

Corporate Social Responsibility Initiatives and Consumer Satisfaction in An Internet-Based Company: A Mediating Role of Communication in The Social Media

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Abstract

In the era of brand economy, maintaining a good brand relationship between companies and consumers is the key for enhancing brand competitiveness and also reputations. By fulfilling corporate social responsibility (CSR), companies promote consumers' sensory and cognitive perception of their brands and products, and thus improve brand relationships and enhance consumers' satisfaction to their brands. Based on social media platforms, this study constructs a model of CSR and consumer satisfaction from the perspective of consumers for research by adopting Carroll's (1991) pyramid theory of CSR as the theoretical basis to classify the independent variable CSR into four dimensions: philanthropic responsibilities, ethical responsibilities, legal responsibilities and economic responsibilities. The dependent variable is consumer satisfaction. The social media CSR communication was used as a mediating variable, on which the research model was developed, and the scale and questionnaire were designed. Finally, an empirical study was conducted to verify the model and hypotheses and to analyze the relationship between the variables. Results indicated CSR as having a positive effect on consumer satisfaction and CSR communication in social media can play a mediating role in the research model. Accordingly, it can be concluded that companies can promote consumer satisfaction through social responsibility. Findings suggest that organisations can enhance consumer satisfaction by fulfilling philanthropic responsibilities, ethical responsibilities, legal responsibilities, economic responsibilities to enhance consumer satisfaction with the brand; and CSR communication through social media can promote consumer awareness of the brand, thus further enhancing consumer satisfaction towards the brand.

Keyword: Corporate Social Responsibility (CSR), CSR Communication, Digital Communication, Social Media, Consumer Satisfaction.

Introduction

The concept of CSR originated in the early 20th century, when a series of social problems arose in the Western countries as a result of the large-scale expansion of enterprises. In such

an environment, the traditional concept of ethics and morality was undermined by perceptions of greenwashing of companies where they often are seen as doing good simply for the companies' profitability. In an era of economic globalization and maximization of business interests remains the primary goal of business. In this context, companies are often tempted to pursue short-term interests and act in ways that are less sincere often over the expense of compromising the rights of consumers. The question of how companies can maximize their profits and at the same time be socially responsible to other stakeholders are increasingly debated among scholars and practitioners.

The "brand effect" is a constant theme in the era of economic globalization, and a company must have its own main brand for long-term development. The company is part of the social ecosphere, and consumers, employees, shareholders and creditors are all stakeholders in the social ecosphere, and their interests are both mutually consistent and mutually constrained. The long-term development of an enterprise cannot be achieved without the support of consumers, who directly influence the economic and social benefits of the enterprise.

The marketing of a company's products needs to attract new consumers, but more importantly, it needs to maintain existing consumer. Consumer satisfaction with the brand is the key to increasing the competitive advantage of the company's brand, and companies can attract new consumers to buy the company's products while maintaining existing consumers, enabling them to take advantage of the competition. Only by taking up their social responsibility can companies establish a good brand image in the minds of the public, enhance and improve the brand relationship between companies and consumers, and thus improve the consumer's perception of the brand. In the age of new media, companies can communicate with consumers through relevant social networks, which is conducive to the development of the relationship between the two.

Through social responsibility, companies can build bridges with consumers. This is not only a requirement for consumers alone, but also for companies in the process of development. The advent of the social media era has brought new challenges to CSR communication. To cope with the changes in consumers on both platforms, companies need different communication content and approaches. While the relationship between CSR and consumer satisfaction has been widely explored, few scholars have examined the relationship between CSR and consumer satisfaction in the context of social media interventions.

The study had the following five objectives

- This study examine the impact of ethical responsibility communication in social media on consumer satisfaction.
- This study examine the impact of legal responsibility communication in social media on consumer satisfaction.
- This study examine the impact of economic responsibility communication in social media on consumer satisfaction.
- This study examine the impact of philanthropic responsibility communication in social media on consumer satisfaction.
- This study introduces CSR communication in social media as a mediating variable in the model, enriching the theoretical basis and providing a new way for companies to fulfil

their social responsibility and improve consumer satisfaction. Arguments of the construct are displayed below.

Literature Review

Corporate social responsibility related studies

Corporate social responsibility (CSR) is a set of social issues that originated in the early 20th century as a result of the expansion of business. From a managerial perspective, Gerde and Wokutch (1998) divided CSR research into four stages, namely self-responsibility, economic responsibility, legal responsibility and social responsibility, using social factors as criteria. The first stage is based on religious forces, in which case companies are not required to fulfill their social responsibility; the second stage is based on profit maximization and the concentration of power in the company. In the fourth stage, due to the rise in education, living standards and other social forces, the general public became the beneficiaries of CSR. At the same time, the realization of the audience's use of resources and the company's profitability becomes the most fundamental objective of the organization.

CSR as defined and summarised

Gerde and Wokutch's (1998) four stages of CSR research, namely self-responsibility, economic responsibility, legal responsibility and social responsibility, have provided a good illustration of the development of CSR definitions. Clark (1916) initially proposed the concept of CSR, which did not specifically define the concept of CSR, but suggested that corporate responsibility was one of the components of social responsibility and accounted for a large proportion of it. The idea of CSR entered the academic researchers and laid the foundation for subsequent scholarly research.

Sheldon (1924) elaborated that CSR was a responsibility of a company when it carried out activities such as production and operations for its purposes that adversely affected other third parties, including the environment and society. Sheldon (1924) first concretely introduced the specific concept of CSR. Chehimi et al (2019) summarized that CSR is part of the production and operation of a company, which is part of society. Corporate behavior should comply with the basic requirements of society, and social responsibility is a corporate obligation and a behavioral responsibility that companies must assume (Christensen et al., 2021).

