

The Efficiency of Working Capital Management in
the Logistics Industry Using the O2O Model:
The Case of SF Group

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Abstract

This dissertation first summarizes and analyzes the operational environment of the logistics industry. Combined with the characteristics of the industry, the management of working capital and its present situation will be analyzed. Shunfeng Group Co., Ltd. (SF Group) is selected as the research object. Based on financial data from 2013 to 2016, the working capital management efficiency of the company is studied and analyzed in terms of the proportion of the working capital factor and the turnover efficiency of working capital. Then it analyzes the development of the working capital management level of this company in the Online-to-Offline (O2O) model, and based on that, it analyzes the main factors that affect the efficiency of the working capital management of SF Group using the O2O model, and finally puts forward some corresponding suggestions based on the case performance.

In the end, based on the case analysis, different suggestions are proposed on how to optimize the working capital management efficiency of the logistics industry using the O2O model: reasonable offline store investment; optimize warehouse construction; accelerate the construction of intelligent logistics and optimize the business structure; optimize the cold-chain logistics system; improve the service system level; formulate reasonable credit policies; select reasonable financing methods; obtain government support.

Key Words: O2O Model; Working Capital Management Efficiency; Logistics Industry

JEL: G31; M41

Sumário

Esta dissertação primeiro resume e analisa o ambiente operacional do setor de logística. Em conjunto com as características da indústria, a gestão fundo de maneiio e sua situação atual serão analisadas. A SF Group é selecionada como o objeto de pesquisa. Com base em dados financeiros de 2013 a 2016, a eficiência da gestão do fundo de maneiio da empresa é estudada e analisada em termos da proporção do fator fundo de maneiio e da eficiência da rotação do fundo de maneiio. Em seguida, analisa o desenvolvimento do nível de gestão de fundo de maneiio desta empresa no modelo O2O e, a partir disso, analisa os principais fatores que afetam a eficiência da gestão do fundo de maneiio da SF Group no modelo O2O. Finalmente apresenta algumas sugestões com base nas conclusões do caso.

No final, com base na análise de casos, diferentes sugestões são propostas sobre como otimizar a eficiência da gestão do capital de giro do setor de logística sob o modelo O2O: investimento razoável em lojas offline; otimizar a construção do armazém; acelerar a construção de logística inteligente e otimizar a estrutura de negócios; otimizar o sistema de logística da cadeia de frio; melhorar o nível do sistema de serviço; formular políticas de crédito razoáveis; selecionar métodos de financiamento razoáveis; obter apoio do governo.

Palavras-chave: Modelo O2O, Eficiência na Gestão do Fundo de Maneio, Indústria Logística

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1. INTRODUCTION

With the leap of people's quality of life and the increase in purchasing power, the rapid development of the Internet has enabled more and more residents to choose more convenient shopping way which is online shopping. In the meantime, the logistics industry is an important industry for China's economic development because for online transactions, for shopping platforms such as Tmall, Taobao and Jingdong, they all use third-party logistics to complete transactions. Online transactions cannot be completed without the logistics business. Therefore, logistics and commerce are very important to the development of e-commerce and market economy, which has also brought a powerful impetus to the development of the traditional logistics industry in China.

At the same time, the trend of global economic integration has become increasingly strong, international trade cooperation has become increasingly frequent, and the status of the logistics industry in the modern society has become increasingly important. Taking view of the development of the logistics industry, China's logistics industry has already entered the stage of self-improvement of high-speed development in the 21st Century.

The logistics industry has been written in the government work report for five years. This not only shows that the country attaches great importance to the development of the logistics industry, but also indicates the future growth of the logistics industry. The logistics industry has a rapid development momentum. Statistics (State Post Bureau of The People's Republic of China, 2015) show that in the global scope, China's logistics business volume ranked number one for the first time with a value of 1.4 billion pieces in 2014 and has occupied the top position in the world for four consecutive years (The State Council of The People's Republic of China, 2018). The total cost of social logistics in China has grown from 7.1 trillion yuan in 2010 to 12.1 trillion yuan in 2017 (<http://m.chinabgao.com/k/wuliu/36433.html>), which shows that China's logistics industry has a huge scale and a good environment for future development. China's logistics industry prosperity index (LPI) has maintained a value higher than 50% since 2014, indicating that China's logistics industry has maintained a steady and rapid trend in its development (China Logistics Information Center, 2017).

However, in the years of rapid development, many challenges such as technical and managerial disadvantages of the logistics industry in China, the saturation of the logistics market, the increase in operating costs, and the increase in working capital requirements have appeared. Compared with developed countries, China's logistics industry showed up late and is weaker in terms of technology and management. Although the logistics industry has maintained a relatively rapid growth trend in our country in recent years, it is still at a lower level of operation as a whole. The relationship between logistics costs and Gross Domestic Product (GDP) is an important indicator, which can be used to evaluate the efficiency of the overall operation of the logistics industry. China's index fell from 23.79% in 1991 to 14.60% in 2017 (China industrial information website, 2018). The logistics costs account for GDP in the developed countries maintains between 8% to 9%, which is nearly 6 percentage points lower than China's (China Federation of Logistics & Purchasing, 2017). Although the efficiency of China's logistics industry has improved significantly in recent years, compared with the logistics industry in developed countries, there is still a large gap.

As far as the current situation is concerned, the traditional business model and basic infrastructure of the logistics industry can no longer meet the needs of the rapid development of the modern logistics industry. In order to follow the rapid development of the entire market and respond to the environment of the era of electronic information, the logistics industry needs to grasp opportunities, develop rapidly, optimize the business models and strengthen the entire logistics system. The e-commerce model has emerged in new information age. Now some mature models: Business-to-Business (B2B), Business-to-Customer (B2C), and Customer-to-Customer (C2C) already exist in the market. The market of China's logistics industry has become full in recent years, and market competition has become intensely heated. Logistics companies are rushing to open up new areas for their own growth and expansion. An emerging business model Online-to-Offline (O2O) has developed rapidly in China in recent years. After the concept of O2O was established, it took less than two years to develop rapidly. Various types of O2O companies have started businesses to seize the opportunity in the market. More and more traditional enterprises began to pay attention to how to use the advantages of the Internet to develop O2O. However, in a short time, the understanding of the new business model is not deep enough, and there is still insufficient experience in the use and turnover of

funds. Logistics companies should solve the problem of how to manage technology and management in the emerging business model. So that they can achieve the maximum profit in the promotion with the efficiency management of working capital.

Many companies in the logistics industry have begun to build O2O platforms. There are few researches on the O2O model in the logistics industry at present. On May 18, 2014, the first batch of 518 customer service stores of the SF Group were opened for business (<http://tech.sina.com.cn/i/2014-06-04/08389416548.shtml>). SF Express became the first company in the logistics industry to officially complete the construction of the O2O platform through the establishment of offline stores. The establishment of the O2O platform is a brand-new attempt by the logistics enterprise for the business model. It completes the entry channel for the platform under the logistics industry and is an active attempt to realize the integration of logistics e-commerce, and provides invaluable experiences for O2O platforms to be set up later. Based on this, I would like to achieve the following objectives by studying the efficiency of the management of working capital in the logistics industry in O2O model:

(1) Based on the status quo of the flourishing development of O2O model in China and with collecting a large number of domestic and foreign research literature, this paper will study the combination of relevant theories of O2O model and working capital management efficiency, the current situation of O2O logistics company working capital management will be studied; the mechanism of the performance of the operating capital management efficiency of logistics companies using the O2O model; theoretically summing up the important factors that cause changes in the operating efficiency of corporate operating funds in this model.

(2) Taking the case of SF Group using the O2O model as the research object, this paper analyzes the status of the operating capital management efficiency of logistics companies using O2O model, discusses relevant factors that cause changes in management efficiency, and expected to help logistics companies circumvent risk while planning to build O2O platforms in the future.

(3) To propose constructive suggestions for optimizing the management efficiency of the logistics industry's working capital and provide reference for logistics companies planning to build an integrated logistics O2O model platform.

This thesis may lead to new perspectives on the use of funds and turnover through the research of working capital management efficiency of the logistics industry in O2O model. The characteristics of emerging business models and working capital management efficiency would be combined to identify the pros and cons of the problem, and effective advice and guidance for capital operations of the logistics industry in O2O model are expected to bring up.

This thesis contributes to the literature in a number of ways. Firstly, enriches the literature on the efficiency of working capital management of China's logistics companies in O2O model. At present, most logistics companies are in the process of the traditional model of e-commerce development or in the e-commerce model B2B or B2C. There are few attempts for the emerging e-commerce model O2O. There are relatively few logistics companies that have established O2O platforms, and for those who have, they have all developed just in recent years. This paper hopes to enrich the literature on the operating efficiency of O2O logistics companies in the O2O model through the case study of the SF Group using the O2O model.

Secondly, this thesis comprehensively analysis the factors that influence operating capital management efficiency of logistics companies in O2O model. In China, because the O2O model still belongs to a relatively new research field, domestic scholars have relatively few research on the O2O model and the operational performance. There are few studies on the management of working capital in the logistics industry. This paper analyzes in depth the factors affecting the efficiency of the operating funds of the logistics companies in O2O model from various aspects, and sets up the basic theory frame of the working capital management efficiency of the logistics companies using the O2O model.

Thirdly, this paper provides suggestions on how to improve the efficiency of working capital management of China's logistics companies using O2O model. This work attempts to conduct a deep analysis of the efficiency of the SF Group's working capital management and the factors affecting the efficiency, explore the factors of the change in the efficiency and is expected to provide a reference for future study, and is expected to help the O2O model companies in logistics industry avoid risks, reduce losses, and optimize operating performance.

2. LITERATURE REVIEW

This chapter summarizes the domestic and foreign scholars' theory and literature about O2O model and working capital management.

2.1 Literature Review of O2O Model

The concept of O2O was first proposed by Alex Rampel based on the GROPON company case in August 2010. O2O means Online to Offline, and then the concept began to cause intense discussion and research in China. Compared with other business models, this model came out later and has shorter history, and there are relatively few research literatures related to it.

2.1.1 Study on operation performance of O2O model

At present, the mature O2O model has demonstrated its remarkable attraction. Dou (2013) proposed that O2O model in early times, online behavior was merely the transmission of information, and cash and item transactions were completed offline. With the emergence of the group purchase model, cash payment was transferred to online, and business and service activities were conducted offline, which indicates that China's O2O model has entered a new phase and slowly developed to the frontier of the industry.

Luo (2012) proposed that the QR code payment promotes the online and offline integration in the O2O model. The taxi software uses the O2O model to connect consumers and services. With the rapid spread and development of mobile terminals and mobile networks, the powerful performance of the O2O model has led to a rapid increase in the informatization of such services.

2.1.2 Research on operation characteristics and value of O2O model

Rampel (2010) thinks that O2O model is a combination of payment model and offline store customer flow. Lu and Li (2015) believe that the characteristics of the O2O

model include the need to own physical stores, publish information online, and finally support online payments. Customers pay online and obtain physical goods or services offline. The O2O model combines offline business opportunities with the Internet, allowing the Internet to act as a front-line supporter of offline transactions. Sun and Meng (2013) believes that although the O2O model has a strong publicity effect, but the O2O model is the same as the traditional e-commerce model: its core function is online payment, the capital flow is the basis of business activities and QR payment is also for convenient payment services.

Sun and Meng (2013) hold the opinion that supported by capital, the market scale of O2O model expanded rapidly, bringing stimulus and hope to the market. Because it requires online and offline development in parallel, the demand for capital integration is high, and the O2O model is not easy to establish. The fading after the boom in group purchase is because of its offline services losing consumers' favor. To do O2O well, one needs to use the Internet to realize the offline experience of user resources. In its practice, offline service capability is its most important decisive factor, and it is also a necessary condition for promoting the O2O model. As a result, traditional retailers have developed rapidly due to their inherent competitive advantages in this area.

2.1.3 Research on the insufficient development of O2O model

Due to its own characteristics, the O2O model has exposed a series of problems in its development.

(1) Payment environment. Due to the inevitability of network virus transmission and the uncertainty of network information security, in the online payment process adopted by the O2O business model, there will inevitably be a situation in which the customer's property suffers losses. Guo (2016) once pointed out that about half of Internet users are skeptical about the security of the current Internet environment.

(2) Consumption habits. Zhao (2014) pointed out that many users are still skeptical about the combination of online payment and offline consumption. For service-based group purchases, surveys show that more than half of the customers are skeptical. Therefore, the consumption habits of Internet users in China still need to be cultivated.

(3) The quality of the e-commerce platform is uneven. As the O2O market is still in its development stage, the threshold for online businesses is low, and some e-commerce platforms have not strictly supervised them, resulting in the loss of consumer interests. The negative word-of-mouth effect is harder to control in the O2O business model than in the traditional business model.

2.2 Working Capital Management

From the 1950s to the 1980s, scholars have begun to find ways to optimize and stimulate working capital in the industry. From the 1990s to the beginning of the 21st century, research on the management of working capital has begun to converge on a global scale. By 1993, China began to implement an internationally-accepted accounting system and introduced the concept of working capital from abroad. And domestic scholars began to study the working capital management from the 1990s.

2.2.1 Research on working capital management

In earlier period, academics' analysis of the efficiency of working capital management was generally based on a single factor. In general, it was analyzed by using several inspection items such as accounts receivable, inventory, accounts payable, etc. However, these indicators can only explain several main internal factors such as current liabilities, current assets, etc. Sagon (1955) pointed out that the allocation of working capital structure is the main influencing factor of corporate performance and should be given enough attention. Weaver and Lyndall (1959) pointed out that the basis for a reasonable estimate of working capital is accounts receivable, inventory, accounts payable, and cash. The management of working capital should be the management of these factors.

