Working Capital Management of Catering Enterprises Based on the Supply Chain — Taking the Jiumaojiu Group as an Example

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Received: October 29, 2023 Accepted: November 23, 2023 Online Published: November 29, 2023

Abstract

The management of working capital is crucial to the development of a business. In recent years, due to the epidemic, the catering industry has generally suffered from reduced revenue, high costs and financing difficulties. With the increasing competition in the catering industry, it is an important research direction to study the working capital management of listed catering enterprises in China from the perspective of supply chain. As a large catering brand in China, Jiumaojiu was in a poor financial situation in recent years. To better understand and help to tackle the problem existing in the management of its working capital, this paper takes Jiumaojiu Group as a case for study. Based on the working capital management evaluation method proposed by Professor Wang Zhuquan, we analyzed the working capital management of Jiumaojiu Group in recent years from the procurement, production and sales parts of its supply chain. According to the results of financial analysis based on Jiumaojiu Group's annual reports for the periods from 2018 to 2022, we conclude that, in order to improve the utilization of the funds and the management of the working capital, Jiumaojiu Group need to improve it inventory management capabilities, strengthen the management of its accounts receivable, and slow down its business expansion slightly. It is hoped that this research can provide reference for Chinese catering enterprises to improve their working capital management.

Keywords: Working Capital Management, Supply Chain Management, Jiumaojiu Group

1. Introduction

Working capital management mainly refers to a series of management strategies adopted by enterprises to improve the efficiency, profitability and paying ability, which is the core content of short-term financial management and can help enterprises use their funds efficiently. As the epidemic spreads around the world, many countries are facing problems of negative economic growth. In the domestic markets, the consumers' consumption expenditure has been greatly reduced (Xu, 2022) and consequently the service industries are under the pressure from the weak purchasing power of end consumers. As the competition in domestic and foreign markets becomes intensifying, whether the company's funds can operate efficiently has been vital to the sustainable development of the enterprises. It is particularly urgent to pay attention to the management of working capital of enterprises. The working capital flow starts from procurement, involving production, marketing and other aspects related to the supply chain. The essence of working capital management is the working capital management throughout the supply chain.

As a traditional service industry, the catering industry has made positive contributions to economic development, expanding domestic demand, prospering the market economy, providing jobs and improving people's better life. However, according to Ma (2022), the catering industry was still seriously affected by the epidemic, with decreased income, high cost, tight cash flow and difficulty in financing. Jiumaojiu Holding Co., Ltd., a catering group focusing on Chinese catering chain operation, was founded in Haikou, Hainan Province and has been operating for more than 28 years. The Group has established and operated five Chinese catering brands indifferent segments, including "Jiumaojiu Northwest Cuisine" and "Taier Chinese Sauerkraut Fish". It was listed on the Stock Exchange of Hong Kong on January 15, 2020. However, recently, Jiumaojiu issued a profit

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warning announcement, due to the epidemic and the fluctuation of the exchange rate, the profit attributable to shareholders was not less than 47 million yuan, down about 86.2% year-on-year, that is, the net profit of Jiumaojiu fell by nearly 90%. In order to keep the business running during this tough time and develop in the long-term, it is crucial to strengthen the efficient management of its working capital.

In times of financial setbacks owing to the international relations and the epidemic, there are a lot of difficulties for the developments of enterprises. From the perspective of supply chain, this paper aims to study the current situation of working capital management of Jiumaojiu Group, analyze the existing problems in its working capital management, and put forward improvement suggestions, which may help to explore the reasonable capital structure of the enterprise, enhance the risk resistance ability, and achieve maximum economic benefits. Also, this study aims at providing useful information for financial data users from the perspective of supply chain, promote managers and financial personnel in enterprises to cultivate view of the channel management, so as to formulate more objective and scientific working capital management policies and improve the efficiency of working capital use and management.

