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# How Does Supply Chain Resilience Affect Corporate Financialization?

## -- Empirical Study on China Manufacturing Listed Companies

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## Abstract

**This paper takes China A-share listed manufacturing companies from 2010 to 2023 as samples to empirically examine the impact of supply chain resilience on corporate financialization and its underlying mechanisms. The study finds that the improvement of supply chain resilience significantly promotes the degree of corporate financialization, and this relationship remains robust even after adopting multidimensional resilience indicators. Mechanism tests indicate that supply chain resilience mainly creates conditions for financial asset allocation through two channels: alleviating financing constraints and reducing cash reinvestment rates. Heterogeneity analysis further reveals that in companies with executive shareholding, the aforementioned promoting effect is more pronounced, suggesting that while equity incentives strengthen the alignment of management and shareholder interests, they may also incentivize the allocation of financial resources released by resilience construction to the financial sector for short-term gains. The conclusions of this paper reveal the complex transmission relationship between corporate operational capacity building and financial investment behavior, providing a new explanatory perspective for understanding the "de-realization to virtualization" phenomenon in manufacturing, and offering policy implications for coordinating supply chain security with the development of the real economy.**

## Keywords

**Supply Chain Resilience; Corporate Financialization; Financing Constraints; Cash Reinvestment Rate; Executive Shareholding; Manufacturing Industry.**

## 1. Introduction

In recent years, the global supply chain has experienced multiple shocks such as trade frictions, geopolitical conflicts, and public health events, exposing its inherent fragility. Against this backdrop, "supply chain resilience" has rapidly evolved from an operational management concept into a core strategic issue concerning corporate survival and national economic security. It emphasizes the ability of the supply chain to maintain core functions through buffering, adaptation, recovery, and even transformation when disrupted. Meanwhile, another trend profoundly impacting China's real economy, particularly the development of manufacturing, has also drawn significant attention-the "financialization" tendency of enterprises, primarily manifested in the shift of more resources from productive investments to financial channels in pursuit of short-term financial gains. By constructing a comprehensive measurement index for supply chain resilience and establishing an econometric model, this study aims to reveal the connection between supply chain resilience and corporate financialization, providing a new perspective for understanding capital allocation decisions in China's manufacturing sector, as well as empirical evidence and decision-making references for

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governments to formulate policies that balance supply chain security with preventing economic "de-realization."

## 2. Research Theory and Hypothesis

### 2.1. Supply Chain Resilience and Corporate Financialization

Supply chain resilience refers to the organizational capabilities and specialized assets developed by enterprises through strategic investments in digital transformation, network restructuring, and process optimization to address uncertainties. While this capability strengthens corporate operational foundations, it may also improve financial and risk conditions, thereby creating new opportunities for financialization. On one hand, resilience-building itself, as a capital-intensive activity, may temporarily divert internal funds. However, in the long run, it significantly enhances core business profitability and cash flow stability by improving operational efficiency[1], optimizing inventory management, and strengthening supply-demand alignment[2]. On the other hand, the risk mitigation mechanisms established through supply chain resilience may reduce specific operational fluctuations without eliminating systemic financial risks. Moreover, increased investments could create new financial leverage pressures, prompting enterprises to continue managing liquidity and smoothing returns through financial assets. Therefore, enhancing supply chain resilience may improve corporate profitability and financial conditions while maintaining or transforming risk structures, ultimately creating conditions for financialization.

H1: Enhanced supply chain resilience facilitates the financialization of manufacturing enterprises.

### 2.2. The Mediating Effect of Financing Constraints and Investment Rate

Enhancing supply chain resilience may facilitate corporate financialization by alleviating financing constraints. The core of resilience lies in building stable and reliable supply chain networks, which helps reduce operational risks and information asymmetry for enterprises, thereby sending positive signals to external markets and improving their financing environment. Studies have shown that frequent changes in supply chain relationships significantly exacerbate corporate financing constraints[3], highlighting the positive role of stable relationships in financing capacity. However, the easing of financing constraints does not necessarily lead to all funds flowing into real investment. Research by Gu Leilei et al. reveals that when enterprises alleviate financing constraints through social responsibility initiatives, management may allocate more abundant funds to financial assets to pursue short-term financial gains, creating an "investment substitution" effect[4]. This indicates that financing convenience brought by supply chain resilience may provide financial support for financialization. Simultaneously, supply chain resilience may also influence financialization by improving investment efficiency. The sustained partnerships, efficient business operations, and risk resistance capabilities fostered by resilience construction help enterprises optimize real investment decisions and enhance return on investment. However, while improved investment efficiency generates more stable and abundant cash flows, it may also create temporary capital surpluses. Under the goal of maximizing shareholder returns, management may be motivated to invest these surplus funds in financial markets for faster or higher returns rather than reinvesting them entirely, thereby reducing cash reinvestment rates and elevating corporate financialization levels. In conclusion, supply chain resilience can either ease financing constraints by providing enterprises with more configurable financial resources, or reduce cash reinvestment rates through improved investment efficiency. These two mechanisms collectively point to a potential outcome: an increase in corporate financialization.

