

The Impact of Recognition of Specialized and New Enterprises on Corporate Cash Holdings

Yuzhuang Zhang ^a, Sizhe Wang ^b

School of International Exchange, Jilin University of Finance and Economics, Changchun, Jilin
130117, China

^aMiko9507@foxmail.com, ^b824061032@qq.com

Abstract. Specialized and new enterprises provide high-quality, differentiated products and services in specific fields, driving technological innovation and industry advancement. Cash holding levels are important in addressing emergencies and achieving steady operational growth. Using A-share listed companies from 2008 to 2022 as a sample, this paper employs the difference-in-differences method to empirically examine the impact and mechanism of recognizing specialized and new enterprises on cash holding levels. The research indicates that the recognition of specialized and new enterprises can significantly reduce corporate cash holding levels, a conclusion that holds true after a series of robustness tests. Mechanism analysis reveals that the recognition of specialized and new enterprises has a more pronounced effect on companies with shorter establishment years and smaller scales. Heterogeneity analysis finds that the recognition of specialized and new enterprises can significantly reduce the cash holding levels of non-state-owned enterprises. This study expands the literature on the recognition of specialized and new enterprises and corporate cash holding levels, providing suggestions for improving recognition standards and enhancing policy promotion and support efforts for specialized and new enterprises.

Keywords: specialized and new enterprises, cash holding levels, difference-in-differences method.

1. Introduction

Specialized and new enterprises drive innovation and development by focusing on niche markets. Continuous technological innovation and product upgrades boost their competitiveness and contribute to industry-wide technological progress and industrial upgrades. Industrial policies support these enterprises by encouraging R&D investment, industry-university-research cooperation, and technological advancement, thereby stimulating innovation. In the face of external technological blockades, these enterprises leverage deep technological expertise to break through key core technologies, enhancing national industrial security and technological autonomy. The government supports these enterprises through policy measures, such as cultivation plans, tax incentives, and financial assistance, promoting their innovation capabilities and market competitiveness while driving high-quality industry development. The importance of cash holding levels is reflected in their support for enterprise operations and risk prevention. While ensuring the stability of daily operations, they enhance the enterprise's ability to withstand risks. An adequate level of cash helps enterprises seize market opportunities, drive business expansion, and innovation. Additionally, maintaining a reasonable level of cash enhances financial stability and credit ratings, providing support for financing. However, there is currently no literature studying the impact of recognizing specialized and new enterprises on cash holding levels.

This study examines the impact of recognizing specialized and new enterprises on cash holding levels through two main logical pathways. The first logic suggests that the recognition of specialized and new enterprises has a more pronounced effect on smaller-scale enterprises, which often face stronger financing constraints. These enterprises typically have weaker collateral capabilities, leading to insufficient cash holdings to support research and development activities conducted by specialized and new enterprises with multiple patents. The second logic posits that the recognition of specialized and new enterprises has a more significant impact on enterprises with shorter establishment years. Such enterprises often exhibit poor performance in stable operations and continuous development, resulting in lower credit ratings from financial institutions and increased financing constraints to

reduce cash holding levels.

This study utilizes annual panel data from Chinese A-share listed companies spanning from 2008 to 2022 to investigate the impact of recognizing specialized and new enterprises on corporate cash holding levels. The research findings indicate that the recognition of specialized and new enterprises can indeed reduce cash holding levels. After conducting robustness tests, the main regression conclusion is validated. Mechanism analysis reveals that the recognition of specialized and new enterprises has a more pronounced effect on enterprises with shorter establishment years and smaller scales. Furthermore, heterogeneity analysis suggests that among enterprises recognized as specialized and new, non-state-owned enterprises are significantly affected by the recognition. The study posits that the reduction in corporate cash holdings may be attributed to the enhanced visibility, government support, and preferential policies brought about by the recognition of specialized and new enterprises. This, in turn, lowers the financial costs for these enterprises, enabling them to hold less cash to cope with uncertainty.

This study contributes in two main aspects. Firstly, it enriches the understanding of the economic consequences of recognizing specialized and new enterprises. Existing literature has shown that such recognition affects enterprise visibility and reputation, facilitates government support and preferential policies, promotes innovation and technological progress, all of which contribute to cost reduction, enhanced competitiveness, and better development opportunities in the market (Ding and Wu, 2023). This recognition also drives development upstream and downstream in industries (Wang et al., 2023) and fosters regional economic prosperity (Wang and Chen, 2022). However, there is currently no literature examining the impact of recognizing specialized and new enterprises on corporate cash holding levels, while also exploring the relationship between this impact and company size and establishment years. Secondly, this study enriches the literature on factors influencing corporate cash holding levels. Existing literature suggests that cash holding levels are influenced by agency problems and information asymmetry (Du and Lu, 2015), especially significantly impacting private enterprises, small and medium-sized enterprises, and enterprises with a high level of economic development (He, 2023). Changes in cash holding levels manifest in aspects such as enterprise risk management, investment decisions, financing costs, agency problems, and enterprise value (Dou et al., 2023). Therefore, enterprises need to balance the security, liquidity, investment, and financing of cash to maximize returns (Liu et al., 2016). However, there is currently no literature that considers the recognition of specialized and new enterprises as a factor influencing corporate cash holding levels.

