

The Impact of Consumer ESG Perception on Corporate Reputation: A Case Study of the Food and Beverage Industry in China

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Abstract. This research explores the impact of consumer's Environmental, Social, and Governance (ESG) perception on corporate reputation in China's food and beverage sector. Employing Signaling Theory and Stimulus-Organism-Response (S-O-R) model, a conceptual framework is proposed where consumer perception of ESG performance is a driver of corporate reputation. This research focuses on three typical Chinese food and beverage firms (Yili Group, Nongfu Spring and Mengniu Group) and investigates the characteristics of their ESG activities and the perceptual outcomes among consumers. The study reveals that the environmental and social components of ESG activities have greater impacts on corporate reputation than the governance component. Additionally, brand trust is found to play a pivotal role in linking ESG perception to reputation. Finally, the paper offers practical recommendations for food and beverage companies to improve corporate reputation via ESG activities.

Keywords: ESG perception, corporate reputation, signaling theory, S-O-R framework, food and beverage industry

1. Introduction

Environmental, Social, and Governance (ESG) has become one of the most popular frameworks to assess corporate sustainability in today's business world. In China, as the country builds an ecological civilization and aims for green development, the integration of ESG principles is increasingly important for corporate governance and social responsibility.

The food and beverage industry holds a unique place in ESG. As a basic industry that plays a key role in China's economy and employment, the industry is also facing serious sustainability challenges, especially in terms of environmental sustainability. Moreover, its direct impact on human health and well-being means that product safety, nutrition, and quality traceability systems play a critical role in shaping consumer confidence. In a world where consumers are increasingly sensitive to corporate social and environmental practices, how China's food and beverage companies' ESG performance is perceived by consumers and how it impacts corporate reputation is a critical issue.

The paper seeks to explore the link between consumer ESG perception and firm reputation in China's food and beverage sector, through existing theoretical models and empirical case studies. The paper is organized in five sections: after this introduction, Section 2 outlines the theoretical framework and model building; Section 3 introduces the empirical background and identifies typical companies for case studies; Section 4 compares the case findings; and Section 5 concludes with managerial implications.

1.1. Literature review

Prior literature has provided significant links between corporate social responsibility (CSR) and consumer assessments. Some researches conducted a systematic literature review which identified that CSR has a substantial impact on consumer decision-making, trust and purchase intentions, with brand trust, brand loyalty and brand attitude as key mediating variables between CSR and willingness to pay [1].

Within the ESG context, some researchers have conducted studies on franchise firms in the food and beverage industry and surveyed 327 people who had knowledge of ESG activities [2]. They found that environmental and social ESG activities positively affect corporate reputation and consumer attitudes while governance-related activities have a relatively smaller impact. Crucially, expectation-confirmation was found to play a mediating role between ESG perception and corporate reputation, highlighting the importance of ESG communication in building trust.

Previous research has observed that although corporate image has a positive impact on corporate reputation in ESG management, social responsibility did not directly and positively affect corporate reputation in the food service industry, highlighting the need to consider the different aspects of ESG when investigating their effects on reputation [3].

In a study that also adds to these insights, previous research used signaling theory and the stimulus-organism-response (S-O-R) model to explore the effects of corporate ESG practices on consumers' intention to purchase green food mediated by brand trust [4]. Their structural equation modeling analysis validated that the environmental, social and governance dimensions each has a positive effect on brand trust, which in turn has a positive effect on purchase intention, with brand trust partially mediating the relationship. This study further enhances the theoretical understanding of the psychological process between ESG and consumer behavior.

Some scholars investigate the influence of company familiarity on CSR evaluation, revealing that familiarity plays a significant role in the relationship between corporate social responsibility and corporate reputation, trust and customer satisfaction, suggesting a critical role of consumer awareness on the link between ESG and reputation [5].

