

Research on Service Quality Evaluation System of Self-built Logistics Platform of E-commerce Enterprises

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Keywords: e-commerce; self-built logistics; service quality evaluation; fuzzy comprehensive evaluation method; Jingdong Mall.

Abstract: With the rapid development of e-commerce, there have been some problems, such as important logistics issues. The logistics market is chaotic, there is no unified management system and rules and regulations, consumer complaints are increasing, and a series of problems such as delay in delivery, long delivery time, and return and exchange are serious. The quality of logistics service is caused by the consumer experience. This paper first constructs the logistics platform service quality evaluation system, and then takes Jingdong Mall as an example to conduct empirical research. Firstly, determine the weight value of each dimension, and then use the fuzzy comprehensive evaluation method to calculate the satisfaction and satisfaction of Jingdong Mall's comprehensive logistics service score. It is 0.52, which is higher than the general satisfaction of 0.42. The dissatisfaction is very small, indicating that Jingdong's overall logistics service quality is good, but the return and exchange efficiency, return and exchange costs, and online customer service quality need to be further improved.

1. Introduction

In recent years, with the rapid development of China's e-commerce market, the annual volume of "Double Eleven" and "Double Twelve" has reached tens of billions. But with the rapid development of e-commerce, there have been some problems, such as important logistics issues. The logistics market is chaotic, there is no unified management system and rules and regulations, consumer complaints are increasing, and a series of problems such as delay in delivery, long delivery time, and return and exchange are serious. The quality of logistics service is caused by the consumer experience. A big impact.

2. Construction of Service Quality Evaluation Index System for Self-Built Logistics Platform of E-Commerce Enterprises

According to the basic characteristics of logistics services, the degree to which logistics customers and other related requirements are met is the quality of logistics services. Distribution is an important part of logistics.

This paper will refer to the results of previous research, combined with the latest industry service characteristics and standards draw on the suggestions and suggestions put forward by consumers, and finally determine the six dimensions and specific indicators of this paper, which will be detailed below. Introduction:

(1) Reliability of service

The reliability of the service is ensured by the enterprise that ensures that the commitment is fulfilled and that the consumer's requirements for the basic service content are met. The content that is intuitively displayed to the customer is tangible, which mainly includes the tangibility of the two parts of the device and the tangibility of the service personnel. Whether companies can provide good services to consumers must have certain equipment as a support. Important indicators of reliability also include the accuracy of the order and the integrity of the goods. Therefore, this paper

summarizes the above content and describes it as the “service reliability” dimension, which explains the basic requirements of the customer for the correct, guaranteed and satisfactory transportation of goods.

(2) Quality of service personnel

Nowadays, for e-commerce enterprises, the only way to directly contact with consumers is the logistics distribution link. Therefore, the service personnel including the courier and customer service personnel directly represent the image of the company. It is an important part of logistics service. For this reason, this paper incorporates the service attitude of service personnel in the logistics distribution link when setting the dimension.

(3) Service flexibility

There are many uncertainties in e-commerce logistics services, including consumer payment methods, delivery addresses, etc. If the company can meet the different needs of customers, the company will gain a good impression of customers.

(4) Timeliness of delivery

In order to further and comprehensively explore the consumer's demand for various aspects such as delivery and receipt, this paper will use the model analytic hierarchy process and the fuzzy total evaluation to conduct research. In today's e-commerce logistics services, the competition between e-commerce websites is the most critical to speed competition. Therefore, we must include the timeliness of delivery when evaluating the service quality of e-commerce enterprises.

(5) Information quality

In the past, the development of scientific information technology in various aspects is still not very mature. Enterprises mainly use e-commerce logistics services by publishing relevant information on e-commerce websites. In this case, customers can only view the information published on the website. Understand the information on the situation of the transportation of goods. Therefore, consumers attach great importance to the issue of obtaining commodity logistics information. In fact, for consumers, whether their purchase and purchase experience is closely related to the quality of information.

