



# Compliance Policies Help Small and Medium-sized Private Enterprises Achieve High-Quality Development

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## ABSTRACT:

The compliance management policy aims to enhance adherence to regulations within enterprises, mitigate operational compliance risks, and ensure the high-quality development of businesses. This paper conducts an empirical analysis of the impact of compliance management policies on the high-quality development of small and medium-sized private enterprises. The study employs a quasi-natural experimental approach using a double-difference model with Chinese A-share-listed private firms as the research sample from 2016 to 2022. The study concludes that compliance management policies effectively regulate corporate violations and facilitate the high-quality development of small and medium-sized private firms, and these findings are robust. Furthermore, the mechanism test results indicate that the compliance management policy operates by enhancing corporate audit oversight and elevating compliance standards, consequently fostering the sustainable development of private enterprises. The study's results strongly advocate for the favorable influence of compliance management policies on private enterprise development, providing valuable and pragmatic insights to promote their achievement of high-quality development.

**Keywords:** Compliance Management Policy; Private Enterprise; Double Difference; High-quality Development

## I. Introduction

Small and medium-sized private enterprises play a crucial role in the national economy and socio-economic development. These enterprises are essential for expanding employment opportunities, improving livelihoods, promoting entrepreneurship, and fostering innovation. Additionally, they play a significant role in stabilizing growth, promoting reform, adjusting structure, benefiting people's livelihoods, and preventing risks. The private economy represents a significant achievement in the development of the socialist market economy, serving as a pivotal element in the establishment of a modernized market economic system and exerting substantial influence in driving the country's economic advancement (Zhang et al., 2021). The Guiding Opinions on Promoting the Healthy Development of Small and Medium-sized Enterprises (SMEs), issued by the General Office of the State Council in April 2019, explicitly highlights the paramount importance of fostering the development of SMEs. In light of the rapidly changing international and domestic market environment, it is imperative to give significant attention to the production costs, investment financing, and innovation and research and development challenges faced by small and medium-sized private enterprises. All regions and departments should fully implement and promote the healthy development of small and medium-sized private enterprises. However, at present, small and medium-sized private enterprises in China still grapple with issues such as limited scale, high costs, and financing difficulties, which significantly impede their development. Moreover, private enterprises are confronted with issues such as diminished profitability and inadequate risk resilience (Bai et al., 2012), along with challenges including the risk of bankruptcy, damage to reputation, and non-compliance (Almeida et al., 2007; Ni et al., 2019), leading to a significant erosion of the reputation of small and medium-sized private enterprises. In light of the market chain effect, many small and medium-sized enterprises encounter difficulties in accessing financial resources, with financing challenges becoming a prominent impediment to their development. The unequal distribution of financial resources between state-owned enterprises and private enterprises (Tian et al., 2019) has adversely affected the development of small and medium-sized private enterprises. Consequently, effectively promoting the healthy and high-quality development of small and medium-sized private enterprises remains a prevalent research topic of great concern to the government and all sectors of society.

Compliance management, as a crucial approach to preventing and mitigating corporate compliance risks and enhancing lawful corporate operation and management, plays a significant role in standardizing and improving corporate governance on the global stage. In recent years, significant progress has been made in the development of compliance management within China's enterprises, and it continues to be elevated to new heights. The International Organization for Standardization (ISO) formally released the Guidelines for Compliance Management Systems in 2014, aiming to prevent and address business corruption and implement severe legal penalties for violations. Currently, comprehensive compliance management systems and international standards have been formally established and implemented across various industries on a global scale. Comparatively, the development of compliance management in China lags behind. At present, China's corporate compliance efforts primarily encompass the banking, securities, insurance, government

administrative agencies, and centralized state-owned enterprises, among other sectors, gradually advancing the construction and implementation of compliance management systems. On November 2, 2018, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) issued the Guidelines for Compliance Management of Central Enterprises (Trial Implementation), which outlines comprehensive directions for establishing enterprise compliance management systems in terms of organizational structure, functions and responsibilities, key areas, operations, and assurance. Although the initial document proposed piloting compliance management in central enterprises, the subsequent issuance of the Opinions on Creating a Better Development Environment to Support the Reform and Development of Private Enterprises by the CPC Central Committee and the State Council on December 4, 2019, further advocated for the promotion of lawful and compliant operations within private enterprises and the cultivation of a positive corporate image. This indicates that the compliance management of private enterprises has been brought to the forefront of the agenda. This initiative holds great significance in rectifying market order and promoting compliant operations within private enterprises. In light of the emergence of illegal and unethical behaviors among small and medium-sized private enterprises in the post-epidemic era, the implementation of compliance management policies raises the question: can it effectively curb such behaviors and foster high-quality enterprise development? Understanding the impact of compliance management policies on the development of private enterprises and delving into the underlying mechanisms constitutes the crucial theme of this paper.

