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The Current Situation and Optimization Path of Enterprise Supply Chain Management Construction in the Context of Digitalization

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Abstract: The advancement of information technology has resulted in a rapid rise of a new phase of technical and industrial revolution, propelling the global shift from an industrial economy to a digital economy at an accelerated rate. Digital transformation has become an irreversible and pervasive tendency in contemporary society. Despite the significant growth of China's economy, the industrial supply chain is not operating at its highest efficiency. To achieve sustainable cost reduction and efficiency, enterprises need to promote digital transformation and supply chain upgrading. By doing so, enterprises can optimize resource allocation among different links in the supply chain and enhance the quality of their development. This study conducted an investigation of the value benefits, problems, and difficulties of enterprise supply chain digital transformation, using Jingdong as an example. The following article aims to provide a credible reference for organizations by discussing the successful paths and measures of digitizing the supply chain, using Jingdong's experience and activities in supply chain digital transformation as a reference.

Keywords: Digital transformation, Supply chain management, JD Group Inc.

1. Introduction

The advancement of information technology and the widespread adoption of digitalization are causing a shift in business supply chain management. A digitalization-based networked supply chain model is replacing the classic linear supply chain model. In 2020, the digital-added value of China's sectors amounted to 31.7 trillion yuan, representing 80.9 percent of the digital economy and 31.2 percent of the country's GDP. Industrial digitalization is a robust force that drives the growth of the digital economy. It involves the complete transformation and enhancement of various traditional industries using advanced digital technologies. This transformation occurs from various angles and covers the entire process, resulting in a shift towards collaborative upgrading from individual improvements to the development of industrial clusters [1]. Based on the Dell Technologies Digital Transformation Index study, China's enterprises experienced significant changes in their digital landscape between 2016, 2018, and 2020. During this period, a considerable number of enterprises that were previously falling behind in digital transformation started catching up and actively engaging in digital initiatives. Simultaneously, the proportion of digital leaders has not experienced a

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substantial increase over the past four years, suggesting that attaining a high level of digitization and digitalization across the entire supply chain remains a challenging and protracted endeavor.

China's comprehensive industrial system, encompassing all industrial categories, offers ample opportunities for the advancement of enterprise supply chain management. Chinese firms are capable of implementing closed-loop management of the entire industrial chain, from raw material procurement to product manufacturing, sales, and after-sales support. This approach enhances the controllability and synergy of the supply chain. Simultaneously, Chinese enterprises are enhancing the innovation capacity of the industrial chain supply chain. This is achieved by implementing advanced information technology and intelligent equipment, which enables supply chain visualization, intelligence, and automation. By analyzing data and utilizing prediction models, they gain a better understanding of market demand and supply chain risks. Consequently, they make more precise decisions, enhance supply chain flexibility, and improve response speed.

Chinese firms may achieve high-efficiency supply chain operations, boost their competitiveness, and contribute to sustainable development by utilizing a comprehensive industrial system, continuously enhancing their innovation potential, and actively promoting green transformation. Nevertheless, despite the rapid advancement of digital transformation and the increasing intensity of global competitiveness, Chinese firms continue to encounter obstacles such as limited adoption of digital technology, information security vulnerabilities, and the need for organizational restructuring. To improve the efficiency and competitiveness of supply chain management, it is necessary for them to actively engage in innovation and adapt to new technology.

Therefore, this paper will analyze the strategic and operational challenges of using digital technologies to enhance supply chain management. The research will involve a literature study and case study to evaluate the current effectiveness of digital technologies in the supply chain. It will also identify the main obstacles in implementing these technologies and propose strategies and recommendations to enhance supply chain management.

This paper examines the role of digital transformation in enterprise value creation by analyzing the supply chain digital transformation case of the well-known domestic Internet enterprise Jingdong Group. It is based on supply chain theory, the current status of digital transformation research, and existing research results. The paper also proposes a development plan and implementation program to address the current problems that still exist. This not only serves as a guiding principle for the future digital development of the Jingdong Group, but it can also provide a reference for other companies in the industry that have similar characteristics to the Jingdong Group.

