

Automobile Transportation Logistics Supply Chain Management Strategy

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Abstract: To enhance the management level and quality of the automobile transportation logistics supply chain and promote innovation and development in automobile transportation logistics enterprises, it is essential to strengthen the construction of the automobile transportation logistics supply chain management model. This can be achieved through the gradual improvement of the automobile transportation logistics management process, ensuring that the management of the automobile transportation logistics supply chain proceeds in an orderly manner. The aim is to improve automobile transportation and logistics service levels while meeting the changing market supply needs. This will enable automobile transportation and logistics enterprises to maintain steady economic benefits and enhance their core competitiveness in the market. Therefore, this paper has conducted a comprehensive exploration and research on managing the automobile transportation logistics supply chain. Corresponding management strategies are proposed as a starting point to achieve the aforementioned goals.

Keywords: Automobile transportation; Logistics supply chain; Management strategies

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1. Introduction

With the continuous development of China's market economy, automobiles have begun to enter thousands of households, and the automobile market has also shown a trend of personalization and customization in continuous development, profoundly impacting the automobile transportation logistics supply chain. Management has put forward higher requirements and needs to respond more flexibly and quickly to changes in market demand. Moreover, in the context of increasingly fierce competition in the automobile market, if automobile companies want to continuously improve their core competitiveness, they need to establish an efficient automobile transportation and logistics supply chain system. This enables automobile companies to fully adapt to the market and meet its demands, thereby meeting the ever-changing automotive demands and improving the quality and level of development of automotive companies. Therefore, it is necessary to formulate comprehensive management strategies for the automobile transportation logistics supply chain to continuously adapt and respond to various challenges, promoting the stability and sustainable development of

automobile companies.

2. Concepts and characteristics of supply chain management

Supply chain management refers to the integrated, systematic management, and optimization of all activities involved in the supply chain. The management activities in this process cover a wide range, from the procurement of raw materials, production, transportation, and storage to the final product after-sales services, etc. The core purpose of supply chain management is to improve the economic efficiency of the entire supply chain and enhance the management efficiency of the supply chain so that it can fully play its role, achieving seamless connection and high efficiency between various links and processes. Collaboration, on this basis, meets the increasingly changing customer needs in the market, minimizes the company's operating costs and development risks, and achieves the development goal of improving the company's core competitiveness.

Supply chain management exhibits the following characteristics:

- (1) **Systematicity:** Systematicity is a significant feature of supply chain management. This is mainly because supply chain management is a systematic management idea. During the promotion of supply chain management, the entire supply chain is considered as a whole to fully pay attention to the internal connections and mutual influences between various links in the supply chain. On this basis, ensure that the overall supply chain is optimized and improved to achieve high-efficiency operation of the supply chain.
- (2) **Strategic:** Supply chain management shows strategic characteristics, mainly reflected in the fact that it is an integral part of the enterprise's development strategy. Supply chain management involves the enterprise's long-term planning and market competition. Through the supply chain, the management process can promote enterprises to build a supply chain network with competitive advantages, thereby ensuring the flexibility and mobility of enterprise supply and helping to improve the enterprise's core competitiveness.
- (3) **Synergy:** The core of supply chain management is to strengthen the synergy between various supply chain links, so supply chain management also reflects the characteristics of synergy. During the promotion of supply chain management, partnerships, information collaboration, and sharing mechanisms can be established so that through this initiative, close cooperation and efficient collaboration between all links in the supply chain can be gradually achieved, and complete planning and coordinated configuration of all links in the supply chain can be achieved.
- (4) **Dynamics:** Supply chain management has dynamic characteristics, mainly because the supply chain management process is dynamic and needs to continuously adapt to market changes and changes in the supply chain environment while promoting supply chain management. On top of that, by flexibly adjusting the supply chain structure and operation methods, the supply advantage of the supply chain is guaranteed, and the sustainable development capability of the supply chain is stimulated.

3. The significance of automobile transportation logistics supply chain management

In the development and operation of automobile companies, transportation logistics supply chain management is of top priority and an essential part of ensuring the stable development of automobile companies. Through transportation logistics supply chain management, automobile companies can optimize cost control methods, comprehensively coordinating and integrating automobile companies and upstream and downstream enterprises

in supply chain management. This gradually realizes cost control, improves corporate profit levels, and continuously enhances all aspects of the supply chain.

Simultaneously, the supply chain management process also helps improve automobile companies' customer satisfaction. Optimizing supply chain links ensures that automobile companies can respond to market customer needs more quickly and accurately, provide high-quality supply chain services to customer groups, and ensure the timeliness of product delivery. This, in turn, enhances customer satisfaction and loyalty, promoting the high-quality development of the company.

Furthermore, supply chain management strengthens cooperation and exchanges between enterprises, allowing both parties to complement each other's advantages, share resources, and jointly obtain more substantial economic benefits. For instance, automobile companies can establish close supply chain cooperation relationships with suppliers, logistics companies, etc., ensuring resource sharing and mutual advantage complementation. This model enables automobile companies to adapt to changes in market demand more quickly, seize market development opportunities effectively, and promote stable and efficient development.