Building on this premise, the present paper selects Chinese A-share listed private enterprises from 2016 to 2022 as the research sample. It empirically examines the impact of compliance management policies on the high-quality development of small and medium-sized private enterprises using a double difference model. Drawing from existing literature reviews and theoretical analysis, this paper first articulates the fundamental research hypotheses. Subsequently, empirical validation is conducted using disclosed data from private listed companies, confirming that the implementation of compliance management policies can effectively mitigate legal violations and foster high-quality development among private enterprises. Moreover, investigation into the underlying mechanisms reveals that compliance management policies drive the high-quality development of private enterprises by enhancing corporate audit oversight and elevating corporate compliance levels. Furthermore, the reliability of the research findings is further bolstered through parallel trend tests, variable substitution, and PSM-DID tests. Finally, this study identifies that enterprise size, performance, and geographic location all impact the relationship between compliance management policies and the high-quality development of private enterprises.

## II. Literature review

The private sector holds a crucial role in China's economic advancement and serves as a key driver of the country's economic expansion. The growth of private enterprises effectively contributes to sustained economic development, job creation, innovation, industrial upgrading, and resource optimization. Academic research on private enterprises is extensive, with a focus on various areas including state capital involvement, political affiliations, enterprise financing, innovation, research and development, and social responsibility.

At the research level of state-owned capital participation, the involvement of state-owned capital in private enterprises can facilitate positive interaction, resource sharing, complementary advantages, and risk mitigation, thereby fostering the development of private enterprises. Relevant studies have indicated that state-owned capital participation can enhance the internal governance standards (Boubakri et al., 2017; Hao et al., 2017), share price information content (Tian et al., 2023), level of green innovation (Wang et al., 2023), and corporate ESG performance (Wei et al., 2023) of private enterprises. Concurrently, the introduction of state-owned capital can effectively reduce the debt financing costs for private enterprises (He et al., 2022), access greater social resources and welfare benefits (Qiang et al., 2021), and garner robust government support and assistance for enterprises (Faccio et al., 2006). At the research level of political affiliation, while state-owned enterprises (SOEs) inherently benefit from political affiliations, small and medium-sized private enterprises (SMEs) encounter property rights discrimination and resource access impediments (Zhou et al., 2019). Strong behavioral motives propel private enterprises to proactively pursue political affiliations (Lin et al., 2015). Studies have demonstrated that the political affiliation of private enterprises can effectively reduce the corporate tax burden (Tian et al., 2018) and secure additional financial subsidies from the government (Yang et al., 2017). Corporate political affiliation conveys favorable market signals and facilitates long-term corporate loan financing (Li et al., 2021), thereby contributing to the development of private enterprises. Regarding private enterprise financing, the existing challenges in securing financing constitute a significant barrier to the development of private enterprises. Actively diversifying financing channels and enhancing financing policies for small and medium-sized enterprises are integral to the country's advancement of the private economy. The findings of related studies have highlighted enduring challenges faced by private enterprises, including limited access to financing channels (Cull et al., 2015) and severe financing constraints (Li et al., 2014). Xu et al. (2019) concluded that the incomplete implementation of financing policies for private enterprises has limited effectiveness in resolving the issue of difficult and costly financing. Mei et al. (2021) pointed out that elevated borrowing costs and increased external financing risk premiums contribute to a considerable rise in the financing expenses of private enterprises. However, cross-ownership mergers and acquisitions, the fair treatment of financial policies, enhanced competitiveness in the banking sector, and the implementation of digital financialization policies can significantly alleviate financing constraints for private enterprises and reduce financing costs. At the research level of innovation and R&D in private enterprises, Xie et al. (2023) found that private enterprises invest less in technological innovation and exhibit lower innovation efficiency. Strengthening the resource allocation for R&D and innovation investment is vital for achieving innovation-driven development in private enterprises. Tang et al. (2017) discovered that while the private manufacturing industry demonstrates strong enthusiasm and capability for innovation, it also contends with significant financing constraints and credit discrimination. Additionally, when the level of external social capital investment in the enterprise increases, the R&D investment and patent output of private enterprises demonstrate positive growth (Lin et al., 2021). At the research level of social responsibility of private enterprises, it's observed that private enterprises may not inherently prioritize social responsibility, but they are strongly intrinsically motivated to fulfill it. Elkington's (1998) study concluded that private firms engage in fulfilling their social responsibilities to cultivate a positive reputation, subsequently reducing corporate finance challenges. Similarly, Wang et al.'s (2020) study points out that the impetus for private enterprises to engage in poverty

alleviation largely revolves around factors such as accessing government subsidies, mitigating financing constraints, and enjoying tax incentives. Private enterprises proactively embrace social responsibility to effectively enhance the enterprise's image and reputation, ultimately attracting widespread attention and favor from investors and partners.

