

Adjusting the Business Model of Fresh E-Commerce with the New-Retail Concept Based on Osterwalder Business Model Canvas—Taking Freshippo as Exemplar

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Abstract. With the emergence of various digital technologies, including big data and the Internet of Things, fresh e-commerce has gained new momentum especially after it became a fundamental demand during the COVID-19 pandemic. Freshippo, as Alibaba's first fresh e-commerce company with the practice of the new-retail retailing method, its current business model and successful experience in the front end of fresh e-commerce have great analytical value. This paper takes Freshippo as the primary research subject, applies a case study analysis, and conducts a survey to collect customer feedback for Freshippo. This paper initially states the existing research result in business-to-customer(B2C) and new-retail retailing methods, then systematically analyzes Freshippo's current operating condition based on the Osterwalder business model canvas. With the further support of survey feedback, three main issues that occurred in Freshippo's ongoing operation, including limited payment method, excessive expansion cost and frustrating user experience have been revealed. In the end, this paper not only offers corresponding potential solutions for Freshippo but also provides proposals for other Freshippo-alike corporations.

Keywords: Fresh e-commerce; New-retail; Osterwalder business model canvas.

1. Introduction

At the 2017 Apsara Conference, Jack Ma first time proposed the concept of “new-retail”, which refers to combining the advantages of both online and offline retailing to gradually replace conventional retail business [1]. Dissimilar from offline retail or online e-commerce, the new-retail is meant to deeply integrate the cloud platform, offline physical stores and logistics by utilizing the Internet, big data and artificial intelligence [2]. Therefore, Alibaba established its first fresh e-commerce subsidiary—Freshippo. The foremost mission of Freshippo is to form a community-based one-stop centre which provides new-retail shopping experiences for its customers, incorporating the “To shop + To home” model and adopting different retail methods for different customer demands. Affected by the COVID-19 pandemic, the scale of China's fresh e-commerce has dramatically increased to 458.49 billion Yuan, which was a 64.0% growth compared to 2019 [3]. With progressively matured developing patterns and customers' consumption habits of fresh goods via online purchasing, it was expected to see fresh e-commerce remain a rapid growth in the future [4]. Yet even in such a promising industry, the once most sought-after stock, Missfresh suddenly announced the dissolution of its e-commerce department in July 2022, along with the concept of Preposition Warehouse which used to have great promises [5]. This incident brought a new question - “What business model could support fresh e-commerce in the long term?” From the theoretical value, this paper aims to analyse Freshippo's business operating pattern which is characterized by the new-retail, summing up its current situation as a fresh e-commerce company, providing experience and advice for other fresh e-commerce companies, accelerating the process of transforming the business model of other “Freshippo-alike” companies.

This paper selects Freshippo as the research subject, analysing its current business model and existing issues from customers' and clients' perspectives, as well as investigating how the fresh e-commerce platform will change its role in the post-pandemic era.

2. Literature Review

This literature and theory review is mainly divided into the domestic field (results found by researchers from China) and foreign field (results found by researchers out of China), as this paper believes that the theories from foreign researchers may lack practice in the business environment of Fresh e-commerce in China, while domestic researchers could fulfil this vacancy by their better comprehension of Freshippo and the business environment where it exists.

Regarding the research of Business to Customer (B2C) marketing, Online to Offline (O2O) marketing and the new-retail, Chinese and foreign scholars all have numerical findings. Salmann (2013) has discovered that China plays an important role in the global B2C market, especially for the fresh goods traded online, and the digital economy has largely changed customers' relationships with conventional merchants [6]. Cho et al. (2018) also recognized that the booming growth of China's smartphone market led to rapid development in the O2O catering platform [7]. Santiago (2014)'s research shows that the new-retail is not two irrelevant retailing methods, but a method that allows customers to order from the online platform and take the items offline, drawing online customers into stores, thereby achieving cross-selling [8]. Taking the precedent of fresh e-commerce in Japan as an example, Jeffrey (2017) assumes that the new-retail is empowered by clearing obstacles of data transformation between online to offline and shortening the distance from farms to stores, thus achieving maximum benefits of supply-side structural reform [9]. Poole (2011)'s research summarized that in the age of the digital economy, corporations have to create an intelligent platform to analyze customers' consumption behaviour [10].

