

Analysis on the Current Situation of Supply Chain Operation Management in D Enterprise

Shijun Gao *

School of Economics and Management, Southwest Petroleum University, Chengdu 610500 China

*Corresponding Author: 17637904569@163.com

ABSTRACT

Taking D food manufacturing enterprise as the research object, this paper analyzes the current situation of its supply chain operation management and finds that there are problems in procurement management, such as low efficiency of internal approval and lack of strategic cooperation suppliers. In inventory management, the setting of safety stock does not consider the buffer for emergencies and does not implement differentiated management. Besides, the integration degree of the supply chain information system is low. To address these issues, optimization measures such as clarifying the time limit for procurement approval, improving the supplier assessment mechanism, and introducing advanced supply chain management software are proposed to enhance the supply chain operation efficiency of D enterprise.

KEYWORDS

D enterprise; Supply chain operation management; Procurement management

1. RESEARCH BACKGROUND AND SIGNIFICANCE

With the introduction of national policies to promote supply chain reform, the level of supply chain operation management has become an indispensable core competitiveness for major enterprises. In today's business environment, the traditional vertical integration business model is gradually being replaced by the horizontally expanded business model. This transformation signifies that the competition between supply chains has become the main direction of competition among enterprises, rather than the traditional individual competition. The food manufacturing industry is an important part of China's real economy. From 2013 to 2042, the number of above-scale enterprises in China's food manufacturing industry has experienced a volatile growth process, reaching a recent peak of 9,235 in 2017. By the end of 2024, the number of above-scale food manufacturing enterprises nationwide reached 10,625, a year-on-year increase of 8.71%. Under the background of the country's vigorous development of the food manufacturing industry, the reform of supply chain management is also in full swing in the food manufacturing industry, in order to improve the development quality of the entire industry. In response to industry changes and changes in consumer demand, D Food Manufacturing Enterprise still adopts the traditional supply chain operation model, resulting in low efficiency of the enterprise's supply chain operation, which cannot match the current development of the enterprise. Therefore, this paper will analyze the existing problems in D Enterprise's supply chain operation management, and optimize and improve D Enterprise's supply chain operation management system, so as to improve its supply chain operation efficiency and help D Enterprise achieve greater development in the current social situation. As an important part of China's real economy, food manufacturing enterprises are of great significance to ensuring people's livelihood. However, the research on supply chain operation management of food manufacturing enterprises is insufficient,

resulting in many problems in their supply chain operation management that have not been solved. Regarding how to study the supply chain operation management in food manufacturing enterprises, this paper systematically and comprehensively analyzes the problems existing in D Enterprise's supply chain operation through organizational structure, procurement, inventory, information system and other links, and puts forward optimization and improvement measures.

2. RURAL ANALYSIS OF THE CURRENT SITUATION OF SUPPLY CHAIN OPERATION MANAGEMENT IN D ENTERPRISE

2.1. Current Situation of Procurement Management in D Enterprise

Procurement is the foundation of the supply chain operation management system and a key determinant of an enterprise's production costs. For food manufacturing enterprises like D Enterprise, procurement directly impacts product quality—only high-quality raw materials can yield reliable food, which is vital to its market competitiveness. Through interviews, it's known that D Enterprise currently collaborates with over 50 suppliers, covering a wide range of raw materials from core ingredients to auxiliary materials needed for production. However, strategic partnerships are scarce: among these, only 6 suppliers providing main production materials have established long-term strategic cooperation, while most others are in short-term, transactional relationships focused on immediate supply needs.

