

Promotion of modern logistics system construction on E-commerce development

Meng Xianglei

Jilin Technology College of Electronic Information, Jilin, Jilin 132021 China

604939130@qq.com

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Abstract: Logistics is the important constituent part of the business system. Also, the rapid development of E-commerce also depends on the high-efficient logistics system. Starting from parcel data generated by Chinese online shopping, the author analyzes the status and developmental trends of E-commerce and logistics, studies the impacts of Chinese modern logistics and express industry construction on E-commerce development, and tries to provide reference for better E-commerce development.

1. Introduction

Modern logistics is the prerequisite of E-commerce development and it is the important constituent part in E-commerce operation process, so as to provide a foundation to realize E-commerce and offer safeguard to E-commerce development. Majorities of products in E-commerce transaction are tangible products. The business transaction through the internet after all is the “virtual” economic process. The final resource allocation should be realized through the transfer of commodity entity and depend on operation of actual logistics[1]. The traditional logistics mode only can meet the bulk and concentrated cargo distribution. In order to make E-commerce independent of regional limit, complicated and scattered cargo distribution requirements, it is necessary to depend on the high-efficient and convenient modern logistics mode. However, the lagging self-management forms the bright contrast with the important role of logistics, so as to become the “bottleneck” to restrain E-commerce development. As a result, the author mainly discusses the impacts of logistics on E-commerce of tangible commodity transaction and tries to provide reference for better E-commerce development.

2. Development overview of logistics and express industry

2.1. Social demand increase drives the high-speed growth of logistics demands.

In recent several years, Chinese express industry has been developed into the rapid development period. The overall scale is constantly expanding. The multi-element competitive pattern has been formed. From 2013-2017, the average growth speed of express enterprise business volume and business incomes was respectively up to 47.35% and 36.4%. Within 5 years, the express business volume was increased by more than 4 times[2]. The total income of express business was increased to 204.5 billion RMB in 2014 from 40.8 billion RMB in 2013. The income growth exceeded 5 times. The Chinese express business volume and growth rate are shown in Figure 1. Chinese express business income and growth rate are shown in Figure 2.

According to the 44th Chinese Internet Development Status Statistics Report issued by China Internet Network Information Center in 2019, until June 2019, Chinese netizen scale was up to 854 million. By comparing with the end of 2018, it was increased by 25.98 million. The internet penetration rate was up to 61.2%, which was increased by 1.6 percent points by comparing with the end of 2018. Chinese mobile netizen scale was up to 847 million, which was increased by 29.84 million by comparing with the end of 2018. The ratio that netizens used mobile to surf the internet was up to 99.1%, which was improved by 0.5 percent points by comparing with the end of 2018[3].

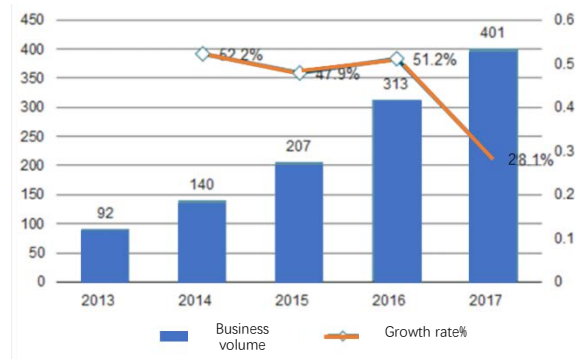


Figure 1 Chinese Express Business Volume and Growth Rate

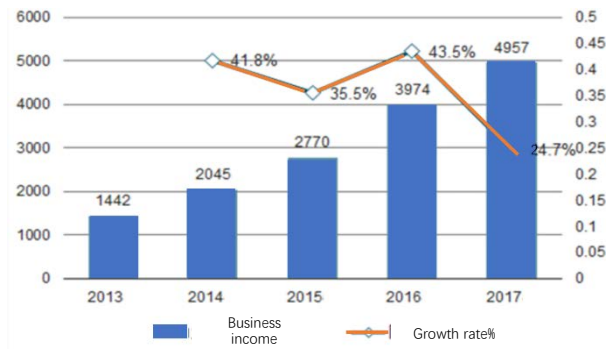


Figure 2 Chinese Express Business Incomes and Growth Rate

The above-mentioned results indicate that with the further development of the internet, online shopping, as one of E-commerce forms, is accepted and involved by an increasing number of people. As a result, the demands for logistics are greatly increased. People's expectation for logistics is also higher.

