Study on Operation Mode of High Speed Express

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Abstract. With the rapid development of China's market economy, the specialization of the industry tends to mature, and the modern logistics industry also presents a new development trend. Freight is an important link in modern logistics system. The demand for fast freight and high value-added transportation is increasing rapidly, which will promote the development of railway and bring opportunities and challenges to railway. Consumers can choose express delivery through high-speed rail transport, the railway sector can also transport express delivery to promote profit growth. This paper first analyzes the connotation of the operation mode of high-speed express delivery, analyzes the related enterprises of high-speed express delivery, compares and analyzes the existing three operation modes of self-organization, agent cooperation and strategic alliance, and puts forward the development countermeasures of high-speed express delivery in China.

1. Introduction
In recent years, with the improvement of social economy and people's living standard, the rapid rise of e-commerce and online shopping and other emerging industries, the volume of social express delivery has been increasing. In this case, the railway department should seize the opportunity to expand the scope of transportation. High-speed express delivery has brought economic benefits to the railway system while serving the public. However, the high-speed express delivery business is not mature at present, its infrastructure equipment is not perfect, the network structure level is not clear, and the choice of operation mode is uncertain, which leads to the defects such as weak "door-to-door" service ability, unreasonable resource allocation and unclear competitive advantage. Through data investigation and method summary, some suggestions for the long-term development of high-speed express are put forward in view of the problems existing in the development of high-speed express. As a new mode of express delivery, the society has different cognition of "express delivery of high-speed rail ". With the development of express delivery industry, the definition of" express delivery of high-speed rail "will be perfected continuously [1].

2. Analysis of Affiliated Enterprises of High Speed Express
The main body of operation is the executor of high-speed railway transportation business. The main body of operation plays a vital role in railway transportation. In order to ensure the smooth progress of high-speed express delivery business, we must make clear the division of labor, strengthen cooperation, give full play to the leading role of the main body of operation, and jointly promote the development of high-speed express delivery.
2.1. Leading enterprises
China Railway Express is a large state-owned professional transport enterprise covering the whole country. China Railway Express's high-speed railway network is the largest and most specialized service network in China. With its own railway advantages, it provides services for many large, medium and small cities in China, provides baggage package transportation services, and also introduces the "door to door" characteristic services. In order to improve the competitiveness of the industry, China Railway Express should grasp the "door-to-door" feature, resolutely obey the command of the railway transport department. China Railway Express service network coverage is gradually increasing, the scale is gradually expanding. China Railway Express network covers many cities throughout the country. China Railway Express is the main responsibility of high-speed express delivery, China Railway Express is responsible for the management of high-speed railway transport business and product transport scheme design[2].

2.2. Related enterprises
In the process of high-speed rail cargo transportation, need to contact other enterprises, such as Shunfeng, Sitong Yida and other social logistics enterprises, as well as to contact the railway station section, such enterprises are related to high-speed express transport enterprises[3].

(1) Social logistics enterprises
The development of high-speed express delivery in railway transportation sector has great limitation. The railway transportation is limited to the railway trunk transportation, and there are some defects relative to the social logistics enterprises. The ability of goods transportation and communication between high-speed express delivery and customers is not as good as that of social logistics enterprises. The railway transportation department can cooperate with the social logistics enterprises, learn from each other's weaknesses, and maximize the advantages of both sides. The railway transportation department can cooperate with express delivery enterprises, China Post, freight forwarding enterprises and so on, so as to create multi-channel and multi-type express service types.

(2) Railway Station Section
Railway Bureau is responsible for loading and unloading cargo, is the key link of high-speed rail express. If the work in the railway station can be carried out smoothly, it will save a lot of time and realize the efficient transportation of goods. Railway station is divided into passenger section, public works section, locomotive section. Different stations have different division of labor. Generally speaking, the task of railway station section is that when the high-speed railway station that carries goods reaches the high-speed railway station, the railway station section can carry on the cargo loading and unloading operation quickly and efficiently, which is a very important link in the process of high-speed express transportation.

