

**A BUSINESS MODEL OPTIMIZATION PLAN FOR
S.F. GROUP'S FRESH E-COMMERCE BUSINESS**

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Abstract

Nowadays, the market is increasingly fierce, so many companies seek new growth points through business diversification. However, logistics companies have not succeeded in integrating business in the e-commerce industry.

In order to answer the failure of logistics enterprises in the field of E-commerce, this paper chooses S.F. BEST as the research object. Case study is conducted on JD.com FRESH and MISSHFRESH to explore their successful experience in business model and the diversity of the industry. After that, we proposed feasible suggestions on the problems existing in S.F. Group.

The study of this project found that fresh e-commerce not only needs to provide customers with quality products and delivery services but also needs to establish a good relationship with customers through platforms and channels. However, S.F. Group lacked the ability of platform and channel management, and its market positioning was obviously wrong, so it suffered from business failure and financial losses.

Aiming at the shortcomings of S.F. Group's business model in market positioning accuracy and resource utilisation ability, this project proposes improvement suggestions and a development plan. By improving the implementation of the plan, we hope to help S.F. Group reshapes its business model and business operation process, and help the company achieve business diversification and vertical integration.

Keywords: Business Model, Business Model Canvas, Fresh E-commerce Business, Diversification

Sumário

Na actualidade, o mercado está cada vez mais feroz, levando a que muitas empresas procurem novas vias de crescimento através da diversificação dos negócios. No entanto, as companhias de logística não conseguiram desenvolver os seus negócios no sector de comércio electrónico.

A fim de dar conta do fracasso das referidas companhias no domínio do comércio electrónico, o presente trabalho tem o S.F. BEST como objecto de investigação. O estudo de caso é conduzido para explorar a experiência bem-sucedida do modelo de negócios e a diversidade do setor. Em seguida, propusemos sugestões viáveis sobre os problemas existentes no S.F. Grupo.

O estudo do presente trabalho constatou que o comércio electrónico actual não apenas necessita de oferecer aos clientes produtos de qualidade elevada e prestar serviços de entrega eficaz, mas também precisa de estabelecer um bom relacionamento com os clientes através de várias plataformas e canais. No entanto, o S.F. Grupo não possuía a capacidade de gestão de plataforma e canal, com um posicionamento obviamente errado no mercado, por consequência, sofreu de fracasso nos negócios e perdas financeiras.

O presente trabalho propõe sugestões de melhoria e um plano de desenvolvimento, focando nas deficiências do modelo de negócios do S.F. Grupo de negócios acerca da imprecisão de posicionamento no mercado e incapacidade de utilização de recursos. Através de melhorar a implementação do plano, esperamos ajudar o S.F. Grupo na reestruturação do modelo de negócios e do processo de operação de negócios, ajuda a empresa a alcançar a diversificação de negócios e integração vertical.

Palavra-chave: Modelo de Negócios; Quadro de Modelo de Negócios; Novo Negócio de Comércio Electrónico; Diversificação.

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1. Definition of the problem's context

In the 21st century, enterprises are facing the challenges brought about by a new round of structural adjustment and geographical division of labour. To ensure continued competitiveness, enterprises have begun to seek new profit growth points. As the most familiar industry for express delivery companies, E-commerce has undoubtedly become the first choice for express delivery companies to try diversified operations.

S.F. Group, the leading express company in China, has started diversified development since 2008. On May 31, 2011, S.F. BEST, the online E-commerce platform of S.F. Group, was officially launched. The platform, mainly in the field of fresh goods, is aimed at middle and high-end users. In May 2014, as an essential part of the S.F. Group's O2O strategy, 518 offline stores named S.F. HEIKE or S.F. HOME was unveiled. They are defined as community service point of online shopping, which provides virtual shopping, pre-sale of goods, express delivery, community service, and many other functions. S.F. Group hopes to create a complete community O2O closed loop with the “logistics + E-commerce” model. However, the development of S.F. HEIKE and S.F. HOME was not smooth. Due to unreasonable rapid expansion, chaotic business model, and unclear market positioning, it suffered continuous losses. In September 2016, many S.F. HEIKE and S.F. HOME were closed, and the rest was renamed S.F. BEST, which means a phase failure of the S.F. Group's E-commerce business.

As a courier giant with a nationwide service network, S.F. Group has worked in the E-commerce supply chain for many years and is very familiar with the operation of the E-commerce industry. In addition, through direct procurement, industry-leading distribution services, and other value-added services, S.F. Group has a unique advantage by diversifying into the E-commerce industry. While after nearly seven years of trials, S.F. Group has still not succeeded, and similar situations have occurred in other major express delivery giants in China.

What are the obstacles that prevent express companies from achieving vertical diversification in the E-commerce business? How do we understand the failure of express delivery companies

in the process of diversification? Also, what actions should express delivery companies take to get out of the current predicament, exit the field, or make adjustments? Answering the above questions will help S.F. Group and even the entire Express industry to achieve diversified development.

This project hopes to explore the reasons why S.F. Group, the leading Chinese express delivery company, failed in the diversification strategy in expanding its fresh food E-commerce business and proposed a feasible and targeted solution.

2. Literature review

2.1. Express industry

2.1.1. Definition

In the General Agreement on Trade in Services, the World Trade Organization (WTO) defines services (and products) as 12 departments following the principles of the United Nations' Centralized Product Classification (CPC) system. The agreement defines Courier Service (or express delivery Services) as services provided by non-postal express delivery companies using one or a combination of modes of transport, including services for the collection, transportation and delivery of letters and parcels, whether at home or abroad, in addition to the services provided by the national postal authority.

The express business originated in the 1950s or so, but it was not until the 1970s that the express business was fully developed on a large scale. Globally, FedEx, United Parcel Service (UPS), DHL and TNT are now the four international express delivery giants. On the other hand, in China, S.F. Group, HTO Express, STO Express, YTO Express, ZTO Express, and YUNDA Express account for the significant domestic market share.

2.1.2. Express delivery: an overview

European and American scholars started their research on the Express industry in the 1960s and have achieved more results after entering the 21st century. Numerous researches (Birla,2005; Brewster,2007; Cosimato et al., 2015; Hübne et al., 2016) analyze the market competition and customer demand issues and provide versatile solutions in the development process of express delivery enterprises through the study of some international leading express delivery companies, and the research field gradually extends to the last-mile supply network, reverse logistics and green logistics.

Birla (2005) through a case study of FedEx, found that in the context of the rapid rise in labour costs, technological innovation and differentiation strategies are essential factors for the success

of express delivery companies in the past, and differentiated strategies will play an increasingly essential role in the future. Brewster (2007) studied the success factors of UPS development and concluded that UPS could develop into an international large-scale express delivery company because of its continuous innovation ability under the changes of the internal and external environment.

More recently, research indicates that continuous innovation, including both technology and concept, is an essential guarantee for the future development of the Express industry. In the case study of DHL, the development of a much more sustainable and environment-friendly approach to SCM is fundamental to achieve not only a reduction of environmental impact but also to overall economic profit (Cosimato et al., 2015). A new business model like omnichannel grocery retailing can also benefit from structuring into back-end fulfilment and last-mile distribution concepts by selecting solutions that match regional specifics, retailer capacity, and consumer behaviour patterns (Hübne et al., 2016)

2.1.3. Research on express delivery industry in China

Due to the late development of the Express industry in China, the domestic academic research on logistics started late as well, mainly around 2000. It originated from the analysis of the problems existing in the logistics business and the corresponding solutions. Due to the rapid development of E-commerce in China, the research focus has gradually turned to the synergistic effect between E-commerce and Express industry, among which more attention has been paid to the driving role of E-commerce in the Express industry.

Wang (2009) revealed in the "Research on the Development of China's Private Express Delivery Enterprises" that China's express delivery enterprises have problems such as small scale, low capital, backward management mode, and low network coverage. Zhang (2012) believes that the development of China's express delivery is accelerating, with distinct mergers and acquisitions, the entry of related industries, the enhancement of air transport capacity and the rise of the "last-mile" distribution. Jin (2013) advocates solving the existing development

problems in the Express industry through government support, improving service quality, promoting product innovation, promoting information, and optimizing human resource planning.

Besides, as the development of E-commerce is the main driving force of the Express industry, a large amount of research has focused on the relationship between E-commerce and the Express industry. Han (2014) exposes the positive impact of E-commerce on the Express industry. At the same time, in the context of E-commerce development, it discusses the infeasibility of establishing a price alliance in the Express industry and proposes a reasonable pricing model to achieve the balance of interests of the two industries. Other related research includes E-commerce cold chain and cross-border E-commerce. Peng (2011) researched the cold chain that emerged in recent years and found that China's cold chain development faces the problems of lack of technical support and high cost, and proposes to accelerate the development of the industry through technological development and scale effect. Zhang and Ma (2015) conducted descriptive research on the increasingly popular cross-border E-commerce issues in recent years and found that express delivery companies' establishment of overseas warehouses can help reduce cross-border logistics risks.

2.2. Corporate diversification strategy

2.2.1. Definition

Regarding the corporate diversification strategy, scholars have already begun relevant theoretical research very early and given different definitions. Ansoff (1957) believes that diversification is a behaviour of growth or expansion that companies enter a new field in the search for long-term development. Gort (1962) argues that diversification is primarily an increase in the market heterogeneity of corporate products. Pitts & Hopkins (1982) believe that diversification means that companies operate a variety of different businesses at the same time. While Klier (2009) pointed out that the definition of diversification can be divided into two different directions, one refers to the activities of enterprises entering new product areas and new markets, and the other is the degree of diversification of products that cross-border

operations. Yin (1999) defines the diversification strategy from the perspective of products. He believes that diversification is the behaviour of enterprises providing products or services to multiple industries at the same time. This kind of behaviour is a way of growth for enterprises.

2.2.2. Corporate diversification research: an overview

To further clarify the diversification strategy, some western scholars have conducted more in-depth research on different types of diversification and related influencing factors.

Rumelt (1974) divided the diversification into nine types based on the three indicators of specialisation ratio, correlation ratio, and vertical ratio. Capon (1988) proposes another method market-based classification method and divides diversified operations into single-business type, dominant-business type, and diversified type. The leading business type and the diversified type can be divided into two sub-types. Khanna, Palepu (1997), by studying the performance of diversified enterprises in emerging economies such as Mexico and India, draws conclusions that are inconsistent with the results of the research in developed countries: Due to factors such as government intervention and imperfect market mechanism in emerging economies, unrelated diversification can improve the business performance of the enterprise, which means enterprises can gain income by constructing the internal capital market of the enterprise. The results of Fauver et al. (2003) show that the business performance of diversified enterprises is related to the country's legal system, the development of the capital market, and the perfection of the market system. In developed countries with perfect market systems, there are discounts in diversified operations. However, in emerging economies with imperfect legal systems and underdeveloped capital markets, the premiums and discounts of diversification are not significant.

2.2.3. Research on corporate diversification strategy in China

In China, the market economy started in the 1980s, and the research on corporate strategy is far later than that in Western countries. However, the relevant academic research on diversification strategy has achieved many results around 2000.

Rui (2000) considers that diversification strategy is a long-term business idea that enterprises can expand their scale, occupy more markets, and increase the efficiency of enterprises by production activities in multiple related or non-related fields. In the meanwhile, he pointed out that the irrational diversification strategy is easy to disperse the production and management resources of the enterprise. Only by strengthening the core competence of enterprises can the corporate diversification strategy be successful. Hu (2003) divides the diversification strategy into three types: horizontal diversification, vertical diversification, and compound diversification according to the degree of association between the primary business field and the expansion business field. Horizontal diversification is the horizontal expansion of new businesses based on the original business and market, whose main target is entering new business areas. Vertical diversification is the expansion to the upstream or downstream industrial chain of the primary industry. This type of diversification is mainly characterized by the increase of intermediate products. Compound diversification may have the dual characteristics of horizontal diversification and vertical diversification, but the correlation between the businesses is relatively weak, and various independent business units will be formed within the enterprise. Tian (2014) regards the degree of association between the industries involved in the business process as the criteria for diversification strategy classification and accordingly divides the diversification strategy into two types: correlation diversification and non-relevance diversification. The related diversification refers to the correlation between the industries involved in the business process; that is, resources and technology can be shared; Non-relevant diversity is a diversified form without inter-industry linkages. Besides, Tian believes that other various classification methods can be subdivided by adding different metrics based on this classification. Chen (2016) believes that diversification strategy plays a vital role in the company's strategy. For enterprises that have developed to a

specific extent, they want to achieve the expansion of the enterprise through diversification strategies, expand the scale of the business, and thus improve the profit of the enterprise. Based on the factors that affect the choice of enterprise strategy, this study analyzes the situation under which enterprises can choose a diversification strategy to help enterprises achieve their goals.

Some local studies have analysed the diversification strategies of specific industries in China. Zhan (2016) studies the influencing factors of the diversification strategy of agricultural enterprises and analyzes the influencing factors of diversification from four aspects: institutional environment, governance characteristics, financial characteristics, and industry characteristics, aiming at the agricultural enterprises. Provide health and rapid development to provide countermeasures and suggestions to improve the diversification strategy of agricultural enterprises further. Yang and Guo (2008) used the annual report of 20 coal-based listed companies in China to analyze the economic effects of the diversification strategy of coal enterprises through quantitative analysis. Finally, it is recommended that coal enterprises should adjust their development strategies according to the development situation - smaller enterprises should concentrate on specialized production and management rather than diversification.

Chinese scholars began research on the cross-border development of express delivery and E-commerce industry since the 2010s. Zhang (2011) introduced the situation of cross-border development of E-commerce by Chinese private express delivery enterprises and analysed the motives of cross-border development of express delivery enterprises through SWOT analysis. Li (2013) believes that the “cross-border” operation between express delivery companies and E-commerce companies is a significant trend in the development of the industry – many E-commerce companies have built their own logistics distribution systems, and even engaged in third-party logistics distribution services, and express companies have begun to establish online platform to engage in E-commerce business. He believes that express delivery companies have a large gap with E-commerce in terms of capital, experience, talents, etc.; thus, the new E-commerce platform of express delivery companies is difficult to compete with existing competitors. Express delivery companies should adopt a differentiated strategy, focus their

limited resources on a field, and establish an E-commerce platform with their characteristics so that they have the opportunity to seize a place in the E-commerce industry. Xu, Yang, and Xu (2014) used transaction cost theory to analyze the motivations of “cross-border” operation of E-commerce and express delivery through two cases - JD.com’s development in express business and S.F. Group’s development in E-commerce business. The authors suggest that cross-border operations require special attention to issues such as stabilizing capital flows, talent development, technological innovation, and reducing management and transaction costs.

2.3. Vertical integration

2.3.1. Definition

In the process of product production and business operation, if an enterprise participates in more than two successive stages, it is called vertical integration. Mpoyi (2003), Fernandes and Tang (2012) believe that vertical integration is the act of enterprises controlling the production of their inputs or supplies and distributing their outputs or finished products. There are three varieties of vertical integration: backward (upstream) vertical integration, forward (downstream) vertical integration, and balanced (both upstream and downstream) vertical integration. The essence of vertical integration is to use internal exchange within enterprise boundaries in order to eliminate contract or market exchange.

2.3.2. Vertical integration: an overview

There are two systematic and complete theoretical approaches in vertical integration research: Industrial organisation approach and Theory of the firm approach. Industrial organisation approach combines the study of vertical integration with monopoly and believes that the purpose of vertical integration is to realize a monopoly or maintain the existing monopoly. However, Theory of the firm approach follows Coase's viewpoint (1937) and believes that there are transaction costs in market transactions, and enterprises implement vertical integration can reduce transaction costs. Both the above two theories agree on the same point of view: vertical integration can improve the level of enterprise performance.

➤ **Industrial organisation approach**

Industrial organisation approach concerns the effects of vertical integration on competition and market. Industrial organisation approach claims that the improvement of enterprise performance level by vertical integration comes from market forces.

The early industrial organisation theory believed that vertical integration of enterprises was subject to two assumptions: technical factors and profit maximization, therefore, vertical integration was once defined as an attempt to set up barriers to industry entry or enhance market power. Peck (1996) believed that vertical integration was the structural feature of the industry. As an important industry entry barrier, it partly explains the high concentration of aluminium industry. The Chicago school proposes price discrimination to explain vertical integration. Through vertical integration, monopolists can earn more consumer surplus through price discrimination, which is much less likely in the absence of integration. Stigler (1955) proposed the theory of industrial life cycle based on Adam Smith's view of the division of labour. He believed that the degree of vertical integration of industry changes based on the life cycle of the industry. Emerging industries and industries in declining stages of the life cycle have small market size, so vertical integration is widely used. Arrow (1975) emphasises the incentive of vertical integration by the uncertainty of upstream product supply and future downstream demand. He proposed that vertical integration could improve resource allocation in the two production stages when information asymmetry appeared in the enterprises in the two production stages.

➤ **Theory of the firm approach**

From the perspective of market failure, transaction cost theory puts forward the concept of the transaction cost. Vertical integration plays an important role in transaction cost theory.

The Nature of The Firm published by Coase in 1937 analysed the incentive factors of enterprise integration degree from the perspective of transaction costs of enterprises and markets. It points

out that the firm and the market are two alternative mechanisms whose objective is the coordination of production. There are transaction costs in the operation of the market, thus in some cases, the internal mechanism is adopted to replace the market mechanism for production activities, which can save transaction costs. Coase believes that transaction costs lead to the emergence of enterprises. Oliver Williamson (1971) accepted Coase's concept of transaction costs and the idea that differences in transaction costs lead to the replacement of the market by firms. He introduced five factors to analyse the occurrence of market failure: (1) Static Markets; (2) Contractual Incompleteness; (3) Strategic Misrepresentation Risk; (4) Information Processing Effects; (5) Institutional Adaptation. Based on Williamson's transaction cost and incomplete contract theory, Grossman (1986), Hart (1986, 1990) and Moore (1990) put forward a new property-rights approach, which considers vertical integration itself as an ownership and studies the costs and benefits of vertical integration from the perspective of incentives.

Other studies related to vertical integration include strategic studies based on enterprise capabilities. It focuses on examining the boundary of an enterprise from the perspective of enterprise capabilities and resources. The core of an enterprise is the collection of resources and capabilities it possesses. The decision on whether to implement vertical integration can only be based on the core capabilities of the enterprise, rather than just considering the changes in external conditions.

Ansoff (1965) and Demsetz (1972) believe that an organisation is a combination of a series of complementary knowledge and skills, and the accumulation and storage of enterprise capabilities affect the boundary and scope of the enterprise. The key of vertical integration is that enterprises can reduce production cost by expanding core competitiveness and sharing tacit knowledge. What is more, the Ansoff Matrix is widely used to analyse enterprise business and support the decision of diversification strategy. While Penrose (1959) and Chandler (1962) argued that the boundary of an enterprise is mainly reflected in the relationship between the new resources needed for business extension and the existing resources of the enterprise. If the two are well connected, companies tend to be vertically integrated.

