

A Report of Study on Optimization Strategy of Foreign Trade Supply Chain Management under B2B Model — Taking Pet Products Market as an Example

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Abstract. With the rise of people's consumption level and the change in consumption concept, the pet economy has become an important part of the social economy, and its vigorous development has brought opportunities for enterprises and society. The traditional management framework of the integrated supply chain, bridging suppliers, manufacturers, distributors, and end-users in the pet market, has persistently failed to adapt to the hallmarks of an efficient, swift, and flexible market environment. Furthermore, ineffective inventory management strategies and the complexities introduced by branded enterprises exacerbate the challenges faced by this traditional model in keeping pace with the dynamic nature of the pet market. This requires optimizing supply chain management, especially the possibility of supply chain management based on big data analysis and Internet of Things technology in the era of digital economy. This report reviews the current situation of the pet market, studies the practical obstacles to the optimization and upgrading of supply chain management in the pet market, and draws a conclusion that the supply chain in the pet market can improve its effectiveness and flexibility through optimization and upgrading under the digital economy. At the same time, it also suggests establishing an effective information sharing mechanism, good partnerships, inventory management optimization, and green supply chain branding. Through these suggestions, enterprises in the pet market can effectively optimize and upgrade the supply chain to adapt to the changing market demand.

Keywords: B2B; Foreign Trade; Supply Chain Management; Pet Supplies.

1. Introduction

The development of technology and the change in consumer behavior in the market have brought new opportunities for the B2B model of e-commerce, which has also brought a series of problems related to supply chain management. The development of foreign trade depends on the development of the global market and the stability of the environment, and its supply chain may have potential market risks. With the change in people's ideas and concepts, pets have gradually become an indispensable member of the pet family [1], and the "other economy" has flourished [2]. Statistics on the value of the pet industry indicate that the market size is expected to grow at a CAGR of 8.7% from 2020 to 2027 [3]. Take the pet care products segment for example, in 2023, the global pet care products market is estimated to be \$30.289 billion and is expected to reach about \$597.51 billion by 2033 [4]. This shows that the pet market has great potential for development. Although the global pet industry is in a booming stage [5], the constant change of industry development drivers has made the pet products market face more and more complex challenges than ever before. As a functional chain connecting suppliers, manufacturers, distributors, and end users, the traditional management model of the supply chain has been difficult to adapt to the characteristics of an efficient, fast, and flexible pet market. Taking the pet supply chain as an example, the situation of the pet supply chain has become increasingly severe due to uncertainties such as the COVID-19 epidemic, natural disasters, and geopolitical conflicts. The sustainable development of the pet supply chain is constrained by the imbalance of the global pet supply chain system, coupled with a variety of factors, such as the unstable supply and demand caused by changes in consumer behavior, the sharp increase in prices affected by the shortage of raw materials, and the lag in shipping compliance influenced by soaring logistics freight rates. However, the development of big data analysis and Internet of Things technology in the



era of the digital economy provides new opportunities for supply chain management, which makes it possible to optimize and upgrade the supply chain. The purpose of this report is to focus on the current situation and problems faced by enterprises in the pet market, and provide suggestions for enterprises to solve the current problems of supply chain management in order to improve the effectiveness and flexibility of supply chain. These problems focus on the difficult to predict consumer demand in the pet market, the lack of a unified information sharing and feedback platform, poor inventory management, brand enterprises, etc. This report is expected to provide practical management tools and strategies for enterprises in the pet market, to build a scientific and reasonable supply chain system that can respond in time and provide some feasible suggestions.

2. Overview of Current Situation

At present, the pet industry has formed a relatively complete and mature industrial chain, including pet trading, pet supplies, pet food, pet medical treatment, pet grooming, pet training and other subsectors. Among them, the pet products industry is an important branch of the pet industry, the main products include pet home leisure products, health care cleaning products, etc. At present, the United States is the world's largest pet consumer market, and Europe and emerging Asian markets are also important pet markets [6]. The deepening of the integration and extension of the pet market industry in the United States has spawned many domestic and cross-border pet product sales platforms, such as Amazon, Walmart, and other comprehensive e-commerce and retail platforms. The large sales platform has become an important sales channel for many pet brands or pet manufacturers, forming product collection and resource integration, and promoting the large-scale development of the pet industry. The US model of upstream and downstream supply chain integration for pet products provides valuable reference experience for other emerging markets. Australia has strict requirements for the quality and safety of pet products, but its pet products import policy is relatively relaxed, so it provides a good development opportunity for overseas brands. China's pet industry has a certain scale, and domestic pet enterprises have risen rapidly, and nearly one million pet-related enterprises have been added within a year [7]. Domestic pet industry manufacturers gradually break the traditional OEM model and directly face consumers by creating their brands [8,9]. Many domestic enterprises, including Petty and Sinopet, have opened the product market through their brands [10,11].

