

Competitive Strategy of Chinese Maintenance Repair and Operations Industry- a Case Study of JD Industrials

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Abstract. As the market size of China's maintenance, repair, and operations industry continues to expand, more and more platform companies are entering this sector. In this increasingly competitive environment, having a set of market competition strategies, implementation measures, and safeguard measures tailored to the enterprise is crucial for long-term survival. This paper conducts a case study on JD Industrial, a leading B2B company in this field. This paper first analyzes the market environment of JD Industrial by using the PEST framework and puts forward the market competition strategy suitable for JD Industrial by using SWOT analysis. It also puts forward the corresponding implementation and safeguard measures for the implementation of these strategies. The potential contribution of this paper is that provide some valuable insights into JDI's market competition strategies. These insights aim to assist JDI in enhancing its market share and achieving sustainable growth in the process of competition from domestic and international rivals.

Keywords: JD Industrial, competitive strategy, PEST analysis, SWOT analysis.

1. Introduction

In the realm of supply chain optimization, a potential area of focus lies in the procurement of indirect materials, crucial for a company's maintenance, repair, and operations. These materials are collectively known as Maintenance, Repair, and Operations (MRO) products, encompassing five major categories such as spare parts, general consumables, administrative supplies, processing and manufacturing items, and chemicals. The scope of MRO products ranges from low-value, non-critical, bulk items to highly expensive specialized equipment. To minimize service disruptions and increase organizational productivity, businesses need to manage and control the inventory of MRO supplies [1]. However, compared to production materials, MRO procurement is characterized by a wider range and variety of projects, as well as the changing needs of customers, which poses a huge challenge for the organization's spare parts management. Lack of attention to and effective management of MRO supply can lead to significant hidden costs, including capital tied up by high slack cargo and high storage expenses [2]. Today, the increase in the output value of the Chinese industry is driving the increase in MRO procurement demand. From 2016 to 2022, the market size of China's MRO procurement services has increased from 2.1 trillion yuan to 3.0 trillion yuan, and it is expected that by 2027, the MRO procurement market size will be nearly 4 trillion yuan, with a compound growth rate of 5.8% [3]. Compared to internal supply chains, digitalized MRO procurement platforms offer relevant businesses a method to selectively choose products and suppliers. This procurement approach enables companies to address cost reduction and efficiency improvement issues in the supply chain [4]. Therefore, digital MRO procurement services are the fastest growing segment in the industrial goods market, attracting the attention of many platform-oriented enterprises. The market size of digital MRO procurement services in 2022 is about 0.3 trillion, and this data will reach about 1 trillion in 2027, with an expected five-year compound growth rate of 29.2%, which exceeds the industry growth rate by 24 percentage points [5]. However, the research on competitive strategy of platform enterprises in MRO digital procurement industry is still limited. This paper fills that research gap, combining it with the Chinese government's "14th Five-Year Plan" to promote the development of small and medium-sized enterprises. Taking the typical enterprise JD Industrial in

the supply chain platform industry as an example, the paper constructs an analysis of JDI's competitive environment, explores its competitive strategy and practical insights, aiming to better promote the rapid development of the industrial internet and achieve the goals of China's Advanced Manufacturing 2025 initiative.

2. PEST Analysis on JDI

Under the background of multiple uncertainties such as intensifying competition between China and the United States, public health emergencies and the Ukraine crisis, the security and stability of China's industrial chain and supply chain are facing impacts [6]. As a key link of the industrial chain and supply chain, large platform enterprises can use their powerful data advantages to solve the problem of information asymmetry among enterprises and coordinate the excessive competition and disorderly competition of large, small and medium-sized enterprises in the process of industrial development. As a key link of the industrial chain and supply chain, large platform enterprises can use their powerful data advantages to solve the problem of information asymmetry among enterprises and coordinate the excessive competition and disorderly competition of large, small and medium-sized enterprises in the process of industrial development [7].

Therefore, the Chinese government encourages large platform enterprises to continuously empower small and medium-sized enterprises through policies. The release of the policy dividend will bring potential development space for the MRO procurement market and the development of JDI within it.

The development of environmental protection and sustainable development concepts has also contributed to the growth of the MRO market. The growing concern of the public on sustainability in society has led companies to turn to repairing parts instead of replacing them, which has created more demand for MRO products, thus contributing to the growth of the MRO market.

The update of digital infrastructure such as big data, artificial intelligence, and the Internet of Things has promoted the transformation of MRO procurement to digital. The inclusion of digital infrastructure has greatly reduced the MRO procurement costs of SMEs and promoted SMEs to play their professional advantages and enhance their competitiveness. Platform enterprises can realize their own growth while supporting the development of small and medium-sized enterprises. Specifically, enterprise MRO procurement from the traditional local communication, post-hoc communication and game communication is changing to the digital transformation after the system communication, real-time communication and symmetric communication. This process also alleviates the problem of information barriers and data silos and reduces the information cost of enterprise procurement. In the context of cost reduction and efficiency improvement, enterprises have an increasing demand for digital MRO procurement. JDI can efficiently match supply and demand by updating and improving its supply chain digital infrastructure, thus gaining more customers.

Under the joint action of multiple forces such as policy pulling, market demand driving, environmental concept changing, and digital technology advancement, the size of the MRO digital procurement market has maintained an upward trend in the past five years. Despite the repeated impact of the epidemic in 2022, the situation of China's economy has not changed, and China's digital economy will still accelerate the development of the MRO market. As the industry leader, JD Industry still has a large space for development and more potential financing opportunities.

