

Tax Enforcement Standardization and Corporate Investment: Evidence from China

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Abstract

Against the backdrop of continuous tax system reform in China, the business environment for market entities has undergone significant transformation. This study employs the staggered implementation of Tax Administrative Penalty Discretion Benchmarks by provincial tax authorities since 2016 as a quasi-natural experiment. Using a sample of A-share listed companies from 2007 to 2021 and a multi-period difference-in-differences approach, we examine how tax enforcement standardization affects corporate investment. Our findings demonstrate that standardized tax enforcement significantly promotes corporate investment growth. Furthermore, from a government-enterprise relationship perspective, we examine in depth the heterogeneous effects across firms with different characteristics. The investment response is particularly pronounced for enterprises without political connections and non-state-owned enterprises, suggesting the reform has helped level the playing field. Overall, by constraining enforcement discretion and improving institutional predictability, tax enforcement standardization effectively optimizes the business environment and stimulates corporate investment. This study not only enriches the theoretical framework examining taxation-investment relationships but also provides valuable insights for corporate investment decision-making.

Keywords: Tax Enforcement Standardization, Corporate investment, Business environment.

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1. Introduction

As China's economy continues to develop, its tax system has undergone continuous reforms. Since the 18th National Congress of the Communist Party of China, the state has prioritized the rule of law in taxation, with coordinated efforts across government agencies to advance related policies. In 2013, the "Decision of the Central Committee of the Communist Party of China on Several Major Issues Concerning Comprehensively Deepening Reforms," adopted at the Third Plenary Session of the 18th Central Committee, formally introduced the principle of "implementing the principle of statutory taxation." This decision established the direction for China's tax system reform, marking a crucial step toward a legalized and standardized tax governance system.

Historically, tax enforcement in China was characterized by excessive administrative discretion. This not only gave rise to enforcement irregularities and inequities but also heightened tax-related uncertainties for businesses, elevating their transaction costs and adversely influencing investment decisions. To address these issues and support the national agenda of advancing a rule-of-law-based taxation system and deepening tax collection and administration reforms, provincial governments began implementing the "Benchmarks for Tax Administrative Penalty Discretion" in 2016. These benchmarks were designed to strictly constrain enforcement discretion, ensuring that tax administration follows transparent and standardized procedures with clearly defined criteria, thereby fostering a rule-of-law and standardized enforcement framework.

Standardized tax enforcement mitigates information asymmetries between enterprises and tax authorities, reduces investment hesitation resulting from ambiguous tax policies, and lowers institutional transaction costs associated with compliance irregularities. From a practical standpoint, corporate investment serves as a fundamental driver of economic growth, with a stable and impartial tax enforcement environment constituting a critical external factor in corporate investment decision-making. A rigorous examination of the impact of tax enforcement standardization reforms since 2016 on corporate investment would not only facilitate assessment of these reforms' practical effects on market entities but also provide valuable theoretical and empirical foundations for enhancing the tax collection and administration system, optimizing the business climate, and informing corporate investment strategies. Such research would ultimately support the achievement of high-quality economic development through the advancement of tax legalization in China.

This study investigates how the tax enforcement standardization reform affects corporate investment. Based on a sample of A-share listed companies from 2007 to 2021 and employing a multi-period difference-in-differences (DID) approach with staggered adoption, our analysis yields three main findings: First, the reform significantly promotes corporate investment. Second, this positive effect is more pronounced among firms without political connections compared to those with such ties. Third, non-state-owned enterprises exhibit a stronger investment response to

the reform than state-owned enterprises. These results underscore that standardized tax enforcement fosters a favorable business environment, enhances legal predictability, and thus encourages corporate investment.

This study makes contributions to the literature in two important dimensions. First, while existing research on tax policy and corporate investment has predominantly focused on explicit incentive instruments such as tax rate adjustments and preferential tax treatments (Maon et al., 2017; Liu and Li, 2021), it has largely overlooked the structural importance of implicit institutional factors like enforcement procedure standardization. The prevailing assumption of "perfect compliance" in conventional analytical frameworks fails to explain distinctive phenomena in China's transitional economy: even as nominal tax burdens decline, firms may still restrain investment due to compliance risk premiums stemming from ambiguous enforcement standards (Desai et al., 2007). This theoretical gap originates from two principal limitations: the narrow equating of tax burden with statutory rates while disregarding implicit costs from discretion abuse, and the treatment of corporate investment decisions as static games while underestimating how procedural justice shapes long-term expectations. Our paper's key theoretical innovation lies in establishing a "institutional certainty - risk premium - investment incentive" transmission mechanism, revealing how the Discretion Standards reshape corporate investment decisions by compressing the "compliance cost uncertainty band."

