Factors Influencing Consumer Satisfaction in Platform-Based Companies: A SERVQUAL Model Study in the Internet+ Era

Jingni Pan[1,a,*]

[1]*School of Economics & Management, Beihang University, Beijing, 100871, China*
a. panjingni0312@163.com
corresponding author

Abstract: With the continuous development of Internet technology, Internet+ has become a hot topic today. In this context, companies need to pay more attention to consumer satisfaction in order to improve their market competitiveness. Therefore, this paper aims to explore the influencing factors of satisfaction in the Internet+ perspective and conduct a comparative study of different influencing factors. The purpose of this paper is to investigate the factors influencing consumer satisfaction based on the SERVQUAL model in the Internet+ perspective. Through a review of related literature, this paper summarizes the changes in consumer needs in the Internet+ perspective and the applicability of the SERVQUAL model in the Internet+ environment. Based on this, this paper constructs a research framework of consumer satisfaction influencing factors based on the SERVQUAL model and proposes the following influencing factors: service quality, price, brand image, product quality, marketing strategy, etc. At the same time, the definition of satisfaction is explained and the influencing factors of satisfaction are sorted out in this paper. Subsequently, this paper presents a detailed analysis of the influencing factors of satisfaction in the Internet+ perspective, including product quality, service quality, price, brand image, etc. This paper adopts a questionnaire survey to investigate the consumers of platform-based companies and conducts a statistical analysis of the survey results. By comparing the consumer satisfaction of the platforms, this paper derives the degree of influence of different influencing factors on satisfaction.

Keywords: Internet+, satisfaction, SERVQUAL model, influencing factors

1. Introduction

With the current global economic downturn and the widespread and far-reaching impact of the novel coronavirus pneumonia epidemic, the traditional international economic cycle has been significantly weakened or even blocked. With the emergence of various new things such as the Internet+ and artificial intelligence in recent years, the question of how platform companies can seize the opportunity of the Internet+ to enhance customer experience and better promote consumption has become an issue that needs to be considered. In this context, platform-based companies need to pay more attention to consumer satisfaction in order to become more competitive in the market. Therefore,

the aim of this paper is to explore the factors influencing consumer satisfaction of platform-based companies from the perspective of 'Internet+' and to compare different influencing factors.

The results of this paper show that factors such as product quality, service quality, price, and brand image all have a significant impact on the satisfaction of consumers of platform-based companies. Among them, product quality and service quality have the most significant impact on satisfaction, while price and brand image have a relatively small impact on satisfaction.

The findings of this paper have certain guiding significance for enterprises to improve consumer satisfaction in platform-based enterprises. Enterprises should focus on product quality and service quality to improve consumer satisfaction. In addition, companies should also focus on brand image building to improve consumers' awareness and trust in their brands.

2. Literature Review

The article "Service Quality Evaluation Method of City Shared Bicycles Based on SERVQUAL Model" by Wang Shengjin and Wang Jichuan mainly talks about a proposed method for evaluating the service quality of city-shared bicycles using the SERVQUAL mode [1].

Hashjin aimed at identifying the gap between patients' expectations and perceptions of service quality based on the SERVQUAL model. The study collected data from patients using a questionnaire, and the results were analyzed using statistical methods. The authors concluded that there were significant gaps between patients' expectations and perceptions of service quality in outpatient clinics [2].

Shahroudi Somayeh The study assessed five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy [3].

Huiwei Niu et al. primarily discuss the evaluation and analysis of the service quality of railway passenger transport in China using the SERVQUAL model. The authors aimed to identify the gaps between customer expectations and perceptions of the service quality provided by railway companies in China. The study provides insights into the factors that affect passenger satisfaction with railway services in China [4].

Davinson Mosquera González, et al. mainly talk about the factors that influence service quality in fitness centers based on the SERVQUAL model. The authors conducted a study to identify the main factors that affected service quality in fitness centers and used the SERVQUAL model to measure service quality [5].

Seyyed Mansour Kashf, et al. collected data from 400 patients using a standardized SERVQUAL questionnaire and analyzed the results using descriptive and inferential statistics [6].

Zun Ahmad Badruridzwanullah's study focuses on the five dimensions of service quality, namely reliability, responsiveness, assurance, empathy, and tangibles, and provides research ideas for related studies [7].

The article by Fatemeh Hashemi et al. is based on a case study design and aims to provide an understanding of the gap between patients' expectations and perceptions of service quality [8].

Singh P. K. and Pancholi Komal are mainly about a study conducted in Udaipur City, India, using the SERVQUAL model to investigate the perceptions and expectations of investors regarding service quality in post office saving banks [9].