Its procurement strategy is primarily batch-based: based on detailed production plans and real-time production demands, the enterprise consolidates material requirements and sends large-volume, bulk orders to contracted suppliers for centralized procurement. This approach aims to leverage economies of scale to secure better prices and reduce transaction frequencies, ensuring a steady flow of materials for production, the decisive factors for the production cost of an enterprise. For food manufacturing enterprises, procurement is related to product quality. After all, only good raw materials can produce food with assured quality, which is the key to D Enterprise's core competitiveness in the market. Through interviews with D Enterprise, it is learned that D Enterprise has cooperated with more than 50 suppliers so far, but there are few suppliers that have reached strategic cooperation. At present, only 6 suppliers of main production materials have strategic cooperation relations; the procurement strategy mainly implements the batch procurement strategy, that is, according to the requirements of the production plan and the actual production needs, centralized and send large-volume and bulk material demand orders to signed suppliers for procurement to meet production needs.

2.2. Current Situation of Inventory Management in D Enterprise

With the development of economy, the global environmental problems become more and more serious, people pay more and more attention to wetlands, and wetland research has become a hot spot. The inventory of D Company can be divided into inventory goods, work-in-progress inventory, turnover material inventory and raw material inventory. From the perspective of inventory amount, the annual average inventory amount of D Company in 2023 reached 7.709 million yuan. Raw materials account for 53% of the inventory, inventory goods account for 34%, work-in-progress accounts for 10%, and turnover materials account for 3%. Commodities are generally arranged for sales according to the production time, closely combined with market demand, and the scale of inventory goods is controlled within a relatively reasonable range [1].

The inventory management system usually has the dual functions of resource allocation and coordination. However, in the actual operation situation of D Enterprise, the effectiveness of these key functions has not been optimized. Specifically, when determining the safety stock level, D Enterprise mainly calculates based on the goods transportation cycle and production reserve time, but fails to fully incorporate the time buffer demand that may be caused by emergencies (as shown in

Table 1); the enterprise does not implement different management methods according to the characteristics of different raw materials and finished products when formulating safety stock strategies.

Table 1. Safety Stock Setting of D Enterprise

Inventory Category	Safety Stock Setting Point/Day	Procurement Arrival Time/Day	Difference/Day
Flour	5	4	1
Sugar	5	4.5	0.5
Oils	5	4	1
Packaging Materials	4	3.5	0.5
Others	5	4	1

3. ANALYSIS OF PROBLEMS AND CAUSES IN SUPPLY CHAIN OPERATION MANAGEMENT OF D ENTERPRISE

3.1. Low Efficiency of Internal Approval Processes

D Company follows a strict procurement process system, and each procurement activity must be implemented in accordance with the preset procedures, aiming to ensure the compliance and transparency of procurement activities. However, in actual operation, each link requires approval by managers at the corresponding level to show authorization and supervision. Although this layer-by-layer approval mechanism can theoretically increase the rigor of decision-making, in practice, due to the lack of specific restrictions on approval time, its drawbacks have gradually emerged. Specifically, when the person in charge of an upstream approval link fails to complete the approval in a timely manner due to busyness, poor information transmission or other urgent matters, the entire procurement process will be forced to stop. This situation not only delays the start time of subsequent links, but may also lead to the invalidation of supplier quotations, delayed response to changes in market demand, and even missed the best procurement opportunity, thus seriously affecting procurement efficiency and company operation efficiency.

3.2. Lack of Strategic Cooperation Suppliers

D Enterprise cooperates with more than 50 suppliers, but only 6 suppliers of main production materials such as flour and oil have strategic partnership. The replacement frequency of suppliers of other production auxiliary materials such as condiments is high, and basically no strategic cooperation has been reached. In this case, it is difficult to obtain the optimal conditions from suppliers in terms of price, quality, delivery time, etc., and it is also difficult to get priority support when the market fluctuates, which increases the instability of the supply chain. There are two main reasons for this situation. On the one hand, enterprises tend to focus on short-term interests when purchasing. D Enterprise may pay too much attention to minimizing the cost of a single purchase, ignoring the long-term value brought by establishing long-term cooperation with suppliers. This short-term oriented procurement strategy limits the possibility of in-depth cooperation with suppliers and makes it difficult to form a partnership based on trust and win-win. On the other hand, the supplier evaluation and management mechanism is imperfect. In the process of selecting and managing suppliers, D Enterprise has not established a comprehensive and systematic evaluation system to identify and cultivate potential suppliers into strategic partners. The lack of effective communication mechanisms and performance evaluation standards makes it difficult to encourage suppliers to continuously improve and develop towards strategic partners.

