

Operational Risk Analysis in The Logistics Industry: A Case Study of Jingdong Logistics

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Abstract. With the improvement in technology and economic system, China's logistics industry continues to innovate and aspire to high-quality development to meet the people's pursuit of a higher quality of life. Still, in the process of innovation and change in logistics enterprises, it is inevitable that a certain degree of operational risk. Taking Jingdong Logistics as the research object, this study discusses the operational risks modern logistics enterprises face and proposes corresponding risk response measures. The study first introduces the importance of logistics in improving the quality of life and promoting national economic development. Then, it analyzes in detail the operation of Jingdong Logistics, as well as the customer management risk, market competition risk and financial risk it faces. Subsequently, the article proposes corresponding risk-coping strategies, including breaking the "bundling" with Jingdong Mall, optimizing the logistics supply chain, and improving profitability. These measures can help Jingdong Logistics cope with risks in the competitive modern logistics market, maintain competitiveness and achieve sustainable development. The article concludes by summarizing the important role of logistics enterprises in the modern economic system and emphasizing the importance of scientific risk management strategies for success in the highly competitive logistics market.

Keywords: Operational risk; Logistics company operations; Sustainability strategy.

1. Introduction

With the continuous improvement of the economic level, consumers began to pursue a higher quality of life, and the importance of logistics is becoming more and more prominent. In the rapid development of economic construction, the construction of a modern logistics system has become an important task, which can promote market competition, accelerate the circulation of goods, accelerate the turnover of funds, safeguard the employment of residents, and then promote the positive development of the national economy [1]. Given the background of today's economic globalization, new technology is constantly innovating, and the new economic model is also constantly updated. Logistics enterprises will continue to encounter challenges in the operation process, which will also be caused by various changing factors and circumstances that make it difficult to avoid the risk, affecting its operational efficiency [2, 3].

This paper takes Jingdong Logistics as the research object, describes the operation and development status quo of Jingdong Logistics, studies and analyses the risks existing in the process of its operation, discusses and formulates the corresponding risk countermeasures, and then reasonably avoids, controls and transfers the risks, to accelerate the innovation and change of the operation of the logistics enterprise, and to push forward the healthy and rapid development of the company.

2. Case Description

2.1. Logistics Operation Risk

An enterprise in the operation process will inevitably generate risks, and logistics enterprises are no exception. In recent years, the world's economy has been developing rapidly, and the economic model has been constantly innovated, so the factors and situations involved in the operation of logistics enterprises have become more complicated and uncertain. Logistics operation risk refers to the logistics enterprise in the operation process due to the complex changes in the external environment and the logistics enterprise's cognitive ability and adaptability to the environment of the limitations of the logistics operation failure or logistics activities cannot achieve the expected goals [2]. Logistics operation risk has diversity uncertainty and is hidden. All the risks are objective and cannot be eliminated only through the means and policies to avoid the risk reasonably.

2.2. Jingdong Logistics Company

With the continuous rise of the e-commerce industry, Jingdong Logistics has become one of the top-ranking logistics companies in China, with the mission of being "technology-driven, leading the global efficient circulation and sustainable development." It is committed to becoming the world's most trustworthy supply chain infrastructure provider [3].

The development history of Jingdong Logistics is mainly divided into two stages: the first stage is internal service, starting in 2007, Jingdong self-built logistics as an internal cost center, escorting the business of Jingdong Mall; the second stage is an independent operation, starting from 2017, Jingdong Logistics is formally independent of the Jingdong Logistics Group, comprehensively opening up the external services, innovation and technology, perfecting the layout of products, and exploring new areas of integration. Supply chain logistics services market in new areas.

3. Risk Analysis

3.1. Customer Management Risk

Although Jingdong Logistics has been completed with Jingdong divestment, removing the Jingdong Mall "bundled" label has always been difficult.

Jingdong Logistics is only a subsidiary of Jingdong Group, although now independent, whether, within the Jingdong or the community, people will think of Jingdong Logistics as a subsidiary of Jingdong, which affects the open service of Jingdong Logistics so that it can not focus on its own core business at the same time, but also to face the risk of collateral damage. For example, due to the group's improper operation, Jingdong Logistics suffered "injustice" and vice versa.

In addition, Jingdong Logistics, its positioning from the service of Jingdong to serve the whole industry, and its evaluation of the success of this transformation of the wind vane is the proportion of external revenue. Although the definition of external customers is non-Beingdong Group customers, this includes the Jingdong e-commerce platform on the third-party sellers. Most of the "external customers" are Jingdong e-commerce platform on third-party sellers, indicating that although Jingdong Logistics has rushed out of self-supporting, it still failed to rush out of the platform, which also means that the upper limit of Jingdong Logistics from a certain point of view is the same as the Jingdong platform. Some sense is tied to the third-party business on the Jingdong platform.

