

# Research on the Synergistic Optimization Path of Supply Chain Management and Working Capital in Retail Enterprises

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**Abstract:** In today's business environment, the synergistic optimization of supply chain management and working capital is crucial to the competitiveness enhancement and sustainable development of retail enterprises. The purpose of this paper is to discuss the path of supply chain management and working capital synergistic optimization in retail enterprises, with a view to providing theoretical support and practical guidance for enterprises to achieve sustainable development. By breaking down departmental barriers, sharing information and integrating resources, enterprises can improve the efficiency and flexibility of the supply chain, optimize the flow of funds, reduce risks and achieve sustainable development.

**Keywords:** Supply chain collaboration, Capital flow optimization, Risk control, Collaborative optimization.

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## 1. Introduction

With the increasingly fierce competition in the market and the diversification of consumer demands, retail enterprises are facing unprecedented challenges and opportunities. Against this background, the synergistic optimization of supply chain management and working capital is particularly important. As a bridge connecting the enterprise and the market, the efficient operation of the supply chain directly affects the competitiveness of the enterprise; while working capital is the blood of the enterprise's operation, and its rational allocation and use is crucial to the sustainable development of the enterprise. Therefore, how to realize the in-depth integration of supply chain management and working capital to enhance the overall operational efficiency and economic benefits of enterprises has become an urgent issue for retail enterprises.

In the academic world, many scholars have conducted in-depth research on the synergistic optimization of supply chain management and working capital. For example, Wang Zhuquan and Ma Guanglin (2005) took the lead in proposing the new concept of shifting the focus of working capital management to channel control and advocated the organic integration of working capital management research with supply chain management, channel management and customer relationship management research. And Lan Lijuan (2021) pointed out that retail enterprise supply chain management has a significant role in improving operational performance, in which working capital management efficiency is the key. By optimizing the supply chain process and improving the capital turnover rate, enterprises can reduce operating costs, enhance market competitiveness, and then achieve steady growth in performance. Based on the inspiration and realistic background of existing research results, this paper discusses in depth the strategies and methods of collaborative optimization of supply chain management and working capital in retail enterprises, aiming at constructing a complete path of collaborative optimization in multiple dimensions by comprehensively applying the theory of supply chain synergy, the theory of optimization of capital flow and the theory of risk management, so as to

provide useful references and reference for retail enterprises to realize the synergistic optimization of supply chain management and working capital.

## 2. Analysis of the Current Situation of Supply Chain Management and Working Capital Management

### 2.1. Status and Challenges of Supply Chain Management

Currently, supply chain management in retail enterprises is facing unprecedented complexity and challenges. With the strengthening of globalization, the supply chain is no longer a simple linear structure, but a complex network involving suppliers, manufacturers, distributors and other links. This complexity requires enterprises to have strong coordination and resource integration capabilities to ensure smooth operation and efficient connection between various links. However, in practice, the lack of effective coordination mechanisms and resource integration means in many retail enterprises has led to poor supply chain operation and even ruptures.

At the same time, the intensification of market competition has also put forward higher requirements for supply chain management. Consumers' increasingly stringent requirements for product quality and delivery speed require retailers to continuously optimize supply chain management and improve the responsiveness and flexibility of the supply chain. However, many enterprises are often slow to respond to market changes and are unable to adjust their supply chain strategies in a timely manner, resulting in missed market opportunities.

In addition, supply chain risk management is a major challenge for companies today. As the complexity and uncertainty of the supply chain increase, so do the potential risks. However, many retail enterprises have deficiencies in risk identification and response, and lack perfect risk management mechanisms and contingency plans, which often make it difficult to respond effectively in the event of emergencies and bring huge losses to enterprises.

## **2.2. Current Status and Problems of Working Capital Management**

The importance of working capital management as a core part of retail enterprises' daily operation is self-evident. However, many retail enterprises have many problems in working capital management.