2. Literature Review and Research Hypothesis

2.1. Literature Review

2.1.1. Recognition of Specialized and New Enterprises

A considerable amount of literature has analyzed the influencing factors of the recognition of specialized and new enterprises. Key factors for the recognition of specialized and new enterprises include technological innovation capability (Ding and Wu, 2023), degree of specialization, market share, management level, and intellectual property protection (Wang et al., 2023). Additionally, the development potential, along with these factors, collectively determines whether an enterprise can be recognized as a specialized and new enterprise (Cao et al., 2022; Liu and Cui, 2022). Key factors for the recognition of specialized and new enterprises include the degree of specialization, refined management, distinctive products, and innovative technologies (Wang and Chen, 2022; Cao et al., 2023). The influencing factors of the recognition of specialized and new enterprises encompass innovation capability, degree of specialization, distinctive development, refined management, and market performance (Wang et al., 2023).

A great number of literatures has analyzed the economic consequences of recognizing specialized and new enterprises. The economic consequences of recognizing specialized and new enterprises include enhancing enterprise visibility and reputation, obtaining government support and preferential

policies, promoting enterprise innovation and technological progress, and improving enterprise financing capabilities (Liu and Cui, 2022). The recognition of specialized and new enterprises helps enterprises reduce costs, enhance competitiveness, and seize better development opportunities in the market (Ding and Wu, 2023). The recognition of specialized and new enterprises can drive development upstream and downstream in the industry chain and promote regional economic development. The economic consequences of recognizing specialized and new enterprises include enhancing enterprise innovation capabilities, strengthening market competitiveness, and promoting sustainable development. These economic consequences contribute to promoting high-quality development of enterprises, enhancing the resilience and competitiveness of industrial chains and supply chains (Cao et al., 2022).

2.1.2. Cash Holding Levels

A significant body of literature has analyzed the influencing factors of cash holding levels in enterprises. Factors such as operational risks, financial risks, external audit quality, proportion of independent directors, and sources of cash affect corporate cash holding levels (Cao et al., 2021). Existing literature explores the impact of factors such as internal governance level, financing constraints, connected CEOs, changes in chairpersons, and poor management on cash holding levels (Yang et al., 2020; Zeng and Yan, 2021). Among these, the influence of executive financial ties on corporate cash holding levels mainly operates through two mechanisms: alleviating external financing constraints and reducing agency costs (Zhou, 2020; Zhang and Yang, 2022). Cash holding levels are influenced by agency problems and information asymmetry, particularly significantly impacting private enterprises, small and medium-sized enterprises, and enterprises with a high level of economic development (He, 2023). Factors influencing cash holding levels include enterprise size, proportion of cash flow assets, Tobin's Q, net operating capital, capital expenditure, asset-liability ratio, dividend dummy variables, and property rights nature (Liu et al., 2016). From a capital structure perspective, cash holding levels are significantly negatively correlated with leverage ratio but positively correlated with current liability ratio (Li and Yang, 2020). Employee welfare measures in different institutional environments may have opposite effects on cash holdings (Dou et al., 2023).

A substantial amount of literature has analyzed the economic consequences of cash holding levels. Cash holding levels in enterprises manifest in aspects such as risk management, investment decisions, financing costs, agency problems, and enterprise value (Dou et al., 2023). Moderate cash holding levels contribute to risk prevention and value enhancement, but excessive levels may lead to loss of investment opportunities and decreased profitability (Cao et al., 2021). Existing literature suggests that enterprises need to balance the security, liquidity, investment, and financing of cash to maximize returns (Liu et al., 2016). The economic consequences of cash include mitigating information asymmetry, reducing financing costs, restraining overinvestment and on-the-job consumption, and enhancing enterprise value (Yang et al., 2020). Cash, as the most liquid asset form, increases enterprise cash holding levels and reduces financing costs, but it may also lead to agency problems among management, resulting in higher agency costs (Du and Lu, 2015; Zhang and Yang, 2022). Enterprise cash holding levels are related to debt behavior in terms of capital structure, debt maturity structure, and debt formation methods (Li and Yang, 2020). The economic consequences of cash include holding costs, liquidity, stability, and flexibility, where holding a large amount of cash entails higher opportunity costs (Dong, 2023), but its high liquidity and ability as a source of financing help enterprises cope with emergencies and achieve profit goals (Wang et al., 2022). The impact of capital market opening on enterprise cash holding levels is complex. Although it increases cash levels, as policies are implemented, the growth rate of cash decreases, simultaneously reducing the value of cash (Chen et al., 2020).