3. Practical Obstacles of Supply Chain Management in the Pet Market

3.1. Consumer Demand is Difficult to Predict

First, consumer psychology is unpredictable, and it is difficult for enterprises to accurately predict their consumer demand. On the one hand, the "2023-2024 China Pet Industry White Paper" shows that the consumption market size of urban pets (dogs and cats) in 2023 will reach 279.3 billion yuan, an increase of 3.2% over 2022. The growth rate of China's pet consumption market is still growing, and the market size is expected to reach 361.3 billion yuan by 2026. On the other hand, affected by the COVID-19 epidemic and the global economic downturn, consumer behavior has gradually changed, from the surge in demand for pet products before the epidemic [12] to the decline in consumer purchasing power, and consumer behavior has become more cautious. It is difficult for pet companies to accurately predict consumer demand, which is likely to lead to insufficient raw materials and spare parts, and it is impossible to increase supply output in the short term. Enterprises have an insufficient understanding of the purchasing behavior and psychological trends of consumers in the market, so they may not be able to grasp the supply chain of some specific pet products promptly.

3.2. Low Logistics Distribution Efficiency

Secondly, in the world, due to the scarcity of raw materials, pet food, clothing, toys, hygiene products, and other products have increased in price to varying degrees. Just as the global shortage of logistics containers during the pandemic exacerbated the shortage of port capacity, the shortage of port

capacity also drove the shortage of containers. The shortage of raw materials caused by the shortage of many logistics transportation processes has become one of the reasons for the continuous growth of product inflation.

3.3. Poor Inventory Management

Moreover, the logistics uncontrollable factors increase, and the performance limitation lags. In the past two years, due to the skyrocketing global shipping orders, extreme weather natural disasters, and other factors, shipping freight soared, and even led to the disruption of shipping capacity, and many companies could not complete the delivery of orders on time. In this case, enterprises may face risks such as poor inventory turnover and return orders due to delivery delays, which will aggravate supply chain management risks.

3.4. Lack of Good Partnership

Finally, the supply chain system of pet products companies is not perfect enough. Taking Chinese pet products enterprises as an example, how to connect suppliers, manufacturers, distributors, retailers, and end users into an organic whole is a big problem. At present, the quality of global pet products raw material suppliers is uneven, and there are product recalls caused by quality control problems. Taking China's pet products market as an example, it lacks a one-stop pet products service platform with unified standards and orderly management, which will be a mainstream trend of supply chain management innovation for pet products enterprises in the future [13]. In terms of procurement processes and production, digitization and innovation, as well as initiatives focused on recycling, waste reduction and conscious consumption, are important for the sustainable development of pet supply chain companies [14].

4. Optimization Strategy Analysis of Supply Chain Management in Pet Market

4.1. Establish an Effective Information Sharing Mechanism

In the supply chain management of the pet market, accurate prediction of consumer demand for pet supply and uncontrollable factors of logistics requires an effective information sharing mechanism, which has become an optimization strategy for the supply chain of the pet market. Enterprises in the pet market can establish a unified information network platform to update and share online and offline information in real-time, such as changes in consumer demand trends in the pet market or logistics risks caused by external environmental influences, to achieve compatibility, safety and real-time characteristics of products supplied in the pet market [15]. There are both competitive and cooperative relations among these enterprises, which achieve win-win situation based on information sharing to a certain extent. Supply chain management requires the characteristics of timely response and collaboration. The information network platform can help the market respond to the changing needs and trends of consumers promptly, and realize the collaborative management of suppliers, manufacturers, warehouses, distribution centers, and channel operators. The supply chain management of the pet market requires enterprises to formulate clear norms and principles for information sharing and updating, to maintain the stability of the market. Some process norms should be determined, such as the frequency, scope, ways, and methods of information sharing and updating.