3.3. Low Integration of the Supply Chain Information System

The obstacles encountered by D Enterprise in the process of integrating its supply chain information system can fundamentally be traced back to the inadequate planning and lack of foresight during the initial stage of its informatization construction. This deficiency has led to a situation where, in the subsequent stages of system development and implementation, different departments have adopted separate office systems based on their specific needs and operational habits, thereby triggering information silos. The discontinuity and differences between systems have severely restricted the smooth flow of information across departments, making it difficult to achieve the ideal state of seamless collaboration and efficient information sharing. In addition, D Enterprise also lacks unified standards and norms for data management. Different departments often follow their own standards and processes when collecting, processing, and sharing data, resulting in numerous inconsistencies in data formats, naming conventions, storage methods, and other aspects. This not only increases the difficulty of data integration and processing but also may seriously affect the accuracy and reliability of the data.

3.4. Insufficient Intelligence in Supply Chain Information Systems

The lack of intelligent and automated information systems has brought various inconveniences to the operations of Company D. In terms of order processing, Company D still relies on manual operations for order entry, processing, and tracking, which is not only inefficient but also prone to errors. In inventory management, due to the absence of automated monitoring and early warning mechanisms, the enterprise struggles to grasp real-time inventory status, leading to issues such as overstocking, stockouts, and deterioration of raw materials.

This problem stems from the limitations in the company's investment in information infrastructure construction and insufficient adoption of advanced information technologies and equipment. Company D is also facing a shortage of information technology professionals. This gap restricts the enterprise's ability to fully upgrade and optimize existing systems and increases the difficulty of introducing cutting-edge intelligent and automated technologies. The lack of talents has resulted in the enterprise's information system being limited to basic data management and recording functions, making it difficult to enter the advanced application level of in-depth data analysis and decision support [2].

4. OPTIMIZATION MEASURES FOR SUPPLY CHAIN OPERATION MANAGEMENT OF D ENTERPRISE

4.1. Strengthen Procurement Management

In terms of maintaining the continuity of the enterprise's supply chain and product quality, procurement activities play a vital role. Specifically, D Enterprise's current procurement process is complex and inefficient, and there is a lack of strategic cooperation suppliers, resulting in low procurement efficiency. Therefore, D Enterprise urgently needs to strengthen its procurement management system, aiming to ensure the continuous and stable supply of raw materials, absolute reliability of quality, and economic rationality of cost control.

4.1.1. Clarify Approval Time Limits

Procurement is critical for maintaining supply chain continuity and product quality. D Enterprise currently faces issues like a complex, inefficient procurement process and a lack of strategic suppliers, leading to low procurement efficiency. Thus, strengthening procurement management is urgent, with goals to ensure continuous raw material supply, reliable quality, and cost-effectiveness. The existing procurement process of D Enterprise involves fragmented links with excessive manual work and

redundant approvals, causing long cycles and high error risks, such as delayed approvals leading to material shortages or recording errors affecting inventory and settlement. In terms of suppliers, D Enterprise mainly has short-term transactional partnerships, lacking in-depth collaboration. This results in unstable supply—suppliers may prioritize others during tight markets—potential quality issues due to weak supplier motivation, and low efficiency from repeated supplier selection and verification.

To address these, D Enterprise can take steps: optimize the procurement process by cutting redundant approvals and adopting information technology, like an online platform for demand application, approval, and order issuance to speed up processes and enable tracking; build strategic supplier partnerships by evaluating and selecting key suppliers, establishing long-term relations through joint planning and information sharing, such as long-term supply plans and price locking; strengthen cost and quality management via a sound cost analysis mechanism and strict incoming inspection with dedicated personnel, ensuring timely handling of unqualified materials and feedback to suppliers.