Mao (1995) believes that the interrelation between current assets and current liabilities, the relationship between the preparation of liquid assets and the corresponding funds should be considered. How to formulate a reasonable working capital allocation through this relationship should be explored from the overall perspective. The research of Wang and Ma (2005) brought a new era to the research on domestic operational asset management. They believe that the management of cross-regional sales companies for working capital is not only related to current liabilities and liquid assets, but also based

on processes. From the source management of suppliers to the production management of intermediate links, and then to the improvement of working capital management performance, which is the whole process of working capital management.

2.2.2 Relationship between working capital management efficiency and enterprise performance

The relationship between working capital management efficiency and business performance is mostly based on empirical analysis. Since the 1980s, Kamath (1989) have conducted in-depth research on the relationship between working capital management efficiency and business performance. Sur and Chakraborty (2011), Baños-Caballero, García-Teruel and Martínez-Solano (2011) verified the correlation between working capital management efficiency and business performance from different perspectives and based on data of companies in different countries. Pang and Song (2009) analyzed the correlation between working capital management efficiency and corporate performance based on the data of public companies listed in Shanghai and Shenzhen from 2000 to 2006, and concluded that shortening the cash cycle of enterprises can improve the company's profitability. Guo (2014) pointed out a significant positive correlation between working capital management efficiency and corporate performance through empirical analysis of gem listed companies. Based on the empirical analysis of China's listed real estate companies from the perspective of channels, Run (2017) found that working capital management efficiency and reasonable allocation of working capital have a positive correlation with the realization of enterprise value increment. Sarveswara and Madhava (2017) took the dairy industry in Andhra Pradesh as an example for empirical research, analyzing the efficiency of various ratio of working capital: current ratio, quick ratio, inventory to current assets ratio, inventory turnover and accounts receivable turnover and profit, the relationship between concluded that all of the working capital ratio was positively or negatively correlated with the company's profit.

2.2.3 Evaluation index of working capital management efficiency

For the investigation of working capital management capabilities, the cash flow period indicator was first proposed by Gitman (1974). It means the number of days from the initial purchase of cash information for productive materials to the final sales of products; Hager (1976) deepened the meaning of this indicator, pointing out that it

includes current assets and current liabilities, and evaluated several important indicators such as inventory, accounts receivable and accounts payable.

The analysis of the efficiency of working capital management in early times is to examine the indicators of the turnover efficiency of its current assets. Commonly used indicators are: inventory turnover rate (or turnover period), receivables turnover rate (or turnover period). However, it does not consider the impact of current liabilities on working capital. In response to this defect, Richard and Laughlin (1980) proposed that the efficiency of working capital management can be reflected by the cash cycle. The value of the cash flow period is expressed as the value of the receivables turnover period plus the inventory turnover period and minus the accounts payable turnover period. This can include the effect of current liabilities on working capital to reflect the overall status of the company's working capital management. Some domestic scholars treat this cash cycle as the working capital turnover period.

Gentry, Vaidyanathan and Lee (1990) explored the concept of a weighted cash turnover period based on previous research results. A new cash turnover model was created based on the original cash turnover period. Added time and weight considerations and analyzed the cash flow in each phase. However, there are few ways for external investors to obtain this data, so the use of such indicators is not universal.

US REL Consulting and CFO Magazine conducted research on US companies' working capital and used the average of working capital turnover and working capital realization efficiency to rank the largest 1,000 companies. The working capital turnover period is represented by the turnover period of receivables plus the inventory turnover period and minus the turnover period of accounts payable. The realization efficiency is represented by the ratio of operating cash flow to operating income. Since 2003, the survey has used working capital turnover as the only evaluation indicator to explore the ranking of corporate working capital management performance (CFO Magazine for Senior, 2003). Wang, Liu and Gao(2007) published the "Chinese Listed Companies' Working Capital Management: 1997-2006" and issued the "2006 Ranking of China's Listed Companies Working Capital Management Performance", which is based on working capital turnover as a reference indicator. In the subsequent study, Wang, Liu,

Wang, Zhang and Yang (2009) also used the sub-channel working capital turnover period to examine the efficiency of the listed company's working capital management.

This paper uses the elements and the overall working capital turnover period as indicators to evaluate the efficiency of corporate working capital management. Through the calculation and analysis of the turnover period and the total working capital turnover period of each relevant element of SF Group's period from 2013 to 2016, this paper explored the efficiency of its working capital management.

2.2.4 Factors influencing working capital management efficiency

As for the foreign studies on the influencing factors affecting the efficiency of working capital management, Nunn (1981) conducted an empirical analysis of the main strategic influencing factors of the five major types of working capital, and put forward the concept of permanent working capital combined with strategy for the first time. Harris (2005) pointed out that the influencing factors of the working capital of enterprises in practice are very complicated, and the driving forces of the internal organization's working capital should be considered together with the external business and market environment.

Chinese scholar Yu (2007) used empirical research on the influencing factors of working capital of listed companies and found out that the factors that have a significant impact on working capital of companies with relatively good financial status are mainly debt ratio, return on equity, turnover days of accounts receivable and inventory turnover. Hu (2014) obtained a questionnaire survey and theoretical analysis and found out that the company fulfilled its social responsibilities and set the target to maximize the value of stakeholders, which can significantly improve the company's working capital management efficiency. Zhao (2015) took A-share listed companies as research samples and empirically analyzed and found out that the supplier credit dependence of purchase channels, credit management of accounts payable, production channel capital occupation level, labor costs of production channels, and marketing channels, customer credit dependency and accounts receivable credit management are all factors that affect the efficiency of working capital management.

2.2.5 Study on improving working capital management efficiency

For the question of how to improve the efficiency of working capital management, Wadhwa, Kanda, Bhoon and Jagannath (2006) believe that the horizontal cooperation in the supply chain can reduce the cost of inventory holding and shorten the order period, so that both manufacturers and retailers can obtain the benefits of saving working capital cost. Katz (2010) pointed out in a survey report on the management of corporate working capital in the Asia-Pacific region that service outsourcing providers, technology providers, financial institutions, and other corporate partners are very helpful in improving the management of corporate working capital. Ji (2011) proposed the use of information methods to implement financial centralized management, effectively strengthen budget management, strengthen inventory management, and formulate reasonable and effective credit policies. Chen (2013) proposed to speed up the collection of accounts receivable, extend the period of accounts payable, and increase the inventory turnover rate when analyzing the operational fund management efficiency of Automatic Teller Machine (ATM) maintenance companies. Cheng (2017) conducted an empirical analysis of the data by 2010-2015 of 31 agricultural listed companies in Shanghai and Shenzhen, and proposed to continue to promote supply chain financing, build supply, identify suitable suppliers, take advantages of supply-side structural reform policies, strengthen inventory management and communication as well as cooperation with related parties, and strictly control the financing information sharing platform for major shareholder capital-occupancy phenomenon.

2.2.6 Current situation of working capital management in logistics industry

As for the analysis of the current situation of working capital management efficiency, Guo (2014) conducted an empirical analysis using the data of China's Growth Enterprises Market (GEM) listed companies from 2010 to 2012 and pointed out that the operating capital management efficiency of China's GEM listed companies is relatively low, and there is a more or less increase in the cash flow period and the turnover period of its components. In 2016, in the "Investigation on the Management of Chinese Listed Companies' Working Capital: 2015" published by Wang and Sun, the authors studied 2,564 listed companies in 2015 A shares and found out that (1) The amount of working capital in most of the industry is on the rise. And In general, its capital structure is more

biased towards investment modules. (2) The management efficiency of the working capital operating module has been declining. And the management of the production funds of the sub-channel operating funds is worth strengthening. (3) For an over view of Funds return, the rate of return is declining (4) The proportion of short-term financial liabilities is getting lower, but there are still high financial risks. (5) As for the management of working capital, state-owned holding companies have highest efficiency, but the for the total rate of return of funds, the state-owned holding companies have the lowest rate. (6) The return of funds from financial and investment activities is positively related to the degree of integration of production and finance, and there is no significant correlation with the level of return of funds from operating activities.

As for the study of the management of working capital in the logistics industry in China, the development of working capital management and logistics industry has a short development time and there are relatively few relevant literature reviews. Li (2014) analyzed theoretically the working capital management of small and medium-sized logistics companies and pointed out that their working capital is insufficient, financing is difficult, and management is neglected, which result in problems of low capital utilization rate, lack of cash flow management, and unfavorable working capital turnover. In the aspect of working capital management, it is proposed to enhance management awareness, improve risk management, appropriately expand, rationally plan funds, maintain a reasonable current liquidity to debt ratio, increase profitability, strengthen information management and meets the dynamic proposals for working capital management.

Zhou (2015) started from the perspective of the value chain theory and analyzed and studied the working capital management of the modern logistics industry, and proposed a method for effective management of working capital from the perspective of the value chain of modern logistics: improve the value chain and the corresponding processes, and strengthen the management of modern information technology. Zhang (2017) analyzed the fundraising policies and investment policies in the working capital of Yuantong Logistics Co., Ltd., analyzed and compared the data of the company from 2010 to 2015, and discussed the working capital turnover period based on the channel perspective and the working capital structure of marketing channel. The author pointed out problems of in the company's working capital management : the lack of awareness of working capital

management, slow capital turnover, improper fund allocation, and over-reliance on banks for fundraising problems, etc.

2.3 Enterprise Working Capital Management using O2O Model

In perspective of problems, Song and Xu (2017) analyzed the operational cash flow of H companies and the working capital under the three channels of procurement, production, and marketing, and proposed that the concept of the company's working capital management and the characteristics of method cannot adapt to the O2O model during the O2O transformation process. The problems with its working capital management are the low inventory turnover efficiency and the long working capital turnover period of the marketing channel. Du (2017) found out that through the research on working capital management of Gome's transition to O2O business model, there were problems with aggressive fundraising strategies, fatigue of working capital management efficiency, and high risk of fund use by suppliers.

In perspective of suggestions, Hu and Wang (2015) took medicine distribution companies as research objects, they concluded that in the process of transforming O2O models, a robust working capital management strategy can avoid financial risks and is a guarantee for successful transformation. At the same time, the management and turnover of deposit funds, accounts receivable and inventory should be optimized. Song and Xu (2017) have proposed that for the management of working capital of manufacturing companies in O2O model, the company should product innovation, of optimize online sales platforms, and enhance self-support logistics systems. Xu, Li and Jiang (2016) proposed suggestions for enhancing the timeliness of collections and optimizing payment management for e-commerce models (B2B, B2C, C2C, O2O). Du (2017) studied the management of working capital of Gome in the transitional O2O model, and give suggestions including diversification of financing channels, reasonable fund-raising ratio, intensification of online business, improvement of after-sales service and logistics systems, and strengthening of supply chain management.

3.THEORETICAL FRAMEWORK

This chapter is the theoretical analysis framework. This part summarizes the concept, classification and characteristics of the O2O model and working capital management, and then summarizes the performance of the working capital management efficiency of logistics industry in O2O model, and analyzes its mechanism. Finally, it analysis and discuss about the impact factors of the working capital management efficiency of the logistics industry using the O2O model. Factors can be classified into general influence factors and special influence factor.

3.1 The Basic Theory

3.1.1 Concept, classification and characteristics of O2O business model

(1) Concept of O2O business model

O2O model is Online to Offline model. The narrow definition of O2O model refers to an e-commerce model that combines online transactions and offline services. The broad definition of O2O model refers to the O2O model that can be called as long as both online and offline are in the entire industry chain. The main content of the O2O business model is to get online consumers attracted to the physical store (Rampel, 2010). Regarding the O2O model concept, the first view is that the O2O model is mainly for importing online customer flow to offline, Kim (2012) thinks that the O2O model refers to the business through the network to provide product sales information, services, push the offline store consumption to online. Consumers need to pay the corresponding fees online, and then use various forms of credentials to offline merchants to extract goods or enjoy services. The second view is that the O2O model is mainly to attract online customer flow to offline. Dou (2013) believes that the O2O e-commerce model allows the front-line role of offline transactions to be played by the Internet. Merchants attract customers to offline services through the Internet, consumers can use online to conduct information screening, which is an organic combination of online and offline channels. The third view is that the O2O model is operated both online and offline in parallel. Korean scholar Chung, Kim and Bae (2017) proposed that the development of O2O

service industry in China is more advanced and rapid than in Korea. They believe that the O2O model is to provide consumers with offline services and online assistance services, and can be extended to a wider range. The O2O model is understood as a model of integration of online shopping and first-line transactions, and the premise of O2O operation is open market.

This article adopts the third viewpoint. The O2O model is not only introducing online consumer payment for offline purchasing, but also attracting customers to enjoy goods and services offline. The online and offline integration is the core point of the O2O model.