3. Analysis on the Operation Mode of High Speed Express
The operation mode is the mode that the enterprise transforms the resources that the enterprise grasps into the profit through the customer. In practice, it refers to the general name of the measures taken to achieve the strategic objectives of the enterprise, which is basically to achieve the objectives of the enterprise. As far as high-speed express delivery is concerned, mastering high-level technology is not equal to success, we must set up the enterprise goal first, and set the corresponding application mode around the goal[4].

The mode of operation refers to the whole system of operation, and the enterprise transforms the resources it grasps into the profit mode through the customer.

3.1. Self-organization operation model
The self-organization operation mode refers to the establishment of a unified integrated management department, self-provided warehouse, garage and so on by individual production enterprises, and the independent completion of the unified integrated management mode, which is responsible for the specific business operation of the company. Establish storage facilities, independently build logistics
management, business departments, rely on high-speed rail network and high-speed rail train to independently complete the transport, warehousing, packaging, loading and unloading tasks, and finally achieve high-speed rail logistics "door-to-door" transport integrated services. The self-organizing operation mode of high-speed express is shown in Figure 1.

Figure 1. Self organizing operation mode of high speed rail express

Because the self-organizing operation mode is an independent integrated management mode, the operation mode has three remarkable characteristics. The first feature is that the model operates independently and is under the unified management of the high-speed rail transport department, and all links are scheduled and operated in an orderly manner. This model has less contact with the outside logistics enterprises, avoiding the risk of enterprise information leakage; The second characteristic is that the enterprise can coordinate and stabilize the work, because its independent operation mode determines that the enterprise is an indivisible whole. Each functional department of the enterprise can coordinate and cooperate with each other to achieve the goal of improving the efficiency of the enterprise. The third characteristic is the low cost, independent operation does not need to pay extra for warehousing, distribution and other expenses.

The self-organizing operation mode is limited by its own conditions and has some disadvantages. The first disadvantage is that it can not fully adapt to market changes and has poor flexibility; The second disadvantage is that the investment cost is high, and the railway transportation department needs to invest more human and financial resources to achieve the self-built warehouse and distribution system; The third disadvantage is that service specialization can not be achieved. High-speed express delivery did not take into account the transport of goods at the beginning of the lack of "door-to-door" transport service experience. If high-speed express adopts self-organized operation mode, this will lead to high-speed express's professional advantages are not played out. Moreover, the category of terminal transportation service is much smaller than that of social logistics enterprises, which can not learn external knowledge and experience in time.

3.2. Cooperative operation of agents

High-speed express leading enterprises are affected by many constraints, such as technology, capital, geography and other factors. High-speed express can not provide complete transportation services on its own, can not determine customer needs and regional or project level business relationships. So the high-speed express leading enterprises divide customers into different categories according to their transportation requirements. Customers with special requirements for transportation or customers with high demand for transportation, leading enterprises can outsource part of their customers' business to social logistics enterprises. Make full use of the advantages of social logistics enterprises to improve
the weak links of high-speed rail transportation, enhance the competitiveness of the industry, reduce logistics costs. The outsourcing enterprises of the cooperative operation mode of agents should obey the management of the leading enterprises of high-speed express delivery, which can improve the service process of "door to station" and "station to door" more effectively. Outsourcing enterprises make service plans according to the requirements of leading enterprises, leading enterprises to supervise the service work of outsourcing enterprises. Leading enterprises and agent enterprises are responsible for their respective tasks according to the contract agreed upon jointly. The specific process of the agent cooperative operation mode is shown in Figure 2.

![Figure 2. Cooperative operation mode of agents](image)

In order to reduce costs, the vast majority of logistics are in the form of outsourcing. This way can use other enterprises to carry out business, to avoid each link is put into their own construction embarrassment. It greatly reduces the cost of business development, realizes the "door-to-door" transportation service, and makes the enterprise withdraw from areas they are not good at, and put more manpower and material resources into areas they are good at. But there are also a lot of unavoidable problems, and first of all, there is no direct management of each process. The outsourcing enterprise's own level plays a decisive role in some links, plus the outsourcing enterprise level is different, which increases the difficulty for the leading enterprise to provide perfect service.