2.2. Fierce market competition results in the unit price of logistics express.

In recent two years, the E-commerce competition tends to be white-hot. E-commerce enterprises try to reduce logistics costs. When express enterprises gain high express order forms, they sacrifice their benefits. The price of the city-wide express and remote express in domestic is continuing to fall. The unit price of domestic express was decreased to 12.36 RMB in 2017 from 18.56 RMB in 2012. The decreasing amplitude was up to 33.4%. In recent years, the falling unit price of the express was abated. The unit price of the express in 2017 was decreased by 2.64% on year-on-year basis, obviously narrowing the decreasing amplitude[4]. In the future, even if the price war will continue, the dramatic falling space of the unit price is limited.

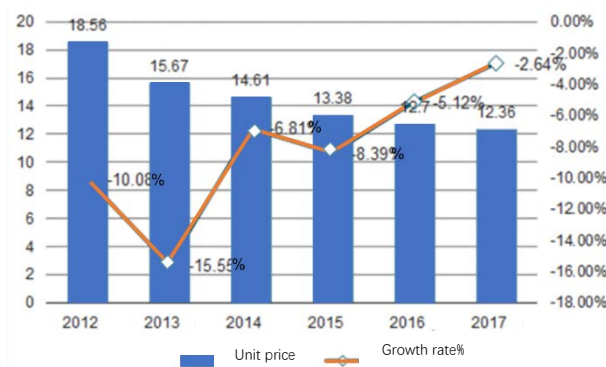


Figure 3 The Average Unit Price and Growth Rate of the Chinese Express Market

The rapid development of the express market is constantly intensifying with the industrial competition. In the fierce price war, the market concentration is gradually reducing. CR4 was reduced to 50% from 77%. Since 2015, the unit price of the express gradually reduced the

year-on-year decreasing amplitude year by year from 8.5% in 2015 to 1.3% in the first half of 2018. Meanwhile, the express brand concentration gradually rose again. CR8 was significantly increased to 81.5% from the minimum 75.7% in January 2017[5].

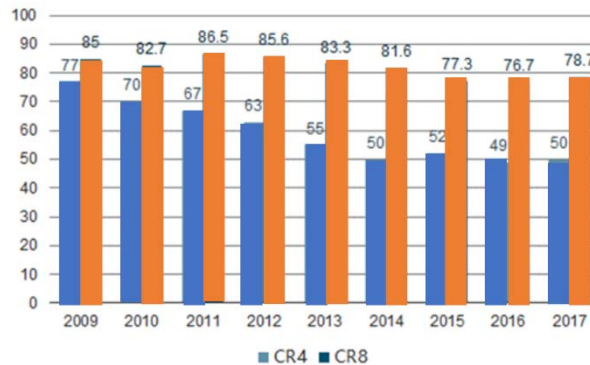


Figure 4 The Express Market Concentration Trend

2.3. Logistics enterprise benchmarking study

The logistics mode mainly includes international express, network express, network breakbulk, regional distribution, contract logistics and self-built logistics of the group. The network logistics and benchmark enterprises see Figure 6.



Figure 5 Network Logistics and Benchmark Enterprises

UPS was founded in USA in 1907. It is famous for undertaking articles and having the extensive business coverage. Until now, it has become one of the biggest express carriers and parcel express companies around the world. The global transportation service of UPS includes emergency transportation, standard transportation and mass transport. The supply chain and information management system optimize the transportation path and ensure visible transportation situations in the whole process.

