A Study on the Interaction between Supply Chain Finance and Public Management in SME Development

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Abstract. With the globalization of the economy and the intensification of market competition, SMEs are facing many challenges in the process of development. Supply chain finance, as an emerging financing model, provides effective financial support for SMEs; while public management plays an important role in optimizing the business environment and promoting the development of SMEs. This paper discusses the interactive relationship between supply chain finance and public management, and analyzes how both can jointly promote the development of SMEs.

Keywords: small and medium-sized enterprises, supply chain finance, public management, interaction, development

1 Introduction

SMEs are an important part of the national economy and their development is important for economic growth, employment and innovation. However, SMEs face many challenges in financing, management and market competition [1]. In recent years, supply chain finance, as an innovative financing model, has been gradually accepted by medium and small enterprises, which can effectively solve their capital shortage problems. Meanwhile, public management provides a good development environment for SMEs through policy support and service optimization [2]. The purpose of this paper is to explore the interaction between supply chain finance and public management and its impact on the development of SMEs.

2 Overview of Supply Chain Finance

2.1 Concept and Core Idea of Supply Chain Finance

Supply chain finance is a financial service model developed on the basis of the supply chain system, aiming to optimize the flow of funds and improve overall efficiency by integrating the resources and information of all parties in the supply chain [3]. It not only involves the flow of capital, but also emphasizes the synergy of information,

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products and services. The core concept of supply chain finance is to enhance the financing capacity of SMEs through credit transfer and risk sharing [4].

2.2 Main Models and Characteristics of Supply Chain Finance

Among the main modes of supply chain finance, accounts receivable financing is an important option. Enterprises can use future accounts receivable as collateral to obtain financing support from banks or financial institutions, and this model effectively alleviates the pressure on the liquidity of enterprises [5]. Inventory financing, on the other hand, allows enterprises to obtain financing based on inventory goods, and improve capital liquidity through pledge or collateralization. Factoring and reverse factoring are also common supply chain finance tools [6]. The former involves enterprises assigning accounts receivable to financial institutions to recover funds in advance, while the latter involves buyers in the supply chain providing financing to suppliers through financial institutions to reduce their financing costs.

Supply chain finance is characterized by a number of features. Risks are diversified through the participation of multiple parties, which helps to reduce the financing pressure on a single enterprise [7]. Supply chain finance emphasizes information transparency and sharing among the participants, and uses data analysis to improve decision-making efficiency and reduce credit risks [8]. Financial products and services can be flexibly adjusted to meet the diversified financing needs of enterprises in accordance with different supply chain demands, thus enhancing their ability to obtain funds.

For SMEs, supply chain finance offers many advantages. Compared with traditional financing methods, supply chain finance can reduce financing costs and improve capital turnover efficiency by reducing risks [9]. Fast financing channels enable SMEs to obtain funds in a timely manner and enhance their market competitiveness, and participation in supply chain finance can also help enterprises establish a good credit record so that they can obtain more financing opportunities in the future.

3 The Role of Public Administration

3.1 Foundations of Corporate Strategy

In the development of SMEs, it is crucial to formulate an effective corporate strategy, which mainly includes market positioning, improvement of innovation capacity, resource integration and cooperation, and response to policy changes. Through clear strategic planning, SMEs can optimize resource allocation and enhance market competitiveness [10]. Market positioning is the foundation of a company's strategy. SMEs need to clearly define their role in the industry and their target customer groups, and develop a market strategy that matches their characteristics. This positioning not only affects the design of products and services, but also determines the firm's position in the supply chain, which directly affects its financing needs and strategy. For example, customized services targeting specific customer groups can enhance a firm's market attractiveness.

3.2 Strategies for Innovation and Cooperation

The ability to innovate is an important driving force for the growth of SMEs. Enterprises should combine technological innovation with market demand for product development and service improvement to enhance their competitive advantage. Utilizing the resources of supply chain finance, SMEs can invest more in technology development and thus maintain their leading position in the industry. Resource integration and cooperation are key components of corporate strategy. SMEs should take the initiative to establish cooperative relationships with other enterprises, financial institutions and the government to form a strong resource network. Such cooperation not only improves financing efficiency, but also expands market channels and realizes the optimal allocation of resources. At the same time, SMEs also need to pay close attention to changes in the policy environment and adjust their strategies in time to adapt to new regulations [11]. By participating in policy formulation and feedback, enterprises can better capitalize on policy dividends and maintain flexibility in a rapidly changing market.

4 Interaction between Supply Chain Finance and Public Administration

In the development process of SMEs, there is a close interaction between supply chain finance and public administration. The two complement each other and jointly promote the financing and development of SMEs, forming a virtuous cycle. Understanding this interactive relationship helps to better grasp the important role of SMEs in the economic system.

The effective operation of supply chain finance requires a good public administration environment. Government regulation and policy protection can enhance the transparency of supply chain finance and reduce credit risks, thereby enhancing the financing capacity of SMEs. For example, the government can establish standardized supply chain finance products, promote information transparency and sharing, and reduce the uncertainty of enterprises in the financing process. Such a regulatory environment can help increase financial institutions' credit support for SMEs and form a good financing ecosystem. The following Table 1 gives a summary of all heading levels.