In contemporary society, the ordinary people are becoming the most basic beneficiary group of CSR. In defining CSR, scholars added mass society to the definition. Frederick (1967) argued that corporate managers should not limit themselves to the internal interests of the company, but allocate the resources of society in a way that maximizes their own profits and satisfies the public's desires, including economic resources, human resources and the welfare of society as a whole. Carroll (1979) was the first to place CSR in the context of practical issues, arguing that CSR is the expectation of society in the economic, legal and ethical spheres, and companies should comply with these expectations and achieve the goal of maximising corporate benefits. Carroll's (1979) greatest contribution to the study of CSR was the integration of the three dimensions of CSR, social issues and social effects. Guzzo, Abbott and Madera (2019) add psychological theory to the definition of CSR, arguing that CSR is the

process of behavioural disposition of the responsible person when communicating with the stakeholders.

By summarising and sorting out CSR related literatures, it is obvious that the definition of CSR given by different scholars has varied from time to time, but the essence of CSR has not changed.

The content of CSR

Different scholars have different views and elaborations on CSR. The most classical and also greatly accepted theory is Carroll's (1991) pyramid of CSR. Carroll (1991) put forward the classical "four-level model", which divides CSR into four levels, the first of which is economic responsibility, in which enterprises are profit-oriented; the second is legal responsibility, in which law is the integration of social laws and regulations on right and wrong, and enterprises need to comply with laws and regulations when conducting business activities; the third is ethical responsibility, which includes three aspects. The third level is ethical responsibility, which includes three aspects: being ethical, doing what is right, just and fair, and avoiding harming the interests of other third parties; and the fourth level is philanthropic responsibility, which means that in addition to the above three responsibilities, enterprises voluntarily assume other responsibilities. As shown in Figure 1.

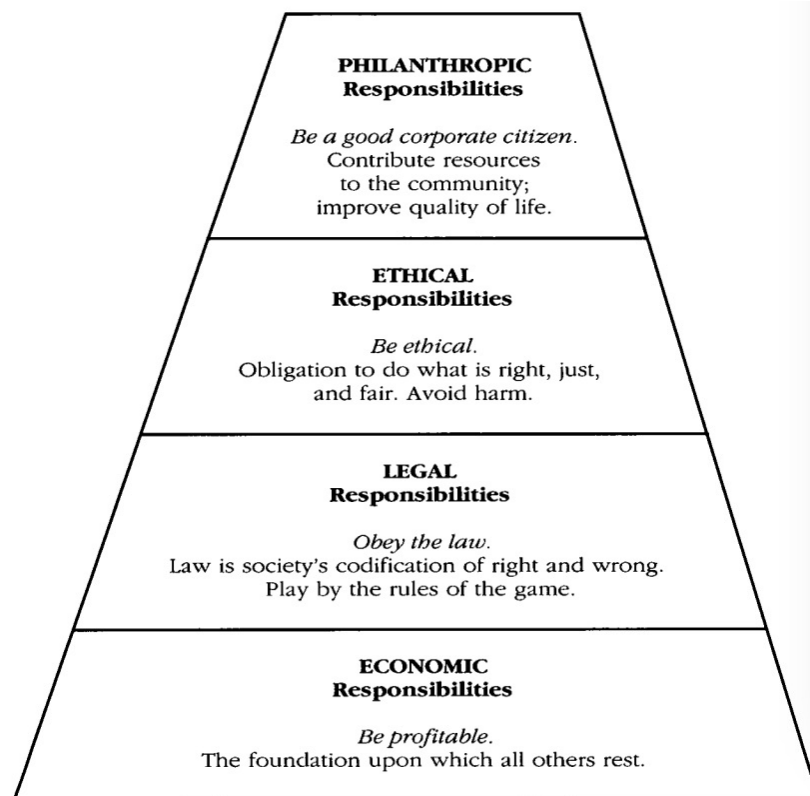


Figure 1: The pyramid of corporate social responsibility

Additionally, there are some other popular elaborations. According to Gulenko (2018), CSR can be divided into mandatory CSR and spontaneous CSR. Mandatory CSR has economic and legal responsibilities. It includes the protection of the environment, the provision of employment opportunities and the protection of consumers; voluntary CSR has public

expectations and inherent requirements of society, including the promotion of community development and charitable donations. Ahrholdt, Gudergan and Ringle (2019) regard that the content of CSR is divided into extrinsic and intrinsic components. Intrinsic social responsibility focuses on employees, including internal selection, training, promotion and dismissal; external social responsibility focuses on groups outside the company, including stimulating group entrepreneurship and employing people with disabilities.

CSR in social media

Peters, Chen and Haenlein (2013) propose a definition of social media as the sharing, co-creation and modification of original content between different individuals and groups through appropriate interactive platforms, using mobile and web technologies. Li, Larimo and Leonidou (2020) suggest that social media relies on online communities to connect with each other through the originality, sharing and exchange of information on users' homepages. "Engagement" has become a key word in social media, and many scholars in the field of consumer research have defined similar concepts, including consumer engagement, brand engagement and consumer participation (Li & Xie, 2019).

As social media becomes the most relevant way of life for people, it has a huge impact on businesses and consumers. Becker and Lee (2019) suggest that the way companies inform consumers is no longer limited to forms of advertising and sponsorship, with corporate social media becoming an emerging form of communication. McClure and Seock (2020) consider that social media can be used to build positive relationships between companies and consumers. Fernández, Hartmann, and Apaolaza (2021) found that social media can bridge the gap between corporate brand operations and media managers, and companies can become managers of the media. Social media can create positive connections between companies and stakeholders and greatly enhance the efficiency of CSR communication.