3.2. Market Competition Risk

According to Figure 1, it can be felt that after the independence of Jingdong Logistics, it will still face great challenges in the logistics industry, in which the express giant SF Express will be the biggest enemy.

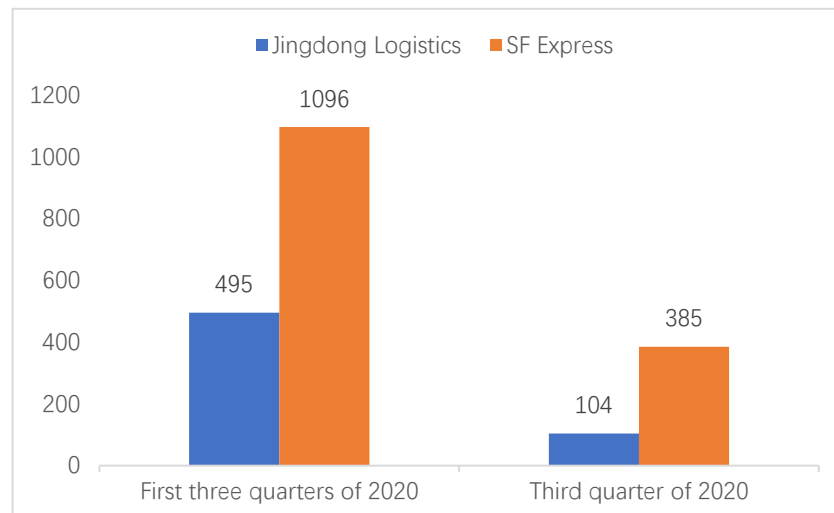


Fig. 1 Comparison of Jingdong Logistics and SF Express 2020 Revenue Figures (Billions of Yuan)

Regarding its business model, SF mainly provides end-to-end express delivery services for individual and corporate customers and has opened up various links from receiving, transferring, and transporting to dispatching, coupled with its large aviation fleet, which greatly improves its distribution efficiency in the whole process. Jingdong Logistics is mainly for e-commerce sellers to provide warehousing and distribution services, warehousing and distribution front, in advance of the completion of the transport process of goods and eliminating the transit link, the user orders, Jingdong Logistics only through the "warehouse + distribution" of the two links to complete the service, which saves a lot of time.

Because of the independence of Jingdong Logistics before only for the Jingdong e-commerce platform to provide services, the competition with SF could be more obvious [4]. However, as Jingdong Logistics is divested from Jingdong and fully open to external services, the shortcomings of its business model have begun to emerge. Jingdong Logistics currently only has a competitive advantage in one-way delivery, that is, the process of goods from the warehouse to the hands of customers, and in the whole two-way logistics, Jingdong Logistics still needs to improve. Due to the huge investment in warehousing and distribution in previous years, the warehousing and distribution system of Jingdong Logistics has matured. Still, the company's lack of experience in the early stages of the collection and transit is also indisputable.

In addition, Jingdong Logistics acquired Cross Express in August 2020 for 3 billion yuan, realizing shipping lines from scratch. By the end of 2020, Jingdong Logistics had about 620 air freight routes, and it is worth noting that SF has already exceeded 2,000 shipping routes compared to the same period. In terms of land transport, there is also a large gap between Jingdong Logistics and SF, data for the same period shows that by the end of 2020, Jingdong Logistics' self-owned transport fleet has a total of 7,500 trucks and other vehicles, while the SF side has 100,000 trunk/branch transport vehicles as well as 43,000 end-of-line collection and dispatch vehicles.

3.3. Financial Risk

As one of Jingdong's high-quality core assets, Jingdong Logistics, which has been established for many years, has always been deep in the loss vortex, which is mainly due to the heavy asset model of Jingdong Logistics. According to Table 1, in the revenue costs of Jingdong Logistics, the top three are employee welfare expenses, outsourcing costs and rental costs.

