Online Marketing Strategy and Service Quality Evaluation System: An E-commerce Perspective

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Abstract

Electronic commerce is an important industry in modern service industry; it has changed the way of production and consumption patterns. In this paper, we have constructed the evaluation system of e-commerce service quality. In the empirical section, we identified five indicators in the evaluation system as tangibles, reliability, responsiveness, assurance and empathy. At the same time, using the analytic hierarchy process to quantify the evaluation index system of service quality, and then analyze the weight of each index. The result shows that evaluation system will effectively promote the enterprise to control the customer's perception and needs, so as to continuously improve the service quality and competitiveness of enterprises.

Keywords: Marketing Strategy, E-commerce, Service Quality, Evaluation System

1. Introduction

According to China's e-commerce research center, the latest release of the 2014 annual China e-commerce market data monitoring report shows that in 2014, China's ecommerce market transactions amounted to 13.4 trillion RMB, an increase of 31.4%. Among them, B2B e-commerce market transactions amounted to 10 RMB, an increase of 21.9%. Online retail market transactions amounted to 2.82 trillion RMB, an increase of 49.7%. 2014 e-commerce market segments of the industry structure, B2B e-commerce still account for a dominant position, overall accounted for slightly reduced to 74.6%. In addition, online shopping accounted for a small margin of improvement, from the previous year's 17.6% to 21%. 2014 by the economic downturn in China's economic growth, economic growth slowed down, and B2B e-commerce market growth rate corresponding decline, the overall proportion of the relative reduction. At the same time, with the increasing maturity of the network shopping industry development, each business enterprise in addition to based on the online shopping market of deep ploughing and meticulous work, and constantly expand the category and optimization of logistics and after-sales service outside, in actively to three or four lines of urban and rural market expansion, prompting growth accelerated. The report shows that as of December 2014, ecommerce service enterprises directly employed more than 2500000 people. Currently, the number of people driven by e-commerce has more than 18 million people. With the continuous expansion of the scale of e-commerce, the government to vigorously promote the development of electricity suppliers, e-commerce for courier and other downstream industries has a strong role in driving, thus derived from a substantial increase in the employment market. Followed by customer service, distribution, technology and other positions in short supply. The report shows, 2014 Chinese B2B e-commerce market transactions amounted to 10 trillion RMB, an increase of 22%. 2014 B2B market to achieve steady growth, mainly due in two aspects, one is B2B services providers continue cultivating information service platform by improve the quality of information service, accurate search and push etc. measures to improve the quality of service. Two is to continue to explore the development of online transactions, the major B2B platforms are

exploring online transactions, through a variety of ways to train user's online transaction behavior and habits, reduce costs and improve efficiency.

For enterprises, the application of electronic commerce can improve the enterprise's work efficiency and economic benefits; it will be with the development of the society its unique advantages to make the enterprise into a more brilliant era. At the same time, the customer will be shared to more favorable, the actual product, so as to achieve a win-win situation. Electronic commerce is an important industry in modern service industry; it has changed the way of production and consumption patterns, and has great promotion to the modern productive forces. Today, e-commerce in its globalization, efficiency, integration, and other characteristics of the highly respected by the modern people, the business community is also regarded as an important opportunity to change the way of business. In our country, the electronic commerce from scratch, from start to set off a boom is just a few years, now has gradually penetrated into every aspect of the economy and society, its development speed than any industry.

Electronic commerce as a modern market environment of a new economic model, create the infinite imagination space for the people of the world, to a steady stream of activity into the global economy. In the face of the great potential and challenge of e-commerce market, the evaluation of the quality of e-commerce service is the key to maintain and enhance the competitiveness of the business enterprise. This paper is based on this background; in-depth study of e-commerce service quality evaluation system, the major business enterprise to improve the service level, and enhance competitiveness also has important reference value.

2. Literature Review

2.1. Electronic Commerce Marketing

Electronic commerce is a kind of dynamic business activity, which is generated in the background of the rapid development of the Internet and the rich resources of the electronic information system. The concept of electronic commerce was put forward in 1960s and quickly spread and promotion, but still lack the definition of an authority. For the definition of electronic commerce, different organizations or experts and scholars have made different interpretations [1]. At the same time, the organization for economic cooperation and development (OECD), the World Trade Organization and the international Multi-National Corporation IBM, Intel; HP companies have given the relevant definition. At present, the general recognition of the academic community is defined as: the definition and connotation of electronic commerce has the narrow and broad sense. Electronic commerce refers to the business activities of the company, industrial enterprises, commercial enterprises, commercial enterprises, commercial enterprises, manufacturers and consumers through the use of commodity exchange as the center of commodity exchange through the use of various electronic means or channels. Generalized electronic commerce refers to all kinds of electronic business in all walks of life, also known as the electronic business, including e-commerce, e-government, electronic business, electronic affairs, etc.