CSR communication methods and strategies have changed accordingly in social media. In terms of CSR communication methods, Hanna, Rohm and Crittenden (2011) proposed a social media ecosystem in his study. In social media era, CSR is mainly spread in social media platforms, which includes two types, namely free media and paid media.

In China, microblog (Sina Weibo) is a typical social media medium, and those who meet the requirements of microblog management can register a microblog account to publish information. Therefore, companies can publish corporate information at low cost and with autonomy, assisting consumers to have a more timely and comprehensive understanding of corporate operations and product information, which has a great impact on consumer satisfaction, making microblogging an indispensable part of the study of corporate social responsibility (Ngai & Singh, 2021). Apart from that, Kim et al (2021) found that the influence of corporate microblog naturally decays over time, so companies should keep their microblogs active and use their operations as a long-term brand-building strategy. In addition, microblog provides a new platform and channel for the publication of CSR reports and the disclosure of information related to them (Ngai & Singh, 2021). It is also easier for users to understand corporate information and monitor corporate behaviour. Companies have a new perspective on building communication and interaction with consumers. Wu and Li (2018)

argue that the interactive engagement behaviour of users also provides an opportunity for consumers to better accept the company's brand and products and services.

Kim and Rader (2010) suggest that strategies for CSR communication can be divided into three categories, firstly, the products or services of the company in consumer responsibility. For example, corporate competence strategies; secondly, CSR strategies in addition to consumer responsibility; and finally, hybrid strategies, combining the above two in social media campaigns. However, in Tao and Wilson's (2015) study, which analyses the adoption of CSR communication strategies by companies on social media platforms, most companies adopt a market-oriented approach, For instance, presenting their brand products and services from a consumer responsibility perspective; another part of the companies adopt the impact of CSR communication on the company. Very few companies have adopted a combined approach to study the impact of CSR communication in social media on consumers. Therefore, the emergence of social media has given a new direction to CSR communication research.

Consumer satisfaction related studies

The first research on the concept of consumer satisfaction was conducted in the 1930s. Hope(1930); Lewin (1938)'s study found that satisfaction was related to self-esteem, trust and loyalty. Prayag et al (2018) argue that consumer satisfaction is the result of a comparison between a consumer 's expectations of a product or service and the actual situation after a purchase has been made, while Ahrholdt et al (2019) states that consumer satisfaction is a temporary evaluation made after a single purchase, so satisfaction can only show that the service or product purchased at the time did not meet the consumer 's desired outcome. Most of the study on satisfaction in academic research currently only takes a single consumer as the target object, while for the manufacturer or producer of a service or product, the result of consumer satisfaction evaluation is the overall evaluation of the service or product by the consumer (Ferreria, 2019). When the customer's real experience is higher than the expected value, the customer will have a higher satisfaction level, and; conversely, when the consumer's expectations are not met, the customer will make a lower satisfaction rating (Felderhoff et al., 2020). The factors influencing customer satisfaction are generally diverse, so when an influencing factor is satisfactory to the customer it does not mean that the customer will feel a higher level of satisfaction at that moment. According to Wang et al (2018)'s study, the factors influencing customer satisfaction are mainly the consumer's own expectations and the service or product that the customer actually perceives at the time of consumption, while the consumer's own expectations are mainly based on the ideal result of the service or product that the consumer envisages based on his or her previous consumption experience, as well as on the information or conventional standards advertised in the service or product, or on the common sense that the consumer has acquired in advance. The latter is usually more influential than the former. Customer satisfaction can be summarized in two qualities: firstly, customer satisfaction is a subjective evaluation result, which varies from one individual to another, mainly in terms of status, consumption perceptions, income level, education level; secondly, satisfaction is not static. When these conditions change, consumers' expectations of the service or product will also change, which in turn will lead to changes in the evaluation of customer satisfaction (Ferreira, 2019). Ahrholdt et al (2019) suggests that customer satisfaction is a subjective emotional or cognitive response to a

product or service purchased and experienced by the consumer in comparison to their previous expectations and actual experience of consumption.

By combing through the relevant literature on CSR, consumer satisfaction and CSR communication in social media, this chapter finds that domestic and international scholars have studied CSR and consumer satisfaction in depth, but less research has been conducted in the social media environment. Thus, this study focuses on CSR in the social media environment, especially the relationship between CSR, CSR communication and consumer satisfaction in the social media environment.

Methodology

Conceptual Framework and Measurements

Carroll's (1991) pyramid of CSR analysis of economic responsibility inherits the traditional theory of profit maximization as the goal. Only by ensuring profitability can an enterprise continue to grow in strength in order to assume more social responsibility. Legal responsibility is a guarantee that the company will grow and operate within the limits of the law. The fulfillment of legal responsibility will enable the company to obtain the government's approval and the company will have a good environment for growth, while the fulfillment of ethical and philanthropic responsibility will enable the company to gain a high social reputation and contribute to its long-term development. This study will also adopt Carroll's (1991) pyramid of CSR to analyze the four dimensions of philanthropic responsibilities, ethical responsibilities, legal responsibilities and economic responsibilities.

In the social media era, social media has become the main platform for companies to build relationships with consumers. In social media, consumers can participate in CSR activities in a direct or indirect way. In this context, by fulfilling their social responsibility, companies can influence consumers' satisfaction, and consumers directly influence CSR behavior through behavioral decisions and feedback. Consumers have a degree of understanding and responsive evaluation of CSR behaviour and therefore influence consumer satisfaction. Accordingly, this study proposes that CSR communication is the mediating variable between CSR and consumer satisfaction, and consumer satisfaction is the dependent variable.

