Research on the Impact of Brand Crisis on Enterprise Economy Based on SPSS Regression Analysis

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Abstract

In today's complex environment, the requirements for the ability of enterprises to deal with the crisis are higher and higher, which means that enterprises need to take appropriate crisis response strategies according to their own situation. This paper uses the questionnaire survey method, through the production and distribution of questionnaires, collect data, and then use SPSS software to analyze the data, test whether the hypothesis is tenable, and finally draw a conclusion. According to the data collected from the questionnaire, this paper uses SPSS17.0 tool for data analysis, including reliability analysis and regression analysis, to test the hypothesis of this study. This study finds: (1)coping strategies have positive effects on brand relationship quality;(2)coping strategies have positive effects on corporate reputation; (3)corporate reputation has positive effects on brand relationship quality;(4)corporate reputation plays an intermediary role between crisis coping strategies and brand relationship quality. The results show that when enterprises face defensible brand crisis, they should take corresponding countermeasures in time to reduce the negative impact of the crisis, so as to reduce economic losses for enterprises.

Keywords: *Economic management, SPSS, coping strategies, corporate reputation, brand relationship quality*

1.INTRODUCTION

In recent years, with the rapid development of economy, China is in line with international standards, and the operation environment of enterprises is becoming more and more complex[1]. In the process of enterprise development, opportunities and challenges coexist, and the frequency of brand crisis is also greatly increased. Due to the development and popularization of online media, the speed and scope of information dissemination are faster and wider, and the media communication channels are more diversified. A small event may also ferment into a big crisis. In addition, in today's era, government departments are becoming more and more strict in the supervision of product quality, and consumers' awareness of safeguarding their rights is gradually strengthened, which puts forward higher requirements for enterprises. If the enterprise does not deal with the defensible brand crisis properly, it will not only cause economic losses, but also cause irreversible damage to the overall image of the enterprise. On the contrary, if we express our attitude as soon as possible and give a solution satisfactory to consumers and the public, we can not only quell the crisis in the shortest time, but also minimize the damage to the corporate image caused by this event and repair the relationship between the brand and consumers. The purpose of this study is to explore the relationship among crisis response strategies, corporate reputation and brand relationship quality in the context of defensible brand crisis[2]. From the perspective of enterprises, study which strategy can reduce the negative impact of the crisis on the brand to a greater extent, and maintain the corporate reputation and the relationship between the brand and consumers. This paper uses the methods of literature review and questionnaire to investigate consumers. While fully studying the relationship between variables, it also provides help for enterprises to choose coping strategies when they encounter defensible brand crisis in the future.

From the perspective of the relationship between enterprises and consumers, this study discusses the enterprise crisis response strategies from the perspective of brand relationship quality. So as to better deal with the brand crisis and minimize the negative impact of the crisis.

2.RESEARCH HYPOTHESIS

2.1. Data quality analysis

2.1.1. Sample descriptive statistics

A total of 103 questionnaires were collected. After screening, 79 valid questionnaires were obtained. The specific sample overview is shown below. It can be seen from table 4 that in this questionnaire survey, the proportion of men and women is relatively balanced, with 36 men and 43 women, accounting for about 50% respectively, which is representative. In the composition of age stage, the number of people in the age group of 18-24 is the largest, accounting for 82.3%. To sum up, the samples collected in this study are representative and universal in gender dimension, and the distribution of age dimension is not very balanced, mainly concentrated in young groups.

Table 1. Statistical table of sample composition

attribute	classification	Number of people	Percentage(%)
Gender	man	36	45.6
	woman	43	54.4
Age	Under 18	4	5.1
	18-24	65	82.3
	25-30	4	5.1
	Over 30	6	7.6

2.1.2. Reliability analysis

In order to ensure the authenticity and reliability of the data collected in the survey, this study tested the reliability of the data, so as to control and reduce the random error. Specifically, the Cronbach alpha coefficient will be used to analyze the main contents of the questionnaire, describe the internal consistency of each index in the questionnaire, and test the reliability of the questionnaire. According to the regulations of academic authority, if the alpha coefficient of Cronbach is greater than 0.9, it is considered that the internal reliability of the scale is very high; If the Cronbach alpha coefficient is greater than 0.7 and less than 0.8, the internal reliability is considered acceptable; If the Cronbach alpha coefficient is greater than 0.5 and less than 0.7, it is considered that there are some problems in the scale, but it still has a certain reference value; If the Cronbach alpha coefficient is less than 0.3, it is considered that there are great problems in the scale design, and redesign should be considered. In this study, SPSS statistical tools are used to analyze the star questionnaire. The specific coefficients of each scale are shown in the table below:

The overall data of this study is Cronbach's α As shown in Table 5 below, it is 0.912, greater than 0.9, indicating that the overall reliability of the data is good.

