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# **E-retailers' logistics management in China: A mixed methods empirical study**

**Keywords:** Logistics Management, E-commerce, China B2C market

**Topic(s):** E-business and Operations; Logistics Management and Physical Distribution

**Word count: 996**

## **Purpose/Background**

Electronic commerce (e-commerce), as a method of buying or selling via telecommunications and computer networks, has redefined and changed the ways how people live and how business is conducted (Bushry, 2005). Although popular in most developed countries, it exists only about 15 years in developing countries like China, although growing at a considerable rate (He, 2010). For example, during 2008-2012, Chinese online shopping market size ascended from £12.82 billion to £130.30 billion. (PRNewswire, 2014). In 2014, China B2C market soared 68.7% and C2C market increased 35.2% comparing to 2013 (iReserach, 2015).

Despite the potential exponential growth of e-commerce market, the logistics sector develops at a slower pace and becomes a constraint to e-commerce growth. For instance, infrastructures in most areas in China remain undeveloped and insufficient for modern e-commerce (Zhou, 2013). During festive periods of high demand, express companies had to run a 24/7 operation for weeks, yet still remain unable to deliver all goods on time (Qian, 2012). Although e-commerce and logistics are two areas over-researched during the past decades in developed countries, there are still few empirical studies in developed countries that explore and how logistics services and infrastructure impact on the business-to-consumer (B2C) markets in China (Zhou, 2013). This study aims to fill this gap by providing empirical evidence on the e-commerce logistics operations in China and how they are integrated with consumer demand. The study is one of few empirical studies that employs mixed-methods with a large scale surveys.

## **Research questions**

The objectives of this research are to investigate, analyze and evaluate the major e-retailers' logistics operation in China and customers' perceptions toward their logistics service. Specifically, research questions are developed as follows:

- What are the main e-retailers' logistics operation modes in China? What are their relative strengths and weakness?
- What are the current situation and main challenges of Chinese e-retailers regarding logistics operation?
- What factors determine the service quality and customer satisfaction in e-retailers' logistics service in China?
- To what extent logistics models such as reverse logistics, crowdsourced shipping might, and delivery box can be applied for e-retailers' logistics?

### **Methodology**

A critical literature review examined e-commerce and logistics management and identified key themes on e-retailers logistics operations comparing developed and developing countries. A conceptual framework of key variables is developed to guide the empirical part of this study.

A mixed empirical method was followed. Qualitative methods included focus groups and in-depth, semi-structured interviews with key logistics managers in China using archival research to cross-validate interviews' results. A large-scale survey of logistics service satisfaction was followed with self-administered questionnaires. Data analysis involved correlation and regression analysis for the quantitative data and content analysis for the qualitative data.

### **Findings**

Firstly, findings suggest that the main challenges for e-retailers in China are: (i) lack of reliable and nationwide 3PL providers, (ii) the high cost and low efficiency of last-mile logistics, and (iii) increased yet unfulfilled logistical needs from small cities that are excluded from e-commerce due to the lack of adequate logistics coverage. Reverse logistics was not prioritized by most e-retailers whereas leading e-retailers in China started to develop sustainable logistics operations to enhance their brand reputation.

Regarding logistics modes in China, findings suggest that most retailers rely on

own means of logistics operations, which offer them the advantage in raising the logistics service quality in China. However, in order to meet the logistics needs of small cities, e-retailers had to collaborate with regional third-party logistics providers and develop their capabilities to extend their delivery range and at the same time reduce logistics cost.

Thirdly, the investigation on the customer's side reveals that 56% customers express a positive judgement toward e-retailers' logistics service in China. Besides safety, delivery dependability, promptness of returns and delivery speed are the most important factors which influence customers' satisfaction level in China. Correlation analysis showed that customers of different ages, occupations and incomes have various preferences on specific logistics service factors (like delivery speed, flexibility and cost). For instance, Chinese youths are easier to lose patience with slow deliveries while employees usually are more concerned with delivery flexibility. Therefore, e-retailers should differentiate their logistics service to meet various needs.

Lastly, optimized strategies in the last-mile logistics, reverse logistics and green logistics were analyzed and evaluated. Findings suggest the CAM model (Lee and Whang, 2001), delivery box (Andrew, 2015; Punakivi et al., 2001) and crowdsourced shipping might be effective solutions in the last-mile logistics and reverse logistics.

### **Contribution**

This research identified and analyzed the current situation and challenges faced by e-retailers in China. A representative sample to further analyze characteristics of Chinese consumer behavior regarding e-commerce logistics service was established. The relationships between various logistics service factors and different customer groups were also explored. Combining with literature arguments, this research also contributes to the choice of logistics modes and optimized strategies in the last-mile logistics and reverse logistics.

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