2. Relevant Studies

2.1. Digital Transformation Drivers

Companies can strategically reinvent themselves through digital transformation, which has been extensively examined by scholars to understand the motivations behind it.

Wu Wuqing and Tian Yajing argued that improving the internal management of enterprises and enhancing their operational efficiency is one of the purposes of digital transformation [2]. Yuan Chun and Xiao Tusheng identified transforming traditional kinetic energy and developing new kinetic energy as one of the motivations for digital transformation [3]. Yin Zhendong and others argue that changes in economic activities and social interaction methods drive the further development of digital transformation [4]. Chenyu Zhao states that enterprises can use digital transformation as a primary tool to achieve high-quality development [5]. Qi Yudong and Xiao Xu pointed out in their study that enterprises face many challenges for survival and development, and how to improve the competitive advantage in the market is a great concern for enterprises, and digital transformation is the best tool to help them solve this problem [6].

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2.2. Digital Transformation Path

Over the past decade, both domestic and international researchers have been researching ways to integrate digital technology into enterprise business activities to achieve enterprise digital transformation. Koo et al., highlighted that China's conventional manufacturing sector is encountering significant challenges related to over-production capacity, imbalanced structure, and inefficient utilization of resources. Hence, it is imperative to implement digital technology across the entire manufacturing industry, encompassing production, sales, and other relevant sectors. This will enable the integration of intelligence throughout the entire process, spanning research and development, design, production, sales, and service. Consequently, it will facilitate the industry's transformation and advancement [7]. Ji Feng et al. also agrees with this perspective and have classified the components that influence digital transformation using rooted theory methodologies. They have identified four distinct paths of transformation. He asserts that businesses can achieve Internet transformation by implementing marketing model innovation, product model innovation, business model innovation, and organizational operation model innovation [8]. Xing Jihong argues that the advent of "Internet +" has significantly impacted the functioning and growth of conventional businesses. She suggests that traditional enterprises should engage in business model innovation by leveraging intelligent outputs, networked activities, and the establishment of intelligent 020 platforms and big data systems to facilitate digital transformation [9]. In the digital economy era, traditional industries encounter numerous challenges. To achieve sustainable development, Lv Tie suggests focusing on three key areas: intelligent manufacturing, industry platform empowerment, and park ecological construction [10]. Jiaji et al. highlighted that manufacturing companies can accomplish digital transformation through the implementation of strategic changes in their industrial layout, restructuring their R&D department's framework, modifying production and sales procedures, and executing strategic reforms that prioritize people [11].

3. The Digital Transformation of the Jingdong Group Case Introduction

3.1. Introduction to the Jingdong Group

Jingdong is precisely positioned as a leading e-commerce company "relying on the innovation and services guided by the supply chain" and has become the most efficient company in the industry by its unique logistics network and excellent supply chain integration. In August 2019, the Ministry of Science and Technology (MOST) integrated Jingdong into its AI innovation platform, standing at the forefront of the development of smart AI. Forefront, promoting the long-term development of China's intelligent supply chain field. It can be seen that Jingdong Group's supply chain management is the leading level and iconic product in China's e-commerce industry.

3.2. Journey and Stages of Digital Transformation of Jingdong Group

The development of digitization under the supply chain management of the Jingdong Group has taken place in the following four periods.

The first one is start-up period (1998-2006). Jingdong was founded in 1998 in the Zhongguancun Overseas Market, and launched its self-operated website in 2004, completing its first step into the field of e-commerce.

The second one is booming development period (2007-2010). In 2007, it began to build a logistics system, and in 2010, it entered B2C. Jingdong's full range of categories was gradually improved, and it gradually transformed itself into a comprehensive e-tailer.