The article by Jin-jing Li, Feng-qing Zeng, and Yi-xi Li, published in the Natural and Social Science Studies Journal in 2017, aims to analyze the customer satisfaction level of agricultural products e-commerce platforms using the SERVQUAL model. The authors used SPSS software to analyze the survey data and found that the overall customer satisfaction level was high, with an average score of 4.08 out of 5. The authors also found that the assurance and empathy dimensions had the highest scores, while the reliability dimension had the lowest score. Overall, the study

provides useful insights into the customer satisfaction level of agricultural products e-commerce platforms in China and the factors that influence customer satisfaction [10].

The article provides a useful case study of the application of the SERVQUAL model in the logistics industry and highlights the importance of customer feedback in improving service quality [11].

The article presents an empirical study on the service quality of private universities in Bangladesh using the SERVQUAL model. The study aims to identify the gaps between the expected and perceived service quality of students in private universities in Bangladesh. The authors used a survey questionnaire based on the SERVQUAL model to collect data from 400 students of three private universities in Bangladesh. The survey questionnaire comprised 22 items [12].

The author concludes the article by summarizing the key findings and highlighting the implications of the study for hotel managers and researchers. The author suggests that hotel managers should prioritize the development of assurance-related strategies and practices to enhance customer satisfaction and loyalty. The author also suggests that future research should further explore the measurement and management of assurance in the hotel industry, particularly in the context of emerging trends such as technology and sustainability [13].

Besides, the study finds that customers of Indian public sector banks perceive service quality to be moderately high, with the highest scores in the dimensions of tangibles and assurance. The authors also find that there are significant differences in service quality perceptions between customers of different age groups, income levels, and education levels [14].

3. Theoretical Model

3.1. Theoretical Framework of SERVQUAL Model

SERVQUAL model is a common service quality assessment tool, which can help companies understand customer satisfaction and dissatisfaction with services by measuring and analyzing the five dimensions of service quality, so as to improve the service quality of companies. Based on the SERVQUAL model, this paper investigates the influencing factors of consumer satisfaction in platform-based enterprises by means of a questionnaire.

3.2. Theory of Reasoned Action

This theory suggests that attitudes and subjective norms determine an individual's behavioral intentions. In the context of consumer behavior, this means that attitudes towards a product or service and the influence of social norms can impact a consumer's decision to purchase.

3.3. Characteristics of Platform-Based Enterprises

Platform-based enterprises are a new type of enterprise emerging in the Internet era. They provide services to consumers through the Internet platform and have the characteristics of multilateralism of transaction parties, network externalities, and economies of scale.

Based on the existing satisfaction theories, this paper constructs a theoretical model of the influencing factors of satisfaction from the Internet+ perspective. The model includes factors such as product quality, service quality, price, and brand image, and analyzes the relationship between these factors.

4. Research Methods

(1) Literature survey method. The literature review method is a method of collecting, identifying and organizing literature to develop a scientific understanding of the facts through the study of the

literature. The first step is to collect and review existing literature related to consumer satisfaction in order to obtain an overview and understanding of the research topic and related domestic and international research and status. A targeted analytical study is conducted to formulate hypotheses, which are then tested using scientific methods to form new conclusions and hypotheses.

(2) Questionnaire method. The questionnaire method involves the researcher designing a form with a number of questions to collect research information from the respondents. The questionnaire is sent out in a small program and the respondents are asked to complete the responses according to the requirements on the form. The design features of the standardized questionnaire option are that it is more detailed, less expensive to use, and easier to monitor than interviews. In this paper, a questionnaire was used to survey online consumers and the results were statistically analyzed. By comparing the consumer satisfaction of different companies, this paper concludes the degree of influence of different influencing factors on satisfaction.

(3) Statistical analysis method. By using the questionnaire data of the reliability and validity test, the SPSS tool is used to analyze and process the data and make a comprehensive evaluation.

5. Research Results

5.1. Research Object

In order to reflect the satisfaction status of platform-type consumers more intuitively, 19 indicators closely related to product quality, service quality, corporate image, etc., were selected for the questionnaire survey, and the main targets were general consumers of all ages and industries. The survey issued 250 questionnaires, and 206 were returned, with an efficiency of 82.4%.

