

Research on the Impact of E-commerce Platform Service Quality on Corporate Reputation

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Abstract

Questionnaire method is used to obtain data, using factor analysis to verify the selected influencing factors, and finally determine the five dimensions that constitute the quality of e-commerce service. After theoretical research, establish a structural equation model of e-commerce service quality impact on corporate reputation. And put forward relevant assumptions. Through empirical analysis, it is found that the value of e-commerce platform's ease of use is only reflected in the function, and its emotional value is not; the reliability of e-commerce platform and the value of empathy to consumers are functioning. And the emotional value has a positive impact; the security of the e-commerce platform service quality has a significant positive impact on the perceived function and has no significant impact on the emotional value; the e-commerce platform's reactive functional value is not significant, but to the consumer The emotional value has a significant impact; the five dimensions of e-commerce platform service quality have a significant positive impact on corporate trust; functional value, emotional value and corporate reliability have a significant positive impact on the loyalty dimension of corporate reputation. Finally, based on the empirical results, the countermeasures and suggestions for improving the creditworthiness of e-commerce platform enterprises are proposed from the aspects of strengthening system quality, ensuring information quality, increasing interaction methods and establishing social platforms.

Keywords

Factor analysis; e-commerce platform service quality; corporate reputation ; structural equation model.

1. Introduction

With the rapid development of the Internet and the continuous improvement of the network environment, the number of Internet users in China has shown a spurt of rising attitude. A large number of e-commerce platform enterprises rely on the Internet to grow and develop. These enterprises mainly provide customers with various information and services through the platform website to seek development. Unlike offline stores, this type of online shopping increases the consumer's perception of the service's experience. The competition of e-commerce platform enterprises is largely the competition of corporate reputation. The e-commerce platform provides customers with goods and services, allowing consumers to perceive the service value of enterprises, and gradually establish a good image of the company among consumers, and finally establish reputation value. Therefore, how the reputation of e-commerce platform companies to improve through service quality is the key to research. In the past, scholars' research on shopping websites mainly studied from the perspective of customer satisfaction and repeated purchase rate, but little research has been done on the influence of the relationship between consumer value perception and

corporate trust on corporate reputation. Therefore, this paper studies the relationship between service quality and corporate reputation of e-commerce platform from both theoretical and empirical aspects.

2. Literature review

Roland T. Rust, the founder of e-commerce services, mainly studies e-services from the perspective of E-Service. He believes that enterprises mainly provide consumers with a kind of intangible and intangible internal services through the Internet platform to increase the competitiveness between enterprises and enterprises^[1]. W. Zheng believes that the components that affect e-commerce services mainly depend on the availability, ease of use, and payment security of the platform^[2]. Scholars have more and more methods for evaluating e-commerce quality. The five most common ones are E-E-Qual, Webqual, Sitequal, and etailqual. In 2001, Yoo developed the Sitequal scale, which has only 9 observation variables. It measures the evaluation indicators through four measures: website operability, security performance of the payment process, aesthetics of the overall design of the website, and feedback on the processing of information data to measure platform service quality^[3]. In 2009, B. Y. Feng and J. Zhang studied the webqual scale, which was mainly used to survey visitors who visited the webpage, and passed the four categories of scales: ease of use, usefulness, additional relationships, environment, this scale is relatively complete but the respondents are not customers who actually trade on the website^[4]. In 1999, Rindova & Kotha analyzed the e-commerce leader Amazon and other competitors and found the establishment process of corporate reputation evaluation mechanism in the Internet environment^[5]. Research and analysis shows that Amazon is far ahead in the e-commerce industry because of its own image and the value factors between enterprises and consumers. Corporate credibility is still a necessary factor to measure a company's reputation in the age of internet, so, some scholars do research from the perspective of corporate trust. Danuta Szwajca found that improving product or service quality and increasing corporate reputation can build credibility among consumers and reduce the uncertainty and harm of the business purchase process^[6]. H. Q. Li extracted four factors to analyze the relationship between corporate reputation and consumer trust. It is concluded that the company's management ability, integrity, customer attention and customer care have a positive impact on the company^[7].

