Research on Innovation Mode of Fresh E-commerce Supply Chain

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Abstract
In recent years, with the rapid development of Internet, the supply chain mode of fresh agricultural products is constantly innovating, and the dual channel mode of depth fusion underline online is gradually formed. Under the promotion of the coronavirus pandemic, the community group purchasing developed rapidly. Fresh products as cores in community group purchases, received extensive attention. Based on this, this paper will start from the supply chain development mode of fresh e-commerce, and analyze its current development status and propose corresponding optimization strategies for the mode of community group purchase.

Keywords
Fresh E-commerce; Supply Chain Mode; Community Group Purchase; Development Suggestions.

1. Introduction
The definition of the supply chain is “By controlling the information flow around the core enterprise, starting from the purchasing raw materials, manufacturing intermediate products and final products, ultimately through sales network will supplier, manufacturer, distributor, retailer and terminal. The user is connected to a whole functional network chain structure.” There are also economists believe that the enterprise supply chain refers to the entire process from the supplier to the customer through the value-added process and distribution channel, which begins with the source point of the supplier to end the end of consumption.

Fresh produce e-commerce refers to the direct sale of fresh fruits, vegetables, fresh meat and other fresh produce products on the Internet by means of e-commerce. Compared with the traditional trading mode of fresh agricultural products, fresh e-commerce has broken through the restrictions of time, space and trading themes in trading activities to a certain extent, bringing producers and consumers closer together and improving circulation efficiency. The difference between the fresh e-commerce supply chain and the traditional supply chain is that the conventional supply chain is operated in 2B mode, but the community fresh e-commerce supply chain is 2C mode, and the supply chain system built by customers. The community e-commerce fresh supply chain includes planting, merchandise procurement, ordering requirements, warehousing sorting, logistics distribution, each of which is different dimensions, and different enterprises have unique mode in these five dimensions.

At 2020, under the influence of pneumonia epidemics, "contactless distribution" was widely respected, and the delivery service to home was also extremely favored, which in turn gavened the demand for community group purchases. Data show that the development growth rate in the first half of the community group purchase market exceeds 100%, and its market size reaches 650 billion. According to the survey, it is 30% to 40% in the community group purchase, and it is also more than 60% of the highest sales in the community group purchase platform, reaching more than 60% of the overall sales. It can be seen that the community group purchase is an important channel for the retail of fresh products.
2. Fresh Food E-commerce Business Model

2.1. Traditional fresh produce e-commerce model

Through self-built logistics or third-party logistics, the traditional fresh produce e-commerce model is to deliver products directly to consumers through self-built logistics or third-party logistics with the help of the Internet. The traditional fresh produce e-commerce business has a national layout, and the product delivery time is generally 1-2 days. This type of fresh produce e-commerce has a relatively large user base due to the early cultivation of user habits. The user base is relatively large, and the cost of attracting new users is low, with strong brand advantages and Integrity. However, there are disadvantages such as long delivery time, high loss rate of products and dependence on capital chain.

2.2. The self-operated store

"Supermarket + Catering home" is the main medium and high-end fresh retail experience store, due to the rapid development of the previous development. The problems accumulated in supply chain, site selection, selection, implementation, etc. Each company is also constantly adjusting the strategy. The Hema and Yonghui are also exploring a variety of modes, such as Hema fresh, Hema mini, Hema F2, Hema station, etc.

2.3. Front marking

The front positions are mostly start-up, and the enterprise is positioned around the user’s "three meals a day", through the continuous optimization of the selection, enhance the customer unit price and reasons, thereby enhancing its competitiveness. Representing companies such as a daily, Ding Dong shopping, Park Puyama. Under the demand for product expansion, the front position is currently 200-400 square meters, and SKU is between 1500-2000.

2.4. Fresh to the cabinet

The model of fresh to the cabinet optimizes fresh circulation costs through predetermined system. Although the time is slightly poor, but the customer's experience is improved from the perspective of price and quality, and the user value can be used to ensure cost and loss can be guaranteed. The rate is lower than the industry average, and this model is also worth learning from SMEs.