First of all, the inefficient use of funds is a common problem faced by many enterprises. Due to the lack of comprehensive monitoring and analysis of the flow of funds, enterprises are often unable to accurately grasp the use of funds, resulting in the retention of funds in various links and waste, which in turn increases the cost of funds. In addition, some enterprises in the fund-raising and allocation of funds are also deficient, the lack of effective financing channels and fund deployment mechanism, so that the funds can not be reasonably utilized, affecting the profitability of enterprises.

Secondly, poor management of capital liquidity is also a major problem faced by many retail enterprises. Due to the lack of effective monitoring of capital liquidity and early warning mechanisms, enterprises are often unable to detect the risk of capital chain breakage in a timely manner, and once there is a shortage of funds, it is easy to trigger a chain reaction, resulting in financial difficulties.

In addition, some enterprises lack science and rationality in the use and allocation of funds. Some enterprises overly pursue short-term interests and invest a large amount of funds in high-risk projects, while neglecting the need for long-term development and risk control. This unreasonable use of funds not only increases the financial risk of enterprises, but also affects their sound operation and sustainable development.

## **3. Theoretical Foundations of Co-Optimization**

Co-optimization refers to the mutual promotion and coordinated development of supply chain management and working capital management through the integration and optimization of their various aspects. This kind of optimization helps to improve the operational efficiency of retail enterprises, reduce operational costs and enhance their market competitiveness. At the same time, co-optimization also helps to improve the efficiency of capital utilization, reduce the risk of capital and provide a strong guarantee for the sustainable development of the enterprise.

The synergistic optimization of supply chain management and working capital is not a simple process merger or resource integration, but is based on a series of profound theoretical foundations, aiming to achieve a deep integration and efficient operation between the two. These theoretical foundations provide solid support and guidance for the implementation of synergistic optimization.

### **3.1. Supply Chain Collaboration Theory**

Supply chain synergy theory is the core guiding idea of collaborative optimization. The theory holds that each link and each subject in the supply chain should coordinate and support each other to form a close whole in order to maximize the overall benefits. Under the framework of supply chain synergy, enterprises not only focus on their own interests, but also pay more attention to the common development and long-term cooperation with supply chain partners. This synergistic idea provides theoretical support for the deep integration of supply chain management and working capital, and guides enterprises to focus on communication and

cooperation with supply chain partners in the process of synergistic optimization, and to deal with market challenges and risks together.

### **3.2. Theory of Optimization of Financial Flows**

The theory of capital flow optimization provides an important reference basis for co-optimization. The theory emphasizes that enterprises should improve the use efficiency and turnover rate of funds and reduce the cost of funds through the refined management and optimization of funds flow. In the synergistic optimization of supply chain management and working capital, the application of the capital flow optimization theory is reflected in the comprehensive analysis and optimization of capital flow in the supply chain, including the management of accounts receivable, the enhancement of inventory turnover rate, and the prediction and control of cash flow. By optimizing capital flow, enterprises can better meet the capital demand of supply chain operations and enhance overall operational efficiency and competitiveness.

### **3.3. Risk Management Theory**

Risk management theory is also an indispensable theoretical basis for collaborative optimization. In the synergistic process of supply chain management and working capital, enterprises face a variety of potential risks and challenges, such as supplier credit risk, inventory risk, market risk and so on. Risk management theory provides the methodology of risk identification, assessment, monitoring and response to help enterprises establish a perfect risk management mechanism, reduce potential losses and ensure the security and stability of the supply chain and capital flow.

## **4. Optimization Path Construction of Supply Chain Management and Working Capital Synergy in Retail Enterprises**

### **4.1. Strategic Planning: Defining Goals and Directions for Synergistic Optimization**

First of all, retail enterprises should clarify the strategic objective of supply chain management and working capital synergy optimization and incorporate it into their overall development strategy. This means that enterprises need to have an in-depth understanding of their supply chain structure and capital flow, identify potential synergy points, and formulate corresponding optimization strategies accordingly. Through specific initiatives such as optimizing the procurement process, increasing inventory turnover and reducing accounts receivable lead times, enterprises aim to improve the efficiency and flexibility of their supply chains, and in turn, improve the flow of funds.

