

Application And Analysis of Flexibility in Cross-Border E-Commerce Supply Chain: A Case Study Of SHEIN

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Abstract. This study takes the Chinese fast-fashion cross-border e-business brand SHEIN as a case object and discusses the application and effect of flexible supply chains in its supply chain management. Firstly, it introduces the basic concept and advantages of a flexible supply chain. It also analyses the current status of SHEIN's current supply chain digital system and software construction and the existing problems. Secondly, it explains how SHEIN's flexible supply chain can help the brand improve its operation capability and profitability and provides suggestions and methods for other same time of enterprises to improve their competitiveness by using flexible supply chains through case analysis. Subsequently, the planning, procurement, production, distribution and return aspects of SHEIN's supply chain are analyzed in depth using the SCOR model. Finally, SHEIN's application of a flexible supply chain is summarised, pointing out its great success and challenges, as well as the problems and development trends facing the fast fashion industry.

Keywords: Cross-Border E-commerce, Supply Chain Flexibility, SHEIN.

1. Introduction

The demand in the market often changes rapidly with popular trends, which in turn affect the production of the supply chain, causing problems such as mismatched inventory and demand, delayed response speed, and increased communication costs. A flexible supply chain is a supply chain that adapts flexibly to changes in demand, reflecting its adaptability and agility to market demand changes. Global competition is fierce, and the supply chain's efficiency often determines enterprises' market share. A flexible supply chain is an important indicator for evaluating the supply chain. SHEIN is a Chinese fast fashion e-business brand. 80, and it is currently the largest cross-border e-commerce fast fashion brand in China.

With the global economic recovery, it is worth studying how flexible supply chains can improve production efficiency and optimize chain paths. The characteristics and theoretical achievements of the flexible supply chain, analysis of the application of flexible supply chain in SHEIN, elucidation of how flexible supply chain helps the brand improve operational capabilities and profit margins, and through this case, Suggestions and methods for other cross-border e-business companies to enhance their competitive edge by utilizing flexible supply chains.

Research on flexible supply chains first emerged in the economic field from the perspective of enterprise costs, introducing flexibility into manufacturing systems and referring to the ability to adapt to environmental changes effectively [1]. The definition of flexibility is the foundation of flexibility research, and many scholars have analyzed and explained the meaning of flexibility. The ability of the supply chain to respond to customer demands is called flexibility, which mainly includes production flexibility and manufacturing flexibility [2]. Most scholars mainly study limited flexibility and define it, placing it between complete flexibility and not, which can improve supply chain performance and save costs [3]. The above scholars have different definitions of supply chain flexibility. Still, they all share one thing in common: flexibility and change are closely related, and scholars believe that supply chain flexibility includes the organization itself and the adaptability of supply chain members. With the continuous maturity of flexibility research, the classification of flexibility is becoming more specific. Supply chain flexibility is gradually divided into process, resource, and product conversion flexibility [4].

With the development of supply chain management, a method of evaluating supply chain flexibility based on orders and the relationship between buyers and sellers has gradually been recognized, and some scholars measure it by designing scales or consulting expert opinions [5]. Based on the classification of different individuals, the various elements that enhance supply chain flexibility will be linked to their corresponding components of supply chain flexibility, enabling us to have a deeper understanding of flexibility.

2. Case Description

Cross-border e-commerce platforms have developed rapidly during the pandemic, mainly due to their significant reduction in entry barriers and risk costs for small and medium-sized enterprises to participate in international trade, thereby entering domestic and international markets faster and obtaining the same market competition opportunities as large enterprises [6]. SHEIN is a Chinese fast fashion cross-border e-commerce brand. These products are sold in over 80 regions, and it is currently the largest cross-border e-commerce fast fashion brand in China. In terms of management and operation, SHEIN continuously innovates its technical equipment and operation mode. At first, most clothing was sold through third-party platforms in regions such as the United States and Europe. Then, independent websites were established to sell independently designed and processed clothing with the continuous expansion of overseas scale. SHEIN is also continuously building and improving its supply chain ecosystem and conducting digital marketing around social platforms.

SHEIN's supply chain model is summarized as small order quick return, which means small batch first order. Some even list design images and wait for orders to arrive before production. SHEIN's supply chain and strong digital capabilities can capture consumer demand promptly and provide feedback on procurement, production, logistics, and other links. The advantages of this supply chain model are mainly reflected in the ability to quickly adjust the supply chain production strategy based on customer purchase feedback, minimize inventory accumulation, increase production of "hot items" through terminal data feedback, and quickly return orders to achieve maximum profit. SHEIN promotes internal supply chain informatization and provides factories with digital manufacturing systems. SHEIN uses a digital system to connect all processing factories, update market trends in real-time, and produce quickly according to order quantities, thereby maintaining an extremely fast updating speed, meeting consumer demand for styles, and forming a long-term attraction to consumers.

3. SCOR Model Analysis

The SCOR model can provide a reference for the field of supply chain management and can be used in supply chain operations across different industries. The supply chain process is divided into five parts: plan, source, make, deliver, and return, which are described at three levels: supply chain division, configuration, and process elements.

3.1. Plan

Digital intelligence has become the key competitiveness of enterprises in the Internet era. At the same time, data sources cover the digital footprint of personal, social and commercial activities, including online browsing records, personal location information, shopping payment information, social media information, etc [7]. SHEIN relies on advanced algorithms such as big data and cloud computing to capture real-time search clicks and product purchases from mobile apps, shopping websites, and other users, analyze and predict consumer preferences, guide research and development design, and use AI technology to create a design assembly line, quickly combine popular elements, produce design drafts, and ensure product design is consistent with consumer trends through reasonable procurement, inventory, and transportation plans. At the same time, the total cost of the supply chain is minimized as much as possible, achieving a low-cost, high-profit situation.