4. Challenges faced by automobile transportation logistics

Certain challenges arise in the automobile transportation logistics management stage, and overcoming these challenges has become essential for promoting the stable development of automobile logistics and transportation. It will also have a vital impact on the development and operations of automobile companies. Specifically, the challenges faced by automobile transportation logistics are reflected in the following aspects:

Firstly, the challenge of transportation costs. In automobile transportation logistics, transportation cost is of top priority. Transportation cost investment determines the economic benefits of automobile companies and the returns that can be obtained in the entire supply chain. With rising fuel prices, transportation costs are gradually becoming a significant challenge in automobile transportation logistics. Automobile transportation and logistics companies need to take effective measures to control costs and improve transportation efficiency, ensuring the company's market competitive advantage.

Secondly, the challenge of transportation efficiency. In the stage of promoting automobile logistics and transportation, transportation efficiency is one of the critical indicators, determining the development level and quality of automobile logistics and transportation enterprises to a certain extent^[1]. During the automotive transportation logistics stage, it is necessary to ensure that products can be delivered in a timely manner at the right time and place to meet the needs of customer groups. However, many links are involved in transportation, such as loading and unloading, warehousing, transportation, distribution, etc. Each link may impact the efficiency of automobile logistics and transportation. Therefore, optimizing the entire transportation process during the automobile logistics transportation stage is necessary to improve transportation efficiency.

Thirdly, the challenge of logistics risk management. There are diversified transportation risk challenges in promoting the development of automobile transportation logistics. Various types of risks will have a significant impact on automobile transportation logistics. Once risk management is not adequately controlled, cargo damage, cost losses, etc., may occur. Therefore, enterprises need to establish a complete risk management system based on the development needs of automobile transportation and logistics, predicting and preventing various types of risks that may arise in automobile transportation and logistics, thereby reducing the impact of risk factors on automobile transportation and logistics enterprises.

Lastly, the challenge faced by logistics service quality. Logistics service quality is also a significant challenge faced by automobile transportation logistics in its development. Under the current trend of diversified consumer demands in the market, different types of consumers have increasingly higher requirements for

logistics and transportation service quality. Automobile transportation logistics needs to provide efficient, punctual, and safe logistics services to a wide range of customer groups, meeting the needs of diversified customers. Moreover, the continuous intensification of market competition requires automobile logistics and transportation companies to continuously improve their service levels and efficiency to win customer groups' trust and expand market share. Therefore, automobile transportation and logistics companies need to establish a complete customer service system, respond to customer needs in a timely manner, understand customer feedback, and, on this basis, optimize and improve the service model to obtain customer satisfaction and recognition.

5. Automobile transportation logistics supply chain management strategy

5.1. Optimize transportation network and resource allocation

To promote the orderly management of the automobile transportation logistics supply chain and enhance the core competitiveness of automobile transportation logistics enterprises in the market, it is necessary to vigorously optimize the transportation network and resource allocation system. This gradual improvement of the automobile transportation network and overall coordination through optimization and improvement of the transportation network promotes the high-quality development of automobile transportation and logistics enterprises.

Firstly, transportation tools need to be optimized and configured. The corresponding transportation tools must be reasonably selected according to different goods' and logistics transportation needs. For example, roads, railways, waterways, and other modes must be combined and configured to enable high-efficiency, low-cost logistics and transportation ^[2].

Moreover, automobile logistics and transportation companies must be committed to improving the logistics network. At this stage, they must focus on nationwide coverage and actively promote the rapid circulation of goods nationwide. They also need to strengthen cooperation with logistics companies in various places, thereby improving the coverage and operational efficiency of the logistics network.

Secondly, it is necessary to accelerate the optimization of warehousing resource allocation. At this stage, automobile companies need to plan the number and layout of warehousing facilities based on market demand and goods sales to improve inventory turnover rates and reduce inventory costs through scientific warehousing management models ^[3].

5.2. Strengthen information sharing and collaborative operation

To promote the supply chain management stage of automobile transportation logistics, information sharing and communication in automobile transportation logistics must be strengthened, and a supply chain information platform must be vigorously established to achieve information exchange and sharing among various supply chains. For example, collaborative relationships among suppliers, distributors, and other partners can be developed to improve the operational efficiency of the entire supply chain.

Firstly, it is necessary to build a supply chain information-sharing platform, making full use of network information technology to connect various modules and links of the automobile transportation logistics supply chain and realize real-time information sharing between various supply chain links. For example, in supply chain information management, the platform can integrate functions such as order management, inventory management, logistics and distribution, and payment and settlement, thereby highlighting the transparency of the entire supply chain information management and improving the operational efficiency of the supply chain [4].