Therefore, based on the analysis, the model is formed as shown in Figure 2.

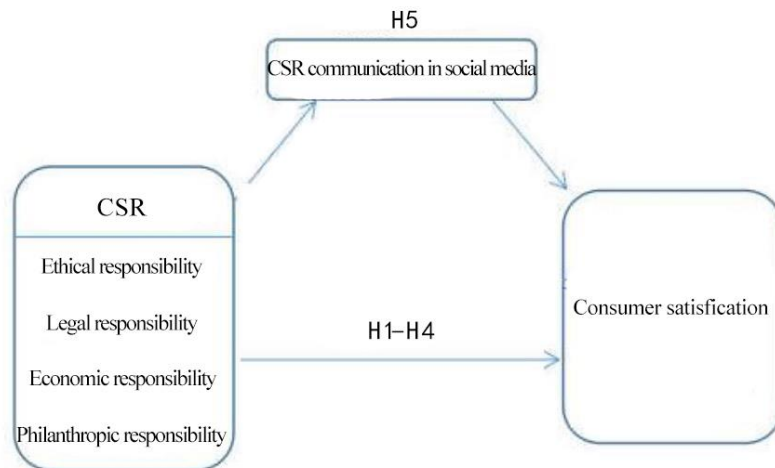


Figure 2: research model diagram

Ethical Responsibility and Consumer Satisfaction

Ethical responsibility is a self-imposed responsibility that includes activities and practices that are expected or prohibited by members of society but are not yet legally defined. Consumer's gradually trust the brand through perception of ethical responsibility, and thus make impact on consumer satisfaction.

Based on the above analysis, the following hypothesis is proposed.

H1: Ethical responsibility has a positive effect on consumer satisfaction

Legal responsibility and consumer satisfaction

Companies have a responsibility to comply with the law and pay taxes, also to protect the basic rights and interests of their employees and consumers. In the process of production and operation, enterprises are both protected by national laws and restricted by laws, which helps reassure consumers and thus enhance consumer satisfaction.

Based on the above analysis, the following hypothesis is proposed.

H2: Legal responsibility has a positive effect on consumer satisfaction

Economic responsibilities and consumer satisfaction

Economic responsibility is the most fundamental responsibility of a company. It is the responsibility of a company to ensure that its business activities are carried out in a profitable manner, to increase wealth for society and to promote the welfare of its employees. At the same time, enterprises are required to provide as diverse a range of products and services as possible to protect the rights and interests of their stakeholders, thereby increasing consumer satisfaction and contributing to the overall development of society and the economy as a whole.

Based on the above analysis, the following hypothesis is formulated.

H3: Economic responsibility has a positive effect on consumer satisfaction

Philanthropic responsibility and consumer satisfaction

Philanthropic responsibility reflects the new public expectations of companies and includes donations, gifts of products and services, voluntary work, cooperation with local governments and other organizations, and voluntary involvement of companies and their employees in community building or other stakeholder-related activities. Active philanthropic responsibility will make consumers feel socially responsible, build a good brand image and social influence, and thus have an impact on consumer satisfaction.

Based on the above analysis, the following hypothesis is proposed.

H4: Philanthropic responsibility has a positive effect on consumer satisfaction

The mediating role of CSR communication

In social media, the process of CSR communication is a two-way communication process between a corporation and consumers, and consumer participation is an important process of CSR communication. Based on the process of consumer response to CSR, CSR behaviour increases consumer awareness and further influence consumer satisfaction through CSR communication

Based on the above analysis, the hypothesis is proposed.

H5: CSR communication in social media plays a positive mediating role between CSR and consumer satisfaction.

The hypothesis is summarized as follow:

Number	Hypothesis
H1	Ethical responsibility has a positive effect on consumer satisfaction.
H2	Legal responsibility has a positive effect on consumer satisfaction.
H3	Economic responsibility has a positive effect on consumer satisfaction.
H4	Philanthropic responsibility has a positive effect on consumer satisfaction.
H5	CSR communication in social media plays a positive mediating role between CSR and consumer satisfaction.

Figure 3: Research hypothesis for research models

The study is about the relationship between CSR, CSR communication in social media and consumer satisfaction from the perspective of consumers. Therefore, a sample of users of Tencent, one of the most successful Internet companies in China and one of the top 500 companies in the world, was selected for the survey. Almost everyone in China is a user and consumer of Tencent, as its launched software, WeChat, has long dominated the number one software download charts, and also basically covers the entire Chinese population of all ages (Negro et al., 2020).

The sample source for this study was WeChat users. WeChat users completed the questionnaire based on their experience of using Wechat and their knowledge of issues related to corporate social responsibility.

Based on Carroll (1991)'s pyramid of CSR, the independent variable CSR into four dimensions: philanthropic responsibilities, ethical responsibilities, legal responsibilities, and economic responsibilities. R1-R5 are measures of ethical responsibilities, R6-R9 aim to measure legal responsibilities, R10-R12 are measures of economic responsibilities, and R13-R15 focus on measuring philanthropic responsibilities. As for CSR communication in social media (Mediated variable), this study measures CSR communication from C1-C4, with four questions. S1 – S5 were designed and presented to measure consumer satisfaction (dependent variable) .

The questionnaire for this study is divided into two main sections: the first section contains the personal information of the respondents, which includes gender, age, education and occupation. The second part is the main part of the questionnaire, which consists of a CSR measurement scale, a consumer satisfaction measurement scale and a CSR communication in social media measurement scale. In this study, a five-point Likert scale was used to measure the questionnaire, which has five levels of evaluation, namely strongly disagree, disagree, indifferent, agree and strongly agree, expressed as a number from 1 to 5 respectively, with larger numbers indicating greater agreement.