Zhang Kun (2017) listed the pain points and weaknesses in the marketing model of conventional fresh e-commerce and proposed that it needs to change the reliance on the dividends of the Internet ages to keep driving turnovers [11]. Wang Xuhui's (2016) research shows that the concept of the comprehensive B2C fresh e-commerce platform allows fresh goods retailers to use matured B2C e-commerce platforms to accomplish precise marketing of fresh goods to individual customers [12]. Zhang Shubin's (2020) research acknowledged that the development of the new-retail in the future would be the integration of online services, offline services, unmanned retail and expertise from both outside and inside of the retail industry [13]. Opening multiple distribution channels, combining secondary sales with the new-retail, as well as expanding other models of the new-retail to adapt to the diversified development of the industry. Wang Yanyan's research summarized that the new-retail combined with big data could make marketing more specific, providing personalized marketing options, which could transform "people to information" to "information to people" [14]. Ji Xiangzhen's (2019) research proposed that after the birth of Freshippo, the emergence of other similar platforms largely diverted Freshippo's customer structure, which exposed some existing problems [15]. The research results above need to be transformed into solutions to solve the current risk of Freshippo.

In the later 20th century, many scholars focused on the value creation of business models and suggested that the nature of business is trading, including trading entity, trading content, trading method and pricing [16]. With the arrival of the Internet age, Osterwalder redefined business models as a company achieving sustainable profit through inner structure, partner relationships, customer relationships, etc. which is called the business model canvas [17]. The most well-known business model canvas theory divides a corporation into 9 building blocks: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships and cost structure. These 9 building blocks illustrate a company's logic flow of seeking profit, as well as covering the four main parts of a business entity: client, product, basic infrastructure and financial logic. A business model can be viewed as a strategic blueprint which could be achieved

by the structure, process and system of an organization. This paper will sum up and analyse corresponding building blocks for Freshippo's current situation by utilizing the Osterwalder business model canvas, but considering the unique characteristics of fresh e-commerce, only the following blocks would be focused on: the value propositions, about how to provide benefit aggregation to customers and create added value; the key activities, about how to effectively reach customers via logistical platforms; at last, the cost structure, about how to reduce the wastage rate of fresh goods platforms and improve their efficiency.

The literature and theory review above summarized the concepts of e-commerce marketing, O2O marketing, B2C marketing and the new-retail which integrated them all. Lacking quantitative study, without systematical case studies, and most of the literature and theories do not have an analysis based on the actual economic environment of China, which left a vacancy for this paper to conduct research for Freshippo's strategies and its future development. This paper will combine the effort of both domestic and foreign fields and take Freshippo as the primary case study subject, analyzing Freshippo's existing issues and risks, predicting industry trends of fresh e-commerce and providing constructive suggestions.

3. Case Introduction

Freshippo was established in March 2015. The new-retail was a total deconstruction of offline merchants made by Alibaba, and Freshippo was one of the representatives of the new-retail. Benefiting from Alibaba's capability of technology and data collecting, Freshippo became a retailing platform which combined supermarkets, restaurants and grocery stores, resolving the fresh goods industry's common pain points, high damage rate, high cost and unable to satisfy demand in time, by taking offline physical stores as the entry point and bridging data from online to offline.

To be a fresh retail platform under one of the largest Internet companies, Freshippo's selling points are mainly focused on three aspects: 1. Personalized push 2. Emotional consumption experience 3. Remarkable distribution and logistics, which are corresponded to the three particular building blocks of the Osterwalder business model canvas mentioned above. First, the personalized push. Even in the total offline retail business environment, Freshippo still insists on using mobile application payment, closely connecting clients from online to offline. This method reminds customers of their offline consumption experience when they login to the mobile application even if they have left the consumption scenario. In fact, behind the mobile application payment is Freshippo's ambition of the big data mining of its clients' consumption behaviours. Alibaba provides membership services for Freshippo customers, letting them view and purchase products in the closest shops, tracking consumption behaviours and giving personalized suggestions by exploiting big data. The second is the cost structure after the emotional consumption experience. The brand-new offline physical stores with a panoramic shopping experience, include a major highlight of Freshippo's marketing activity named "Fresheat", establishing an emotional connection for customers toward physical stores. Such actions achieve a primitive accumulation of unique consumption experiences, aimed to bring comfortable feelings. The third one is the remarkable logistics and delivery service which is also the key service and provides the slogan of "3 miles for 30 minutes" for Freshippo's delivery service. 30 minutes is the maximum waiting time that clients could tolerate, and it is far less than the time cost of clients going to the grocery stores by themselves. Furthermore, for some fresh goods, 3 miles is the best distance for normal temperature delivery to replace the cold chain, and it is also the longest distance that could be reached within the specified time limit excluding the order selection. This delivery management significantly reduces delivery costs.