5.2. Research Method and Result Analysis

5.2.1. Math and Equations

$$SQ = \sum_{i}^{22}(Pi - Ei) \tag{1}$$

$$SQ = \sum_{J=1}^{5} wj \sum_{i=1}^{22}(Pi - Ei)) \tag{2}$$

$$Servqual = \frac{(\sum_{i=1}^{m} SQ_i)}{m} \tag{3}$$

SQ is the perceived service quality;

Pi is the score of the ith factor in terms of customer perception;

Ei is the score of the ith factor in terms of customer expectations (i = 1, 2, 3, ...n, n = 22). The SQ obtained from the above equation is the total perceived quality of an individual customer, given the equal importance of the five attributes.

The questionnaire dimensions and indicators were designed and operationalized as follows: tangibility, reliability, responsiveness, assurance, and empathy.

Continuing the assessment intention and details of the original scale "tangibility" regarding product quality, the "tangibility" dimension was set to evaluate the platform qualification and quality. Integrate the questions about platform quality and brand image in the "reliability" dimension of the original scale, and set the "reliability" dimension. To set the "responsiveness" dimension by integrating the questions about service quality in the "responsiveness" dimension of the original scale. To set the "empathy" dimension based on the perceived value and consumer expectation questions in the original "assurance" scale. Set the "empathy" dimension according to the consumer satisfaction and consumer loyalty questions in the original scale "empathy". The final questionnaire was designed with five dimensions: tangibility, assurance, ethics, professionalism and extensibility.

The questionnaire was analyzed:

Table 1: KMO and Bartlett's test.

KMO Sampling suitability number.		0.824
Bartlett Sphericity Test	Approximate cardinality	2499.609
	Degrees of freedom	231
	Significance	0.000

Table 2: Cronbach's reliability analysis.

Cronbach's Reliability Analysis			
Title	Correction Item Total Correlation (CITC)	Item deleted alpha factor	Cronbach alpha coefficient
Have you ever shopped on the platform	0	0.953	0.952
How often do you buy products through the platform	-0.04	0.958	
perceived platform quality - the consumer platform website shows clear product images and easy to understand text	0.667	0.95	
It is easy to find the products you need to buy on the consumer platform website	0.748	0.949	
Shopping on the consumer platform is very affordable, with many marketing activities	0.681	0.949	
Perceived service quality - the platform customer service can respond quickly to customer needs	0.72	0.949	
The products purchased can arrive on time, and the delivery method is convenient and safe	0.723	0.949	
Platform customer service staff can quickly solve the problems in shopping	0.686	0.949	
Perceived product quality - the products received are consistent with the pictures on the website	0.725	0.949	
The quality of the products received is consistent with the promotional content	0.735	0.949	
The product has a certification mark	0.698	0.949	
12. Perceived brand image - the corporate brand has a good reputation	0.68	0.949	

Table 2: (continued).

12. Enterprise brand is very familiar, high visibility	0.647	0.95	
12. Enterprise is very socially responsible and often does public welfare	0.687	0.949	
Consumer expectations - I want the corporate platform to provide quality online services before purchase	0.667	0.95	
I hope that the logistics speed, service and quality of the goods purchased are guaranteed	0.709	0.949	
I want the platform to have perfect after-sales service	0.705	0.949	
Perceived value - I think the products on the platform are reasonably priced	0.684	0.949	
I think the quality of the products on the platform is guaranteed	0.703	0.949	
I think the service provided by the platform is worth its price	0.787	0.948	
Consumer satisfaction - I am satisfied with the quality of the products I buy online	0.735	0.949	
I am satisfied with the quality of the service I buy online	0.705	0.949	
I am satisfied with the quality of the online purchase platform	0.673	0.95	
Consumer loyalty - I will continue to use the platform to buy products	0.708	0.949	
I would recommend the platform to others	0.597	0.95	
Cronbach α: 0.950			

Table 3: Reliability statistics.

Cronbach Alpha	Number of items
0.842	19

For space reasons, if you need to use the questionnaire and SERVQUAL scale, please contact the author for the above data. The results of this paper show that product quality, service quality, price, and brand image factors all have significant effects on online consumers' satisfaction. Among them, product quality and service quality have the most significant influence on satisfaction, while price and brand image have a relatively small influence on satisfaction.

6. Conclusion

The study found that the factors influencing consumer satisfaction in platform-based companies mainly include service reliability, service responsiveness, service assurance, service empathy and

service entity. Among them, service reliability is the most important factor, which involves whether the services provided by the company are stable, accurate and reliable. Service responsiveness is also one of the influencing factors, which mainly involves the speed and attitude of the enterprise in responding to the problems or demands raised by customers. Service assurance and service compassion are two other important factors of consumer satisfaction in platform-based businesses. Service assurance mainly refers to a company's commitment to and guarantee of service quality, including the accuracy, timeliness and completeness of service. Service empathy, on the other hand, refers to whether a company shows care and concern for its customers in the service process and whether it can provide personalized services. Finally, the service entity is also one of the influencing factors. It mainly refers to the quality of the service place, facilities and equipment provided by the company. Consumers' satisfaction with the service entity directly affects their overall evaluation of the company's services. In summary, the SERVQUAL model provides an objective and scientific method of service quality assessment for platform-based enterprises. By studying the influencing factors of consumer satisfaction, enterprises can better understand customer needs and expectations, so as to continuously improve service quality and achieve sustainable development.