In the early stage of the development of high-speed express delivery, the railway transportation department is suitable to adopt the cooperative operation mode of agents under the condition of lack of service capacity and capital. In the early stage of development, the leading enterprise should devote energy and resources to the core service function. Leading enterprises build their own brand, at the same time cooperate with social logistics enterprises, integrate resources, form their own unique core competitiveness, outsource their weak links to other enterprises, leading enterprises can improve business efficiency[5].

3.3. Strategic alliance business mode
The operation mode of strategic alliance is a kind of cooperative relationship which can realize the goal of sharing resources, sharing risks and costs under the premise of ensuring the independence and equality of each enterprise, so as to achieve a win-win situation. The emergence of the strategic alliance model stems from the fierce social competition, which has achieved remarkable success in related fields. The same model in the field of high-speed rail logistics has also produced a very good effect, very reference signficance, through competition is conducive to the formation of more standard and standardized industry standards, is the upgrading of modern operation mode, the construction of high-speed train logistics technical standards. The strategic alliance operation model is shown in Figure 3.
Because of the influence of the independence of both sides, the strategic alliance model will inevitably interfere with the progress of the project. If the qualification of cooperative enterprises is limited, it may affect customer experience and endanger customer information security. But after all, the advantages outweigh the disadvantages. Both sides of the strategic alliance are in an equal position, thus having more autonomy and being able to respond more quickly to market changes. The two sides share the benefits and share the risks together, which can minimize the caused by the risk. Through sharing resources together, communicating with each other, realizing deep cooperation and maximizing the advantages of both sides. Long-term and stable cooperation can reduce operating costs and increase revenue.

Strategic alliance model can sensitive insight into the industry market, through long-term cooperation between enterprises, effective information exchange and resource sharing, thus improving the flexibility of enterprises and reducing operating costs; The establishment of long-term strategic alliance between enterprises can reduce transaction costs and increase returns; Strategic alliance model can stimulate enterprises to improve their core competitiveness continuously. The disadvantage of this model is that the enterprise can not run independently and can not completely manage and control the enterprise; The drawbacks of this model may also leak customer information.[6].

4. Comparison of High Speed Express Operation Mode

Through the description of the three modes of operation of high-speed express, the advantages and disadvantages of the analysis and the scope of the three modes of operation respectively, the operation mode of high-speed express has been further understood. Each model has its own differences in the stability of relationship, service content, cooperation mode, operation advantage, operation disadvantage and so on, as shown in Table 1.

| Table 1. comparison of three operation modes |
|--------------------------------------------|
| **Stability of cooperative relationships** | **Self-organization operation mode** | **Agent Cooperative Operation Mode** | **Strategic alliance operation model** |
| Single enterprise operating on its own | Relationship between delegate and delegate; Short-term/medium-term/long-term cooperation | Partnerships; Long-term cooperation |
| Command structure and power system of hierarchy | Contractual | Contractual, cross holding, joint venture, joint venture |
| Provide door-to-door service with your own resources | Collaborate with resources to provide door-to-door or other services | Integration of enterprise qualifications and capabilities to provide door-to-door or integrated logistics services |
| Operational advantages | High stability, easy to control independently; lowest transaction costs; easy coordination. | Enhance core competence; low operating cost; strong flexibility. | Moderate stability; low operating costs; moderate flexibility; enhancement of core competencies; inhibition of opportunistic behavior. |
|------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Operational weaknesses  | Poor flexibility; long investment time and high cost of dedicated assets; decentralized management energy, which is not conducive to the promotion of core competencies and cross-organizational learning. | High transaction costs; poor stability; disclosure of knowledge information; uncertainty factors. | Increased difficulty in management; impact on independence and control; disclosure of knowledge |
| Conditions of application | High-speed express delivery operation in the middle and late, with a strong logistics capacity, social influence. | High-speed express delivery operation in the early stage, the supply of resources is insufficient. | High-speed express delivery operation in the early or mid-term, insufficient supply capacity of resources. |

5. Conclusion
In view of the actual situation of China's current high-speed express research, the article should continue to expand the research content, so that the paper can really play its practical value, for more industry departments to learn from. Through the analysis and summary of the operation mode of high-speed express, the development prospect of high-speed express in China is prospected, and the development countermeasures of high-speed express are put forward.

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