(2) Classification of O2O business model

Regarding the classification of the O2O model, Yue and Xu (2015) divided the O2O model into a physical model focusing on shopping that mainly contains physical purchase and an experience-based model that operates based on the experience principle of user experience. Jin and Liu (2016) published *O2O Business Models and Trends of Development*, which classify the O2O business model into two types according to different platforms. The first is the profit channel through the difference between resources and sales. The second type of platform is the media platform that provides information resources to aggregate mobile and rely on advertising for revenue. Also, the O2O model can be divided into three categories according to the nature of the online and offline sales trends. The first is online service for offline drainage. Since 2000, websites like Meituan and Demi, which are popular in the past, have provided online information, product evaluations, group purchase discounts, and other services for customers to attract and develop consumer groups for offline businesses, by which they can earn commission. The second is online and offline parallel sales. Many traditional enterprises have gradually developed into this model, and there are already a large number of stores offline. Online Taobao, Tmall, and Jingdong also have sales platforms. Sometimes inconsistent online and offline prices cause disputes, but they are all in this together to promote further consumption. The third is offline consumption for online diversion. That is to take full advantage of the offline store's experience, as well as online shopping, payment, logistics, and other service advantages to achieve the "offline experience + online sales" model.

Offline stores are designed to provide customers with real-life experiences on products and services, and the actual purchase is done online.

(3) Characteristics of O2O business model

Firstly, users of the O2O model are able to screen and book businesses through comprehensive and quick information online, and can obtain more favorable prices than offline stores.

Secondly, the O2O model merchants have good publicity channels and opportunities; the results of the promotion can be clearly understood, and the customer's data can be traced through the ins and outs of each transaction, which can help maintain and stabilize the customer base of regular consumption; communicate well with customers and a more comprehensive understanding of the customer's consumer psychology; the online booking form saves a large amount of costs for the business; for new stores, the new consumer demand is more quickly promoted; the need for location of offline stores and spending would be reduced.

Furthermore, the O2O platform is closely linked with customers' lives, serving customers in various aspects such as travel, food and accommodation, which increases customer stickiness; it is helpful for the promotion of businesses, and attracts a large number of merchants with offline living services; its cash flow is several times as much as its of B2B, B2C, and C2C model; it also brings about advertising revenue and the emergence of more profitable models after the expansion of scale.

3.1.2 Concept, classification and characteristics of working capital

(1) Concept of working capital

Working capital is the general term for corporate liquid assets and current liabilities. The difference between current assets and current liabilities is net working capital. It has a broad and narrow sense. The broad working capital, also known as the total working capital, refers to the capital that an enterprise puts on current assets, which mainly includes accounts receivable, inventory, other receivables, accounts payable, bills payable, advance receipts, and accrued expenses, other accounts payable, etc. Narrowly

defined working capital refers to the difference between current assets and current liabilities of a company at a certain point in time.

This paper adopts the broad concept of working capital. When evaluating the efficiency of working capital management, it will examine the turnover period of accounts receivable, inventory, accounts payable and other subjects for analysis.

(2) Classification of working capital

Working capital can be divided into current assets and current liabilities according to the constituent elements. It can be further divided into accounts receivable, inventory, other receivables, accounts payable, bills payable, advance receipts, accrued expenses, and other payables. According to the channel, it can be classified into working capital for procurement channels, production channels, marketing channels and non-operating production activities.

(3) Characteristics of working capital

Firstly, working capital turnover time is short. This is determined by its own concept. It is composed of current assets and current liabilities, indicating that the short-term funding method can meet the needs of working capital.

Secondly, non-cash forms of working capital, such as inventory, accounts receivable, and short-term marketable securities, are relatively easy to liquidate, which is important for companies to meet temporary capital requirements.

In addition, the amount of working capital is volatile. Current assets or current liabilities are vulnerable to internal and external conditions, and the fluctuations of amount are often large.

Finally, the sources of working capital are diverse. Long-term funding and short-term financing can all address the needs of working capital.

3.1.3 Concept definition of working capital management efficiency

With the same work content, the competitive social environment needs to use certain methods to assess the outcome. The difference in working time and the amount of input

will inevitably lead to different results. There is no direct comparison between the results, and the result does not have any significance. This requires a relative measure. The definition of efficiency is the ratio of useful power to drive power (Xu, 1994). In a popular sense, it is the ratio of output to input. From this definition, improving efficiency can generally be improved from two aspects. Assuming constant output, reducing input can increase efficiency. Assuming constant input, improving output can increase efficiency. Working capital management efficiency refers to the ability of enterprises to use short-term funds to create value for the company during the operation of the company. Companies often use the efficiency of working capital management as an important indicator to measure their operational capabilities.

3.1.4 Operation activities of logistics industry

China's logistics industry started relatively late. With the rapid development of the national economy, China's logistics industry has maintained a rapid growth rate. The business activities of the logistics industry are mainly composed of seven components: transport, storage, packaging, transport handling, distribution processing, distribution and related logistics information links. The specific content includes the following aspects: user services, demand forecasting, order processing, distribution, inventory control, transportation, warehouse management, layout and location of factories and warehouses, handling, procurement, packaging, and intelligence information.

3.2 O2O Model Analysis of Logistics Industry

3.2.1 PEST analysis of logistics operation environment in O2O model

PEST is a macro environment analysis model for enterprises. P is for Politics, E is for Economy, S is for Society, and T is for Technology.

(1) Politics

The logistics industry has been included in the government work report for five years, which is enough to show that the country attaches great importance to the logistics industry. On September 12th, 2014, the China State Council made the “Mid-term and Long-term Planning for the Development of the Logistics Industry (2014-2020)”, which

urges the construction of modern logistics and the promotion of the level of logistics socialization, informatization, standardization, and greenization. In the same year, the Ministry of Commerce issued the “Opinions on promoting the development of commercial logistics” to encourage support for the scale and modernization of trade and logistics, and to develop e-commerce logistics. On December 12th of the same year, the National Development and Reform Commission issued the “Three-year Action Plan for Promotion of Logistics Industry Development (2014-2016)”, emphasizing the simple decentralization of power, implementing the tax support policy, and increasing the management of the compliance of the highway toll system. On May 29th, 2015, the State Council Information Office held a briefing session of the State Council policy and said the Ministry of Commerce recently have paid lots of attention to the construction of physical stores (http://www.gov.cn/xinwen/2015-05/29/content_2870553.htm). The Ministry of Commerce specifically encourages cooperation between traditional stores and online store companies and e-commerce to realize the O2O transaction method. On September 29th of the same year, the General Office of the State Council issued the “Opinions on Promoting the Online and Offline Interaction to Accelerate the Transformation and Upgrading of Commercial and Commercial Circulation Innovation and Development” concerning the O2O model, and proposed support for encouraging online and offline interactive innovation and stimulating the vitality and soundness of entity commercial development, the modernization of the market system and the improvement of policy measures, and the introduction of related policy support. In November of the same year, the State Administration for Industry & Commerce issued the “Opinions on Strengthening Supervision of the Internet Market”, referring to the development of social business models such as social e-commerce, cross-border e-commerce, group purchase, and O2O, as well as the development of new types of business. In February 2018, the State Council Information Office held a routine briefing on the “Provisional Regulations on Logistics” to strengthen the planning and standardization of logistics (http://www.gov.cn/xinwen/2018-02/27/content_5269257.htm). This series of policies has laid a good foundation for the stable and orderly development of the logistics industry using the O2O model. At the same time, it also provides a favorable environment for the logistics industry using the O2O model to enhance self-competitiveness and establish a foothold in the international community, opening up a green channel for its development.

It cannot be overlooked that at the 2009 Global Climate Conference in Copenhagen, China promised to reduce carbon emissions per unit of GDP by 40%-50% by 2020 (<http://finance.ifeng.com/news/20091126/1512138.shtml>). In recent years, China's logistics industry has developed rapidly, and extensive growth has caused the logistics industry to become one of the industries with high carbon emissions in China. The state has issued a series of policies to control carbon emissions, which has also brought resistance to the development of the logistics industry using the O2O model. This requires companies to find a balance between low-carbon economy and their own development.

(2) Economy

First of all, in a complex internal and diplomatic environment, China's economy has maintained a steady and rapid growth of medium and high-speed. From 2003 to 2011, the growth rate of China's GDP was maintained at around 10%. From 2012 to the present, China's GDP has also been steadily rising. The growth rate is maintained at 7%. By 2017, China's GDP has reached 82.71 trillion yuan (National Bureau of Statistics of China Database, 2018). Even during the financial crisis, China is actively stimulating domestic demand and promoting consumption. In a relatively sluggish international environment, China has consistently maintained a rapid economic growth. The living standards of the residents have been continuously rising, and the level of consumption and purchasing power have been increasing day by day. With the rise of e-commerce, the gradual transformation of residents' consumption patterns, it turned out to be the online shopping boom, which creates new ways of consumption, brings more entrepreneurial jobs, provides powerful Internet background and consumer group support for the rapid development of the O2O model, brings opportunities for the logistics industry to develop rapidly. This provides a good soil for the rapid development and rapid expansion of logistics companies using the O2O model.

Secondly, for the increasingly competitive logistics industry, the increasingly saturated consumer market is also inspiring logistics companies to find new profit points, which has spawned the rapid development of the O2O model in the logistics industry.

However, with the acceleration of the pace of opening-up, under the relevant provisions of the World Trade Organization, the rules for the entry of China's logistics

industry have been repeatedly relaxed, which provides opportunities for foreign logistics giants with strong advantages and competitiveness to enter the Chinese market. The logistics industry that establishes the O2O platform must not only take into account both the intense competition within the industry and the pressures and risks brought about by the large amount of capital investment in the early stage of the O2O model, but also the strong competitors abroad. It also brings a strong challenge to logistics companies using the O2O model in China.

(3) Society

China's population base has always been at the top of the world. At the end of 2017, the total population of mainland China reached 1.39 billion, an increase of 7.37 million compared to the end of 2016 (National Bureau of Statistics of China Database, 2018). Coupled with the shift in consumer spending patterns, spending on online shopping has a huge shopping group and a huge potential customer base. Not only that, the development of society has improved the level of residents' education, the concept of residents' consumption has begun to change, and they are more willing to pay for convenient logistics services. The personalized experience of consumption using the O2O model has become more and more important, and consumer groups have become increasing.

As China's ageing trend increases, China's demographic dividend is disappearing and labor costs are rising year by year, there is a more urgent need for the development of O2O models to ease the pressure on labor costs. At the same time, residents' awareness of rights protection has been gradually improved. Rights protection using the O2O model has not been convenient, feedback has not been able to respond quickly, and complaints against logistics have also increased. Moreover, the residents' consumption levels and product service tendencies in different regions are also different, which makes it more difficult to dispatch offline, which also brings more challenges to the development of the logistics industry using the O2O model.

(4) Technology

With the rapid development of science and technology, high-tech such as global positioning system, bar code scanning, voice input, and drones has begun to be widely

used in the logistics industry, which not only brings great convenience of information and communication to businesses and consumers, but with the increasing consumption of the Internet, it also provides effective support for the high timeliness and optimizes management of logistics transportation. However, O2O business model emphasizes the combination of online and offline, which pays attention to the customer's consumer experience, and the negative word-of-mouth effect increases control difficulty after fermentation through the Internet. Therefore, there is a higher requirement for enterprises to have considerable strategic integration capabilities. Secondly, compared with the advanced science and technology of the International logistics industry, China's science and technology used in the logistics industry is still relatively backward. In the maintenance and establishment of information systems, and in the process of technological renewal and innovation, China's logistics companies' investment in funds and personnel has not been able to comply with international standards. This is where China's logistics industry needs improving.

Table 1. PEST analysis of logistics operation environment in O2O model

<p>P</p> <ul style="list-style-type: none"> ● Multiple policies to support the logistics industry ● Policies encourage the O2O platform ● The government strengthens network supervision ● Controlling carbon emissions policy brings development resistance 	<p>E</p> <ul style="list-style-type: none"> ● The national economy has been steadily improving and consumers' purchasing power has increased ● Changes in consumption patterns supports the development of O2O ● Intensified competition among industries, promotes the transition of O2O model ● The rules for access to the logistics industry are relaxed, and foreign competitors are influx
<p>S</p> <ul style="list-style-type: none"> ● Consumer groups based on large population ● Consumer attitudes changed, personalized and convenient enjoyment promote development of logistics using O2O ● Reduced demographic dividend, rising labor costs, and urgent development of the O2O model ● Increased awareness of consumer rights protection, O2O opinion feedback system is challenged ● Different regional consumption trends increase the difficulty of warehousing and distribution of O2O logistics 	<p>T</p> <ul style="list-style-type: none"> ● The rapid development of the Internet and the growth of online consumer groups ● The use of high technology promotes the development of logistics companies in O2O model ● Smart logistics and rights protection platform technology needs to be improved ● Compared with international leading technologies, the gap is large

3.2.2 Basic elements of logistics operation in O2O model

(1) Online Platform

The online platform is a core component of the O2O model, and the benefits of the platform are also crucial. The rapid development of the Internet provides the basic environment for the construction and operation of the platform. Platform construction and maintenance, transaction data processing, logistics information collection and dissemination, revenue and expenditure tools, and marketing and promotion technologies are the basic guarantees for online platform operations. The SF Group's "SF BEST" platform and Yuantong Express's "Mom Shop" platform were born using the O2O model of the logistics industry.

(2) Offline Entity Stores

The offline physical stores and online platforms assist each other. The O2O model of the logistics industry has just started to develop. In the early stages of development, physical stores need investments in the areas of reasonable planning, establishment of stores, recruitment of staff, and standardized management, such as the Shenxian Subway line.

(3) Logistics Transportation

The important support of logistics e-commerce integration using the O2O model is the logistics operation of the enterprise itself. Logistics companies are not only responsible for self-operated product transportation, but also need to meet the logistics needs of other e-commerce and non-e-commerce merchants.