The data was collected by means of a questionnaire and then analysed and hypotheses tested using the software SPSS19.0 and AMOS17.0. Credibility is an indicator of the reliability of a measure and is a way of judging the usability of a scale. When analysing questionnaire results, scholars often use the Cronbach's alpha coefficient, an indicator of consistency proposed by (Cohen, 1960). When the coefficient of this indicator is greater than 0.7, the questionnaire is highly consistent. Validity is an indicator of the degree of accuracy of the content measured and reflects the correctness of the questionnaire. There are two specific forms of construct validity, convergent validity and discriminant validity. Convergent validity is judged by the significance of the factor loading coefficients and the mean variance extracted from the latent variables.

Structural Equation Modeling (SEM) is a multivariate statistical analysis technique that involves hypothesis building, estimation and testing of abstract variables, through which the linear relationships between the latent variables can be analyzed and tested. This study employed SEM to model the relationship between CSR, CSR communication in social media and consumer satisfaction.

Results and Discussion

This study was conducted among the WeChat users, mainly through the questionnaire website. A total of 600 questionnaires were distributed, of which 570 were actually returned, a 95% return rate. Among the 570 questionnaires collected, 524 questionnaires were selected through screening, with a valid return rate of 92%.

The first part of the questionnaire was divided into four categories: gender, age, education level and occupation. A total of 524 valid questionnaires were collected. Among the 524 respondents, 47.32% were male and 52.68% were female; among the questions on age, 18-45 years old was the main group of mobile phone consumers, accounting for 94% of the total, with 16.96% of the 18-24 years old group, 55.8% of the 25-34 years old group and 19.64% of the 35-45 years old group. In terms of education level, college and bachelor's degree

accounted for 85% of the respondents, with 80.36% of the respondents having a college or bachelor's degree; in terms of occupation, 8.93% of the respondents were students, 18.75% of the respondents were employees of government agencies and institutions, and 60.71% of the respondents were employees of enterprises.

The above data shows that the proportion of male and female respondents in this study is balanced, which can better reflect users' feedback on WeChat; the distribution of age groups is concentrated between 18-45 years old, which is in line with the main group of WeChat users; in the question of education level, college and bachelor's degree accounts for a larger proportion, the higher the education level, the more consumers will pay attention to corporate social responsibility in the consumption process; in the question of occupation, corporate employees account for a larger proportion, followed by government agencies and students. Government agencies and students, who are more likely to be concerned with CSR in their own interests. Therefore, the data recall is satisfactory and the analysis of the data is trustworthy.

Item	Category	Number	Percentage
Gender	Male	248	47.32%
	Female	276	52.68%
Age	below 18	10	1.79%
	18-24	90	16.96%
	25-34	288	55.8%
	35-45	106	19.64%
	above 45	31	5.8%
Education background	below high school	26	4.91%
	High school	47	8.93%
	Diploma/bachelor	420	80.36%
	Postgraduate	31	5.8%
Job	below high school	48	8.93%
	High school	100	18.75%
	Diploma/bachelor	316	60.71%
	Freelancer	33	6.7%
	Others	27	4.91%

Figure 4: Questionnaire sample survey characteristics

The data for the descriptive statistics need to be normally distributed, with an absolute value of sample skewness of less than 3.0 and an absolute value of kurtosis of less than 10.0. As shown in Figure 5, the mean values of the variable measures are evenly distributed, with standard deviations ranging from 0.7 to 0.9, indicating that the data is not significantly discrete; the absolute values of skewness are less than 1.0. Therefore, the statistics meet the standard.

When analysing questionnaire results, the Cronbach's alpha coefficient, an indicator of consistency by Cohen (1960), is usually used. When the Cronbach's alpha coefficient is in the range of 0.7-0.9, then the reliability of the scale is high. According to the results in Figure 5,

the Cronbach's Alpha values for the four dimensions of CSR, namely ethical responsibility, legal responsibility, economic responsibility and philanthropy responsibility, are all above 0.85, indicating that the CSR scale has a high level of intra-scale consistency and high reliability.

Kaiser (1974) states that when conducting KMO values and Bartlett's spherical test, factor analysis should be discarded for KMO below 0.5, while a Bartlett's spherical test with a significance below 0.05 is appropriate for factor analysis. The AVE should be above 0.5, the higher the value of the indicator, the higher the degree of convergence of the scale.

The KMO value of the CSR scale and the Bartlett's spherical test were 0.799, a value greater than 0.5, indicating the existence of common factors among the variables; the significance of the Bartlett's spherical test was 0.00, less than 0.05, indicating the rejection of the null hypothesis, so the CSR scale is suitable for factor analysis.

As shown in Figure5, all dimensional loadings (AVE) are greater than 0.5, indicating good convergence of CSR measures

Variable	Item	SD	Skewness	Kurtosis	α	AVE
Ethical responsibility	R1	0.80519	-0.040	-0.145	0.915	0.512
	R2	0.80729	-0.818	-0.541		
	R3	0.93519	-0.721	-0.440		
	R4	0.79518	-0.819	-0.125		
	R5	0.94520	-0.789	-0.198		
R6	0.80613	-0.716	-0.382	0.925	0.663	
Legal responsibility	R7	0.70518	0.030			-0.627
	R8	0.88219	-0.609			-0.877
	R9	0.90613	-0.859			-0.568
Economic responsibility	R10	0.79529	0.255	-0.644	0.922	0.552
	R11	0.75514	-0.445	-0.437		
	R12	0.80436	-0.317	-0.492		
Philanthropy responsibility	R13	0.97138	0.689	-0.690	0.914	0.554
	R14	0.89512	-0.672	-0.944		
	R15	0.81610	-0.063	-0.399		