2. Literature Review

American scholar Michael E. Porter firstly proposed the concept of value chain, which provided a theoretical foundation for the research of supply chain. In the early days, the supply chain was viewed as a logistics process. Beamon (1999) defined the supply chain as the logistical connection of manufacturers, suppliers and sellers, which could improve the efficiency of the enterprise. In the 1990s, people's understanding of the supply chain has changed from a "production chain" to a "value-added chain". Mentzer et al. (2001) suggested that the upstream and downstream enterprises form a complete supply chain, in which the products, funds and information between enterprises could be exchanged. Later studies paid more attention to the network of the core enterprises. Hofmann and Kotzab (2011) believed that the integration and coordination of supply chain became the main content of the supply chain research. The theme of integration played an important role in the research of supply chain management. Tong and Gu (2013) introduced business flow and workflow on the basis of the original supply chain management research method, and formed a 5F research model, which enriched the supply chain management research method. Gang et al. (2016) pointed out that the application of big data based on information technology to the supply chain management can improve the efficiency of enterprises, and help to measure how much benefit the supply chain can bring to the enterprise. Zhang (2020) carried out the research of the integration of supply chain and finance, which provided a new development concept for corporate financing.

In 1930s, Guthmann (1934) noticed that many businesses went bankrupt due to insufficient working capital during the Great Depression in the United States. He first proposed a study of working capital in response to this phenomenon. Mao (1995) was the first scholar to study working capital in China. He expounded the concept of working capital management, and proposed that the importance of integrating the two aspects of current assets and current liabilities. Wang and Ma (2005) believed that enterprises need innovation in working capital management. The focus should be shifted from the allocation of current assets to the channel control. It was believed that while considering the relevant interests of upstream and downstream enterprises, more working capital isn't always better (Fu, Huang & Gan, 2006). Wang and Zhang (2012) pointed out that for the use of working capital, only a comprehensive analysis of all aspects and elements could form a more objective evaluation system. Kumar and Sisadia (2012) used nine major factors for quantitative analysis, and the pointed out that working capital management is to ensure that the company have sufficient capacity to pay the long-term and short-term debts. Liu (2020) used different indicators to conduct a comprehensive study on the working capital of enterprises, and pointed out that the channel capital management of enterprises would have a direct impact on the working capital management.

Since 2001, studies in the United States had introduced supply chain thinking into working capital management, believing that it was necessary to incorporate supply chain management in business management. In recent years, many scholars at home and abroad have also conducted the research of working capital management from the perspective of supply chain. It was believed that though there were differences in working capital management between industries, improving supply chain management and channel relationship management can improve the working capital management in different companies (Wang, Pang & Sun, 2007). Lind et al. (2012) proposed that with the intensifying competition in the market, the competition between enterprises was no longer limited to the interests, but has shifted to the competition for the market, customers and suppliers in the entire supply chain. Therefore, the management of working capital should abandon the traditional single factor, and should be based on the overall management of the supply chain. It was vital to optimize the cooperative relationship between enterprises, suppliers and customers. Zhao and He (2018) conducted a study using case analysis. They pointed out that the speed of logistics turnover in the supply chain has a significant impact on the efficiency of working

capital. Xie (2018) constructed the working capital turnover period index, and evaluated the procurement, production, sales process of the enterprise from the perspective of the business process. Wen and Wang (2021) pointed out that the more stable and concentrated the supply chain, the higher the efficiency of working capital management of enterprises. Zhang (2021) took a manufacturing enterprise as the research object and found some problems in its working capital management. He proposed countermeasures for these problems from three parts of procurement, production and sales.

3. Background of the Case

3.1 Overview of Catering Industry in China

According to the National Bureau of Statistics, in recent years, the overall scale of China's catering industry has shown a growth trend. In 2020, owing to the outbreak of epidemic, the annual catering revenue fell by about 15% compared to 2019. In 2021, with the epidemic gradually under control, China's catering industry has recovered to the pre-epidemic level. However, in 2022, the revenue of China's catering industry was 4,390 billion yuan, down 6.3% from the previous year.

Owing that the total profit of catering enterprises in China in 2022 haven't been revealed, here we analyze the total profit from 2017 to 2021. Although the total revenue showed the trend of fluctuation, the total profit of China's catering enterprises has dropped significantly, from 258 billion in 2018 to 25 billion in 2019. What's more, in 2020, the total profit has dropped by 50% in a year, from which we can conclude that owing to the epidemic, the operation of the catering industry has been affected seriously and the total profit in catering industry has declined.