Table 2. Overall reliability analysis results

Cronbach's α	Number of items
0.912	12

2.2. Crisis response strategies and brand relationship quality

Existing research shows that in the crisis scenario, enterprises adopt coping strategies to reduce consumers' negative experience caused by brand crisis. Consumers' attitude towards the brand has both positive and negative emotions, which is in a contradictory state. This paper adopts the reconciliation strategy and defense strategy, in which the reconciliation strategy shows that the enterprise takes the initiative to take repair action and bear the responsibility of the crisis, so that consumers can see the responsibility and sincerity of the enterprise, but this also allows consumers to confirm the fault of the enterprise; The defense strategy is that the enterprise denies the existence of problems and refuses to bear responsibility, so that consumers can not confirm whether it is the fault of the enterprise, but it can not reflect the sincerity and sense of responsibility of the enterprise. In the excusable crisis, the response effect of exculpatory strategy is better than that of reconciliation strategy, and the repair effect of brand assets is better [3]. Trust is determined by consumers' subjective identity, brand credibility and brand intimacy, which is more matched with the defense strategy[4]. The following assumptions are obtained:

H1: In the situation of defensible brand crisis, compared with the reconciliation strategy, the enterprise adopts the justification strategy to enhance consumers' trust in the brand.

2.3. Crisis response strategies and corporate reputation

Some scholars divided enterprise crisis response strategies into scapegoat response strategies, excuse response strategies and compensation response strategies[5]. Through empirical research, it is concluded that there are some differences in enterprise reputation evaluation formed by different crisis response strategies, in which compensation response strategies are slightly higher than the other two. In the event of a crisis, a certain amount of compensation given by enterprises to consumers can enhance the goodwill of consumers, so as to protect the reputation of enterprises and reduce the adverse impact of the crisis[6]. However, taking responsibility and giving compensation means that the enterprise itself has great responsibility for the emergence

of the crisis. The explanation shows that a resolute response, although refusing to take responsibility, will leave an impression of integrity to consumers and have a positive impact on the reputation of the enterprise. The classification of enterprise coping strategies in this study is defense strategy and reconciliation strategy, from which the following assumptions are obtained:

H2: when enterprises adopt defense strategy, the evaluation of enterprise reputation is higher than that of reconciliation strategy.

2.4. Corporate reputation and brand relationship quality

Zhao and Chen (2017) [7] divided trust into cognitive trust and emotional trust, and proved that corporate social responsibility can affect customer trust and satisfaction through corporate reputation. Good corporate reputation helps to enhance customer trust and customer satisfaction. The following assumptions can be obtained:

H3: corporate reputation has a significant positive impact on the trust dimension of brand relationship quality.

2.5. Intermediary role of corporate reputation

Most of the existing studies take corporate reputation as the regulatory variable to study the effect of crisis response strategies, and there is no clear research that corporate reputation plays an intermediary role in the relationship between crisis response strategies and brand relationship quality. Some scholars have proved that corporate reputation plays an intermediary role in the performance of corporate social responsibility and the quality of brand relationship, and corporate reputation has a significant positive impact on the quality of brand relationship. Other scholars have proved that corporate reputation plays an intermediary role between corporate social responsibility and brand equity, and plays a positive role in brand equity. This study takes corporate reputation as an intermediary variable to analyze its intermediary effect on crisis response strategies and brand relationship quality, and puts forward the following assumptions:

H4: corporate reputation plays an intermediary role between crisis response strategies and the trust dimension of brand relationship quality.