(6) Economics

In b2c e-commerce transaction activities, individual consumers account for a very high proportion of their total customers. In their view, logistics services are one of the subsidiary projects of online shopping, not value-added services, so in the face of this Consumers often show a highly sensitive attitude in terms of fees for services or the corresponding costs. If the e-commerce company cannot reasonably set the logistics cost, then it will increase the customer's dissatisfaction rate, and the customer will directly give up the purchase of the goods at the merchant. Moreover, with the gradual improvement of online shopping rules, the actual productivity of consumer returns has also increased, and consumers have begun to consider the cost of reverse logistics when deciding whether to purchase a certain product. Therefore, e-commerce companies must fully consider the economics of logistics services.

The evaluation index system constructed in this thesis covers a total of six dimensions, covering a total of 22 indicators.

3. Empirical Research: Taking Jingdong as an Example

The above is mainly the preliminary construction of the self-built logistics service quality evaluation index system. In order to ensure the scientific and effective index system, the investigation results and analysis can better guide the practice, and the data analysis and practice investigation must be adopted. The method is to verify whether the design of the indicator system is reasonable or not.

3.1 Questionnaire Issuance

The main target of this survey will be based on people with high online shopping frequency and familiar with the online shopping process. According to the survey results of the 2012-2013 China

Online Shopping User Behavior Research Report, the vast majority of online shopping users are between the ages of 19 and 30, and they are familiar with online shopping and logistics services. More clear and sensitive to the various service links of the online shopping stream.

The study sample was obtained after the respondent filled out the questionnaire and submitted it. a total of 141 e-questionnaires were collected in this survey, except for samples that were randomly filled out and that had less frequent online purchases. Finally, 135 valid questionnaires were obtained. Among them, 35 valid samples for questionnaires required by AHP, and 100 valid samples for questionnaires for fuzzy comprehensive evaluation.

3.2 Determination of the Weight of Jingdong Logistics Service Quality Evaluation Index System

The Jingdong logistics service quality evaluation index system mainly includes a two-tier hierarchical target system, six first-level indicators and 22 second-level indicators. After the construction of the logistics service quality evaluation index system, it is necessary to determine the weight of each level of indicators. According to the relevant requirements of the AHP, it is first necessary to design a questionnaire based on the indicators, mainly to investigate the relative importance of the indicators at all levels. The two indicators are compared to determine the weight of each level of indicators.

According to the analysis of 35 questionnaires issued, according to the scores of these scores, the scores of each score can be obtained, and the judgment matrix of each level of the evaluation system can be obtained. Calculate according to the total weight = the weight of the corresponding indicator * the weight of the upper level indicator, and summarize the weight of each indicator and the total weight.

Table 1. JD Logistics Service Quality Evaluation Index System First-Level Indicator Judgment Matrix

Logistics service quality evaluation	reliability	Timeliness of delivery	Service staff quality	flexibility	Information quality	Economic
reliability	1	1	3	1	4	2
Timeliness of delivery	1	1	2	2	3	3
Service staff quality	1/3	1/2	1	1	2	1
flexibility	1	1/2	1	1	3	2
Information quality	1/4	1/3	1/2	1/3	1	1
Economic	1/2	1/3	1	1/2	1	1

Table 2. Summary of Index Weights of Jingdong Logistics Service Quality Evaluation Index System

Primary indicator	Weights	Secondary indicators	Weights	Total weight
reliability	0.2535	Cargo integrity	0.4636	0.1175
		Delivery accuracy	0.2034	0.0516
		Dot coverage	0.1893	0.0480
		Return guarantee	0.1438	0.0365
Timeliness of delivery	0.2712	Delivery speed	0.2319	0.0629
		Arrival speed	0.2514	0.0682
		Peak delivery delay time	0.1620	0.0439
		Return processing efficiency	0.2319	0.0629
		Pick up time	0.1228	0.0333
Service staff quality	0.1243	Delivery reminder service	0.1366	0.0170
		Courier service attitude	0.1462	0.0182
		Courier image	0.0903	0.0112
		Error processing	0.2787	0.0346
		Standardization of courier business operations	0.1641	0.0204
		Online customer service quality	0.1842	0.0229
flexibility	0.1792	Payment flexibility	0.3108	0.0557
		Receiving method flexibility	0.1958	0.0351
		Flexibility in the choice of distribution companies	0.4934	0.0884
Information quality	0.0732	Convenience of logistics information acquisition	0.2500	0.0183
		Timeliness of logistics information acquisition	0.7500	0.0549
Economic	0.0986	Logistics costs	0.6667	0.0657
		Return fee	0.3333	0.0329