2.2. Research Hypothesis

Small-sized enterprises with a short establishment time face challenges in financing primarily due to insufficient credit records and financial transparency, weak collateral capabilities, and a lack of management and market competitiveness. These factors lead to reduced trust from financial

institutions, affecting their sources of financing. Specialized and new enterprises focusing on specific areas of technological research and development also experience low cash holding levels due to financing constraints. These enterprises, hindered by information asymmetry and agency problems, struggle to obtain external financing. Additionally, they face higher financing costs and stricter conditions due to unpredictable market prospects. Coupled with operational uncertainty, these factors further impact their cash holding levels.

Small-scale enterprises with shorter operational histories face significant financing constraints. Firstly, these enterprises often lack robust credit records and financial transparency. Their financial data completeness and credit accumulation are typically limited, making it challenging for financial institutions to assess their repayment ability and risk levels, thereby affecting their access to financing. Secondly, deficiencies in governance structures, management capabilities, and market competitiveness within small-scale enterprises impede their stable operation and sustainable development. These factors diminish the trust of financial institutions in their financing applications, exacerbating the severity of financing constraints.

The constraints on financing often result in lower cash holdings for specialized and new enterprises. Such enterprises typically focus on intensive research and innovation within specific technological domains, necessitating substantial financial investments. Financing constraints exacerbate asymmetric information and agency issues, making it challenging for these enterprises to secure adequate funding from external sources, consequently impacting their cash reserves. Furthermore, products or technologies developed by specialized and new enterprises often operate at the forefront of the market, with unpredictable market prospects and profitability. Investors tend to approach financing applications from these enterprises with caution, leading to higher financing costs and stricter terms. This further constrains their financing capabilities, thereby reducing their cash holdings.

Hypothesis 1: The recognition of specialized and new enterprises significantly reduces the level of cash holdings within the enterprise.

3. Research Design

3.1. Sample Data Source

The initial sample for this study consists of annual observations from non-financial A-share listed companies in China from 2008 to 2022. The sample was screened according to the following principles: (1) excluding ST and *ST companies; (2) excluding financially abnormal companies with an asset-liability ratio greater than 100%; (3) excluding samples with missing relevant variables. Ultimately, the study obtained 37,017 observations as the test sample. To mitigate the influence of outliers on regression results, all variables in this study were minorized at the upper and lower 1% within each industry. The data used in this study are sourced from the CSMAR database.

3.2. Definition of Variables

The dependent variable, Cash hold, represents the level of cash holdings within a company. Considering that the annual reports of companies in the sample period already include the item of cash and cash equivalents, this study adopts the method proposed by Opler et al. (1999) and Harford (2013), which measures the level of cash holdings as cash and cash equivalents divided by total non-cash assets. Additionally, robustness tests utilize cash and cash equivalents divided by total assets as an alternative test indicator.

The explanatory variable, Inno, represents whether a company is recognized as a specialized and new enterprise. According to the lists of specialized and new enterprises released by the Ministry of Industry and Information Technology, if a company is recognized in any of the three batches or in subsequent years, it is defined as 1; otherwise, it is defined as 0.

Drawing from previous research (Li and Yang, 2020; Cao et al., 2021; Dou et al., 2023), a series of control variables are included. The control variables consist of enterprise size (*Size*) is the natural logarithm of the total assets of the enterprise at the end of the period, asset-liability ratio is total

liability divided by total asset(*Lev*), return on assets(*Roa*) is about net profit divided by total assets at the end of the period. Owner ratio of the largest shareholder (*Top1*) is the proportion of shares held by the largest shareholder., whether the company is experiencing loss (*Loss*), if it has loss, it was recognized as 0. Otherwise, it is 1. Market-to-book ratio (*Mb*) is (Market value of equity + Net debt market value) divided by total book value of assets at the end of the period, net working capital (*Nwc*) is about net operating capital divided by total assets at the end of the period. Capital expenditure(*Capex*) is about ((Expenditure on fixed assets, intangible assets, and other long-term assets - Disposal of fixed assets, intangible assets, and other long-term assets) divided by total assets at the end of the period, current liability ratio(*DS*) is about Current liabilities divided by total liabilities, Number of employees(*Ennum*) is Ln(Number of formal employees within the company).