The research results of this paper have certain guiding significance for enterprises to improve consumer satisfaction. Enterprises should focus on product and service quality improvement to enhance consumer satisfaction. In addition, enterprises should also focus on brand image building to improve consumers' awareness and trust in their brands.

There are some limitations in the study of this paper, such as a small sample size and narrow research scope. Future research can further expand the sample size and the scope of the study to draw more accurate conclusions. In addition, future research can also explore the influence of other influencing factors on consumer satisfaction.

References

[1] Wang Shengjin,and Wang Jichuan."Service Quality Evaluation Method of City Shared Bicycles Based on SERVQUAL Model." E3S Web of Conferences 236.(2021). doi:10.1051/E3SCONF/202123603022.

[2] Hashjin A.A., Farrokhi P., and Aryankhesal A.. "Gap of services quality expectation and perception based on SERVQUAL model in the selected hospital outpatient clinics affiliated with Iran University of Medical Sciences." Journal of Health Administration 23.3(2020). doi:10.29252/JHA.23.3.55.

[3] Shahroudi Somayeh, Arbabisarjou Azizollah, and Rahdar Omolbanin."The Perceptions of Students toward the Quality of Educational Services at Zahedan University of Medical Sciences, Based on the SERVQUAL Model during the Academic Year 2017-2018." Journal of Medical Education Development 12.33(2019). doi:10.29252/edcj.12.33.103.

[4] HuiweiNiu, et al."SERVQUAL Model Based Evaluation Analysis of Railway Passenger Transport Service Quality in China." Journal on Big Data 1.1(2019). doi:10.32604/jbd.2019.05799.

[5] Davinson Mosquera González, et al. "Factors associated with service quality in fitness centers based on the SERVQUAL model." Revista CEA 5.9(2019). doi:10.22430/24223182.1253.

[6] Seyyed Mansour Kashf, et al. "Evaluation the Quality of Health Services Based on SERVQUAL Model in Ahwaz Health Care Centers, Iran." Caspian Journal of Health Research 4.1(2019).

[7] Zun Ahmad Badruridzwanullah, et al. "Level of Satisfaction on Service Quality Dimensions Based on SERVQUAL Model Among Patients Attending 1 Malaysia Clinic in Kota Bharu, Malaysia.." Oman medical journal 33.5(2018). doi:10.5001/omj.2018.76.

[8] Fatemeh Hashemi, et al. "Evaluation of the Quality of Hospital Services from Patients\' Perspective Based on SERVQUAL Model in a Selected Teaching Hospital in Kerman: A Case Study." (2018)4.2

[9] Singh P. K., and Pancholi Komal. "Service Quality in Post Office Saving Banks (A Study of Investors' Perceptions and Expectations of Udaipur City using SERVQUAL Model)." International Journal of Management Studies 5.1(2)(2018).doi:10.18843/ijms/v5i1(2)/06.

[10] Jin-jing Li,Feng-qing Zeng, Yi-xi Li. "Customer Satisfaction Analysis of Agricultural Products E - commerce Platform Based on SERVQUAL Model." Natural and Social Science Studies 1.4(2017).

[11] Wilian Ramalho Feitosa, et al. "A case study about the assessment of quality of services in a logistics company in the light of the SERVQUAL model." *Independent Journal of Management & Production* 8.5(2017). doi:10.14807/ijmp.v8i5.592.

[12] Hoque Umma Salma, et al. "Assessing Service Quality Using SERVQUAL Model: An Empirical Study on Some Private Universities in Bangladesh." *Trends in Higher Education* 2.1(2023). doi:10.3390/HIGHEREDU2010013.

[13] Sangpikul Aswin. "Acquiring an in-depth understanding of assurance as a dimension of the SERVQUAL model in regard to the hotel industry in Thailand." *Current Issues in Tourism* 26.3(2023). doi:10.1080/13683500.2022.2047163.

[14] Shetty Dasharathraj K, et al. "A study of service quality in Indian public sector banks using modified SERVQUAL model." *Cogent Business & Management* 9.1(2022). doi:10.1080/23311975.2022.2152539.