3.3 Using Fuzzy Comprehensive Evaluation to Evaluate the Quality Evaluation of Jingdong Logistics Service

Judging from the survey results, the comprehensive evaluation of Jingdong logistics service quality is quite satisfactory. With 100 points, the corresponding indicators of logistics service quality

are very satisfied, satisfied, general, dissatisfied, satisfaction quantitative indicators - very satisfied (90-100 points) satisfaction (70-89 points), general (60-69 points) Not satisfied (0-59 points).

On the basis of the above, 100 masses (including ten leaders and experts in logistics distribution mode) were invited to evaluate the four logistics modes according to the relevant explanations and rules of the logistics distribution model optimization index system. the fuzzy judgment matrix can be normalized, and the result is:

$$\begin{aligned}
 B(1) &= \begin{pmatrix} 0.29 & 0.27 & 0.39 & 0.05 \\ 0.18 & 0.36 & 0.39 & 0.07 \\ 0.21 & 0.31 & 0.44 & 0.04 \\ 0.23 & 0.31 & 0.40 & 0.06 \end{pmatrix} & B(2) &= \begin{pmatrix} 0.26 & 0.31 & 0.38 & 0.05 \\ 0.22 & 0.28 & 0.43 & 0.07 \\ 0.22 & 0.29 & 0.45 & 0.04 \\ 0.26 & 0.27 & 0.42 & 0.05 \\ 0.20 & 0.29 & 0.48 & 0.03 \end{pmatrix} \\
 B(3) &= \begin{pmatrix} 0.20 & 0.26 & 0.49 & 0.05 \\ 0.21 & 0.26 & 0.49 & 0.04 \\ 0.22 & 0.26 & 0.47 & 0.05 \\ 0.23 & 0.26 & 0.48 & 0.03 \\ 0.24 & 0.26 & 0.45 & 0.05 \\ 0.26 & 0.28 & 0.43 & 0.03 \end{pmatrix} & B(4) &= \begin{pmatrix} 0.23 & 0.30 & 0.43 & 0.04 \\ 0.23 & 0.32 & 0.39 & 0.06 \\ 0.27 & 0.30 & 0.39 & 0.04 \end{pmatrix} \\
 B(5) &= \begin{pmatrix} 0.23 & 0.36 & 0.36 & 0.05 \\ 0.18 & 0.34 & 0.45 & 0.03 \end{pmatrix} & B(6) &= \begin{pmatrix} 0.20 & 0.30 & 0.46 & 0.04 \\ 0.17 & 0.32 & 0.45 & 0.06 \end{pmatrix}
 \end{aligned}$$

The third-level evaluation result is a comprehensive evaluation of the four evaluation levels, and the results are as follows:

$$\begin{aligned}
 Z = A * R &= (0.25 \ 0.27 \ 0.12 \ 0.17 \ 0.07 \ 0.10) \begin{pmatrix} 0.24 & 0.30 & 0.40 & 0.05 \\ 0.24 & 0.29 & 0.43 & 0.05 \\ 0.23 & 0.26 & 0.47 & 0.04 \\ 0.25 & 0.30 & 0.40 & 0.04 \\ 0.19 & 0.35 & 0.43 & 0.04 \\ 0.19 & 0.31 & 0.46 & 0.05 \end{pmatrix} \\
 &= (0.23 \ 0.29 \ 0.42 \ 0.05)
 \end{aligned}$$

3.4 Relevant Recommendations

Combining the weight values of each dimension, the fuzzy comprehensive evaluation method is used to calculate the satisfaction and satisfaction of Jingdong Mall's comprehensive score of logistics service is 0.52, which is higher than the general satisfaction of 0.42, and the dissatisfaction is very small. It shows that Jingdong's overall logistics service quality is good, but the return and exchange efficiency, return and exchange costs, online customer service quality, etc., need further improvement. The specific recommendations are as follows:

(1) Optimize the business process of Jingdong Logistics Service

The lack of Jingdong logistics service business process is mainly focused on the response time and processing cycle of return and exchange. The reliability is mainly concentrated on the implementation of return service and logistics coverage. The main reasons are the rapid development of enterprises, insufficient logistics service capacity, instability and decline in service quality. This is mainly reflected in slow returns and exchanges, reviewing the subjectivity of auditing standards,

long-term returns and processing cycles of exchanges, and low in remote areas. Coverage logistics services.