2.3.3. Research on vertical integration in China

In China, with the rapid development of the economy, cases of enterprises improving their operations through vertical integration are frequently occurring. Academic research has also begun to focus on the use of vertical integration by companies in different industry contexts and its impact factors.

Li and Tang study the determinants of vertical integration of Chinese enterprises and whether vertical integration affects the production efficiency of enterprises. They find that price uncertainty and the degree of government regulation on raw materials were positively correlated with the degree of vertical integration of Chinese enterprises, while contract validity was negatively correlated with it. Besides, the higher the degree of vertical integration, the lower the total factor productivity of Chinese enterprises. Yu and Yu (2006) found that demand fluctuation and government regulation policies are the two most important factors influencing the vertical integration of coal power plants in China. Chen and Huang (2006) took aluminium smelting industry as a case study and found that government regulation changed the comparison between market transaction cost and internal organisational cost of enterprises, so that enterprises could bypass government regulation through vertical integration, thus affecting the boundary of enterprises. Gao (2006) conducted a questionnaire survey on two automobile manufacturers and their dealers in Shanghai and found that dealers' specific investment would lead to manufacturers' channel speculation, but it would be influenced by manufacturers' specific investment and the continuous influence of channel relations. Taking Chinese listed enterprises from 2001 to 2003 as samples, Fan (2008) used input-output table method to estimate the degree of vertical integration of enterprises. The results show that the weaker the local property right protection is, the lower the quality of the local government is, and the less developed the local product and input market is, the higher the degree of vertical integration of enterprises in the region is. Meanwhile, the degree of vertical integration of enterprises is positively correlated with the cross term of the uncertainty of input price and the asset specificity.

2.4. Summary

In this chapter, academic literature in three directions, the Express industry, corporate diversification strategy and vertical integration, have been discussed.

In the first part, research focuses on the analysis of successful experience and exploration of new logistics models and technologies, while local research focuses more on the problems faced by express companies in the context of E-commerce development. As a result, local research currently lacks the induction of successful experiences in the development of local express companies, especially in emerging business areas, including new business model in online to offline (O2O), cold chain and logistics integration solution.

As for the second section, scholars have classified the diversification strategies and clarified the relevant influencing factors. Local research has further discussed the diversification strategies of different industries, while in the Express industry, it has focused on the cross-border development trends and motivations of E-commerce and express delivery industries. For the commercial innovation of express delivery companies' diversified attempt in fresh business, some enterprises have broken through the predicament and achieved profitability, while the successful experience is yet to be summarised and learned.

In the third part, scholars usually adopt two paradigm-industrial organisation approach and theory of the firm approach to study vertical integration, and strategic research centring on enterprise resources and capabilities also plays an important guiding role in the practice of vertical integration of enterprises.

This research focuses on express companies' diversified attempts in the E-commerce industry, paying attention to the construction of business models. It is hoped that through the case study and business model analysis, the development strategy of E-commerce for S.F. Group will be summarised.

3. Conceptual framework

To better understand S.F. Group's business operation in E-commerce field, especially its trail in fresh segment, we need to answer two questions: 1) why does S.F. Group intend to break its industry border though it has already occupied the leading position in Chinese express market; 2) if the adventure is necessary, how can S.F. Group achieve its strategic target regarding the dilemma it is currently facing?

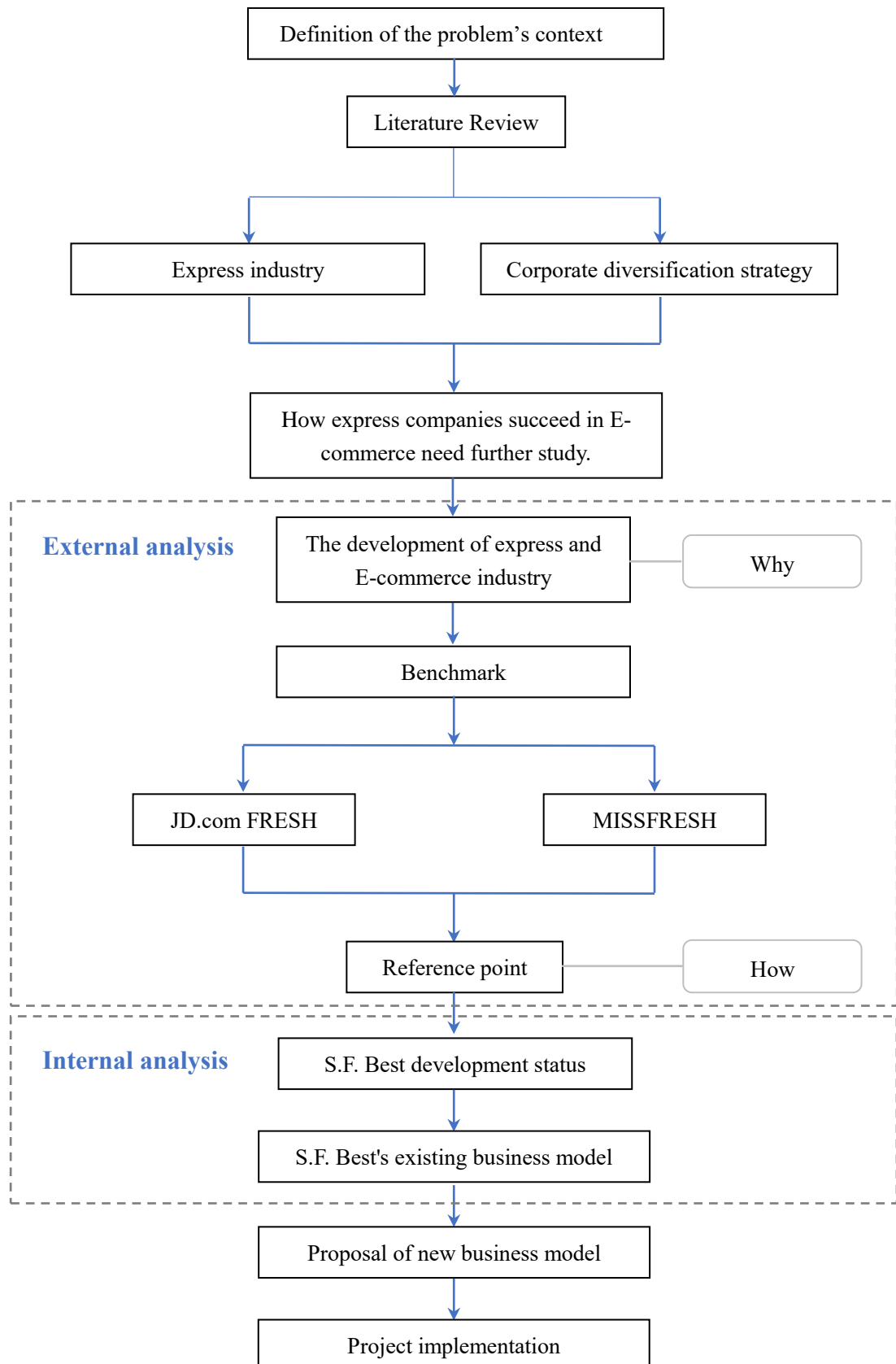
To understand the necessity of S.F. Group's diversified development, we will analyse the development status and the competitive picture of the industry. It is the challenge brought by continuous external environmental change the essential reason for companies to adjust their development strategies.

After that, we will try to gain successful experience by analysing benchmark cases, like JD.com and MISSFRESH. In the past few years, lots of enterprises have entered the fresh food E-commerce field while few of them made a profit. In that case, the experience of benchmark cases, like JD.com and MISSFRESH, would be a useful reference point to guide our project.

Then, analysis of S.F. Group's enterprise development will be presented to make a comparison with the benchmark cases. In this part, we will also analyse the business model of S.F. Group's existing E-commerce operation model and establish a new business model based on optimisation measures. It is essential to find out S.F. Group's core competitiveness and existing problems that can be improved.

In order to synthesise and clarify the literature review and to give an overview about what is going to be developed in this project, a conceptual framework of reference will be developed and presented as below (Figure 1).

Fig.1. Conceptual Framework.



4. Methods and techniques of gathering and analysing data

In this chapter, it intends to describe how the project will be conducted; in particular, the methods and techniques used to collect and analyse the data.

4.1. Data acquisition method

The project started with the collection of secondary data from various sources. Secondary data refers to data which have been already collected by and readily available from other sources. Common sources of secondary data include official statistics, corporate websites, consulting company research reports, industry news, etc. The goal was to gain maximum information about the development status of China's fresh E-commerce and S.F. BEST. Some of the sources are listed below:

1) Official statistics:

- Website of The State Council of the People's Republic of China
(<http://data.mofcom.gov.cn/index.shtml>)
- Website of Ministry of Commerce of the People's Republic of China – Department of Electronic Commerce and Informatization (<http://www.gov.cn/shuju/index.htm>)
- Website of China Federation of Logistics Network (<http://www.chinawuliu.com.cn>)

2) Corporate websites

- Website of JD.com (<https://www.jd.com/>)
- Website of Freshhema (<https://www.freshhema.com/>)
- Website of S.F. Group (<http://www.sf-express.com/cn/sc/index.html>)
- Website of S.F. BEST (<http://www.sfbest.com/>)
- Other websites of BAT and TMD, etc.

3) Consulting company research reports

- Website of ANALYSYS (<https://www.analysys.cn>)
- Website of Sohu.com (<http://www.sohu.com>)

- Database of OLXOZ.com (<http://www.olxoz.com/index.php/site/index>)
- Website of WinShang (<http://www.winshang.com/>)

4) Industry news

- Industry news reported on the website of Alizila (<https://www.alizila.com>)
- Articles posted on Wechat Official Accounts (<http://mp.weixin.qq.com/>)

Due to the limited budget and time, it is difficult to make more extensive market research and to collect primary data, so the secondary data will be an essential source of information to do our research. With the rapid development of the Internet and media, the problem of poor timeliness of secondary materials has been dramatically improved.

4.2. Data content structure:

After finishing data collection, we will move to the next step – data analysis, in which part collected data is going to be analysed through chosen Content Structures and tools. In our research, case study and business model canvas are two main Content Structures and tools. As two typical analysis tools, they are often used in corporate strategic management, consulting projects and academic research.

4.2.1. Case study

A case study is “a research method involving an up-close, in-depth, and detailed examination of a subject of study (the case), as well as its related contextual conditions” (Mills et al, 2010). Heale R and Twycross A (2018) point out that “if a researcher wants to study a specific phenomenon arising from a particular entity, then a single-case study is warranted and will allow for an in-depth understanding of the single phenomenon and, as discussed above, would involve collecting several different types of data”. Furthermore, multiple-case studies allow for a deeper understanding of research questions and theory application.

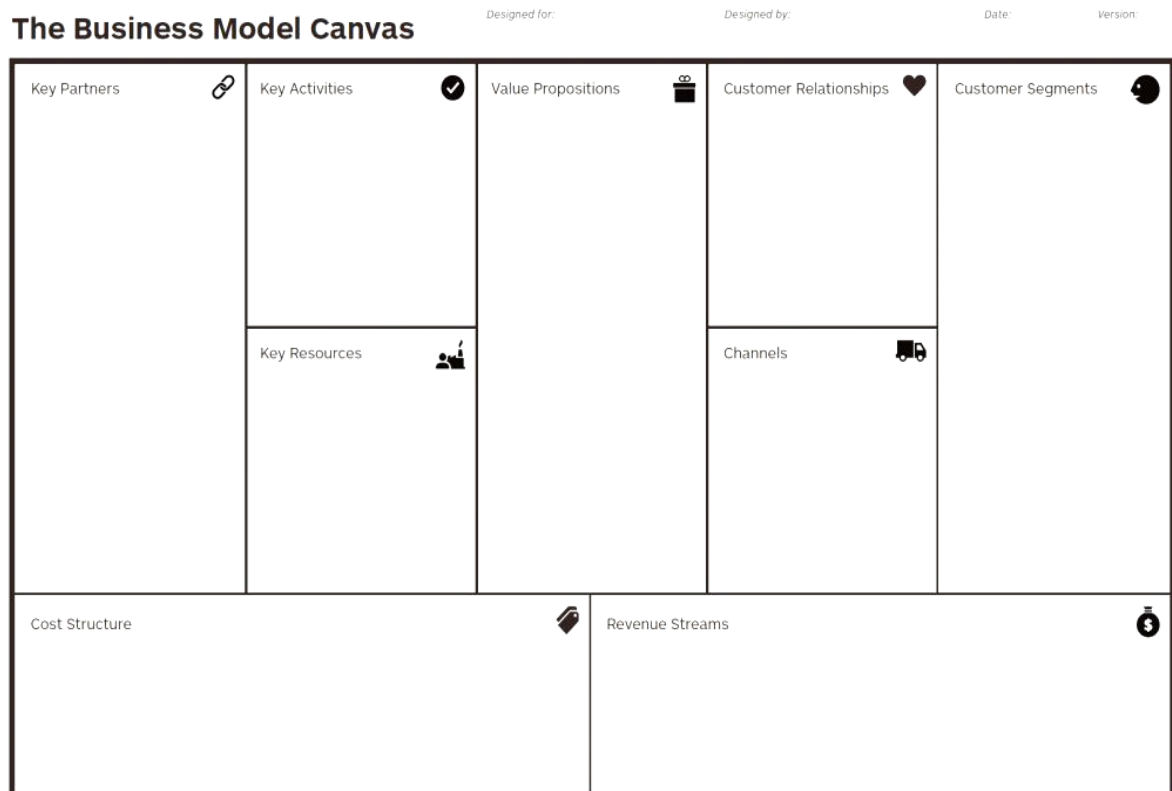
Our study involved three companies, S.F. Group, JD.com and MISSFRESH, of which S.F. Group was the main research object, while the other two were used as benchmarking cases for successful empirical induction and comparative analysis. Since fresh E-commerce is a new business sector, few academic achievements and business experiences can be used as a reference. Besides, there is no successful precedent for the diversification trail of express delivery companies in E-commerce. In that case, the experience of the existing industry leader is extraordinarily precious. Through case analysis, we will summarise the successful experience of developing E-commerce, especially fresh food E-commerce, and compare the development of S.F. Group, to propose a reasonable business model and corresponding improvement measures.

4.2.2. Business Model Canvas

Since the 1950s, lots of scholars have studied the “business model”. Osterwalder, Pigneur and Tucci (2005), propose the most widely accepted definition, which is “A business model is a conceptual tool containing a set of objects, concepts and their relationships with the objective to express the business logic of a specific firm. Therefore, we must consider which concepts and relationships allow a simplified description and representation of what value is provided to customers, how this is done and with which financial consequences.” In recent years, competition among companies in business ecosystems will not only happen through new products services or technologies but also through innovative business models (Gassmann et al., 2013). S.F. Group's diversification development in E-commerce business is precisely one kind of new business model, building on the base of Logistics + E-commerce's linkage operation.

In order to judge whether a business model is successful now or in the future, we can use various business model Content Structures. Among them, Osterwalder's Business Model Canvas is one of the most widely used and mature tools (Figure 2).

Fig.2. The Business Model Canvas.



Source: <https://www.strategyzer.com/canvas/business-model-canvas>.

The business model canvas is a shared tool for describing, visualising, assessing and changing business models. It describes the rationale of how an organisation creates, delivers and captures value. Originated from Osterwalder's research on the business model, the business model canvas has provided the expansion and refinement of the four pillars in the business model ontology. In other words, the business model canvas further expands the four sectors of Products and Services, Customer Interface, Infrastructure Management and Financial Aspects into nine system elements, including Value Proposition, Customer Segmentation, Customer Relationships, Channels, Key Resources, Key Activities, Key Partnerships, Cost Structure and Revenue Streams. The following table shows the correspondence between business model ontology and business model canvas and the content of each element. (Table 1)

Table.1. The correspondence between business model ontology and business model canvas.

Sectors in Business Model Ontology	System Elements in Business Model Canvas	Description
Products and Services	Value Proposition	The collection of products and services a business offers to meet the needs of its customers, distinguishing it from its competitors.
Customer Interface	Customer Segmentation	To build a useful business model, a company must identify which customers it tries to serve.
	Customer Relationships	Companies must identify the type of relationship they want to create with their customer segments.
	Channels	A company can deliver its value proposition to its targeted customers through different channels.
Infrastructure Management	Key Resources	The resources that are necessary to create value for the customer.
	Key Activities	The essential activities in executing a company's value proposition.
	Key Partnerships	Organisations usually cultivate buyer-supplier relationships so that they can focus on their core activity.
Financial Aspects	Cost Structure	Cost structure describes the essential monetary consequences while operating under different business models.
	Revenue Streams	The way a company makes income from each customer segment.

Source: Osterwalder A, Pigneur Y. (2010) Business model generation: A handbook for visionaries, game changers, and challengers. New Jersey: John Wiley and Sons.

By using a business model canvas, business model innovation can be achieved, and obtain the potential to strongly impact the market and the competitors (Zhang et al., 2018) and may help to establish a differentiable competitive advantage (Teece, 2010).

5. Information analysis and conclusions

In this part, to better clarify the analysis logic, the collected data will be analysed from the external and internal dimensions.

5.1. External analysis

For the external analysis, **we will analyse the development status and the competitive picture of the industry to understand the reason why S.F. Group insists on new business attempts in the field of E-commerce.** The answer to this question will also affect one of the questions that the project needs to respond to: whether S.F. Group needs to continue to promote its diversified development strategy in business. Besides, when conducting external analysis, we will also learn from the experience of benchmarking companies. In the past few years, many enterprises have explored fresh food E-commerce business, but few of them are profitable. In that case, the experience of benchmark cases, like JD.com FRESH and MISSFRESH, would be a useful reference to guide our project.

5.1.1. Analysis of related industry development in China

In this part, we will review the development of China's E-commerce and Express industry to understand the macro background environment of S.F. Group's diversified development.

