

# A Research Review on E-commerce Logistics Delay

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**Abstract.** With the increase of the number of Internet users in China, the scale of online transactions is growing rapidly. Logistics plays a more important role as a link connecting buyers and sellers of online transactions. However, the development of the logistics industry in China is not mature enough, causing the problem of logistics delay to be more prominent. This review reviews the timeliness of e-commerce logistics from two aspects: the timeliness of e-commerce logistics, and the problems of logistics delay.

**Keywords:** E-commerce logistics, Logistics timeliness, Logistics delay.

## 1. Introduction

According to China's e-commerce market data monitoring, China's e-commerce transaction volume in the first half of 2017 was 13.35 trillion Yuan, a year-on-year increase of 27.1%. As a link between e-commerce companies and customers, logistics express companies will increase their courier business volume with the increase of the scale of e-commerce sales. Currently, major e-commerce platforms in China classify logistics service levels as an important indicator of a customer evaluation e-commerce shop. When the logistics express delivery company's transportation capacity can't meet the business volume growth demand, it will lead to the timeliness of logistics which cannot be guaranteed, customers can not receive the goods in the expected time then lose patience, finally, they choose to give the product bad reviews, or even reject received the product. According to CNNIC China Online Shopping Market Research Report, the speed of logistics express delivery has become a major factor affecting internet users' repeated purchase website products. Statistics released by the State Post Bureau on postal consumer complaints show that in October 2017, there were 20,857 effective consumer complaints about express delivery services, of which 7,135 were valid appeals for logistic delays, accounting for the total number of valid appeals. 34.2%, an increase of 30.3% over the same period of last year. The current delay rate of express delivery is still a long way from the expected delay of 2020 delivery by the express delivery industry during the "13th Five-Year Plan" period. With the continuous reduction of transportation time, unnecessary delay has become one of the key factors affecting timeliness. Under this background, it is of great significance to study the logistics delay of e-commerce.

## 2. Study on Timeliness of E-commerce Logistics

There are many researches on the timeliness of e-commerce logistics at home and abroad. Heim (2001) found that the timeliness of delivery is significantly related to customer loyalty [1]. Aramco J (2002) pointed out that delivery time is one of the main criteria for evaluating the "last mile" delivery quality [2]. Diaz (2002) confirms that customer's waiting time will positively affect customer's dissatisfaction and negatively influence customer's intention to purchase [3]. Swami Nathan (2003) pointed out that online consumers have higher expectations for the quick and timely delivery of purchased products than in traditional environments[4]. Boyer (2005) pointed out that logistics timeliness has a significant impact on customers' shopping satisfaction, customer loyalty and repurchasing behavior[5]. Kim (2005) believes that logistics transport time is one of the main measurement factors for customers to choose whether or not to purchase online [6]. Li (2009) pointed out that the quality of logistics distribution will decrease with the gap between the customer's expected time and the actual delivery time increases[7]. Figliozzi (2010) pointed out that importers and

exporters take the time and reliability of logistics transportation as key performance indicators for transportation performance, and logistics delays have a greater impact on the import and export trade [8]. Ishaan R (2012) designed a multimodal transport logistics network that considers hub delays due to the delay in logistics transportation due to limited logistics hub resources and the reduction of service levels [9]. Jeanie Nan (2013) listed the time of stocking as the time to evaluate the quality of logistics services and receive the goods [10]. Xia Wu (2016) first confirmed the impact of customer satisfaction on e-commerce companies and express logistics companies, and empirically demonstrated that the speed of package delivery and online shopping satisfaction has a close relationship [11].

### **3. Research Status of Logistics Delay**

Bornstein (2007) pointed out that using standby vehicles to solve the logistics delay caused by the interference factors [12]. Figliozzi (2010) pointed out that importers and exporters regard logistics transportation time and reliability as key performance indicators for transportation performance, and logistics delays have a greater impact on import and export trade [13]. Ishaan R (2012) designed a multimodal transport logistics network that considers hub delays due to delays in logistics transportation due to limited logistics hub resources and reduced service levels [14]. Chen CC (2013) pointed out that when scheduling-coordinated logistics networks are delayed due to interference (such as traffic accidents or traffic jams), the use of an integrated scheduling optimization model can reduce the impact of dissemination with less delay, and empirically confirms different settings. Relaxation time can effectively reduce delay propagation [15]. Schonfeld P (2016) proposed a scheduling decision support system that counters delays and delays in multimodal transport logistics [16].

## **4. Conclusion and Further Work**

### **4.1 Conclusion**

This review first sorts out the researches on timeliness of scholars at home and abroad and finds that the timeliness of logistics influences the online consumers' evaluation of the service quality of e-commerce enterprises and the service quality of express logistics companies. The shorter the logistics transportation time, the higher the evaluation is. The higher the customer's satisfaction with the online shopping process. However, due to the incomplete infrastructure of the express logistics industry in China, the resistance of logistics transportation to random disturbance factors is relatively weak. Once the goods are subjected to random factors in the logistics transportation process, there is a greater probability of logistic delays. Secondly, through combing the research on logistic delays by scholars at home and abroad, it was found that logistic delays will increase customer dissatisfaction, reduce customer satisfaction, and have a negative impact on the development of e-commerce companies and express logistics companies. Some scholars aim at logistics. This problem has been proposed for delays. However, these countermeasures can only reduce the impact of logistic delays and cannot completely solve the problem of delay. Some scholars simply solve the problem of delay by setting the slack time between logistics nodes. This method can solve the problem of delay. However, it undoubtedly increases the waiting time of customers and reduces the competitiveness of logistics companies.

### **4.2 Further Work**

Due to the limitations of many factors such as time and conditions, as well as the defects in my knowledge ability and time experience, this article can also be further improved and in-depth research in the following aspects.

(1). Considering the impact of different factors on the logistics delay of e-commerce, it is beneficial for enterprises to adopt appropriate measures to control specific factors so as to reduce the impact of logistics delays.

(2). considering delays in the impact of different logistics nodes on logistic delays will help logistics companies adopt different management measures for different links.

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