



Research on the Impact of Corporate Digital Responsibility on Consumer Forgiveness from the Perspective of Perceived Value

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Abstract. Digital technology has become a powerful tool for enterprise digital operation, and how corporate digital responsibility influences consumer behavioral willingness plays a key role in enterprise development. Based on attribution theory and perceived value theory, the research perspective of corporate digital responsibility is transformed to study how corporate digital responsibility affects consumer perception (perceived value) and behavior (consumer forgiveness) from the perspective of consumers, and the findings show that consumer-perceived corporate digital responsibility positively affects consumer forgiveness, in which perceived value plays a mediating role. The findings enrich the research related to corporate digital responsibility and consumer behavior, and provide valuable references for companies to develop digital responsibility guidelines and norms.

Keywords: Corporate digital responsibility; perceived value; consumer forgiveness

1 Introduction

Digital transformation has become an inevitable path for today's businesses, along with the negative challenges of business management. Business operations affect consumer behavior, and negative corporate behavior can have various adverse effects, such as negative word of mouth, reduced willingness of consumers to buy, and consumer boycotts. 2022 Learning Express 170 million pieces of user data were leaked, and were called down by users. These digital risks from digital technology can not only damage a company's reputation, but also hinder the growth of the digital industry.

Elliott conceptualizes Corporate Digital Responsibility (CDR) as a voluntary commitment by organizations to support "good" digital business practices and digital sustainability (i.e., data and algorithms) by collaboratively guiding efforts to address the economic and ecological impacts of the digital society. Consumer-perceived corporate digital responsibility refers to corporate practices that consumers perceive as addressing the economic and ecological impacts of the digital society and enhancing digital sus-

tainability. For the study of corporate digital responsibility, most scholars have researched the concepts and dimensions related to corporate digital responsibility, and have reached different conclusions respectively. Empirical studies at this stage are mostly from the perspective of the enterprise, and fewer studies on the relationship between digital responsibility and consumers show that nowadays, enterprise marketers rely on data to a very high degree, but enterprises do not know how to prevent the negative impact of data on the enterprise, the Internet aggravates the consumer's various concerns about privacy. Businesses are faced with the problem of losing customers due to privacy breaches and the problem of how to balance the need for data and shopper privacy. In marketing shoppers evaluate the intrusiveness of technology on their personal privacy, thus updating their perceptions of fairness, value, satisfaction, trust, commitment and attitudinal loyalty. When companies experience a crisis of negative digital impacts, how the fulfillment of corporate digital responsibility affects consumer value perceptions and thus obtains consumer forgiveness for the company. Although many scholars have paid attention to corporate digital responsibility, there are fewer studies on corporate digital responsibility from a consumer perspective.

This research is mainly based on the perceived value theory, using the perceived value of digital responsibility as a link to establish a research framework for consumer-perceived corporate digital responsibility, perceived value, and consumer forgiveness under the consumer's perspective, and to study the relationship between the digital responsibility that companies need to take on, as perceived by consumers, and the perceived value and consumer forgiveness.

2 Research Model and Hypothesis Proposal

2.1 Consumer Perception of Corporate Digital Responsibility and Consumer Forgiveness

According to Fritz Heider attribution theory mainly addresses how people in everyday life identify the causes of events. According to Heider, there are no more than two types of causes of events: internal causes, such as emotions, attitudes, personality, abilities, etc.; and external causes, such as external pressures, weather, situations, etc. Si-amagka^[1] points out in his article that people are more inclined to internal attribution, rather than external causes. Therefore, in the context of a negative event for a firm, consumers are more likely to blame the firm itself for the negative event rather than other causes of the event. Kang and Hustvedt found in their study that consumers' perceptions of a firm's transparency in production and labor conditions, and its social responsibility by giving back to the local community, directly affect these consumers' trust in the firm and their attitudes toward it. and attitudes, and indirectly affects their intentions to purchase and spread positive word-of-mouth about the firm. As a result, the following hypothesis is proposed:

H1: Consumer-perceived corporate digital responsibility has a positive effect on consumer forgiveness.