3.3. Model

Drawing on the research by Dou et al. (2023) and Cao et al. (2021), this study constructs the following model (1) to examine the impact of specialized and new enterprise recognition on cash holding levels:

$$\text{Cashhold}_{i,t} = \beta_0 + \beta_1 \text{Inno}_{i,t} + \sum_k \gamma_k \text{Controls}_{i,t} + \psi_t + \sigma_i + \varepsilon \quad (1)$$

Where, the subscripts *i* and *t* respectively denote the company and time. The dependent variable $\text{Cashhold}_{i,t}$ represents the cash holding level of company *i* in year *t*. The key explanatory variable *Inno* indicates whether company *i* was recognized as a specialized and new enterprise in year *t*. Controls represent a series of control variables. Additionally, this study controls for fixed effects in the model, where ψ_t and σ_i respectively denote the year fixed effect and the firm-specific fixed effect. According to the hypothesis, a significantly negative coefficient β_1 would imply that the recognition of specialized and new enterprises reduces the cash holding levels of companies.

4. Empirical Results Analysis

4.1. Descriptive Statistics

Table 1 reports the descriptive statistics of the main variables. The mean value of *Cashhold* is 0.219, with a median of 0.142 and a standard deviation of 0.239, indicating that the average cash holding level of listed companies in China is approximately 21%. The maximum value of cash holding is 1.43, and the minimum value is 0.01, suggesting significant differences in cash holding levels among different listed companies. The mean value of *Inno* is approximately 0.06, indicating that 6% of the listed companies have been recognized as specialized and new enterprises.

Table 1. Descriptive Statistics of Main Variables

Variable	N	Mean	SD	Min	p25	p50	p75	Max
Cashhold	37,017	0.219	0.239	0.010	0.077	0.142	0.262	1.430
Inno	37,017	0.060	0.237	0.000	0.000	0.000	0.000	1.000
Size	37,017	22.242	1.301	19.857	21.317	22.055	22.977	26.272
Lev	37,017	0.439	0.204	0.059	0.278	0.434	0.592	0.890
ROA	37,017	0.034	0.064	-0.260	0.012	0.035	0.065	0.196
Top1	37,017	34.283	14.988	8.434	22.543	32.030	44.557	74.451
Nwc	37,017	0.214	0.241	-0.359	0.046	0.211	0.382	0.763
Capex	37,017	0.048	0.048	-0.028	0.013	0.034	0.068	0.228
TobinQ	37,017	2.025	1.305	0.844	1.226	1.600	2.307	8.459
Loss	37,017	0.121	0.327	0.000	0.000	0.000	0.000	1.000
DS	37,017	0.814	0.178	0.260	0.719	0.870	0.957	1.000
Ennum	37,017	7.698	1.257	4.564	6.853	7.630	8.475	11.157

4.2. Benchmark Regression Results

Table 2 presents the regression results for the recognition of specialized and new enterprises and the level of cash holdings. Column (1) shows the regression without control variables, while Column (2) includes control variables. In Column (1), the coefficient for the Inno variable is -0.075, which is significantly negative at the 1% level. After adding other control variables in Column (2), the Inno coefficient is -0.038, also significantly negative at the 1% level. These results indicate that the recognition of specialized and new enterprises can significantly reduce the level of cash holdings in companies. Economically speaking, using Column (2) as an example, if a company gains recognition as a specialized and innovative enterprise, its cash holding level will decrease by 3.8 percentage points, which is approximately a 17% reduction relative to the mean cash holding level in the sample period. In summary, the results suggest that the recognition of specialized and new enterprises significantly reduces the level of cash holdings in companies, supporting the research hypothesis proposed earlier.

Additionally, the regression signs of the control variables are generally consistent with existing literature and economic expectations.

Table 2. Recognition of Specialized and New Enterprises and Cash Holding Levels

	(1)	(2)
VARIABLES	Cashhold	Cashhold
Inno	-0.075***	-0.038***
	(-11.32)	(-6.69)
Controls	No	Yes
Constant	0.238***	-0.185***
	(49.17)	(-3.81)
Observations	37,017	37,017
FIRM&YEAR FE	Yes	Yes
Adj. R2	-0.068	0.207

4.3. Robustness Check

In this section, we employ an alternative measure of cash holding levels. Following Ozkan (2004), we use the ratio of cash and cash equivalents to total assets as a substitute measure of cash holding levels (Cashhold2). The results in Table 3 show that the coefficient for Inno remains -0.017, which is significantly negative at the 1% level, indicating that the results are robust.

Table 3. Results with Alternative Variable Measurement

VARIABLES	Cashhold2
Inno	-0.017***
	(-5.97)
Controls	Yes
Constant	-0.047**
	(-1.98)
Observations	37,017
FIRM&YEAR FE	YES
Adj. R2	0.254

Although this study employs a firm fixed-effects model to mitigate endogeneity issues within firms, the research conclusions still face potential reverse causality problems. To address this potential reverse causality, this study uses Propensity Score Matching (PSM) to match samples before regression analysis. The samples from the treatment and control groups for the year in which companies are recognized as specialized and new are matched, and a reliability analysis is conducted on the data before and after matching. The matching results indicate a good match, with minimal differences between the variables of the treatment and control groups post-matching. This provides a solid foundation for subsequent difference-in-differences experiments. Moreover, the similarity of

the matched samples suggests that the recognition of specialized and new enterprises meets the random probability assumption, complying with the homogeneity requirement for using the DiD method. After matching, the sample consists of 11,772 observations. Using the matched data sample for the main regression, the results in Table 4 show that the coefficient for Inno is -0.027, significantly negative at the 1% level, indicating that the results remain stable.