C1	0.60550	0.254	-0.922			
CSR	C2	0.70582	-0.315	-0.823		
In Social	C3	0.90751	-0.561	-0.419	0.840	0.648
meida	C4	0.81350	0.351	-0.726		
S1	0.89304	-0.626	-0.199			
Consumer	S2	0.69301	0.179	-0.329	0.906	0.587
Satisfaction	S3	0.72114	-0.250	-0.105		
	S4	0.90304	-0.620	-0.110		
	S5	0.88914	0.120	-0.131		

Figure 5: Descriptive data analysis, reliability and validity analysis

The overall model fit is used to evaluate the fit of the model to the data, while the intrinsic structural fit of the model is evaluated in two aspects, which include the significance of the parameters and the confidence between the latent variables. In this study, a validation factor analysis was conducted on the scale, such as Figure. χ^2/df , RMR, GFI, AGFI, NFI, IFI, CFI and RMSEA were chosen as the fit indices for the study. Figure 6 shows that the fit of the scale is good, indicating that the measurement has structural validity, and the model passed the validation factor analysis

Statistical validation	χ^2/df	RMR	GFI	AGFI	NFI	IFI	CFI	RMSEA
Critical value	<3.00	<0.05	>0.90	>0.90	>0.90	>0.90	>0.90	<0.08
Testing results	1.386	0.036	0.99	0.947	0.984	0.995	0.995	0.037

Figure 6: Overall model validation factor

In evaluating the actual value of a model, the degree of fit of a structural equation model is often used. In this study, the CMIN metric is often used to test the fit of the model. In order to examine the mediating role of CSR communication, this paper uses Amos software to conduct a structural model test. The fit indices chosen for this study are $\chi^2/df=1.152$ (<3.00), RMR=0.048 (<0.05), GFI=0.979 (>0.90), AGFI=0.956 (>0.90), NFI=0.962 (>0.90), IFI=0.995 (>0.90), CFI=0.995 (>0.90), and RMSEA=0.029 (<0.08), all of which met the criteria for fit. However, the results of the validation of the path relationship through the model showed that although the model fitted well from an overall perspective, economic responsibility on consumer satisfaction failed the significance test.

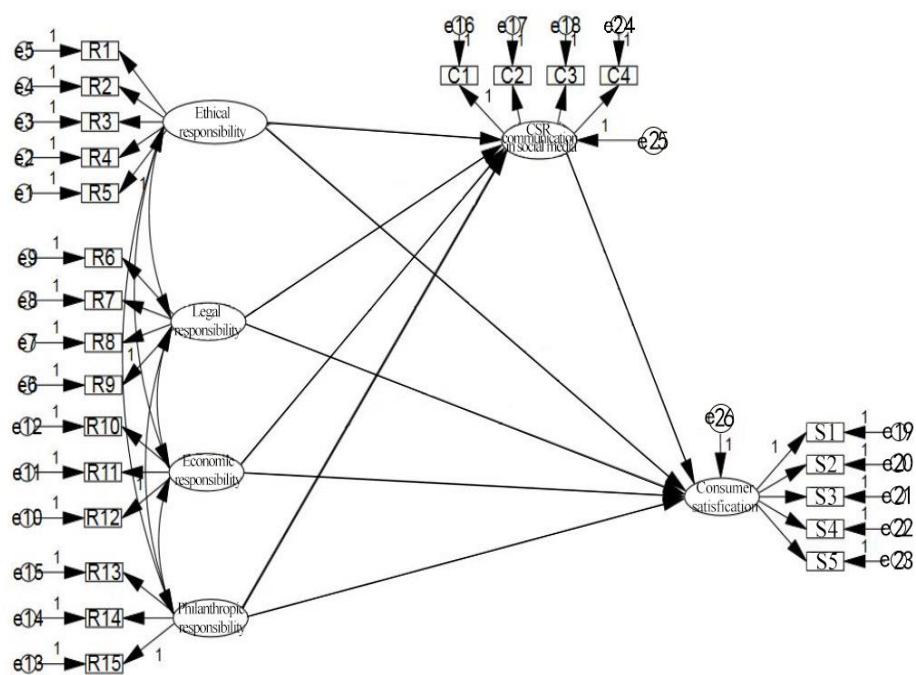


Figure 7 : SEM Path diagram

Independent variable	Dependent variable	Estimate	S.E.	C.R.	P.
Ethical responsibility	Consumer satisfaction	0.364	0.159	6.089	***
Legal responsibility	Consumer satisfaction	0.359	0.12	6.741	***
Economic responsibility	Consumer satisfaction	0.035	0.071	0.78	0.435
Philanthropy responsibility	Consumer Satisfaction	0.454	0.069	9.028	***

Figure 8: Hypothesis test results of CSR and consumer satisfaction

Variable	Variable	Estimate	S.E.	C.R.	P.
CSR communication in social media	Consumer satisfaction	0.344	0.118	5.827	***

Figure 9: Test results of CSR communication in social media intermediary

From Figure 8 and 9, the independent variables ethical responsibility, philanthropy responsibility, and law responsibility all reach a significance level at $p=0.05$, indicating that the independent variables have a positive effect on the dependent variable. Therefore, H1, H2 and H4 are valid. However, the coefficient of the path of the independent variable financial responsibility on the dependent variable consumer satisfaction is 0.03 with a significance level of 0.435 and H3 is not valid.

The path coefficient of the mediating variable on the dependent variable consumer satisfaction was 0.34, which reached the significance level at $p=0.05$. Therefore, the mediating variable partially mediates the relationship between CSR and consumer satisfaction and hypothesis H5 is valid.