5.1.1.1. E-commerce development in China

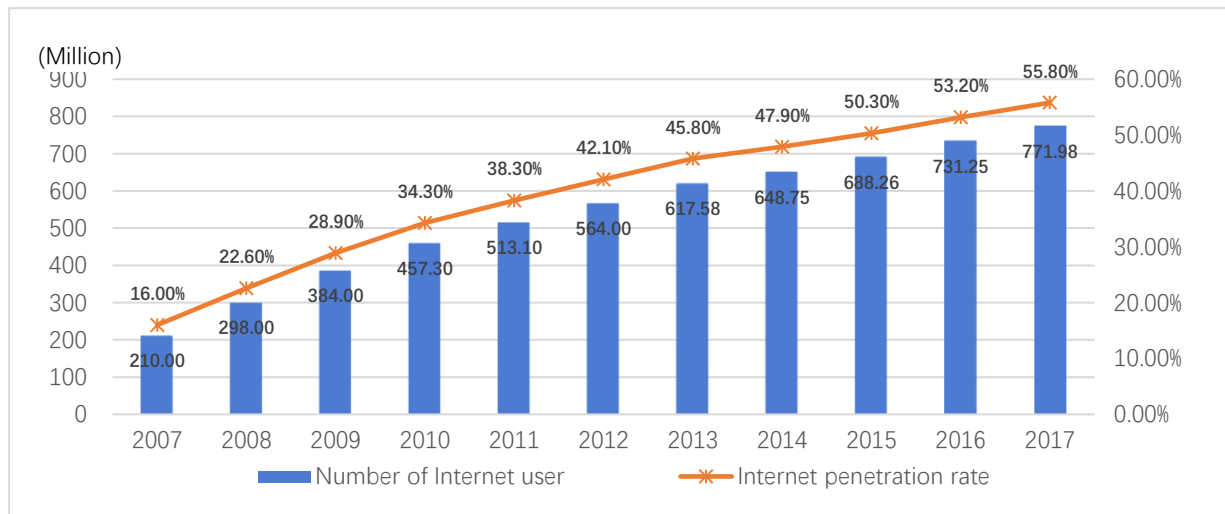
In the past two decades, the E-commerce industry has gradually become an essential driving force for the Chinese economy. The world's largest market size in E-commerce represents a vast opportunity and attracts many competitors. Notably, market segments, like fresh food E-commerce, cross-border E-commerce and internet banking, still have to be developed.

1) Background of China's E-commerce development

With the tremendous development of Internet technology and mobile intelligent terminal, modern society has already marched into the era of the mobile Internet economy. Till the end of 2017, the number of the global Internet user is around 4.021 billion; China has the most extensive network community with approximately 772 million users, being equal to the sum of users in India and the United States which ranked at second and third. According to China Internet Network Information Center (CNNIC)'s the latest statistical report published on January 31st, 2018, Chinese cyber citizens spend an average of 27 hours per week online, and the figure is 50% higher than that in 2010¹ (Figure 3).

¹ China Internet Network Information Center, 2018. *The 41st Statistical Report on Internet Development in China*. Beijing: China Internet Network Information Center, 2018

Fig.3. Internet user scale and Internet penetration rate in China from 2007 to 2017.



Source: China Internet Network Information Centre. 2018. The 41st Statistical Report on Internet Development in China.

The popularisation of the Internet has dramatically enhanced the informatisation of Chinese society and freed China from its poor information conditions. People can get access to a variety of information service whenever and wherever possible. Besides, it has much promoted the development of Chinese commerce, especially the internet economy. Based on a considerable size of the Internet user groups and fuelled by the rise of the middle class and growing disposable income, Chinese electronic commerce or E-commerce (we shall use this term from hereafter) started late in the end of 1990s but developed very fast. For the past few years, E-commerce has gradually become a new economic growth point and an essential driving force of China, accounting for 6.4% of China's GDP in 2016².

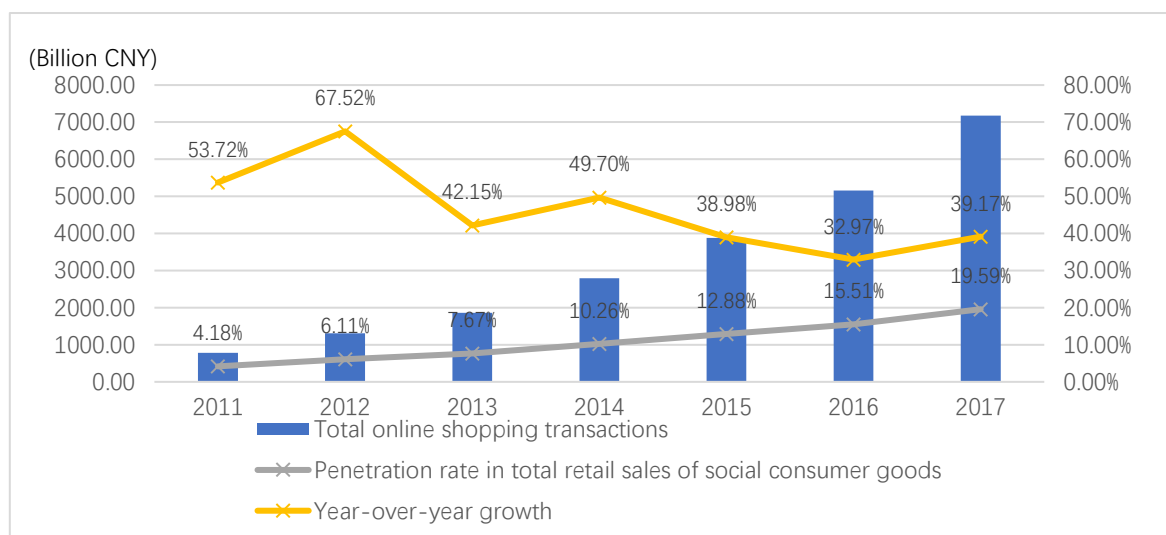
2) Chinese E-retailing Market Size

Increasingly improved online trading and related Internet technologies benefit to ordinary consumers and significantly changed their consumption concept - online shopping has become one of the people's main consumption styles within five years. The penetration rate

² Ali Research Institute, 2017. *Five years of innovation and leap: 10 key words to understand the Chinese Internet*. Beijing: Ali Research Institute, 2017.

in total retail sales of social consumer goods rose steadily in the past seven years, from 4.18% to 19.59%³, that is, one out of five expenses on consumers goods was incurred online (Figure 4). This figure is also the highest one after 2014 when surpassing that of America⁴.

Fig.4. The growth of online shopping users from 2011 to 2017.



Source: China E-commerce research centre. 2018. 2017 China Online Retail Market Data Monitoring Report

3) Chinese E-commerce Market Competition

An increasing number of business entities have joined the E-commerce industry, which leads to fiercer market competition. In the past two decades, China has created numerous Internet giants, including Baidu⁵, Alibaba⁶ and Tencent⁷. They are also collectively known as the

³ China E-commerce research center. 2018. *2017 China Online Retail Market Data Monitoring Report*. Beijing. China E-commerce research center. 2018.

⁴ Ali Research Institute, 2017. *Five years of innovation and leap: 10 key words to understand the Chinese Internet*. Beijing: Ali Research Institute, 2017.

⁵ **Baidu, Inc.** (Chinese: 百度): a Chinese multinational technology company specializing in Internet-related services and products, and artificial intelligence incorporated on 18 January 2000.

⁶ **Alibaba Group Holding Limited** (Chinese: 阿里巴巴集团控股有限公司): a Chinese multinational E-commerce, retail, Internet, AI and technology conglomerate founded in 1999.

⁷ **Tencent Holdings Limited** (Chinese: 腾讯控股有限公司): a Chinese multinational investment holding conglomerate specializing in various Internet-related services and products, entertainment, artificial intelligence and technology, founded in 1998.

companies “BAT” – for their strong influence on the whole society as the superhero “Batman” does in the comic world. Recently, BATs are also threatened by Internet startups “TMD” – Toutiao⁸, Meituan-Dianping⁹ and DiDi¹⁰. These challengers gained the support from “BAT” and institutional investor at first, while they showed great ambition in new sections of the internet industry, including but not limited to car-sharing, food distribution service and online video entertainment, etc.

Other incomers are those traditional enterprises which are committed to catching up with the trend of the times, for example, Suning.com¹¹ and S.F. Group¹². For the former one, it used to be the largest Chinese bricks-and-mortar retail company and experienced enormous challenges from E-commerce in the past decade. To survive in the internet era, Suning developed its electronic development strategy and established the multi-channel retailing business model. As for S.F. Group, a logistics carrier mainly responsible for downstream of the E-commerce supply chain, it extended its business toward upper reach through setting up the E-commerce section. It means it is not satisfied with being a leader in the logistics process only but aiming to expand the influence in the whole supply chain as well.

Fig.5. Competition map of the Chinese E-commerce industry.



Source: Compiled by author.

⁸ **Toutiao** or **Jinri Toutiao** (Chinese: 今日头条): a Beijing-based news and information content platform, founded in 2012.

⁹ **Meituan-Dianping** (Chinese: 美团网): a Chinese group buying website for locally found consumer products and retail services, founded in 2010.

¹⁰ **DiDi** (Chinese: 滴滴出行): a major Chinese ride-sharing, AI and autonomous technology conglomerate founded in 2012.

¹¹ **Suning.com Co., Ltd.** (Chinese: 苏宁易购): one of the largest non-government retailers in China, headquartered in Nanjing, Jiangsu Province, founded in 1990.

¹² **S.F. Group (Group) Co., Ltd.** (Chinese: 顺丰速运): a Chinese delivery services company based in Shenzhen, Guangdong, China, founded in 1993.

In short, with the development of the Chinese E-commerce industry, shopping online has become one of the main consumption styles for most Chinese consumers. This new trend provides enormous opportunity for both Internet companies and bricks-and-mortar enterprises, and also brings increasing challenges for all the competitors – those cannot adapt to the market, for example, yhd.com, would be eliminated within few years.

In order to avoid fierce competition, more and more new participants will choose a new segment of the E-commerce industry for deep cultivation. As for S.F. Group, it has mature experience in the logistics supply chain, especially in the cold chain, so it chose fresh E-commerce as one of the new strategic areas for future development.

5.1.1.2. Express development in China

The rapid development of the E-commerce industry has also spawned the prosperity of the logistics industry, especially the express sector, which is aiming at B2C service. However, the low entry barriers in the Express industry have made the market competition extremely fierce, and the price war has made competitors face a more competitive environment.

1) Background of Global Express Development

Express service is one of the most familiar logistics sections that the public get access to. Only with the convenient service provided by Express industry can E-commerce enterprises achieve the goal to deliver the goods to the consumers in best condition within a short time. The revenue of the global Express industry is hard to be estimated without efficient data support, while Asia Pacific region is expected to be the key development market in the future because of its potential opportunity brought by the booming E-commerce¹³.

Generally, development of the Express industry especially the parcel delivery business in the world precedes the popularisation of the E-commerce industry in the 1980s, such as Europe, America and Japan. DHL, the industry leader in the European area, started and improved its express service at the end of the 1970s¹⁴. Its Post & eCommerce Parcel (PeP) and Express services nowadays accounted for 54.10% of its total revenue in 2017¹⁵. Likewise, the parcel delivery market in America is mainly dominated by three giants: United Parcel Service (UPS) FedEx, and the United States Postal Services (USPS). Take UPS for an example. Founded in 1907, UPS “became the first package delivery company to serve every address in the 48 continental United States” in 1975 and “by 1985, UPS Next Day Air service was available in all 50 states and Puerto Rico”¹⁶ (UPS, 2018). As for the Japanese market, “in 1975, Yamato

¹³ www.chyxx.com, 2018. *Analysis of the Status Quo of the Development of the World's Logistics Industry in 2017 and the Forecast of Future Development Direction*. <<http://www.chyxx.com/industry/201709/567196.html>>

¹⁴ DHL, 2018. Company History. <<https://www.dpdhl.com/en/about-us/history.html>>

¹⁵ Statista, 2018. DHL's external revenue in FY 2017, by segment (in million euros) <<https://www.statista.com/statistics/262738/dhls-revenue-by-segment/>>

¹⁶ UPS, 2018. Company History.

began the delivery service aiming at individual customers for the first time in Japan's logistics industry. Today, it has ranked first in Japanese domestic parcel delivery market share - in 2018, it handled 1.8 billion of the 3.86 billion total parcel volumes in the country (a market share of 46.63%)¹⁷. From the history of the global Express industry, it is not difficult to find that it is not bound with E-commerce at the beginning; in other words, it is more like "rising in response to the proper time and conditions".

2) Development of Chinese Express industry

Unlike the development history of developed countries, China tells a different story entirely. Since Express Mail Service (EMS) launched by China Postal, a state-owned express company, in 1985, it monopolised the market for more than one decade. However, along with the continuous economic development, the rapid growth of market demand for better services in developed coastal areas expedited numerous private courier service company. S.F. Group, established in 1993 in Guangdong, provided one-day business mail delivery service in the Pearl River Delta area. That same year, STO Express was launched in Shanghai and focused mainly on the delivery of customs' paperwork in Yangtze River Delta Economic Zone. The success of the two companies had become two models for the entrepreneurs – other famous private couriers, like YUNDA Express (in 1998), YTO Express (in 2000), ZTO Express (in 2002) and HTO Express (in 2003), the predecessor of Best Express, also established their business in similar franchise business model in the same areas.

Between 1999 and 2003, many e-retail platforms were established, including 1) Dangdang.com, the first online bookstore in China; 2) Joyo.com, which was purchased by Amazon.com in 2004 and renamed Amazon China; 3) 360buy.com, an electronic products online speciality stores and the precursor of JD.com and 4) Taobao.com, similar to eBay, a platform for small businesses and individual entrepreneurs to open online stores. These platforms usually adopted both China Postal and private couriers as their carriers in terms of different regions while the

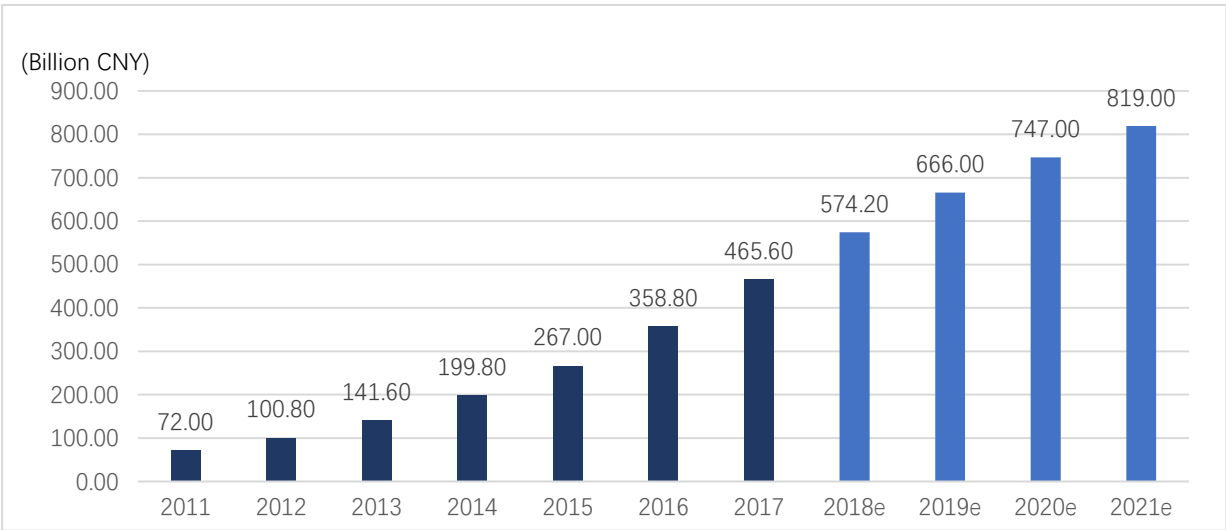
<<https://www.pressroom.ups.com/pressroom/about/HistoryStackList.page?countrylang=US-English>>

¹⁷ Yamato Holding Co., Ltd. 2018. Consolidated Financial Results for the Year Ended March 31, 2018. Tokyo: Yamato Holdings Co., Ltd., 2018.

widely-used multi-layer subcontracting or outsourcing brought many complaints about the unguaranteed delivery service.

E-retailing platforms had developed their logistics operation into two patterns to improve customer satisfaction. The first one is to invest in building their own-running integrated system to deal with the entire supply chain, from orders receiving, warehousing to goods distributions, for example, Joyo.com and JD.com. While another mode is betting on an " asset-light" strategy – raising the bargaining power through building up strategic cooperation relations with a 3PL service provider, such as Alibaba’s strategic investment in HTO Express. With support from e-retailing platforms, the Express industry witnessed a 36% average annual growth rate from 2006 to 2013. The market size achieved 465.60 billion CNY in 2017, and it is expected that the Compound Average Growth Rate (CAGR) will remain at 17.9% for the period 2018 – 2021. (Figure 6)

Fig.6. Chinese Express Market Size.



Source: BEST Inc., 2018. REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933.

In addition to the growth of the market size, China's express delivery industry has significantly improved in technology. Many companies, including Alibaba, JD Logistics and S.F. Group, are heavily investing in new logistics technology. Unmanned express delivery truck, as one of their

latest research outputs, is going to be put into use soon. These kinds of new techniques and innovative modes are playing an essential role in industry growth. China's Ministry of Commerce indicates that on the official website:

With the continuous improvement of informatisation, standardisation and intensification, the introduction of advanced modes such as smart logistics, cold chain and multimodal transport, the circulation cost has continued to decline. In 2017, the ratio of total social logistics costs in GDP was 14.6%, which is 0.3 percentage points less than the previous year and 3.4 percentage points less than in 2012 (Figure 7).

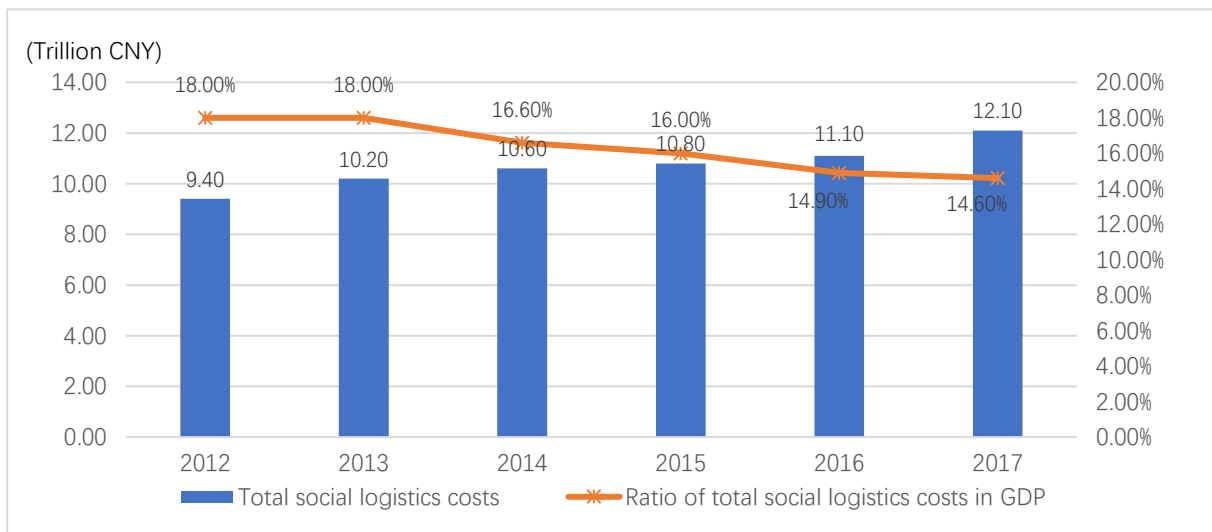
The percentage of standard salver used in pilot enterprises has risen to over 80% - the efficiency of loading and unloading is increased by more than 3 times, the turnover efficiency of vehicles is more than doubled, the damage ratio of goods is reduced by 20% - 70%, and the overall logistics cost is reduced by 10% on average¹⁸.