Second, our findings advance the understanding of business environment significance for corporate investment. Current business environment research primarily concentrates on explicit institutional costs like streamlined approvals and tax reductions (as captured in the World Bank's "Doing Business" indicators), while generally neglecting the crucial role of implicit institutional quality such as enforcement standardization. Through theoretical development and empirical verification, we demonstrate that the tax discretion benchmark reform, by constraining enforcement flexibility, effectively transforms "institutional certainty" into a public good within the business environment. When firms can clearly anticipate the triggers and consequences of tax penalties, their "policy ambiguity cost" is substantially reduced. This procedural justice-assured stability proves more effective than short-term tax incentives in promoting long-term asset-specific investments. Our finding challenges the simplistic "lower rates equal better environment" notion and provides a theoretical foundation for incorporating "enforcement predictability" into business environment assessment frameworks.

2. Literature Review

2.1 Tax Enforcement and Corporate Behavior

Existing literature establishes a significant relationship between tax enforcement and corporate governance, particularly in addressing pervasive issues like agency problems and information asymmetry. Jensen (1986) demonstrates that agency-driven conflicts of interest between shareholders and management can impair

investment efficiency, as managers often pursue self-interested investment strategies that deviate from shareholder value maximization. Zhang and Zhu (2015) further show that tax enforcement can partially constrain corporate tax avoidance, thereby mitigating agency conflicts and information asymmetry while improving investment efficiency.

Tax enforcement also functions as a crucial external governance mechanism. Enhanced enforcement has been shown to improve corporate governance and firm value through multiple channels: effectively curbing earnings management (Zeng and Zhang, 2009; Ji and Pan, 2025), limiting related-party tunneling (Ye and Liu, 2011), and reducing debt financing costs (Pan et al., 2013). Stringent tax supervision motivates firms to enhance financial reporting quality and reduce fraud risk (Hanlon et al., 2014). Additionally, Tang et al. (Tang et al., 2022) find that standardized tax enforcement increases audit fees as auditors expand procedures to address tax-related risks, thereby improving the external governance environment.

Regarding environmental and social outcomes, standardized tax enforcement significantly promotes both the quantity and quality of corporate green innovation, particularly among firms in regions with high government intervention and private enterprises (Tang et al., 2024). Beyond stringent oversight, incentive-compatible flexible enforcement also improves cooperative tax compliance (Sun and Zhao, 2023; Yin et al., 2024) and enhances corporate ESG performance (Zhang et al., 2024).

In terms of tax burden equity, Li et al. (2020) document that improved tax collection capacity reduces regional disparities in corporate tax burdens, promoting both firm development and resource allocation efficiency. Sun et al. (2024) show that the implementation of discretionary benchmarks across provinces has significantly standardized tax enforcement, strengthening both its deterrent effect and external oversight while fostering regionally fair tax environments. These findings collectively demonstrate that tax enforcement optimization helps level the playing field, enabling diverse enterprises to compete fairly under uniform tax law application.

2.2 Determinants of Corporate Investment

As a fundamental mechanism of resource allocation, the drivers of corporate investment decisions have attracted substantial scholarly attention. Research identifies internal governance and incentive structures as primary internal determinants, while external factors predominantly comprise policy and market conditions. Within corporate governance frameworks, independent director oversight effectively constrains CEO power, enhancing investment efficiency and curbing over-investment. Similarly, strengthened executive incentives through extended tenure or increased equity holdings amplify governance effectiveness (Zhang et al., 2024).