Table 4. Regression Results Post-PSM Matching

VARIABLES	Cashhold
Inno	-0.027***
	(-2.95)
Controls	Yes
Constant	-0.275**
	(-2.27)
Observations	11,772
FIRM&YEAR FE	YES
Adj. R2	0.036

The effectiveness of the difference-in-differences (DiD) method depends on whether it satisfies the parallel trend assumption. –To test whether they DiD model in this study meets the parallel trend assumption, we use the samples from the year of recognition of specialized and innovative enterprises as the baseline group and construct ten dummy variables, including before5_, before4, before3, before2, before1, post1, post2, post3, post4, and post5_. To be specific, before5_ equals 1 if the sample is from five years before or earlier; otherwise, 0. before4 to before1 equal 1 if the sample is from the fourth year to the first year before recognition, respectively; otherwise, 0. post1 to post5_ equal 1 if the sample is from the first year to the fifth year after recognition or later, respectively; otherwise, 0. Figure 1 reports the regression results for testing the parallel trend assumption. It is evident that the regression coefficients for before4, before3, before2, and before1 are all greater than 0, consistent with the expectations under the parallel trend assumption. Furthermore, the coefficients for post1, post2, post3, post4, and post5_ are all significantly less than 0, indicating that the parallel trend in cash holding levels between the treatment and control groups was abruptly disrupted following the recognition of specialized and new enterprises. This strongly suggests that the benchmark regression results are not driven by pre-existing time trends in cash holding levels between the treatment and control groups.

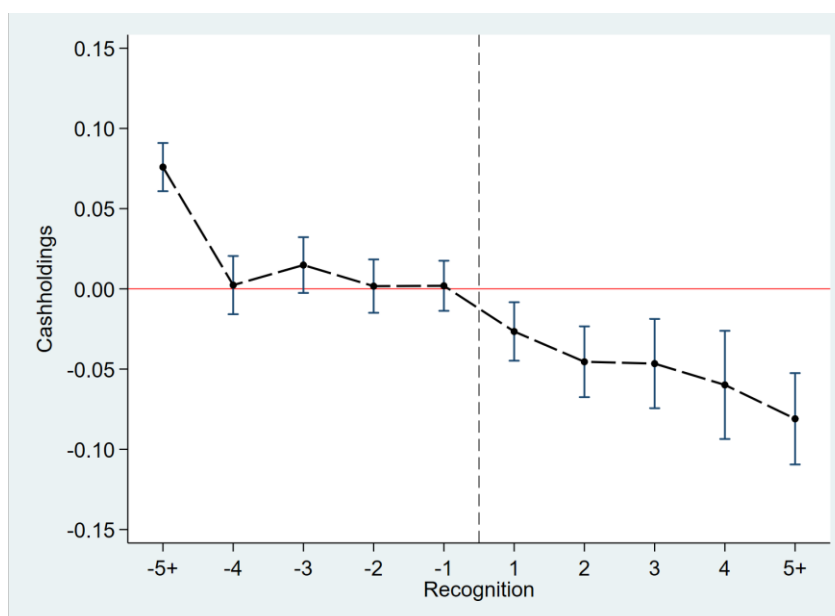


Figure 1. Parallel Trend Test

To test the impact of missing variables on the baseline results, we adopted the random permutation method proposed by Cornaggia and Li (2019) to conduct pseudo-tests. The specific steps are as follows: randomly assign the specialized and special identification time of each listed company, and assign variable changes according to these randomly generated event time. The original Inno values based on real event times are then replaced with these random variation values and the regression model is re-run. To reduce the chance factor and improve the validity of the pseudo-test, we independently performed 1,000 random assignments. If the baseline result is driven by missing variables, the regression coefficient of the pseudo-test should deviate significantly from 0. Conversely, if the missing variables have little effect on the benchmark results, the coefficients of the pseudo-test should be clustered around 0.

