Study on Improving the Service Quality of E-commerce in Liaoning Province

Xiaozhu Wang [1,a], Yuxin Zhao [1,b] *

[1] Dalian Neusoft University of Information Liaoning, Dalian 116023, P.R. China

[a] wangxiaozhu@neusoft.edu.cn; [b] zhaoyuxin@neusoft.edu.cn

Abstract. Today, with the rapid development of e-commerce, how to improve the service quality of e-commerce becomes a problem worth exploring and studying. Based on the analysis of the current situation of e-commerce development in Liaoning Province, this paper establishes the evaluation index of e-commerce service quality through the analysis and reference of e-commerce service quality scale, and finds a practical and effective way to improve the e-commerce service quality in Liaoning Province by analyzing and designing an evaluation index for it.

Introduction

With the rapid development of the Internet, the number of Chinese netizens is growing at a rapid rate every year, and e-commerce is spreading around the country like a tide with a tremendous momentum. According to the statistics of China Internet Network Information Center (hereinafter referred to as CNNIC), by June 2018, the number of Chinese netizens had reached 802 million. In the first half of 2018, the number of new netizens increased by 29.68 million, an increase of 3.8% compared with 2017, and the Internet penetration rate was 57.7%. Nowadays, e-commerce has become a new consumption mode and fashion trend in Chinese society. As an important northeastern province, Liaoning has made every effort to improve the development of e-commerce in recent years. According to CNNIC statistics, Liaoning netizens reached 27.41 million in 2017, ranking seventh in whole country. Data show that by the end of last year, the Internet penetration rate in Liaoning Province reached 62.6%. Beijing has the highest Internet penetration rate (77.8%), followed by Shanghai (74.1%) and Guangdong (74%). In 2017, the total volume of e-commerce transactions in Liaoning province exceeded 1 trillion Yuan, and the net retail sales reached 200 billion Yuan.

Service Quality of E-Commerce

As for the service quality of e-commerce, the research of foreign scholars started relatively early. American scholar Parasuraman believes that in the e-commerce environment, consumers contact with service providers by network, which is different from the traditional research of service quality based on people's contact, therefore, we cannot copy the concept of traditional service quality. In 2002, three scholars, Zeithaml, Parasuraman and Malhotra, based on the early research on service quality and its measurement tools, gave the first formal definition of service quality of a website: the degree of convenience that the website provides efficient and effective shopping, purchase and delivery. In 2005, they defined the quality of e-commerce service as the degree to which a website can conveniently, quickly and effectively shopping, purchase and deliver goods. At the same time, some scholars believe that e-commerce services refer to the network-based services delivered by the Internet. From these definitions, we can see that the service quality of e-commerce includes all aspects of service in advance, in the process and afterwards. Therefore, service providers are required to maintain service consistency in the new environment and maintain the same excellent service level at any time and at any circumstance. At the same time, in essence, it still needs to reflect the satisfaction degree of customer needs. Compared with the evaluation of traditional service providers, customers seldom evaluate every small process when they accept e-commerce-related services. On the contrary, it is more likely to evaluate services as a whole process and result. More definitions are shown in Tab. 1.

Tab. 1 Definition of Service Quality ofE-commerce

Concept	Definition	industry	Author&Year
Service Quality	Customers compare their expectations of o particular service with what they actually receive	Traditional Service Area	Gronroos 1984
Service Quality	The Function of gap size and direction between service expectation and service performance	Traditional Service Area	Parasuraman 1985
Quality	The ability of set of inherent characteristics of a product, system, or process to meet the requirements of customers and other interested parties	All industry	ISO 9000
electronic service quality	Consumers' comprehensive evaluation of electronic services provided in the internet market	Electronic Commerce	Santos 2003
electronic service quality	The extent to which websites improve the efficiency and effectiveness online shopping and distribution	Online retailing	Parasuraman 2005
service quality	Customers' opinions on how they actually get better service than they expect	All industry	Prakash 2013

Service Quality Model of E-Commerce

Many Chinese and foreign scholars have put forward their own opinions and evaluations on the service quality of e-commerce and formed various models and scales of the service quality of e-commerce. Among them, the representative ones summarize as follows and are shown as Tab. 2.

（1） **Sitequal.**

In 2001, Yoo&Donthu put forward SITEQUAL, an evaluation tool that includes four dimensions: usability, aesthetic design, processing speed and safety. This method is based on the perspective of customers and has a strong ability to predict customer behavior. Through empirical research, SITEQUAL has been proved to be an effective tool for measuring the quality and quantity of websites from the perspective of customer perception and the four dimensions of the scale can fully reflect the real service level of the website.

（2） **E-S-Qual.**

In 2005, Parasuraman, Zeithaml and Malhotra, scholars of SERVQUAL, put forward a new tool of electronic service quality model: E-S-QUAL, which is used to determine every online service attributes that customers encounter in the process of shopping and payment. It is a basic tool for evaluating the service quality of commercial websites. Traditional SERQUAL is a tool used to measure the process of interaction between people in non-network context, and to diagnose the quality of service of enterprises. Zeithamleta developed E-SQ to compensate for the shortcomings of traditional SERVQUAL in the network, which includes 11 dimensions: reliability, responsiveness, accessibility, flexibility, navigation, efficiency, guaranteed trust, security/privacy, price, website aesthetics and personalization. Parasuraman et al. developed E-S-QUAL mainly to measure the core quality of service in the network. The standard E-S-QUAL contains four dimensions and 22 items.