In all types and types of E-commerce, B2C e-commerce is a kind of retail business model, which is based on the Internet. In the process, the enterprise through the Internet to provide consumers with the new type of shopping environment of online store, consumers through the Internet to complete the order on the Internet, a series of activities such as shopping and payment. The interactive, diversity and rapid development of e-commerce has brought revolutionary changes to the work and life of the modern human [2]. It can not only reduce the cost, expand the scope of circulation, increase sales, fast response to the market, but also change the consumer's purchase decisions, so that they enjoy more products and services. For this society, it can quickly reduce the cost of public services, to achieve all kinds of electronic payment and remote office, etc. With the development of economy and society, the convenience and superiority of electronic commerce will be more prominent.

2.2. Customer Participation

Most scholars define customer participation from the concept of behavior; the academic community has not yet formed a unified theory. Sinem and Kabaday (2013) consider that customer participation is a form of information or effort to the organization to provide production resources [3]. Zhang (2013) out that only the customer to participate to a certain extent, to ensure the smooth progress of the service process [4].Samiee (2008) defines the extent and type of customer involvement in the definition and behavior of services that they are seeking [5]. And describes customer involvement as a behavior, mainly referring to the customer's service and the resources or behaviors that are provided in the whole process;Liem (2013)from the results point of view to describe customer participation as a contribution; and they believe that customer participation is to provide customers with customized products and services in the process of customer service, and to create an important way to create a unique competitive edge[6].

There has been some deep research on the dimensions and factors of customer participation. Djelassi (2013) divided customer participation into four kinds of factors [7]: the spirit of customers, intelligence, physical and emotional effort and investment, intelligence input refers to the input of information and mental, physical inputs, including physical and physical investment, emotional investment is emotional investment. Sharma(2014) use critical incident analysis and found that customer participation of four forms, namely[8]: firstly advance preparation, for the preparation of the service behavior; secondly, establish the relationship: and service providers to establish the relationship between the behavior; third, the information exchange behavior and search for information, to understand the situation and the expectation of service; fourth is intervention, customer feedback the performance of parents to the enterprise, and are keen to diagnose problems and solve. Manjit (2013) suggest that the customer involvement includes three broad dimensions [9], information sharing, responsible behavior and interpersonal interaction. Information sharing refers to the customer to the "information" of the resource input service enterprises, customers need to pass information to the service staff to ensure that their personal needs are met. Customer liability behavior is the responsibility of the customer in the relationship with the service provider. Interpersonal interaction includes many factors, such as trust, reliability, support, cooperation and commitment. In the process of service, customer's attitude will affect the service; also affect other customers' perception of service

2.3. E-Commerce Service Quality

Service quality as a concept has a long history, from the last century, the service industry in the full range of the lifting of the ban, there are scholars concerned about the service and product is different, and realized that the service quality is different from the product quality. For example, some scholars proposed the service quality is not only related to the results, but also includes the service delivery process. Doina (2014) points out the difference between the customer and the service quality of the product and the service. But at that time the concept of service quality is still not a clear definition [10]. Until Doina proposed the customer perceived service quality, made clear its component elements and pointed out that the internal marketing is the

scientific and effective method to create the quality culture of the enterprise. He pointed out that quality should be the customer perceived quality, customer service expectation and perceived performance comparison.

In the same year, Lee(2011) proposed the concept of process quality and quality of results, and then the service quality and product quality are fundamentally different, in the study, the service quality is similar to the attitude, is the customer's overall evaluation of things[11]. Lehtinen puts forward the customer perceived service quality, which includes the quality of the service and the quality of the technology. Mohamad (2012) proposed that the service quality is defined as the service to the customer, and the service is on a high level[12]. This definition contains two meanings: first, the quality of service provided is higher than the expected value of customers; second, the quality of customer perceived service is directly related to the customer expectation value. To sum up, the connotation of service quality should include the following contents: the quality of service needs to be perceived by customers; service quality is in the real situation of service enterprises and customers. Service quality is measured by objective method, and it needs to be tested by customer's subjective knowledge.