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The third one is period of capitalization and strategic layout (2012-2016). Jingdong began to expand the group's strength and influence through acquisitions, investments, and strategic cooperation, and provided third-party logistics services for the first time.

The forth one is comprehensive transformation period (2017 to present). In 2017, Jingdong comprehensively used new technologies to build a smart supply chain system, deeply optimizing the digital transformation of enterprise supply chain management from the perspective of the overall social supply chain, and promoting cost, efficiency, and experience improvement.

4. Digital Transformation Case Study of Jingdong Group

Jingdong's supply chain has evolved from operating a single warehouse to managing many warehouses in China. Currently, it has transitioned into the era of integrating a multi-platform omnichannel supply chain and implementing C2B (or C2M) reverse customization. Jingdong Group has achieved nationwide coverage in terms of supply chain infrastructure. It operates millions of self-managed items, serves over 500 million users, and connects millions of stores across the country to provide consumers with an exceptional experience. Jingdong collaborates in promoting an omnichannel operational strategy that combines brand-owned physical stores and Internet superstore networks to achieve seamless integration between online and offline operations. Currently, Jingdong has established partnerships with renowned brand manufacturers such as Coca-Cola, Yili, Mengniu, Wal-Mart, China Resources Vanguard, and other supermarket channels in the supply chain. When consumers place an order on Jingdong, if they are located in an area covered by these brand shops, they can expect their order to be delivered within 30 minutes.

4.1. Digital Transformation Path for Jingdong Enterprise

4.1.1. Digital Transformation of the Logistics Chain

The utilization of data in logistics management enhances operational efficiency. Jingdong Logistics employs advanced digital technologies, including artificial intelligence (AI), big data, blockchain, and the Internet of Things (IoT), to create a distinctive digital management system. This system comprises five key components: warehouse management system (WMS), transport management system (TMS), order management system (OMS), and supply chain control tower. The Warehouse Management System (WMS) allows staff to track inventory and worker movement in real time, enhancing operational efficiency through visualization. By integrating Cloud Warehouse with the WMS, external suppliers can collaborate with Jingdong by sharing the WMS. The management data they give will enrich the WMS and facilitate data synergy. A Transportation Management System (TMS) may autonomously allocate both internal and external transportation assets by utilizing the data provided in the order form. It accomplishes this by optimizing routes and continuously monitoring the entire process in real time, hence minimizing the need for human involvement. This ultimately leads to enhanced efficiency and cost reduction. The Order Management System (OMS) may be easily integrated with various order interfaces, including customer apps, websites, and application applets. This enables customers and end-users to track each order in real time. This enhances the efficiency and quality of service. By systematically integrating and analyzing data from various systems such as WMS, TMS, and OMS, people can quickly obtain the most up-to-date information on the status of the supply chain. Then people use predictive decision analysis to identify potential risks of supply chain disruption at an early stage. This allows for effective coordination between different departments. The firm maximize the efficiency of the supply chain to finally meet the needs and desires of consumers [12].

The enterprise uses digital algorithms to make intelligent decisions and optimize configuration planning. Jingdong utilizes artificial intelligence and big data analytics to generate a significant

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volume of transportation data. By employing proprietary algorithms, it offers managers intelligent decision-making support, conducts real-time data analysis, and optimizes network density and equipment utilization. This ultimately leads to a substantial improvement in customer quality of service and operational efficiency. By utilizing sophisticated route planning algorithms, the most efficient route can be precisely determined by considering multiple factors, including traffic conditions, distance, weather, and distribution stations. This is combined with predictive analytics to accurately optimize loading and unloading sequences, shipment frequency, and shipment volume. As a result, the operational efficiency of the logistics network is enhanced, leading to reduced economic costs. Merchants can employ digital algorithms to analyze historical sales records or big data on sales patterns in similar product categories. This analysis helps merchants precisely identify and optimize stock allocation across regional warehouses. As sales activity takes place and transaction data is collected, the data is then used to enhance the algorithms, enabling them to better forecast regional demand [13].