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3.1. Inspection of H1

This study is tested by one-way analysis of variance. From table 1, it is concluded that the satisfactory homogeneity test of variance has a significance of $0.258 > 0.05$, indicating that analysis of variance can be carried

out. The analysis of variance shows that the significance of Table 2 is $0.005 < 0.05$, indicating that the enterprise coping strategies have a significant impact on the trust dimension of brand relationship quality.

Table 3. One way analysis of variance homogeneity test scale of trust

Levene statistic	df1	df2	Sig.
1.290	1	156	0.258

Table 4. One way analysis of variance scale of trust

	Sum of squares	df	Mean square	F	Sig.
Between Groups	2.532	1	2.532	7.933	0.005
Within Groups	51.648	156	0.331		
Total	53.477	157			

3.2. Inspection of H2

Hypothesis 2 is tested by one-way ANOVA, and the results are as follows. From table 3, it is concluded that the significance of variance homogeneity test of enterprise reputation is $0.787 > 0.05$, indicating that analysis of variance can be carried out. Table 4 is obtained through analysis of variance, and the significance is $0.024 < 0.05$, indicating that enterprise coping strategies have a significant impact on enterprise reputation. Table 5 shows that the average values of corporate reputation corresponding to reconciliation strategy and defense strategy are 0.322 and 0.348 respectively, indicating that when defense strategy is adopted, the evaluation of corporate reputation is higher than that when reconciliation strategy is adopted, and hypothesis 2 is true.

Table 5. One way ANOVA homogeneity test scale for corporate reputation

Levene statistic	df1	df2	Sig.
0.073	1	156	0.787

Table 6. One way analysis of variance scale of corporate reputation

	Sum of square	df	Mean square	F	Sig.
Between Groups	2.595	1	2.595	5.164	0.024

Within Groups	78.397	156	0.503		
Total	80.992	157			

Table 7. Single factor analysis descriptive scale of corporate reputation

Response strategy	N	Mean	Std. Divaition	Std. Error	95% confidence interval for mean		minimum	maximum
					Lower bound	Upper bound		
Conciliatory strategy	79	3.22	0.716	0.081	3.06	3.38	1	5
Defensive strategy	79	3.48	0.702	0.079	3.32	3.64	2	5
Total	158	3.35	0.718	0.057	3.24	3.46	1	5

3.3. Inspection of H3

The purpose of hypothesis 3 is to test whether there is a regression relationship between the two dimensions of corporate reputation and brand relationship quality, because there is only one independent variable, corporate reputation, adopt univariate linear regression to calculate the correlation coefficient between variables, so as to verify the research hypothesis.

Table 8. Goodness of fit of regression model for corporate reputation and trust dimension of brand relationship quality

Model	R	R2	Adjusted R2	Std. Erro
1	0.498a	0.248	0.244	0.50202

a. Predictive variable: (constant), corporate reputation
b. Dependent variable: trust

Table 9. Regression model variance analysis table of corporate reputation and trust dimension of brand relationship quality

Model	Sum of square	df	Mean square	F	Sig.
1 regression	12.999	1	12.999	51.581	0.000a
residual	39.315	156	0.252		
Total	52.315	157			

a. Predictive variable: (constant), corporate reputation
b. Dependent variable: trust

As can be seen from table 6, the adjusted R-square between the two variables of the trust dimension of corporate reputation and brand relationship quality is 0.244, the fitting degree of the model is acceptable, and corporate reputation can explain 24% of the trust dimension of brand relationship quality. As can be seen from table 7, the F statistic is 51.581, SIG= 0.000 < 0.05, meeting the requirements of significance standard. Hypothesis 3 is supported.

3.4. Inspection of H4

First, test whether the impact of coping strategies on the trust dimension of brand relationship quality is significant. After univariate linear regression analysis of the data with SPSS, the results are shown in Table 8 below. It can be seen that the regression coefficient is 0.253 and sig= 0.005 < 0.05, passed the significance test, so Baron and Kenny hierarchical analysis can be continued.

Table 10. Coping strategies and brand relationship quality trust dimension regression model regression coefficient and significance test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1 (constant)	3.329	0.064		52.380	0.000
coping strategies	0.253	0.090	0.220	2.817	0.005

a.Dependent variable: trust

After univariate linear regression analysis, the results are shown in Table 9. It can be seen that the regression coefficient is -0.256 and sig= 0.024 < 0.05, passed the significance test.