All of the testing results are shown as follow in figure10:

Number	Hypothesis	Results
H1	Ethical responsibility has a positive effect on consumer satisfaction.	supported
H2	Legal responsibility has a positive effect on consumer satisfaction.	Supported
H3	Economic responsibility has a positive effect on consumer satisfaction.	Not Supported
H4	Philanthropic responsibility has a positive effect on consumer satisfaction.	Supported
H5	CSR communication in social media plays positive a mediating role in CSR and consumer satisfaction.	Supported

Figure10 : Model Hypothesis test results

Conclusion

In this study, based on Carroll (1991)'s pyramid of CSR, the model is divided into four dimensions: philanthropic responsibilities, ethical responsibilities, legal responsibilities, and economic responsibilities. Consumer satisfaction is presented in the context of social media which falls under various dimensions that are often interconnected, based on Carroll's model.

This study found that CSR has a positive effect on consumer satisfaction. Companies can improve the quality of their products and services and innovate in their products to increase consumer satisfaction. Legal responsibilities increase consumer satisfaction; therefore, corporation should comply with the law and tax compliances. Additionally, ethical responsibilities facilitate consumer satisfaction, therefore, companies should not do anything that is unethical. Finally, companies taking on philanthropic responsibilities will get the attention of consumers. Fulfilling philanthropic responsibilities, such as charitable donations, can promote consumer satisfaction, and companies can gain consumer attention by promoting philanthropy, thus increasing satisfaction. However, the study found that consumers do not care about the economic responsibility of companies and it does not have too much impact on consumer satisfaction. The findings show that doing good to the community in terms of contributing wealth to the community reflect a better image and branding for a company's CSR initiatives.

With the advent of social media, social media has become a platform to connect companies with consumers. CSR communication in social media is used as a mediating variable in this study. The study was conducted from the perspective of the consumer. It is found that

consumers no longer become informed, but become participants in CSR behavior, and companies need to align their communication processes with consumer expectations and include an element of interactivity in the content research design. In terms of CSR communication strategies, corporate self-publishing platforms have become a means for consumers to access corporate information.

Empirical research has verified the mediating role of CSR communication in social media, which has led to the conclusion that companies can communicate with consumers through social media, interact with information about CSR activities, analyze consumer feedback and improve existing behavioral activities. This process will increase consumer attention and awareness of the brand, and thus enhance consumer satisfaction.

This study recommends that companies establish a CSR communication mechanism for social media. Social media is characterized by the democratization of content, personalization of content, focus on the scope of content dissemination and high efficiency in the dissemination of information. The social media can be used to highlight unfavorable events for companies, such as unfavorable publicity. In such cases, it is important that companies communicate in a timely and positive manner to consumers through CSR communications, but it is a challenge to get the timing right, to deliver the right positive messages and to use crisis communication budgets. While companies can promote consumer satisfaction by being socially responsible, the opposite effect can be achieved with inappropriate CSR communications. Scholars have pointed out in their research that most companies in China currently have insufficient crisis communication skills and are unable to take appropriate measures to maintain their image among consumers when a product crisis arrives.

This research has important practical and theoretical significance. In practical significance, based on the influence of Tencent's CSR communication in social media on consumer satisfaction, can help more enterprises to respond to similar events with reference effect and further understand the relationship between them. This study provides a direction for more companies, which can clearly combine their own brand advantages to carry out CSR communication with consumers in order to obtain higher consumer satisfaction. This study also can provide evidence for the relevant departments of government to make pay more attention to the relationship between CSR behavior and consumer satisfaction, especially for the supervision of CSR behaviors in different fields. In theoretical significance, the relationship between CSR communication and consumer satisfaction is often ignored, and the mechanism among them is rarely analyzed. Likewise, there are different important contributions of the present study to the existing literature. This study adds to the existing CSR literature from the perspective of the customers, whereas the prior studies have largely addressed the relationship of CSR in other domains as opposed to the customers. Barauskaite and Streimikiene (2020) research on the relationship between CSR and financial performance found that the important role of CSR in shaping customer sentiment and behavior through social media has been largely ignored by contemporary researchers. Therefore, this study hopes to further enrich the research in this field on the basis of many scholars' research. By distributing and collecting questionnaires, and then analyzing the data with SPSS and AMOS software to make the research result more convincing. It also provides data and theoretical support for post-scholar research in this field.

This paper focuses on the Tencent software(Wechat) user group, but it remains to be researched whether the verified findings are applicable to other industries, and the existing academic community still lacks a uniform standard for all industries, pending future research. In addition, the sample size in this paper is relatively small due to constraints, which may have an impact on the results of the study. Future studies may explore further standards of practice within similar industries, particularly in the Asian region.