4.1.2. Digital Transformation of the Sales Chain

Jd.com captures user trajectories while conducting accurate user analysis. Jingdong Mall has utilized deep learning and big data technology to construct consumer buying behavior models. These models are used to categorize clients to more precisely deliver personalized marketing and exclusive preferential purchasing options. Through the analysis of click data and click groups of advertisements using big data, Jingdong has developed precise models for recommending and sorting advertisements. These models can effectively determine which advertisements consumers prefer and which types of advertisements are most effective, thus reducing wasted advertisement investment and lowering sales costs.

The C2M reverse customization project facilitates the transmission of customer requirements to manufacturers further up in the supply chain. This process aids in the advancement of product development and update iteration, ultimately enhancing the success rate of new launches [14]. Jingdong facilitates P&G in achieving precise alignment of supply and demand, extensive collaboration in research and development and production, significantly enhancing the enterprise's responsiveness to market dynamics, and reducing the new product development cycle from the initial 18-24 months to 9-12 months. Furthermore, the C2M supply chain operates on a zero inventory model where orders are placed first and production occurs later. This has resulted in a reduction of 10 days in inventory turnover and significant cost savings in warehousing. Additionally, 99.5% of orders can be automatically reconciled, leading to a 65% improvement in end-to-end operational efficiency. As a result, Jingdong has saved 28 million yuan in warehousing costs [15].

4.1.3. Digital Transformation in Procurement

Jingdong has launched the Zhizhen Chain Cloud Signature Platform, which utilizes blockchain technology to guarantee the security, integrity, and immutability of procurement data and information. This is achieved through the use of blockchain's digital deposit, time stamps, and other technical features. Enterprises can utilize blockchain technology to monitor and evaluate suppliers' service information in real-time, ensuring its integrity and immediate updates. By conducting thorough data collection, analysis, statistical analysis, and extensive research, businesses can more precisely identify the most suitable suppliers and make more informed procurement decisions based on their supply chain data. This enables them to better achieve their procurement objectives and effectively reduce the costs associated with information asymmetry.

Using modern big data technology, Jingdong can leverage its extensive historical data to gain intuitive insights into the procurement process. Additionally, the company can instantly alter its

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procurement plan based on the obtained data, resulting in cost reduction. Jingdong Mall utilizes enterprise big data and the supplier exchange information system to thoroughly evaluate suppliers in the procurement process. This evaluation includes factors such as credit rating, cost-effectiveness of goods, delivery speed, prepayment ratio, stability of cooperation, and probability of delayed delivery. By conducting this in-depth analysis, Jingdong Mall aims to better cater to the needs of purchasing customers and significantly reduce the costs associated with information search, decision-making, and negotiation in the procurement process [16]. Simultaneously, it significantly decreases the expenses associated with information retrieval, decision-making, and negotiation during the procurement procedure. This enhances the customers' ability to negotiate and grants them a more convenient procurement experience.

Besides, Jingdong has introduced an automated replenishment system that utilizes big data analysis. This system is built upon the analysis of storage data, historical sales data, and market trend data for different products. Its purpose is to efficiently address the challenges associated with replenishing product varieties and quantities. The model establishes a safety threshold for each product and instantly notifies the Purchasing Department when the quantity in stock falls below this level, allowing for timely restocking. Simultaneously, this system has the capability to automatically detect underperforming and expired products and proactively implement promotional strategies, such as offering discounts, to enhance inventory turnover and streamline warehouse management. The automatic replenishment system of Jingdong Mall offers robust assistance to the procurement process, successfully enhancing bargaining capacities and substantially reducing negotiation expenses. Additionally, it efficiently alleviates the inventory burden caused by surplus merchandise.