Meanwhile, the principles of conciseness and ease of operation have also become the aspects that enterprises should pay attention to. For some non-confidential information related to market trends and changes, or the rising prices of pet food, clothing, toys, hygiene products, and other products, as well as poor after-sales management of products, enterprises can ensure the real-time and accuracy of such information, to make adjustments and optimization according to these actual situations. For example, the adjustment of policies and regulations and the adjustment and optimization of supply chain management. For the personnel relationship management of the information network platform, the enterprise should establish an incentive mechanism for information sharing, encourage different departments and individuals to collect and share information on the pet market supply chain, and

reward and motivate departments and individuals with outstanding contributions, improve the enthusiasm and passion of departments and individuals to participate in information sharing and enhance the stability of the supply chain. In addition, enterprises should increase investment in information system construction and network platform construction to ensure the application of new information technology, to promote the transmission and sharing of information [16]. For some information during the COVID-19 epidemic, enterprises should collect relevant data as much as possible, such as inventory information or customer forecasts, to speed up the update of information to the greatest extent.

4.2. Inventory Management Upgrade

According to the overview of the current situation of the pet industry, under the adverse environmental impact, enterprises may face the risk of inventory turnover and refund due to delivery delays, which will aggravate the risk of supply chain management. Inventory management is an important aspect of the optimization strategy of supply chain management. The upgrading of inventory management can be divided into three aspects: joint inventory management mode, digital technology application system, and optimization of collaborative logistics distribution network. As for the inventory management mode, the joint inventory management mode is one of the effective inventory management modes, which means that the inventory plan requires the participation and joint development of suppliers and customers at the same time, to achieve benefit sharing and risk sharing, to solve the inventory turnover and demand amplification phenomenon of the supply chain system and avoid inventory overstocking and stock shortage phenomenon. This model can monitor and adjust the inventory situation in real-time to improve the efficiency of the supply chain. In terms of the application system of digital technology, real-time monitoring and adjustment of inventory require timely follow-up and data collection, and the purchasing behavior of consumers and the trend of market demand also rely on big data analysis to support inventory forecasting. Internet of Things technology and big data analysis provide monitoring and analysis functions for inventory information respectively, thus enhancing the accuracy and timeliness of information in inventory management. The big data analysis technology of inventory management and the Internet of Things technology are connected to the information sharing network platform, and enterprises can use advanced information application technology to accurately and timely forecast and adjust the product inventory of enterprises, to avoid the problem of inventory overhang or shortage caused by uncontrollable factors. Enterprises can establish inventory and logistics visualization systems to improve upstream supply chain management and reduce capital flow pressure.

For the optimization of logistics distribution network, the efficiency of logistics distribution and customer satisfaction affects the effect of inventory management in the supply chain. Some software or systems based on digital technology and artificial intelligence can help to plan the best distribution route, to realize route planning and optimization and improve distribution efficiency. Meanwhile, Internet of Things technology can also track the distribution status of logistics. To timely grasp the delivery information, effective logistics distribution network also helps enterprises to reduce the burden of inventory, and properly solve the problem of inventory pressure, to achieve a good turnover rate of inventory. The logistics distribution system of online and offline channels should realize information sharing, and a unified logistics distribution information service platform can be built so that enterprises can integrate the order information, inventory information, and logistics distribution information of online and offline channels, to choose the appropriate transportation mode, transportation path and transportation time. For inventory management problems caused by some uncontrollable factors, enterprises should establish a good after-sales service mechanism and inventory response mechanism, to reduce customer losses and the possibility of customer satisfaction decline as much as possible [17]. For some inventory during the novel coronavirus epidemic, enterprises should give professional after-sales service statements and timely collect and update inventory information to minimize the relevant losses of enterprises.