Research on the quality of service has been carried out for 20 years, but the research on the concept of the quality of e-commerce services for the academic community is only a matter of recent years. In essence, the quality of service in the electronic business environment is very different from the traditional service quality. Because of the electronic commerce environment, consumers are mostly through the network and service providers, and the traditional service quality is mainly focused on the contact between people and people. Therefore, the definition of the concept of the traditional service quality cannot be copied. Electronic commerce is a kind of service, which is the combination of technology and service. Zuo (2013) propose the quality of e-commerce services is the site can enable customers to search, purchase and delivery of products and services more convenient [13]. Shoki (2012) believe that the quality of modern electronic business service refers to the quality of the product or service to the customer's overall judgment or evaluation[14], the quality of e-commerce services defined as a website to facilitate the rapid and efficient shopping, procurement and delivery, which identifies the electronic business service quality from the purchase of the former phase has been extended to buy.

With the rapid development of electronic commerce, the importance of service quality is also highlighted. How to improve the service quality of electronic commerce is the focus of the research on the theory and practice of the domestic and international. At present, research on e-commerce is still in its infancy. Therefore, the successor shall strengthen the research, to keep up with the development and the demand of electronic commerce.

3. Research Object and Method

3.1. Quality Evaluation of the Whole Process of E-Commerce

Through the analysis of the requirements of the quality of service and the present e-commerce service quality evaluation system, the main problems are: the evaluation system is lack of coherent whole process system evaluation, the evaluation content is incomplete, and the evaluation method is single and is not rich. Therefore, this paper set up a new e-commerce service quality evaluation system should be effectively compensate for these shortcomings and deficiencies, the customer involvement in the electronic commerce whole process service quality evaluation system should include: 1) Reflect the whole process: E-commerce services to the entire process quality of service process to conduct comprehensive control requirements, the various aspects of the whole process of working to improve the quality of service. Therefore, this paper creatively will electronic commerce customer participation in the whole process of service quality evaluation system according to the stage of service points for pre service process and service process and service process, so the customer participation in the electronic commerce the whole process service quality evaluation system, including pre service process and service process and service process after the three sub-systems.

2) Customer participation: E-commerce has entered into the era of service management; e-commerce is only to uphold the customer as the center of the service concept, in order to continuously improve customer satisfaction and service quality. Therefore, the full text of the whole process of e-commerce service quality evaluation system based on customer participation; focus on the role of customer participation.

3) Results can be quantified: Since the construction of this paper is the quality evaluation system of the whole process of customer participation, the evaluation can be described as the ultimate goal of this paper, and the evaluation result is the basic requirement of this paper. Therefore to build the customer to participate in the electronic commerce process service quality evaluation system of the three subsystems are respectively through the expert scoring method and the investigation method of the questionnaire to be quantified. At the same time, according to the expert forum, the three systems are different stages of the service process, but the impact on the quality of service is the same. Therefore, this paper uses the weight of three to systems, and finally can quantify the entire customer participation in the electronic commerce whole process service quality evaluation system for the follow-up analysis.

3.2. Evaluation System Index

In this paper, we construct the service quality evaluation system of customer participation in the service quality evaluation system in order to get the customer participation in the service quality evaluation system in 4 dimensions. On the basis of literature review, we analyze and study the characteristics of e-commerce services, and sum up the four dimensions of the index. In addition, we analyze and study the completeness of all the indicators through focus group interviews and expert interviews, and get the evaluation index of the quality of service, as shown in Table 1.

Dimensions	Index	Contents	
	quality	I want to know the specific product quality	
	service level	I want to know the level of service enterprise	
prepare β1	credit	I want to know the store's credit	
	customer service	I hope to communicate with the customer	
	warehousing	I want to understand the warehousing situation	
	arrival time	I am clearly aware of their arrival time requirements	
	Logistics	I define their logistics requirements	
	self perception	I define the commitments to meet the requirements	
information β2	products	I define their requirements for a product or service	
	corporate image	I know their requirements for corporate image	
	feel	I know I feel for the online shopping	
	service attitude	I define their requirements for staff attitude	
communication		I think it is very important to communicate	
	cooperation	I think online shopping needs cooperation	
Cooperation B3	contact	I think online shopping needs effective communication	
	evaluation	I am willing to give a correct assessment of the store	
	customer service	I am willing to meet customer service process complete	
	friendly treatment	I was able to be treated equally and friendly	
interaction 0.4	praise	I would like to commend the customer service	
interaction β4	favorable comment	I am willing to give praise	
	chat	I am willing to communicate with its	