(4) Cooperative Goods Supply Guarantee

The goods sold by physical stores in the offline logistics industry and the physical resources used must have corresponding suppliers. After signing cooperation agreements with suppliers, logistics companies rely on long-term good relations of cooperation with suppliers in terms of the turnover of accounts payable and the guarantee of goods.

(5) Consumers

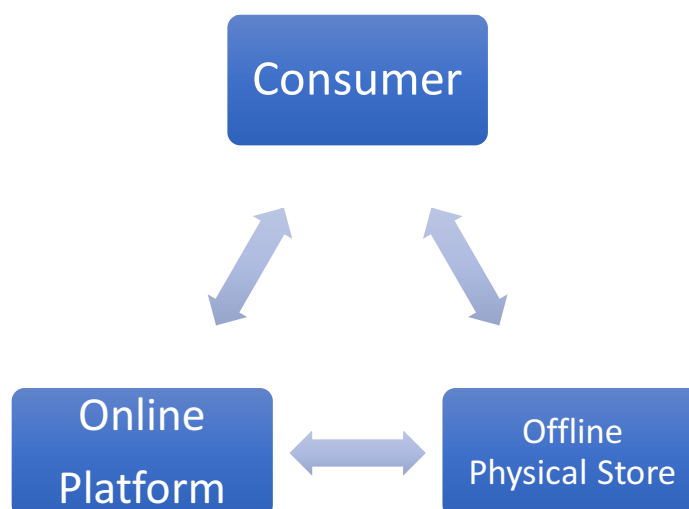
Consumers in the logistics industry in O2O model are an important guarantee for the operational circulation of the entire model. According to consumer demand can be divided into: e-commerce, non-e-commerce business, self-owned goods transport. According to the difference between products and services purchased by consumers, it can be divided into: sales of goods, express delivery services, and other convenience services. Consumer preference is also a guide for logistics companies to provide goods service provision, product design, marketing and publicity.

3.2.3 The process of logistics operation in O2O model

In O2O model, the operation of the logistics industry is mainly linked to three internal and external links. E-commerce logistics integration of online and offline platforms, consumer experience in physical stores and publicity and after-sales service support provided by physical stores, based on the collection and processing of order transactions and logistics information, the online platform dispatches goods and services, and consumers evaluate and feedback online platforms.

The logistics industry operation process in the O2O model is shown in the figure below:

Figure 1. The logistics industry operation process in the O2O model



3.3 Performance Analysis of Working Capital Management Efficiency of Logistics Industry using O2O Model

3.3.1 Current situation of working capital management in logistics industry

Working capital management of logistics is the management of current assets and current liabilities. According to the characteristics of the logistics industry, the management of logistics working capital is to deal with business activities of the monetary funds, accounts receivable, notes receivable, inventory, accounts payable, employee pay payable and the management of subjects as monetary funds in financing activities and investment activities.

The development of the logistics industry is short, and the traditional logistics industry is difficult to adapt to the rapid changes in science and technology and economy. Using the emerging business model, logistics enterprises still lack the experience of efficient management of working capital, and a series of problems have emerged. Above all, the problem that exists in logistics industry commonly is financing difficulty. In recent years, the logistics industry has been booming, and all logistics enterprises are trying to expand their scale and seize the market. The operation cannot only be maintained by relying on their own capital. The demand for capital is long-term and huge. Secondly, working capital management efficiency is low, the logistics industry has insufficient experience in capital management and utilization, and capital turnover is slow, which make it difficult to achieve reasonable and effective working capital utilization.

3.3.2 Changes in working capital elements

(1) Monetary fund

First of all, large investment in the initial stage of O2O model establishment can easily lead to relative reduction of monetary fund, which will further affect the short-term solvency of the enterprise. In the later stage, the scale effect will lead to cost saving and performance improvement, and then the monetary fund will increase significantly.

Secondly, the online payment mode caused by the O2O model transformation of the enterprise puts forward new requirements for its monetary fund management. Its

online payment platform may be self-owned or paid use, and the payment tool may be designed and developed by itself (such as Alibaba's Alipay, Suning yunshang's e-pay) or use of third-party payment tools. The online payment platform can speed up the circulation efficiency of monetary funds. Meanwhile, the online payment function can present the process of transaction capital circulation more clearly, simplify the financial process and save the cost of working capital.

(2) Inventory, accounts payable and accounts receivable

O2O model provide online order for brands or distributors, then brands or distributors arrange production or procurement, so as to make the customer demand uncertainty reduced sharply. The quantity of inventory is directly proportional to the uncertainty of customer demand, therefore, the transformation of enterprise O2O model will cause the decline in the sales of inventory scale, and the reduced inventory size will improve the quality of current assets of the enterprise. On the other hand, however, due to the particularity of the logistics industry, if the goods (non-inventory) of its freight and warehousing parts can achieve scale effect in the O2O model, the cost of storing a single cargo will decrease.

And accounts receivable and accounts payable largely depend on the credit strategy adopted by the company. A relatively strict credit policy for accounts receivable and a relatively extended credit strategy for accounts payable can have a beneficial impact on working capital management efficiency. On the contrary, the working capital management efficiency will be adversely affected. In addition, online payment in O2O model can speed up the delivery of accounts receivable and accounts payable, and improve working capital turnover efficiency.

3.3.3 Ratio of current assets to current liabilities

Using the O2O model, logistics enterprises realize the integration of logistics and e-commerce. On the one hand, the O2O model transformation will affect the ratio of current assets, total amount of current liabilities and structure, and change the quality of current assets. On the other hand, it puts forward higher requirements for monetary capital and inventory management. It is the most strategic part of working capital management to

maintain the matching relationship between the capital occupation and the source of long-term and short-term funds in the enterprise operation.

With the establishment of the platform, the proportion of current assets and current liabilities is also changed. The inventory could have one of the largest quantity in current assets in some of the industry, but in O2O model of logistics industry, because of its low inventory characteristic, with the gradually mature of O2O model, its inventory as a proportion of current assets will be lower, the corresponding portion of accounts receivable and the proportion of monetary funds will increase. The characteristics of the industry make accounts payable and notes payable the highest current liabilities in the logistics industry. Therefore, in the O2O model transformation process of an enterprise, the structure of current assets and current liabilities will change. The large investment in the initial stage of construction will easily lead to the reduction of monetary capital and the increase of current liabilities, which will rapidly reduce the ratio of current assets to current liabilities, and thus affect the short-term solvency of the enterprise.

3.4 Analysis of Factors Influencing Working Capital Management Efficiency of Logistics Industry using the O2O Model

3.4.1 General factor analysis

Generally, for the working capital management efficiency of various enterprises using different business models, the general influencing factors include: (1) the attention level of the company's management; (2) capital structure ratio; (3) credit management of accounts receivable and accounts payable; (4) government acts; (5) financing methods; (6) business scope.

(1) The attention level of the company's management

Working capital management has not received enough attention, which is a common problem in small and medium-sized logistics enterprises (Li, 2014). Some listed companies have higher requirements on the scale operation and profit growth of enterprises, ignoring the management of the internal operating funds of enterprises, and have not set up a special organization to manage the working capital. If the logistics

enterprise management in the O2O model takes casual attitude about the source and use of working capital, it will lead to the phenomenon of using short-term borrowing to meet the long-term capital demand, thus reducing the efficiency of working capital management.

(2) Capital structure ratio

How to raise short-term funds is one of the core issues of working capital management (Wei, 2011). The essence of this problem is the matching relationship between current assets and current liabilities. Generally speaking, the larger the ratio of current assets to current liabilities, the stronger the short-term solvency of enterprises, and the smaller, the reverse. Therefore, increasing the size of current assets is an important guarantee to reduce the risk of corporate debt repayment. Liquid assets, however, the increase of the scale, will inevitably require companies use long-term financing way to raise more money and occupied in current assets, but the cost to raise long-term financing is huge, which can affect the profitability of the enterprise, in the long term, eventually because of low profitability, solvency is affected, it brings to the enterprise financial risk. The current assets of an enterprise within a certain period should be reasonably larger than current liabilities, which can not only reduce the holding cost of current assets, but also enable the short-term financial risks of the enterprise to be in a relatively stable state. At the same time, the different structure of working capital will also affect the solvency and profitability of enterprises. Therefore, to determine the size of working capital, to manage the working capital, must be balanced between profitability and financial risk.

(3) Credit management of accounts receivable and accounts payable

Due to the characteristics of large amount, fast turnover, scattered customer base and small amount, the receivables of logistics enterprises have become the main difficulties in the management of receivables of logistics enterprises (Ding, 2005). Accounts receivable will increase the loss as enterprise's cash outflow. Although credit sale can generate more profits, it does not actually increase the enterprise's cash inflow, but makes the enterprise have to use limited working capital to advance the payment of supplier's goods and various taxes and fees, which accelerates the enterprise's cash outflow. In the

fierce business competition environment, reasonable use of credit policy will help enterprises expand and stable sales market, but at the same time, the increase of accounts receivable takes up a lot of money, cause and deposits of funds in circulation, susceptible to bad debt losses at the same time. The risk of accounts receivable is everywhere. To strengthen the accounting and management of accounts receivable is in relation to the capital turnover of the enterprise, which will affect the management benefit of enterprise. A reasonable and strict credit policy for accounts receivable can guarantee the effective turnover of accounts receivable and thus improve the working capital turnover efficiency. However, compared with accounts receivable, accounts payable bring a reverse effect to the working capital management. Therefore, relatively strict credit receivables policies and relatively extended credit payables policies can have a favorable impact on the working capital management efficiency.

(4) Government acts

The government behavior provides the policy background for the logistics industry in the general environment. The strict or relaxed government regulation, the support or restriction of the government attitude and the regulations on the logistics industry issued by the government may lead to the change of factors in various aspects of the logistics enterprise. In recent years, the government has been strongly supporting the logistics industry and the O2O model, and documents released recently has provided a benign policy environment for the better and faster development of logistics enterprises. It provides powerful conditions for the logistics industry in terms of tax reduction and exemption, standard management of transportation and market access. If the logistics industry using the O2O model can use these policies effectively, it will also be able to obtain favorable improvements in corresponding monetary funds, operating costs, accounts payable and other subjects, so as to improve the efficiency of working capital management.

(5) Financing methods

With the shortage of energy resources and the rise of labor costs, the profit margin of logistics enterprises is gradually reduced, and more working capital is needed to expand the scale. The establishment of the O2O model is the formation of the integration

of online and offline platforms, which not only requires the enterprise itself to have strong economic strength, but also requires the enterprise to find effective financing methods to supplement the demand of scale expansion. Firstly, bank loans. This has certain requirements for the credit evaluation of the enterprise itself, which can supplement the monetary capital of the enterprise, increase the current assets, and also bring interest payable and increase the current liabilities. Secondly, project financing. This requires companies to have sufficient market attractiveness and good prospects of development. External investment can be in the form of monetary capital or in the form of inventory, fixed assets, intangible assets and other forms. It may bring the increase of current assets to enterprises, and correspondingly, logistics enterprises may also change their current liabilities.

Again, appear on the market financing, equity financing. This is a major trend of logistics enterprises in recent years. Seven logistics companies have been listed successively. It can be seen that these enterprises have a strong desire for capital with its huge demand and market ambition. Going public can bring sufficient working capital to the enterprise, at the same time after the enterprise goes public, there will be payable dividends in the account of current liabilities. Secondly, going public can effectively improve the enterprise's brand value and market influence. It can be seen that the impact of listing on the working capital management efficiency of enterprises is beneficial in the short term.

(6) Business scope

O2O model of logistics business scope can be varied, such as Shunfeng, in addition to the main logistics business, has established the items "SF BEST" mainly aimed on main fresh goods, "financial" that provides financial services and third-party payment platform "SF PAY", Yuantong "mother store" in the face of maternal and infant market, and Shentong established "JUXBW" and mainly sell dried fruits and retail, etc. It involves a wide range of business and competition ensues. How to gain a position in the newly entered market without neglecting the main logistics service business is a problem to be considered in the logistics industry using the O2O model. Different businesses will bring corresponding performance, mainly corresponding to the operating cost and operating

income, which will affect the turnover efficiency of accounts receivable, inventory and accounts payable and further affect the working capital management efficiency.

3.4.2 Special factor analysis

The working capital operation of the logistics industry using the O2O model is affected by its model and industry characteristics. Therefore, the special influencing factors are summarized as follows :(1) offline stores: the establishment of community O2O logistics station; (2) online platform: smart logistics development; (3) warehousing factor: warehousing layout; (4) transport links factor: transport and cold chain logistics; (5) delivery factor: logistics service quality.

(1) Offline stores: the establishment of community O2O logistics station

From establishment to development of the O2O model can be divided into the initial stage, the optimized growth stage and the maturity stage. The allocation and focus of funds in different periods are different, so the impact on working capital management efficiency is also different. In the O2O model, the logistics stagnation point is the offline physical store, which is the integrated store of the whole logistics e-commerce and the front end of contacting consumers in reality. In the early stage of establishment, self-established logistics community resident needs to invest a lot of construction and management costs, which will bring a lot of capital pressure to O2O entrepreneurs, especially in the early stage of their entrepreneurship. Therefore, the growth of enterprises is limited, and the O2O services they provide will be limited in both region and object (Luo, 2015).