Table 5 and Figure 2 present the results of the placebo test. Table 5 reports the descriptive statistics of the distribution of regression coefficients from the random experiments, while Figure 2 plots these regression coefficients on the horizontal axis. The results indicate that when the recognition times for specialized and new enterprises are randomly generated for each listed company, the regression coefficients for Inno cluster around 0. This finding shows that the randomly constructed events in the placebo test do not significantly impact cash holding levels. In contrast, the regression coefficient for Inno under the actual events is -0.038 (as seen in Table 2), which is entirely outside the distribution of regression coefficients from the random experiments. These results suggest that the benchmark regression analysis results are not driven by other uncontrolled factors, but rather by the effect of the recognition of specialized and new enterprises. In conclusion, the placebo test results further affirm the reliability of the core conclusions of this study.

Table 5. Descriptive Statistics of the Distribution of Inno Regression Coefficients Under Random Permutation

Variable	Obs	Mean	Std. dev.	Min	Max
_b_change1	1,000	-0.000111	0.0046138	-0.0138677	0.0161593
_se_change1	1,000	0.004607	7.97E-06	0.0045858	0.0046351

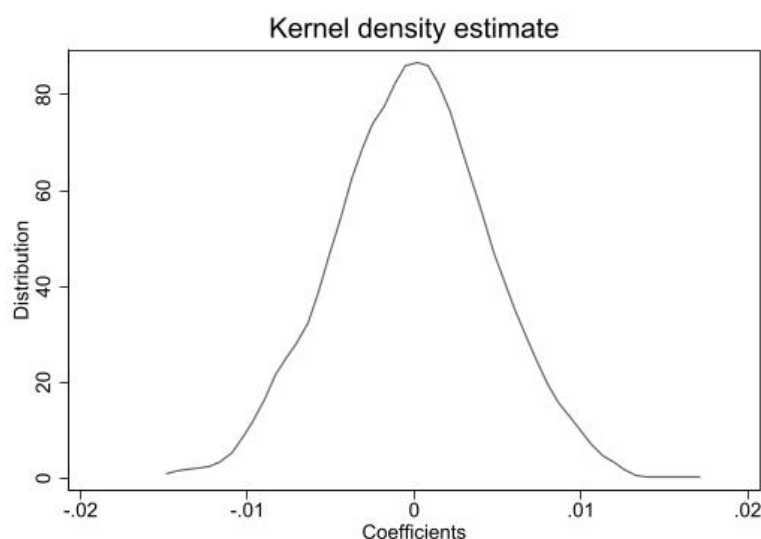


Figure 2. Results of 1000 Placebo Tests

5. Further Analysis

5.1. Mechanism Analysis

To conduct the analysis, this study divides the sample into two groups based on the average asset size (Size) of the companies: one group with asset sizes larger than the average and the other with asset sizes smaller than the average. Table 6 reports the relevant regression results. When the

company size is larger, the regression coefficient is -0.015, which is not significant. However, when the company size is smaller, the regression coefficient is -0.031, which is significantly negative at the 1% level. This indicates that the recognition of specialized and new enterprises has a more pronounced negative impact on the cash holding levels of smaller companies.

To further analyze the impact, the study divides the sample based on the average establishment age (Age) of the companies. The sample is split into “long-established companies” and “short-established companies”. Separate regressions are then performed for these two sub-samples. Given the significant differences in establishment ages across different industries, the impact of the recognition of specialized and new enterprises on cash holding levels may vary accordingly. Hence, a simple division may present some issues. To address this, Table 6 presents the regression results. When the establishment age is longer, the regression coefficient is -0.000, not significantly different from 0. Conversely, when the establishment age is shorter, the regression coefficient is -0.137, significantly negative at the 1% level. This indicates that the recognition of specialized and new enterprises has a more pronounced negative impact on the cash holding levels of companies with shorter establishment periods.

Table 6. Regression Results for Mechanism Variables

	large size companies	small size companies	long-established companies	short-established companies
VARIABLES	Cashhold	Cashhold	Cashhold	Cashhold
Inno	-0.015	-0.031***	-0.000	-0.137***
	(-1.51)	(-3.95)	(-0.08)	(-5.41)
Controls	Yes	Yes	Yes	Yes
Constant	-0.263***	0.276***	-0.290**	-0.279***
	(-3.88)	(2.62)	(-1.98)	(-3.22)
Observations	16,303	20,714	19,472	17,545
FIRM&YEAR FE	YES	YES	YES	YES
Adj. R2	0.084	0.199	-0.073	0.221