Moreover, the automobile transportation logistics supply chain management process needs to strengthen

data exchange and interoperability. Data information such as order status, inventory status, logistics, distribution progress, etc., must be exchanged and shared in real-time through the information platform to make communication between various logistics links more efficient. Collaborative efficiency is improved, and delays and errors in logistics information transmission are reduced ^[5].

Finally, a standard process for collaborative operation needs to be developed for the automotive logistics and transportation supply chain. At this stage, the operations and specifications between each supply chain link need to be fully clarified, and seamless cooperation between each supply chain link can be achieved through supply chain collaboration, thereby improving the operational efficiency of the entire supply chain and strengthening the management level and quality of the automobile transportation logistics supply chain.

5.3. Improve service levels and customer relationship management

To effectively promote the orderly advancement of automobile transportation logistics supply chain management, it is necessary to vigorously improve service levels and relationship management with customers, thereby ensuring the quality and level of supply chain management ^[6].

First, it is necessary to vigorously enhance automobile logistics supply services. It is essential to establish a complete customer service system and provide customized customer services, including order inquiries, complaint handling, after-sales service support, etc., to resolve various problems in a timely manner during the logistics transportation stage.

Secondly, it is necessary to strengthen employee service awareness training and simplify service processes, such as providing customers with more convenient automobile transportation logistics services through online reservations, self-service inquiries, etc., to improve service efficiency and level ^[7].

Moreover, in promoting relationship management with customers, it is necessary to establish customer files and strive to provide customers with personalized services. For example, regularly strengthening customer return visits and telephone communication to understand customer needs and proactively providing customers with personalized and customized logistics and transportation service plans to increase customer satisfaction and loyalty. This also improves the level of automobile transportation logistics supply chain management and quality goals ^[8].

5.4. Building green logistics and sustainable development model

The automobile transportation logistics supply chain management stage must also focus on establishing a green logistics and sustainable development model, thereby promoting the sustainable development of automobile logistics supply chain management.

Firstly, the logistics packaging selected in automobile logistics transportation needs to prioritize recyclable and degradable packaging materials, reduce the use of disposable material pollutants, and minimize the impact of packaging waste on the environment ^[9].

Secondly, it is necessary to optimize the transportation mode for logistics. For example, long-distance transportation can choose railway or waterway transportation, while short-distance transportation can opt for green and low-carbon electric transportation. Maximizing energy-saving technology during transportation is also crucial. For instance, optimizing and configuring low-energy consumption vehicles and route planning to reduce carbon emissions during transportation ^[10].

Finally, a recycling and reuse system must be established in logistics and transportation to recycle and process waste generated during the logistics and transportation stage. For example, establishing a waste recycling station to recycle and process waste paper, plastic, etc., contributes to building a green logistics development model and enhances the management level and quality of the automobile transportation logistics

supply chain.

6. Conclusion

In summary, strengthening supply chain management is the top priority in developing automobile transportation logistics. Through supply chain management, all aspects of the automobile transportation logistics supply chain can be fully coordinated, and the supply chain management model can be continuously improved, thereby providing automobile companies with efficient transportation and logistics services to meet the personalized service needs of consumers in the market. Therefore, this paper proposes a strategy for automobile transportation logistics supply chain management for joint discussion and communication.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Yang Y, 2022, Research on Optimization of Logistics Management in the Automobile Industry Based on Supply Chain Management. *China Science and Technology Investment*, 2022(27): 48–50.
- [2] Huang J, 2021, Research on Integrating and Optimizing Auto Parts Inventory and Transportation Based on Supply Chain. *Auto Expo*, 2021(3): 208–209.
- [3] Deng M, 2012, Analysis and Countermeasures of China's Automobile Logistics Supply Chain Management. *Logistics Technology (Equipment Edition)*, 2012(5): 36–39.
- [4] Lin R, 2023, Discussion on Logistics Management Strategies in the Supply Chain Management Environment. *Marketing Circle*, 2023(18): 89–91.
- [5] Zhou L, 2014, Management Improvement Strategy for Automobile Logistics Companies Based on Supply Chain – Take Shenlong Automobile Co., Ltd. Xiangyang Factory as an Example. *Logistics Technology (Equipment Edition)*, 2014(5): 32–35.
- [6] Liu J, 2023, Analysis of Value Creation of New Energy Automobile Industry in the Logistics Field – Taking W Company as an Example. *Economic Research Guide*, 2023(7): 59–62.
- [7] Gao R, Huang S, Hu Z, et al., 2023, Agricultural Product Supply Chain Pricing Decisions Considering Misreporting of Production Costs. *Journal of Hubei Institute of Automotive Industry*, 37(3): 67–72.
- [8] Xu J, Yu J, 2021, Application of LoRa Technology in Auto Parts Logistics. *Precision Manufacturing and Automation*, 2021(3): 40–43 + 64.
- [9] Sun J, 2023, Modern Logistics Economic Management Model and Development Suggestions. *Logistics Times Weekly*, 2023(7): 92–94.
- [10] Liang R, 2022, Supply Chain Management Based on Logistics Information Technology. *Logistics Technology*, 45(16): 122–124.

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