

Research on Performance Evaluation of Container Multimodal Transport from the Perspective of Supply Chain Management

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Abstract: Container multimodal transport is an advanced stage of transportation development and an inevitable trend of modern transportation development. Despite the rapid increase of container traffic in China, there is a lack of efficient container multimodal transport system, which fails to give full play to the advantages of various modes of transport in container transport. Container multimodal transport is carried out by the carriers in each transport section. In the traditional business management thinking, all aspects of enterprise production management are independent and small units that are relatively dispersed and separate. The probability that a multimodal transport network will be able to complete the transport within a certain period of time and complete the transport mission in an emergency. Competition between supply chains has gradually become the main form of market competition, and enterprises need to maximize customer value through supply chain management.

1. Introduction

Logistics is a new subject developed in the middle of the century, and it is also one of the more influential disciplines in modern times. Multimodal transport is a new advanced mode of transport, which emerges and develops on the basis of container transport [1]. It is also a comprehensive and coherent mode of transport that has developed rapidly in recent years in the world. Supply chain management is to make full use of computer network technology to plan the business flow, logistics, information flow and capital flow in the supply chain. Compared with the traditional way of bulk cargo transportation, container transportation has the advantages of high transportation efficiency, good economic benefits and high service quality [2]. In the traditional business management thinking, all aspects of enterprise production management are relatively small and independent units that are independent of each other [3]. The popularity and development of container transportation is a yardstick for measuring the modernization of logistics and transportation. As an organic whole, the supply chain emphasizes information sharing among members of the supply chain as well as strategic partnerships.

In the conceptual model of supply chain management, supply chain entities refer to the objective objects that can be engaged in supply chain management. They can be enterprises, banks, stores, government agencies or individuals. Using all kinds of communication equipment, through the network to connect into a unified whole. Figure 1 is the conceptual model of supply chain management and freight transportation system.

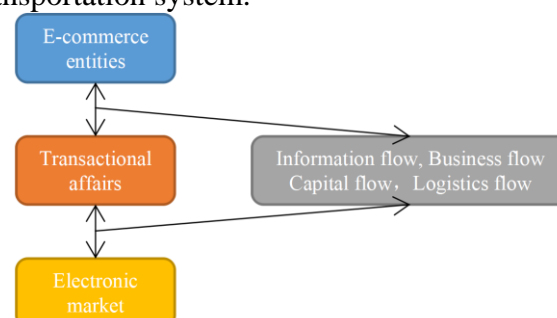


Fig. 1 Conceptual model of supply chain management and freight system

Container transportation has developed rapidly in the world and has become the best mode of transportation for guaranteeing international trade in all countries of the world. Most enterprise managers only pay attention to the sales process, and believe that selling products is the most important part of the entire production management cycle [4]. The other links are relatively neglected or simply regarded as an auxiliary link for sales. Under the guidance of traditional enterprise management consciousness, the supply chain of enterprises is not taken seriously. Short-term behavior, gray supply, low efficiency, high cost and other problems are common and difficult to eradicate [5]. Container multimodal transport is carried out by the carriers in each transport section. The whole transportation of goods will be coordinated as a complete single transportation process [6]. On the premise of satisfying customer's demand, we pursue the minimization of the comprehensive cost of all links from raw material purchase, product manufacturing, distribution to product delivery to customers, in order to achieve the optimum service and maximize the competitiveness.

2. Strategic Connotation of Supply Chain Management

In the era of rapid economic development, the main problem facing and concerned by any country is how to reduce the unit production cost. And improve economic efficiency, expand the sales market, and diversify commodity production. Collaborative multimodal transport refers to transport companies with two or more modes of transport. In accordance with uniform regulations or agreed agreements, the goods are transported from the point of takeover of the goods to the place where the goods are delivered [7]. Some managers put forward that we should optimize and innovate the means of enterprise management in a more organizational and holistic level from the perspective of the whole supply chain, that is, the total cost. So we have the concept of supply chain management. For more complex products, when a single enterprise does not have enough resources and capacity to design and produce, it can be completed through the cooperation and cooperation of relevant enterprises with the help of supply chain management.

With the continuous process of economic globalization, in order to quickly keep up with the demand of commodity transmission on the market, the whole society has created more demand for multimodal transport services and multimodal transport infrastructure. The supply chain management aims at shifting the focus of enterprise management from the sales at the back end to the supply chain at the front end, so as to strengthen the coordinated management of each supply node in order to maximize the performance of production and operation cycle. Whether it is the packaging, storage, transportation and loading and unloading of the product, it is necessary to have someone to complete the work. Social products must go through the field from the production field to the consumption field. Without the circulation process, the use value of social products will not be realized. In the fierce market competition, the supply chain will gradually replace individual enterprises and become the real subject to meet market demand.

3. Route Planning of Container Multimodal Transport

The emergence of container transport has brought great changes not only to the transport industry itself, but also to other industrial ministries related to the transport industry. The establishment of container multimodal transport corridor is also the choice of the location of container multimodal transport corridor, that is, the selection of appropriate transit cities. Along with the development of container transportation, science and technology have made rapid progress, and electronic computer technology has been widely used in various fields of transportation. When the competition between enterprises and enterprises is transformed into competition between supply chain and supply chain, the essence of market competition is gradually upgraded to the competition of core competence of supply chain. Since the goods are transported in containers, in a sense, the cost of packaging, tally and insurance can be saved accordingly. The development of trade in manufactured goods and the increasing supply of suitable containers have created conditions for multimodal transport of containers.

With the expansion of the city scale and the modernization of facilities, the tasks of the

transportation sector are becoming increasingly tense and the construction costs of the busy ones are increasing. The expansion of the transportation system in the future is constrained by various factors. As the logistics supply chain becomes more and more complex, the transportation demand for goods is also more diversified [8]. To cope with these changes, container products should be considered as part of the overall solution of container multimodal transport. Cargo owners are increasingly demanding for multimodal transport, and together with the international transport industry, they are striving to promote the development of international multimodal transport. With the different regional economic patterns, China presents different development trends. The container multimodal transport system in developed coastal areas is relatively perfect. Before the development of international multimodal transport business, operators of various modes of transport were independent and self-contained.

4. Conclusions

Container multimodal transport is the advanced stage of transportation industry development and the necessity of economic and social development. It can significantly improve the efficiency and efficiency of transportation. This paper analyses and studies the coordination of container multimodal transport system in China from the perspective of supply chain management. This paper expounds the coordination of the system from two angles of orientation and quantification. The probability that a multimodal transport network will be able to complete the transport within a certain period of time and complete the transport mission in an emergency. The intelligentization of container multimodal transport needs to develop the intelligent system of the whole industry chain with the construction of intelligent service towel. The government should guide container companies in the decision-making of container multimodal transport. Strengthen the construction of infrastructure, technical equipment, and strengthen coordination among different departments.

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