4.2. Path Analysis of the Impact of Digital Transformation on Value Creation of Jingdong Group under the Perspective of Supply Chain Management

4.2.1. Value Creation Path Based on Coordinated Supply Chain Management

Jingdong's "integrated supply chain" relies on digital intelligence technology and encompasses a comprehensive range of service services. Integrating supply chain planning, design, and implementation with big data and artificial intelligence allows for a comprehensive approach to designing and implementing the supply chain. However, with the use of digital intelligence technology, the integration of different components of the supply chain is achieved, both before, during, and after the supply chain process. This allows participants to offer customers personalized solutions through internal collaboration, resulting in reduced coordination costs and quicker response times. The system is comprised of six distinct areas: supply chain planning, forecasting and scheduling, supply chain middle office, digital warehousing, intelligent transport, and just-in-time delivery.

In 2019, Jingdong Group inaugurated and built China's first 5G intelligent logistics demonstration park, enhancing supply chain collaboration through the implementation of artificial intelligence. In 2020, despite the negative growth of competing companies, the extremely efficient supply chain integration structure of the company allowed it to obtain a significant competitive advantage and generate positive corporate profit growth, thanks to the influence of the new crown outbreak. Since initiating its digital transformation, Jingdong Group has successfully expanded its integrated supply chain services through Jingdong Cloud, serving thousands of key customers. These services primarily cater to various industries such as fast-moving consumer goods, apparel, 3C electronics, household appliances, automotive aftermarket, fresh produce, and more. Companies in the forefront of their respective industries, such as Nestle, Xiaomi, and SAIC-GM-Wuling, have enhanced their level of intelligence and automation by utilizing the integrated supply chain solution provided by Jingdong Cloud. In addition, they utilize service products such as warehousing, transportation, express delivery,

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cloud warehouse, and technology to facilitate the integration and optimization of supply chain logistics across a broader range of industries, both upstream and downstream. This aims to foster the growth of the real economy and strengthen the resilience of industrial digitalization [17]. By implementing collaborative supply chain management, enterprises can enhance their marketing channels and modes, thereby improving their brand image and reputation. This also leads to the gradual development of corporate culture changes and has a certain impact on the enterprise's market position [18].

4.2.2. Value Creation Path Based on Supply Chain R&D Innovation Management

Jingdong Group has allocated significant financial resources towards research and development, specifically focusing on technology innovation. This investment is aimed at creating value and establishing a strong basis for future digital transformation. During the digital transformation, the company has consistently augmented its investment in research and development (R&D) and innovation. Additionally, it has established multiple digital supply chain initiatives. As an illustration, the Jingdong Group has constructed a sophisticated logistics park and made substantial investments in a plethora of robotic equipment under the framework of the Jingdong Cloud system. This greatly encourages the firm to establish an impeccable supply chain management system, while also driving the ongoing enhancement of its level of automation and intelligence. Furthermore, to fully engage in the pursuit of research and development, Jingdong Group has made substantial investments in both human resources and financial resources throughout the years [19]. As a result, Jingdong Digital Science has been established to specifically facilitate this endeavor. This indicates that the significant expenditure in research and development by Jingdong Group is primarily motivated by the company's digital transformation efforts.

Furthermore, Jingdong Group's endeavor to establish collaborations with prominent scientific research institutions demonstrates its strong determination to enhance its innovation capacity. This, in turn, has a direct impact on the efficiency of the company's financial indicators, as well as influencing the overall efficiency of the enterprise's financial indicators to some extent.

4.2.3. Value Creation Path Based on Supply Chain Operation Management

Jingdong Group has expedited the dissemination of information throughout the organization by implementing a management approach that streamlines the organizational structure. As a result, the efficiency of the organization's decision-making and management has been enhanced. Jingdong has successfully implemented a more efficient and effective organizational structure through many structural adjustments. This has enhanced the organization's ability to compete in the market and significantly contributed to the achievement of its strategic goals. Jingdong Mall has transitioned from vertical integration to a flatter organizational structure. This shift has involved the creation of a centralized platform that incorporates supply chain technology, marketing, services, and basic platform business [20]. As a result, the company has achieved more efficient organizational operations. Furthermore, in light of the current circumstances where communication within the organization is easier, Jingdong Group has expanded the scope of horizontal management to adapt to the rapidly evolving market conditions. This has made the organization more adaptable, flexible, and innovative, allowing for the optimal distribution of resources and the advancement of organizational management efficiency. The supply chain operations management of the Jingdong Group significantly decreases the operating expenses in production operations, which also has a certain influence on the efficiency and effectiveness of the subsequent analysis of corporate financial indicators.