3. Hypothesis and model

3.1 Variable

This paper considers "ease of use", "reliability", "safety", "reactivity", and "empathy" as the measurement factors for e-commerce service quality. "Ease of use" means that the content of the website is concise and convenient, and the operation process of the online shopping process is convenient; the "reliability" refers to the extent to which enterprises fulfill their promises to consumers and the stability of the system; the "security" the protection of consumers on the security link of e-commerce platform shopping and the confidentiality of consumers' personal privacy; the "reactivity" refers to the ability of e-commerce enterprises to provide timely and prompt answers or feedback to consumers' questions, demands and complaints; the "empathy" refers to the personalized service provided by e-commerce companies to customers, which enables customers to experience care, such as personalized recommendations, service attitudes, diversification of payment methods, etc.

"Consumer perceived value" includes: 1. "Functional value" means that the value perceived by consumers in terms of efficiency, information, cost, etc. 2. "Emotional value" means whether the website can make consumers feel happy and whether the product can make consumers Pleasant.

"Enterprise reliability" refers to the most basic ability of a company to respond to customer needs, including good service and high-quality products, so that consumers can be assured that the future product performance of the company is guaranteed.

This article measures the overall situation of corporate reputation through "consumer loyalty" to the enterprise, and believes that corporate reputation is essentially an attitude structure.

3.2 Research hypothesis

1. The assumption that the quality of e-commerce service affects consumers' perceived value

Hypothesis of “ease of use” and “perceived value”

H11a: E-commerce platform “usability” has a positive impact on consumer “function value”;

H11b: E-commerce platform “usability” has a positive impact on consumer “emotional value”;

Hypothesis of “reliability” and “perceived value”

H12a: E-commerce platform “reliability” has a positive impact on consumer “function value”;

H12b: E-commerce platform “reliability” has a positive impact on consumer “emotional value”;

Hypothesis about “safety” and “perceived value”

H13a: E-commerce platform “security” has a positive impact on consumer “perceived value”;

H13b: e-commerce platform “security” has a positive impact on consumer “function value”;

Relevance assumptions of “reactivity” and “perceived value”;

H14a: E-commerce platform “security” has a positive impact on consumer perception; H14b: e-commerce platform “security” has a positive impact on consumer “function value”;

2. The assumption that e-commerce service quality affects corporate trust

H21: E-commerce platform “usability” has a positive impact on corporate trust;

H22: E-commerce platform “reliability” has a positive impact on corporate trust;

H23: E-commerce platform “security” has a positive impact on corporate trust;

H24 : E-commerce platform “reactivity” has a positive impact on corporate trust;

H25: E-commerce platform “empathy” has a positive impact on corporate trust.

3. The assumption that customer perceived value affects corporate trust

H31: Customer perceived “functional value” of e-commerce platform has a positive impact on enterprise reliability;

H32: E-commerce platform customer perceived “emotional value” has a positive impact on “enterprise reliability”.

4. Relevant assumptions that customer perceived value affects corporate reputation

H41: Customer perceived “functional value” of e-commerce platform has a positive impact on “corporate loyalty”;

H42: E-commerce platform customer perceived “emotional value” has a positive impact on “corporate loyalty”.

5. Hypothesis that corporate trust affects corporate reputation

H51: E-commerce platform “enterprise reliability” has a significant positive impact on corporate reputation.