Externally, macroeconomic policy uncertainty adversely affects corporate investment by tightening behavioral constraints (Wei and Wang, 2025). Wang and Lyu (2023) demonstrate that economic policy uncertainty impairs capital allocation

efficiency through real options mechanisms, intensified financial frictions, and agency conflicts - effects particularly pronounced in firms facing high investment irreversibility, strong industry monopolization, binding financing constraints, and weak internal controls. Tax policies similarly influence investment through their effects on financing costs and expected returns. Mao et al. (2024) reveal that perceived uncertainty in tax administration significantly suppresses investment propensity, underscoring the need for transparent policy communication and predictable enforcement to foster equitable business environments conducive to high-quality development. Conversely, financial system development facilitates investment by easing external financing constraints and expanding funding channels (Allen et al., 2004).

Notably, direct evidence regarding tax enforcement's impact on corporate investment remains limited in China, where research predominantly examines tax reduction measures and incentives. Wang et al. (2024) show that excess VAT refunds stimulate new investment while curbing over-investment. However, tax reforms may yield mixed effects: the consolidation of national and local tax bureaus, for instance, increased corporate tax burdens, leading firms to reduce investment expenditures to alleviate resultant financial pressures.

3. Institutional Context and Hypothesis Development

3.1 Institutional Context

China's tax administration modernization has long confronted the fundamental challenge of constraining administrative discretion. Before 2016, although the Tax Collection and Administration Law authorized tax authorities to impose administrative penalties, broadly defined fine ranges - such as "between 0.5 and 5 times the tax due" - resulted in systematic inconsistencies, including differential treatment of identical violations, enforcement influenced by personal relationships, and negotiated settlements. This excessive discretion not only created opportunities for rent-seeking but also impeded firms' ability to accurately anticipate compliance costs, generating a cycle of "unstable expectations—deferred investment."

In 2016, the Central Leading Group for Deepening Comprehensive Reform approved the Guiding Opinions on Regulating the Discretionary Power in Tax Administrative Penalties, prompting provincial-level tax authorities to successively issue localized Benchmarks for Tax Administrative Penalty Discretion. These guidelines introduced three key institutional constraints:

Quantified Discretion Tiers: Violations are classified into distinct categories - such as "minor," "general," and "serious" - with explicitly defined fine ranges corresponding to each tier. For instance, one province specifies that a first-time failure to file on time, if voluntarily corrected, incurs a fine of 0.5 times the tax due.

Enumerated Discretion Factors: Explicit lists of considerations - including "subjective intent," "severity of social harm," and "degree of cooperation during inspection" - are provided with assigned weights, limiting the influence of extra-legal factors.

Procedural Rigidities: Mandatory procedures such as full documentation of enforcement actions, panel reviews for major penalties, and written justification for discretionary outcomes ensure traceability and accountability.

This reform represents a paradigm shift from extensive toward refined tax governance, replacing administrative flexibility with institutional rigidity and embedding the principle of rule of law into tax administration. Importantly, since provincial discretion benchmarks were formulated under guidance from the State Taxation Administration, their staggered implementation offers a quasi-exogenous setting for identifying the causal effects of institutional change.

3.2 Hypothesis Development

Tax enforcement standardization promotes corporate investment through several channels. From the perspective of tax environment stability, the historically substantial discretion available to enforcement officers created significant uncertainty in policy implementation. Varying interpretations of identical tax provisions across officials made accurate tax liability forecasting difficult for firms, elevating operational risk and fostering investment conservatism. The 2016 standardization initiative, by clarifying enforcement procedures and codifying penalty benchmarks, substantially mitigated this uncertainty. Operating within a more predictable tax environment, firms can better forecast future cash flows, strengthening investment confidence and willingness.

Through the lens of transaction cost theory, irregular enforcement previously encouraged rent-seeking behaviors. Companies incurred implicit transaction costs through resources diverted to manage tax inspections or secure favorable outcomes via unproductive means. By constraining enforcement discretion, the reform curtails rent-seeking opportunities and reduces these transaction costs. The resultant cost savings free up capital for investment while raising expected returns, encouraging investment expansion. This leads to our first hypothesis:

H1: Tax enforcement standardization significantly promotes corporate investment.

Politically connected firms historically leveraged their ties to buffer against tax uncertainty during less standardized periods. Such connections facilitated access to internal policy information and lenient treatment, partially offsetting the negative effects of arbitrary enforcement. For instance, connected firms could obtain favorable interpretations of ambiguous tax rules through informal channels. In contrast, firms lacking political connections faced higher compliance risks and greater uncertainty.