In the process of strategic planning, enterprises should also pay attention to market trends and industry development dynamics, so as to adjust and optimize the goals and paths of synergistic optimization in a timely manner. At the same time, enterprises should establish a regular evaluation mechanism to quantitatively assess the results of synergistic optimization to ensure the achievement of strategic objectives.

## **4.2. Organizational Restructuring: Breaking Down Barriers and Promoting Cross-Sectoral Synergies**

In order to achieve synergistic optimization of supply chain management and working capital, enterprises need to break down inter-departmental barriers and establish a cross-departmental synergy mechanism. Enterprises can set up a special supply chain management department, responsible for coordinating the work of procurement, production, sales and other links to ensure the smooth operation of the supply chain. At the same time, the finance department should also actively participate in the supply chain management, through the provision of financial support, risk assessment, etc., to provide a strong guarantee for the optimization of the supply chain.

In addition, enterprises should establish cross-departmental communication and cooperation mechanisms to promote information sharing and resource integration. Through regular cross-departmental meetings and the establishment of information-sharing platforms, enterprises can strengthen inter-departmental communication and collaboration and improve the efficiency of collaborative optimization.

## **4.3. Information System Construction: Real-Time Monitoring and Dynamic Adjustment of Supply Chain and Capital Flow**

The use of modern information technology is the key to achieving synergistic optimization of supply chain management and working capital. Enterprises should make full use of advanced technologies such as big data, cloud computing and Internet of Things to build an integrated supply chain management system and funds management system. Through real-time data collection, analysis and sharing, enterprises can achieve real-time monitoring and dynamic adjustment of supply chain and capital flow.

Specifically, enterprises can establish a supply chain information platform to achieve information sharing and cooperation among suppliers, producers, sellers and other links. At the same time, real-time monitoring and early warning of capital flow is carried out through the capital management system to ensure the safety of capital and improve its use efficiency. In addition, enterprises can also make use of big data analysis technology to conduct in-depth mining and analysis of supply chain and capital flow data to provide strong support for decision-making.

## **4.4. Risk Control: Ensuring The Security and Stability of The Supply Chain and Financial Flows**

Risk control is an indispensable part of the collaborative optimization process. Enterprises should establish a perfect risk management mechanism to identify, assess and monitor the risks that may arise in the supply chain and capital flow.

In terms of the supply chain, enterprises should strengthen the management of supplier credit, establish a supplier credit evaluation system, and conduct regular evaluation and adjustment of suppliers. At the same time, enterprises should also pay attention to inventory risk and reduce the risk of inventory backlog and slow-moving sales through reasonable inventory planning and adjustment. In terms of capital flow, enterprises should strengthen the management of accounts

receivable and establish a strict accounts receivable collection mechanism to ensure the timely recovery of funds. In addition, enterprises should also pay attention to external risks such as exchange rate risk and interest rate risk, and reduce potential losses through reasonable risk avoidance and countermeasures.

## **4.5. Partnership Management: Towards Resource Sharing and Complementary Strengths**

Establishing long-term and stable cooperative relationships with partners is an important way to achieve synergistic optimization of supply chain management and working capital. Enterprises should actively establish good cooperative relationships with suppliers, distributors and other partners to achieve synergistic operation and common development of the supply chain by sharing resources, information and risks.

In co-operation with suppliers, enterprises can reduce costs and improve product quality through joint purchasing and joint R&D. In the cooperation with distributors, enterprises can expand market share and improve sales efficiency by sharing sales channels, customer information and other resources. In addition, enterprises can also participate in industry organizations, attend industry exhibitions, etc. to strengthen communication and cooperation with peers, understand industry dynamics and trends, and provide useful reference for their own synergistic optimization.