Efficient logistics distribution is the embodiment of O2O business value, otherwise it is difficult to stick users to long-term consumption on the business platform. The location of the community O2O logistics center is "the closer, the more precious", which can guarantee the delivery efficiency of goods fundamentally and control the quality of the goods throughout the logistics process. This kind of efficient and quality guarantee can obtain the recognition and financial support of high-end people with good economic foundation. Enterprises need to invest a lot in the establishment of offline stores. Besides, the construction and maintenance of online intelligent platforms also need a lot of financial support. Firstly, in this period, it is easy to lead to the reduction of monetary

capital and the increase of current liabilities, which rapidly reduces the ratio of current assets to current liabilities, thus affecting the short-term solvency of the enterprise. Secondly, the corresponding amount of accounts payable will increase under the premise that the enterprise maintains the original delivery ratio. In addition, the initial investment is huge and the corresponding operating cost will be increased. However, in the initial stage, because the original operation model is still maintained, the change of inventory will not be obvious. Therefore, the change range of operating cost and accounts payable indicates the change of accounts payable turnover efficiency, which will affect the cash turnover efficiency.

(2) Online platforms: smart logistics development

There are two different impacts, one is the payment method on efficiency, the other one is the information system on efficiency.

① Impact of the payment method on efficiency

Electronic payment will speed up working capital turnover. The core of the O2O business model is online prepayment, which is conducive to the improvement of turnover rate of merchant funds. The online payment of users through the online platform is the only mark of the final completion of consumption activities and the most accurate assessment standard of consumption data. In the O2O model, for companies that build professional platforms that provide online platform services, only by means of online electronic payment can the online platform accurately convey consumers' demand for goods and services to offline physical enterprises and stores. Using the O2O business model, the fund settlement is mainly completed through electronic payment of online platforms, which can store massive information, while the information transmission of the platform is realized by using network information technology, and the information is carried out through the transmission of digital information. The e-payment link of the online platform using the O2O model meets the demand of customers for convenient payment, also satisfies the purpose of merchants to quickly recover funds, and speeds up the turnover of working capital.

② Impact of information system on efficiency

The update of science and technology enables logistics enterprises to further realize automation, informatization and environmentally friendly in data collection, goods service provision, warehouse management and turnover. First of all, orders, delivery and transactions in the O2O model are made more online, saving a large part of labor and material costs. Secondly, logistics information can be quickly transmitted to all links, saving time cost for information processing and management. In addition, under the big data environment, logistics enterprises can better carry out business planning, warehousing construction and consumer behavior trend analysis, which is conducive to the improvement of their business and the acceleration of working capital turnover efficiency. The information system has permeated all the management of modern enterprises and provided timely and accurate information for various decisions of enterprises. If the company cannot establish a data network system that can cover the general branches, due to it cannot obtain timely and comprehensive data management, the company cannot make the arrangement of scientific prediction. Especially for logistics industry in O2O model, in terms of logistics transportation and order delivery, both rely on information system to a large extent. If the information transmission is not smooth, the company's procurement and distribution, environment and warehousing plan cannot adapt to the market demand. As a result, the inventory is unreasonable, the amount of capital occupied is affected and the efficiency of working capital management would be reduced.

(3) Warehousing factor: warehousing layout

In the development of logistics industry, logistics warehouse management is very important. This has a very important impact on cost control in the logistics industry (Zhang, 2017). Warehousing is the inventory control center in the logistics and supply chain. It includes inventory, packaging, transportation and circulation processing. Inventory cost is one of the main costs. In O2O model, in order to adapt to the new logistics business integration model of offline store operations, logistics enterprises may have a new planning and investment for warehouse layout. Establishment and layout in the early stage would have a significant effect on monetary capital, accounts payable subjects. Monetary funds will correspond to reduce, accounts payable would increase, operating cost would increase, which brings the efficiency of management of working capital a short-term negative impact. The impact of a complete warehouse layout is mainly reflected in the inventory and operating cost accounts. First of all, the reasonable

degree and effective planning of warehouse layout is the key to reduce inventory and thus operating cost. The reduction of inventory has a positive impact on inventory turnover, while the reduction of operating costs corresponds to the reduction of accounts payable. Secondly, the reasonable degree and effective planning of warehouse layout is the key to reduce inventory and operating cost. The rationality of warehousing layout directly affects the warehousing cost and operating cost of logistics industry, and finally affects the working capital management efficiency of enterprises.

(4) Transport links factor: transport and cold chain logistics;

Transportation takes a relatively high proportion in the logistics process. At present, the operating speed of China's railway, highway and inland river shipping is at a low level, the proportion of efficient transport mode is low, and the loading and unloading time is relatively long (Ye and Chi, 2012). In recent years, as the price of production factors in the transportation industry keeps rising, fuel consumption cost, accessory cost and other costs keep increasing, the demand for logistics and transportation goes down. The fierce competition in the logistics market makes some logistics enterprises face great pressure of survival. Any form of logistics activity is heavily dependent on the service of transportation. The management and control of transportation cost will affect the cost of logistics in terms of transportation cost and transportation timeliness, and further affect the turnover of working capital and economic benefits.

With the development of fresh e-commerce and the deepening of the new retail reform, cold chain logistics in the O2O model has developed rapidly. As an important part of modern logistics, cold chain logistics aims to guarantee the quality of special goods such as fast-moving consumer goods and medicine industry. Therefore, cold chain logistics has its own characteristics besides the characteristics of general logistics. Because of the particularity of cold chain transportation of goods, this transportation link not only has higher requirements on timeliness, but also has higher requirements on temperature and humidity in each link of transportation, which increases the cost of cold chain transportation. In addition, fresh perishable goods require special transportation equipment, temperature control equipment, fresh-keeping equipment and storage equipment, which all require high investment. Moreover, in terms of the loss rate of cold-chain transportation, the average loss rate of developed countries is less than 5%, and the current level of China is far behind that of Western countries (Tan, 2018). Logistics

companies also need to bear the risk of deterioration in the transportation of perishable goods. These factors determine the high cost nature of cold chain logistics, thus increasing the circulation pressure of working capital.

(5) Delivery factor: logistics service quality

In the O2O environment, five dimensions of logistics service quality have a strong impact on consumers' purchasing (Xie, 2016). It is demonstrated that the timeliness, completeness, communication and error of logistics service have positive effects on consumers' attitudes to purchase. And it mainly involves the timeliness and safety in the transportation, transportation, the professional personnel response and service attitude and O2O online feedback system perfect degree, which affect the pay rate and consumption behavior of consumers, thus affect the speed of the logistics enterprise gathering and revenues and earnings, and then influence operating financing volume and turnover efficiency.

4. CASE STUDY: THE SF GROUP

This chapter is the case analysis of SF Group using the O2O model. It firstly introduces the case background, summarizes the reasons and process of setting up O2O by SF Group. Based on the financial data from 2013 to 2016, combined with the data of 20 representative enterprises in the logistics industry, this work studies and analyzes the working capital management efficiency of the company in terms of working capital factor and turnover efficiency respectively. Then it analysis main factors that cause the change in the efficiency of working capital management. The results show the main factors. Finally, based on the actual situation of the case, this dissertation puts forward some suggestions on optimizing the management efficiency of the working capital of the logistics industry using the O2O model.

4.1 Case Background

4.1.1 Company background

According to the information on the official website of SF Group and public news. The company background is sorted as follows.

Shunfeng Group Co., Ltd. (SF Group) was established in Shunde, Guangdong in 1993. Its business scope is mainly international and domestic logistics and related businesses.

In 1996, the SF Group moved its business to cities outside Guangdong Province. Subsequently, SF Group not only established a large number of business organizations such as information collection, market development, logistics and distribution, express delivery, etc. in Greater China, and established a nationwide network to serve customers, but also actively expanded its international services.

Since the investment in 2013, the SF Group has integrated and accepted a number of companies, attempting to establish a logistics-wide industrial chain ecology including

storage, transportation, and dispatching, and started to tap into e-commerce, fresh food, property, and financial services.

In 2016, the SF Group obtained the approval from the China Securities Regulatory Commission to gain access to the A-share market and successfully listed. SF plans to enhance its advantages in air cargo and purchase aircraft as well as airport. At the same time, cold chain transportation and international expansion are the links that SF Group will strengthen in the future.

4.1.2 Background introduction for company model selection

The traditional business model cannot meet the needs of business expansion, the original competitive advantage no longer exists, and the gap in the level of service between the logistics industry gradually becomes smaller. In today's increasingly fierce competitive environment, SF, as a logistics company with strong capabilities, is also actively making strategic transformations in order to enhance its value creativity.

In recent years, e-commerce has developed rapidly, and the scale of logistics companies is also expanding. However, because of homogenous competition and long-term price wars among logistics companies, their profitability is not optimistic. Some logistics companies are at a loss. The introduction of O2O distribution system may bring new profit growth points for the logistics industry and improve its revenue status.

All along, SF's revenue status is relatively good, but compared to Yuantong, the latter is still the leader of the current domestic logistics industry. In 2015, Yuantong Express surpassed Shentong Logistics as the leader in the logistics industry, occupying 21% of the domestic logistics market share and ranking first. A large part of the success of Yuantong came from the support of Ali E-commerce. In its business, parcels from e-commerce accounted for 70%, and among them, Alibaba e-commerce accounted for 70%, which means Alibaba provided around 50% of the Yuantong business volume (<http://www.nbd.com.cn/articles/2015-10-13/953058.html>, 2015). Without the support of Alibaba, Shunfeng, which falls behind in the electricity business, may achieve performance beyond by adopting the O2O model.

SF has been working hard on diversification. Both logistics and e-commerce can complement each other and promote each other's development. E-commerce will improve the professionalism of its logistics business, and the main business of logistics is also the main advantage of its e-commerce business. First of all, the logistics company choose e-commerce is to serve e-commerce customers better, so as to personally practice e-commerce business, to provide e-commerce businesses and consumers with professional logistics services better. What is more important is that logistics companies use their advantages in logistics resources to extend their business to e-commerce and seek new profit points.

The intention of establishing cross-border integration of e-commerce logistics O2O with SF is obvious. SF's layout of convenience stores and e-commerce services are all for the logistics industry. Whether it is to make fresh e-commerce, O2O, or cross-border e-commerce, it is all related to the development trend of e-commerce and logistics. The e-commerce industry is developing toward fresh e-commerce, and SF Group chose to establish SF BEST mainly aimed on fresh goods. In order to develop into O2O, SF began to establish offline entity stores, to purchase globally, and SF made Fengqu Haitao. What SF is really doing is cold chain logistics and international logistics.

4.1.3 O2O model establishment process

According to the information on the official website of SF Group and public news. The establishment history of O2O in SF is sorted as follows.

In 2011, SF cooperated with convenience stores 7-11 to launch its own branded convenience stores. SF express entered the convenience store industry with investors and then gradually withdrew from the market.

On May 31, 2012, SF BEST was officially launched and mainly distributed to domestic cities.

In September 2013, overseas online shopping transport service which was newly created by SF, was launched.

On May 18, 2014, 518 SF HEIKE stores were put into operation for the first time. The difference between the store and the traditional retail store is that there is no real

goods in the store. Through promotional materials or electronic equipment, customers can understand the goods and place orders in the store.

On November 11, 2014, SF launched the overseas shopping platform "Preferred International". Like SF, its target market is the food industry.

On January 8, 2015, SF launched its own cross-border B2C e-commerce website, "SF BUY".

In February 2015, the company began to provide laundry service, hoping that through community service, the company could get through the O2O layout of SF. In May of the same year, SF BEST and SF HEIKE merged to complete the business integration, so that consumers could purchase all of SF products. On May 18, SF upgraded the name " SF HEIKE " to "SF Family" and conducted a national trial. This change of name is a combination of SF BEST + SF Family + SF finance + SF logistics + SF convenience service. The O2O community platform layout of the whole channel was completed.

On September 22, 2016, " SF Family " was officially renamed " SF BEST ".

The creation process of online platform and offline physical stores SF is shown in the following table:

Table 2. Development process of SF O2O model

Year	Event	Specific business
2010	“SF E business circle”	Online shopping platform
2011	Establishment of the gift platform of "Zun Li Hui"	The goal is to provide professional gift service for mid - to high-end business people
2011	“SF Pay” obtained payment license	Provide one more payment method for SF customers
2012	SF BEST was established	Most online products are fresh food
2013	“SF BEST” enters Tmall	SF is no longer an independent e-commerce company
2014	HEIKE was established	It imitates the integration model of logistics convenience between the United States and Japan, mainly including pre-sale online shopping and rapid delivery. The first batch of 518 HEIKE inns opened, covering the whole country except Qinghai and Tibet. In the early days, there were no commodities in the store, so they could get to know the goods by logging in sf-express through promotional materials or tablet computers and place orders in the store, which would be delivered to home or picked up at home by sf-express logistics. In the late period, more sales promotion activities in the spot.
2015	HEIKE change its name to SF Family	Began to place orders online as the main form, began to gradually increase the physical display product categories increased maternal and infant overseas online shopping, fresh.
2016	SF Family change its name to SF BEST	Since then, SF preferred to become a major brand in the online and offline retail business of sf. At the same time, SF began to sell fruits, rice, seafood, milk and other commodities in its preferred store, which gradually evolved into offline stores.

Source: Collation of Public Information.