Though, there is still a huge lag between the Chinese express and logistics industry and that of developed countries. An officer of China Federation of Logistics & Purchasing (CFLP) reveals that “the ratio of total social logistics costs in Chinese GDP in 2016, 14.9%, is twice as high as that in developed countries such as America, Japan, and Germany, and five percentage points higher than the global average”¹⁹.

¹⁸ China's Ministry of Commerce, 2018. Review and Prospect of China's Domestic Trade Development in 2017
<http://www.gov.cn/shuju/2018-06/03/content_5295874.htm>

¹⁹ China's Ministry of Commerce, 2017. China Retail Industry Development Report
<<http://images.mofcom.gov.cn/www/201707/20170703104141651.pdf>>

Fig.7. Total social logistics costs and their ratio to GDP in 2012-2017.



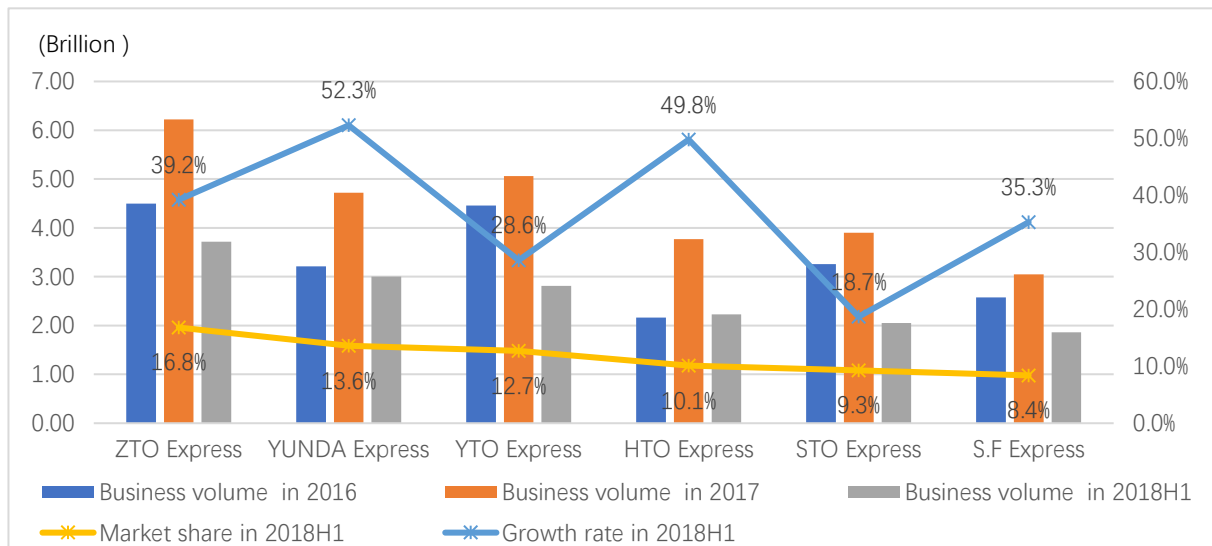
Source: China's Ministry of Commerce, 2018. Review and Prospect of China's Domestic Trade Development in 2017. http://www.gov.cn/shuju/2018-06/03/content_5295874.htm

Except for the industry giants like S.F. Group and STO Express, most Chinese express companies in third and fourth-tier cities are operated as the workshops do, utilising backwards operating institutions and primitive techniques. Labour costs in China are very low, so if the same work can be done by labour at a lower cost, some companies lack the motivation to adopt new technologies, resulting in a high potential loss. Take cold chain logistics as an example. The construction of this business branch lags, and the per capita possession of refrigerated trucks in the country is less than one-tenth of that in the United States; the initial one kilometre of cold chain infrastructure of agricultural products is imperfect, and it is impossible to pre-cool, classify, package, and standardized in the first time, resulting in annual loss of agricultural products over 300 billion CNY. Besides, the vast territory brings a huge challenge for logistics carriers because of the requirement of thorough geographical coverage. It is difficult for a single logistics carrier to balance service coverage and cost control. As a result, the whole industry suffers a lot from too many layers of subcontractors, low management level and primitive techniques.

3) Chinese Express Market Competition

Having the similar name and similar development paths, HTO Express, STO Express, YTO Express, ZTO Express and YUNDA Express are collectively known as “Si TO Yi Da”, which means four “Tong” and one “Da”. Until September of 2017, the five and S.F. Group had all completed listing. The six private logistics giants hold a majority of the express delivery and logistics market, accounting for 70.9% of China's express delivery market. The other two related indicators, CR4 and CR8, reach 53.2% and 80.2% respectively in the first half of 2018²⁰, which reflects a high degree of corporate concentration.

Fig.8. The business volume and market share of the six biggest express companies in 2018H1



Source: Annual report 2018 & Interim report of each company, compiled by the author.

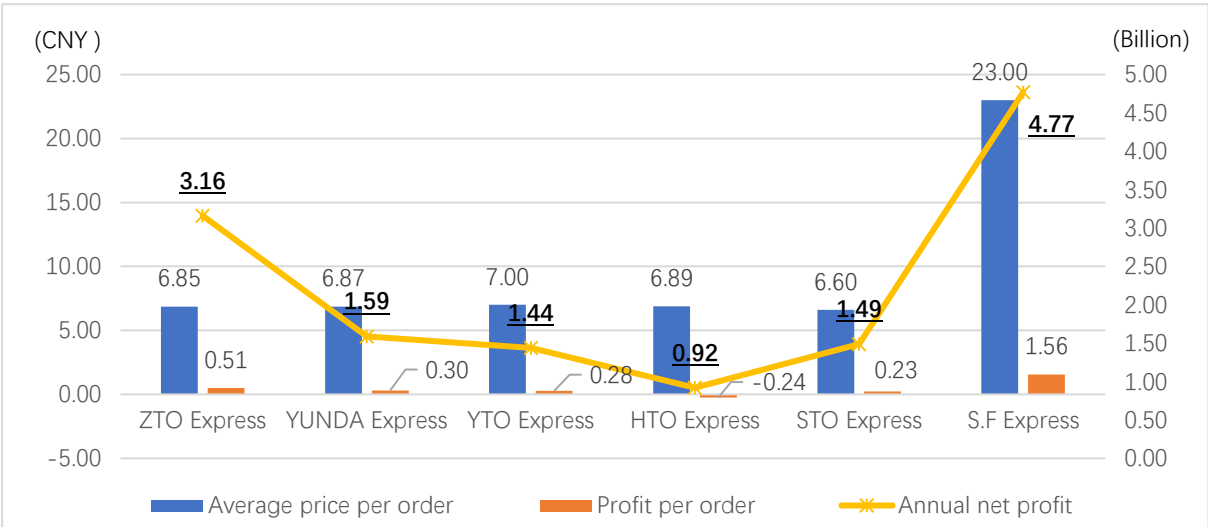
ZTO Express, which witnessed an increase of 39.20% in the first half of 2018, held its leading position in the total business volume. The other five giants, YUNDA Express, YTO Express, HTO Express, STO Express and S.F. Group, ranked second to sixth respectively. Due to fierce market competition, the ranking is changing every year, but it can be expected that “Si TO Yi

²⁰ What do you see from the courier companies that are “disappearing”?

Da” will hold the positions of “main players” in the future. As for S.F. Group, it has been surpassed by “Si TO Yi Da” and has achieved the least business among six listed companies.

On the other hand, we need to compare the profitability of these six companies by examining the average price and profit of the individual express parcels. From 2011 to 2017, the average value of domestic express delivery slipped from 20 yuan per order to 12 yuan per order, with a drop of 40%. Among the six listed companies, the average price of S.F. Group is about 23 yuan per order, while the average price of “Si TO Yi Da” is only 7 yuan per order. As for the profit per order, among “Si TO Yi Da”, only ZTO Express’s profit per order reached 0.5 yuan, and other companies failed to break through 0.3 yuan. On the contrary, S.F. Group realised a profit per order of 1.56 yuan due to higher service pricing. As a result, S.F. Group won first place in the net profit ranking. (Figure 9)

Fig.9. The profitability of the six biggest express companies in 2017.



Source: Annual report 2018 & Interim report of each company, compiled by the author.

In short, S.F. Group's profitability is better than “Si TO Yi Da” due to high-quality customer service, but through the strategy of low-price competition, “Si TO Yi Da” has increasingly gained competitive in the market, which has dramatically challenged the leading position of S.F. Group.

5.1.1.3.Summary

As China enters the era of the Internet economy, enterprises are required to adapt to the development trend of the Internet economy era. Competitors seek transformation and upgrading when facing fierce competition in the Express industry.

S.F. Group is still the most profitable logistics company in China by developing advanced logistics technology and improving management ability, but its competitors are gradually eating into its market share through low price strategy. Faced with highly homogeneous business type, industry participants are eager to seek new ways or solutions.

S.F. Group logistics infrastructure and operation system for E-commerce development. It is also the first large express company to explore cold chain logistics. From this point of view, S.F. Group has a good accumulation and solid foundation in the E-commerce logistics industry.

In the face of fierce market competition, as well as the development pressure of building industrial ecology and improving income-generating ability, S.F. Group urgently needs to break through the competitive dilemma by strengthening the core competitiveness of logistics and promoting the diversification strategy. In addition, fresh E-commerce will become the most important and least risky choice for S.F. Group to extend the industrial chain vertically.

5.1.2. Analysis of benchmark cases

1) Selection of benchmarking cases

As an emerging market segment, the new entrants of fresh E-commerce have produced three new business models, namely Integrated E-commerce Model, Vertical E-commerce Model and Online-to-Offline (O2O) model. The three leading companies, JD.com FRESH, MISSFRESH and Freshhema, with a market share of 75% in fresh food E-commerce, represent three business models mentioned above.

For JD.com, it is the only integrated E-commerce platform in China with self-operated logistics, and the establishment of the fresh retail sector is achieved by expanding the merchandise category based on the existing E-commerce business. Relying on a mature operating system and good reputation, JD.com has grown rapidly in the fresh business and has become a leader in the fresh business of integrated E-commerce.

MISSFRESH is a start-up company that enters the fresh E-commerce sector with a vertical E-commerce model and captures the top three in the market. Due to the lack of experience in the E-commerce industry, MISSFRESH leverages Tencent's diversification strategy, gaining its strategic investment and technical support. It quickly captures the market through new operating concepts such as front warehouses (Wang, 2019).

Freshhema, a new market contender using O2O Model, relies on Alibaba's technical resources, using big data in retail to accurately target consumers. It speeds up the response to customers within the coverage area by simultaneously establishing online and offline dual channels, offering consumers a more-efficient and more-flexible shopping experience. For offline channels, Freshhema uses a heavy-asset strategy to create a store with “warehouse-retail-catering” composite function.

However, when Freshhema's heavy asset model enhances the consumer's scene experience, it also faces high financial pressure, which also makes it difficult to expand rapidly. Compared

with the O2O model that emphasises contextual consumption, the former two models reduce the heavy-asset investment in the consumer environment, paying more attention to the quality of goods and distribution efficiency. They are rapidly expanding and profitable through a reproducible business model and are widely considered to have more potential in the development of fresh food E-commerce business.

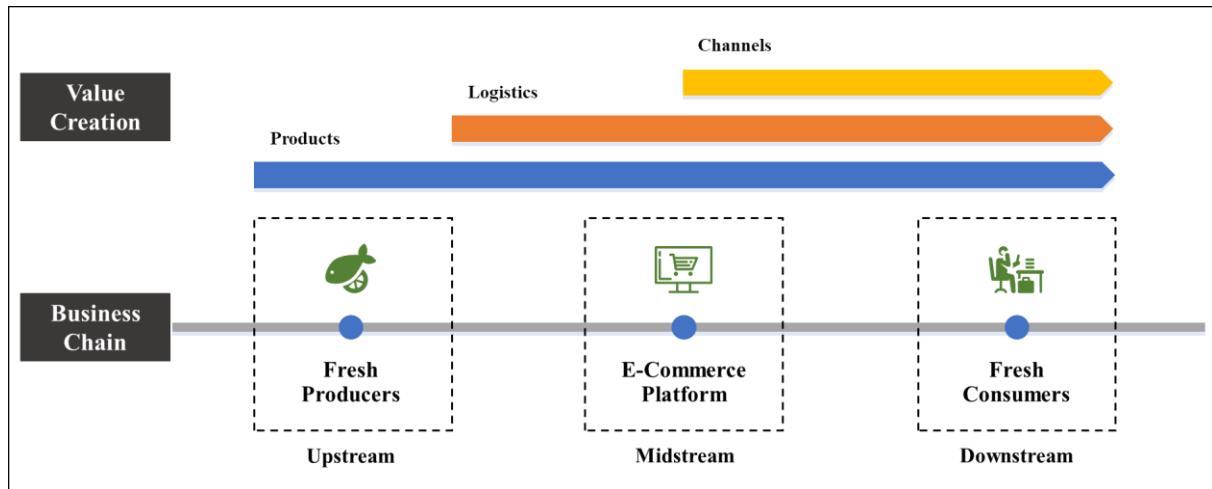
As a courier company, S.F. Group has significant advantages in warehousing and distribution, and it has gradually established cooperative relations with upstream fresh suppliers, regarding product quality as the most important selling point, which means that the development path of S.F. Group is more similar to Integrated E-commerce Model or Vertical E-commerce Model. Therefore, we chose JD.com FRESH and MISSFRESH as benchmark cases to guide the future development of S.F. FRESH.

2) Content Structure

This chapter is composed of two cases, JD.com FRESH and MISSHRESH. Each case covers four parts: Development Background, Business Architecture, Operation Analysis and Business Model.

- Development Background enables us to understand the development history and general information of the enterprises.
- Business Architecture enables us to understand the positioning of fresh business within the enterprises and the broader industrial ecosystem.
- Operation Analysis focuses on how fresh E-commerce enterprises establish channels to connect with consumers and deliver products to customers. According to the important elements involved in fresh E-commerce, this part will be divided into three sub-sections: Fresh Products, Logistics Services and Market Channels (Figure 10). This part is the focus of the entire case study and will provide key information for business model analysis.
- Business Model will summarise the business model canvas of the benchmarking enterprise.

Fig.10. Business chain and value creation of fresh electricity business.



Source: Website of ANALYSYS (<https://www.analysys.cn>), compiled by the author.

In this section, we need to summarise industry development experience and answer the following questions by analysing the benchmark cases: 1) How do fresh E-commerce companies position the market and get access to the target customers? 2) What capabilities and resources do fresh E-commerce companies need to create value for customers? Only by thoroughly analysing the market demand of an industry and its requirements on enterprises' core competence, can the business model of the enterprise be fully understood.

5.1.2.1.JD.com FRESH

JD.com (Fig 11), operated by JD group, a well-known Internet company, is the second-largest online shopping platform in China, among which its self-operation business ranks first in the Greater China Area.

In 2017, JD Group launched JD.com FRESH business (Fig 11) on the existing basis of JD.com mall, which is conducive to the rapid development of the new business. JD.com Group quickly replicates the experience of general E-commerce business to the JD.com FRESH business. Through the horizontal diversification strategy, JD Group's fresh business progress is exceptionally smooth.

Fig.11. Logo of JD.com and JD.com FRESH business.



Source: JD.com 's official website, on May 3rd, 2019.

1) Development of JD group

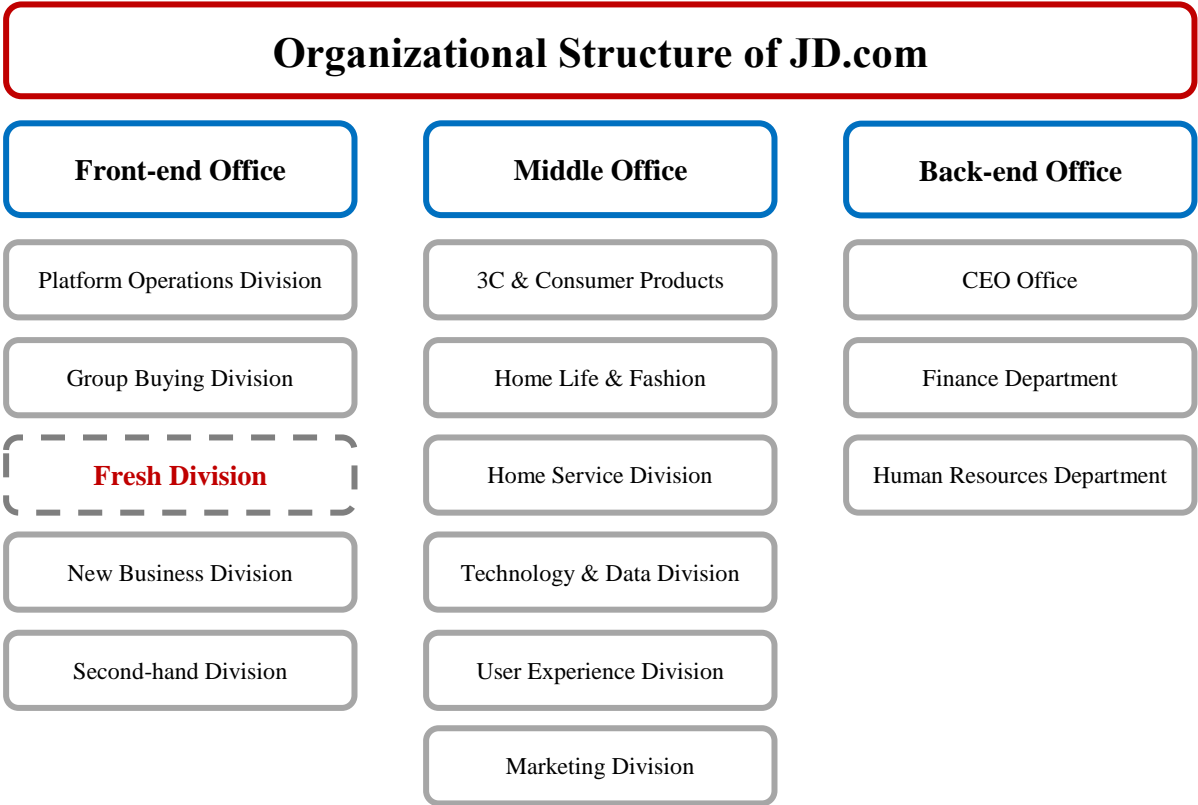
In 1998, JD.com was found by Richard Liu in Beijing. Twelve years later, in 2010, JD launched its online marketplace platform, www.360buy.com, which enabled the company to expand the range of product choices for nationwide consumers. In May 2014, JD Group was officially listed on the NASDAQ Stock Exchange. It was the first large-scale integrated E-commerce platform in China that successfully went public in the US. In 2018, JD Group's market transaction volume was close to 1.7 trillion yuan. In July 2018, JD group ranked No. 181 in the Fortune Global 500. It ranked third among Internet companies, only behind Amazon and Alphabet.