Table 1. Changes in the company's supply chain before and after the reform.

norm	Prior to policy implementation	After policy implementation	growth rate (esp. in economics)
Average financing	Half a million dollars.	One million dollars.	100%
Financing success rate	40%	70%	75%
Average sales	Three million dollars.	3.9 million dollars	30%

The interaction between supply chain finance and public administration is also reflected in the mode of information sharing and win-win cooperation. The government can make use of all kinds of information on supply chain finance to carry out market analysis and policy evaluation and formulate more targeted policies. At the same time, when SMEs participate in supply chain finance, through information sharing and cooperation, they can obtain more market opportunities and form effective allocation of resources. Such an interactive relationship promotes healthy communication between the government and enterprises, forming a win-win situation.

5 Case Studies

5.1 Case Background

There is a large number of SMEs in a given region, mainly in the manufacturing and retail sectors. However, these enterprises generally face financing difficulties in their development process, which constrains their expansion and technological upgrading. To address this problem, the local government launched a policy called "Supply Chain Finance Promotion Program" in 2021, which aims to improve the financing environment for SMEs through public administration.

5.2 Policy Implementation

The implementation of the policy included the establishment of supply chain financial service centers, the introduction of low-interest loans and accounts receivable financing products in cooperation with financial institutions, and the provision of regular training for SMEs. These measures not only provide enterprises with the necessary financial support, but also enhance their awareness and ability to use financing tools.

5.3 Data Analysis

According to the survey data, the amount of financing for SMEs participating in the program increased significantly in the first year of the policy. The following Table 2 gives a summary of all heading levels.

Table 2. Specific data on company changes.

norm	Prior to policy implementation	After policy implementation	Evolution
Number of participating enterprises	200 homes	200 homes	no change
Average amount of financing ($ million)	50	100	Increase of $0.5 million (100%)
Financing success rate	40%	70%	30% increase

Annual sales for the year prior to implementation (in millions of dollars)	300	-	-
Post-implementation annual sales ($ million)	-	390	Increase of $0.9 million (30%)

As can be seen from the table above, the average amount of financing for the 200 SMEs before the implementation of the policy was RMB 500,000 yuan, while this value was raised to RMB 1 million yuan after the implementation of the policy, representing a growth rate of 100 per cent. The financing success rate also increased from 40% to 70%, showing that the government policy has effectively lowered the threshold for enterprise financing. The sales of the participating enterprises also increased significantly, from $3 million in annual sales before implementation to $3.9 million after implementation, a growth rate of 30%.

Financing growth rate (FR) formula

$$\text{FR} = \frac{Difference\ between\ pre-\ and\ post-implementation\ financing}{\text{Average pre-implementation financing}} * 100\% \tag{1}$$

data entry

$$\text{FR} = \frac{100 - 50}{50} * 100\% = 100\%$$

Sales Growth Rate (GR) Calculation Formula

$$\text{GR} = \frac{Difference\ in\ annual\ sales\ before\ and\ after\ implementation}{\text{Annual sales before implementation}} * 100\%$$

Assuming annual sales of $3 million before implementation and $3.9 million after implementation (30% increase)

$$\text{GR} = \frac{390 - 300}{300} * 100\% = 30\%$$

Financing Success Rate Enhancement (SR) Calculation Formula

$$\text{SR} = \frac{\text{Number of successful enterprises financed after implementation}}{\text{Total number of participating enterprises}} * 100\%$$

Substitute data:

$$\text{SR} = \frac{140}{200} * 100\% = 70\%$$

reach a verdict

Through the analysis of the above data, it can be seen that the implementation of the "Supply Chain Finance Promotion Program" policy has provided SMEs with effective financing support, which has significantly increased the success rate of financing and the sales growth rate of enterprises. This case shows that good interaction between public management and supply chain finance can provide strong support for the development of SMEs. In the future, policymakers should continue to pay attention to the needs of enterprises, further optimize financial products, and strengthen the cooperation between the government and financial institutions, so as to promote the sustainable and healthy development of SMEs.

Through research on SMEs in a certain region, it was found that the local government has provided SMEs with support such as financing matchmaking and information services through the establishment of a supply chain financial service center, which has significantly improved the financing efficiency and operational capacity of enterprises.

6 Conclusion

In the current economic environment, the interactive relationship between supply chain finance and public management provides a new impetus for the development of SMEs. By studying this relationship in depth, we can see that the two work together to form a virtuous circle of SMEs' financing capacity, innovation capacity and market competitiveness.

Supply chain finance, as a flexible financing method, can effectively solve the problem of financing difficulties of SMEs. By utilizing assets such as accounts receivable and inventory as collateral, SMEs can obtain timely financial support, which in turn promotes technological innovation and market expansion. This mechanism not only enhances the capital turnover efficiency of enterprises, but also promotes the healthy development of the entire supply chain.

In practice, it is recommended that the government and financial institutions strengthen their cooperation to establish a win-win financing ecosystem for all parties. The Government can work with financial institutions to develop financial products suitable for SMEs and provide them with the necessary credit rating and risk assessment support. Through information sharing and data analysis, financing efficiency can be enhanced and credit risks reduced, thus creating a sustainable financing model.

Strengthening training and services for SMEs is equally crucial. The Government should organize training programs to enhance the understanding and ability of business owners and managers to use supply chain finance tools. This will not only help SMEs to improve their own financing capabilities, but also promote the standardization of their internal management and enhance their overall competitiveness.

With the advancement of technology, digitalization and intelligence will provide new opportunities for the development of supply chain finance. The application of new technologies such as blockchain and artificial intelligence will further improve the transparency and efficiency of financing. Therefore, it is recommended that the Government encourage cooperation between fintech companies and traditional financial institutions to promote innovation in financial products to meet the changing market demand.

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