3.2 Basic Information of Jiumaojiu Group

Jiumaojiu (Guangzhou) Holding Co. Ltd., a catering group focusing on Chinese catering chain operation, was founded in Haikou, Hainan Province and has been operating for more than 28 years with more than 16,000 employees. The Group has established and operated five Chinese catering brands in different segments, namely, "Jiumaojiu Northwest Cuisine", "Taier Chinese Sauerkraut Fish", "Song Hot-pot Factory", "The Uncle Chef" and "Laimeili Meishan Grilled Fish with Green Prickleyash". It is a leading Chinese restaurant, committed to operating catering brands distributed in different market segments. According to its interim report in 2022, as of December 31, 2022, the number of its self-operated stores has reached 556. It has worked with more than 100 shopping centers for more than five years. The restaurant network has covered 109 cities in China and 2 cities in Singapore and Canada. The number of registered members in the membership system has exceeded 8 million. However, the company is in a poor financial situation in recent years. Its operating income in the first half of 2022 decreased by 6. 1% year-on-year, and its net profit fell from 205 million to 63 million. Its financial situation in the second half of the year may be worse owing to the epidemic.

3.3 Supply Chain Management of Jiumaojiu Group

The supply chain of Jiumaojiu Group can be divided into upstream, midstream and downstream parts. The upstream part of the supply chain is the pre-production preparation, including raw material procurement and the research and development of new products. The midstream part refers to the production process. Jiumaojiu Group's own central kitchens in Guangdong, Hainan and Hubei produce most of the semi- products. It also purchases a small number of semi-finished products from third-party supply centers. The downstream part is the marketing of its own products. The products eventually flow to consumers at the end of the supply chain through online channels and offline channels. In recent years, Jiumaojiu has continued to invest in the construction of supply chain, especially the upstream and midstream parts. Its 2022 interim report shows that it has completed a supply chain management system with five functions: estimating quotation, warehouse management, procurement management, production and processing, and logistics management.

On December 23, 2021, the Jiumaojiu constructed a National Supply Chain Center Base in Hengli Town, Nansha District, Guangzhou. With a construction area of about 138,000 square meters and a total investment of 500 million yuan, the base is expected to achieve an annual output value of more than 3 billion yuan in 2027. It will become a comprehensive catering base integrating raw material storage, food processing, transshipment, distribution, personnel training and cultural display. Investment in the supply chain will help Jiumaojiu increase the company's profits. For example, through the layout of the upstream, though the market bass prices increase generally, the purchase price of sea bass in 2021 has decreased compared with 2020, greatly reducing the cost.

3.4 Working Capital of Jiumaojiu Group

This paper analyzes Jiumaojiu's working capital structure in detail before analyzing the working capital management form the view of the supply chain. It is believed that the working capital structure includes current

assets and current liabilities. Based on the financial data from 2018 to 2022, the following analysis is carried out.

(1) Current Assets

The proportion of current assets can describe the liquidity of the enterprise's assets. The scale of current assets is shown in Table 1 below.

Table 1. Working Capital Structure of Jiumaojiu Group

RMB'000

				The Proportion of
	Current Assets	Non-current Assets	Assets	Current Assets
2018	226,618.00	960,351.00	1,186,969.00	
2019	383,250.00	1,271,101.00	1,654,351.00	23%
2020	2,861,710.00	1,944,741.00	4,806,451.00	60%
2021	2,559,430.00	2,575,666.00	5,135,096.00	50%
2022	2,622,643.00	2,404,643.00	5,027,286.00	52%

As we can see from the Table 1, the total current assets of Jiumaojiu Group increased from 227 million yuan to 2.62 billion yuan. According to the details in the financial reports, it is due to the increase of the cash. However, the proportion of current assets in the later period declined, which is related to its focus on supply chain management. Although Jiumaojiu had invested more on the midstream and the downstream of the supply chain, in recent years it also begun to build its own raw material production base in the upstream of the supply chain and its own central kitchen in the midstream, so it also needed non-current assets such as production plants and production equipment. Therefore, the proportion of current assets has decreased slightly. The current assets mainly include: monetary funds, accounts receivable, inventory, etc. Table 2 shows the proportion of major current assets of Jiumaojiu Group from 2018 to 2022.