4. Methodology

To more concretely and practically analyze the issues of Freshippo, as well as the real feeling of customers, this paper has conducted 350 online surveys via the Internet platforms and collected 305

feedback which contained 219 valid information. At the beginning of the survey, a question about whether the surveyees have consumed at Freshippo was asked, and the survey would be defined as 'invalid' if the answer is 'false'. This questionnaire contained 17 questions which were mainly divided into two parts. The first part was about the descriptive statistical information about the surveyees, including but not limited to age, gender, etc. The second part was mostly focused on satisfaction with Freshippo's services, setting the Likert scale questions such as the shopping environment, service attitude and satisfaction with delivery. Furthermore, the questionnaire also asked whether the surveyees have recently reduced the purchasing frequency at Freshippo and the reasons for that. Measuring customers' overall cognitive evaluation of Freshippo through the aspects of the product price, service attitudes, delivery services and payment methods.

5. Results and Discussion

Table 1. Descriptive data analysis of questionnaires

Serial number	Survey item		Statistical analysis of data
1	Gender	Male	81 people (37%)
		Female	138 people (63%)
2	Age	18-25 years old	43.74%
		26-30 years old	20.09%
		31-40 years old	18.26%
		Above 40 years old	17.90%
3	Monthly Income	5000 RMB or less	27.37%
		5001 to 8000 RMB	36.03%
		8001 to 9999 RMB	25.55%
		10000 RMB or more	11.05%

Firstly, by sorting out the result of the first part of the questionnaire, the statistics and data were obtained in table 1. From this table, it could be easily seen that the user group of Freshippo mainly consisted of young women, and this could be partially attributed to the fact that the loyal customer base of Taobao is young women. The big data management of Alibaba Cloud could grasp the consumption habit and preferences of particular customer groups, with better comprehension to attract them with further interest. However, solely providing services for limited customer groups is unsustainable for the new-retail retailing model and ignoring other customer groups would lose the fundamental implication of big data, wasting social resources. In addition, since Freshippo's current loyal customer bases are more active on the Internet, they are easy to accept new things and change their consumption habits and could be attracted by new platforms at any time, shifting their consumption behaviours. Thus, how to horizontally develop customer bases while retaining the existing customer stickiness is one of Frshipppo's unsolved problems.