5.2. Heterogeneity Analysis

This study conducted a heterogeneity analysis based on the nature of enterprises to test whether the identification of specialized and special new enterprises has different effects on the cash holding levels of different types of enterprises. The key to the analysis is to distinguish between business types. Due to different sources of financing, the level of cash held by enterprises will vary. State-owned enterprises (SOEs) may have different cash management and holding strategies than private enterprises due to their unique ownership structure and government support. Even if soes are identified as specialized and innovative enterprises, they may not need to maintain high cash holding levels due to direct support from the government, which provides financial assistance or guarantees during times of financial stress, thereby reducing the risk of cash flow shortfalls. Therefore, this study posits that the impact of the recognition of specialized and new enterprises on cash holding levels is more pronounced for non-state-owned enterprises. This article divides the sample into “state-owned enterprise group” and “non-state-owned enterprise group” based on the variable Equity Nature of the company’s nature within the same year. Then, it applies a benchmark regression model to regress the two subgroup samples separately. Table 7 reports the relevant regression results. The results show that in the regression results of the state-owned enterprise group, the regression coefficient is not significantly different from 0; the regression coefficient is -0.039, and it is significantly less than 0 at the 1% level. The above results indicate that when the enterprise is a non-state-owned enterprise, the negative impact of identifying specialized and innovative enterprises on the level of cash holdings of the enterprise is more pronounced, supporting the speculation of this article. This implies that state-owned enterprises hinder the role of specialized and new enterprises in cash holdings. To better

leverage the role of identifying specialized and new enterprises in cash holdings, it is also necessary to increase the proportion of identifying non-state-owned enterprises.

Table 7. Heterogeneity Analysis of Company Nature

	(1)	(2)
	state-owned enterprises	non-state-owned enterprises
VARIABLES	Cashhold	Cashhold
Inno	-0.021	-0.039***
	(-1.46)	(-5.76)
Controls	Yes	Yes
Constant	-0.093	-0.421***
	(-1.39)	(-6.06)
Observations	14,100	22,917
FIRM&YEAR FE	YES	YES
Adj. R2	0.161	0.217

6. Conclusion

To alleviate the bottleneck issues faced in crucial core technological domains and to support the innovation and development of small and medium-sized enterprises, China initiated the policy of fostering specialized and new enterprises starting from 2018. This study, based on annual panel data of listed companies from 2008 to 2022, utilizes the recognition of specialized and new enterprises as a quasi-natural experiment to investigate the impact of specialized and new enterprise identification on corporate cash holding levels using a difference-in-differences approach. The research findings indicate that the recognition of specialized and new enterprises significantly reduces corporate cash holding levels. This conclusion remains robust after undergoing a series of robustness checks, demonstrating the positive role of the identification policy in guiding companies towards optimizing cash management and enhancing operational efficiency. Through the analysis of the impact mechanism, this study reveals that the specialized and new enterprise identification policy can influence the cash holding levels of companies with different founding years and sizes, with a more significant effect observed on companies with smaller scales and shorter founding years. This mechanism elucidates the potential effects of the identification policy in promoting innovation and enhancing market competitiveness. Furthermore, this study conducts heterogeneity analysis from the perspective of company nature. The research indicates that the impact of specialized and new enterprise recognition on cash holding levels is more significant for non-state-owned enterprises. This finding unveils the differences among enterprises of different ownerships in enjoying policy dividends, providing policymakers with more detailed reference points for policy formulation.

This paper puts forward several policy suggestions. First, it is suggested to improve the identification standards and procedures, make the standards more scientific and reasonable, accurately reflect the innovation ability and market competitiveness of enterprises, and simplify the procedures, improve transparency, reduce the time and cost of enterprises to apply, and establish a dynamic adjustment mechanism to adapt to the development of the industry and technological progress. Secondly, it is suggested to strengthen policy publicity and support, widely publicize the policy of identifying specialized and special new enterprises through media, Internet and conference channels, provide tax incentives, financial support and talent training support, encourage newly established and small-scale enterprises to participate in the identification and promote their development. In addition, cooperation platforms should be established to promote cooperation and exchanges between enterprises of different ownership, jointly promote industrial upgrading and innovative development, enhance China's position and influence in the global economy, and achieve sustainable economic and social development.