2.5. Community group purchase

Community group purchases are new retail modes that rely on community and head social relationships. It is primarily targeted that the second-line and the following cities, the township market, and the market competition is relatively small. Its application scenario is mainly community acquaintances and light social, so traffic can achieve accurate docking. Through the marketing means of community distribution, the fresh efficiency is high and the cost is low. The community group purchase has experienced the preliminary shuffling, and the market is in a refined adjustment phase. At present, mainly representing companies such as prosperous, exclusive, etc. Due to many channels of fresh consumption, if the community group purchase cannot provide a competitive product, the head of the head will affect the development of this model.

3. Community Group Purchase Mode

3.1. The Platform Development

Community group purchase rapid development, the platform target performance is doubled, and the overall size of the industry is expected to exceed 50 billion yuan (GMV caliber) in 2021.
According to the Medical Consultation Survey, 2020 China Community Group Buy Market is 72 billion yuan (based on sales measure). In 2021, the main players of the Internet platform have increased the investment in community group purchases. According to 36kr reports, the Meituan groups expected to invest 20 billion in community group purchase business, up 100% year-on-year, the goal is 2021 billion GMV; more than a lot of purchases The investment in dishes is also increasing. A lot of buying food has covered more than 300 cities across the country, while high-efficiency expansion markets, spelling will continue to increase investment in agricultural product infrastructure, to enhance the cost of buying vegetables. According to the "Connected Insight" media report, Alibaba purchases the community group to purchase the key project of 2021 new retail sector, or invested at least 20 billion yuan, strive to enter the top three rows of the market; the 2021 impact goal under the MMC business group is opening more than 20 provinces, the daily average is 40 million, and the average number GMV is 350 million yuan.

![2021 Community Group Platform GMV Target](source)

**Figure 1. 2021 Community Group Platform GMV Target**

### 3.2. The Product Categories

Product categories are gradually enriched, which also leads the regional brands usher in new developments. The number of orders is climbing, SKU is stable at 1500+, with obvious geographical and seasonal characteristics. From the viewpoint of Meituan Preferred’s limited time seconds, hot pot base appeared in Chengdu and old aged vinegar appeared in Shanxi, with more regional characteristics; in the heat of summer, electric fans appeared as limited time seconds in Changsha, Wuhan and Chengdu. According to the research, the number of SKUs in Wuhan, Changsha and other mature areas of community group purchase development such as Xingsheng Youxuan and DuoDuo reached 1500+, and the number of orders on the platform generally increased highly.

Community group purchase is mainly used for regional brands, both high price/performance characteristics. Local second and third brands are more cost-effective and more compatible with the positioning of community group purchase channels, especially in meat, poultry and eggs, seafood and aquatic products, frozen food, grain and oil food, household and personal care categories, is expected to usher in new development opportunities through community group community group purchase to usher in new development opportunities; in dairy bread, casual

In the segments of dairy bakery, snack food, alcoholic beverages, Mengniu, Yili, Coca-Cola, Pepsi, Daliyuan and other large brands have also laid out community group purchase channels. In the segments of dairy bread, casual snacks and alcoholic beverages, Mengniu, Yili, Coca-Cola, Pepsi and Daliyuan have also laid out community group purchase channels.
3.3. **The Logistics Warehousing**

The logistics warehousing and distribution of Fresh Food is continuous iteration, refrigeration facilities are basically complete. Summer fast food frozen SKU accounts less than 10%, the center warehouse has basically realized full-crop chain, and the current distribution difficulty is mainly in the grid warehouse to the group, and there is currently a more accumulator and refrigerated equipment to achieve freezer transportation distribution. The two models of cold shed and incubator are mainly implemented, and the construction of cold shed is due to the initial investment of high (6-80,000 / piece) and partner instability, the platform has been difficult to implement; the single cost of the incubator is lower, 200 - 300 yuan / piece, 24 hours, currently in the platform, the platform is generally implemented; the grid exterior, the driver's performance is usually in the incubator in the insulation box, and the refrigerant preservation time is generally 8 ~ 10 hours. The head of the head will give priority to the team of refrigerated equipment.

Using four-stage hierarchical sorting, the full-time pre-efficiency innovation is new. At present, the mainstream warehouse performance of community group purchases is mainly supplied to the supplier - shared warehouse - the center of the center of the net, the four-segment chain of the head of the head, where the shared warehouse is made through the way in advance and the intensive sorting mode in advance. The performance efficiency is improved.