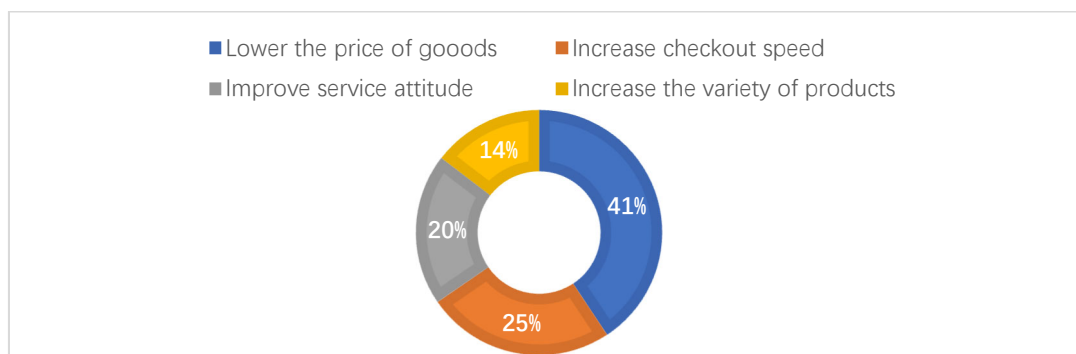


Fig. 1 The reasons why consumers have not shopped at Freshippo in recent times

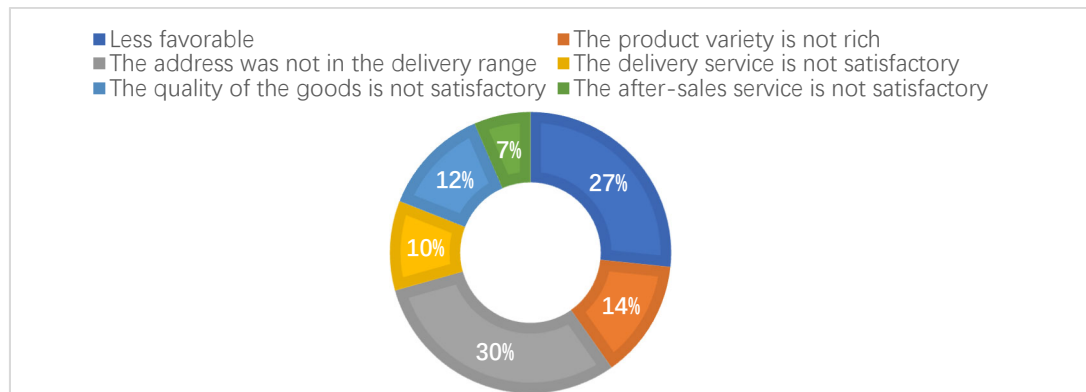


Fig. 2 The aspects that consumers believe that Freshippo needs to improve

Regarding the question of the frequency of recent purchases at Freshippo, almost half of the surveyees stated that they have reduced their purchase frequency than before, and their reasons were provided and summarized in Table 1. It could be seen from the table that half of the customers thought the reasons for reducing their desire to purchase were lack of discounts and addresses out of the delivery area. A small portion of customers thought it was the disappointing services that made them not wish to consume at Freshippo. While regarding the question of the improvements Freshippo required, which were summarized in Table 2, most of the customers believe that there was considerable room for improvement in price, product variety and service quality. Especially in terms of service, the speed of checkout and the ability to handle complaints have attracted the attention of consumers. Therefore, based on the above questionnaire results, this paper concludes three main problems of Freshippo.

5.1 Payment method limits customer groups

The first one is the payment problem which received the most complaints. As an offline retailer, Freshippo insists on using Alipay as its only payment method, while refusing to use WeChat payment or cash. It might not be an issue for young customers to download Alipay and sign up, but for senior customers or who are unable to use a smartphone, this online payment would significantly reduce their willingness to consume at Freshippo. The single payment method will inevitably lead to a loss of customers in the long term, and it is also a loss that should be avoided for a corporation. Furthermore, refusing to accept cash violates the competition principle of the market economy, suppressing the diversified development of Freshippo, and does not meet the idea of “convenient, efficient and precise” advocated by Freshippo’s new-retail concept.

5.2 High operation and expansion cost

High unit price is the second reason why customers do not want to shop at Freshippo. Compared to offline retailers, Fresh e-commerce has a higher unit price. The application often pushes mid-range or high-end products with high minimum purchases to ensure brand reputation. Since the labour cost of picking and packaging each order with the intelligent equipment is certain, and the delivery cost of the limited delivery range is also certain, to generate sufficient profit, Freshippo has to appropriately raise the unit price. At the same time, the physical stores require more human, material and financial resources, and to attract and retain the existing customer base, the physical stores could only offer products with lower gross profit. With Freshippo’s expansion toward second and third-tier cities, the sales, limited by relatively lower population density and purchasing power, will be reduced, yet the cost of logistics will increase. Thus, to maintain a fixed cost, offline stores have to increase their price.

5.3 Incapable services

The third problem is the incapable services, especially the logistical and delivery services. The delivery range of 3 miles sometimes can not be marked on the map, which usually results in cases

where customers have placed orders but were not in the delivery range. Also, the 30 minutes delivery time often be delayed by weather and traffic conditions. Fresh goods' properties of difficult to transport and easy to be lost in the shipping process, with the fact that many orders taken by Freshippo appear the phenomenon of repeated transportation and roundabout transportation, not only delaying customers' time for receiving items but also often causing food spoilage. And when such problems happened, customers' complaints can not receive proper and timely solutions, for example, customers can not receive refunds or fresh goods replaced for spoiled one in time. At the same time, several issues are occurring in Freshippo's integration from the online platform to offline stores and the after-sale process. In a situation where the product information provided by the mobile application does not match the actual product in stores, the enthusiasm of customers to purchase the product and the trust in the company would be greatly lost. Customers returning unsatisfied products not only consume time and energy for both sides but also make customers incur negative reviews toward Freshippo.