To sum up, by setting clear strategic objectives, breaking down departmental barriers, building efficient information systems, strengthening risk control and establishing close cooperation with partners, retail enterprises can realize the deep integration and coordinated development of the supply chain and capital flow, and enhance their competitiveness and sustainable development.

# **5. Case Studies and Insights**

## **5.1. Case Presentation**

Take China Resources Vanguard as an example, a famous retailer in China, which has achieved remarkable results in the synergistic optimization of supply chain management and working capital in recent years. CR Vanguard always adheres to the guidance of customer demand, and improves operational efficiency and reduces operational costs through continuous optimization of supply chain management. At the same time, the company focuses on establishing long-term and stable cooperative relationships with its suppliers to achieve synergistic operation of the supply chain by sharing resources and information. In terms of fund management, CR Vanguard introduces an advanced fund management system to monitor the flow of funds in real time and ensure the safety and effective use of funds.

CR Vanguard has taken a number of measures in supply chain optimization. Firstly, it has realized full monitoring and management of the logistics process by introducing an advanced logistics management system, which has improved the efficiency and accuracy of logistics. Secondly, CR Vanguard has strengthened its co-operation with suppliers and established a strict supplier evaluation system to ensure the quality and service level of suppliers. In addition, the company has actively implemented supply chain finance and provided financing support to suppliers through co-operation with financial institutions, which has reduced the financing

cost of the supply chain.

In terms of capital management, CRV focuses on improving the efficiency of capital utilization. The company strictly controls the use of funds through the establishment of a fund budgeting system to avoid waste and loss of funds. Meanwhile, CR Vanguard also actively utilizes the financial market to raise funds by issuing bonds and carrying out stock financing, which provides financial support for the company's expansion and development.

## 5.2. Case Studies and Insights

First of all, the synergistic optimization of supply chain management and working capital requires enterprises to have a global view and strategic thinking. Enterprises should start from the overall perspective, closely integrate supply chain management and capital management, and realize the mutual promotion and coordinated development of the two.

Secondly, strengthening supply chain cooperation is the key to achieving synergistic optimization. Enterprises should actively establish long-term and stable cooperative relationships with suppliers, distributors and other partners to achieve synergistic operation and common development of the supply chain by sharing resources, information and risks.

Once again, information technology is an important means to achieve collaborative optimization. Enterprises should actively use advanced technologies such as big data, cloud computing and the Internet of Things to build intelligent supply chain management systems and fund management systems to improve the efficiency and accuracy of management.

Finally, enterprises need to make targeted adjustments and optimization according to their own characteristics and market environment when implementing collaborative optimization strategies. Different enterprises have differences in scale, business scope, market competition, etc., so they need to formulate a collaborative optimization strategy that meets their own characteristics according to their own situation.

## 6. Conclusion

Co-optimization is an important means to improve the operational efficiency of retail enterprises, reduce operational costs and enhance market competitiveness. The synergistic optimization of supply chain management and working capital can be achieved by optimizing supply chain processes,

strengthening supply chain cooperation and using information technology; enterprises need to make targeted adjustments and optimizations according to their own characteristics and the market environment when implementing synergistic optimization strategies.

Retail enterprises should strengthen their attention to the synergistic optimization of supply chain management and working capital, and incorporate it into an important part of their strategic development. They should actively introduce advanced supply chain management concepts and technical means to promote the optimization and upgrading of supply chain processes. At the same time, strengthen the strategic cooperation with supply chain partners to achieve resource sharing and mutual benefit. Make full use of information technology to improve the efficiency and accuracy of collaborative optimization and provide a strong guarantee for the sustainable development of the enterprise. Through the collaborative optimization of supply chain management and working capital, retail enterprises are expected to achieve more efficient and intelligent inventory turnover, reduce the cost of capital occupation, while enhancing customer satisfaction and building a more robust and flexible business model to adapt to the rapidly changing market demand in the future.

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