（3） **WebQual.**

According to the different foundations of WebQual, it can be divided into two schools, American school and British school. Firstly, Loiacono, a scholar in University of Georgia of American School, refers to the concept of information quality of information systems, and puts forward WebQual (US), a measurement tool of website service quality. Its dimensions include: information, interaction, integrity, response time, design, intuition, visualization request, innovation, process and multi-channel. Communication, business processes and alternatives. The purpose of this tool is to extract relevant information from website design. Secondly, The evaluation of the service quality of business websites has always been the focus of Barnes and Vidgen, scholars of the University of Bath in the United Kingdom. Based on the framework of quality function deployment, they obtained WebQual 1.0 (UK) from the perspective of consumers. Since then, they have continuously introduced new versions of WebQual, WebQual 2.0 (UK), WebQual 3.0 (UK), and WebQual 4.0. In WebQual 4.0, they summarized the research of other scholars, including Bailey, Pearson, Davis, Parasuraman, Zeithaml, Wang, and so on, and obtained standard tools for evaluating Usability, Information and Service Interaction.

Tab. 2 an Overview of E-commerce Quality of Service Scale

Number	Scale	Dimension	industry	Index item	Author
1	SITEQUAL	Ease of Use Aesthetic Design Processing speed Security	Online retail	9	Yoo
2	WEBQUAL	Usefulness Ease of Use Entertainment Complementary relationship	B2C	36	Loiacono
3	WebQual4.0	Reliability Information Service interaction	B2C	22	Aladwani
4	PWQ	Content quality Technical applicability appearance	Online retail	25	Wolfinbarger
5	eTailQ	Fulfillment/ Reliability Website design Security/Privacy Customer service	Online retail	14	Zeithaml
6	E-S-QUAL/ E-Recs-QUAL	Efficiency Usability Fulfillment Privacy Responsiveness Compensation Contact	Online retail	20/11	Parasuraman
7	eTransQual	Functon Design Entertainment Treatment process reliability Responsiveness	Online retail	25	Bauer

Establishing an Service Quality Model of E-Commerce in Liaoning Province

At present, researches on the service quality model of e-commerce mainly focus on the following four aspects. Firstly, use the mature scale developed by domestic and foreign experts directly; Secondly, the developed scale is partially modified, and the modified factors are analyzed and tested. Thirdly, establish a multi-level service quality evaluation system; fourthly, after differentiating different modes of e-commerce (B2C, C2C, etc.), a differential scale is established to enhance its applicability.

This paper holds that due to the differences between eastern and western cultures and consumer behaviors, there is not enough reliability to guarantee that the scale developed by western scholars can be directly introduced into the evaluation process of e-commerce service quality in Liaoning province. At the same time, through the definition of e-commerce service quality, we can see that each dimension of its service quality evaluation has its own characteristics compared with the traditional service industry, so we need to redefine the meaning of each dimension. According to the standard paradigm proposed by the famous scholar Churchill in 1979 and the current situation of E-commerce service quality in Liaoning province, We can determine the initial scale of e-commerce service quality by group research method, and then use the data collected from market research to generate concise scale through process iteration and exploratory factor analysis to test the dimensions of the scale to determine the final scale. Finally, five dimensions of convenience, responsiveness, safety, empathy and performance are formed.

Improving Path of the Service Quality of E-Commerce in Liaoning Province

（1）**Speeding up the Logistics and Improving the Convenience of Circulation.**
Through fastening the deep cooperation between express delivery enterprises and e-commerce enterprises, guiding enterprises to rely on express delivery network, actively expand e-commerce, agent payment business to improve the convenience of product circulation. Promote the use of third-party collection and payment platform in accordance with financial standards and electronic forms, and increase the development of collection and payment of goods by express enterprises in our province, so as to ensure the goal of strengthening capital supervision and ensuring industry safety. Express companies need to carry wireless POS machines to collect money, eliminate the risk of fund management brought by cash collection by express companies, and create favorable conditions for the development of "collection of money" business of express companies. At the same time, enterprises should enrich the connotation of service, expand service areas, and provide multi-level, diversified and personalized service products.

（2）**Strengthen the Training of Customer Service Personnel to Improve the Speed and Quality of Effect.**
E-commerce enterprises should improve employment services and strengthen the information docking mechanism between supply and demand of e-commerce talents. To guide qualified vocational colleges to set up e-commerce specialty and establish the "school-enterprise integration" management system and operation mechanism. (Responsible departments: Provincial Human Resources and Social Security Department and Provincial Education Department) Various training institutions have increased e-commerce skills training programs to support e-commerce enterprises to carry out pre-job training, skills upgrading training and high-skilled personnel training. Colleges and universities in Liaoning Province should speed up the training of high-quality professional and technical personnel in the field of e-commerce. At the same time, our province should strengthen the construction of vocational training policy system, build a lifelong training system for workers, and steadily implement the country. Conditional vocational colleges, social training institutions and e-commerce enterprises are encouraged to carry out online entrepreneurship training and formulate policies and measures to encourage employment and entrepreneurship in the field of e-commerce. We will encourage the introduction of e-commerce management personnel and formulate relevant supporting policies and management measures.

（3）**Guarantee network security, protect customer information and property security.**
E-commerce enterprises shall establish and improve the network security protection system, data resource security management system and network security emergency response system in accordance with the national information security level protection management norms and technical standards. Encourage e-commerce enterprises to obtain information security management system certification, improve their information security management level. E-commerce enterprises should strengthen cooperation with professional network security service agencies and relevant administrative departments, share early-warning information of network security threats, eliminate hidden dangers of network security, and jointly prevent cyber-attacks, sabotage, theft of personal and business information of citizens and other illegal and criminal activities.

Summary

Based on the analysis of the current situation of e-commerce development in Liaoning Province, this paper establishes the evaluation index of e-commerce service quality through the analysis and reference of e-commerce service quality scale, and through the analysis and formulation of the evaluation index of e-commerce service quality, finds a practical and effective way to improve the quality of e-commerce service in Liaoning Province.

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