Table 2. The Proportion of Major Current Assets of Jiumaojiu Group

RMB'000

		Proportion	Trade and	Proportion		Proportion
		of	Other	of Trade and	Cash and Cash	of Cash and
	Inventories	Inventories	Receivables	Other	Equivalents	Cash
				Receivables		Equivalents
2018	36,387.00	16%	124,476.00	55%	59,752.00	26%
2019	74,904.00	20%	156, 173.00	41%	127, 170.00	33%
2020	51,094.00	2%	293,274.00	10%	1,843,903.00	64%
2021	70,750.00	3%	408,958.00	16%	1,342,090.00	52%
2022	78,042.00	3%	477,207.00	18%	1,845, 171.00	70%

As shown in Table 2, the cash and cash equivalents and the trade and other receivables were relatively high. The proportion of inventories showed a downward trend, indicating that the Jiumaojiu Group took certain measures to avoid the impairment caused by inventory backlog and reduce the proportion of inventory occupied by working capital. The surge in cash and cash equivalents was mainly related to the need of cash for the expansion in recent years. However, its proportion was too high, indicating that the company doesn't invest efficiently, and the return would reduce. In addition, accounts receivables fell significantly, indicating that its status in the supply chain has become higher, reducing the risk of uncollectible accounts receivable.

(2) Current Liabilities:

It is inevitable for enterprises to borrow in daily operations. The reasonable liability structure can solve the problem of insufficient cash of enterprises and help enterprise use external funds to carry out internal business, bringing financial leverage to enterprises. The current liabilities of Jiumaojiu Group are shown in Table 3 below.

Table 3. Current Liabilities of Jiumaojiu Group

RMB'000

	Current Liabilities	Non-Current	Liabilities	The Proportion of
		Liabilities		Current Liabilities
2018	440,056.00	543,344.00	983,400.00	45%
2019	793,841.00	689,834.00	1,483,675.00	54%
2020	748,945.00	997, 104.00	1,746,049.00	43%
2021	804,545.00	1, 192,955.00	1,997,500.00	40%
2022	859,915.00	1, 108,339.00	1,968,254.00	44%

As can be seen from Table 3, the proportion of current liabilities of Jiumaojiu Group remained relatively stable, fluctuating around 45%. According to the research of Li (2022), the portion of current liability from 30% to 70% is moderate, which means it would not rely solely on short-term borrowing. Although short-term debt can temporarily cope with the risk of insufficient liquidity, their borrowing interest rates are high and may lead to a break in the capital chain.

4. Analysis of the Working Capital Management of Jiumaojiu Group from the Perspective of Supply Chain

4.1 Working Capital Management in the Procurement Process

The working capital management in procurement mainly includes the management of payables, advance payments and material inventory. Both accounts payable and notes payable are debts incurred by enterprises to purchase raw materials from suppliers, in which case the enterprise appropriates the funds of upstream suppliers. Prepayment is the payment paid by an enterprise to suppliers before receiving the goods, in which case the upstream suppliers of the enterprise occupy working capital. In order to speed up the working capital turnover efficiency of the procurement process, it is necessary to reduce the amount of raw material inventory and appropriately extend the payment cycle. Through the construction of the procurement platform, which includes the bass tracing system, Jiumaojiu Group can communicate with suppliers more efficiently, maintain friendly relationship with them, and reduce the cost of procurement. The calculation formula for the working capital of the procurement process is: Working capital in the procurement process = material inventory + advance payment - accounts payable. The working capital in the procurement process of Jiumaojiu Group in recent years is shown in Table 4.

Table 4. Working Capital in the Procurement Process

RMB'000

					The Working	Turnover
		Inventory			Capital in the	Period
	Inventory	Turnover	Advance	Accounts	Procurement	in the
		in Days	Payment	Payable	Process	Procureme
						nt Process
2018	36,387.00	18.9	20,647.00	72,464.00	(15,430.00)	(2.93)
2019	74,904.00	20.6	34,234.00	96,807.00	12,331.00	1.65
2020	51,094.00	22	73,431.00	137,731.00	(13,206.00)	(1.75)
2021	70,750.00	14.5	102,476.00	141,207.00	32,019.00	2.76
2022	78,042.00	20.2	92, 191.00	139,318.00	30,915.00	2.93