3. Determination of JDI Competitive Strategy

3.1. Strengths

As part of the JD.com ecosystem, JDI has unique advantages. JDI has access to the whole system of processes, technology, supply chain logistics systems and other support, which allows it to gain more market share than its competitors. For example, with the support of JDI, JD Industry has implemented an "asset-light" model. This model reduces JDI platform's own investment in logistics

facilities, and the collaboration between this model and its self-built performance system significantly improves logistics performance. The key performance indicator, inventory turnover level, shows that JDI's service level leads the industry, with a 22-year average of 17.9 days of inventory turnover. The synergy of the JD Group ecosystem is a unique advantage of the JD Industry, which greatly reduces the operating costs of the JD Industry. Product service and business model differentiation strategy implemented. Compared with most MRO platforms that only make transactions online, JD Industry truly realizes the digitalization of the supply chain. The main components of this model include digitization of goods, digitization of procurement, digitization of compliance, and digitization of operations. It not only has an MRO trading platform, but more importantly, it can provide end-to-end full-link digital solutions, such as product procurement solutions, energy consumption solutions, and operation and maintenance solutions to meet customer needs while maintaining lean operations and scalability.

3.2. Weaknesses

One of the drawbacks of JDI is that the level of network platform design needs to be improved, and different products need to be clearly defined and classified. One manifestation of this shortcoming is the confusing layout of the JD Hardware City website. Specifically, on this site, product categories are not arranged by specific Stock Keeping units (SKUs). Instead, the site's initial search results only offer stores of different brands, with a mix of products from those brands.

3.3. Opportunities

China's industrial policy increasingly emphasizes digitalization, promoting the digital transformation of industries and the advancement of manufacturing towards digitalization, networking, and intelligence. JD Industrial can leverage its platform and digital capabilities, as well as its service advantages, to seize the developmental opportunities brought about by industrial digitalization.

In 2022, the penetration rate of leading MRO enterprises in China was less than 0.5%, significantly lower than the over 5% rate in mature markets such as Europe, America, and Japan in 2021. Hence, there is substantial potential for the development of MRO industrial products.

3.4. Threats

The industry is still in the early stages of its booming development and its future growth faces many potential risks. The vision of China's industrial supply chain has not yet been fully validated and faces considerable uncertainty. At this stage, it is necessary to acknowledge the uncertainty of the industry's development and prudently assess the risks in order to better cope with future challenges.

In the industrial product market, there are strong competitors like ZKH, Alibaba 1688 Industrial Products, EHSY, and Grainger, who possess significant capabilities in supply chain, technology, and finance. JDI is threatened by the rapid growth of these rival brands.

4. Strategy Implementation Analysis

Jingdong Industrial is improving its brand influence by implementing SO expansion strategy under the macro policy and JD ecosystem. Jingdong Industry provides whole-chain digital solutions and intelligent services in purchasing, fulfillment, and operation, and has strong competitiveness in the MRO industrial products market. Jingdong Industry improves platform-related services by implementing WO turnaround strategies to enhance the customer buying experience. JD Industry needs to implement ST strategies to leverage internal strengths and avoid external threats. Using the resource advantages of JD Group, JD can reasonably avoid risks, and make use of the model characteristics of full-link digitization to attract enterprise customers and seize market share. WT WT refers to the defense strategy, JD Industry should reduce internal disadvantages, avoid external threats,

and optimize platform pages, improving user purchasing experience. Accelerating platform layout, increasing product categories, and optimizing technical services are also significant.

Through the previous SWOT analysis, as shown in table 1, the opportunities that the JD Industrial platform faced in the external environment are greater than the threats; In terms of the internal environment, the JD Industrial platform currently has more advantages than disadvantages. Choosing SO strategy could make Jingdong's industrial platform gain greater advantages in the competition. Therefore, this paper suggests that JDI adopt SO strategy to cope with the future industry competition. There are several benefits to adopting this strategy. First, making full use of the synergies of macro policies and JD Group's ecosystem can further enhance brand influence. Secondly, through end-to-end full-link digitalization, JDI can gain the trust of customers and further expand its market share by optimizing intelligent services for customers throughout the procurement process.

Therefore, when MRO digital procurement companies discuss how to develop competitive strategies, one of the most important goals is to integrate the supply chain and win a competitive advantage in response to the rapid changes in the industry. In this case, how to choose the right competitive strategy in this rapidly changing industry, establish the company's core value, and maintain competitive advantage is one of the key issues facing Jingdong Industry and other enterprises.

Table 1. SWOT analysis on JDI

External	Internal	S(Strengths)	W(Weaknesses)
		Support from JD ecosystem. Differentiated services.	The sense of platform use needs to be improved.
O(Opportunities)		SO	WO
Policy Dividend. Expansive Development Prospects.		Expand influence under policy impact. Explore market potential through differentiated Strategies.	Improve platform-related services to enhance customer purchasing experience.
T(Threats)		ST	WT
Market demand fluctuations. Changes in policies and regulations. Supply chain disruption risk. Intense market competitor.		Utilize the characteristics of a fully digitalized supply chain model to attract corporate clients.	Platform redesign. Enhance the user purchasing experience. Increase product variety. Refine technical services.

5. Conclusion

This paper mainly analyzes the status quo of the development of the JD Industry and finds that the JD Industry relies on Jingdong's strong supply chain foundation, huge number of users, and integration of technical service capabilities to build a full-link solution. However, with the increasingly fierce competition between platforms, it is also necessary to develop a competitive strategy in line with the market to stand out in the fierce competition. PEST analysis method and SWOT analysis method are used to analyze and study the current situation of JD Industry, JD Industry must go deep into the supply chain infrastructure construction through a differentiated competition

strategy, to better form the core competitiveness. In the implementation process, the choice of SO strategy is more conducive to the JD Industry to achieve more profits and gain stronger competitiveness.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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