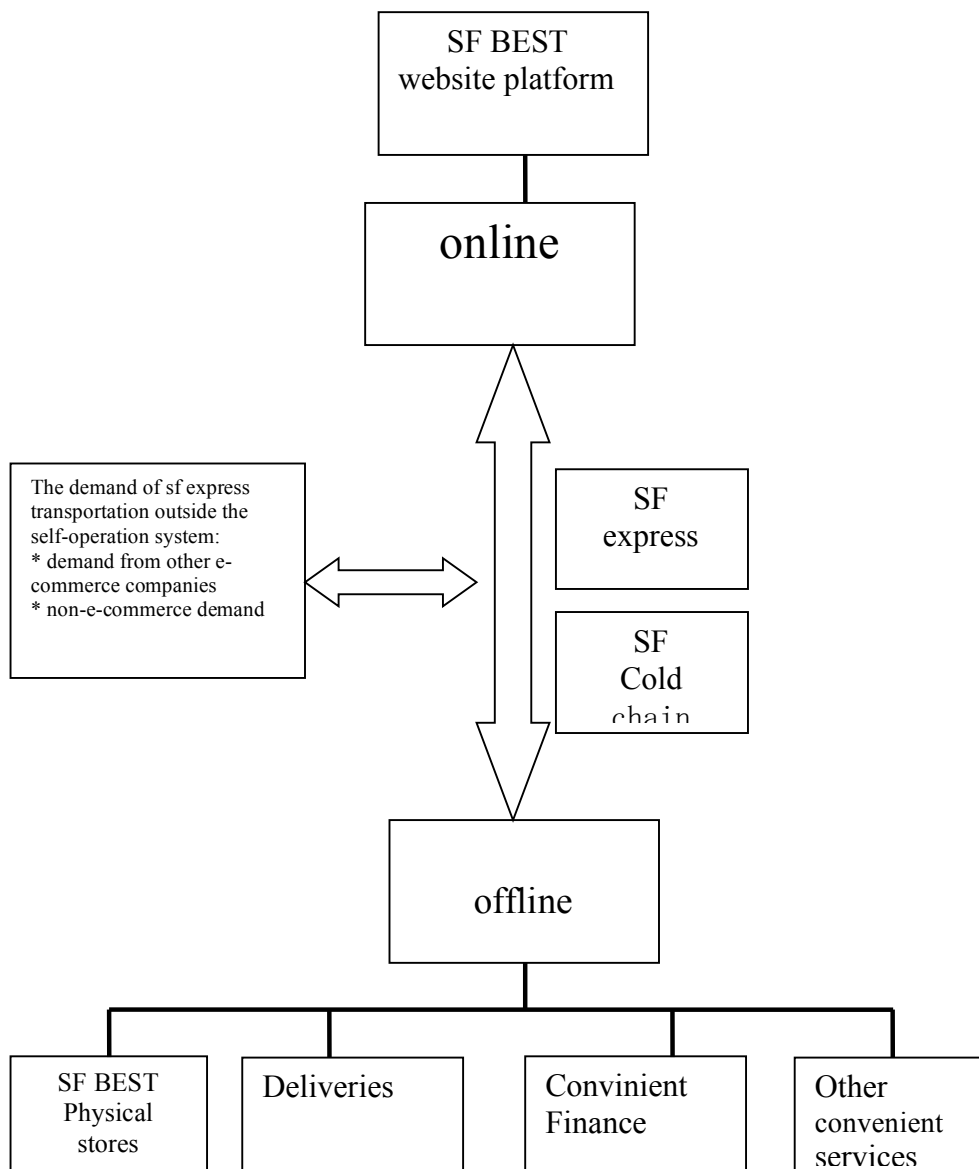
4.1.4 Company O2O model analysis

(1) The analysis on the composition of SF's O2O model

Along with the layout of offline stores " SF HEIKE ", SF has completed the establishment of O2O model in the field of logistics e-commerce, and established O2O

community platform jointly with online and offline SF BEST, SF finance, SF logistics, SF convenience services, marking the formation of an online and offline cooperation model integrating logistics e-commerce. At the same time, SF customers can be divided into three modules, as shown in the figure below

Figure 2. The O2O logistics e-commerce integration model of SF



Source: An Analysis of Integrated Development Model of Shunfeng Express Logistic E-commerce Based on Online and Offline Integration. Meng and Ding. 2015.

(2) SWOT analysis of the company's O2O model

SWOT analysis represents the analysis of enterprise's strengths, weaknesses, opportunities and threats.

①Strengths

First of all, a large amount of continuous investment is required in the early stage of the O2O model. SF has a strong financial strength and a large amount of continuous operating revenue as the support, which can guarantee the stable investment and development in the early stage of the establishment of the O2O model.

Secondly, as a logistics enterprise, SF can achieve rapid logistics within the distribution range. Not only that, as is known for the quality in the industry, SF has also brought good consumer reputation and high customer trust. And its cold chain delivery system can control the cost effectively. Moreover, this model is positioned as a high-end consumer group with low promotion costs. In addition to logistics business and virtual shopping, " SF HEIKE " also has ATM, cold chain logistics, group-purchase pre-sale, laundry, home appliance maintenance and other services, and also provides services such as telephone top-up, air ticket reservation, water and electricity payment, credit card repayment, etc. SF not only has a mature logistics system, but also has advanced experience in O2O due to its early layout two years ago. Relying on the preliminarily mature SF BEST and mature logistics network, SF is positioned in the community O2O, attracting consumers with virtual shopping experience and providing a variety of service projects. SF has made an attempt on offline O2O retail same-city delivery for the "last kilometer" distribution, which has prepared for the development of instant delivery business.

Also, the direct operation model of SF since 2002 enables SF to effectively control customer terminals and guarantee service quality. With the emergence of offline stores of SF, the special operation mode of zero inventory can effectively reduce its operating costs.

②Weaknesses

The initial market positioning of the offline distribution of sf O2O model was high-end consumer groups, which were relatively small field in consumers and small in number. In terms of distribution scope, although normal temperature goods can be delivered to the whole country, fresh goods can only be delivered to 54 cities, such as Beijing, Shanghai, Guangzhou and Shenzhen, and cannot be delivered nationwide at present. The consumer groups involved are subject to regional restrictions. In addition to sales, the main work is sending and receiving logistics, other services account for a small proportion of the business structure, and the range of goods sold is wide and uncharacteristic. At the beginning, relying on the self-owned e-commerce platform of SF, they promoted high-quality products with high price to consumers. In order to attract more consumers, they also began to sell fresh fruits and vegetables with relatively low price in the late transformation period.

Secondly, the features of direct operation keep SF in a state of continuous heavy capital operation, and the expansion of its business also requires the investment of its own capital. In addition, the initial capital requirements of the establishment of O2O model put SF's capital operation under greater pressure.

③Opportunities

First of all, as the first private logistics company to set up its own O2O platform, SF has taken the lead in the market before fresh producers have not formed the industry scale and food cold-chain logistics is developing. In addition, the government has attached great importance to the e-commerce sector and provided a lot of policy support for its development in recent years, creating a good and rapid development opportunity.

④Threats

In terms of internal environment, with the improvement of national living and consumption level and the reduction of demographic dividend, the increase of human and material costs has also brought considerable pressure. Secondly, the domestic high-end market has not been fully opened, and the purchasing power of high-end consumer needs to be improved. At the same time, the quality and safety of fresh food sold in offline stores

cannot be ignored. Moreover, domestic logistics companies have also started to build O2O platforms, rapidly entering the O2O market and increasing the competitive pressure. With the opening of the national market access policy, foreign-funded enterprises can easily enter the domestic market, bringing new challenges to the development of SF.

The SWOT analysis can be summarized as in the table below.

Table 3. SWOT analysis of SF O2O model

<p>Strengths</p> <ul style="list-style-type: none"> * abundant capital and stable investment * main logistics and cold chain advantages * extensive business, attract consumption * direct mode, control terminal 	<p>Weaknesses</p> <ul style="list-style-type: none"> * fresh food distribution is subject to geographical restrictions * main logistics and business features * the direct business model focuses on capital and requires large capital
<p>Opportunities</p> <ul style="list-style-type: none"> * the first O2O platform in the industry * fresh food delivery, market is superior * rapid development of cold chain logistics * government policy support 	<p>Threats</p> <ul style="list-style-type: none"> * human and material costs rise * the high-end market is not fully open * enterprises in the same industry develop O2O model * the threat of strong foreign competitors

4.2 The Analysis of SF's Working Capital Element Structure

Based on the data of listed companies in the logistics industry from the year 2013 to 2016, the data of the top 20 listed companies were selected according to the profit ranking list in China's logistics industry in 2016 (http://www.sohu.com/a/141884903_151241), and the average value of the data was used as the industry average level for comparative analysis. Analysis on the proportion of elements of SF Group from 2013 to 2016 is as follows:

Table 4. Analysis of working capital factors of SF Group from 2013 to 2016

	2016	2015	2014	2013
Current ratio	1.16	1.13	1.33	2.21
The industry average	1.85	2.11	1.97	2.05
Quick ratio	1.14	1.12	1.29	2.18
The industry average	1.52	1.80	1.62	1.83

Source: The calculation of financial indicators is based on the data of consolidated financial statements. The calculation formula is as follows: (1) current ratio = current assets/current liabilities (2) quick ratio = (current assets - inventory)/current liabilities

By analyzing the current ratio and the quick ratio, it can be seen that from 2013 to 2015, the current ratio and the quick ratio decreased vertically. Industry horizontal comparison, starting from 2014, both ratios of SF were lower than the industry average. SF chooses the direct management model, and the headquarters will conduct unified management and management of all branches, and raise funds to build infrastructure and buy assets and equipment. The above business model determines that SF needs to appropriately increase its financial leverage according to the long-term development needs of the company. At the same time, the growth of the business has allowed SF to raise funds by increasing short-term and long-term borrowing for infrastructure construction and procurement of transportation tools and machinery. Since the formal establishment of the O2O platform in 2014, the ratio of current assets and current liabilities of SF decreased significantly. Since 2014, SF has paid lots of efforts to lay offline stores. Large investment has resulted in the vacancy of working capital and the growth of current assets is less than the growth of current liabilities, which has reduced its short-term solvency.

It is generally accepted that the minimum reasonable value of the current ratio is 2 and the minimum reasonable value of the quick ratio is 1. By combining the current ratio and the quick ratio, it can be seen from the table that the value of both the current ratio and the quick ratio in 2013 was larger than 2 and higher than the industry average, and there were more idle current assets, which affected the working capital turnover

efficiency and profitability. Because of its light inventory characteristics, the current ratio and quick ratio of SF are similar. After the establishment of O2O platform in 2014, although its direct operation model and early store investment reduced its current ratio to less than 2, its quick ratio dropped to near 1, close to a reasonable level, indicating that its capital structure is reasonable and its solvency is still strong. In 2016, the two indicators were slightly improved, because the increased investment capital of employees flowed into working capital and the retained profits brought by excellent performance made its current assets and liabilities structure and solvency optimized and improved.

4.3 Analysis of SF Working Capital Turnover Efficiency

4.3.1 Current assets turnover efficiency analysis

Table 5. Analysis of current asset turnover efficiency of SF from 2013 to 2016

Unit: day

	2016	2015	2014	2013
Receivables turnover period	26.78	26.32	23.20	20.47
The industry average	47.62	53.87	54.35	53.98
Inventory turnover period	2.54	3.01	3.19	2.81
The industry average	37.02	42.79	39.91	39.78
Current assets turnover period	124.99	128.16	138.24	/
The industry average	318.18	359.64	324.30	/

Source: The calculation of financial indicators is based on the data of consolidated financial statements.
Note: Computation formula is as follows. (1) the accounts receivable turnover ratio = operating income/accounts receivable at the beginning of the final average balance (2) inventory turnover ratio = operating cost/inventory at the beginning the final average balance (3) current asset turnover ratio = operating income/current assets at the beginning the final average balance (4) turnover period= 360 / turnover ratio

If the working days of accounts receivable are extended, the collection speed becomes slow, the inventory turnover period is too long, and the inventory realization

ability is low, the company will have to supplement the working capital by borrowing, which further causes the cost increase and the passive operation.

Learned from data analysis in the table above, from the point of time longitudinal analysis, the company's accounts receivable turnover period motion rise from 2013 to 2016. Due to its business models and market positioning, SF have more customers who have large assets, stronger profit ability. Those consumers are enterprises with great qualification and would pay on a monthly basis. SF gives the consumer a certain accounting period and it lead to the accounts the low receivable turnover efficiency, which indicating the relaxation of its credit policy.

From the horizontal comparative analysis of the industry, the turnover efficiency of SF receivables is good. This is determined by its business characteristics. There are many and relatively scattered consumers. In the transaction, consumers' immediate payment takes up a large proportion, the balance of accounts receivable is relatively low, payment time is relatively short, and the turnover capacity of accounts receivable is relatively strong.

SF mainly operates express logistics services, with only a small amount of goods sold. SF ' s inventory mainly includes low-value consumables, inventory materials, inventory commodities and aviation consumables. It can be seen that the O2O platform was established in 2014, and its inventory turnover period was higher than that of 2013, and the inventory turnover efficiency was reduced, which is cause by the initial store construction resulted in the increase of inventory in the short term. From 2014 to 2016, its inventory turnover declined year by year. After the O2O platform was put into operation, the inventory planning is getting more reasonable, and the inventory turnover efficiency increases.

It can be noted that after SF build the O2O model in 2014, the number of days of current assets turnover declined year by year, indicating that its working capital turnover efficiency in terms of current assets has been improved to a certain extent.