FedEx was founded in 1971. It is an international express company and provides overnight express, ground express, heavy cargo transport, and file copy. It is famous for high-efficient and rapid distribution. It is one of the biggest air mail parcel forwarders in the world. The hub-and-spoke shipping system designed by FedEx dramatically improves the distribution efficiency and becomes the classical model of logistics transportation. The subsequent logistics system construction of many enterprises refers to this mode.

SF Express was founded in early 1990 with the self-owned aviation cargo aircraft transportation. Meanwhile, it reduces the number of intermediate circulation nodes and ensures the simple and high-efficient supply chain. It is operated in the full direct sales mode. With the integrating system, it supervises and evaluates the website to ensure service quality. In addition to express, individualized logistics services, and E-commerce industry, SF Express positively develops the financial business.

“Sitong Yida” is the general term of STO, ZTO, Best Express, YTO and Yunda, accounting for

half of the Chinese express market. These five expresses undertake majorities of logistics businesses in non-self-built logistics E-commerce enterprises in Taobao and Tmall. By taking STO as an example, the early stage gives priority to express business. In recent years, it focuses on warehousing and other supporting value-added services. The features include low price, more coverage websites, moderate speed, and general service quality.

2.4. E-commerce logistics development

Cainiao Logistics is the Cainiao network platform developed by Alibaba after spending 300 billion RMB developing Chinese Smart Network(CSN) to realize 24h delivery services in any area around the world. It thoroughly overturns existing E-commerce logistics mode. Cainiao network depends on urbanization promotion, while continuing perfecting the logistics information system. It constructs the logistics warehouse base around the world and combines with all manufacturers, express logistics company, third-party service companies, and E-businessman to participate in common development of each process.

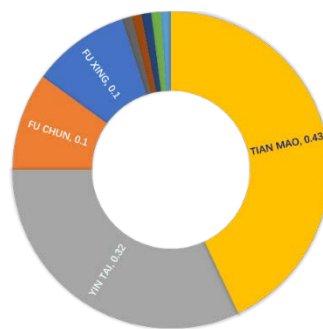


Figure 6 Contribution Stock Right Figure of Cainiao Network

SF Best is the best food online shopping mall released by SF Express in 2012. SF is responsible for direct collection from place of origin, sales, storage, and distribution services[6]. Focusing on the global high-end characteristic foods, it faces high-end and high-end client groups. It can be divided into eight categories including fresh food, grain and oil non-staple food, infant & mom food, wine beverages, snacks & biscuits, tea, nutrition and articles for gourmet.

JD's logistics system is the self-support commodity service of JD Mall. In order to ensure distribution efficiency and improve user experience, JD storage, transportation, distribution and logistics visualized system are completed by self-built. Nowadays, it has been comprehensively released. In order to touch users closely and improve the response speed of the supply chain, JD conducts channel sink for warehouse services and conducts overall arrangement in third-tier and fourth-tier cities. With the utilization of multiple mobile shopping platforms in JD, downward permeation of marketing activities, and rapid expansion of logistics coverage, the user quantity from third-tier cities to sixth-tier cities is gradually increasing. In order to get close to users and improve response speed of the supply chain, JD conducts channel sink in JD warehouse services.

3. Impacts of the modern logistics system on E-commerce

Without modernized logistics, any relaxed business activities will become senseless, let alone the E-commerce development. Modern logistics distribution efficiency determines the rapid and convenient advantages of E-commerce. It is one of important indexes for clients to evaluate E-commerce satisfaction degree. As a result, modern logistics is the foundation and safeguard of E-commerce development and the prerequisite. The good logistics distribution system is the important obstacle to affect Chinese E-commerce development. For example, there is the huge improvement space realizing distribution time effect and close distance distribution around the world. Enterprise logistics is accustomed to referring to the formed mode operation and can't transform the potential logistics demands into the effective market demands. Logistics will affect the E-commerce development in a long time, but it is not the final obstacle. In this way, we need to take positive measures to promote the business activity reform. The core content of E-commerce

after all is business. Only by perfecting the tangible goods distribution system can we promote the logistics industry to better serve for clients, improve the entire business system construction, and conduct the reasonable and orderly reform from the perspectives of structure and functions, so as to develop high efficiency of E-commerce.

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