactive content, competence perceptions, warmth perceptions, and product purchase intention.

### 6.3. Practical implications

This paper carries managerial implications as well. We noticed that informational content informed product purchase intention more robustly than emotional content. A company's official CSR-related content can contain details such as the time, place, amount, channel, object, and use of the brand's charitable donations. This information can satisfy consumers interested in brands' CSR behavior.

Furthermore In fast-paced digital consumer environments, brand DSR interactions enhance purchase intentions through synergistic application of information cascade theory and regulatory focus theory. The information cascade phenomenon describes individuals' tendency to replicate prior decisions under conditions of informational ambiguity (Zhu et al., 2023). Empirical evidence demonstrates that strategically displaying real-time CSR engagement metrics (e.g., "100,000 participants joined") across digital touchpoints—including official websites and social media platforms—can effectively leverage herd mentality to stimulate consumer participation and purchasing behavior. Complementary to this approach, regulatory focus theory posits distinct goal-pursuit strategies: promotion-focused individuals prioritize advancement gains, while prevention-oriented consumers emphasize loss avoidance (Mantovani et al., 2015). For prevention-focused consumers,

CSR messaging should emphasize risk mitigation and social protection (e.g., “Prevent escalating harm to safeguard future generations”). Conversely, promotion-aligned strategies should highlight aspirational benefits (e.g., “Co-create an improved future through sustainable practices”). This dual theoretical framework enables brands to optimize CSR communication strategies according to consumers' motivational orientations.

Additionally, informational content was shown to boost perceived brand competence and thus purchase intention. Emotional content instead evoked perceived warmth and lower purchase intentions in comparison to perceived competence. Among enterprises' DSR-related interactive content, informational content stimulates consumers' competence perceptions (e.g., brand confidence, wisdom, skills). Emotional content lacks precise CSR details. Consumers accordingly perceive warmth from the brand but lack confidence in the brand's capabilities, causing warmth perceptions to remain stagnant. As such, when publishing emotional content, brands are recommended to add DSR informational content (e.g., the amount and timing of charitable donations) to convey competence and make consumers more willing to buy. This context should maximize the usefulness of DSR-related interactive content.

Finally, we have highlighted the importance of product quality certification in DSR interaction. When product quality certification is provided, emotional interactions stimulate perceived warmth, a ‘warm glow’ feeling, and greater purchase intention. These outcomes were not significant in the absence of such certification. When enterprises engage in CSR interactions, the presence of authoritative product quality certification can amplify the impact of emotional content on purchase intention. While emotional content alone may not directly drive purchase decisions, it can evoke a Warm Glow Feeling, which, when reinforced by product quality certification, enhances consumers' willingness to purchase.

Both informational and emotional content offer distinct advantages. Therefore, companies can strategically integrate both types of content in long-term brand development to enrich the overall consumer experience, ultimately fostering a stable and lasting brand loyalty relationship.

#### 6.4. Limitations and future research directions

While this research offers valuable insights into the impact of DSR (Digital Social Responsibility)-related interactive content on consumers' purchase intentions, several limitations merit further attention, and numerous avenues for future research remain unexplored. First, the studies were conducted in a controlled, virtual experimental environment. Although stimulus materials illustrating brands' interactive, emotional, and informational DSR content were carefully designed based on previous studies and real-world CSR-related materials posted by brands online, the virtual nature of the environment might not fully capture participants' responses in real-world settings. Consumer behavior in virtual experiments can be influenced by factors such as the artificial setting or the lack of real-world consequences, which may differ significantly from behaviors observed in naturalistic, everyday contexts. As such, there is a need for future research to incorporate field experiments or use secondary data sources to examine consumer behavior more authentically, allowing for a better understanding of how DSR-related content influences purchase decisions in real-life scenarios.

