# Study on Supply Chain Integration Strategic Model of Guangdong, Hong Kong and Macao Dawan District

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Abstract: With the emergence and rapid development of e-commerce, supply chain integration model has been effectively formed, and its advantages are becoming more and more obvious, attracting more entrepreneurs' attention. Especially in the context of Guangdong, Hong Kong, Macao and the Great Bay Area, people are paying more attention to the e-commerce market. When investing in the e-commerce market, it gradually forms the industry situation of "cross-competition, multi-hegemony". Generally speaking, if an enterprise wants to integrate the service capability of supply chain, it needs to promote the integration of supply chain from its own comprehensive ability, supply chain design ability and logistics network service ability. Better development will be achieved. Firstly, this paper introduces the related concepts of supply chain integration; secondly, it expounds the mode and characteristics of supply chain integration; according to the development of Guangdong, Hong Kong, Macao and the current market demand situation, it clarifies the challenges faced by the current supply chain integration in Guangdong, Hong Kong and Macao; finally, it puts forward the development of supply chain integration from different aspects. It is hoped that this study will contribute to the sustainable development of supply chain integration in the context of Guangdong, Hong Kong, Macao and the Great Bay Area.

#### 1. Introduction

As an important driving force of China's economy, Guangdong, Hong Kong and Macao Dawan District have clearly gathered 80% of China's supply chain enterprises on the basis of the maturity of modern supply chain conditions, and contain more than 300 industrial clusters with different characteristics. The logistics and transportation system has developed rapidly and has great potential for economic development and consumption. The development of Yingchain industry has provided a good industrial base and a wide range of development in the Mainland. Modern supply chains are also needed for the construction of Dawan District in Guangdong, Hong Kong and Macao. At present, the Dawan District of Guangdong, Hong Kong and Macao is in an important period of accelerating the transformation and upgrading of traditional industries and accelerating the development of new industries. The problems of factor circulation and social division of labor in the major cities in the Bay Area need to be solved effectively. The construction of Dawan District will inevitably bring various factors activities and gatherings, promote the optimization and upgrading of industrial layout, and bring about the deconstruction and reconstruction of supply chain industry in Dawan District. At present, the financing difficulties and expensive financing problems in this region are quite obvious, which have been restricting the development of small and medium-sized enterprises, small and medium-sized enterprises. Most of the assets of the industry are movable property, which cannot be effectively used as collateral, and it is more difficult in bank financing.

The Dawan District of Guangdong, Hong Kong and Macao are one of the important gathering places of small and medium-sized enterprises in China. Supply chain finance is the core element of building a modern supply chain. Supply chain finance has gradually become an important way to effectively alleviate the financing difficulties and expensive financing of small and medium-sized enterprises. According to the introduction of supply chain finance, according to the actual trading background, it can make use of the enterprise turnover speed and cash-in ability to strong active assets, such as inventory receivables, as the first repayment guarantee, to carry out financial

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products. Planning, releasing the credibility of core enterprises along the supply chain, promoting SMEs that lack real estate in the supply chain to rely on active assets financing. However, there are some difficulties in the development of traditional supply chain finance. From the bank's point of view, it is mainly manifested in the recognition of rights and interests and voluntary undertaking. The smart supply chain can improve the rating of small and medium-sized customers. At present, the effective implementation of intelligent supply chain can increase credit and reduce cost through block chain, increase efficiency by artificial intelligence and fast financing by cloud computing, etc...

# 2. Concepts of Supply Chain Integration

Supply chain integration is a systematic concept, which includes functional integration, spatial integration and intertemporal integration (hierarchical planning), that is, the functional integration of procurement, production, transportation, warehousing and other activities, which are geographically dispersed between suppliers, facilities and markets. These activities are integrated at three levels: strategic level, tactical level and operational level. Strategic level planning includes resource acquisition decision-making in long-term planning, tactical level planning mainly includes resource allocation decision-making in medium-term planning, while operational level planning includes decision-making affecting short-term business behavior of enterprises, and hierarchical planning requires consistency of overlapping supply chain decision-making at all planning levels. • The integration between enterprises has also been gradually taken seriously. Supply chain is a system of supplier, manufacturer, distributor, retailer and end-user, which is based on the core enterprise's control of information flow, logistics and capital flow, purchasing raw materials and manufacturing intermediate products and final products, and finally delivering products to consumers through the sales network. The whole system is composed of supplier, manufacturer, distributor, retailer and end-user. The development of integrated supply chain planning promotes the progress of IT technology. On this basis, it also has higher development requirements. It requires more complete database and access, more powerful data support function and decision-making assistance function. Supply chain management is an integrated mode that links suppliers, manufacturers, distributors and retailers on the basis of feedback information flow and feedback material flow and information flow, and acts on end-users. On the basis of relevant quotations, it can effectively understand the supply chain as a core enterprise. Based on the control of information flow, logistics, and capital flow to consumers, starting with purchasing raw materials, intermediate products and final products are constructed. Finally, the products are delivered by the sales network to suppliers, manufacturers, distributors, retailers, etc., until the end users are connected into a whole network structure and mode. • From the point of view of supply chain, although customers are buying goods, in essence, customers are buying the value that can get benefits. Moving all kinds of materials in the supply chain is a value-added process that continuously uses high and new technology to increase its technology content or added value. The integration of supply chain is obtained with the globalization of economy and the rise of multinational groups. With the intensification of market competition, the competition between enterprises has extended from the wide competition to the common competition in both breadth and depth. According to Porter's analysis, he divides the competitive strategies of enterprises into three categories: cost leadership strategy, differentiation strategy and focus strategy. In order to gain a leading position in the market, every enterprise is trying to reduce the total cost of products and actively create its own product characteristics. But we know that with the rapid development of technology, the characteristics of products can easily be imitated by other companies, the differentiation is becoming less and less obvious, while the homogenization of products sweeps across the entire product chain.

