

Analysis of the Logistics Service Level of Express based on Pareto analysis

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Keywords: express, service level, electronic commerce, Evaluation index

Abstract. In the existing logistics enterprises in our country, the logistics service level is not very well. Most enterprises are still limited to traditional pattern of service consciousness. It hindered the development of the enterprise seriously. Under the impetus of the e-commerce, China ushered a new era of national online. Express win a rare opportunity for development. And following the inadequate service quality and the service level are exposed gradually. Therefore, this paper is combined the current development situation and problems of the express, also listed five kinds of evaluation indices and gave out the way to help the enterprises improve the level of logistics service.

1. Introduction

Modern logistics is known as the "third profit source", it is not only the logistics enterprise economic benefits to achieve the terminal, it is the main component of the national economy, and even a country's core competitiveness. 2014, the total amount of China's express delivery is high, overtaking the United States as the first. Basis in China for the next five years planning and support is expected by 2020, the logistics industry increase in value will with an average annual growth rate of 8%, the rapid development of total increase will account for the gross domestic product of about 7.5%, indicates that the logistics became a service industry of a leading industry.

In the past five years, along with the electronic commerce industry entered public life, the number of courier companies in China in the development of a trend which cannot be halted. Many express companies with advanced service concept, has been recognized by enterprises and consumers. However, in the era of Internet of things service industry, competitive market presence variables. Enterprises want to stand out among the many outstanding enterprises, it is necessary to remind the need for innovation, and actively create a unique core competitiveness of enterprises themselves and can not be copied. Contemporary customers pay more and more attention to the quality of service, for customers, the cost is almost the same, customers are more inclined to in service companies. Therefore, it is imperative to enhance the level of logistics services.

2. An overview and evaluation method of logistics service level

2.1 Evaluation index of logistics service level

The evaluation index of logistics service level is the basis and effect of evolution of the main factors of customer satisfaction. In the process of determining the evaluation index, a questionnaire survey was conducted among the students in the University, and the contents were classified and sorted out.

(1) The availability of services: the degree of coverage of the logistics distribution, the mode of transport, the type, quantity and performance of the equipment, and the ability to provide services at any time.

(2) The reliability of service: including the safety of the goods themselves and the ability of the shipper to receive the goods accurately. The safety of the goods itself includes: The shipment intact rate, damage or loss rate and the ability of tracking the goods in transit. Judge consignor can timely and accurate standard goods have the following several aspects: whether can punctual delivery;

before the arrival of the goods at the port of the consignee, is able to accurately inform the consignee of the arrival of the goods at the time; logistics information flow of real-time and accuracy.

(3) Quickly response of service: for customer's orders, inquiries, complaints fast response; rapid response to changes in customer demand; distribution plan a sudden situation, can quickly notify the shipper and the consignee.

(4) Service personnel professional: degree of logistics service personnel composition; processing ability of the business; service personnel training system; staff service attitude and take the initiative to help customers to solve the problem of intention.

(5) The integrity of the service: whether to provide a complete logistics infrastructure services; whether the development of personalized service based on enterprise orientation; whether it has the ability to provide value-added logistics services.

2.2 Method for determining the level of logistics service

(1) Pareto analysis

Pareto distribution is based on the Italy economist Vilfredo Pareto (Federico Damaso Vilfredo Pareto, 1923-1948). This is a kind of power law which he found in a lot of practice. Cloth and published in his economic work in 1897^[1]. Also known as primary and secondary factor analysis method, is commonly used in project management method. It is based on the main features of the technical and economic aspects of the classification, to line up, focus and general, so as to distinguish between different ways to determine the management of a method. Because it divides the object into A, B, C three categories, it is also known as ABC classification. Generally, the cumulative frequency of the curve is divided into three levels, and the corresponding factors are divided into three categories^[2]:

A factor, frequency ranged from 70% to 80%, is the main influencing factors.

B factors, earthquake frequency is 10% ~ 20%, is the secondary factor.

C categories of factors, frequency of 10% to 0, is the general impact factor.

This approach is conducive to the people to find the primary and secondary contradictions, targeted to take measures.

Bamford and Greatbarxks (2005) pointed out that the Pareto rule will be required by research into different categories, and by using the same evaluation means for each category, Position the category that has the greatest impact or problem, and provide the decision basis for the management^[3].

(2) Pareto chart

Pareto chart, also known as the primary and secondary factor analysis, or the arrangement of the graph method, is derived from the Pareto rule. It is a bar chart that is often used in quality management. When encountered in the following situations, the use of the Pareto chart can quickly understand the need to improve the place. When to analyze the frequency of occurrence of a problem or in a process which leads to the occurrence frequency of the cause of the problem; or in many problems and reasons to find out the influence of the biggest need to be most concerned about a problem.

3 Case study on STO enterprise

STO was founded in 1993, Until the end of 2014, Shen Tong's has more than 1370 independent outlets, more than 50 distribution center, equipped with tens of thousands of vehicles special transport car, covered the most cities, especially in East China basic full coverage, no blind area.