However, there are still theoretical gaps. First, there is a need for more systematic explorations of ESG dimensions' unique impacts on corporate reputation in China's food and beverage sector. Second, the mechanisms that mediate the effects of consumer ESG perceptions on reputation remain underdeveloped. Third, there is a need for further research on the implications for food and beverage enterprises with different levels of ESG maturity. To overcome these limitations, this paper builds on signaling theory and the S-O-R framework to explore the relationship between ESG perception and reputation in Chinese food and beverage firms via three case studies.

2. Theoretical framework and model construction

2.1. Signaling theory as an explanatory foundation

Signaling theory offers a compelling framework to explain the effect of ESG practices on consumer attitudes and reputation. Developed initially in the field of economics to explain an information gap between two parties, signaling theory suggests that in situations where one party has information unknown to the other, signals can be used to communicate unobserved information or intentions. With regard to ESG, corporate sustainability practices serve as signals that communicate to consumers about unobservable qualities of the firm, including its values, quality, and long-term focus - information that consumers incorporate into their assessment of reputational outcomes.

Signaling theory has been effectively applied to assess ESG activities in the food industry by some scholars, who found that environmental, social, and governance signals play a significant role in shaping consumers' perceptions, and brand trust mediates this relationship. In the present framework, ESG performance is an external signal that is sent to customers, who then interpret the signals based on their knowledge, values, and expectations to form assessments of the firm. The effectiveness of the signal is determined by three factors: signal observability (whether the firm's ESG activities are easily detected), signal credibility (whether the firm's claims are backed by activities that can be verified), and signal fit (whether the firm's ESG activities are congruent with the firm's business and brand values).

This view is further corroborated by some scholars, who reveal that reputation-focused firms face external pressure with the increasing societal attention and improved ESG performance can alleviate information asymmetry and improve reputation, which signals to consumers the firm's sustainable development. The mechanism test in this study shows that firms' ESG performance enhances customer loyalty by enhancing internal and external regulation and reputation.

2.2. The stimulus-organism-response framework: brand trust as a mediating mechanism

The stimulus-organism-response (S-O-R) model provides a different perspective by focusing on the role of psychological states in the development of behavioural responses. The S-O-R model has its roots in environmental psychology and has been widely adopted in consumer research. The S-O-R model suggests that stimuli (S) in the environment affect an individual's internal organismic states (O), such as cognitive and affective reactions, which in turn drive responses (R).

In S-O-R model, ESG practices act as environmental stimuli (S) which influence consumers' internal organismic states (O) - brand trust - which, in turn, drive behavioral responses (R) such as purchase intention. The framework underscores the idea that the effects of ESG signals are not instantaneous and automatic; rather, these signals must be absorbed via trust before having downstream effects.

The brand trust construct in this framework has two components: trust in the firm's competence (ability to fulfil promises) and trust in the firm's benevolence (care for stakeholder well-being). ESG practices may affect both aspects of trust: environmental practices signal competence in long-term stewardship, social practices signal benevolence toward stakeholders, and governance practices signal accountability and integrity. The mediating role of brand trust is also corroborated by the systematic review of literature that identified brand trust, brand loyalty, brand love, customer satisfaction, brand attitude, purchase intention and brand equity as important mediating factors in the CSR-consumer behavioural outcome relationship.

2.3. Integrating theoretical perspectives

Drawing on the theoretical viewpoints discussed above, the present paper suggests the following conceptual model to explore the link between consumer ESG perceptions and corporate reputation.

The model proposes that:

Proposition 1: Consumer E (environmental) perceptions positively affect corporate reputation.

Proposition 2: Consumer perception of a firm's social (S) activities positively influences corporate reputation.

Proposition 3: Consumer perception of a firm's governance (G) activities positively influences corporate reputation, but may have a lower impact than environmental and social activities.

Proposition 4: Consumer brand trust is a mediator of the relationship between ESG perception and corporate reputation.

Proposition 5: The concurrence between consumer expectations and ESG performance (expectation-confirmation) moderates the effect of ESG perception on brand trust.