As for JD.com FRESH business, it began in 2017. The fresh food business was added to the original list with 17 major categories and became the 18th key category; furthermore, the fresh business has gained a dedicated navigation port on the homepage of JD.com mall, which helped to attract many consumers. With the existing mature operating system, including 521 highly automated warehouses covering the whole country and 180,000 logistics teams, JD.com has reduced the barriers to entry the fresh business and dramatically reduced the initial investment in infrastructure and operation platform.

2) Business Architecture

To enhance the group's support for each business, JD.com Group has reshaped its business architecture based on its future development strategy -- it reduced the number of front-end business units which directly connected with consumers from 10 to 5 and added Middle Office between Front-end Office and Back-end Office to enhance support functions (Fig 12).

Fig.12. Business Architecture of JD.com.



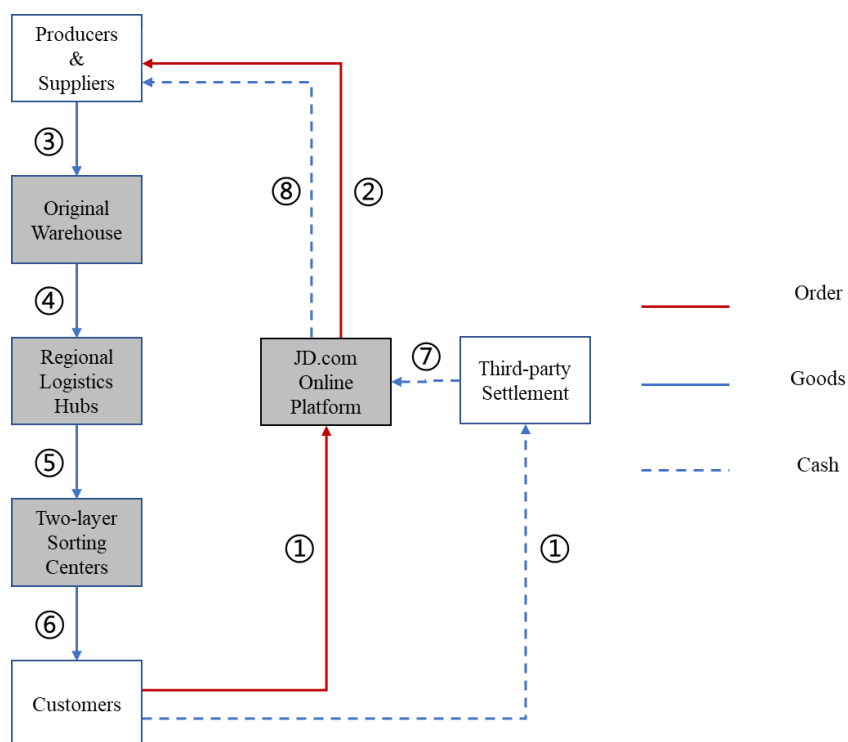
Source: JD.com 's official website, on May 3rd, 2019.

The front-end business units consist of Platform Operation Division, Group Buying Division, Fresh Division, New Business Division and Second-hand Division, in which Fresh Division mainly undertakes the business of JD.com FRESH. **JD.com FRESH, as the emerging business segment of JD.com mall, shares the existing business architecture with other sub-businesses, thus rapidly gaining internal resources and business capabilities accumulated after 21 years of development.**

3) Operation Analysis

The operation mechanism of JD.com FRESH's business can be illustrated in Figure 13. The serial number in the figure represents the order in which the various links in the business occur, showing how the order, goods and cash flow in the operation mechanism.

Fig.13. Operation Mechanism of JD.com's Fresh E-commerce Business



Source: Compiled by the author, on May 3rd, 2019.

- Once an order is made online, it is sent to the corresponding registered merchants through JD.com online platform. In the meanwhile, the payment paid by the consumer is generally deposited with a third-party payment platform, such as Alipay and Tenpay.
- The registered merchant sends the packaged goods to the origin warehouse or sends a product packaging request to the origin warehouse to process the stored goods directly, after which the purchased goods are delivered to the buyer via JD.com nationwide logistics network.
- When the customer confirms receipt of the goods, the money hosted by the third-party payment institution will be sent to the merchant and supplier via the JD.com online platform. In the process, the platform deducts an appropriate amount from the deposit as revenue.

➤ **Fresh Products**

In general, fresh E-commerce operators sell fresh products purchased from fresh producers or suppliers. However, JD.com FRESH operates as an open platform and does not sell fresh products. Instead, it generates revenue by charging product sales service fees and value-added service fees. **Thus, registered merchants on JD.com FRESH are considered as suppliers of the business process.**

JD.com FRESH adopts an open registration system, which means that Fresh producers and suppliers can enter JD.com FRESH and become registered merchants if they submit registration information and pay the corresponding deposit. The merchants on the JD.com FRESH platform come from all over the world, but domestic suppliers account for more than 90 per cent of merchants. Therefore, the products sold are mainly domestic. JD.com FRESH currently has more than 10,000 fresh product categories.

It is worth noting that most of the items sold on JD.com FRESH are freshly packaged, unprocessed products or items that can be stored for long periods so that orders can be delivered for up to two days.

The author selected five typical fresh produce on JD.com FRESH and used the best sales as the representative price for the product. At the same time, the author compares the prices of similar products by visiting several physical markets in Guangzhou, and it was found that the price is generally flat or slightly higher than that in the commodity market. However, since the goods on JD.com FRESH are heavier in weight, generally 1.5-2 times that of commodities in the physical market, the average price still has a clear advantage. Specific data can refer to Table 5.

➤ Logistics Services

Logistics service is extremely essential in the operation of fresh E-commerce because it connects a variety of business participants and helps fresh producers and suppliers deliver goods to customers through freight nodes. JD.com Group has a mature self-operated logistics service, which is built on a nationwide logistics service network and a reliable logistics team. By the end of 2018, JD.com Group has built 521 warehouses with a total area of 116,000 square meters and established a logistics service team of more than 180,000 people to provide integrated supply chain and logistics services to various customers across a wide range of industries

JD.com Group's warehousing system consists of warehouses, regional logistics hubs and sorting centres. Fresh produce producers and suppliers can store goods in JD.com Group's origin warehouses, which store goods according to the supplier's needs, quickly sort and deliver goods when receiving customer orders in the system, though are not responsible for the goods sales. Other suppliers, if they have the appropriate storage conditions, can also handle the storage of the goods themselves and take refrigerated preservation measures to ensure the freshness of the goods. JD.com Group's two-layer sorting centres being connected to the origin warehouses via seven regional logistics hubs. The regional sorting centres, as the first layer, divide China into 27 distribution areas, and the city sorting centres, as the second level, constitute the Last-Mile distribution network. JD.com plans the location and construction of the sorting centres based on the volume of cargo in each area and each city, in order to achieve full

coverage in almost all counties and districts. These sorting centres pay more attention to the turnover efficiency of goods and the convenience of order distribution, so being compared to the origin warehouse, they are relatively simple in storage conditions.

The consumer's order will be processed and transmitted to the merchant's backend system, through which the fresh producers and suppliers can sort and package the goods according to the consumer's purchase needs. When the goods are packed, they will be sent to the adjacent JD.com warehouse. JD.com logistics transports the goods to all parts of the country through self-operated or outsourced cargo planes, railways, fleets, etc., and further distributed the goods to couriers through a two-tier sorting mechanism. Finally, the "last kilometre" logistics delivery is completed by the courier. With a dense and closely connected warehouse network and a mature logistics team, JD.com logistics can complete the delivery of fresh food orders within 48 hours after placing an order.

➤ **Market Channels**

JD.com has established two major channels: a web client (www.jd.com) and a mobile client (JD App). On these web portals, the fresh business has always occupied obvious positions, through which consumers can enter the dedicated fresh food homepage quickly. The consumption process of consumers buying fresh goods on JD.com generally consists of six steps, namely Homepage of the Official Website, Homepage of Fresh Products, Sections and Paths, Product Details Page, Shopping Cart, and Payment Page (Figure 14).

Fig.14. Consumption process on JD.com.



Source: JD.com 's official website, on May 3rd, 2019.

On the fresh food homepage, it is mainly divided into two sections: category list and scene guide. For the first section, visitors go directly to the list of goods they want to buy through the

three-level classification list. While for the second part, there are more different ways to link to the product list - not just through regular promotions, but also through categories of consumer needs, product review articles, and recommendations for best-selling products. No matter from which way the visitors enter, they will mostly come to the list of goods as they did in the first section. This is a common retail strategy to attract customers.

JD.com Group has experienced more than 20 years of development and accumulated a lot of experience in platform operation and channel management. **As an emerging industry, JD.com FRESH follows the original business model and business resources of JD.com Group.** By establishing ports and service teams in existing channels, traffic can be channelled smoothly to the fresh business segment.

4) Business Model

The business model canvas can be leveraged for further analysis of JD.com FRESH's business model (Table 2).

Table.2. JD.com FRESH's business model canvas.

Key Partners <u>Fresh supplier,</u> <u>Third-party</u> <u>payment platform</u>	Key Activities <u>Platform</u> <u>development,</u> <u>Order</u> <u>management,</u>	Value Proposition <u>Eat a little bit</u> <u>better</u>	Customer Relationships <u>Pre-sales</u> <u>guidance,</u> <u>After sales service</u>	Customer Segmentation <u>Ordinary urban</u> <u>families</u>
	Key Resources <u>Internet</u> <u>technology,</u> <u>Logistics network</u>		Channels <u>Web Client,</u> <u>Mobile Client</u>	
Cost Structure <u>Platform development costs,</u> <u>Use cost of vehicles and facilities,</u> Management costs, Employee salary			Revenue Steams <u>Platform service income,</u> <u>Value-added service income</u>	

Source: Compiled by the author, on May 3rd, 2019.

5.1.2.2.MISSFRESH

MISSFRESH is a fresh food E-commerce platform that pays attention to the dietary needs of ordinary people. Covering all kinds of fruits and vegetables, seafood and poultry, milk snacks, etc., MISSFRESH has established a cold chain logistics system of “city sorting warehouse + community front warehouse” in major cities, providing users with “2 hours delivery” speedy cold chain delivery service of fresh food products.

MISSFRESH completed \$450 million in financing on September 6, 2018. As the funder, Tencent became one of MISSFRESH's largest shareholders through four capital injections, making MISSFRESH an essential part of Tencent's user ecology.

1) Development of MISSFRESH

In November 2014, Daily Fresh was founded by Xu Zheng and Zeng Bin, who have more than ten years' experience in the retail industry. In the first half of 2018, the proportion of users of the daily fresh food in the fresh E-commerce industry has exceeded 50%, leading the industry for four consecutive quarters. By the end of 2018, it had expanded to 12 categories, including fruits, vegetables, dairy products, snacks, alcohol, meat and eggs, aquatic products, cooked food, light food, instant food, grain and oil, and daily necessities. MISSFRESH's “City Sorting Warehouse + Community Distribution Centre” cold chain logistics system established in 20 major cities across the country provides users with a 2-hour delivery service of self-operated full-category fresh goods.

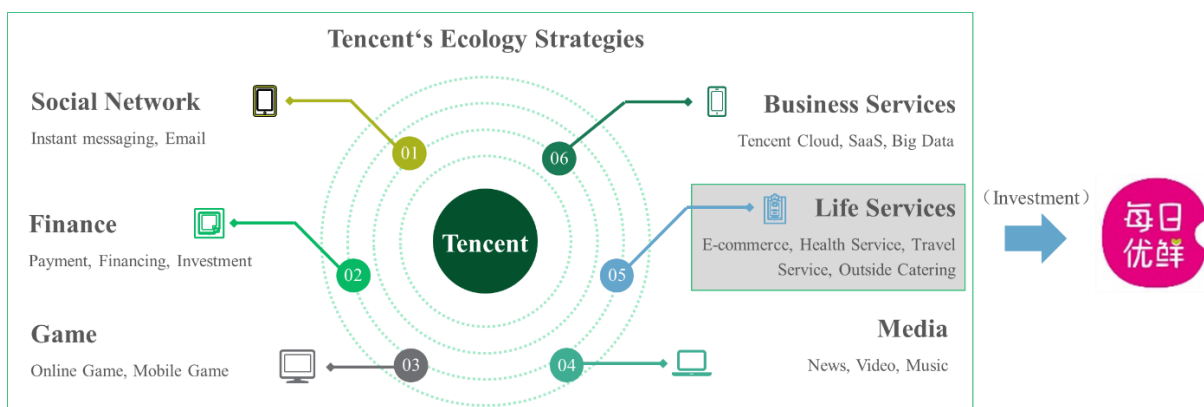
2) Business Architecture

MISSFRESH is currently only engaged in the single business of fresh E-commerce business and has a close cooperative relationship with Tencent. In recent years, Tencent, one of the Internet industry giants, has gradually established an Internet industry ecology covering Social network, Financial, Game, Business Services, Life Services and Media through diversification strategy. In the early stage of MISSFRESH's establishment in 2014, Tencent made a strategic

investment in MISSFRESH and further increased its investments in the past few years. Although Tencent does not directly participate in MISSFRESH's operation, it promotes the business coordination between the two parties by exerting its equity influence.

Since the experience of MISSFRESH's operation team in the traditional retail industry is not fully adapted to the development of E-commerce logistics, and its ability to provide Internet platform services is insufficient, Tencent provides MISSFRESH with two aspects of resources and support: **1) Firstly, Tencent provides support of big data and digital ability to help MISSFRESH accurately locate target customers online, and optimize warehouse location and logistics planning offline; 2) Secondly, Tencent attracts consumers for MISSFRESH with its rich network entrance and huge traffic.** MISSFRESH, by contrast, incorporated the fresh E-commerce business into the Tencent's Life Service business section, which has become an important part of the Internet ecology of Tencent. (Figure 16)

Fig.15. Business Architecture of MISSFRESH.

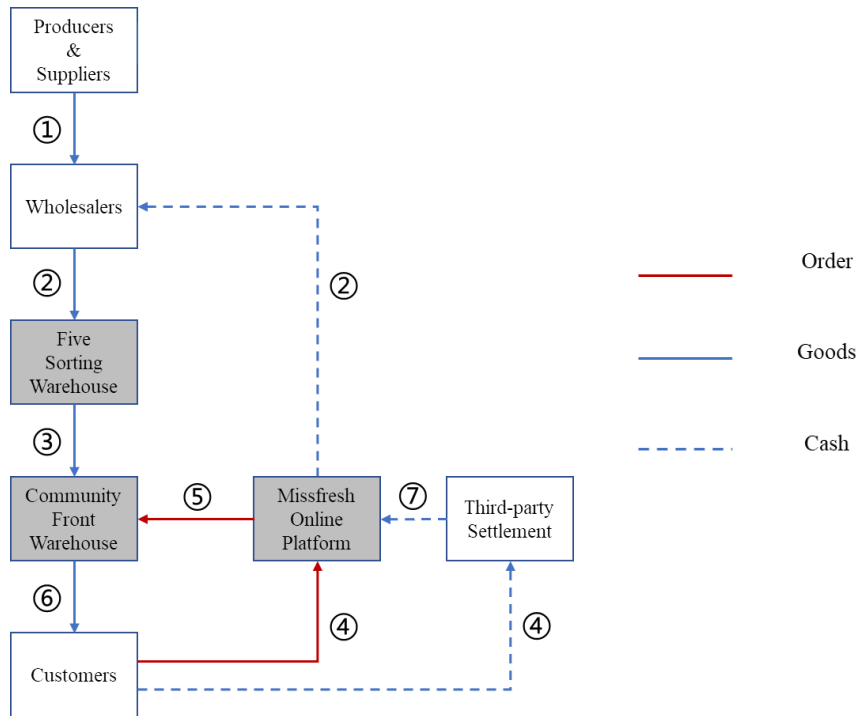


Source: MISSFRESH's mobile client, on May 3rd, 2019.

3) Operation Analysis

Through the integration of the above business links, the operation mechanism of MISSFRESH's fresh E-commerce business can be illustrated in Figure 16. The serial number in the figure represents the order in which the various links in the business occur, showing how the order, goods and cash flow in the operation mechanism.

Fig.16. Operation Mechanism of MISSFRESH's Fresh E-commerce Business.



Source: Compiled by the author, on May 3rd, 2019.

- MISSFRESH's procurement team will purchase goods from fresh wholesalers every day, and quickly delivers them to the front warehouses of each community through the country's five major transshipment warehouses.
- When the consumer places an order through the MISSFRESH mobile client to the online service platform, the order is sent to the community front warehouse, and the logistics distributor delivers the goods to the consumer within two hours.
- The money paid by the consumer when purchasing the product will be transferred to the MISSFRESH platform after confirming the receipt.

➤ Fresh Products

The products of MISSFRESH Fresh Market are purchased and sold by MISSFRESH. It has a dedicated procurement team that procures all the best-selling quality products on a global scale, with domestic and imported products at a ratio of 7:3.

In order to improve the efficiency and flexibility of category management, they generally tend to contact with fresh wholesalers and adjust the number of goods purchased and their quantity in real-time in the procurement process according to market conditions and support of Tencent's big data technology. As a result, MISSFRESH's procurement costs will be relatively high, but it also reduces the risk of the backlog on commodity inventory from large-volume purchases.

The fresh foods sold on MISSFRESH are often processed fresh-cooked foods or packaged fast foods. They generally need to be refrigerated and eaten as soon as possible, so the delivery time and delivery conditions are strictly required. Some products will be placed in the package with ice cubes during delivery to ensure that the quality of the food is not affected.

The author selected the same fresh foods mentioned above on MISSFRESH. After comparing the prices, the surface price of the products sold by MISSFRESH was only 1/3 to 1/2 of the products sold in the store. However, since the weight is only 40% to 50% of local goods, **the price is much higher than that on JD.com FRESH and at the local market.** Specific data can refer to Table 5.

➤ Logistics Services

Since MISSFRESH is a new Internet E-commerce company, all its infrastructure, including storage equipment, is newly established. MISSFRESH first established five large sorting warehouses in North China, East China, South China, West China and Central China. At the same time, in order to complete the order delivery within two hours, **MISSFRESH adopted the concept of the “front warehouse” and set up more than 1000 small warehouses of about 300 square meters distributed in urban residential areas in 20 cities across the country,** thus shortening the distance from community warehouses to customers. **Besides, it has built a logistics team that only serves its own business.** The transportation capacity brought by thousands of well-trained logistics and distribution personnel in each city fundamentally guarantees that the delivery of goods can be delivered on time.