6. Suggestions

6.1 Attracting customer groups with multiple distributions

With the background of the Internet, people will have more and more payment methods, and Freshippo should keep abreast of this trend, opening multiple distribution channels instead of a sole payment method, especially the offline physical stores which should set up multiple checkout methods, to reduce queuing time and improve efficiency. At the same time, Freshippo could also make full use of its delivery services, allowing customers to choose to pay in cash or online after items arrived. Expanding Freshippo's payment methods on the one hand facilitates customers, on the other hand, is an illustration of Freshippo's wide-ranging business layout. Using different payment methods to attract and retain different customer groups has become a way to expand user groups while keeping the advantage of application payment to conduct big data analysis, segmenting consumer groups to accurately position marketing strategies for different consumer groups. In addition, Freshippo could track customers who have consumed in the physical stores online or offline, and regularly conduct corresponding activities such as information pushes and gift certificates to better retain customers, thus driving sales by customer habits and interests.

6.2 Reducing expansion cost by applying abreast storage mode

To solve the problem of the exceeded cost of in-store storage like Freshippo has, a parallel storage mode of central warehouse and in-store storage can be established. For urban areas with relatively small demand, the central warehouse mode could be used. Although the covered delivery area would be reduced, the also reduced cost means that more warehouses could be established, overall expanding the operational scope. To better achieve the operation model of "shopping on the Internet, delivered at the doorstep" Freshippo should firstly build up a fresh cold chain logistics network with wide coverage, strengthen the diversification to form a regional centre, and freely allocate resources between every logistical node. Maximizing the role of in-store storage mode with front warehouses for existing stores, to serve surrounding areas and timely allocate inventory level for salable and unsalable products. However, Freshippo should also beware of its capability and avoid "excessive centralization", preventing itself from the increasing business burden and efficiency reduction. Furthermore, for the product selection of the e-commerce platform, Freshippo could reduce the number of stock-keeping units (SKU) by an appropriate amount and invent hot sale products to minimize the cost before the process of storage and delivery, attracting new customers by promotion based on storage and sales.

6.3 Improving user consumption experience

Freshippo's advantage compared to other e-commerce-only companies is user experience. Customers expect superior experiences after they have paid the extra cost and the key to boosting the

quality of online service experiences is increasing delivery speed and handling timeouts and mistaken orders with carefulness. Freshippo could continue to improve its logistical system with better use of big data, the Internet of Things and automation, enhancing operational efficiency by utilizing intelligent order management, as well as warehouse management and distribution arrangements based on different properties of products. Under the practice of the front warehouses, the delivery area covered by each shipper would be reduced, thereby lowering the delivery time per order. To solve the problems of the product itself, Freshippo should root out the problems from their sources by evaluating procurement from various fields and carrying out a random inspection for water quality, equipment, etc. Urging suppliers to ensure the safety and quality of the source of procurement. Refining the reward and punishment system for responsible staff and enhancing employees' sense of responsibility for the enterprise. Ensuring transparency and institutionalization for each process from procurement to customers. In terms of the supply chain, Freshippo should leverage its digitalization to build up a supporting system for the upstream and downstream of the supply chain, establishing "digital agriculture" to solve the existing issues in the conventional supply chain.

7. Conclusion

7.1 Key Findings

Freshippo has developed well since its birth and, to some degree, became an operation template of the new-retail model, providing an entirely new business model. However, there are still issues behind its rapid growth. From the problems of Freshippo revealed by business model analysis and questionnaires conducted by this paper, the main obstacle that would cease Freshippo's expansion is the subsidy in customers' favoritism. From actual feedback, this paper summarized the main problems that Freshippo is currently facing: payment method limits customer groups, high operation and expansion costs, and incapable service. For these three problems, this paper proposed corresponding solutions: attracting customer groups with multiple distributions, reducing expansion cost by applying abreast storage mode and improving user consumption experience.

7.2 Future Studies

This paper took Osterwalder business model canvas as an entry point to analyze Freshippo's current business model and found out its potential yet unsolved problems from the customer's perspective, along with corresponding solutions. As a pioneer among fresh e-commerce corporations, Freshippo has achieved partial success as it became a new-retail platform, which provided an experience and reference for the subsequent transformation and development of those "entire offline" fresh good retailers represented by Missfresh. Although Freshippo represents a transformation of fresh e-commerce in the future, the idea of the new-retail is a relatively new concept for the existing business entities. In addition, Freshippo's transformation is not being fully tested and evaluated by the market, and the lack of in-depth academic research can be a limitation for this paper to some degree. Furthermore, the data analysis in later research could be misleading, since Freshippo's physical stores only cover a small number of cities in China, thus the collected questionnaire results may have errors made by regional concentration and the consumption habit of the surveyed population may have its limitation. Therefore, this paper will keep tracking the operation and development of the new-retail corporations represented by Freshippo in the future, investigating in practice with updated research results to make better use of the value and significance of this research.

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