Its accounts payable generally showed an upward trend, which is related to its public listing in 2020. Its rapid expansion and a large amount of borrowing increased the efficiency of capital turnover, but also increased the company's debt risk. Inventory turnover in days refers to the number of days of an enterprise from the acquisition of inventory to consumption and sales, calculated through the proportional relationship between the cost of sales and the average inventory in a certain period of time. Its inventory turnover in days performed relatively well in 2018 and 2021, reflecting that the efficiency of its inventory management in these two years is high. In general, its payables are significantly higher than the advance payment, which can help the enterprise save funds and improve efficiency in the procurement process. In 2018 and 2020, the working capital of Jiumaojiu Group in the procurement process was negative, which shows that its accounts payable fully covered the scale of funds occupied by raw materials and prepaid accounts. Thanks to its commercial reputation, the procurement process was well managed. However, in 2019, 2021 and 2022, the working capital of the

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procurement process is relatively high, reflecting its inefficient capital flow and the capital occupied by inventories and the suppliers, which do harm to the operation of the enterprise. Turnover period in the procurement process in these three years is positive, which is 1.65 in 2019, 2.76 in 2021 and 2.93 in 2022. A positive turnover period indicates that Jiumaojiu didn't use the suppliers' funds and accounts payable may be poorly managed in business.

4.2 Working Capital Management in the Production Process

In the production process, the capital is mainly occupied by the salary of employees and other payables. If the enterprise delays the payment of these two parts, it can reduce the capital investment. The formula for calculating working capital in the production process is: Working capital in the production process = productive inventory + other receivables - employee pay payable - other payables.

Jiumaojiu Group has established a logistics system, including three central kitchens located in Guangdong, Hainan and Hubei. Each kitchen is equipped with three warehouses. The service radius of the various logistics facilities is about 200 km. While some of its ingredients are directly transported to the restaurants, its own central kitchens in Guangdong, Hainan and Hubei produce most of the semi-finished products. Guangdong's Central Kitchen opened in December 2016 to provide ingredients to its restaurants in South China (excluding Hainan). Hainan's central kitchen opened in September 2016, providing ingredients for its restaurant in Hainan. Hubei's Central Kitchen opened in December 2015 and provide ingredients to its restaurants in Central and East China. In conclusion, Jiumaojiu invested a lot in the production process. The production process is the core part of the catering industry, and the efficiency of the production process provides a guarantee for enterprises to obtain profits. The working capital of Jiumaojiu Group in the production process in recent years is shown in Table 5.

Table 5. Working Capital in the Production Process

				KMB'000
				Turnover
	Other		The Working	Period in the
	Receivables	Other Payables	Capital in the	Production
			Production Process	Process
2018	67,498.00	114,554.00	(47,056.00)	(8.95)
2019	87,779.00	149,652.00	(61,873.00)	(8.29)
2020	126,815.00	185,930.00	(59, 115.00)	(7.84)
2021	222,238.00	212,267.00	9,971.00	0.86
2022	241,610.00	201,601.00	40,009.00	3.79

In the production process, the working capital of Jiumaojiu Group was negative in the first three years, and it has increased significantly in the past two years. Since its financial statements do not reflect productive assets and employee pay payable, the calculation of working capital for its production process is relatively simple. Specifically, other receivables increased from 67.5 million yuan to 241.61 million yuan, an obvious increase, which shows that the company have to improve them management of funds in the production process. Other payables grew faster, from 114.554 million yuan in 2018 to 201.60 million yuan in 2022, an increase of nearly three times in five years, which shows that Jiumaojiu have tried to occupied funds in the production process. The turnover period in the production period from 2018 to 2020 is negative and about minus eight, indicating that it used the capital efficiently in these three years. However, it grew up rapidly and turned positive from 2021, showing that the capital may be occupied by some plants or labor cost in the production process and was not efficiently used.

4.3 Working Capital Management in the Sales Process

Selling is the last step of business activities, which is the key way to bring finished products to the sales market and the consumers, in order to return funds for operation. Enterprises gain capital returns through this channel, and then invest the funds in the next round of procurement, production, and marketing, or some financial management activities. The cycle is a vital to the sustainable development of enterprises. In the sales part, the working capital of the enterprise includes advance receivables, accounts receivable and tax payable. Advance receivables are funds prepaid by the customers, which means the occupation of the customers' funds. The finished products and account receivables will occupy the working capital of the enterprise in the sales part. The formula for calculating the working capital of the sales process is: Working capital in the sales process = accounts receivable + finished products – advance receivables - taxes payable. The working capital in the sales

process of Jiumaojiu Group in recent years is shown in Table 6.