Generally, MISSFRESH's purchasing team will determine the fresh product category and purchase quantity with the supplier in advance according to the marketing plan and market forecast. The purchased products will be transported by professional cold chain transportation companies to 20 cities through five sorting warehouses, and then stored separately at community front warehouses in each city according to the inventory forecast. Whenever an order is received on MISSFRESH's online platform, it is pushed to the community front warehouse nearest the customer. The logistics team sorts and packages the goods and strictly follows the delivery policy to ensure the goods can be delivered within two hours.

The construction of new logistics facilities and the establishment of a logistics team often lead to a sudden increase in costs. **However, MISSFRESH has optimised the warehouse location and logistics planning by making use of Tencent's technical capabilities and solved the challenge of investment costs.**

➤ **Market Channels**

MISSFRESH currently has only one platform, the MISSFRESH mobile client. Customers can enjoy the fresh E-commerce service by installing the MISSFRESH mobile app and registering as a member. Unlike JD.com FRESH, MISSFRESH uses a five-step shopping process, including Homepage, Product List, Product Details Page, Shopping Cart, and Payment Page (Fig 17). The customer enters the list page of the item to be purchased through the unique home page on the mobile client. Although MISSFRESH has only 12 categories and about 3000 SKUs, in order to simplify the operation and facilitate the operation of white-collar consumers, MISSFRESH has divided the interface into 20 sections, which is convenient for consumers to browse products and make purchasing decisions quickly. After selecting the item, the consumer can review the item placed in the shopping cart and complete the payment in the payment interface.

Fig.17. Consumption process on MISSFRESH.



Source: MISSFRESH 's mobile client, on May 3rd, 2019.

Although MISSFRESH only has one platform, through establishing a cooperative relationship with Tencent, MISSFRESH has obtained many channel resources. Firstly, Tencent will provide MISSFRESH with a business port or advertising service in the appropriate position of the subordinate business interface. When consumers click on the relevant page, the system will guide the mobile phone to quickly jump to MISSFRESH client. Then, through the interconnection and sharing of data, the big data technology of Tencent helps MISSFRESH quickly outline the user portrait of consumers, to accurately place advertisements and carry out marketing for target customer groups. Last but not least, Tencent's operation experience and customer service experience in other Internet business platforms have greatly improved MISSFRESH's operation efficiency and customer satisfaction.

4) Business Model

The business model canvas can be leveraged for further analysis of MISSFRESH 's business model (Table 3).

Table.3. MISSFRESH's business model canvas.

Key Partners <u>Fresh wholesalers,</u> <u>Cold chain</u> <u>transportation</u> <u>companies,</u> <u>Tencent Internet</u> <u>and Big Data</u> <u>Technology,</u> <u>Third-party</u> <u>payment platform</u>	Key Activities <u>Product</u> <u>purchasing,</u> <u>Platform</u> <u>development,</u> <u>Order</u> <u>management</u> Key Resources <u>Product</u> <u>management</u> <u>capacity,</u> <u>"Last-mile"</u> <u>distribution</u> <u>network</u>	Value Proposition <u>Quality life</u> <u>begins with a</u> <u>good meal.</u>	Customer Relationships <u>Pre-sales</u> <u>guidance,</u> <u>After sales service</u> Channels <u>Mobile Client</u> <u>(Connected to</u> <u>Tencent</u> <u>ecosystem)</u>	Customer Segmentation <u>Young white-collar</u> <u>workers in first tier</u> <u>cities</u>
Cost Structure <u>Fresh procurement costs, Platform development</u> <u>costs, Cold chain transportation costs,</u> <u>Warehouse leasing expense,</u> <u>Management costs, Employee salary</u>		Revenue Steams <u>Commodity sales income,</u> <u>Value-added service income</u>		

Source: Compiled by the author, on May 3rd, 2019.

5.1.2.3. Summary

In the last part of the case analysis of JD.com FRESH and MISSFRESH, the author uses the Business Model Canvas to compare the similarities and differences in the business models of the two successful enterprises, to summarise the experience of developing fresh E-commerce.

Based on the research of the two companies, the analysis of the nine system elements of their business model canvas is as follows:

- **Key Partners**

Fresh E-commerce generally involves multiple business links, which brings complexity and resource demand to fresh E-commerce enterprise. **When internal resources and capabilities are insufficient to complete the business, it is more economical to outsource some work to business partners. For new market participants, core partners with key resources become an important force in helping companies reduce the difficulty and investment cost of entering fresh E-commerce.** Because JD.com FRESH does not have the production and screening capabilities for fresh products, it is highly dependent on fresh suppliers' commodity availability. The open platform has become an important tool for JD.com FRESH to optimise the quality of the product - JD.com FRESH can strengthen the competition in the FRESH market through the open platform mechanism, and consumers' preference for high-quality products will prompt suppliers to optimise the quality of their products. As for MISSHFRESH, it lacks experience in logistics and channel management, so it turned to Tencent's Internet technology to comprehensively improve its management efficiency, including improving client design, strengthening order management, and optimising the location of the front warehouse

- **Key Activities**

The key activities of different fresh E-commerce enterprises have little difference in the composition of business links. Both JD.com FRESH and MISSFRESH need to

deliver products from suppliers to customers through logistics and warehousing services. Besides, they need to establish stable online channels to ensure contact with customers.

However, the key activities of different fresh food enterprises differ in products and service, especially in product portfolio and sales methods. They are mainly affected by the market positioning and commercial capabilities of fresh electricity suppliers. Due to its market positioning for ordinary urban families and its service capacity covering the whole country, JD.com FRESH's product mix focuses on mass consumer products, mainly in large packages. Due to the market positioning of white-collar workers in first-tier cities and the logistics capability of terminal distribution, MISSFRESH focuses on processed food, mainly in exquisite small packages.

- **Key Resources**

In the fierce competition of the fresh E-commerce industry, E-commerce enterprises are highly dependent on the utilisation ability of internal key resources.

For example, JD.com FRESH's core resource is JD.com Group's nationwide logistics network and mature E-commerce operation ability, which enables JD.com FRESH to quickly copy the successful experience of JD.com Mall and realise the fast entry and coverage of fresh business in the national market. MISSFRESH, on the other hand, relies on the rich experience of the start-up team in the retail industry and develops a unique style in the selection strategy. Besides, MISSFRESH is the first fresh enterprise to establish a community front warehouse in the first-tier city in China, which is of great help to improve the delivery efficiency and customer service level.

- **Value Proposition**

As an emerging industry, fresh E-commerce differs from the traditional retail industry in the value proposition, which reflects consumers' pursuit of a healthy diet in the Internet era and should reflect the value pursuit of corresponding target customers. JD.com FRESH advocates "eat a little bit better" in response to the concerns of home consumers about food quality. MISSFRESH inspired consumers with "Quality life begins with a good meal" to connect a healthy diet with a quality life.

- **Customer Relationships**

Fresh E-commerce is essentially a retail industry, so customer service that covers the whole consumption process and handles complaints promptly is the key to establish a good customer relationship. After years of development, JD.com Group has established a timely feedback customer service system and established closer interaction with customers through the membership system. JD.com FRESH can quickly connect with customers by leveraging the same service system and mechanism. The MISSHRESH start-up team has extensive experience in the retail industry and can quickly graft similar service experience into new businesses by leveraging their Internet systems and platforms. Besides, Tencent's operation experience and customer service experience in other Internet business platforms have greatly improved MISSFRESH's operation efficiency and customer satisfaction.

- **Channels**

The goal of establishing a channel for fresh E-commerce is to make the target customer group accessible to the service platform so that the platform can get user flow. Information and services should be interconnected between different channels to improve operational efficiency and customer convenience. JD.com FRESH currently uses JD.com Mall's mature web and mobile app as a channel to quickly attract users from the existing online platform to new businesses without retraining users. This approach also helps JD.com FRESH reduce its investment in creating separate channels. As a start-up, MISSHRESH needed to build a customer channel based on mobile clients from scratch. Fortunately, MISSHRESH received guidance from its partner, Tencent, on platform building and channel resources from Tencent's Internet ecosystem, and it avoided building its own user base from the ground up.

- **Customer Segmentation**

Fresh E-commerce enterprises need to determine specific market segments according to the development trend of the market and their own capabilities and

resources, and the market segments of different enterprises should be differentiated to reduce direct market competition. Due to its nationwide logistics network and mature E-commerce operation capacity, JD.com FRESH pursues a broader geographical and market coverage, targeting ordinary urban families. MISSFRESH noticed that young white collars working in first-tier cities have higher consumption power and stronger demand for quality fresh food, so they built their business around this target group.

- **Cost Structure**

Fresh E-commerce is in the early stage of development. Enterprises can use the existing infrastructure or adopt the asset-light model to reduce the investment cost. For example, JD.com FRESH makes use of the existing logistics fleet and warehouse facilities, while MISSFRESH reduces the cost of building a warehouse network by renting small warehouses scattered in the community.

- **Revenue Streams**

The business model established by fresh E-commerce should create value for customers to achieve a stable income stream. JD.com FRESH provides cost-effective FRESH products for tens of millions of ordinary urban families across the country, and the huge number of orders has brought stable service fee income on the platform. On the contrary, the number of white-collar workers in first-tier cities is far less than that of ordinary urban families, however, the high consumer loyalty and repurchase rate of target customers help MISSFRESH gain good revenue ability as well.

Based on the above analysis of business model canvas, we find that successful cases focus on two aspects of Business Model Ontology: 1) Customer Interface; 2) Infrastructure Management. They respectively answered the following questions: 1) the methods that fresh E-commerce companies position the market and get access to the target customers; 2) the ability and resources needed by fresh E-commerce companies to create value for customers.

1) Customer Interface



Customer Interface needs to propose a strategy for fresh E-commerce enterprises to carry out market positioning and reach the target customers, which is the most important link to connect with customers. **Only when fresh E-commerce enterprises make accurate market positioning for potential customers and establish good relations with them through channels and operation management, can fresh E-commerce enterprises turn their resources and capabilities into profits. A clear Customer Interface reflects good market insight accuracy.**

In general, market positioning can be determined by analysing the consumption demand, consumption habits and customer group characteristics of potential customers. In the past two years, many studies on customer satisfaction of fresh E-commerce in China reveal the main demand of Chinese consumers for fresh consumption (Zhao, 2017; Guo, 2018; Li, 2018; Luo, 2019). Zhao (2017) analysed the influencing factors of consumer satisfaction through quantitative methods, and found that consumers mainly paid attention to products, logistics and E-commerce platforms when buying fresh products online. Guo (2018), Li (2018) and Luo (2019) also obtained similar research results through their respective studies, while they refined the three factors of product, logistics and platform service and proposed sub-factors including commodity price, commodity quality, after-sales service, website design and so on. **This project adopts product, logistics and E-commerce platform as the main analysis criteria. On the analysis of consumer demand, JD.com FRESH and MISSFRESH not only consider the characteristics of selected target customers in FRESH consumption, but also fully combine them with their own core resources and core capabilities.** Relevant contents will be discussed in the next section.

In addition, fresh E-commerce enterprises pay attention to consumer consumption habits and demographic characteristics which will affect the profitability of the business model (Fang, Liu and Liu, 2014). The ordinary urban families selected by JD.com FRESH have a low consumption frequency, only 5-6 times a year. However, due to the high single

consumption amount and the large population base of this group in China, the revenue of JD.com FRESH can be guaranteed. On the contrary, MISSFRESH selects a group with a smaller population, white-collar workers in first-tier cities, benefiting from the high consumption frequency and the total amount of single consumption of this group, which also brings stable income to MISSFRESH. Therefore, the characteristics of JD.com FRESH and MISSFRESH's target customers can be compared as follows (Table 4).

Table.4. Characteristics of JD.com FRESH and MISSFRESH's target customers, on May 3rd, 2019.

Enterprise	Target Customers	Consumer demand			Consumption Habits	Demographics
		Products	Logistics	Platform Service		
 JD.com FRESH	Ordinary urban families	Abundant variety, moderate price, cost-effective products	Medium delivery efficiency	One-stop shopping, Immediate-response after-sales service	Low frequency, high single consumption	Large customer base, distributed throughout the country
 MISSFRESH	White-collar workers in first-tier cities	Convenient to eat and exquisite packaged, Low price sensitivity	High delivery efficiency	Seek freshness, intelligent customer service	High frequency, medium single consumption	Young age, small customers group, concentrated in big cities

Source: Compiled by the author, on May 3rd, 2019.

After determining the market segmentation, fresh E-commerce enterprises need to establish appropriate customer channels and customer service according to the characteristics of selected target customers. JD.com FRESH's target customers are close to that of JD.com Mall, allowing it to leverage existing web and mobile clients and attract customers to new businesses by building dedicated business ports on existing channels. The fast-response customer service also reflects the importance JD.com Group places on customers. In addition to using existing channels, fresh E-commerce enterprises can also establish new channels like MISSFRESH. MISSFRESH highly integrates the retail operation experience with the Internet technology of Tencent, to improve the marketing accuracy of target customers and their consumption experience.

2) Infrastructure Management

Infrastructure Management focuses on the key resources and capabilities of fresh E-commerce enterprises, which is the indispensable foundation for fresh E-commerce enterprises to carry out business. Clear Infrastructure Management reflects the high resource utilisation capacity of the enterprise.

Infrastructure Management focuses on the key resources and capabilities of fresh E-commerce enterprises, which is the indispensable foundation for fresh E-commerce enterprises to carry out business. In view of the high similarity between customers' focus on fresh E-commerce (including products, logistics and E-commerce platform) and the value-creating links of fresh E-commerce industry chain (including products, logistics and channels), fresh E-commerce enterprises are required to build resources and capabilities in product screening, logistics distribution, platform and channel operation.

After 21 years of development in e-retailing, JD.com Group has established a solid logistics and warehousing network and acquired rich experience in platform operation. At present, it applies its operating capacity and logistics resources to fresh electricity business, meeting the needs of logistics distribution and platform and channel operation. However, JD.com FRESH does not have the experience and expertise in the selection of FRESH products, so it adopted the open platform model at the initial stage of establishment. JD.com FRESH strengthened the market competition with the help of the open platform, and then completed the product selection through the elimination mechanism of the market.

As for MISSFRESH, it is highly dependent on external partners for the utilisation of its capabilities and resources. It has the retail business ability to make it in the product selection has a clear advantage, so in the fresh business it further improves and strengthens the procurement team procurement and selection ability. However, MISSFRESH lacks experience in logistics distribution and channel construction. For the former, MISSFRESH introduces the concept of the front warehouse to respond to the demand of target customers for efficient

distribution. Besides, it built its own-run last-mile delivery team and outsourced the goods transportation to professional cold-chain companies. For the latter, MISSFRESH makes full use of Tencent's operation ability and channel resources on the Internet. On the one hand, it builds an operation platform under Tencent's expert opinions and industry knowledge, and on the other hand, it makes use of the ports provided by Tencent ecology to attract customer flows.

Therefore, the capabilities of product screening, logistics distribution, platform and channel operation are essential for fresh E-commerce enterprises. Industry participants must master and make full use of the key resources they have. At the same time, for the resources they do not master or the business they are not good at, they should seek the support of external partners to achieve win-win through cooperation.

In the end, we need to emphasise that resources and capabilities must serve the needs of the target customer. Resources and capabilities are acquired at cost, so infrastructure management must be based on a clear user interface. At the same time, the enterprise can adjust the user interface according to the existing resources and capabilities, and then change the pricing strategy and the form of service provision accordingly. From the case of the two benchmark enterprises, they choose to serve different customer groups according to their own enterprise resources, resulting in obvious differences in development strategies. However, their success in the market proves that their respective target customers are satisfied with the fresh E-commerce services they provide.

5.2. Internal analysis

For internal analysis, the author mainly analyses S.F. BEST itself. By comparing the benchmark case analysis, the defects and shortcomings in the business model will be exposed and become an essential basis for the development of the optimisation plan.

5.2.1. S.F. BEST

S.F. BEST is a subsidiary of S.F. Group. With the aim of “Best food for home”, S.F. BEST relies on the online E-commerce platform and offline community stores to provide users with global quality food that is needed daily.

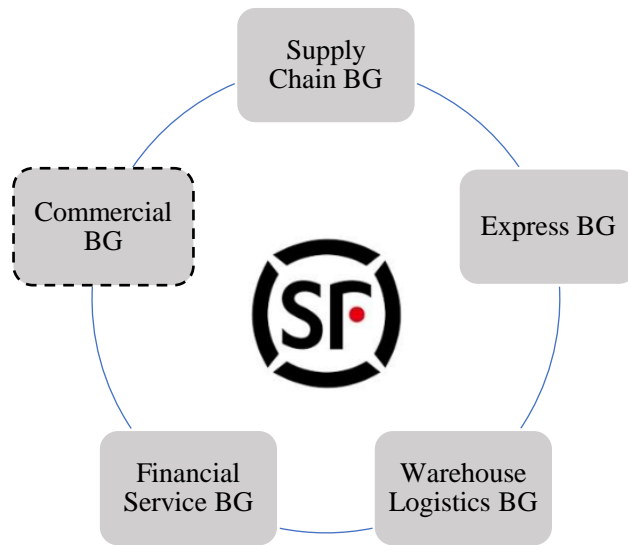
1) Development of S.F. BEST

As a leader in the domestic Express industry, S.F. Group officially launched its online shopping platform, S.F. BEST in 2012. In 2014, its offline store “Heike” was launched. In the plan, S.F. Group will be able to build a huge business empire with the combination of express network, online trading platform and offline entity. However, by 2016, S.F. BEST suffered a total loss of more than 1.6 billion yuan – a report stated that “mainly due to the large-scale laying of offline stores in S.F. Group's E-commerce sector in 2014.” S.F. BEST has closed many offline stores, but there are still more than 300 operating in major cities and profitability needs to improve.

2) Business Architecture

S.F. BEST is an ecological component of S.F. Group. Group in terms of business relationships. At present, S.F. Group consists of five business groups, including supply chain business group, express business group, warehouse logistics business group, financial service business group and commercial business group. The first three are mainly related to S.F. Group ‘s core business, logistics and supply chain. The commercial business group can get support from the other four business groups to a specific extent, but the development is relatively slow (Figure 18).

Fig.18. Business Architecture of S.F. Group.