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4.3. Challenges in Jingdong's Digital Supply Chain Logistics Management

The heavy asset operation model of self-built logistics has a long payback period. Jingdong's self-built storage and logistics operation model has certain drawbacks, including the significant running costs that deplete substantial cash and resources, thereby imposing a substantial burden on the enterprise's economic efficiency. However, the complex and burdensome infrastructure of the asset-heavy self-built warehousing and logistics model has impeded its ability to quickly plan and establish operations in rural and remote areas, as well as in international markets. This has hindered the rapid improvement of its logistics infrastructure and the swift growth of its business, as the market dynamics change rapidly.

Data are dispersed. Scattered data can result in issues such as unequal distribution of information, challenges in obtaining information, and inefficiencies in processing information. Supply chain management encompasses multiple components, including procurement, production, inventory, sales, and more. Each component has its own data sources and techniques for processing data. The presence of diverse data sources results in data dispersion.

5. Optimisation Suggestions

5.1. Optimisation Recommendations for Collaborative Supply Chain Management

Firm can build supply chain partners to achieve deep synergy between the platform and upstream and downstream. Jingdong Group can enhance supply chain collaboration by implementing effective supply chain management strategies. This will involve expanding the scope and depth of collaboration and leveraging shared interests to achieve optimal efficiency and synergy among supply chain partners. Ultimately, this will improve the overall efficiency of supply chain management. In order to overcome the challenges in the collaboration between core firms and their upstream and downstream partners, Jingdong can develop strategic and long-lasting partnerships with a larger number of dealers. This will enable them to achieve a deeper level of collaboration in the supply chain by aligning their mutual interests. Jingdong can assist upstream enterprises in implementing reverse customization C2M by utilizing big data to track customer demand [21]. This enables the research and development of new products and the iterative updating of old products. In the downstream of the supply chain, Jingdong utilizes integrated channels across the country to support dealers in implementing positioning marketing. Jingdong Group strengthens its capacity to generate value by fostering deep collaboration with its suppliers and customers.

A logistics infrastructure combining self-built and integration can be built. Jingdong Group's expertise in supply chain management lies in its own integrated logistics strategy for warehousing and distribution [22]. Nevertheless, the substantial initial expenditure required for constructing self-built warehouses and logistics facilities often hinders the ability to keep pace with the rapid growth of the organization. To mitigate the risks associated with investing in warehousing and logistics parks, and to facilitate the growth of the logistics business without hindering the expansion of Jingdong Group, a collaboration can be established with third-party logistics providers that meet Jingdong's logistics service requirements through integration and resource sharing. This collaboration would result in the establishment of a comprehensive logistics service that can cater to various warehousing needs, possesses robust supply capabilities, and is supported by a sophisticated cloud-based logistics infrastructure [23]. This would enhance Jingdong's ability to offer comprehensive services to its industry customers and consequently improve its capacity to create enterprise value.

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5.2. Suggestions for Optimising Technological Innovation in the Supply Chain

Improving supply chain data integration capabilities is important. Data collection ranges from point to point, from core enterprises to upstream and downstream, from single purchase data to comprehensive consumer habit analysis data, and from data on each consumer to data on the entire database. This enables a fuller grasp of the supply chain management situation and real-time monitoring. In addition, supply chain management can apply the platform's big data system to enterprise-assisted decision-making, such as by tracking orders in real-time, controlling inventory and warehousing and distribution, and making timely processing. More use of data to the future outlook and product development, rather than just historical summary and performance evaluation. The integration and processing of data, accurate positioning, and improve the usefulness of the information, can make the enterprise value creation ability more excellent.