# 3. The Foundation of Supply Chain Integration in Dawan District

Supply chain refers to the process that can reflect and show how the most suitable goods and

services can be delivered to the most needed users (including individuals) accurately and timely at the most reasonable price in the shortest time, through the most effective way, and from which the reasonable benefits can be obtained and the value-added relationship resulting therefrom. With the integration of 5G, the new generation of Internet of Things, artificial intelligence and other technologies, the traditional supply chain has entered the modern supply chain. With the development of Internet technology, driven by the multi-technology of "5G+AI+Internet of Things", the integrated service capability and new generation of information technology of modern supply chain provide tremendous convenience for the smooth global trade, and the value share created is also increasing. As an important engine of China's economy, the Dawan District of Guangdong, Hong Kong and Macao have mature conditions for developing modern supply chains. The top ports in the Dawan area of Guangdong, Hong Kong and Macao are clustered together, and 80% of China's supply chain enterprises are gathered. There are more than 300 industrial clusters with different characteristics. The logistics transportation system is developed, and the economic development and consumption potential are enormous. It provides an excellent industrial basis and a broad hinterland for the development of supply chain industry. The construction of Guangdong, Hong Kong and Macao Dawan District also needs modern supply chain. At present, the Dawan District of Guangdong, Hong Kong and Macao are in an important rising period of accelerating the transformation and upgrading of traditional industries and accelerating the innovation and development of emerging industries. "The construction of Dawan District will inevitably bring about the flow and agglomeration of various factors, the optimization and upgrading of industrial layout, which will bring about the deconstruction and reconstruction of supply chain industry in Dawan District.

# 4. The modeling ability enhancement strategy for three-dimensional bionic images

#### 4.1. Management Policy Synergy

We will further implement CEPA series agreements between the Mainland and Hong Kong and Macao, and promote greater openness to Hong Kong and Macao in the areas of shipping, logistics and railway transport. We will speed up the construction of a single window for international trade and promote information exchange and mutual recognition among port regulatory authorities. Strengthen internal and Hong Kong and Macao port departments' cooperation, expand and improve port functions, and promote the implementation of a more convenient mode of passage at Guangdong, Hong Kong and Macao ports in accordance with the law. To formulate policies and supporting traffic management measures for mainland and Hong Kong-Macao communications, improve the Hong Kong-Macao route management system, and promote the development of traffic logistics.

#### 4.2. Unification of Standards and Norms

We will promote the establishment of a standard system of transport equipment consisting of logistics units, transport units, means of transport and transshipment equipment, improve the level of matching, specialization and standardization of corridor transport equipment, and strengthen the docking with international standards. Improve the popularity of standardized pallets in key enterprises of corridors and circular sharing. Propulsion vehicle outline size standard and standard pallet convergence. To study and promulgate the standards of logistics documents and rules of multimodal transport, such as electronic documents and railway freight tickets, and to improve the standards and mechanisms of information sharing among different modes of transport. We will promote the construction of design standards for multimodal transport facilities and loading and unloading connection platforms, and promote seamless connection of facilities and equipment in different modes of transport.

#### 4.3. Overall planning of port and shipping resources

To coordinate the development orientation of Guangdong, Hong Kong and Macao ports and

promote the coordinated development of port groups. We will consolidate and upgrade Hong Kong's position as an international shipping center, enhance the comprehensive services of international shipping in Guangzhou and Shenzhen, and form a win-win port, shipping and logistics service system with complementary advantages with Hong Kong, so as to enhance the overall competitiveness of the port group. We will promote the integration of port resources in Guangdong Province, promote the sharing and sharing of resources such as deep-water waterways and inland ports in the Pearl River Estuary, and form an integrated port operation pattern. We will improve the collection and distribution network of inland waterways, dredging railways and highways, accelerate the construction of railway ports such as Nansha Port Area in Guangzhou Port, and improve the efficiency of port transshipment. To clarify the development orientation of airports in Hong Kong, Guangzhou, Shenzhen, Macao and Zhuhai, consolidate and enhance the status of Hong Kong's international aviation hub, and enhance the competitiveness of Guangzhou and Shenzhen airports as international hub. Efforts should be made to enhance the functions of airports such as Macao and Zhuhai, to strengthen the rapid transport links between airports, to promote dislocation and benign interaction of airports in Dawan District, and to promote the common integration and development of airports..