The reformed standardized framework establishes uniform, transparent enforcement, leveling the playing field by diminishing the comparative advantage of political connections. Non-connected firms benefit disproportionately as systemic biases and enforcement unpredictability decline. Enhanced fairness and transparency enable these firms to better align investment decisions with

operational strategies and market opportunities, amplifying the reform's positive investment effects. Thus, we propose:

H2: The investment-promoting effect of tax enforcement standardization is more pronounced for firms without political connections than for those with such connections.

State-owned enterprises (SOEs), given their government ownership and inherent ties, historically received differentiated treatment in tax enforcement. During less standardized periods, their government relationships often translated into leniency, with authorities considering broader objectives like economic stability and employment. Consequently, SOEs exhibited lower sensitivity to tax policy changes and enforcement uncertainty, with their investment decisions less affected by the tax enforcement environment.

Non-state-owned enterprises (non-SOEs), being more market-oriented, demonstrate greater sensitivity to external business conditions. Under irregular enforcement, non-SOEs faced elevated tax risks - including potential over-enforcement and unreasonable tax burdens - that significantly suppressed investment willingness. The standardization reform creates a fairer competitive environment for non-SOEs by reducing arbitrary tax interventions and lowering investment risk perceptions. This enables non-SOEs to more accurately assess project returns and risks, encouraging more active investment. Therefore, we hypothesize:

H3: The investment-promoting effect of tax enforcement standardization is stronger for non-state-owned enterprises than for state-owned enterprises.

4. Research Design

4.1 Model Specification

To examine the impact of the tax enforcement standardization reform on corporate investment, this paper employs a multi-period Difference-in-Differences (DID) design with the following regression model:

$$invest_{i,t} = \alpha_0 + \alpha_1 POST_{i,t} + \alpha_s CONTROLS_{i,t} + \sum prov + \sum year + \varepsilon_{i,t} \quad (1)$$

Model (1) is a multi-period Difference-in-Differences (DID) model. Since the timing of the reform implementation varied across provinces, enterprises in regions that had implemented the reform are designated as the treatment group, while those in regions that had not yet implemented the reform serve as the control group. The treatment group status at the province level is absorbed by province fixed effects (*prov*), and the temporal variation before and after the reform is absorbed by year fixed effects (*year*). Therefore, in this model specification, the coefficient on the *POST* variable effectively captures the "difference-in-differences" estimate - that is,

the extent of change in tax avoidance improvement for enterprises in reformed regions after the reform compared to enterprises in regions that had not implemented the reform.

4.2 Variable Definitions

Dependent Variable: Invest

Invest, the dependent variable, measures a firm's net annual investment. It is calculated as the difference between cash outflows for acquiring fixed assets, intangible assets, and other long-term assets and cash inflows from disposing such assets, normalized by total assets at year-end.

Explanatory Variable: POST

POST is a dummy variable indicating the post-reform period of the tax enforcement standardization. The reform - implementation of benchmarks for tax administrative penalty discretion - was rolled out across provinces at different times after 2016.

- 2016: Liaoning.
- 2017: Jilin, Zhejiang, Beijing, Shaanxi, Guangdong.
- 2018: Guizhou, Hebei, Tibet, Shanxi, Heilongjiang, Shanghai, Jiangsu, Anhui, Fujian, Jiangxi, Yunnan, Gansu, Qinghai, Tianjin, Inner Mongolia, Chongqing.
- 2019: Sichuan, Hainan, Ningxia, Hubei, Guangxi.

POST is coded as 1 for years after the reform takes effect in a given province, and 0 otherwise.

Control Variables (CONTROLS)

Following established literature, we include the following control variables.

- Firm size (size): Natural logarithm of total assets at year-end. Larger firms tend to have stronger financing capacity and investment scale; a positive correlation with investment is expected.
- Financial leverage (lev): Ratio of total liabilities to total assets at year-end. Higher leverage indicates greater debt repayment pressure and tighter cash flow; a negative correlation with investment is anticipated.
- Firm performance (roa): Net profit divided by total assets at year-end. Higher profitability suggests more internal funds available for investment; a positive relationship is expected.
- Corporate cash flow (CFO): Net operating cash flow scaled by total assets. Ample cash flow enhances investment capacity; a positive correlation is predicted.