References

- Ahrholdt, D. C., Gudergan, S. P., & Ringle, C. M. (2019). Enhancing loyalty: When improving consumer satisfaction and delight matters. *Journal of Business Research*, 94, 18–27. <https://doi.org/10.1016/j.jbusres.2018.08.040>
- Barauskaite, G., & Streimikiene, D. (2020). Corporate Social Responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods. *Corporate Social Responsibility and Environmental Management*, 28(1), 278–287. <https://doi.org/10.1002/csr.2048>
- Becker, K., & Lee, J. W. (2019). Organizational usage of social media for Corporate Reputation Management. *The Journal of Asian Finance, Economics and Business*, 6(1), 231–240. <https://doi.org/10.13106/jafeb.2019.vol6.no1.231>
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505. <https://doi.org/10.5465/amr.1979.4498296>
- Carroll, A. B. (1991). The Pyramid of Corporate Social Responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48. [https://doi.org/10.1016/0007-6813\(91\)90005-g](https://doi.org/10.1016/0007-6813(91)90005-g)
- Chehimi, G. M., Hejase, A. J., & Hejase, N. H. (2019). An assessment of Lebanese companies' motivators to adopt CSR strategies. *Open Journal of Business and Management*, 07(04), 1891–1925. <https://doi.org/10.4236/ojbm.2019.74130>
- Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and Sustainability Reporting: Economic Analysis and Literature Review. *Review of Accounting Studies*, 26(3), 1176–1248. <https://doi.org/10.1007/s11142-021-09609-5>
- Clark, J. M. (1916). The changing basis of economic responsibility. *Journal of Political Economy*, 24(3), 209–229. <https://doi.org/10.1086/252799>
- Felderhoff, C., Lyford, C., Malaga, J., Polkinghorne, R., Brooks, C., Garmyn, A., & Miller, M. (2020). Beef quality preferences: Factors driving consumer satisfaction. *Foods*, 9(3), 289. <https://doi.org/10.3390/foods9030289>
- Fernandez, P., Hartmann, P., & Apaolaza, V. (2021). What drives CSR Communication Effectiveness on social media? A process-based theoretical framework and Research Agenda. *International Journal of Advertising*, 41(3), 385–413. <https://doi.org/10.1080/02650487.2021.1947016>
- Ferreira, B. M. (2019). Packaging texture influences product taste and consumer satisfaction. *Journal of Sensory Studies*, 34(6). <https://doi.org/10.1111/joss.12532>
- Gerde, V. W., & Wokutch, R. E. (1998). 25 years and going strong. *Business & Society*, 37(4), 414–446. <https://doi.org/10.1177/000765039803700405>
- Gulenko, M. (2018). Mandatory CSR reporting—literature review and future developments in Germany. *Nachhaltigkeits Management Forum Sustainability Management Forum*, 26(1-4), 3–17. <https://doi.org/10.1007/s00550-018-0476-9>

- Guzzo, R. F., Abbott, J. A., & Madera, J. M. (2019). A micro-level view of CSR: A Hospitality Management Systematic Literature Review. *Cornell Hospitality Quarterly*, 61(3), 332–352. <https://doi.org/10.1177/1938965519892907>
- Hanna, R., Rohm, A., & Crittenden, V. L. (2011). We're all connected: The power of the Social Media Ecosystem. *Business Horizons*, 54(3), 265–273. <https://doi.org/10.1016/j.bushor.2011.01.007>
- Kim, S., & Rader, S. (2010). What they can do versus how much they care. *Journal of Communication Management*, 14(1), 59–80. <https://doi.org/10.1108/13632541011017816>
- Kim, S., Sung, K. H., Ji, Y., Xing, C., & Qu, J. G. (2021). Online firestorms in social media: Comparative research between China Weibo and USA Twitter. *Public Relations Review*, 47(1), 102010. <https://doi.org/10.1016/j.pubrev.2021.102010>
- Li, F., Larimo, J., & Leonidou, L. C. (2020). Social media marketing strategy: Definition, conceptualization, taxonomy, validation, and future agenda. *Journal of the Academy of Marketing Science*, 49(1), 51–70. <https://doi.org/10.1007/s11747-020-00733-3>
- Li, Y., & Xie, Y. (2019). Is a picture worth a thousand words? an empirical study of image content and social media engagement. *Journal of Marketing Research*, 57(1), 1–19. <https://doi.org/10.1177/0022243719881113>
- McClure, C., & Seock, Y.-K. (2020). The role of involvement: Investigating the effect of Brand's social media pages on Consumer Purchase Intention. *Journal of Retailing and Consumer Services*, 53, 101975. <https://doi.org/10.1016/j.jretconser.2019.101975>
- Negro, G., Balbi, G., & Bory, P. (2020). The path to WeChat: How Tencent's culture shaped the most popular Chinese app, 1998–2011. *Global Media and Communication*, 16(2), 208–226. <https://doi.org/10.1177/1742766520923008>
- Ngai, C. S., & Singh, R. G. (2021). Operationalizing genuineness in CSR communication for public engagement on social media. *Public Relations Review*, 47(5), 102122. <https://doi.org/10.1016/j.pubrev.2021.102122>
- Peters, K., Chen, Y., Kaplan, A. M., Ognibeni, B., & Pauwels, K. (2013). Social Media Metrics — a framework and guidelines for managing Social Media. *Journal of Interactive Marketing*, 27(4), 281–298. <https://doi.org/10.1016/j.intmar.2013.09.007>
- Prayag, G., Hassibi, S., & Nunkoo, R. (2018). A systematic review of Consumer Satisfaction Studies in hospitality journals: Conceptual development, research approaches and future prospects. *Journal of Hospitality Marketing & Management*, 28(1), 51–80. <https://doi.org/10.1080/19368623.2018.1504367>
- Sheldon, O. (1924). *The Philosophy of Management*. London: Sir I. Pitman.
- Tao, W., & Wilson, C. (2015). fortune 1000 communication strategies on Facebook and Twitter. *Journal of Communication Management*, 19(3), 208–223. <https://doi.org/10.1108/jcom-01-2013-0004>
- Wang, H., Du, R., & Olsen, T. (2018). Feedback mechanisms and consumer satisfaction, trust and repurchase intention in online retail. *Information Systems Management*, 35(3), 201–219. <https://doi.org/10.1080/10580530.2018.1477301>
- WU, D. D., & LI, C. (2018). Emotional branding on social media: A Cross-Cultural Discourse Analysis of global brands on Twitter and weibo. *Intercultural Communication in Asia: Education, Language and Values*, 225–240. https://doi.org/10.1007/978-3-319-69995-0_11