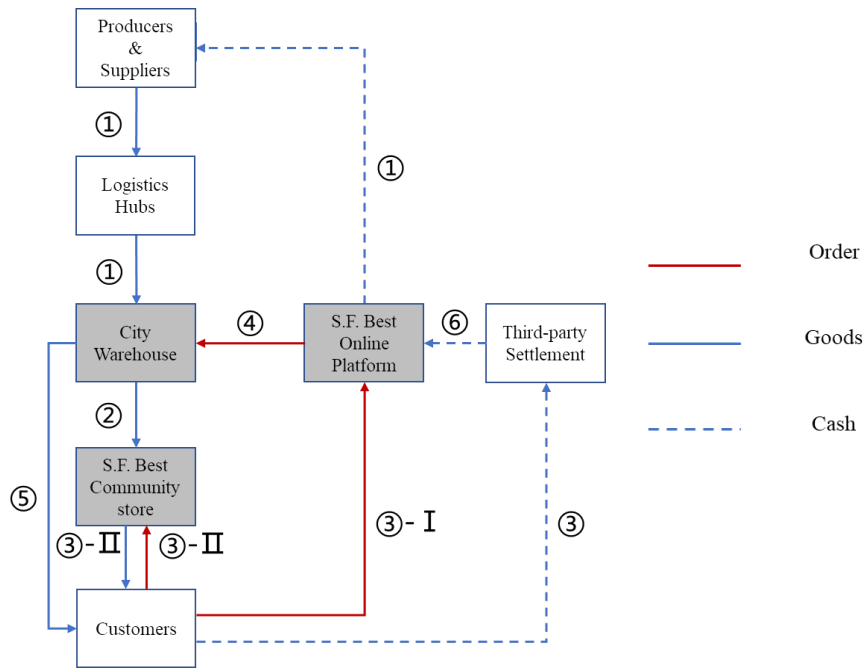
Source: S.F. BEST's mobile client, on May 3rd, 2019.

3) Operation Analysis

Through the integration of the above business links, the operation mechanism of S.F. BEST's fresh E-commerce business can be illustrated in Figure 19. The serial number in the figure represents the order in which the various links in the business occur, showing how the order, goods and cash flow in the operation mechanism.

S.F. BEST is the object of this research. The Content Structure used in its business process is similar to the previous one, focusing on the online ordering process, commodity procurement, cargo warehousing and logistics distribution, which directly connected to the three major issues that consumers concern, including products, logistics, platform service.

Fig.19. Operation Mechanism of S.F. BEST's Fresh E-commerce Business.



Source: Compiled by the author, on May 3rd, 2019.

- Goods that are regularly purchased from fresh produce producers and suppliers by the S.F. BEST purchasing team are shipped to various city warehouses for storage through logistics hubs. Some of the goods will be further distributed to the S.F. BEST store.
- Consumers can choose to go to the S.F. BEST store to purchase fresh goods through the offline channel (③-II) or via the online client to place an order from the web or mobile app (③-I). Consumers who buy fresh products at S.F. BEST stores can make offline payments and withdraw the goods.
- As for the path of the online shopping, after the online service platform receives the order information, it will push the order to the urban warehouse and deliver the goods directly to consumers from the urban warehouse.
- The money paid by the consumer when purchasing the product will be transferred to the S.F. BEST platform after confirming the receipt.

➤ Fresh Products

S.F. BEST only sells self-operated products. It has established a procurement team that specialises in the procurement of quality goods at home and abroad. This team will usually sign a direct purchase cooperation agreement with the selected fresh produce, thus reducing procurement costs and ensuring a stable supply of goods. Especially in some seasonal products with scarcity, this strategy has helped S.F. BEST successfully occupy a significant market share, such as Yangcheng Lake hairy crabs that are only available in September each year. At the peak period, S.F. BEST's hairy crab sales account for 15-20% of the national sales.

This direct procurement model also poses a severe problem. If the market forecast is not accurate, and the supply exceeds demand, S.F. BEST will face substantial economic losses. Therefore, accurate market insights and market forecasting models can be of great help to the direct procurement model.

S.F. Group's high-quality logistics services mainly serve business customers. Its success has inspired S.F. BEST fresh E-commerce to select the same market positioning and establish a high-end product category. For the source of goods, nearly 40% of S.F. BEST's products come from overseas markets, and a large proportion of the remaining parts are high-quality domestic products.

As for the weight of the product, most of the S.F. BEST products are flat or slightly higher than similar products in the store. Since the customer is positioned as a high-end home consumer, S.F. BEST focuses on medium-sized packaging. By comparing the price and packaging weight, we realised that the unit price of S.F. BEST is lower than that of MISSFRESH, but it is not competitive with the local market and JD.com FRESH. Specific data is shown in table 5. The red font colour represents the lowest price for the item among the three platforms.

Table.5. Commodity price comparison of JD.com FRESH, MISSFRESH and S.F. BEST

JD.com FRESH	Price (CNY)	53.8	59.9	149	22.9	98
	Unit Weight (KG)	1	2.5	2	2.5	1
	Unit Price (CNY)	53.8	23.96	74.5	9.16	98
MISSFRESH	Price (CNY)	49	9.9	26.9	6.5	30
	Unit Weight (KG)	0.5	0.22	0.4	0.4	0.25
	Unit Price (CNY)	98	45	67.25	16.25	120
S.F. BEST	Price (CNY)	69.9	70	79.9	25	99
	Unit Weight (KG)	1	2.5	1	1.6	1.5
	Unit Price (CNY)	69.9	28	79.9	15.625	66
Local market	Price (CNY)	30-100	20-50	40-80	10-20	50-100
	Unit Weight (KG)	0.5-1	1-1.5	0.5-1	1-1.5	0.5-1
	Unit Price (CNY)	50-100	20-35	70-80	10-15	90-100

Source: Online client of three fresh E-commerce enterprises, compiled by the author, on October 10th, 2019

➤ Logistics Services

S.F. BEST currently relies on S.F. Group's logistics infrastructure, including the city warehouse network covering more than 99% of the country's urban and rural areas, and in most large and medium-sized cities, S.F. Group has a well-established dedicated cold chain warehouse to ensure the low temperature of goods from storage to transshipment.

In terms of the logistics process of procurement, S.F. BEST regularly sends transportation fleets to suppliers based on the cooperation agreements signed with suppliers, and the purchased goods will be transferred to warehouses in various cities through logistics hubs. Some items will be further allocated to S.F. BEST stores on a two- to three-day basis, depending on store needs. The S.F. BEST store is not only an offline sales channel but also an essential part of the S.F. BEST warehouse system. Each S.F. BEST store stores 3-4 days of inventory and issues replenishment requests to the city warehouse based on inventory level. However, in the commodity management system, real-time monitoring and inventory forecasting functions have not been enabled, and the commodity management of physical stores relies on the store manager to report to the system.

S.F. BEST divides the offline channel and the online channel in the process of product sales. Consumers who buy fresh products at S.F. BEST stores can make offline payments and withdraw the goods. Online channels mainly rely on couriers of S.F. Express to complete the delivery of orders. After the online orders are processed by the service platform, they will be sent to the city warehouse in the city where the consumer lives. The goods will be packaged and sorted in the city warehouse and delivered by couriers. S.F. BEST's high dependence on couriers leads to the delivery efficiency being limited by the delivery efficiency of the S.F. Express delivery system.

➤ **Market Channels**

S.F. BEST has established three customer channels, including web clients, mobile clients and physical stores. Consumers can choose their ways and channels of consumption according to their circumstances. At present, there is no connection between online channels and offline channels. Consumers need to register two accounts in the process of consumption, and customer service including return and exchange is also carried out independently. At the same time, the two channels of goods are not exactly the same. If a particular product is out of stock in one channel, the consumer needs to buy it through another channel.

The consumer process on the web client and mobile client is similar to that on JD.com FRESH and MISSFRESH clients. It takes five steps to complete the order, including Homepage, Product List, Product Details Page, Shopping Cart, and Payment. Page (Figure 20). Through the online channel, customers can get access to about 5000 SKU items.

Fig.20. Consumption process on MISSFRESH.



Source: MISSFRESH 's mobile client, on May 3rd, 2019.

The third most crucial channel for S.F. BEST is the physical stores located in major large and medium-sized cities across the country. These physical stores are mainly located in urban centres and bustling business districts, especially around major streets and office buildings. From 2014 to 2015, S.F. BEST laid out more than 500 stores across the country, but due to poor management, S.F. BEST closed a large number of physical stores in 2017. At present, the total number of stores nationwide is maintained at around 300.

The size of the S.F. BEST physical store is generally small, around 30-40 square meters, half of which is used to store goods and the other half is used for merchandise display. In these stores, consumers can buy about 200 different types of goods, but the types and supply of goods are generally not fixed, affected by the situation of inventory and sales.

Fig.21. Consumption process on MISSFRESH.



Source: MISSFRESH 's mobile client, on May 3rd, 2019.

4) Business Model

The business model canvas can be leveraged for further analysis of S.F. BEST's business model (Table 6).

Table.6. S.F. BEST 's business model canvas.

Key Partners <u>Fresh suppliers,</u> <u>Third-party payment platform</u>	Key Activities <u>Platform development,</u> <u>Store management,</u> <u>Product distribution</u>	Value Proposition <u>Best food for home</u>	Customer Relationships <u>After sales service</u>	Customer Segmentation <u>High-income business customers and their families</u>
	Key Resources <u>Logistics resources,</u> <u>Source of supply</u>		Channels <u>Web Client,</u> <u>Mobile Client</u> <u>Physical stores</u>	
Cost Structure <u>Platform development costs, Fresh procurement costs, Use cost of vehicles and facilities,</u> <u>Management costs, Employee salary, Store rent</u>			Revenue Steams <u>Commodity sales income,</u> <u>Value-added service income</u>	

Source: Compiled by the author, on May 3rd, 2019.

5.2.2. Summary

Based on the analysis of benchmarking enterprises in the previous chapter, we found that successful fresh E-commerce companies have invested much attention in Customer Interface and Infrastructure Management. We use this analytical framework to analyse S.F. BEST's business model and explore the reasons for its failure.

The problems of S.F. BEST can be summarised in the following two aspects: 1) Low market insights accuracy. Inaccurate market positioning and unobstructed channels lead to the inability to establish relations with customers; 2) Bad resource utilisation capacity. Due to the lack of the ability of E-commerce platform and channel operation, the logistics network resources and commodity screening ability did not turn into a competitive advantage but caused huge cost pressure. Specifically, S.F. BEST's problems in Customer Interface and Infrastructure Management can be further separated into six specific sub-problems (Table 7).

Table.7. S.F. BEST 's Problem in Business Model.

	Core factors	Sectors in Ontology	Aspects	Description
1	Market insight accuracy	Customer Interface	Customer Segmentation	Positioning the high-end market, but the consumer base and consumer repurchase rate are low, and the service does not reach the expectations of high-end consumers.
2			Customer Relationships	From the express business personnel to form a customer service team, the customer service level does not meet the requirements.
3			Channels	The store location is unreasonable, online and offline channels are not connected, and customer flow is low.
4	Resource utilisation capacity	Infrastructure Management	Key Partners	S.F. BEST is currently working alone and has not established cooperation with external partners with business resources
5			Key Activities	Offline stores have a large investment but poor operation, and the supply and demand of products are unbalanced.

6			Key Resources	Logistics resources are not fully utilised resulting in low distribution efficiency; Goods of good quality are often slow to sell.
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Source: Compiled by the author, on May 3rd, 2019.

From the perspective of market insight accuracy, S.F. BEST made mistakes in targeting customers and channel operation. In terms of consumer positioning, S.F. BEST chooses high-income business customers and their families as its target customers in order to keep consistent with the group's overall market positioning. As a leading enterprise in the express industry, S.F. Group is known for its high-quality and safety-guaranteed services, so it has won the favour of high-end business customers and gradually formed an obvious image difference with other express companies in the market competition. In order to maintain its brand image and promote its fresh business brand S.F. BEST to the same customer Group, S.F. Group adopts the same market positioning as its express business. Moreover, S.F. BEST believes that the purchasing power and willingness of business customers to purchase fresh food is as high as that of express delivery services. However, S.F. BEST ignores several factors - service level expectation, consumption preference, group population and so on. Firstly, high-income business customers have higher requirements on service level, including expectations on distribution efficiency, expectations on service standardisation, and even exclusive consumption experience of online consumption. Moreover, they prefer to buy freshly harvested vegetables and freshly slaughtered meat products in community fresh stores rather than packaged food. As for the group population, high-income business customers account for a small proportion of the population, which is difficult to bring stable revenue. **As a result, S.F. BEST's wrong understanding of customers' needs and consumption habits in different businesses led to the failure of positioning target customers.**

Besides, S.F. BEST has failed miserably in its channel operations. **Unreasonable store location leads to many physical stores distributed in busy business districts and urban centres, which is in great conflict with the consumption habits of consumers.** Even for high-income groups, their consumption habits are to buy food materials in community fresh stores or large supermarkets instead of going to streets in busy business districts. **The disconnect**

between online and offline channels has led to the great discomfort of the consumption experience. The commodity management and customer management system of the physical store are not connected with the web client and mobile phone client. As a result, consumers who signed up for online memberships and received discounts on their online clients will not be able to get them at the S.F. BEST stores. Besides, the operation team of S.F. BEST comes from the express department and lacks the service experience and service consciousness of the retail industry, which further affects the customer relationship between S.F. BEST and consumers.

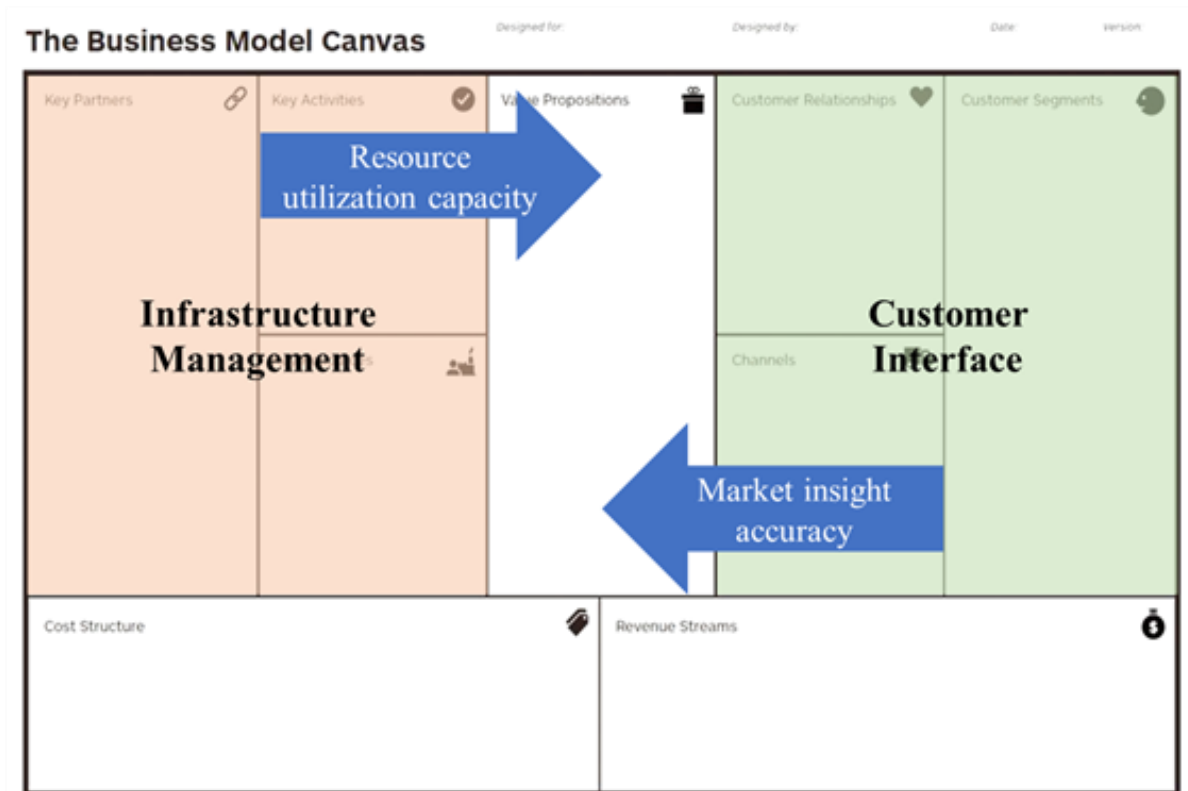
In addition to the challenges in the consumer interface, S.F. BEST also faces the dilemma of poor infrastructure management. There is no doubt that S.F. BEST has good enterprise capacity in logistics and products. First, S.F. Group has established a reliable logistics service network and accumulated rich industry experience after more than 20 years of development. Then, S.F. Group has established good cooperative relations with many high-quality fresh food suppliers in the process of undertaking E-commerce logistics. Therefore, S.F. BEST can quickly establish a good product foundation by establishing a professional procurement team.

However, good enterprise capability in logistics and products did not bring good benefits to S.F. BEST. It has natural defects in the operation of the E-commerce platform and channel. As a logistics service provider, S.F. Group's understanding of E-commerce stops at the level of commodity distribution, but it does not understand consumers' demand for higher retail and consumption experience. In addition, the defects in channel construction also cause a huge gap between S.F. BEST and high-income consumers. **However, the most important thing is that S.F. BEST did not seek external resources or help from external partners to solve its lack of platform and channel operation ability.** In contrast, successful enterprises pay enough attention to their weaknesses - JD.com FRESH converts fresh supplier's selection ability into its own product ability through the open platform mechanism, while MISSFRESH improves its platform operation ability by using Tencent's Internet technology and attracts a lot of customer traffic with its channel resources.

When S.F. BEST does not solve its lack of ability in platform operation and channel operation, the value created by high-quality logistics services and product services cannot be delivered to consumers. Therefore, S.F. BEST is faced with such a situation: it purchases high-quality fresh goods and transfers the products from suppliers to warehouses in various cities in the shortest time through a strong cold chain transportation network, but the sales situation is out of their control and inventory is often overstocked. Offline stores are often closed due to severe loss due to lack of customers, while customer service staff received many complaints but failed to solve customer demands. What's more, their core business is also facing a lack of price advantage, product packaging and other problems.

In a word, S.F. BEST is unable to accurately locate its target customers and perform poorly in the operation of fresh E-commerce platforms and channels. As a result, S.F. Group is unable to establish a good relationship with customers, and its ability in logistics and products cannot be turned into a means of profit. Furthermore, by referring to the ontology framework of business model, the author found that Infrastructure Management and Customer Interface are located in the upper left corner and the upper right corner of the business model canvas respectively, representing two essential entry points for establishing the business model, which also reflects the fundamental defects of S.F. BEST's business model, the mismatch between S.F. BEST's enterprise resources and customer needs (Figure 22).

Fig.22. The mismatch between S.F. BEST's enterprise resources and customer needs.



Source: Compiled by the author, on May 3rd, 2019.

Based on the above analysis of the business model, we further discuss S.F. BEST's diversification strategy. When enterprises need to enter new industries and fields, the diversification strategy is widely adopted. At this time, the industry barriers formed by industry knowledge and professional skills often become the biggest obstacle faced by enterprises. Here, we will discuss the successful experience of JD.com Group, the holding company of JD.com FRESH, and Tencent, the investor of MISSFRESH, in business diversification. The successful case analysis provides three suggestions, including:

1) **Enterprises adopting diversification strategy should choose the industry they are familiar with or the industry in which core resources and capabilities can play a role and overcome industry barriers.** The fresh E-commerce business expansion of JD.com Group relies on the high similarity between fresh business and existing business in the E-commerce operation mode, while Tencent takes advantage of the universality of MISSFRESH and other sub-businesses in Internet technology.