This model recognises the multifaceted nature of ESG perception. Environmental, social and governance signals may differ in salience, observability and relevance; this may affect how consumers perceive them. Furthermore, cultural and industry factors may affect the relative importance of ESG dimensions when consumers form reputations. The role of substantive (i.e., actual sustainability practices) and symbolic ESG signals (i.e., claims without actions), in particular, is crucial to building trust given the impact of consumer perceptions of corporate motives.

3. Sample selection and case analysis

3.1. ESG landscape of China's food and beverage industry

To understand the individual companies, let's first look at the industry landscape. There has been significant improvement in ESG disclosure and practices in China's food and beverage industry in recent years. The sustainable information disclosure rate for the food and beverage industry has steadily been higher than the average for all industries. The white spirits (baijiu) sub-industry within this sector has the highest rate of disclosure over 90 percent.

But the disclosure rate does not reflect the actual ESG performance. The ESG rating analyses of the food and beverage industry show that most companies are rated at moderate levels, implying overall ESG performance at a lower level than the average of other industries. The environmental dimension is of particular concern, exhibiting insufficient information disclosure on carbon emissions, waste discharge and energy consumption. The social dimension has moderate performance, while the governance dimension shows above-average governance structure but inadequate ESG governance systems and disclosure practices.

This industry profile (average overall performance, variation among companies, and environmental and governance dimension weaknesses) sets the stage for our investigation of the impact of consumer perceptions of ESG activities on corporate reputation. The industry's variability provides a natural diversity to select cases, allowing comparisons between companies with different ESG performances.

3.2. Selection criteria and case overview

To conduct the case analysis, three Chinese food and beverage companies were selected based on the following selection criteria: (1) listed companies with disclosed ESG performance; (2) high level

of consumer awareness and market share; (3) availability of ESG-related disclosure and secondary data; (4) different ESG performance in the industry; (5) evidence of consumer perception data in the literature. They are Yili Group, Nongfu Spring and Mengniu Group.

Case 1: Yili Group

Inner Mongolia Yili Industrial Group Co. , Ltd. (Yili Group), China's and Asia's biggest dairy company. Yili is a leader in ESG performance within the Chinese food and beverage industry. The governance of ESG at Yili is also hierarchical in structure with a "Board of Directors-Executive Committee-Department" structure and ESG is integrated into the performance evaluation of key roles. Yili has secured a Grade AA in MSCI ESG ratings, the highest among China's dairy industry and among the world's top. It has been consistently top in the Dairy Industry Social Responsibility Development Index for several years in a row, according to the Chinese Academy of Social Sciences' Corporate Social Responsibility Blue Book.

In 2024, Yili also launched the first ESG value accounting report in the global food industry, in collaboration with the monetization of its ESG performance, showing the dual materiality principle. It showed that Yili donated 280 million yuan a year to the public, and its operations generated a positive value of 6.81 billion yuan for society and the environment. The success shows that Yili is able to convert substantial ESG messages into tangible and recognisable results for consumers.

Case 2: Nongfu Spring

Nongfu Spring Co. , Ltd. is China's No.1 packaged beverage and drinking water brand with "Natural and Healthy" as its brand philosophy. ESG management has been ingrained in its business processes, from resource management to supply chain management. Nongfu Spring is featured in the S&P Global Sustainability Yearbook, with top-ranking in the global beverage industry and as an "Industry Mover.

The company's sustainability report showed progress in environmental responsibility: the intensity of greenhouse gas emissions was lower than the base year, and the recyclability of packaging material was 99.9 percent. On social sustainability, the company has invested in 100 percent employee training, and has donated large sums to various causes, including community development and business programs.

Nongfu Spring has also established stringent social standards for its supply chain, requiring suppliers to adhere to strict labor standards, including prohibiting forced labour and ensuring freedom to bargain collectively. But some external research has found Nongfu Spring trails some other companies in its industry in terms of sustainability, suggesting that much more can be done.

Case 3: Mengniu Group

Mengniu Group is China's second-largest dairy company and a rival to Yili Group. The company has undertaken various ESG initiatives. Mengniu's "Construction and Practice of Sustainable Consumption System" was chosen by the Education and Communication Center of the Ministry of Ecology and Environment as a best practice ESG case in sustainable consumption.