Second, while this research examined the general effects of DSR-related interactive content on purchase intention, the study did not delve into the potential differential impacts of specific types of content. For instance, DSR-related interactive content can vary in form—such as text-based, video-based, or interactive media—and it is still unclear whether certain formats are more effective in shaping consumer attitudes and behaviors. Future studies could explore how different types of DSR content influence purchase intentions, potentially identifying specific content forms that resonate more with different consumer segments. Additionally, this study explored product quality certification as a

moderator in the relationship between DSR-related interactive content and purchase intention. However, there are many other potential moderators that could play a significant role in shaping this relationship. Variables such as brand reputation, consumer trust in the brand, the brand's donation history, and even individual differences in consumer values and attitudes toward corporate social responsibility (CSR) could all influence how DSR-related interactive content is perceived and whether it ultimately drives purchase behavior. Further research should investigate these potential moderators in greater depth, as they could offer more nuanced insights into the mechanisms at play.

Moreover, future research could examine the long-term effects of DSR-related interactive content. While this study primarily focuses on short-term purchase intentions, it would be valuable to explore how ongoing exposure to DSR-related interactive content influences customer loyalty, brand advocacy, and repeat purchasing behavior overtime. Understanding these long-term effects would help brands design more effective, sustained CSR campaigns.

Finally, there is a need to explore the cultural and contextual factors that may moderate the relationship between DSR-related interactive content and consumer behavior. Consumer perceptions of CSR and DSR vary across different cultural and geographic contexts, and what works in one market might not be as effective in another. Research that explores cross-cultural differences in the perception of CSR initiatives and their impact on purchase intentions could provide brands with a more global understanding of how to tailor their DSR-related interactive content for diverse consumer bases in sum, while the current research lays a foundation for understanding the role of DSR-related interactive content in shaping consumer behavior, it also opens up numerous avenues for future studies. By expanding the scope to include real-world context, exploring different forms of content, considering additional moderators and examining long term effects, researchers can build a more comprehensive understanding of how DSR can be leveraged as a powerful tool for influencing consumer purchase decisions.

#### CRediT authorship contribution statement

**Xu Jily:** Writing – original draft, Software, Methodology, Conceptualization. **Tong Zelin:** Writing – review & editing, Supervision, Software, Investigation. **Manzar Rehman:** Writing – review & editing, Software, Formal analysis, Data curation. **Talib Hussain:** Writing – review & editing, Software, Methodology, Investigation.

#### Consent to publish

All authors are agreed to publish this article.

#### Declaration of competing interest

We declare that there is no any clash of interest.

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#### Appendix I. Experimental materials

##### I.1. Declarations

We selected representative DSR-related content from multiple brands' social media accounts to ensure that the materials accurately reflected the typical characteristics of informational and emotional content. All materials underwent pretesting to verify their validity and representativeness.



## 1.2. Informational content

On July 20, 2021, a sudden flood in Henan Province affected 14.76 million people in 150 counties (cities and districts). On July 21, ‘A Company’ organized manpower and material resources on the same day and raised 50 million worth of materials, including clothes, food, drinking water and soon. And A Company shipped all the materials to Zhengzhou overnight and donated them to local charities. The materials donated by A Company are mainly being used to provide priority protection for the affected people and rescue workers. A Company will continue to pay attention to the progress of disaster relief and continue to provide help.

## 1.3. Emotional content

On July 20, 2021, a sudden flood in Henan Province affected 14.76 million people in 150 counties (cities and districts). Natural disasters notwithstanding, there is love in the world. On July 21, ‘A Company’ was concerned about the disaster area and raised 50 million worth of materials to donate to the disaster area. A Company wished to help the people of the disaster area on the shoulders of responsibility, and vowed to share the difficulties with the people of the disaster area. A Company will continue to pay attention to the progress of disaster relief and build a solid fortress for the reconstruction of a beautiful home in the disaster area, with practical actions to convey the deep care of the people of the disaster area.

## Data availability

Data will be available on request.

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