Table 6. Working Capital in the Sales Process

					RMB'000
					Turnover
				The Working	Period in
	Accounts	Advance	Tax Payable	Capital in the	the Sales
	Receivable	Receivables		Sales Process	Process
2018	16,792.00	856.00	12,313.00	3,623.00	0.69
2019	11,922.00	746.00	23,085.00	(11,909.00)	(1.60)
2020	15,089.00	1,661.00	37, 165.00	(23,737.00)	(3. 15)
2021	12,223.00	980.00	38,259.00	(27,016.00)	(2.33)
2022	23,207.00	0.00	30,884.00	(7,677.00)	(0.73)

The main business of Jiumaojiu Group is to operate restaurants, provide takeaway business and sell special local products. Jiumaojiu Group tries to expand sales channels, making full use of the takeaway platform. Through online and offline channels, the revenue can grow and the funds for operation can return. In recent years, the tax payable has generally shown an upward trend. The accounts receivable also increased as a whole, up by about 38% from 2018 to 2022, showing that accounts receivable occupies more and more funds, which limits the capital turnover efficiency of the enterprise. It is not conducive to the development of enterprises, and the management of accounts receivable of Jiumaojiu Group needs to be improved. The advance receivables are funds prepaid by customers, which can increase the liquidity of Jiumaojiu Group and help obtain adequate sales information. However, the proportion of advance receivables of Jiumaojiu Group is very small. By calculating the working capital of the sales process, it is shown that from 2018 to 2020, the working capital of the sales process has been negative and continued to decline, indicating that the capital of consumers occupied by Jiumaojiu Group is increasing. However, working capital increased from 2021. Though the turnover period in the sales process were still negative, it increased dramatically from 2020 to 2022, showing the poor management of working capital in the sales process in these three years.

4.4 Problems and Suggestions in the Working Capital Management Based on the Supply Chain for Jiumaojiu Group

4.4.1 Problems in the Working Capital Management Based on the Supply Chain

Based on the above analysis, the problems in the working capital management for Jiumaojiu Group could be summarized as follows.

(1) Low Efficiency of Inventory Management

Compared with other industries, the inventory of the catering industry is with high liquidity, but the expiration date is generally the shortest. There are strict requirements for the freshness of ingredients. Therefore, the requirement for storage environment is high. If the material inventory doesn't be managed well, the loss for the company would be large. It's material inventory increased form 36.4 million in 2018 to 78 million in 2022, and the inventory turnover in days increased from 18.9 in 2018 to 20.2 in 2022. The overstock of inventory restricted the liquidity of funds, resulting in the increase in the turnover period in the procurement process. It is necessary to accelerate the inventory turnover efficiency of enterprises.

(2) Excessive Account Receivable

With the continuous expansion and development, the operating income of Jiumaojiu Group has increased significantly, and the accounts receivable were also surging. From 2018 to 2022, accounts receivable increased from 16.79 million yuan to 23.21 million yuan, an increase of 38%. The company adopted a relatively loose credit sales policy in order to seize market share in development, resulting in a surge in corporate accounts receivable. A large number of accounts receivable can bring with a series of adverse effects on a business. On the one hand, excessive accounts receivable indicates that the ability of the enterprise to convert products into funds is weak, which is easy to cause difficulties in capital turnover of enterprises; On the other hand, accounts receivables have the risk of bad debts, which increases the management cost and opportunity cost of the enterprise. At present, there are three main sales methods, cash sales, credit sales and pre-sales. Jiumaojiu Group generally implements cash sales, that is, to pay after the meal. This can prevent the occurrence of bad debt losses, quickly recover funds, and speed up the flow of funds. However, by comparing the accounts receivable of Jiumaojiu Group in the past five years, it can be seen that the scale of corporate accounts receivable has

skyrocketed, indicating that the financial risk of the enterprise will increase accordingly. As of 2022, the accounts receivable of Jiumaojiu Group reached 23.2 million yuan. These receivables may come from third-party payment platforms such as Alipay and WeChat. This may lead to limited working capital turnover in the marketing process, which increases the cost of the enterprise to a certain extent.

(3) Aggressive Expansion Strategy

Table 7 shows the number of stores of each company in recent years.