Table 11. Regression coefficient and significance test of coping strategies and corporate reputation regression model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1 (constant)	3.478	0.080		43.605	0.000
Coping strategies	-0.256	0.113	-0.179	-2.273	0.024

a. corporate reputation

After that, the influence of independent variable coping strategies and intermediary variables on the trust dimension of dependent variable brand relationship

quality is tested. The results are shown in table 10 below. Therefore, the regression coefficient of coping strategy is 0.368, the regression coefficient of corporate reputation is 0.447, and the their sig= 0.000 < 0.05, significant, so the trust dimension of corporate reputation on the quality of brand relationship is partially mediated, and Hypothesis 4 is supported.

Table 12. Regression coefficient and significance test of trust dimension regression model of coping strategies, corporate reputation and brand relationship quality

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(constant)	1.776	0.192		9.260	0.000
		0.368	0.076	0.319	4.843	0.000
	Coping strategies	0.447	0.053	0.556	8.424	0.000
	Corporate reputation					

a.Dependent variable: trust

Summarizing the above, it can be seen that corporate reputation plays a partial intermediary role between crisis response strategies and the trust dimension of brand relationship quality. After adding the intermediary variable corporate reputation, coping strategies still have a significant impact on the trust dimension of brand relationship quality.

4.CONCLUSIONS

4.1. research conclusion

Based on the literature review, this study draws four hypotheses, and analyzes the collected data with the help of SPSS analysis tool through questionnaire measurement. After the data analysis and discussion of the sample, the following conclusions are drawn:

(1) In the case of defensible brand crisis, the effect of defensible strategy is better for consumers' trust in the brand.

(2) When enterprises adopt defense strategy, the evaluation of enterprise reputation is higher than that of reconciliation strategy.

(3) Corporate reputation has a positive impact on improving consumers' trust in the brand. The higher the corporate reputation, the more positively affect consumers' trust in the brand.

(4) Corporate reputation plays a partial intermediary role between crisis response strategies and the trust dimension of brand relationship quality, and a complete

intermediary role between crisis response strategies and the satisfaction dimension of brand relationship quality.

4.2. Research enlightenment

Through empirical analysis, this study verifies the impact of enterprise coping strategies on the quality of brand relationship. In previous studies, it is usually studied from a single perspective of enterprises or consumers, while this study discusses enterprise crisis response strategies from the perspective of brand relationship quality, combined with the relationship between the two. In addition, this study also introduces the variable of brand relationship quality, verifies that the enterprise coping strategies have a significant impact on it, and enriches the measurement methods of the effect of brand crisis coping strategies. In addition, this study takes corporate reputation as an intermediary variable to verify that it plays an intermediary role between crisis response strategies and brand relationship, which enriches the research in related fields.

When facing the defensible brand crisis, enterprises should take corresponding countermeasures in time to reduce the negative impact of the crisis. From the perspective of the relationship between enterprises and consumers, choose appropriate coping strategies to reduce the negative impact of the crisis on enterprise reputation, consumer trust and satisfaction. Both reconciliation and defense strategies have a positive impact on corporate reputation, and the impact of defense strategy is relatively more significant and effective. For the maintenance of the relationship between enterprises and consumers, both strategies have a positive effect, but the specific emphasis is different. It is easier to repair consumers' trust in enterprises by adopting defense strategies, such as denying responsibility and explaining the causes of the danger.

4.3. Research limitations

In this study, the questionnaire link is distributed to students, friends and so on through the questionnaire star platform to obtain the survey data. In terms of sample size, although 103 questionnaires were recovered in this study, there were only 79 valid questionnaires. The quality of the questionnaire was not very high, and the concentration of the age group was high. It was mainly in the stage of 18-24 years old, and there were deficiencies in the sample span. Moreover, due to the online filling of the questionnaire, it is difficult to ensure that the questionnaire filling process is not disturbed, which also has a certain impact on the effectiveness and authenticity of the data. Therefore, in the future research, we should expand the scope of samples and improve the accuracy of data. Therefore, enterprises should seriously consider their needs according to their actual situation, and take appropriate measures in time.

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