3.2. Source

SHEIN, backed by the clothing industry cluster in the Pearl River Delta, has a unique competitive advantage. At the same time, its strong scale advantage reduces the bargaining power of suppliers. To achieve “small order quick response”, SHEIN has established a B2B supplier platform - Xiyin Taoliao - and is recruiting suppliers widely. In addition, in order to maximize efficiency, SHEIN has developed a cloud factory platform order-grabbing model similar to Meituan delivery drivers and Didi drivers, which facilitates suppliers to compete for orders fairly based on their actual situation. SHEIN fully understands the importance of industrial chain cooperation and, through digital empowerment, shares its technological advantages and flexible supply chain models with supplier partners on the SHEIN chain. With the assistance of SHEIN, suppliers have successfully upgraded from traditional production factories to digital intelligent factories, significantly reducing material waste and production cycles.

3.3. Make

In terms of production management, SHEIN implements B2B and C2M business models through the platform and implements the construction of digital supply chains. The factory can directly receive orders issued by SHEIN on the system. SHEIN directly controls the production line through the system, assigns work, calculates workload, pays wages and other tasks to workers, and achieves penetrating process management of the factory and workers. SHEIN R&D Center has over 300 digital assistance systems covering various stages of production and sales, completing the full digital connection and delivery of the internal supply chain, product, and R&D Center.

3.4. Delivery

In order to reduce logistics costs and improve the logistics system, SHEIN has specifically established Guangzhou Zhuotian International Freight Forwarding Co., Ltd. The company handles the front-end delivery of SHEIN products, while local third-party freight companies in various markets handle the terminal freight process. SHEIN uses its high-quality Internet technology and big data algorithm to optimize the logistics route and continuously improve the distribution scheme. With overseas markets with slightly different facility environments, SHEIN has developed local delivery methods that match them. For example, SHEIN adopts two delivery methods in the US market: third-party standard and express delivery. This ensures that overseas users stay within 14 days from official order placement to receipt. A reasonable and efficient logistics system has laid a solid foundation for SHEIN to become a unique presence in fast fashion clothing today.

3.5. Return

Due to a large number of suppliers and different production batches, the quality of clothing varies. Returns are a common phenomenon in the clothing industry. With the high return rate of fast fashion products and the long logistics time at home and abroad, SHEIN provides relaxed return conditions and promises to return within 45 days. SHEIN has established overseas transit warehouses specifically responsible for goods transfer and handling returns in its main sales markets, separating shipping and returns, and improving the efficiency of all aspects of commodity transactions.

4. Discussion

The application of SHEIN in supply chain flexibility not only effectively enhances the connectivity and integration between different business sectors of enterprises but also enhances the efficiency of enterprise business expansion and service innovation, forming new formats and models for enterprise development and operation. At present, on the Trustpilot website, consumers have given SHEIN over 100000 reviews. Despite severe polarization in reviews, the overall rating is 3.9 out of 5. It can be said that SHEIN has achieved tremendous success in terms of both development scale and user reputation. SHEIN has developed rapidly in the short term during the pandemic, and its supply chain

flexibility strategy has provided strong technical support for its innovative development. The development of the fast fashion clothing industry during the epidemic has also exposed some problems. Due to the decentralization of procurement and sales markets, the delivery time of fashion clothing products is long, exposing drawbacks such as the insensitivity of the clothing supply chain. It is also pointed out that the fast fashion clothing industry faces various competitive pressures in terms of product prices and product novelty [8]. At the same time, the development of the fast fashion clothing industry has caused serious damage to the natural environment, with a large amount of production and consumption leading to large-scale waste, causing a heavy burden on the social environment. According to current research, fast fashion clothing products have problems such as poor quality, insufficient supply chain response, inventory backlog, environmental pollution, and serious brand plagiarism and homogenization [9, 10]. Although SHEIN has a high advantage in creating fashion while challenging H&M, Zara, and others, she also constantly faces infringement disputes due to suspected counterfeiting and plagiarism issues.

American direct-selling jewelry brand Kikay has sued SHEIN for alleged counterfeiting of products. Kikay's co-founder Quinn Jones has explicitly stated that SHEIN's business model itself is inherently brutal [11]. In recent years, more fast fashion brands have invested more funds in sustainable products and supply chains. The Zara website lists a timetable for achieving environmental indicators, while H&M launches a 100% biodegradable product line. However, SHEIN's performance could be better. A survey conducted in Canada in 2021 found that the products sold by SHEIN contain excessive levels of toxic chemicals. Under the pressure of globalization and global industrial chain restructuring, enterprises should pay more attention to the updates and iterations of supply chain technology. Only in this way can more small and medium-sized foreign trade enterprises safely go abroad.

5. Conclusions

Research shows that through a flexible supply chain, SHEIN not only effectively improves the connection and integration between various business segments of enterprises but also enhances the efficiency of business expansion and service innovation, forming a new pattern and mode of enterprise development and operation. The development of the fast fashion apparel industry has also caused serious damage to the natural environment, with mass production and consumption leading to large-scale waste and placing a heavy burden on the social environment. To sum up, as globalization and the pressure of global industrial chain restructuring increase, enterprises should pay more attention to the updating and iteration of supply chain technology; only then can more small and medium-sized foreign trade enterprises safely go out of the country.

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