Mengniu has made its "Green Industrial Chain" the heart of its ESG strategy, and is seeking a sustainable development model that combines environmental governance, industrial transformation and poverty alleviation. Mengniu has initiated green consumption campaigns like the "Green Life Carnival, " engaging consumers as "Green Partners" in environmental protection.

Yet, Mengniu has also faced governance issues, which emphasise the significance of ESG authenticity. It has been criticised for its "Yimi Baba" milk powder product over claims of overstated scientific research and misleading marketing, exploiting consumers' concern over their children's growth. This case highlights the impact of governance shortcomings - even in the presence of strong environmental and social programs - on consumer perceptions and reputation.

3.3. Analysis of consumer ESG perception and reputation

Based on the conceptual model and empirical evidence from the case companies, we observe some commonalities between consumer ESG perception and reputation. Environmental Dimension. In all three cases, environmental ESG activity is the most evident to consumers. Yili's carbon neutrality goals, biodiversity reports and company-wide carbon management systems explicitly show environmental commitment. Nongfu Spring's greenhouse gas intensity reductions and high recyclability of packaging are measurable targets. Mengniu's green packaging and involvement in government programs also provide positive environmental cues. Research confirms that environmental activities among ESG have a strong impact on reputation because the activities are the most visible and have the most personal meaning to consumers concerned with climate change and resource scarcity.

Social Dimension. ESG social activities such as employment practices, product safety, supplier responsibility, and corporate philanthropy have direct implications for consumer welfare, and therefore are important reputation-building activities. Yili's creation of products in line with public health recommendations and supplier social responsibility programs showcase social engagement. Nongfu Spring's supplier labor requirements and employee training are examples of social governance. Mengniu's product scandal reveals the consequences of social failure in terms of loss of reputation capital. The study on restaurant firms also confirms that various aspects of CSR, especially environmental and legal responsibility, directly affect brand reputation.

Governance Dimension. Governance activities, such as board oversight mechanisms, anti-corruption measures, and ESG governance frameworks, consume less visible activities. Few consumers come across information on board committees or the inclusion of ESG metrics in executive remuneration. Previous research has explicitly discovered that governance activities have a relatively smaller effect on company reputation and consumer perceptions than environmental and social activities. This insight is supported across the three cases: Yili's advanced corporate governance (including the Sustainability Committee on the board and the inclusion of ESG metrics in executive compensation) is one of the best practices in the industry, but these aspects of governance are not likely to be seen or valued by the average consumer. Mediating Mechanisms. The cases reveal the key mediating role of brand trust. Yili's green reputation is substantiated through transparent reporting, thereby fulfilling consumers' expectations and building brand trust. On the other hand, when companies' ESG reports are seen as inconsistent with reality, trust can be eroded via expectation violation. The ideal ESG outcomes are when consumers see congruence between company promises and actions. The indirect role of brand trust in the ESG-consumer behavior link has been empirically supported, as brand trust partially mediates the link between each dimension of ESG and customers' behaviour [4].

As shown by Mengniu's experience with the product controversy, even if a company has significant environmental and social actions, problems with governance transparency and marketing integrity can lead to expectation violation, hurting brand trust and reputation. This indicates that while governance dimensions may have a lower direct influence, they have a substantial impact through expectation confirmation if governance failures are made public.

4. Comparative findings and discussion

The case analysis provides the following comparative insights that contribute to the literature.

Finding 1: Sector-specific sustainability attributes moderate ESG-reputation relationships. The direct link between the food and beverage industry and consumer health and well-being justifies a

stronger weighting of social dimension ESG activities than for other industries. Contamination in dairy products would likely have a more negative impact on reputation than a similar ESG failure in another industry. This insight highlights the importance of industry-specific theoretical models as opposed to "one size fits all" approaches to ESG. Previous research showed that in the hospitality industry, all dimensions of corporate social responsibility (CSR) (except philanthropy) directly and significantly influence brand reputation, suggesting the industry-specific nature of the links,

Finding 2: Consumer perceptions differ for high versus low ESG maturity. For companies with high ESG maturity, consumers may view positive ESG messages as in line with a pre-existing halo effect, further cementing positive perceptions. Low-maturity companies may experience consumer scepticism of ESG claims, given incomplete disclosures of environmental and governance information. Some scholars propose that consumers' familiarity plays an important role in the indirect effect of CSR on reputation, suggesting that awareness and recognition play a key role in consumer perceptions of ESG.