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H2: The enhancement of supply chain resilience can facilitate the financialization of manufacturing enterprises by easing financing constraints and reducing cash reinvestment rates.

# 3. Research Design and Model

## 3.1. Sample Selection and Data Sources

The research object of this paper mainly includes manufacturing enterprises in China's A-share market from 2010 to 2023. After the 2008 financial crisis, the world began to pay attention to the financial asset management of enterprises. After 2009, the short-term impact of the financial crisis was basically subsided, and its long-term impact on the world became evident. Therefore, the data selection started from 2010 to study the changes in the financial data of manufacturing enterprises after investing in financial assets. Based on the basic sample, the data were processed as follows: (1) excluding financial companies; (2) excluding ST/*ST companies; (3) applying a 1% tail-trimming treatment to the main continuous variables. Finally, 14,412 experimental samples were obtained. The data were sourced from the Guotai An (CSMAR) database and Mark Data Network.

## 3.2. Variable Settings

For manufacturing enterprises in China's A-share market, most companies do not have to resort to financial channels for substantial profits due to the complete collapse of their main business. Therefore, the scope of this article is limited to manufacturing enterprises with sound and stable main businesses, discussing the influencing factors of corporate financialization.

### 3.2.1. Dependent Variable

The measurement of corporate financialization is calculated by analyzing the ratio of net exchange gains (after deducting investment losses in joint ventures and associates) to operating profits, based on the investment returns, fair value changes, and net exchange gains of non-financial enterprises, denoted as Fin[5]. By incorporating fixed effects of industry (Ind) and year (Year), the formula for corporate financialization is established as follows:

$$\begin{aligned} Fin_{i,t} = {} & \alpha_0 + \alpha_1 Cost_Coor_{i,t} + \alpha_2 Age_{i,t} + \alpha_3 Size_{i,t} + \alpha_4 Growth_{i,t} + \alpha_5 Position_{i,t} + \alpha_6 Tang_{i,t} \\ & + \alpha_7 Tax_{i,t} + \alpha_8 ROA_{i,t} + \sum Ind + \sum Year + \varepsilon \end{aligned}$$

### 3.2.2. Explanatory Variables

$$Cost_Coor_{i,t} = \frac{\sigma(Production_{i,t})}{\sigma(Demand_{i,t})} - 1$$

$$Production_{i,t} = Cost_{i,t} + Inv_{i,t} - Inv_{i,t-1}$$

Regarding the explanatory variable of supply-demand deviation, coordination costs in corporate supply chains are difficult to measure directly. Therefore, the accuracy of supply-demand matching in corporate supply chains is measured by the deviation between production fluctuations and demand fluctuations, which characterizes supply-demand coordination costs. Zhang Shushan et al. proposed optimizing supply-demand matching to enhance supply chain resilience. They also suggested that the deviation degree of corporate operating performance can capture changes and fluctuations on both ends of the supply chain, thereby reflecting its resilience to some extent[6]. The deviation degree of production from demand is measured by the ratio of corporate output to demand[7]. Here, σ represents the standard deviation of the variable, with the numerator and denominator indicating the volatility of corporate production and demand, respectively. Production refers to corporate output, Cost to corporate operating

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costs, and Inv to net year-end inventory. Corporate demand is represented by Cost as a proxy variable. A greater supply-demand deviation in the supply chain indicates lower matching accuracy and higher coordination costs for corporate supply chains.

#### 3.2.3. Control Variables

The selected control variables in this study primarily assess three dimensions: corporate asset status, listed company performance, and shareholder equity. Specifically, Age (years of listing), Size, Tang (tangible asset ratio), and Lev (asset leverage ratio) evaluate asset conditions; ROA, Growth, and Tax gauge operational performance; while Position (where the chairman and largest shareholder are the same person) measures shareholder equity. The model also controls for industry and year fixed effects.

## 4. Empirical Analysis

### 4.1. Analysis of Benchmark Regression Results

Table 1's benchmark regression analysis reveals that the core explanatory variable Cost_Coor exhibits a statistically significant negative coefficient (-0.339) at the 1% level. This demonstrates that enhanced supply chain resilience significantly promotes corporate financialization, thereby validating the central hypothesis of this study: improved supply chain resilience effectively mitigates corporate financialization tendencies.