Table 1. The cost structure of Jingdong Logistics

	Year 2018	Year 2019
Employee benefit expenses	46%	42%
Outsourcing costs	29%	35%
Rental costs	12%	10%
Depreciation and amortisation	3%	3%
Other	10%	10%

The core advantage of Jingdong Logistics is to save time costs through storage instead of transport. Still, its practice of building its warehouses in major cities across the country has led to high rental costs, which is also a key factor in the company's perennial losses. In addition, Jingdong Logistics relies heavily on outsourcing platforms in its relatively weak trunk/feeder transport sector, which not only leads to a significant increase in outsourcing costs but also makes it prone to an imbalance in the entire logistics chain. To reduce high employee welfare expenses, Jingdong Logistics canceled the base salary of grassroots couriers, lowered the relevant welfare standards from June 2019, and replaced it with a new incentive pay system. This move has incurred the dissatisfaction of a large number of couriers.

In front of the high-cost structure, the low gross profit margin also makes Jingdong Logistics' desire to achieve profitability extremely difficult [5].

4. Risk Response Measures

4.1. Breaking the "Bundle"

The survival and development of enterprises should always be orientated to customers' needs. Logistics enterprises should give full play to their respective logistics characteristics, implement innovation, keep pace with the times, and avoid the phenomenon of homogenized logistics flooding the market to win the favor of consumers and gain a unique advantage in the highly competitive logistics industry [6]. The customer management risks Jingdong Logistics faces are rooted in its history of close ties with Jingdong Mall and the challenges of opening its services to the outside world.

First, Jingdong Logistics must be actively branded and promoted, emphasizing its independence and ability to operate autonomously to break the bundled label with Jingdong Mall. Through well-designed brand image and publicity campaigns, Jingdong Logistics can establish its independent status in the public mind and highlight its leading position in the logistics industry.

In addition, Jingdong Logistics should actively seek to diversify its customer base, not just limiting itself to partners on the Jingdong platform but also building strong relationships with external customers. This requires Jingdong Logistics to provide long-term and excellent customer service and support to ensure that customers are willing to continue to choose Jingdong Logistics as their logistics partner under certain influencing factors.

4.2. Competitive Market

At this stage, the smooth operation of enterprise logistics operations is connected with the degree of perfection of the enterprise supply chain system [7].

Jingdong Logistics needs to adopt a series of strategies to maintain the core competitiveness of the supply chain system when facing competition from large logistics companies such as SF and then improve its service quality.

First, Jingdong Logistics should prioritize investment in building more efficient collection and transit networks and improving route planning and timeliness to narrow the gap with its competitors. At the same time, it should improve operational efficiency by continuously upgrading technology and information technology, investing in logistics technology and data analytics to optimize route planning, cargo tracking and inventory management.

In addition, Jingdong Logistics should actively develop its own shipping and land transport capabilities, expand its transport network and increase the coverage of trunk and feeder routes to improve transport efficiency and service levels. Jingdong Logistics can also actively seek partnerships and cooperate with other logistics companies or supply chain service providers to share resources and reduce costs.

4.3. Enhance Profitability

As a logistics company, it is reasonable to ensure the safety and efficiency of the logistics link. It should continuously track the goods in shipping, land transport, warehousing, delivery and other aspects of the circulation through the whole chain of supervision to protect the timeliness and reliability of its transport and minimize the risk [8]. Therefore, the cost pressure Jingdong Logistics faces is a huge problem, and enhancing its profitability is a key factor in improving its financial situation.

Firstly, Jingdong Logistics should optimize its asset allocation to alleviate the pressure on rent and staff costs brought about by the asset-heavy model. For example, it should choose more economical locations or co-operate with property developers to reduce construction and leasing costs. Adopt automation and intelligent technologies to improve the operational efficiency of the sorting, warehousing and distribution systems and reduce unnecessary reliance on workforce [9].

In addition, Jingdong Logistics can achieve profitability by expanding its business scope and additional value-added services to increase gross profit margins. For example, in addition to providing basic storage and transport services, it can also provide high value-added services such as cold chain logistics, special goods distribution and customized packaging to attract more customers and improve price elasticity. In turn, it will increase the level of revenue [10].

5. Conclusion

Through the case analysis of Jingdong Logistics, we understand the operational risks faced by modern logistics enterprises and explore corresponding countermeasures for its current situation, which provides valuable reference experience for other logistics enterprises. In the future, with the continuous development of science and technology and the constant changes in market patterns, logistics enterprises need to continuously optimize their risk management strategies to adapt to new challenges and opportunities.

Logistics enterprises play an important role in the modern economic system, and operational risks are inevitable. Still, through reasonable operational management and scientific risk response strategies, logistics enterprises can effectively reduce the negative impact of risks, achieve sustainable development, and maintain competitiveness in the highly competitive logistics market.

Authors Contribution

All the authors contributed equally, and their names were listed alphabetically.

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