![Figure 2. The mainstream wareroom model of Community group purchase](image)

3.4. **The function of the head**

The group leader diversion function is weakened, the platform gradually become the main diversion. In the early stage of community group purchase, the head of the group mainly played the two functions of attraction and fulfillment. With the gradual improvement of the community group purchase model, consumers are more inclined to choose community group purchase goods through the platform, and it is predicted that the head of the future mainly plays a terminal fulfillment function. At the same time, Meituan Yousei has launched the "Tuan Xiaomei" robot, which pushes out new news, publishes the preview and small program sharing links every day.

The commission rate of the group leader is decreasing and becoming an industry trend. At present, according to industry research, compared with the average commission rate of 10-12% in the early days of community group buying, the overall commission rate has declined by about 5%. This is mainly because 1) the head of the group can simultaneously serve as the head of multiple platforms, the scarcity of the head of the group is reduced; 2) the ability of the head of the group to attract traffic is gradually outlawed by the platform, the consumer’s stickiness to the platform is enhanced.
Refrigerated storage has become the hard strength of the head. Several community group buying platforms currently tag and sort the head end, and will give priority to recommending self-pickup points with refrigerated equipment, and self-pickup points without refrigerated facilities do not support frozen product sales. According to the new economic sales data, the head of the third-tier and below cities accounted for 65%, and the head of the new first-tier, second-tier and third-tier cities accounted for 11% higher than in 2019.

4. Development Measures

4.1. Strengthen the quality control of fresh products

Currently, despite the decline in consumer purchasing power, consumer demand for product quality is showing a trend of not decreasing but increasing. Therefore, fresh electric business can continue to help the upstream origin product fresh standardization construction, increase the origin of direct picking. On the one hand, in order to avoid the huge pressure of the standardization of the whole category, fresh food e-commerce can continue to help the standardization construction of upstream products and increase the direct harvesting efforts.

On the one hand, in order to avoid the huge pressure of full category standardization, fresh produce e-commerce enterprises should first make category selection, run through the standardization process of the selected category, and continuously accumulate the experience of product standardization, and then extend the standardization to other categories to form a virtuous cycle. On the other hand, fresh produce e-commerce enterprises should clarify the origin and country of production information of fresh produce and provide relevant and reliable health information. Fresh food e-commerce companies should clarify the origin and production country information, provide relevant and reliable health certificates, optimize and refine the product packaging, so that consumers can buy and eat with peace of mind.

4.2. Build a complete and efficient supply chain system

In order to build a complete and data-driven supply chain system, firstly, under the environment of the country actively improving the construction of cold chain infrastructure, fresh food e-commerce should prompt most cold chain logistics carriers to gather and make the logistics information transparent and open, so as to make vehicle mobilization and turnover more efficient and reasonable, and reduce operating costs.

Second, around the personalized consumer, we should try to build an order-driven production supply chain by integrating consumer needs. At the same time, the use of Internet technology, the supply chain for digital transformation, open upstream and downstream, to achieve real-time information interconnection of all parties involved in the fresh supply chain, operational synergy, improve operational efficiency. In order to reduce the communication cost and information loss during the circulation of fresh products, we should try to build a "decentralized" cold chain logistics backbone network and realize a cold chain logistics system that connects the origin to any end consumer nationwide, so as to provide one-stop service for enterprises and improve gross profit.

5. Conclusion

At present, the community group buying platform no longer relies solely on subsidies to pull in new, but has entered a new stage of business efficiency-oriented, focusing on both traffic competition and supply chain capability. Guided by the new stage of both traffic competition but more focus on the supply chain capacity competition.
In the long run, supply chain capability building is the key to forming a brand moat to improve the fulfillment time and product quality and guarantee user experience, while at the same time, the platform needs to give full play to the internal ecological synergy effect and attract more ecological builders to join, so as to form a competitive barrier and consolidate its market position. The platform should give full play to the internal ecological synergy effect and attract more ecological builders to join, so as to form competitive barriers and consolidate its market position. Looking ahead, along with the maturity of business model iteration, the platform will move towards benign competition, and by building localized, and localized platforms in the sink market, the platform will be able to compete, and by building a localized, multi-level warehouse and distribution system and supply chain infrastructure in the sinking market, we will improve the efficiency of the fresh food industry chain. In the future, with the maturity of business model iterations, the platform will move towards healthy competition and improve the efficiency of fresh food industry chain by building localized, multi-level warehousing and distribution system and supply chain infrastructure in sinking markets.

References