 Table 1. Preliminary Index of Service Quality Evaluation System

4. Empirical Analysis

4.1. Reliability and Validity Test

We conducted a questionnaire survey on the evaluation index of the evaluation index in April 2014, and 500 questionnaires were distributed and 496 copies were returned, and the recovery rate was 83%. Then, the reliability and validity of the questionnaire were tested. Cronbach' α is current research data most commonly used in the reliability test method and used to evaluate the respondents response to items measuring the degree of consistency. In this paper, the 16 indicators of the evaluation system of the overall test, the overall coefficient of the index system is 0.902, then the four dimensions of the test, get their coefficients were 0.896, 0.796, 0.837 and 0.825. The reliability coefficient of the index system as a whole and the four dimensions are higher than 0.7, indicating that the overall reliability of the measurement tool is higher.

We use exploratory factor analysis to test the validity of the measurement tool; the first test factor is in the condition of the exploratory factor analysis, in which the author chooses the KMO statistics and Bartlett to determine the validity of the measurement tools. Through the SPSS12.0 data analysis software, the KMO value is 0.816>0.7, then the result of KMO test shows that the numerical analysis is suitable for the factor analysis. The significant level of's Bartlett spherical test was 0.000<0.5, the results showed that it was suitable for the analysis of the factors. In the exploratory factor analysis, the author uses principal component analysis to extract factors, according to the Kaiser Criterion set the feature value is greater than 1 of the extraction standard. The statistical results show that all the measurement items are more than 0.5 and the load of the load is small, and the convergence and validity of the index system are very high.

Table 2.	The	Result	of I	KMO	Stati	stical Test	

Kaiser-M	Kaiser-Meyer-Olkin		
	Approximate chi-square	124.837	
Bartlett test	df	13	
	Sig.	0.000	

4.2. Service Quality Evaluation System

Whether the result of e-commerce service quality to meet customer needs and to what extent can meet customer demand is critical for businesses, but also need to be evaluated by the customer and feedback to learn. E-commerce customer service quality evaluation should be a market point of view, from the customer's awareness and perception to be evaluated is the basic measure and evaluates the quality of basic services. The authors studied the related services quality evaluation system, the final choice to the subjective awareness of customer focus is to measure the quality of service five dimensions and 22 indicators as the theoretical basis, combining the characteristics of modern e-commerce market and the integration of customer participation philosophy, through the integration of screening methods for each indicator and expert discussion of the various indicators were analyzed one by one, by retaining 16, merging four, modify one, add two to finalize the process of customer service after participation 21 indicators evaluate e-commerce services, through the research process analysis above indicators, the authors can build enterprises to provide services for the evaluation of the object, the main customer for the evaluation of customer service quality as perceived service quality evaluation results of the service process after evaluation index system, as shown in Table 3.

level-1 indexes	level-2 indexes	level-3 indexes
	Tangibles B1	Service facilities C1, corporate image C2, staff image C3
	Reliability B2	Customer commitment C4, reliability C5,service information C6, concern C7
E-business service	Responsiveness B3	Timeliness C8, service attitude C9, convenience C10; rapidity C11, accuracy C12
qualityA1	AssuranceB4	Assured C13; trustworthy C14, courtesy C15, service quality C16
	Empathy B5	Understand customer C17, to meet customer demand C18, personalized C19, service time C20, interests C21

Table 3. Service Quality Evaluation	System of E-Commerce
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4.3. Service Quality Evaluation Index Weighty

In this paper, we use the analytic hierarchy process to determine the weight of the service quality evaluation index. It is characterized by a deep analysis of the essential factors and their relationship in the complex decision-making problems, which can be used to provide a simple and convenient method for the decision-making of complex decision-making problems with the use of less quantitative information. Therefore, this paper uses the analytic hierarchy process to quantify the service quality evaluation index system, and then analyzes the weight of each index. The standard principle is the same level of target tree in the same level of the index, according to the importance of the upper level of the index, the importance of the degree of importance and the importance of non importance, and in accordance with the criteria listed in the two. This score is derived from the 1 to 9 ratio of Saaty, which is not only consistent, but also can be used to quantify the properties of people who feel the difference.