3.1STO service level analysis

Table 1 Classification and statistics of complaints in the fourth quarter of 2015

number	Issues of appeal	The number of complaints	percentage (%)	Chain growth (%)	Year-on-year growth (%)
1	the delay	183	29.9	2.8	2.8
2	lose	100	16.3	22.0	72.4
3	Damage	63	10.3	34.0	200
4	Illegal charges	6	1.0	-14.3	-40.0
5	Receive and send service	11	1.8	-31.3	-45
6	Delivery service	246	40.2	18.8	2.0
7	Collection payment	3	0.5	300	50.0
total	---	612	100	13.0	14.2

Table 2 STO express complaint form

Issues of appeal	The number of complaints	percentage %	Cumulative percentage
Receive and send service	246	40.20	40.20
the delay	183	29.90	70.10
lose	100	16.34	86.44
Damage	63	10.29	96.73
Receive and send service	11	1.80	98.53
Illegal charges	6	0.98	99.51
Collection payment	3	0.49	100.00

Analysis method: using Pareto analysis, find out the main problems that affect the level of logistics service, and directly reflect the status of enterprise service level. To help enterprises to solve the problem of priority ranking.

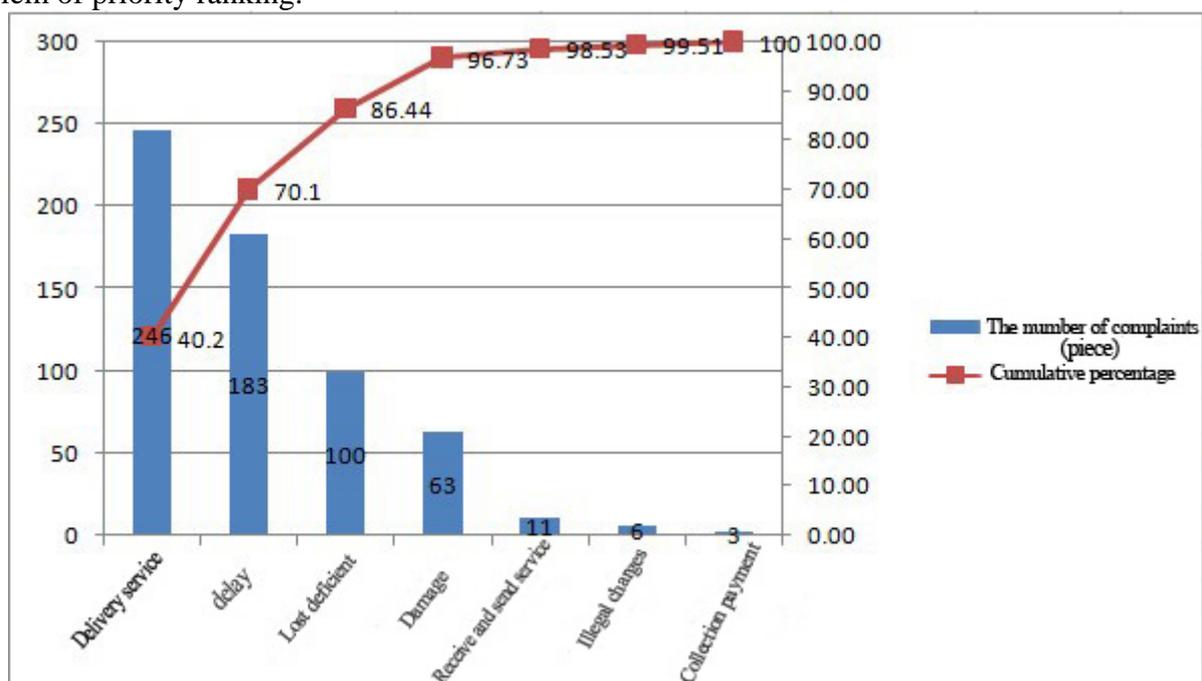


Figure 1 Pareto figure (customer complaint)

Combined with the above a few charts, you can know, Shen through express company logistics service level of the main reasons from delivery service, delay in service and goods pieces of lost deficient. Therefore, STO mainly to solve these three kinds of problems, can greatly reduce customer complaints, improve the level of logistics services.

The problem, of course, if the enterprises want to faster better solve the logistics service level, starting from their own point of view is not enough, it is best to understand the service level of the enterprise competition, and the enterprise competitive benchmarking, combined with own situation, to develop the most suitable for the optimization strategy of enterprise development. 2014 customer complaints from a single point of view, sto can SF and Yuantong express as the reference object, combined with the indicators of the evaluation index system of logistics service level, comparison and analysis of the enterprise itself and several other advantages of express delivery companies in the logistics service level of high and low.

4 Conclusions

From the above analysis, it can be concluded that the logistics service level of express industry needs to be improved.

1. Improve the level of logistics information technolog. To improve the operational efficiency of express delivery enterprise service, it is necessary to have a good information system and high-end logistics equipment, to create intelligent logistics. So as to reduce the customer's complaint rate

2. Logistics after sales service. Courier is express industry of "the last one kilometer", eventually with customers face to face contact person, his words and deeds are related to the enterprise image. Appropriate after-sales service can not only motivate the service attitude of express delivery service, but also can make the customer feel the intention of the enterprise, and increase the loyalty

3. Provide differentiated services

Express companies should pay attention to and respect their competitors, to understand the advantages and disadvantages between themselves and the competitive enterprises. Timely adjustment of service concept, the introduction of personalized, diversified, differentiated logistics services, such as providing a variety of limited time, night delivery service, etc., so as to be in an invincible position in terms of market demand.

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