2) Enterprises should adopt different diversification strategies according to the degree of correlation between new business and existing business. Those with strong correlation can implement internal diversification, while those with low correlation can adopt external diversification.

In this project, we will use the two concepts of internalisation and externalisation. In the case analysis, we found that the successful fresh E-commerce enterprises adopted two different models when implementing business diversification. First, the enterprise internalisation, through the establishment of departments within the scope of the enterprise to undertake new business, the new business for strict management. When jd.com fresh was launched, for example, the jd.com group created the company's fifth business-oriented front end. As an enterprise only engaged in the E-commerce business, the infrastructure of JD.com Group has a high degree of asset specificity externally, but it has an excellent versatility for different product lines of the E-commerce business. For this reason, it is uneconomical for JD.com Group to build new logistics and storage facilities for the fresh business, and business internalisation becomes a better choice. The essence of business internalisation is vertical integration -- by integrating the fresh business into the existing business system, JD.com FRESH can enjoy resources such as the group's existing logistics and platforms through internal procurement, thus reducing transaction costs in the market.

The second is to externalise the business, form a cooperative relationship with the company undertaking new business through foreign investment outside the boundary of the enterprise, and only use equity to influence the development of the invested enterprise. For example, Tencent's diversification strategy in Internet ecology is realised through the externalisation of business. In view of the strong asset specificity of different businesses in the Internet industry, Tencent established a special investment team to invest in unicorn companies with different businesses. Tencent relies on its brand operating ability and equity ownership relationship to influence the development of enterprises. It not only accelerates the layout of Internet ecology but also optimises the group's financial situation. The businesses in the Internet ecosystem of Tencent are not connected with the upstream and downstream, but more parallel to each other.

Therefore, its external diversification strategy is basically consistent with horizontal diversification.

In the fresh business, we think S.F. group should adopt the strategy of business internalisation. At present, S.F. group has obvious advantages in logistics resources and forms a high degree of business correlation and asset specificity with fresh business. In the case comparison between JD.com Group and Tencent, S.F. Group is more like the former. By learning the business internalisation strategy of JD.com Group and realising the vertical integration of business development, S.F. Group can improve the utilisation of high-quality logistics resources and reduce the cost of developing fresh business.

3) Enterprises should specify development plans based on their core resources and capabilities and strengthen the synergy between business and resources. The core resource of an enterprise is its most significant competitive advantage. For example, in the diversification strategy, JD.com Group's mature E-commerce operation model and Tencent's Internet technology are always the most valuable resources for them to expand their new business.

To sum up, as an E-commerce logistics operator, S.F. Group's attempt to diversify fresh E-commerce business conforms to the business development of S.F. Group, and its logistics and product capabilities can provide strong resource support for new business. Considering that fresh electricity business and logistics business are each other's upstream and downstream business, and there are many opportunities for business cooperation, the author suggests that S.F. Group adopt an internalization strategy - By establishing an internal market and completing the vertical integration of logistics and e-commerce businesses, it will improve the resource utilization rate and reduce the transaction costs between related businesses. However, when S.F. Group implements business diversification, it needs to solve the problems of core resource utilisation and coordination and optimise business operation by establishing a reasonable combination of resources and skills. For the business and ability that the enterprise is not good at, it should be assumed by external partners.

6. Forms of implementation

This part puts forward targeted suggestions for the problems mentioned above and the reasons behind them and proposes implementation plans based on the corresponding suggestions, to help S.F. BEST develop new business processes, improve service capabilities and optimise profitability.

6.1. Optimisation suggestions for S.F. BEST business

This section will propose solutions to the six problems mentioned above in terms of enhancing the resource utilisation capacity and deepening the understanding of customer needs (Table 8).

Table.8. Suggestions on the optimisation of S.F. BEST's fresh E-commerce business model.

	Core factors	Aspects	Solutions
1	Resource utilisation capacity	Customer Segmentation	①Revise market positioning. The target customers are changed to middle-income households in first - and second-tier cities to expand the customer base.
2		Customer Relationships	②Strengthen the whole process of customer consumption service, guide customer consumption and solve customer complaints and suggestions.
3		Channels	③ S.F. BEST fresh store can establish cooperation with the existing community chain fresh store, to adjust and enrich the product categories reasonably and enhance the consumer attraction. S.F. BEST can take advantage of the stable consumer demand of community-based fresh food stores for cold-chain distribution business and drive sales of S.F. BEST products. Community fresh food stores expand the category of high-quality products through cooperation with S.F. BEST to enhance consumer appeal. When the time is right, S.F. BEST can quickly gain market share through capital operations such as mergers and acquisitions; ④Technology is used to realise online and offline communication and change the state of the three channels being blocked from each other. ⑤Promote to-B business to reduce investment costs.

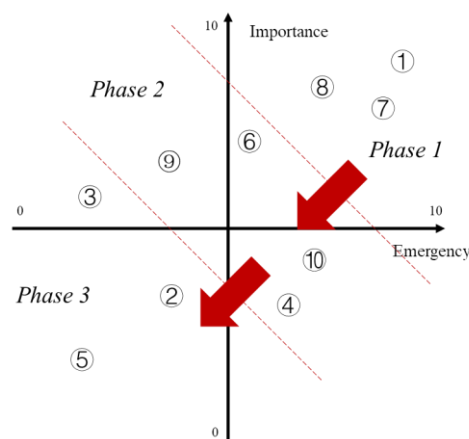
4	Market insight accuracy	Key Partners	⑥ Bring in external strategic partners. Establish a cooperative relationship with external entities with retail industry experience and Internet operation ability to provide support for S.F. BEST to enter fresh food E-commerce and reduce investment cost.
5		Key Activities	⑦ Strengthen the use of internal resources. Transplant the existing technical resources of S.F. Group to create a service platform for channel communication and provide strong support for fresh business;
			⑧ Reduce physical stores, open franchise system and reduce the cost of physical point network layout;
6		Key Resources	⑨ Establish a delivery system based on community brick-and-mortar stores to improve the order response level and ensure the delivery of orders within two hours. ⑩ Optimize product mix. By expanding the product level, the product will be covered by multiple levels instead of only high-end products, to attract more consumers.

Source: Compiled by the author, on May 3rd, 2019.

6.2. Implementation plan

According to the importance and urgency of each optimisation proposal, they can be placed on the following axes, with the horizontal axis indicating urgency and the vertical axis indicating importance. From the top left to the bottom right, the ten optimisation recommendations are divided into three groups with two dotted red lines, which represent the three stages respectively, from stage 1 to stage 3, which is gradually declining in urgency and importance. We thus have a three-stage implementation plan (Figure 23).

Fig.23. The method of dividing stages of the implementation plan.



Source: Compiled by the author, on May 3rd, 2019.

Stage 1 (Within 1-3 months)

The first stage is to solve the fundamental problems that need to be solved for the future development of S.F. BEST fresh business and the urgent problems that can reverse the disadvantage immediately.

1) **Revise market positioning.** Market positioning fundamentally affects the development strategy and development mode of enterprises, so it is necessary to make it clear in the first stage as soon as possible. Moreover, a complete development plan should be redrawn.

2) **Strengthen the use of internal resources.** S.F. Group has excellent internal resources. Using its technical resources to establish an operation platform is conducive to improving the operational efficiency of the fresh business and provide excellent platform support for other improvement measures.

3) **Reduce physical stores and open franchise system.** Existing physical stores bring high financial pressure to S.F. BEST. We should reduce the operating expenses as soon as possible by reducing the number of stores or transforming them to the franchise system and use the funds for future business optimisation. In the meanwhile, physical stores should gradually migrate to the community to enhance the serviceability of community residents

Stage 2 (Within 3-6 months)

The second stage focuses on the improvement of the customer consumption experience. Through the optimisation of management and the adjustment of the business model, customer satisfaction can be improved quickly, and the customer base can be cultivated steadily.

1) **Bring in external strategic partners.** This phase begins to focus on the help of external partners for business optimisation. The introduction of strategic partners is mainly aimed at solving the problem that S.F. BEST currently lacks experience in Internet business operation

and stays away from retail consumers. Currently, available Internet companies include Tencent, NetEase and Xiaomi.

2) Establish a delivery system based on S.F. BEST community physical stores. The establishment of a distribution system with community stores as the core is to improve the coverage of the community and the order response-ability.

3) Solve the problem of mutual blockage of channels. Closed channels lead to a significant decline in replenishment capacity and order response capacity. To build an interconnected enterprise SCM system and CS system through technical means is conducive to improving service capacity and meeting customer demand.

4) Optimise product mix. The product mix affects the customer's willingness to consume. At present, S.F. BEST's product portfolio is concentrated, and the price is high. S.F. BEST needs to expand the grade and type of the product, and appropriately lower the price to serve the new target group.

Stage 3 (Within 6-12 months)

The third stage mainly serves the medium - and long-term development strategy of S.F. BEST.

1) Establish cooperation with the existing community chain fresh store. It is not easy to establish a cooperative relationship with the existing community fresh food stores, which requires a specialised department to follow up and take charge and requires long-term work. However, if we can gradually realise the cooperation of community market on the national scale, it will help S.F. BEST gain the huge market space and growth potential in the future.

2) Strengthen the whole process of customer consumption service. Customer service optimisation of the whole business process needs to start from daily management, implement continuous performance inspection, and take effective personnel incentives.

3) **Promote B2B business** to optimise revenue structure. In the future, when the service for consumers is mature, a B2B business can be developed by establishing good connections with business customers. The B2B business is an important channel to optimise revenue structure and improve revenue level.

6.3. Development forecast

1) Based on the above business optimisation implementation plan, we hope S.F. BEST can establish the following business models in the future:

Table.9. S.F. BEST 's business model canvas (New).

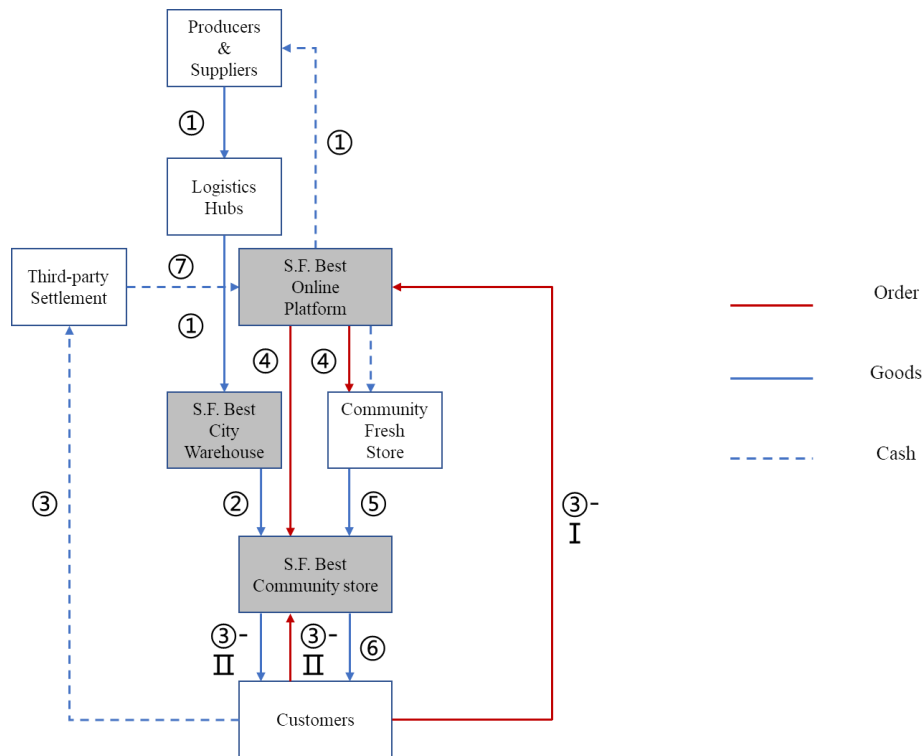
Key Partners <u>Fresh suppliers,</u> <u>Third-party payment platform,</u> <u>Internet Companies,</u> <u>Marketing planning companies,</u> <u>Community fresh store, etc.</u>	Key Activities <u>Platform development,</u> <u>Store & Franchise</u> <u>Store management,</u> <u>Product distribution</u> Key Resources <u>Logistics resources,</u> <u>Source of supply,</u> <u>Specialized distribution team</u>	Value Proposition <u>Best food for home</u>	Customer Relationships <u>After sales service</u> <u>Customer tracking survey, Membership service</u> Channels <u>Web Client,</u> <u>Mobile Client,</u> <u>Physical stores,</u> <u>Internet channel resources</u>	Customer Segmentation <u>Middle-income groups in first - and second-tier cities</u>
Cost Structure <u>Platform development costs, Fresh procurement costs, Use cost of vehicles and facilities,</u> <u>Management costs, Employee salary, Store rent</u>			Revenue Steams <u>Commodity sales income,</u> <u>Value-added service income:</u> <u>Brand licensing fee, Membership fee</u>	

Source: Compiled by the author, on October 21rd, 2019.

Key features: Partners with rich resources, Excellent customer service, Channel connectivity, Asset-light model, Diversified income structure,

2) Based on the above business optimisation implementation plan, we expect S.F. BEST to establish the following operation model in the future :

Fig.24. Operation Mechanism of S.F. BEST's Fresh E-commerce Business (New).



Source: Compiled by the author, on May 3rd, 2019.

- Goods that are regularly purchased from fresh produce producers and suppliers by the S.F. BEST purchasing team are shipped to various city warehouses for storage through logistics hubs. Some of the goods will be further distributed to the S.F. BEST store according to instructions from the inventory monitoring and forecasting system.
- S.F. BEST establishes cooperation and information exchange with existing community fresh food stores. Community fresh store can register commodity information on the online service platform, so as to form real-time information of commodity inventory of category A (S.F. BEST store) and category B (community fresh store) on the platform. When a customer opens the S.F. BEST client, the platform service automatically selects

the nearest S.F. BEST store and displays the product information of S.F. BEST store and fresh food store in the surrounding community.

- Consumers can choose to go to the S.F. BEST store to purchase fresh goods through the offline channel (③-II) or via the online client to place an order from the web or mobile app (③-I). Consumers who buy fresh products at S.F. BEST stores can make offline payments and withdraw the goods.
- Online orders will be processed through the online service platform and pushed to the nearest S.F. BEST store and community fresh food store respectively according to category A/B. The goods purchased are sorted and packaged separately in the two kinds of stores. The community fresh store needs to deliver the goods of category B to S.F. BEST store first, and then the distribution team of S.F. BEST will deliver the goods of the two kinds together.
- The money paid by the consumer when purchasing the product will be transferred to the S.F. BEST platform after confirming the receipt.

7. Conclusions

This paper discusses the external market environment for S.F. BEST to carry out fresh food E-commerce business and the successful way for successful fresh food enterprises. It also summarises the reasons for the failure of S.F. BEST and puts forward corresponding improvement suggestions. At this point, the author can answer the three questions raised at the beginning of the article:

1) What are the obstacles that prevent express companies from achieving diversification in the E-commerce business?

S.F. Group chooses fresh E-commerce business for diversified expansion, which is in line with the business development of S.F. Group. However, the implementation of the diversification strategy is hindered by the defects in the channel operation of S.F. Group.

As a branch of the E-commerce industry, the fresh E-commerce business is highly dependent on platform and channel operation. Only by establishing channels closely related to customers and providing intelligent customer services can fresh E-commerce enterprises create and deliver value for customers. Therefore, to enter fresh E-commerce business through vertical diversification strategy, express delivery companies must rely on channel operation to break through the industrial barriers between the links of the industrial chain. Currently, S.F. Group can provide high-quality fresh product categories and guaranteed logistics and distribution services, but due to the defects of channel operation, the value creation of the first two businesses becomes meaningless. This is the direct reason for the failure of S.F. Group's diversification strategy, and it is also applicable to most express delivery companies that want to enter the E-commerce business.

2) How do we understand the failure of express delivery companies in the process of diversification?

S.F. Group's diversification strategy is subject to the establishment of channels. Furthermore, the underlying cause of its failure is the mismatch between enterprise resource utilisation capabilities and market insight accuracy. First, S.F. BEST follows the high-end positioning of the company and targets at high-income business customers and their families but ignores that the consumption habits and demands of these customers affect the revenue level. Then, the channel construction problem faced by S.F. BEST is fundamentally the enterprise's platform and channel operation ability. The problems of the platform and channel operation ability not only directly affect customer service level but also have a significant impact on logistics and product ability.

By returning to the business model canvas, we can find that enterprise resource utilisation capabilities and market insight accuracy reflect two essential sections of the business model, namely, infrastructure management and customer interface, respectively. At the same time, it also reveals that the problem express delivery companies face is the contradiction between enterprise capability and customer demand in the business model. Business models are not viable when the capabilities of the enterprise cannot meet customer needs.

3) What actions should express delivery companies take to get out of the current predicament, exit the field or make adjustments?

The fierce competition in the logistics industry makes it necessary for express delivery companies to implement diversification strategy, and logistics business ability provides necessary resources and capabilities for business diversification. In view of the problem of enterprise ability and market insight, enterprises first need to provide clear direction for business development through market positioning.

Also, due to the lack of channels and other capabilities, enterprises need to develop strategies to cultivate business capabilities. Based on the degree of association between new business and existing business, two methods can be adopted: externalisation (such as Tencent) or internalisation (such as JD.com Group). Externalisation refers to the separation of the

businesses that the enterprise is not good at or needs to invest in with high costs, and the operation of these businesses will be conducted by external professional E-commerce or Internet companies. Logistics enterprises become strategic and financial investors and only affect the operation of the divested company through equity relationship. On the other hand, internalisation mainly relies on internal resources to build a capability system, outsourcing business links that enterprises are not good at or establishing a cooperation mechanism to introduce external resources to reduce cost input. According to the highly relevant development of S.F. BEST's current business, it is recommended to adopt internalisation, and complete the optimisation of existing business by outsourcing operation links to Internet enterprises or establishing a strategic cooperative relationship with them.

In conclusion, it is still necessary and feasible for S.F. BEST to enter into multi-industry development through diversification strategy. However, as the retail industry, fresh food E-commerce has higher requirements on order response-ability and channel building ability of market participants. When S.F. BEST enters this industry, it needs to solve the contradiction between resource utilisation ability and customer positioning. On the one hand, it needs the unique advantages of S.F. Group logistics supply chain to build its channels in the retail market. On the other hand, it needs the ability and resources of external partners to enhance consumer insights and lay a solid foundation for business success through accurate market positioning.

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