2.2 The Mediating Role of Perceived Value

Value perception is the subjective weighing of costs and benefits that individuals establish based on existing cognition, and it is a key variable in exploring individual willingness and behavior. The theory of value perception clarifies the path paradigm and logical mechanism of individual behavioral willingness, namely psychological cognition $\rightarrow$ value perception $\rightarrow$ behavioral willingness^[2]. The digital economy has created a new business model in today's society, which has produced a great change in people's work and life, and the new business model will bring new corporate responsibility, according to the theory of perceived value, the behavior of corporate digital responsibility practices can enhance the user's psychological cognition, thereby increasing the user's perceived value, so that after the emergence of a negative event, the enterprise greatly reduces the negative impacts of the event on the enterprise and obtain consumer forgiveness. Functional value refers to the quality of functionality from the perceived or expectations of product performance, as a dimension of value perception, research has proved that functional value can enhance consumers' willingness to buy, and is an important factor in promoting forgiveness and repairing relationships. At this stage of research on corporate digital responsibility, there are quite a lot of studies from the corporate perspective, and the implementation of corporate digital responsibility will enhance the high-quality development of the enterprise, as well as positively and positively affect the digital performance of the enterprise. However, digital responsibility will have an impact on the perceived value, which in turn affects the user's willingness to use or consume, and when consumers perceive the risk, they will reduce their willingness to use the technology platform. An increase in perceived value also significantly increases consumer loyalty and enhances user viscosity, which in turn promotes consumers' willingness to forgive. In related studies, both consumer empathy and sympathy have been shown to mediate consumer forgiveness willingness. Based on this, the following hypotheses are proposed in this study:

H2: The mediating role of value perception in the impact of corporate digital responsibility on consumer forgiveness in consumer perception.

3 Research Design

3.1 Data Collection

This paper collects the data needed for the research through the questionnaire method, which is adapted from the relevant research results of authoritative journals at home and abroad. Before the formal research, scholars in this research field were invited to test-fill the questionnaire and optimize and improve the questionnaire items. The content of the questionnaire is divided into three parts: the first part is about the top 9 digital enterprises in China, and respondents can fill in according to the enterprises they are familiar with; the second part is about the characteristics of the respondents; and the third part is about the measurement of the model variables. In order to ensure the validity of the data, questionnaires with repeated answers and missing answers were deleted,

while questionnaires with opposite logical relationships were deleted. 400 questionnaires were released for the formal research, 325 questionnaires were recovered, and 266 valid questionnaires were retained, with an effective questionnaire recovery rate of 66.5%. Among the valid samples, in terms of gender, males accounted for 37.59%, females accounted for 62.41%, and in terms of age, those aged between 18 and 25 accounted for 65.04%. ~In terms of age, 18-25 years old accounted for 65.04%, 26-35 years old accounted for 19.92%, 36-45 years old accounted for 4.51%; 46-55 years old accounted for 6.77%, and 55 years old and above accounted for 3.76%; in terms of working mode, full-time/part-time accounted for 17.29%; freelance accounted for 10.05%, unemployed accounted for 6.39%, and students accounted for 66.17%; in terms of educational level, junior high school and below accounted for 4.51%, and senior high school accounted for 9%. 4.51%, high school 9.40%, specialized and undergraduate 57.89%, graduate and above 28.20%.

3.2 Variable Measurement

All the scales were rated on a 7-point Likert scale, with 1 to 7 ranging from "Strongly Disagree" to "Strongly Agree".

Dependent variable: consumer-perceived corporate digital responsibility (CPCDR): this study uses Mihale-Wilson et al.'s research on the norms of corporate digital responsibility from the perspective of consumers^[3], with a total of 14 question items.

Mediating variable: perceived value (PV): this study uses a measurement scale developed by Sweeney and Sou tar, which has been widely accepted in the retail industry. The scale has three basic dimensions: emotional value, social value and functional value, totaling nine question items.

Dependent variable: consumer forgiveness (CF): this study used Jinhua Li's measurement scale, illustrated in 2 directions: forward scoring and reverse scoring. The scale has a total of 4 question items.

Control variables: gender, age, education, and mode of work. In this study, the above demographic variables were used as control variables to minimize the effect of errors in the core variables in the relationship test.