Table 7. Number of Stores

		Taier	Laimeili			
	Jiumaojiu	Chinese	Song	The	Meishan	
	Northwest	Sauerkraut	Hot-pot	Uncle	Grilled	
	Cuisine	Fish	Factory	Chef	Fish	Total
2019	143	126	1	1	0	271
2020	98	233	3	1	0	335
2021	83	350	9	1	2	445
2022	77	384	11	1	2	475

Affected by the epidemic, the number of passengers has declined, and the seat turnover rate for restaurant has dropped significantly, which has had a negative impact on revenue. But Jiumaojiu is still expanding, especially Tai Er. The number of stores has surged. In the process of implementing the scale expansion strategy, Jiumaojiu Group has not closely considered the current economic and social situation.

- 4.4.2 Suggestions in the Working Capital Management Based on the Supply Chain
- (1) Jiumaojiu Group needs to improve its inventory management capabilities. Jiumaojiu needs to ensure that the inventory level is maintained in an appropriate state, avoiding the occupation of funds, thereby enhancing the efficiency of capital use in the procurement process. Therefore, Jiumaojiu could use the just-in-time (JIT) inventory system, which aligns raw-material orders from suppliers directly with production schedules. Companies employ this inventory strategy to increase efficiency and decrease waste by receiving goods only as they need them for the production process, which reduces inventory costs. This method requires Jiumaojiu to forecast demand accurately.
- (2) In addition to scientific and technological means to supervise the inventory, Jiumaojiu Group should also designate special personnel to regularly check the volume and freshness of raw materials every day, preventing food materials from deteriorating due to improper storage, which could reduce the losses and costs caused by inventory.
- (3) Jiumaojiu could establish the marketing investigation system to forecast the market demand. The rapid expansion has led to the inability to research some cities and estimate the consumption of these stores, which makes it difficult for procurement plans to meet market demand. The consumption of food raw materials is affected by many uncontrollable factors, such as fluctuations in customer flow and changes in consumer preferences. If warehouse management ignores the needs of downstream customers, it will greatly increase the difficulty of matching with market demand. Therefore, Jiumaojiu group needs to establish the marketing investigation system and set up a team specializing in marketing investigation.
- (4) In order to avoid the shortage of the company's working capital, it is necessary to strengthen the management of accounts receivable. Enterprises can formulate corresponding collection policies according to the age of accounts receivable, the number of accounts receivable, etc. Although most of the receivables of Jiumaojiu Group belong to third-party payment platforms, which would be paid in the short term, the amount of accounts receivable of Jiumaojiu Group is too large. Jiumaojiu Group could collect money through encouraging customers to use some real-time payment methods such as online banking.
- (5) Jiumaojiu should find a development model that meets the company's actual situation and reduce expansion slightly. After listing, Jiumaojiu Group has gradually expanded. However, owing to the rapid change of the market under the pressure of the epidemic and the reduction of national consumption level, many enterprises in catering industry are facing the risk of bankruptcy. In this context, companies should keep a cautious attitude and pursue a contractionary strategy.

5. Conclusion

This paper takes Jiumaojiu Group as an example and discusses its working capital management from the perspective of supply chain management using the financial index analysis method. Although Jiumaojiu Group

has invested a lot in the management of the supply chain, the financial index shows that it didn't manage the working capital efficiently in the procurement process, the production process and the sales process in these years. Therefore, this study propose that it could improve the management of inventory, accounts receivable and improve the expansion strategy.

This study conducts a case study of Jiumaojiu Group, but due to the confidentiality of its internal information, the data used in the article mainly comes from the public financial reports of Jiumaojiu Group and relevant information on the Internet. The information for conducting the in-depth research is limited. In the future, if more data and information are available, research should more closely integrate the management of working capital and supply chain of enterprises by explaining the financial indicators from more concrete behaviors of the enterprises. What's more, the sample size of the study can be expanded. Researchers can select more companies and use their data for empirical research.

Acknowledgments

Not applicable.

Authors contributions

The authors contributed equally to the study. All authors read and approved the final manuscript.