3.3 Model construction

The customer perception value and corporate trust are used as intermediate variables to construct a conceptual model, as shown in Figure 1 below:

4. Research design and data analysis

4.1 Questionnaire design and investigation

The questionnaire analysis tools used in this paper are mainly SPSS22.0 and AMOS17.0. The specific analysis methods include: 1 Descriptive statistical analysis, mainly to make a statistical description of the basic information of the respondents, including gender, education, age, online shopping history, monthly shopping times, revenues, and platforms for regular shopping. 2 Reliability and validity analysis. 3 Structural equation model analysis

The questionnaire mainly consists of three parts: The first part is the basic situation of the respondent, including age, gender, shopping times and common shopping platforms. The second part is the

measurement question of service quality of e-commerce platform. There are a total of 22 questions in five evaluation indicators: ease of use, reliability, safety, reactivity and empathy. The third part includes 16 measurement questions about corporate perceived value, corporate trust and corporate reputation. The questionnaire survey mainly uses the 5-level scale method, 1 means “very unimportant”, 2 “not important”, 3 “general”, 4 “important”, and 5 “very important”.

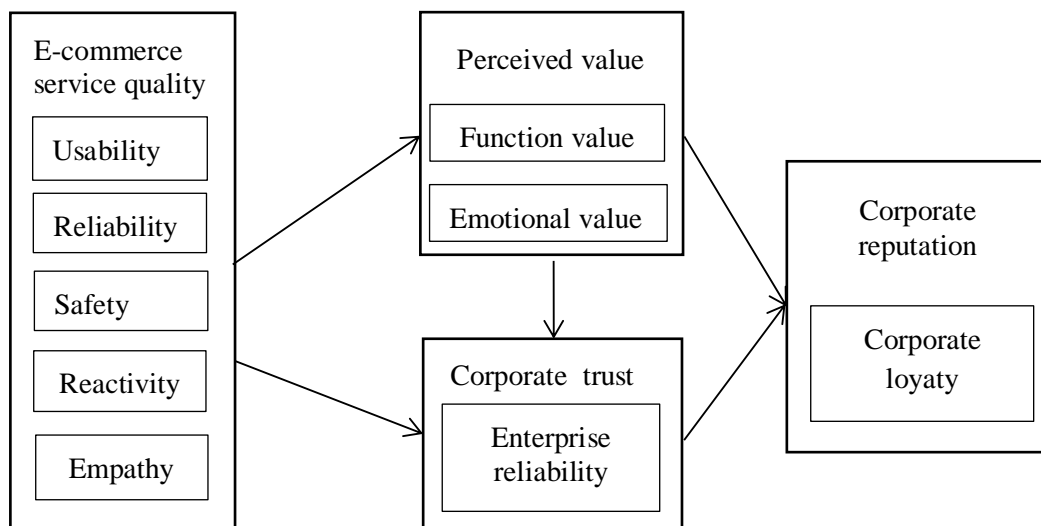


Figure 1. Model diagram of the factors affecting e-commerce service quality to corporate reputation

In the following, the original model is empirically analyzed by SPSS and AMOS statistical software, and the conclusion of the empirical analysis is used to judge whether the model is corrected.

4.2 Descriptive statistics

Data were obtained both electronically and directly, with 252 questionnaires being issued directly, 223 online questionnaires. Delete the questionnaires that do not meet the requirements, and finally get a total of 387 valid questionnaires. The basic information of the respondents is shown in Table 1 below. The proportion of female groups in the survey sample is higher than that of males by 21.28%, because women are higher than men in e-commerce consumption. According to the data released by the China Internet Information Center, the 20-49 year old population has the largest number of Internet users and the highest frequency of purchases. Therefore, we selects people who are 18-55 years old and have e-commerce operation experience and online shopping experience to issue questionnaires.

Table1 Basic information of the respondent

Variable	option	Number of people interviewed
gender	male	152
	female	235
age	Under 20 years old	70
	21-30 years old	230
	31-40 years old	62
	41 years old or older	25
education	High school and below	86
	College	119
	Bachelor	128
	Graduate student or above	54

career	Farmer	7
	student	127
	Civil servants, institutions	31
	State-owned enterprise	55
	Self-employment	39
	retiree	2
	unemployment	4
	others	122

4.3 Analysis of the reliability and validity of the questionnaire

(1) Reliability analysis

Generally, the Cronbach's α value is greater than 0.6 and more than 0.7 is ideal. The reliability analysis of the questionnaire shows that the Cronbach's α values of service quality, intermediate variables and corporate reputation of the e-commerce platform are 0.938, 0.936 and 0.892, which are greater than 0.85, indicating that the internal evaluation system has good consistency and the questionnaire has a high degree of credibility.