Therefore, it is recommended that Jingdong should optimize the business process of log

(2) Ways and means of improving Jingdong logistics service

Jingdong Logistics should improve the methods and methods of logistics services and attach importance to providing personalized logistics services to customers. For example, when placing an order, customers can pay attention to or view the diversification of the relevant personalized service distribution model, including not only accelerated delivery, but also slow incremental distribution and multiple returns and exchange modes, and synchronous receipt and delivery of some returns and exchanges: Strengthen system management, strictly prevent logistics personnel from leaking customer information, establish error information feedback mechanism, solve time and method errors and lack of necessities, and feedback problems.

(3) Strengthen customer-centric logistics service concept

Jingdong Mall logistics service personnel must firmly support the customer-oriented concept, always provide high-quality services to customers, develop effective customer plans and mechanisms, and provide appropriate services to customers. The consumer spending process is accompanied by a respectable process. Only trust and respect for customer service can win customer satisfaction, improve customer's stickiness and loyalty, and win long-term customers. In order to improve the construction of logistics distribution system and logistics information platform, it is distributed from business process, customer communication skills and command awareness. Better prepare for the first line of deliveries and build efficient productivity services. Encourage them to improve their customer evaluation mechanisms. In addition, we have chosen a different path to expand our capabilities in innovation and business value addition and increase customer value.

(4) Comprehensive improvement of logistics service quality in terms of convenience and after-sales service guarantee

Jingdong Logistics should improve the convenience of logistics service quality and after-sales service guarantee, strengthen the coordination between government departments and customers, so that each customer can point out effective ways to solve logistics problems; targeted recruitment logistics service personnel need to prepare Have a serious, responsible and enthusiastic attitude, rigorous thinking, and constantly improve their training level, so that they have high professional quality and skills. In addition, the final mile of delivery should be improved to improve information and visibility from the customer's perspective, such as SMS notifications and logistics distribution tracking, to benefit customers and reduce customer waiting time and uncertainty. Improve the cost performance of logistics services, reduce logistics and distribution costs, and improve satisfaction. Modifying the unreasonable part of the terms, the customer has a higher awareness of the quality of logistics services in Jingdong Mall, reducing the difference between expectations and cognition, and promoting the overall logistics service quality of Jingdong Mall.

4. Summary

Based on the characteristics of e-commerce logistics, combined with the actual situation of Jingdong Logistics, this paper studies the logistics service quality evaluation system of Jingdong E-commerce platform, and then designs a questionnaire based on comprehensive review of relevant literature and materials, and analyzes the investigation results in depth. To analyze the quality of Jingdong logistics service in a more comprehensive and systematic way. We should put forward profound optimization measures for the self-built logistics platform model represented by Jingdong Logistics, thereby promoting the development of e-commerce logistics, improving market competitiveness and improving customer satisfaction. The socio-economic level and the common development of modern information technology have promoted the transformation of current economic market consumption patterns. In the new era, e-commerce companies have unlimited development prospects, but they are also facing increasingly severe challenges. The logistics distribution model is a key factor affecting the development of e-commerce enterprises. In the new

era of e-commerce enterprise transaction scale expansion, how to establish a logistics system has become an important issue facing e-commerce enterprises. As the king of e-commerce, Jingdong Mall has gradually opened a broader market with the construction and improvement of its own logistics system. However, the negative impact of its own logistics construction cannot be ignored, and its own logistics operation is enough to provide reference for other e-commerce companies. Only by giving full play to its advantages and improving existing deficiencies can it be carried forward.

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