# 5. Development Trend of Supply Chain Integration under the Background of Guangdong, Hong Kong and Macau Big Bay Area

Development Trend of Supply Chain Integration under the Background of Guangdong, Hong Kong and Macau Big Bay Area Supply chain integration is the integration of Internet technology and new generation of Internet of Things, artificial intelligence and other technologies, which promotes the traditional supply chain industry to enter a new stage of modern supply chain. From the current situation of e-commerce growth and package growth in recent years, the growth rate of tens of percent is undoubtedly shocking for the development of an industry. I believe that in the near future, more practitioners will join in the development of enterprises and promote the rapid development of e-commerce enterprises. Supply chain integration in this area. On this basis, it will gradually improve and continue to develop. On this basis, we need to clarify the specific direction of its development and related factors.

First, network and service capabilities

Specifically speaking, including the central layout service and quality service standard trunk lines and transport allocation flexibility and capacity in the supply chain, the current purchasing process starts from the order, involving supply, warehousing, finance, quality inspection and production, sales, transportation and other departments, the procurement function is divided by different departments, which is neither systematic nor systematic. Overall planning leads to cumbersome procedures and inefficient work; moreover, enterprises often adopt the method of pre-purchasing and large-scale hoarding for scarce raw materials, which increases the cost of purchasing, increases the cost and price of products, and weakens the competitiveness of products in the market. Pay attention to and give full play to the advantages of the Internet.

Secondly, the design capability of supply chain

For customers in different industries, the accuracy of sales forecasting, the ability of big data service and the design ability of customer supply chain are still in the initial exploratory stage. It is necessary to pay more attention to the design of this content so as to promote its better development.

Thirdly, infrastructure and technology application capability

Generally speaking, in the process of supply chain integration, the construction of facilities in Dawan District of Guangdong, Hong Kong and Macao has a direct impact on the R&D effect of enterprise core technology. If the infrastructure is not perfect, it will be very disadvantageous to the R&D of enterprise core technology. On the contrary, the sound infrastructure construction will play an important role in promoting the development of enterprise core technology. In addition, the different innovative capabilities of enterprises themselves will directly affect the cost and bring different experience effects to customers. However, there are duplication of models and

construction standards in infrastructure facilities, which in most cases lack sufficient customized service capabilities.

Finally, integrate IT capabilities

The comprehensive IT capability includes the construction capability of oms, wms, TMS system and information system. Among them, OMS is the most important, it has many functions such as providing warehousing and distribution, transparent service, supporting management of various sales platforms and providing open-api open data interface for customers. In the future, with the slowdown of market demand, the small and medium-sized enterprises in China will not always present a "small, weak, scattered, slow" state, but will have a winner-take-all situation. There is a strong competitiveness, superior strength and direction of development and strength, and continue to achieve faster development.

### 6. Conclusion

As the core engine of the Pearl River Delta, Dawan District of Guangdong, Hong Kong and Macao has the advantages of education, economy and industry. Taking the Zhongjiang River of Zhuhai and Macao, Zhaoqing of Guangfo and Shenguan Hui as the three urban belts around the Pearl River, Shenguan Hui Economic Circle has become an important engine of the three cores of the Dawan District of Guangdong, Hong Kong and Macao, and has promoted the smooth implementation of the strategy of the Dawan District of Guangdong, Hong Kong and Macao. With the expansion of Shenguan-Hui economic circle, Shanwei and Heyuan are also included. Generally speaking, the Shenguan-Hui economic circle has the convenience of natural harbor, and also has played a role in the plain advantage of the Pearl River Delta, basically forming an integrated development model of Shenguan-Hui, Heyuan and Shanwei. Therefore, the strategic goal of the development of Shenguan-Hui Economic Circle is to establish an innovative economic circle. Although the Shenguan-Hui Economic Circle has embodied its unique characteristics and advantages in many aspects, it still exists in terms of innovating the core engine and adapting to the overall strategy of Guangdong, Hong Kong, Macao and the Great Bay Area. On the basis of the analysis of the present situation and trend of supply chain integration in Guangdong, Hong Kong, Macao and Dawan District, it is clear that on the basis of the development of the times, it is necessary to promote the development of supply chain integration in Guangdong, Hong Kong and Macao from the perspective of software facilities and infrastructure and hardware facilities, so as to provide a better service for the major national strategy.

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