Finding 3: Brand trust provides a psychological link between ESG and reputation. This study confirms that ESG practices function as environmental cues mediated by the organismic factor of brand trust. In the absence of brand trust, high ESG performance can fail to lead to better reputation. This process implies that ESG communication should focus on fostering trustworthy relationships, rather than simply reporting ESG performance data. A systematic literature review found that brand trust (along with brand loyalty and brand attitude) as a mediator of the CSR-consumer outcome relationship, with moderators including demographics, cause-based factors, firm attributes, and product category.

Finding 4: Governance transparency is more insurance than promotion for reputation. Although governance indicators have a lower direct impact on reputation assessments than environmental and social indicators, governance failures (when exposed) can result in substantial reputational damage. So, corporate governance acts as a hygiene factor for corporate reputation: it may not positively contribute to reputation but it systematically destroys reputation. In ESG sub-tests, environmental and social responsibility factors have a greater influence on customer retention than governance factors, consistent with this finding [6].

5. Conclusion and implications for industry development

5.1. Summary of findings

This paper has explored the impact of consumer ESG perception on corporate reputation in China's food and beverage industry. Using signaling theory and the S-O-R framework, a theoretical model was constructed placing consumer ESG perception as a predictor of corporate reputation mediated by brand trust and moderated by expectation-confirmation. Based on case comparisons of Yili Group, Nongfu Spring and Mengniu Group, the paper concludes that environmental and social ESG factors have greater impacts on corporate reputation than governance, though exposure of governance failure can have a negative impact on reputation.

5.2. Managerial implications for the food and beverage industry

First, food and beverage companies should focus on environmental and social ESG actions in their consumer communications. Because these aspects show the greatest perceptual impact on consumers, investing in carbon emissions reduction initiatives, supply chain responsibility activities and product safety measures is likely to provide greater returns in consumer trust and brand

reputation. Consumers perceive environmental responsibility as a critical concern, and expect companies to follow ethical and legal norms.

Second, ESG communication needs to be transparent. The proposed mediation of expectation-confirmation highlights that unrealistic ESG claims without matching performance lead to an expectation violation and subsequent loss of trust [2]. Companies should follow communication strategies that allow consumers to assess ESG claims through transparent reporting.

Third, governance reform should not be aimed at directly influencing consumers but more as a pre-requisite for credible ESG practices. Robust governance practices - including sustainability oversight by the board of directors, leadership incentives tied to ESG performance and anti-corruption measures - improve the credibility of environmental and social claims, and avoid governance failures that erode reputation. We know that in the food service industry, governance failures can outweigh and compensate for significant environmental and social efforts.

Fourth, based on the current distribution of ESG maturity across the industry, average firms have different strategies than leading firms. While average firms should first improve their environmental and social performance before large-scale ESG communication, leading firms should focus on enhancing consumer perceptions via ESG communication. By contrast, leading firms with high ESG credibility should harness the power of expectation confirmation to convert consumer perception to long-term advantage.

5.3. Limitations and future research directions

Our research provides some limitations for future studies. The case analysis relied on publicly reported ESG information and secondary sources, lacking primary data from consumer surveys. Researchers could adopt quantitative techniques (such as structural equation modeling) to empirically test the proposed model with a sample of consumers from the Chinese food and beverage industry. Cross-cultural and cross-industry comparisons would reveal boundary conditions for our proposed relationships. Finally, longitudinal studies tracking the evolution of ESG perception and reputation as consumer understanding of ESG develops would help to shed light on the dynamic nature of the ESG-reputation relationships.

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