5.3. Recommendations for Optimising Supply Chain Operations Management

Jingdong Group could consider establishing a customer-centric organizational structure, allowing each department to operate as a boundaryless digital organization. This will enable the company to implement organizational innovation and management while keeping a unified approach to overseeing the digital supply chain. Furthermore, it is advisable to establish a Jingdong Intelligent Supply Chain Expert Committee or a dedicated research institution to focus on researching and providing guidance for the advancement of Jingdong Group's intelligent supply chain operations. This would involve developing a technical system, and standard system, and addressing other crucial aspects to fundamentally enhance the company's ability to create value.

The implementation of a diversified development mode of operation is crucial for the continued growth of the Jingdong Group. A fair and unbiased enterprise promotion mechanism plays a particularly significant role in this regard. In China's e-commerce platform, particularly in the service-oriented sales product industry, the overall competence of frontline enterprises and their employees directly determines the quality of the entire enterprise's operation and service level. This is a crucial factor in building a strong brand. Therefore, enterprises should prioritize providing incentives and establishing career channels for their frontline enterprises and employees. The initial step in cultivating a proficient customer service team involves designing a specialized training program for middle managers that focuses on evaluating business performance and enhancing business skills. This program aims to promote skill development and enable the selection of highly qualified individuals who can effectively contribute to the company's value creation.

6. Conclusion

This article presents the following findings by examining the case of Jingdong Enterprises' digital transformation from the standpoint of supply chain management. Initially, organizations should prioritize their own growth and overarching plan to attain digital transformation in a step-by-step and organized fashion. Enterprises should possess a comprehensive understanding of the issues and deficiencies in their progress and actively advance sustainable development by means of digital transformation. Enterprises should adopt a holistic approach to understand the entire supply chain, including the upstream and downstream processes, consumer behavior, and operational characteristics. By considering the perspective of both the product and the consumer, enterprises can identify pain points within the supply chain and develop a comprehensive plan and implementation strategy for supply chain management. Furthermore, regarding the execution aspect, the initial phase involves setting up an information system on a digital platform with the aim of enhancing supply chain management through the utilization of information technology. Beginning with the phased implementation of its business process, the key nodes are identified and prioritized based on their

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ease and speed of implementation. This approach has a significant impact and plays a leading role in initiating the digital transformation. The digitization process then gradually extends to both the upstream and downstream components of the supply chain, resulting in the overall digitalization of the entire supply chain. Second, firms should develop their digital capacity by adopting information technology on a constant basis. The construction of a digital supply chain platform integrates all types of information created during the manufacturing process to form a full system that provides corresponding services. Accompanied by the ongoing development of the digital economy, firms, by adapting to societal development trends, continuously carry out digital transformation and upgrading, better the overall development technique, and therefore achieve an increase in enterprise value. This can gradually broaden the scope of resource acquisition, improve data access, generate high levels of supply chain synergy, lower operational costs, and increase value.

From the perspective of supply chain management, this paper studies the development status of Jingdong's digital transformation, analyzes the role of its digital transformation in the process of enterprise value creation, and puts forward development planning and implementation plans in view of existing problems. This not only has a guiding effect on the practice of future digital development of Jingdong Group, but also can provide reference for some companies in the industry with similar characteristics of Jingdong Group that will or are implementing digital transformation, and help them realize digital transformation in combination with their own business processes to meet the needs of digital development of the Internet retail industry.

However, the research done in this paper is a case study of a single company, and the conclusions obtained are difficult to publicize to other Internet retail enterprises. As a leading enterprise in the Internet retail industry, Jingdong Group is also at a high level of scale and business, and its digital transformation has an impact on enterprise value creation. For many small e-commerce companies, this case study may lack reference value. Whether digital transformation is effective for small and medium-sized enterprises remains to be seen.

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