4 Empirical Analysis

4.1 Reliability and Validity Analysis

In this study, reliability tests were conducted for the variables involved. For the reliability test, Cronbach's alpha coefficient and combined reliability (CR) were used to measure the internal consistency of the measurement scales of the four variables. The Cronbach's alpha coefficient values for each variable were 0.934, 0.93, 0.821, and 0.922, which were all greater than 0.7, and the CR values were 0.934, 0.931, 0.824, and 0.923, which were all greater than 0.7, indicating that the scale's reliability meets the acceptable standard.

For the validity test, the AVE values of consumer perceived corporate digital responsibility, perceived value, and consumer forgiveness are 0.505, 0.602, and 0.546 respectively, which are all greater than the ideal value of 0.5. Secondly, the factor loadings of each variable are all over the acceptable threshold of 0.5, which indicates that the aggregation validity of the variables is Good.

4.2 Hypothesis Testing

1. Main effect test

A total of 3 sub-models are constructed in this study, and stepwise regression method is used for hypothesis testing. In this study, we take consumer forgiveness as the dependent variable and add control variables such as gender, age, occupational situation, and education to get model 1, and on the basis of model 1, we add the independent variable consumer-perceived corporate digital responsibility to get model 2, and the results show that consumer-perceived corporate digital responsibility significantly and positively affects consumer forgiveness ($\beta=0.182$, $p<0.01$), and hypothesis H1 is verified.

2. Mediation effect test

On this basis, the control variable, independent variable (consumer-perceived corporate digital responsibility) and mediator variable (perceived value) were added to the model to obtain Model 3 to test the joint effect of consumer-perceived corporate digital responsibility and perceived value on consumer forgiveness, and the results showed that after the mediator variable perceived value was added, there was a significant positive effect of perceived value on consumer forgiveness ($\beta=0.215$, $p<0.01$), and the effect coefficient decreased from 0.182 to 0.05. $p<0.01$), consumer-perceived corporate digital responsibility has a positive effect on consumer forgiveness but not significant ($\beta=0.084$, $p>0.05$), the influence coefficient decreased from 0.182 to 0.084, indicating that the perceived value plays a partial mediating role in the influence of consumer-perceived corporate digital responsibility on consumer forgiveness, and the hypothesis H2 is valid. The results are shown in Table 1

Table 1. Hypothesis testing

Research variables	M1	M2	M3
MAN	0.209**	0.171*	0.102
AGE	0.00	0.012	0.003
EB	0.004	0.014	0.019
LP	0.581**	0.542**	0.493**
UNE	0.095	0.09	0.094
STU	0.039	0.034	0.084
CPCDR		0.182**	0.084
PV			0.215**
R2	0.104	0.128	0.187

5 Conclusions and Insights

Corporate digital responsibility is becoming increasingly popular in both research and practice. However, so far, most of the new areas regarding corporate digital responsibility are mostly theoretical and conceptual. This study is based on the framework of psychological cognition → value perception → behavioral intention, exploring the impact mechanism of consumers' perceived corporate digital responsibility on consumer forgiveness from the perspective of consumers and from the angle of perceived value. The main conclusions are as follows:

After the occurrence of negative digital events, consumers' perception of corporate digital responsibility has a positive impact on consumer forgiveness. Empirical results prove that consumers' perception of corporate digital responsibility is indeed a key determinant of consumer forgiveness. The degree of consumer forgiveness for negative digital events will be comprehensively considered based on the perceived corporate digital responsibility regarding privacy protection and the transparency of the data collected by the company. As mentioned in the literature, when organizations adopt corporate digital responsibility systems and demonstrate compliant behavior, the decisions of customers, future talents, and investors will be positively influenced. Corporate digital responsibility can help organizations stand out, foster stakeholder trust, and drive competitive advantage. According to the literature review, there is limited research on the relationship between corporate digital responsibility and consumer forgiveness, so the theoretical model proposed in this study contributes to market research. Value perception mediates the effect of corporate digital responsibility on consumer forgiveness as perceived by consumers. The empirical results are consistent with our hypotheses and support previous findings^[4-6].

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