Table 1: Variables and definitions

Variable	Definition
Invest	(Cash paid for the acquisition of fixed assets, intangible assets and other long-term assets - Cash received from the disposal of fixed assets, intangible assets and other long-term assets) / Total assets at year-end.
POST	Dummy variable that takes a value of 1 for periods after the reform implementation, and 0 otherwise.
size	Natural logarithm of total assets at year-end.
lev	Total liabilities at year-end divided by total assets at year-end.
roa	Return on Assets.
CFO	Net cash flow from operating activities divided by total assets at year-end.
soe	Dummy variable that takes a value of 1 for state-owned enterprises, and 0 otherwise.
PC	Dummy variable that takes a value of 1 if the listed company's chairman or general manager has political connections, and 0 otherwise.
dual	Dummy variable that takes a value of 1 if the positions of general manager and chairman of the board are held by the same person, and 0 otherwise.
od	Proportion of independent directors on the board: Number of independent directors divided by the total number of board members.
ratetop1	Largest shareholder's ownership percentage.

4.3 Sample Selection and Data Sources

This study utilizes data from A-share listed companies spanning 2007-2021 as the initial sample. The sample is refined through the following screening procedures: financial, insurance, and securities firms are excluded; companies under Special Treatment (ST, *ST, and PT) are purged; and observations with missing variables are removed. The final dataset comprises 44,430 firm-year observations.

Data are collected from multiple sources: the implementation dates of provincial tax enforcement standardization reforms are manually compiled from official tax authority websites; financial data for all variables are obtained from the China Stock Market & Accounting Research (CSMAR) database. All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the impact of outliers.

5. Empirical Results

5.1 Descriptive Statistical Analysis

Table 2 presents descriptive statistics for the main variables. The final sample comprises 44,430 firm-year observations. As shown, the variable invest has a mean of 0.058 and a median of 0.037. The mean exceeding the median, coupled with a standard deviation of 0.066, reflects substantial variation in investment levels across firms, supporting the relevance of examining tax enforcement reform effects. The POST dummy averages 0.419, indicating that 41.9% of observations fall within the post-reform period. Sample firms exhibit average total assets of RMB 479 million (log value: 22.28), an average asset-liability ratio of 44%, and an average return on assets (ROA) of 3.3%.

Table 2: Descriptive Statistical Analysis

Variable	N	mean	sd	p25	p50	p75
Invest	44430	0.0580	0.0660	0.0130	0.0370	0.0790
POST	44430	0.419	0.493	0	0	1
size	44430	22.28	1.420	21.29	22.04	23.01
lev	44430	0.443	0.210	0.276	0.435	0.597
roa	44430	0.0330	0.0640	0.0110	0.0340	0.0640
CFO	44430	0.0470	0.0710	0.00800	0.0460	0.0870

5.2 Correlation Analysis

In Table 3, the correlation coefficient between the variable invest and POST is negative, which is contrary to the expected relationship. However, correlation coefficients only reflect bivariate relationships without considering the influence of control variables. Therefore, it is necessary to refer to the subsequent regression analysis results for a more robust interpretation. The correlations suggest that firms with a smaller scale, lower debt levels, and better performance are more likely to invest. Furthermore, the maximum correlation coefficient among the variables does not exceed 0.5, indicating the absence of severe multicollinearity issues.

Table 3: Correlation Coefficient Matrix

	Invest	POST	size	lev	roa	CFO
Invest	1					
POST	-0.061***	1				
size	-0.046***	0.116***	1			
lev	-0.075***	-0.052***	0.495***	1		
roa	0.183***	-0.053***	0.015***	-0.355***	1	
CFO	0.147***	0.049***	0.043***	-0.163***	0.394***	1

5.3 Multiple Regression Analysis

Table 4 presents the basic regression results, which include three key findings: First, corporate investment increased significantly after the implementation of the tax enforcement standardization reform (Hypothesis 1). Second, following the reform, the investment growth of firms without political connections was significantly greater than that of firms with political connections (Hypothesis 2). Third, post-reform, non-state-owned enterprises (non-SOEs) exhibited more significant investment growth compared to state-owned enterprises (SOEs) (Hypothesis 3). These findings correspond to columns (1), (2), and (3) of Table 4, respectively. The detailed regression results are as follows:

First, in Model (1), the coefficient on POST is 0.0046*** ($t=2.89$), which is significantly positive at the 1% level. This indicates a significant positive relationship between the tax enforcement standardization reform and the level of corporate investment, supporting Hypothesis H1.