(2) Validity analysis

To perform KMO and Bartlett spherical test on the questionnaire indicators, the results are shown in Table 2 below. The KMO is greater than 0.7, and the Bartlett spherical test has a significant P value of 0.000, indicating the data recovered by the questionnaire is suitable for factor analysis. Factor analysis of the questionnaire as a whole, extracting a total of 9 factors with eigenvalues greater than 1. The overall interpretation of 77.252% indicates that the questionnaire is generally well explained.

Table2 KMO and Bartlett spherical test

variable	KMO	Bartlett spherical test		
		approximation	Degree of freedom	Significant
Ease of use	0.846	709.936	10	0.000
reliability	0.800	591.138	6	0.000
safety	0.817	958.863	6	0.000
Reactivity	0.851	759.919	10	0.000
Empathy	0.821	532.391	6	0.000
Functional value	0.803	516.653	6	0.000
Emotional value	0.788	863.064	6	0.000
Business reliability	0.748	1385.413	6	0.000
Loyalty	0.725	715.794	6	0.000

In this paper, the main component method is used to extract 38 indicators of service quality, functional value, emotional value, enterprise reliability and corporate loyalty, rotate the extracted 5 quality of service variables, 2 perceived value variables, 1 enterprise trust variable, and 1 enterprise loyalty variable by the maximum variance method, the minimum factor load per rotation is 0.617, and most of them are above 0.7, indicating that the questionnaire has good structural validity.

4.4 Structural equation model test and correction

After the reliability test and validity test of the questionnaire are passed, then use AMOS21.0 software to carry out the model test. Firstly, it is judged whether the fitting index of the model can be accepted. If it is unacceptable, model correction is needed when the difference between the fitted index and the standard index is large. The fitting results of the model are shown in Table 3 below, from the output of the structural equation model, the χ^2/df and the Root Mean Square Error of Approximation

(RMSEA) have reached the standard value, and the model has good fitting results. Among them, NFI, IFI,CFI,GFI, AGFI are more likely to be affected by sample capacity, and the output result does not reach the standard value, but the overall fitness is good. In order to reduce the error, the model needs to be corrected.

Table 3 Structural equation model fitting index

Fitting index	Guideline	Numerical value	Model adaptation result
X2/df	<3	1.304	well
(Normalized Fit Index)NFI	>0.9	0.792	not good
(Incremental Fit Index) IFI	>0.9	0.867	better
(Goodness-of-Fit Index)GFI	>0.9	0.892	better
(Adjusted Goodness of Fit Index)AGFI	>0.9	0.891	better
(Comparative Fit index)CFI	>0.9	0.874	better
(Root Mean Square Error of Approximation) RMSEA	<0.08	0.026	well

The modified structural equation model fitting index is shown in Table 4 below. The corrected Normalized Fit Index NFI and the Comparative Fit index CFI have been greatly improved. Obviously, the corrected model parameter significance is significant at the 1% level and have higher fitness.

Table 4 Modified structural equation model fitting index

Fitting	x2/df	NFI	IFI	GFI	AGFI	CFI	RMSEA
Result	1.201	0.92	0.911	0.973	0.956	0.876	0.026

Through the AMOS21.0 software, the standardized estimation value is calculated for the influencing factors of the revised business e-commerce platform service quality and its corporate reputation. From the standardized estimation values, the structural relationship between each variable and the degree of association between the potential variables can be seen. According to the previous analysis of the structural equation model, the hypothesis test structure of this study is obtained. Except that H11b, H13b and H14a do not support the test results, the other 17 hypotheses pass the test. The final model is derived from the hypothesis test results, as shown in Figure 2.