4.3.2 Current liabilities account turnover efficiency analysis

Table 6. Turnover efficiency analysis of SF's accounts payable from 2013 to 2016

Unit: day

	2016	2015	2014	2013
Account payable turnover period	32.48	28.99	25.24	/
The industry average	31.28	28.01	25.87	/

Source: (1) The calculation of financial indicators is based on the data of consolidated financial statements. Note: Accounts payable turnover ratio= (main business cost + current inventory increase cost)/average accounts payable (2) turnover period= 360/turnover ratio

According to the time longitudinal analysis, after the establishment of the O2O platform in 2014, the turnover period of SF's accounts payable increased year by year, and its main business cost and inventory increased less than its accounts payable. As can be seen from the data in the financial report, the value of accounts payable increased from 2014 to 2016. Firstly, due to the increase in the amount of transportation payable, various outsourcing and material procurement, etc. caused by the expansion of the scale and increased business volume of SF. Secondly, all kinds of transfer centers, business outlets and offices in SF increased, and the rental fees should be increased accordingly. In addition, the increase of outsourcing cost to cope with is significant, mainly because in order to optimize business process and improve operation efficiency, SF has increased the outsourcing of various business links, such as dry branch transportation, transfer station handling and dispatch.

From the industry horizontal comparison and analysis, the account payable turnover of SF has exceeded the industry average since 2015. The turnover of accounts payable reflects the ability of the company to use the funds of the supplier free of charge. SF can take more money from suppliers than its peers, showing its important market position, but at the same time bearing more repayment pressure.

The reasonable turnover rate of accounts payable is decided by the industry comparison and the normal level of the company's history, and should makes the period of accounts receivable turnover and accounts payable turnover as close as possible.

Compared with the average level of the industry, the turnover period of SF's accounts payable is at a reasonable level. SF's receivables turnover period and accounts payable turnover period are closer in length than the industry level. From the time longitudinal analysis, the difference value of the two turnover periods of SF is gradually increasing, and the repayment pressure borne by SF is gradually increasing.

4.3.3 Working capital turnover efficiency overall analysis

Table 7. Working capital turnover efficiency analysis of SF from 2013 to 2016

Unit: day

	2016	2015	2014	2013
Cash flow period	-3.15	0.34	1.16	/
The industry average	53.36	68.65	68.39	/

Source: The calculation of financial indicators is based on the data of consolidated financial statements.
Note: cash flow period = inventory turnover period + accounts turnover period - accounts turnover period

On the whole, the working capital turnover period of SF from 2014 to 2016 was far lower than the industry average from the horizontal industry analysis, indicating that the working capital management efficiency of SF was at a high level in the industry. Under the circumstance that the average working capital turnover efficiency of the whole industry is improved year by year, the working capital turnover efficiency of SF has a good performance. From the time longitudinal analysis, the working capital turnover efficiency of SF has been improved year by year since 2014, and the working capital turnover efficiency of SF has been outstanding in 2016, which cannot ignore the positive impact of the successful listing of SF in 2016 on its finance and operation.

4.4 Working Capital Management Status Summary of SF

Through the above analysis, it can be summarized as follows: firstly, the debt repayment index of SF is good. The current ratio and quick ratio indexes of SF during the period show that the current asset structure of SF is reasonable and its solvency is strong; Secondly, stable operating conditions, good operating conditions of SF, sufficient cash

flow and strong sustainable profitability provide a good internal guarantee for debt repayment; Thirdly, good credit and smooth financing channels make SF have maintained good cooperative relations with Banks, with sufficient credit extension and smooth borrowing and financing channels, and never failed to repay the loan due, which provides a good external fund guarantee for the normal operation of the company.

Overall, the working capital turnover efficiency of SF has performed well. From the perspective of time longitudinal analysis, after the establishment of O2O platform, working capital turnover efficiency is improved year by year. From the horizontal comparative analysis of the industry, SF's receivables turnover rate is consistent with its business characteristics and operating conditions and remains above the average level of the industry. From the perspective of time, the receivables turnover period of SF increased year by year, indicating the relaxation of the credit policy of SF on accounts receivable during this period. The O2O platform was established in 2014, and its inventory turnover period was higher than that of 2013, and the inventory turnover efficiency was reduced, because the initial store construction resulted in the increase of inventory in the short term. From 2014 to 2016, its inventory turnover period declined year by year. After the O2O platform was put into operation, the storage network is optimized and upgraded, which is more reasonable for inventory planning and the inventory turnover efficiency is increased.

In particular, the O2O model of SF was on the right track in 2016, and the successful listing attracted huge funds. The market news also made investors and consumers see the good expectations of SF's development, which further increased SF's performance and brought more operating income. Standardization and scale bring more profit space and more working capital can be utilized. Although the debt paying ability is lower than that before the establishment of O2O platform and the debt paying risk is higher, the turnover efficiency of each element and the total working capital is obviously better than the industry average. In the foreseeable future, with further optimization of O2O model development, if the company motion can balance the weight of the good solvency risk and market expansion, continue to maintain a low storage inventory levels, planning good accounts payable delivery plan, maintain the stability of earnings growth, the company's future motion of working capital management efficiency could be more outstanding. And it could maintain the good momentum to achieve high performance in the fierce market competition, which set a qualified example for the O2O model of logistics industry.

4.5 Study on Factors Influencing Working Capital Management Efficiency of SF

4.5.1 General factors analysis

According to the performance of working capital management efficiency of SF and combined with the analysis of the actual operating environment of SF, the general influencing factors of working capital management efficiency are :(1) full support from the government; (2) diversified business operation; (3) successful public financing; (4) receivables management and appropriate receivables strategy.

(1) Full support from the government

First of all, the Chinese government attaches great importance to the development of the logistics industry in the overall environment, and has issued a series of policies to support the development of the logistics industry and the O2O model in terms of tax incentives, standard governance and loan convenience, which facilitate the working capital turnover of logistics enterprises including SF using the O2O model. Secondly, in terms of O2O supply, the company actively cooperated with local governments. Under the license of fresh supply issued by local government, SF signed and cooperated with the source of supply and the famous local production base of original products. With the strong support of the government, SF can get effective preferential tax treatment and payment conditions during the signing and performance process, which will bring positive influence on monetary capital and the turnover rate of accounts payable.

Table 8. Monetary fund, accounts payable and account payable turnover period of SF
from 2013 to 2016

	2016	2015	2014	2013
Monetary fund (ten thousand yuan)	691,550.90	362,037.33	235,314.56	194,352.28
Accounts payable (ten thousand yuan)	525,917.72	309,547.31	227,233.84	133,708.93
Accounts payable turnover period (day)	32.48	28.99	25.24	/

Source: Data of consolidated financial statements.

(2) Diversified business operation;

SF's O2O logistics e-commerce integration not only includes the main business of SF transportation, but also SF finance, as well as online and offline SF BEST, providing a variety of services such as ATM, payment of water and electricity, distribution and logistics, and dry cleaning. Cooperate with each other for its main business, SF express transportation and service, and quickly improve performance. It also accelerates the circulation of working capital and improves the management efficiency of working capital.

(3) Successful public financing;

In the early stage of the establishment of the platform, the construction and maintenance of offline physical stores, the construction and operation of online information network, and the optimization and market expansion of logistics and transportation were invested with a lot of funds. In order to meet the capital needs of subsequent expansion, SF successfully got listing in 2016. In addition to purchasing planes and building airports, SF plans to strengthen its cold-chain transport and international expansion. Going public not only brings huge capital to SF but also produces a good advertising effect. In 2016, SF ranked first among listed logistics companies in

terms of net profit (http://www.sohu.com/a/141984903_151241). It can also be found from the financial statements of this year that compared with 2015, the monetary fund of SF in its financial statements of 2016 increased significantly, mainly because of the increase in bank deposits caused by the increase in the capital increase of shareholders of Tyson holdings in this year and the inflow of cash from operating activities. Operating revenue, operating costs, accounts receivable, accounts payable, short-term borrowings increased significantly. Since 2016, working capital turnover efficiency of SF has also been greatly improved.

Table 9. Working capital elements from 2013 to 2016

	2016	2015	2014	2013
Monetary fund (ten thousand yuan)	691,550.90	362,037.33	235,314.56	194,352.28
Accounts receivable (ten thousand yuan)	455,991.15	399,255.9	298,133.53	200,167.48
Advance payment (ten thousand yuan)	149,254.92	1,474,75.19	163,785.61	81,615.18
Short-term loan (ten thousand yuan)	546,627.9	658,533.91	453,459.42	79,871.67
Accounts payable (ten thousand yuan)	525,917.72	309,547.31	227,233.84	133,708.93

Source: Data of consolidated financial statements.

(4) Receivables management and appropriate receivables strategy.

The turnover efficiency of SF receivables is relatively high in the industry, which is determined by its business characteristics. SF has a large number of customers and is

relatively dispersed. In the transaction, customers' immediate payment takes up a large proportion. In addition, as shown in the following table, the receivables turnover period of SF increased year by year from 2013 to 2016. With the longer cooperation time with some core high-quality customers and the growth of business volume, SF correspondingly extended payment days for such customers, resulting in a slight decline in receivables turnover efficiency. On the whole, the turnover efficiency of SF receivables is at a reasonable level, consistent with its business characteristics and operating conditions.

Table 10. Account receivables of SF from 2013 to 2016 and their turnover period

	2016	2015	2014	2013
Accounts receivable (ten thousand yuan)	455,991.15	39,9255.9	298,133.53	200,167.48
Receivables turnover period	26.78	26.32	23.20	20.47

Source: Data of consolidated financial statements.

4.5.2 Special factor analysis

The O2O model has brought a corresponding impact on the working capital management efficiency of SF. Based on the performance of its management efficiency, the special influencing factors using the O2O model are summarized as follows: (1) factor of offline stores, the initial establishment of stores; (2) factor of online platform, intelligent logistics management and diversified payment means; (3) warehousing factor, construction of large storage network; (4) delivery factor, leading the service quality industry; (5) transportation factor, advantages of cold chain logistics.

(1) Factor of offline stores, the initial establishment of stores

SF has had many experiences of exploration before the formal establishment of O2O platform, and also made a variety of preliminary preparations for the establishment of the O2O model of integrated logistics and e-commerce. After the establishment of the O2O platform, its current ratio and quick ratio declined rapidly, and its short-term solvency

declined. Until 2016, the integration of O2O e-commerce logistics was on the right track, and its debt paying ability was improved. The initial investment in the O2O model is relatively large, and the cost of online and offline establishment, maintenance and optimization is also relatively high. After the establishment of SF HEIKE O2O platform in 2014, SF spent a lot of money to support the expansion and maintenance of the platform, mainly because SF began to focus on laying offline stores in 2014. Up to 2015, there are nearly 3,000 offline physical stores, covering more than 40 districts in China(http://blog.sina.com.cn/s/blog_a091659c0102w47x.html). The large amount of investment has led to the vacancy of working capital, as well as the reduction of current assets and the increase of current liabilities, which has a negative impact on working capital turnover.

Table 11. Current ratio and quick ratio of SF from 2013 to 2016

	2016	2015	2014	2013
Current ratio	1.16	1.13	1.33	2.21
Quick ratio	1.14	1.12	1.29	2.18

Source: The calculation of financial indicators is based on the data of consolidated financial statements.

(2) Factors of online platform, intelligent logistics management and diversified payment means

SF established HEIKE O2O platform in 2014, and spent a lot of money to support the expansion and maintenance of the platform in 2015. It invested a total of 560 million yuan in research and development in 2016 (The annual report of Shunfeng, 2016), so the operating cost increased in 2014 and the main operating cost rate increased. SF has independently developed a complete operation management system (order management system, sorting support system, time management system, command and dispatch system, etc.) to realize order life and visual management. Since 2016, SF has established big data-driven warehouse site selection, business sales forecast, inventory siting strategy and intelligent allocation and allocation scheme. In 2016, SF invested a lot in research and development, aiming to create a simple and efficient business process. As the first enterprise in the industry to carry out automation transformation, SF has the highest

degree of automation in the industry. As shown in the following table, the operating cost ratio of SF has been maintained at 80.00% for two consecutive years since 2015, which has been improved compared with the early establishment of O2O model. This has provided a good technical guarantee for its subsequent operation and development. In various aspects such as ordering, freight storage, turnover and delivery, its automation and informatization can bring great convenience and cost saving, which is conducive to the acquisition and turnover of its working capital.

Table 12. Operating cost ratio from 2013 to 2016

	2016	2015	2014	2013
Operating cost ratio	80.00%	80.00%	83.00%	75.00%

Source: The calculation of financial indicators is based on the data of consolidated financial statements.
Note: operating cost ratio = operating costs/prime operating revenue

In terms of payment method, it is different from other e-commerce companies. Using the O2O model, SF preferred ordinary online payment methods, such as online banking, Alipay, WeChat, etc., and developed its own financial service platform “SF-PAY”, and also supports the cash payment method of offline stores. Firstly, the online payment platform can speed up the circulation efficiency of monetary funds, the delivery speed of accounts receivable and accounts payable. Meanwhile, the online payment function can present the process of transaction capital circulation more clearly, simplify the financial process and save the cost of working capital. Secondly, the financial platform of SF can absorb certain funds and support the capital operation of enterprises. Moreover, the feasibility of offline payment attracts consumers who have no Internet skills or are not used to online shopping, which can improve sales performance, increase the operating income and improve the turnover efficiency of accounts receivable and payable. In the financial statements of 2016, one of the main reasons for the sharp increase in monetary funds is the improvement in operating performance and the increase in bank deposits caused by the inflow of cash.