Second, Model (2) introduces political connections (PC) as a moderating variable. Following prior research, this paper defines corporate political connection based on whether the chairman of the board or the general manager currently holds or has previously held positions such as member of the Chinese People's Political Consultative Conference (CPPCC), delegate to the National People's Congress (NPC), or government official. PC is a dummy variable that takes the value of 1 if the chairman or general manager of the listed company has such a political connection, and 0 otherwise. In Model (2), the coefficient on the interaction term (POST $\times$ PC) is -0.0053 ($t=-2.71$), significantly negative at the 1% level. This suggests that after the implementation of the tax enforcement standardization reform, the investment growth of firms with political connections was significantly lower than that of firms without political connections. This result supports Hypothesis H2, which posits that the reform significantly promoted investment in firms without political connections compared to those with such connections.

Third, Model (3) introduces state-owned enterprise (SOE) status as a moderating variable (SOE is a dummy variable that takes the value of 1 for state-owned enterprises, and 0 otherwise). The coefficient on the interaction term (POST $\times$ SOE) is -0.0095*** ($t=-7.26$), which is significantly negative at the 1% level. This indicates that after the implementation of the tax enforcement standardization reform, the investment growth of state-owned enterprises was significantly lower than that of non-state-owned enterprises. This result supports Hypothesis H3, which posits that the reform significantly promoted investment in non-state-owned enterprises compared to state-owned enterprises.

Table 4: Multiple Regression Analysis

	H1	H2	H3
Variables	Invest	Invest	Invest
POST	0.0046^{***}	0.0070 ^{***}	0.0077 ^{***}
	(2.89)	(3.84)	(4.72)
PC		0.0030 ^{***}	
		(3.43)	
PC POST		-0.0053^{***}	
		(-2.71)	
soe			-0.0126 ^{***}
			(-14.52)
soe POST			-0.0095^{***}
			(-7.26)
size	-0.0006 ^{**}	0.0003	0.0011 ^{***}
	(-2.06)	(0.91)	(3.99)
lev	-0.0042 ^{**}	-0.0083 ^{***}	-0.0018
	(-2.18)	(-3.60)	(-0.96)
roa	0.1333 ^{***}	0.1259 ^{***}	0.1292 ^{***}
	(23.41)	(18.29)	(22.82)
CFO	0.0904 ^{***}	0.1006 ^{***}	0.0927 ^{***}
	(19.13)	(18.11)	(19.72)
Constant	0.0615 ^{***}	0.0438 ^{***}	0.0279 ^{***}
	(10.97)	(6.44)	(4.86)
Observations	44,430	30,934	44,430
R-squared	0.073	0.080	0.085
year	YES	YES	YES
PROV	YES	YES	YES

5.4 Robustness Tests

5.4.1 Parallel Trends Test

The parallel trends assumption is a fundamental requirement for the validity of the Difference-in-Differences (DID) methodology. To test this assumption, we employ event-time dummies relative to the reform implementation year. Specifically, we create dummy variables for the four years preceding the reform (pre4, pre3, pre2, pre1) and the three years following the reform (post1, post2, post3), using the period immediately before the reform as the benchmark.

Figure 1 plots the estimated coefficients for these event-time dummies along with their 95% confidence intervals. The coefficients for all pre-reform periods are statistically indistinguishable from zero, indicating no systematic differences in investment trends between treatment and control groups before the policy implementation. This pattern satisfies the parallel trends assumption.

Following the reform, the coefficients turn positive and statistically significant, revealing a substantial increase in investment by firms in the treatment group relative to the control group. The point estimates show a generally increasing magnitude over the post-reform years, suggesting a strengthening treatment effect over time.

This dynamic pattern provides visual evidence supporting a causal interpretation of the reform's impact. The absence of pre-trends combined with the emergence and persistence of positive effects after the reform reinforces the validity of our identifying assumption and the robustness of our main findings.