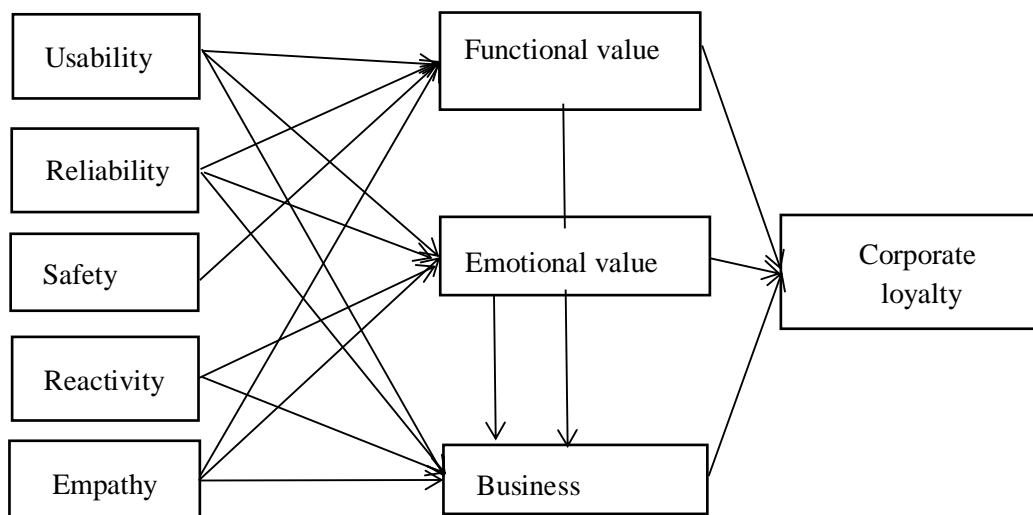


Figure 2. Final model after correction

5. Conclusion

The empirical results show that the service quality of e-commerce platform has a significant impact on corporate reputation through consumers' perceived functional value, emotional value and corporate trust, expressed in the following points:(1)The impact of the service quality of the e-commerce service platform on the perceived value of consumers. The e-commerce platform's

“usability” is only expressed in terms of functionality, and its emotional value is not; the “reliability” of the e-commerce platform has a positive impact on the value of the consumer in terms of both functional and emotional value. The better the reliability, the commitment and execution of the platform are the same, the more effective value factors are transmitted to the consumers, and it is easier to generate value perception in the emotional, which is consistent with the confirmed results; the “security” of service quality of e-commerce platform has a significant positive impact on perception function and has no significant impact on emotional value, because consumers believe that security is the most basic guarantee function; the e-commerce platform's “reactivity” functional value is not significant, but has a significant impact on consumer's emotion value, mainly because it is different from the entity enterprise, online shopping consumers can quickly and effectively interact with consumers on the platform; “empathy”, such as pay attention to the customer needs, the provision of points redemption and other activities, the introduction of personalized services, allows consumers to perceive the platform's functional and emotional value(2) The five dimensions of e-commerce platform service quality have a significant positive impact on corporate trust. Firstly, the ease of operation of the platform makes it easier for online shoppers to dig out the required products. Secondly, the “security” of the platform can reduce the risk of online shopping and increase the risk to enterprises. Once again, the better the platform is, the better the problem can be solved as soon as possible to win customer trust; finally, “empathy” increases the function of the website in many aspects, and its personalized service attracts customers and increases their trust. (3)The impact of perceived value on corporate trust. Functional value and emotional value have a significant positive impact on enterprises, mainly reflected in the powerful functions of the platform to meet consumer demand, customer satisfaction increased to enhance corporate satisfaction. (4)Consumer perceived value and corporate trust have a significant positive impact on corporate reputation. Consumers build awareness of the company. The higher the emotional value, the stronger the trust, which leads to the better reputation of the company.

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