(3) Warehousing factors, construction of large storage network

In order to cooperate with the operation of offline physical stores, SF constructed a warehousing network across the country and expanded the warehousing scale. In 2015,

more than 300,000 square meters of warehouses were constructed successively to continuously improve the warehousing and logistics capacity. In 2015, storage facilities were constructed on a large scale for the operation of physical stores in the O2O model. After the storage platform was put into operation, it was effectively optimized in the aspects of inventory, packaging, handling and circulation processing, forming scale effect, which helped with reducing the storage cost of individual goods and accelerating the efficiency of goods turnover, thus saving operating costs. In 2015 and 2016, the operating cost ratio was maintained at 80.00%, which was improved from the initial stage of O2O construction. The construction of large storage network has improved the level of transportation and storage, effectively improved the performance and accelerated working capital turnover, and the working capital management efficiency has been significantly improved in 2016.

(4) Delivery factors, leading the service quality industry

In terms of e-commerce logistics, SF adheres to the positioning of medium and high-end e-commerce logistics market, and provides target customers with high-quality and comprehensive logistics services and great customer experience. Its service features are known as "efficient and rapid". Product service quality has always been a key element of SF. SF is a company of direct sales features, from the maintenance of online logistics information system, to the construction of every offline store, staff employment, logistics, transportation and so on, each link is a top-down integration self-built investment and management operations. It helps the standardization of the internal management, and can effectively guarantee service quality and customer experience, maintain customer source and increase customer loyalty. Compared with the increasingly fierce competition in the middle and low-end e-commerce logistics market, the business logistics market of SF is mainly aimed at the needs of customers to send and deliver high-value documents, with high unit price and weak price sensitivity of customers. However, the number of enterprises participating in the competition is limited due to high requirements on aspects such as timeliness, safety and service of logistics parts. With the improvement of residents' living standard and consumption concept, more and more consumers appear in the logistics market with high efficiency, safety and service. SF has always had a good image in the industry and a good reputation among consumers, which is a greater stability guarantee for its business performance. As shown in the following table, the cash turnover

period is relatively short and the operating income level is relatively high. The operating income of SF has also been steadily rising, providing sufficient working capital support for direct operations.

Table 13. Cash turnover period and operating income of sf from 2013 to 2016

	2016	2015	2014	2013
Cash flow period (day)	-3.15	0.34	1.16	/
Operating income (ten thousand yuan)	5,748,269.81	4,810,115.48	3,891,114.14	2,738,186.17

Source: The calculation of financial indicators is based on the data of consolidated financial statements.

(5) Transportation factors, advantages of cold chain logistics

In terms of cold-chain transportation, SF has established its cold transport division since November 2014. At present, SF is in a leading position in the business of several fresh products, including cold delivery to home, cold delivery to store, cold transport vehicle, cold transport and storage, SF cold delivery spare parts, fresh speed distribution, hairy crab delivery. At present, the network of cold transport routes has covered 176 cities and 117 food routes throughout the country, covering the core cities of northeast, north, east, south and central China (http://www.sohu.com/a/199990655_679870). Regardless of the cold chain logistics technology and business, SF has a great advantage. A large amount of investment has been made on the online and offline establishment, maintenance and optimization of the O2O platform in 2014 and 2015, the construction of the large storage network and the establishment of the cold transport business department. It can be seen from the table that from 2014 to 2016, the operating costs corresponding to the prime operating revenue shows a downward trend in the operating cost ratio. After the integration of O2O e-business logistics became mature in 2016, the cost control and operating income in the cold-chain logistics project showed a good performance, which also brought a positive impact on working capital management.

Table 14. Main operating revenue, operating cost and operating cost ratio from
2013 to 2016

	2016	2015	2014	2013
Operating costs (ten thousand yuan)	4,612,299.83	3,856,236.08	3,218,987.64	2,055,603.11
Operating costs growth	19.40%	23.60%	42.14%	/
Prime operating revenue (ten thousand yuan)	5,740,935.96	4,807,032.25	3,889,273.59	2,736,272.39
Prime operating revenue growth	19.61%	19.80%	56.60%	/
Operating cost ratio	80.00%	80.00%	83.00%	75.00%

Source: The calculation of financial indicators is based on the data of consolidated financial statements.

4.6 Suggestions for Optimizing Working Capital Management Efficiency of Logistics Enterprises using the O2O Model

Based on the case analysis, 8 suggestions are proposed on how to optimize the working capital management efficiency of the logistics industry using the O2O model : (1) reasonable offline store investment; (2) optimize warehouse construction; (3) accelerate the construction of intelligent logistics and optimize the business structure; (4) optimize the cold-chain logistics system; (5) improve the service system level; (6) formulate reasonable credit policies; (7) select reasonable financing methods; (8) obtain government support.

4.6.1 Reasonable offline store investment

At the initial stage of O2O model establishment, logistics enterprises need to invest a lot of money in the construction and maintenance of offline physical stores as well as

the construction and operation of online information network. First of all, in the short term, there is no reliable external source of funds, which requires the logistics companies themselves to have strong financial support. Without sufficient self-financing support, and without effective external funds, if logistics enterprises blindly build O2O platforms, it would lead to rapid decline of short-term solvency of enterprises and huge financial risks, which may cause the rupture of capital chain, and the gain is not worth the loss. Therefore, logistics enterprises should pay attention to adjusting the structure ratio of current assets and current liabilities, and balance the progress of expanding the market and the degree of bearing financial risks. Reasonable investment should be made to avoid risks and guarantee the good operation of enterprises.

4.6.2 Optimize warehouse construction

The warehouse construction will consume a large amount of working capital. The reasonableness and effective planning of warehouse layout is the key to reduce inventory, increase the storage capacity of logistics goods, and then improve the efficiency of working capital management. The reduction of inventory will have a positive impact on inventory turnover efficiency, and the enhancement of storage capacity will bring about the reduction of unit storage cost, thus saving operating cost. Inventory and operating cost will affect the working capital management efficiency of enterprises.

4.6.3 Accelerate the construction of intelligent logistics and optimize the business structure

Smart logistics is being innovated. To optimize the various links in the logistics industry chain could improve the industry efficiency, reduce the industry cost, reduce the industry risk and create new value points. Moreover, diversified payment methods can meet the needs of consumers with different payment methods preference, attract more consumers, improve sales performance and increase operating income. Not only that, the faster payment between consumers and merchants can make the working capital of the enterprise get better turnover, reduce the cost of capital precipitation, and improve the working capital turnover efficiency of the enterprise.

Secondly, O2O model of logistics enterprise cannot blindly following crossover, after all, there have been many large enterprises in the area of electronic commerce, they

obtained certain achievement in their respective areas, e-commerce logistics enterprises layout must find accurate positioning, looking for the suitable direction for their own business, optimize the business structure, set up their own advantages, which is the only way to gain a role in the fierce market competition.

4.6.4 Optimize the cold-chain logistics system

Cold chain logistics is an important part of logistics and develops rapidly using the O2O model. The high cost of cold chain logistics increases the circulation pressure of working capital. Reasonable investment in cold chain logistics technology and professional skills of delivery personnel should be increased to reduce the cost of refrigerated storage, transportation and reduce the cost of goods deterioration in cold chain logistics. Cold chain logistics should be optimized to reduce the cost and increase the income, reduce the financial risk of working capital and accelerate the capital turnover.

4.6.5 Improve the service system level

The timeliness and safety in transportation, the professional responsibility and service attitude of transportation personnel, and the perfection of O2O online and offline feedback system will affect the payment speed and re-consumption behavior of consumers, and then affect the collection speed, business performance and income of logistics enterprises, thus affecting the amount of operating funds and its turnover efficiency. Logistics enterprises should improve the understanding of logistics service quality, strengthen the construction of logistics service quality management information system, strengthen the construction of logistics standardization, improve logistics service quality, improve the timeliness, integrity, communication and error of logistics service quality in O2O model, which can have positive effects on consumer buying attitude and is helpful to promote the efficiency of working capital management.

4.6.6 Formulate reasonable credit policies

Reasonable and strict receivables credit policy can guarantee the effective turnover of receivables in logistics enterprises using the O2O model, so as to improve the working capital turnover efficiency. Compared with accounts receivable, accounts payable bring a reverse effect to working capital management. Therefore, the industry credit of the

enterprise should be reasonably utilized to extend the payment term and relieve the pressure of working capital turnover. The relatively strict credit receivables policy and the use of the relatively extended credit standing of the company's accounts payable strategy can have a beneficial impact on the working capital management efficiency and thus enhances the enterprise's management level.

4.6.7 Select reasonable financing methods

At the beginning period of O2O platform, for the establishing offline entity stores, the construction and maintenance of the online information network, the operation and optimization of logistics transportation and market expansion ask for a lot of invest. In order to meet the capital needs of subsequent expansion, even such company with deep pockets cannot rely on proprietary funds demand and have to choose to go public to undertake financing. The competition to go public in recent years also illustrates the problem of large capital demand and difficult financing in logistics industry. Logistics enterprises need to choose appropriate financing methods according to their own capital strength, their own demands and risk inclination. In the case that the bank loan, the self-support fund is difficult to meet the development need, the equity financing and the listing financing are a way out. The backdoor listing is a relatively easy and short-cycle listing channel.

4.6.8 Obtain government support

The Chinese government has always been supportive for logistics industry. If logistics industry can learn to use all kinds of preferential policies, communicate and collaborate positively in their business development and expansion, and strive to gain support for tax relief, land cost, convenient transportation, payment term and license approval, then the favorable guiding effect can be obtained on corresponding monetary funds, operating costs, accounts payable and other subject.

5. CONCLUSION

This chapter summarizes the research results of this dissertation, and puts forward the weakness of the work and future prospects.

5.1 Summary and Conclusion

This thesis highlights the relevant literature on O2O model and working capital management, and then analyzes the changing mechanism of working capital management efficiency in O2O model from three aspects: current situation of working capital management in the logistics industry, capital element structure and working capital turnover efficiency. Regarding this problem, relevant theories are presented, and the following main factors influencing working capital management efficiency in O2O mode were summarized: development stage, business scope, financing method, government behavior, storage platform, payment means and other factors.

In order to verify the theoretical framework, this paper studies the SF case in O2O model from 2013 to 2016 and has carried on the analysis discussion, mainly to see the market performance and related financial statements, illustrates the operation mechanism of business logistics integration O2O model. Based on the data of representative enterprises in the logistics industry during this period, the development status of the company's working capital management level using the O2O model is analyzed. And on this basis, the main factors influencing working capital management efficiency of SF using the O2O model are concluded as general factors and special factors.

The general influence factors are:

- (1) The government supports;
- (2) Diversification of business operations;
- (3) Successful listing and financing;
- (4) Receivable management: accounts receivable strategy is unreasonable.

The special factors are:

- (1) The line of stores factor: the establishment of stores;
- (2) The online platform factor: intelligent logistics management and diversified means of payment are;
- (3) Storage factor: the construction of large storage network;
- (4) Distribution factor: industry leading service quality of, industry;
- (5) Transportation factor: cold chain logistics advantages.

In the end, based on the case analysis, 8 suggestions are proposed on how to optimize the working capital management efficiency of the logistics industry using the O2O model:

- (1) Reasonable offline store investment;
- (2) Optimize warehouse construction;
- (3) Accelerate the construction of intelligent logistics and optimize the business structure;
- (4) Optimize the cold-chain logistics system;
- (5) Improve the service system level;
- (6) Formulate reasonable credit policies;
- (7) Select reasonable financing methods;
- (8) Obtain government support.

5.2 Future Research

Insufficient of this paper research has two main points: (1) this paper studies the logistics O2O model of working capital management efficiency problem, however the development of O2O model in China is short, the reference literature and the mature case is not enough, the study ability of the author and the corresponding analytical data is

limited, the research of working capital management efficiency is not deep enough; (2) only one representative company is selected for discussion and analysis, which may have the limitation of generalizing.

In the context of emerging business models, the research on the integration of online and offline logistics and e-commerce is not mature enough. The longer the industry develops using this model and the more problems arise, the more effective data can be utilized. In the future research, research could be made more specific and more data could be gotten to support, so as to analyze the operation capacity of enterprises integrating logistics and e-commerce using the O2O model, and put forward better summary suggestions in theory and practice, so as to promote the development of the industry.

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Appendix

The stock code of the 20 listed logistics companies which are chosen as representatives are as follows.

Company Name	Code
YTO Express Group Co., Ltd.	600233
Aucksun Co., Ltd.	002245
Prolto Supply Chain Management Co., Ltd.	002769
Y.U.D. Co., Ltd.	600119
CMST Development Co., Ltd.	600787
HPF Co., Ltd.	200350
Inform Storage Equipment (Group) Co., Ltd.	603066
Jiangsu Wanlin Modern Logistics Co., Ltd.	603117
Jiangsu Feiliks International Logistics Inc.	300240
Europol Intelligent Network Co., Ltd.	002711
Feima International Supply Chain Co., Ltd.	002210
CTS International Logistics Co., Ltd.	603128
Xiamen C&D Inc.	600153
Ccs Supply Chain Management Co., Ltd.	600180
Sto Express Co., Ltd.	002468
Guangyu Development Co., Ltd.	600270
Xiangyu Co., Ltd.	600057
Eternal Supply Chain Management Co., Ltd.	002183
Yunda Holding Co., Ltd.	002120
S.f. Holding Co., Ltd.	002352