Funding

Not applicable.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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References

Beamon, B. M. (1999). Measuring supply chain performance. *International Journal of Operations & Production Management*, 19(3), 275-292. https://doi.org/10.1108/01443579910249714

Fu, R., Huang, J. D., & Gan, S. D. (2006). Review of theoretical research on free cash flows: development and application. *Research on economics and management*, *12*, 5-10. https://doi.org/10.13502/j.cnki.issn1000-7636.2006.12.001

Gang, W., Gunasekaran, A., Ngai, E., & Papadopoulos, T. (2016). Big data analytics in logistics and supply chain management: certain investigations for research and applications. *International Journal of Production Economics*, 176(C), 98-110. https://doi.org/10.1016/j.ijpe.2016.03.014

Guthmann, H. G. (1934). Industrial working capital during business recession. *Harvard Business Review*, 12(4),

- 472-477.
- Hofmann, E., & Kotzab, H. (2011). A supply chain-oriented approach of working capital management. *Journal of Business Logistics*, 31(2), 305-330. https://doi.org/10.1002/j.2158-1592.2010.tb00154.x
- Kumar, A., & Sisodia, A. (2012). Study and analysis of capital management in current business scenario. *International Journal of Scientific Research*, 1(6), 114-115. https://doi.org/10.15373/22778179/NOV2012/44
- Lind, L., Pirttilä, M., Viskari, S., Schupp, F., & Käri, T. (2012). Working capital management in the automotive industry: Financial value chain analysis. *Journal of purchasing and supply management*, 18(2), 92-100. https://doi.org/10.1016/j.pursup.2012.04.003
- Liu, F. (2020). Working capital management performance analysis and suggestions for XX pharmaceutical company from the perspectives of key elements and channels. *China township enterprises accounting*, *1*, 56-57.
- Ma, J. F. (2022). Research on the difficulties and countermeasures in the catering industry in the post-pandemic era. *Trade fair economy*, 8, 70-72. https://doi.org/10.19995/j.cnki.CN10-1617/F7.2022.08.070
- Mao, F. G. (1995). Basic principles of working capital management. Accounting research, 1, 38-40.
- Mentzer, J. T., Dewitt, W. Keebler, J. S., Min, S., Nix, N. W., & Smith, C. D. et al. (2001). Defining supply chain management. *Journal of Business Logistics*. https://doi.org/10.1002/j.2158-1592.2001.tb00001.x
- Tong, L. Z., & Gu, C. M. (2013). The 5F research model for supply chain management. *Journal of management world*, 6, 184-185. https://doi.org/10.19744/j.cnki.11-1235/f.2013.06.020
- Wang, Z. Q., & Ma, G. L. (2005). Distribution channel control: the focus of working capital management of the enterprises with multi-districts distribution. *Accounting research*, *6*, 28-33+95.
- Wang, Z. Q., & Zhang, X. M. (2012). Design of performance evaluation system for working capital management based on the channel management. *Finance and accounting monthly*, *13*, 11-13. https://doi.org/10.19641/j.cnki.42-1290/f.2012.13.005.
- Wang, Z. Q., Pang, Y. M., & Sun, J. Q. (2007). A review and prospect of working capital management. *Accounting research*, 2, 85-90+92.
- Wen, X. W., & Wang, Y. D. (2021). Supply chain stability and concentration to enterprises influence of operating fund management. *Productivity research*, *3*, 34-39+161. https://doi.org/10.19374/j.cnki.14-1145/f.2021.03.008
- Xie, C. L. (2018). Working capital management for business process. *Communication of finance and accounting*, 26, 83-87. https://doi.org/10.16144/j.cnki.issn1002-8072.2018.26.020.
- Xu, J. (2022). Study on the impact of the Covid-19 epidemic on the consumption status of Chinese residents. Masters thesis. Shandong University of Finance and Economics. https://doi.org/10.27274/d.cnki.gsdjc.2022.000886
- Zhang, C. C. (2020). Analysis of supply chain financing model and risks in the era of big data. *Business information*, 12, 67-68.
- Zhang, X. Y. (2021). Research on enterprises working capital management from the perspective of supply chain. *China journal of commerce*, *3*, 109-110. https://doi.org/10.19699/j.cnki.issn2096-0298.2021.03.109.
- Zhao, Z. J., & He, Z. H. (2018). An empirical study on supply chain inventory management and its relationship with performance in automobile industry enterprises. *Industrial engineering and management*, 2, 98-106. https://doi.org/10.19495/j.cnki.1007-5429.2018.02.014.