References

- [1] Zeng, C., & Yan, M. (2021). Strategic Integration of Industry and Finance and Corporate Cash Holdings: Empirical Evidence from Non-Listed Financial Institutions with Corporate Shareholdings. *Financial Forum*, 26 (06), 71 - 80.
- [2] Cao, H., Zhang, S., Ouyang, Y., et al. (2022). Innovation Policies and the Innovation Quality of Specialized, Refined, and Innovative Small and Medium-Sized Enterprises, *China Industrial Economy* (11), 135 - 154.
- [3] Chen, L., Zhang, N., Wang, W. (2020). Capital Market Opening and Corporate Cash Holdings: Empirical Evidence from “Shanghai-Hong Kong Stock Connect”. *Finance and Accounting Monthly*, (14), 23 - 31.
- [4] Cao, Y., Zeng, D., Sun, L., et al. (2021). Implementation of the “Belt and Road” Initiative and Corporate Cash Holdings. *Auditing and Economic Research*, 36 (03), 65 - 76.
- [5] Cao, Y., Zhang, Y., Shi, R., et al. (2023). Resilience Antecedents of Specialized, Refined, and Innovative “Hidden Champions” Driven by Digital Transformation: An fsQCA Analysis Based on Text Mining of Annual Reports of Listed Companies. *Foreign Economics & Management*, 45 (10), 68 - 83.
- [6] Dou, H., Sun, Y., Liu, W., et al. (2023). Corporate Pension Plans and Cash Holdings: From the Perspective of Employee Benefits. *Accounting Research*, (06), 118 - 135.
- [7] Dong, R. (2023). The Impact of Digital Transformation on Cash Holdings Levels of Retail Enterprises. *Research on Business Economics*, (15), 166 - 169.
- [8] Du, X., Lu, J. (2015). Background of Board-Auditor Firm Work Experience and Corporate Cash Holdings: Empirical Evidence from China's Capital Market. *Auditing and Economic Research*, 30 (04), 40 - 49.
- [9] Ding, Y., Wu, X. (2023). Does Nurturing “Hidden Champions” Enterprises Help Enhance Innovation Vitality of Small and Medium-Sized Enterprises in Manufacturing? Evidence from Specialized, Refined, and Innovative Policies. *Science & Technology Progress and Policy*, 40 (12), 108 - 116.
- [10] He, X. (2023). Competition among Commercial Banks and Corporate Cash Holdings: Empirical Evidence from Chinese Manufacturing Enterprises. *Journal of Shanghai Lixin University of Accounting and Finance*, 35 (01), 31 - 41.
- [11] Liu, C., Cui, P. (2022). Research on the Growth Path of Domestic Small and Medium-Sized Enterprises from Specialized, Refined, and Innovative to “Hidden Champions”. *Southwest Finance*, (11), 29 - 42.
- [12] Liu, J., Wang, Y., Luo, S. (2022). Analysis of the Influence of Controlling Shareholders on Corporate Cash Holdings: From the Perspective of Human Resource Costs. *Economic Issues*, (11), 123 - 129.
- [13] Li, J., Yang, S. (2020). Empirical Study on the Impact of Corporate Debt Behaviour on Cash Holdings Levels. *Statistics and Decision*, 36 (16), 154 - 157.
- [14] Liu, Y., Hu, Y., Wu, F. (2016). Does Managerial Experience Influence Corporate Cash Holdings? Evidence from China's Shanghai and Shenzhen Stock Markets from 2006 to 2013. *Economic Management*, 38 (07), 133 - 146.
- [15] Wang, H., Chen, K. (2022). The Impact of Innovation Support Policies on Enterprise R&D Investment and Operating Performance: Micro-Evidence from Specialized, Refined, and Innovative “Hidden Champions” Enterprises. *Southern Finance*, (11), 22 - 35.
- [16] Wang, W., Wang, K., Yan, Z. (2023). Research on the Impact Mechanism of Regional High-Quality Development on the Innovation Performance of Specialized, Refined, and Innovative Small and Medium-Sized Enterprises. *Science Research Management*, 44 (02), 32 - 44.
- [17] Wang, Y., Zeng, D., Li, J., et al. (2023). Founder-Scientist Bridge and Enterprise Technological Innovation Performance: An Analysis Based on Specialized, Refined, and Innovative “Hidden Champions” Enterprises. *Studies in Science of Science*, 41 (09), 1690 - 1701.
- [18] Wang, Y., Liu, J., Xiong, Z. (2022). Study on the Impact of Digital Economy on Corporate Cash Holdings: A Quasi-Natural Experiment Based on “Broadband China Strategy”. *Theoretical and Practical Finance and Economics*, 43(03), 96 - 103.
- [19] Yang, X., Chen, F., Yang, Z. (2020). How Does CEO Change Affect Corporate Cash Holdings? *Auditing and Economic Research*, 34(02), 3-21.
- [20] Zhou, B. (2020). The Impact of Executive Financial Ties on Corporate Cash Holdings. *Economic and Management Research*, 41 (02), 53 - 65.

- [21] Zhang, R., Yang, X. (2022). Can Carbon Emission Trading Policies Increase Corporate Cash Holdings Levels? *Contemporary Finance & Economics*, (11), 125 - 136.
- [22] Cornaggia, J., & Li, J. Y. (2019). The value of access to finance: Evidence from M&As. *Journal of Financial Economics*, 131 (1), 232 – 250.
- [23] Jensen Gao H, Harford J, Li K. Determinants of corporate cash policy: Insights from private firms [J], *Journal of Financial Economics*, 2013, 109 (3): 623-639.
- [24] Opler T, Pinkowitz L, Stulz R, et al. The determinants and implications of corporate cash holdings [J]. *Journal of Financial Economics*, 1999, 52 (1): 3 - 46.
- [25] Ozkan A, Ozkan N. Corporate cash holdings: an empirical investigation of UK companies [J]. *Journal of Banking & Finance*, 2004, 28 (9): 2103 - 2134.