4.1.2. Improve the Supplier Assessment and Evaluation Mechanism

D Enterprise should develop a rigorous and comprehensive supplier selection and assessment mechanism. In the selection process, it is necessary to extensively consider the supplier's product quality, reasonable quotation, delivery timeliness, service level and other multi-dimensional performance, and carefully select in close combination with the actual operation needs of the enterprise. In addition, a sound dynamic monitoring and evaluation mechanism for supplier performance should be established to ensure regular review of supplier performance. In the evaluation process, not only should suppliers with consistently excellent performance be commended and rewarded, but also targeted improvement measures should be implemented for those with poor performance [3]. For example, suppliers with an actual assessment score of 60 points or below should be eliminated if necessary, so as to maintain and continuously improve the overall quality and effectiveness of the supplier group. D Enterprise should actively explore ways to establish in-depth strategic cooperative relations, and jointly promote the resilience and competitiveness of the supply chain through shared vision, risk sharing and resource sharing, laying a solid foundation for the long-term stable development of the enterprise.

4.2. Strengthen Informatization Construction

Informatization is a key support for the operation and management of modern enterprises. For D Food Manufacturing Enterprise, strengthening informatization construction is not only conducive to improving the efficiency and accuracy of supply chain management, but also can promote the enterprise to stand out in the fierce market competition.

4.2.1. Introduce Advanced Supply Chain Management Software Tools

To deepen the professionalization and intelligentization of supply chain operation management, D Enterprise should actively introduce supply chain management software and tools. These technical means can effectively promote the automation transformation of supply chain operation management, reduce human interference and errors, and improve operation efficiency. For example, with the help of an automated order management system, enterprises can complete the whole process of order receiving, processing and tracking automatically, greatly reducing the time and cost required for manual operations; furthermore, by using an intelligent warehouse management system, enterprises can realize real-time inventory monitoring and intelligent allocation, rationalize inventory allocation, effectively control inventory costs, and further improve the overall efficiency and response speed of supply chain operations [4].

4.2.2. Strengthen the Recruitment of Professional Talents and Employee Training System

Against the background that D Enterprise has introduced advanced supply chain management systems and supporting tools, since most employees have relatively limited educational backgrounds, it is

particularly important to recruit outstanding computer - major talents and implement a timely and continuous training plan. This measure can not only accelerate the informatization construction of D Enterprise, but also speed up the process of employees' familiarity with new software tools, ensuring that they can effectively use these technical resources, thereby promoting a significant improvement in supply chain management efficiency in the short term. The training program needs to be carefully designed, covering not only the teaching of basic operational skills, but also the integration of simulation drills in actual application scenarios to deepen understanding and improve practical capabilities. In this way, D Enterprise can not only overcome the obstacles in the knowledge structure of human resources, but also stabilize the team's capabilities during the transformation process, and finally achieve the goal of intelligent and efficient supply chain operations.

ACKNOWLEDGEMENTS

The completion of this research could not have been achieved without the careful guidance and support from the School of Economics and Management, Southwest Petroleum University. We also express our gratitude to all colleagues who provided data and suggestions. Hereby, we extend our sincere thanks.

REFERENCES

- [1] Wang Qiuying. Research on Supply Chain Cost Management of Food Enterprises under Omni-channel Retail Model——Taking Enterprise A as an Example [J]. Management & Technology of SME, 2023(15): 102-104.
- [2] Zhang Pengge, Zhang Shuai. Optimization of Food Industry Supply Chain and Logistics Management Strategies [J]. Shanghai Light Industry, 2025(02): 182-184.
- [3] Ma Zhengsen. Construction and Optimization of Quality and Safety Management System in Food Supply Chain [J]. Modern Food, 2024, 30(21): 123-125.
- [4] Liu Zhiwei, Wang Jinghai. Research on Optimization Strategies of Product Supply Chain Based on Logistics Management——Taking Food Industry Companies as Examples [J]. Logistics Sci-Tech, 2024, 47(20): 139-142+164.