A1	B1	B2	B3	B4	B5
B1	1	1/3	1/4	1/3	1/2
B2	3	1	1/2	2	3
B3	4	2	1	2	3
B4	3	1/2	1/2	1	2
B5	2	1/3	1/3	1/2	1

Table 4. Secondary Indexes of Judgment Matrix

Then we can get w1 =0.072, w 2=0.267, w3 =0.369, w4=0.183,w5 =0.109,CR=0.02<1. Three levels of indicators C1, C2, C3 on the two level indicators judgment matrix B1, as shown in table 5:

B1	C1	C2	C3
C1	1	1/2	1/2
C2	2	1	1
C3	2	1	1

Table 5. Secondary Indexes of Judging Matrix of B1

Then we can get w1 =0.2, w2 =0.4, w3 =0.4, CR=0<1. Three levels of indicators C4,C5,C6,C7 on the two level indicators judgment matrix of B2, as shown in Table 6:

B2	C4	C5	C6	C7
C4	1	3	4	2
C5	1/3	1	2	1/2
C6	1/4	1/2	1	1/2
C7	1/2	2	2	1

Table 6. Secondary Indexes	of Judging Matrix of B2
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Then we can get w1 = 0.472, w2 =0.164, w3 =0.108, w4=0.256, CR=0.02<1. Three levels of indicators C8, C9, C10, C11, C12 on the two level indicators judgment matrix of B3, as shown in Table 6:

B3	C8	C9	C10	C11	C12
C8	1	2	2	3	4
C9	1/2	1	2	1/2	2
C10	1/2	1/2	1	1/2	3
C11	1/3	2	2	1	1
C12	1/4	1/2	1/3	1	1

Table 7. Secondary Indexes of Judging Matrix of B3

Then we can get w1 =0.373, w2=0.178,w3=0.151,w4=0.199,w5=0.098,CR=0.09 <1. Through expert consultation and questionnaire survey, combined with the above data can get customer participation of e-business performance evaluation index system of summary, as shown in Table 8 shows. From each index value can be found, for the electronic commerce service process after the service evaluation, the customer is most concerned about is the service personnel to provide services in the timeliness, the performance of customer commitment and customer service to get the rapid, *etc*.

 Table 8. Synthetic Weight of Evaluation Index System for E-Commerce

 Service

level-1 indexes	level-2 indexes	level-3 indexes	Synthetic weight(w)
		C1	0.014
	Tangibles β1	C2	0.029
		C3	0.027
		C4	0.126
	Daliability 02	C5	0.044
	Reliability β2	C6	0.029
		C7	0.068
		C8	0.138
		C9	0.066
anning quality	Responsiveness β3	C10	0.056
service quality evaluation		C11	0.074
evaluation		C12	0.036
		C13	0.074
		C14	0.062
	Assurance β4	C15	0.017
		C16	0.029
		C17	0.023
		C18	0.038
	Empathy β5	C19	0.007
		C20	0.023
		C21	0.018

5. Conclusion

In this paper, we have constructed the evaluation system of e-commerce service quality, so that customers participate in the service process, make up for the existing service quality evaluation has been unable to cover the user and cannot reflect the customer's full range of perceived defects, can effectively promote the customer's perception and needs, so as to continuously improve service quality and competitiveness of enterprises.

This paper puts forward the service quality evaluation system through the whole process of service. It makes up for the existing traditional e-commerce service quality evaluation, and has neglected the status quo of improving the overall service quality control. Modified and perfected the index and content of the quality evaluation system of e-commerce service. Based on the service quality evaluation system, the evaluation system of customer "s perception behavior is based on the theory driven and expert panel method to determine the customer" s service quality evaluation index, and to improve the quality of service quality system. Based on the analysis of service quality evaluation system, this paper analyzes the requirements of e-commerce service quality evaluation system based on the requirement analysis of e-commerce service quality evaluation system, and constructs the evaluation system of service quality in e-commerce process, and finally meets the requirements of modern electronic commerce service quality evaluation system based on the new method. Based on the evaluation system of the whole process service quality, the author makes a diagnosis analysis of the electronic commerce website, and puts forward some suggestions on improving the service quality with the reference value.

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