4.3. Build Partnerships

According to the above, taking Chinese pet products enterprises as an example, how to connect suppliers, manufacturers, distributors, retailers, and end users into an organic whole is a big problem, which requires enterprises and suppliers, manufacturers, distributors, and retailers to establish a close partnership. Logistics companies, suppliers, and distributors with a good reputation in the industry can help enterprises achieve long-term stability in the supply chain of goods, production, retail, and logistics distribution, to grasp a certain initiative in the market, information sharing, and collaborative operation [18]. Companies should choose partners that match their qualifications, reputation, and service level, and ensure that these partners can provide the resources to support them, especially in an unstable global environment, to achieve win-win results for both parties. For example, the quality of global pet products raw material suppliers is uneven, and sometimes product recalls caused by quality control problems occur. Such unsuitable partners as suppliers will have a damaging impact on the reputation and operation of enterprises. In terms of partnership, enterprises should establish relevant cooperation mechanisms to become the basis for long-term and stable trust cooperation between all parties. The cooperation mechanism stipulates the responsibilities and obligations of the parties, the frequency of regular communication, the establishment of assessment standards and the precautions for consultation, and covers the information sharing and feedback system, to ensure mutual support and trust cooperation between enterprises based on partial information sharing and exchange. The relevant feedback system can help collect and deal with the problems and conflicts in the cooperation of partners, solve the problems and contradictions in the cooperation on time, and strengthen the management and supervision of the cooperation of these partners, to maintain the stability and long-term nature of these partnerships. It is worth noting that some innovative partners can bring new creativity and opportunities, such as pet medical institutions. The cooperation between enterprises and pet medical institutions can provide more extensive and comprehensive medical services for pet customers, and enhance the competitiveness and creativity of pet enterprises.

4.4. Green Supply Chain Branding

Supply chain management branding is an effective way to build supply chain management optimization. The initial idea of enterprises may be to rely on suppliers to sell different products, but with the continuous strengthening of retail power, enterprises have more say in the supply chain and thus decide to get rid of the constraints of the upstream product supply side, to avoid problems in the supply chain price and supply of goods. Enterprises in the pet market can develop, design, and produce related pet products by themselves, and launch their brands, to master the initiative of raw material supply, product production and design, and online and offline operations. For brands, supply chain management ability is the core component of their brand power, and the transformation from channel brand to category brand can help enterprises build brand image and core brand power. For consumers in the pet market, their purchasing behavior tends to be multi-frequency and multi-type product procurement, which provides the possibility for pet companies to design and develop a full range of pet supplies. Enterprises should conduct independent research and development and innovation in raw materials, quality, and types, and create products with new functions and themes, involving various utensils such as pets, toys, clothing, cleaning and electronics, etc., to realize independent research and development and continue to build the brand power of supply chain management of enterprises [19]. In terms of procurement processes and production, digitization and innovation, as well as initiatives focused on recycling, waste reduction, and conscious consumption, are important for the sustainable supply chain of pet products companies. In view of this situation, the measures of green supply chain management should also become a form of branding. Enterprises should pay attention to environmental protection in all aspects of the supply chain, such as the environmental protection of product packaging, the environmental protection of logistics and transportation, etc., which has become an important aspect of the fulfillment of corporate social responsibility and has maintained the social reputation of enterprises to a certain extent.

5. Conclusion

In conclusion, this report studies the relevant content of supply chain management of pet market enterprises under the current situation that the pet economy has become a consumption trend in today's economic society, and points out that the supply chain management of pet products enterprises under the B2B model has practical obstacles such as difficult to predict consumer demand, backward inventory management, imperfect application of digital technology and lack of unified network information platform. In view of the above problems, this paper gives the following scientific and sustainable coping strategies. First, if enterprises want to seize the opportunity, they need to grasp the market demand in time, predict and identify the consumption trend as early as possible, and plan it into supply and production. In this regard, enterprises should take customer demand as the guidance, to improve quality and efficiency as the goal based on the establishment of information sharing platform mechanism and a series of methods to share real-time market information, monitor the real-time status of the supply chain, so that enterprises can effectively and low-cost to provide customers with high-quality products and services. Second, given the two major problems of global raw material prices and logistics capacity shortage, enterprises should adopt information management technology to establish inventory and logistics visualization systems to improve upstream supply chain management, reduce capital flow pressure, upgrade inventory management, and invest in the application of joint inventory management mode, digital technology application system and collaborative logistics distribution network optimization. Third, for all aspects of supply chain management, enterprises should establish close partnerships with suppliers, manufacturers, distributors, and retailers with good reputations and high service standards to maintain the long-term stability of the supply chain. Fourth, private label companies should aim to brand their supply chains. From the perspective of brand and capital interests, brand acquisition, investment in factory construction, channel integration, etc. have become a new strategic direction for domestic and foreign pet enterprises. Green supply chain management has also become a requirement of corporate social responsibility.

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