**Table 1.** Benchmark Regression

| VARIABLES | Fin |
|---|---|
| Cost_Coor | -0.339*** |
| | (-3.64) |
| Constant | -0.652*** |
| | (-4.46) |
| Controls | YES |
| Observations | 14,412 |
| R-squared | 0.162 |
| Company FE | YES |
| Year FE | YES |

### 4.2. Robustness Test

**Table 2.** Robustness Testing

| VARIABLES | Fin | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| AGAINST | -0.019* | | | |
| | (-1.65) | | | |
| OPERATE | | -365.248*** | | |
| | | (-4.82) | | |
| RECOVER | | | -0.076*** | |
| | | | (-10.47) | |
| UPDATE | | | | -0.018* |
| | | | | (-1.86) |
| Controls | YES | YES | YES | YES |
| Observations | 14,412 | 14,412 | 14,412 | 14,412 |
| R-squared | 0.160 | 0.162 | 0.171 | 0.161 |
| Company FE | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES |

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This study conducts robustness testing on the multidimensional definition of supply chain resilience. By substituting four key dimensions-resilience (AGAINST), operational capability (OPERATE), recovery capacity (RECOVER), and update capability (UPDATE)-for core explanatory variables in the benchmark regression, the results (Table 2) show all estimated coefficients of these dimensions are significantly negative. This indicates that each core dimension of supply chain resilience independently and significantly promotes corporate financialization, confirming the robustness of the fundamental relationship between supply chain resilience and corporate financialization.

## 4.3. Mediation Effect Test

The enhancement of supply chain resilience can drive financialization in manufacturing enterprises through two channels: alleviating financing constraints and reducing cash reinvestment rates. As shown in Column 1 of Table 3, the coefficients of Cost_Coor on KZ and MONREINV are significantly positive. Here, a higher KZ value indicates more severe financing constraints, while MONREINV represents the enterprise's cash reinvestment rate. This suggests that greater supply chain resilience reduces financing constraints and lowers cash reinvestment rates. Column 3 reveals that the coefficient of KZ on Fin is significantly negative, indicating that easing financing constraints promotes financialization. Column 4 further shows that the coefficient of MONREINV on Fin is significantly negative, demonstrating that reduced cash reinvestment rates substantially enhance financialization.

**Table 3.** Mediating Effect

| VARIABLES | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | KZ | MONREINV | Fin | FIN |
| Cost_Coor | 0.260** | 0.083*** | | |
| | (2.13) | (10.39) | | |
| KZ | | | -0.041*** | |
| | | | (-4.55) | |
| MONREINV | | | | -0.296* |
| | | | | (-1.93) |
| Controls | YES | YES | YES | YES |
| Observations | 13,908 | 13,908 | 14,412 | 14,412 |
| R-squared | 0.237 | 0.059 | 0.121 | 0.092 |
| Company FE | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES |

## 4.4. Heterogeneity Analysis

**Table 4.** Heterogeneity Analysis

| VARIABLES | Fin | |
|---|---|---|
| | (1) | (2) |
| | senior management does not hold shares | Senior executives' shareholding |
| Cost_Coor | -0.265** | -0.430*** |
| | (-2.22) | (-3.43) |
| Controls | YES | YES |
| Observations | 7,385 | 7,027 |
| R-squared | 0.170 | 0.154 |
| Company FE | YES | YES |
| Year FE | YES | YES |

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This study conducts a stratified regression analysis by categorizing samples based on executive shareholding status. As shown in Table 4, the supply chain resilience significantly enhances corporate financialization in the executive-shareholding subgroup. This finding suggests that equity incentive mechanisms designed to align shareholder and management interests may inadvertently create a paradox: while strengthening supply chain resilience, they could incentivize management to allocate more financial assets for short-term returns rather than invest in long-term physical innovation and capacity expansion.

## 5. Research Conclusion and Significance

This paper takes China's listed manufacturing companies as the research object and empirically tests the impact of supply chain resilience on corporate financialization and its mechanism. The study finds that the improvement of supply chain resilience generally promotes the deepening of financialization in manufacturing enterprises, a conclusion that remains robust even after substituting multiple dimensions of supply chain resilience. Further mechanism analysis indicates that supply chain resilience mainly creates conditions for financialization through two channels: alleviating corporate financing constraints and reducing cash reinvestment rates. On one hand, resilience-building sends positive signals of operational stability to the market, improving the external financing environment for enterprises. On the other hand, enhanced operational efficiency may lead to temporary capital surplus, which, driven by the pursuit of short-term returns, may result in more investments in financial assets. Notably, heterogeneity analysis reveals that this promoting effect is significantly stronger in companies with executive shareholding, suggesting that equity incentive mechanisms aimed at aligning shareholder and management interests may inadvertently amplify the tendency of management to convert operational advantages into financial speculation arbitrage while strengthening the strategic effects of supply chains. By placing corporate supply chain resilience and financialization within the same analytical framework, this study not only enriches the research perspective on the motivations behind corporate "de-realization" but also reveals the complex path through which entity capacity building may indirectly promote financialization by improving financial fundamentals, while deepening the understanding of the regulatory role of corporate governance in strategic execution. The policy implication is that when promoting the security and resilience of manufacturing supply chains, governments should address potential capital allocation distortion risks. By optimizing corporate governance and refining long-term management incentive systems, enterprises can be guided to channel resilience-derived resources toward technological upgrades and physical expansion. This approach not only safeguards supply chain security but also solidifies the manufacturing sector as the bedrock of national development.

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