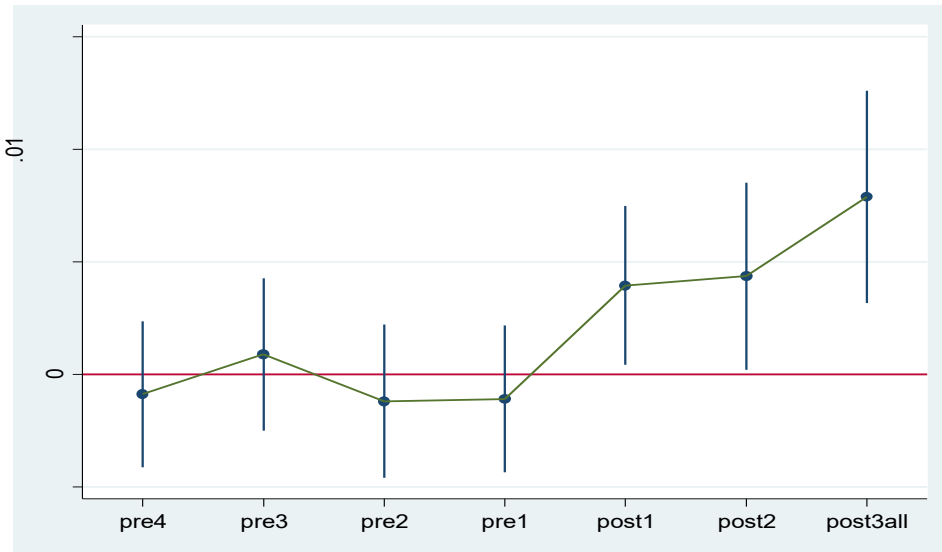


Figure 1: Parallel Trends Test

5.4.2 Excluding Firm- and Industry-Specific Trends

The baseline regression incorporated province fixed effects (prov) and year fixed effects (year). To further ensure robustness, firm fixed effects (company) and industry-by-year fixed effects (ind) are introduced in this test.

Including firm fixed effects helps effectively identify unique factors associated with individual firms, thereby minimizing interference from inherent firm-level heterogeneity on the research results. Similarly, while firms within an industry share common characteristics, differences exist across sub-sectors. Introducing industry-by-year fixed effects allows for a more refined control of industry-specific characteristics, preventing special circumstances within particular industries from distorting the research conclusions.

Column (1) of Table 5 incorporates firm fixed effects, and Column (2) incorporates industry-by-year fixed effects. The results show that the coefficient on POST remains significantly positive in both specifications. This indicates that the promoting effect of the tax enforcement standardization reform on corporate investment is not driven by firm-specific or industry-specific trends, confirming the robustness of the results.

5.4.3 Additional Control Variables

Corporate governance may influence corporate investment activities. Therefore, this study incorporates the following corporate governance control variables into

the model: CEO duality (dual), the proportion of independent directors (od), and the ownership percentage of the largest shareholder (ratetop1). CEO duality is a dummy variable that takes the value of 1 if the positions of chairman of the board and general manager (CEO) are held by the same individual, and 0 otherwise. The proportion of independent directors is calculated as the number of independent directors divided by the total number of board members. The ownership percentage of the largest shareholder refers to the shareholding ratio of the largest shareholder in the listed company. After including these corporate governance control variables in the third column of Table 5, the regression coefficient for POST remains significantly positive, indicating the robustness of the results.

Table 5: Robustness Tests

	Firm Fixed Effects	Industry Fixed Effects	Additional Control Variables
VARIABLES	Invest	Invest	Invest
POST	0.0023*	0.0035**	0.0050***
	(1.74)	(2.25)	(3.10)
size	0.0104***	0.0013***	-0.0002
	(17.58)	(4.49)	(-0.75)
lev	-0.0002	0.0136***	-0.0029
	(-0.09)	(7.06)	(-1.49)
roa	0.1360***	0.1476***	0.1285***
	(24.38)	(26.53)	(22.06)
CFO	-0.0140***	0.0508***	0.0907***
	(-3.11)	(10.85)	(18.95)
dual			-0.0131***
			(-18.16)
od			-0.0071
			(-1.24)
ratetop1			0.0001***
			(6.24)
Constant	-0.1786***	0.0147**	0.0742***
	(-13.93)	(2.48)	(12.13)
Observations	43,937	44,427	43,286
R-squared	0.463	0.128	0.080
year	YES	YES	YES
prov	NO	YES	YES
company	YES	NO	NO
ind	NO	YES	NO

6. Further Analysis

Having established the positive effect of tax enforcement standardization on corporate investment, we now examine the composition and efficiency of this investment response. Specifically, we address two questions: First, does the reform primarily stimulate maintenance investment or new investment? Second, does it potentially induce over-investment?

Maintenance investment represents expenditures required to sustain existing production capacity, calculated as the sum of depreciation of fixed assets and amortization of intangible assets and long-term deferred expenses, scaled by total assets. Such investment maintains but does not expand productive capacity. New investment, derived by subtracting maintenance investment from total investment (both scaled by total assets), reflects capacity expansion through incremental inputs of materials, labor, and technology.

Columns (1) and (2) of Table 6 report the reform's effects on maintenance investment (Maintaininv) and new investment (Addinv), respectively. The coefficient on POST is insignificant for maintenance investment but significantly positive for new investment, indicating that the reform specifically stimulated expansionary investment rather than merely supporting existing operations. This pattern suggests that standardized enforcement created what might be termed "institutional attractiveness" - enhancing firm confidence in future prospects.

Following established investment efficiency models (Richardson, 2006; Chen and Xie, 2011; Jiang and Xu, 2015; Huang et al., 2016; Wang et al., 2017), we measure over-investment (overinv) using the positive residuals from investment efficiency estimations. Column (3) shows an insignificant POST coefficient, indicating no systematic increase in over-investment following the reform. This suggests that the policy stimulated investment quantity without compromising investment efficiency, addressing concerns about potential resource misallocation.

Table 6: Further Analysis

	(1)	(2)	(3)
VARIABLES	Maintaininv	Addinv	Overinv
POST	0.0125	0.0776*	-0.0014
	(1.08)	(1.70)	(-0.34)
size	0.8830***	0.9433***	-0.0033***
	(166.71)	(114.68)	(-3.85)
lev	-0.1175***	-0.1335**	0.0162***
	(-5.05)	(-2.28)	(2.71)
roa	-1.7266***	0.9783***	0.0312*
	(-35.89)	(5.27)	(1.83)
CFO	1.1225***	1.8388***	0.0065
	(28.07)	(12.76)	(0.43)
Constant	-1.3146***	-2.5149***	0.1145***
	(-11.40)	(-14.72)	(6.34)
Observations	38,077	24,866	21,443
R-squared	0.933	0.450	0.005
year	YES	YES	YES
PROV	YES	YES	YES

7. Conclusion and Implications

Against the backdrop of China's ongoing economic development and tax system reform, the legalization of taxation has gained substantial momentum since the 18th National Congress of the Communist Party of China. The historically excessive discretionary power of tax enforcement officers frequently resulted in arbitrary enforcement practices, elevating compliance burdens and transaction costs for businesses. The 2016 introduction of provincial "Benchmarks for Tax Administrative Penalty Discretion" marked a pivotal institutional innovation that systematically constrained administrative discretion, advancing tax enforcement toward greater legalization and standardization.

Using 44,430 firm-year observations from A-share listed companies (2007-2021), our empirical analysis demonstrates that: First, the implementation of discretion benchmarks significantly promotes corporate investment. Second, the reform creates a more level playing field by attenuating the traditional advantage of politically connected firms - investment stimulation is significantly stronger among enterprises without political connections. Third, non-state-owned enterprises exhibit more pronounced investment responses than their state-owned counterparts. These findings withstand multiple robustness checks, including parallel trends validation.

Further analysis reveals that the reform specifically stimulates new investment rather than maintenance spending, while generating no significant over-investment - confirming that the investment expansion does not compromise efficiency.

Our findings offer three key implications: For policymaking, the documented reduction in political connection advantages and stronger effects on vulnerable market entities suggest the need for targeted support mechanisms - such as refined tax incentives and streamlined administrative procedures - to help these firms capitalize on reform-driven opportunities.

For tax administration, we recommend continued refinement of enforcement standards through precise operational guidelines and quantified discretion benchmarks. Complementary measures should include professional development programs for enforcement staff and comprehensive oversight mechanisms with strict accountability protocols.

For corporate practice, firms should proactively adapt internal governance structures to leverage the reformed institutional environment, aligning investment strategies with both market conditions and the enhanced regulatory predictability to strengthen competitive positioning.

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