The research mentioned above primarily focuses on the specific development status of private enterprises in China, aimed at promoting the healthy growth of small and medium-sized private enterprises. Moreover, some scholars have dedicated their research to the high-quality development of private enterprises. For instance, Li X.(2023) suggests that economic policy uncertainty has a negative impact on the high-quality development of private firms, while mixed-ownership reform (Yan et al., 2023) and financial supply-side reform (Zhang et al., 2022) significantly contribute to the high-quality development of private firms. Furthermore, enhancing the regional business environment and upholding clean party leadership have also yielded certain contributions to the high-quality development of China's private enterprises. Based on the aforementioned research and considering the challenges presented by the current global economic downturn to the development of China's private enterprises, such as escalating financing costs, diminishing profitability, and heightened risks of regulatory violations, the examination of whether the establishment of a compliance management policy system can effectively regulate the business practices of enterprises, particularly small and medium-sized private enterprises, to promote high-quality development, becomes a significant and worthwhile research topic. Through the prism of compliance management policy, this paper will analyze the influence of such policies on the high-quality development of small and medium-sized private enterprises.

### III. Policy background and theoretical analysis

#### (i) Policy background

To facilitate the sustained and healthy development of the national economy, preventing corporate compliance risks and enhancing the overall compliance management have emerged as pivotal focuses in the current national rule of law efforts. This aims to elevate the compliance operation and management levels of enterprises in alignment with legal regulations. Since 2017, significant strides have been made in building our compliance management framework. The Fourth Plenary Session of the 18th CPC Central Committee highlighted the ongoing commitment of the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) to fortify corporate compliance management. Compliance management has now become a common challenge and opportunity for enterprises, requiring corresponding efforts in internal management and external supervision. In 2018, which is regarded as the "Year of Compliance Management" in China, the State-owned Assets Supervision and Administration Commission of the State Council promulgated the "Guidelines on Compliance Management for Central Enterprises (for Trial Implementation)" on November 2, 2018, aiming to promote central enterprises to accelerate the establishment of a compliance management system that is comprehensive, accountable, synergistic, and independent. The promulgation of the Guidelines on Compliance Management for Central Enterprises is of great significance. The Guidelines delineate the responsibilities, focal points, and operational frameworks for constructing compliance management systems within central enterprises. Serving as a pilot initiative for compliance management development, central enterprises have exemplified a crucial role in elevating the standard of compliance management, thereby conveying significant policy signals for domestic enterprises to enhance their internal compliance management structures. Compliance management has found extensive application in various domains, encompassing areas such as intellectual property rights, accountability for transgressions, oversight of listed companies, export regulations, antitrust measures, and safeguarding network information security. The nationwide rollout of pertinent regulations has prompted small and medium-sized private enterprises to progressively engage in the establishment of compliance management frameworks.

In recent years, instances of criminal violations by small and medium-sized private enterprises and entrepreneurs have exhibited an upward trend, resulting in an increased risk of transgressions. Consequently, there is an urgent need to fortify the criminal compliance management of private enterprises. One year following the enactment of the "Compliance Management Guidelines for Central Enterprises (Trial Implementation)", the Central Committee of the Communist Party of China (CPC) and the State Council issued the "Opinions on Creating a Better Development Environment to Support the Reform and Development of Private Enterprises" on December 4, 2019. This directive seeks to cultivate a fair and convenient business environment by prioritizing the enhancement of the quality and efficiency of private enterprise development, while adhering to the principle of competitive neutrality. The opinion emphasizes that private enterprises should comply with laws and regulations, conduct operations in accordance with legal requirements, govern their enterprises within the bounds of the law, and safeguard their rights through legal means. Simultaneously, it encourages private enterprises to adhere to legal and compliance standards when expanding overseas to establish a positive reputation. The issuance of this opinion is intended to invigorate the development momentum of small and medium-sized private enterprises, address challenges related to financing difficulties and high costs, and foster sustainable, healthy enterprise growth.

#### (ii) Theoretical analysis and hypotheses

After conducting a literature review and examining national policies, it can be preliminarily concluded that the implementation of compliance policies significantly impacts the development of private enterprises in China. The private economy serves as a critical force in China's modernization and development efforts, serving as a pivotal foundation for achieving high-quality development. Private enterprises play a crucial role in propelling China's comprehensive construction of a strong socialist modernization country and in achieving its second centennial goal. Based on the literature review, the micro perspective of private enterprise development research incorporates the integration of state-owned capital, the utilization of political affiliations, and the fulfillment of social responsibility. These efforts are conducive to enhancing the reputational image of enterprises, reducing financing constraints and costs, obtaining government subsidies and tax incentives, and promoting R&D and innovation, thus fostering high-quality development. From a macro research perspective, state policy interventions also have positive or negative impacts on private enterprise development, as exemplified by

initiatives such as mixed ownership reform and financial supply-side structural reform. Compliance management, recognized as the current national key macroeconomic policy, is poised to have a profound impact on the development of enterprises in China. Scholar Yang B. (2020) has emphasized that fortifying the construction of compliance management systems in state-owned enterprises is an inevitable requirement for achieving high-quality development. Likewise, the compliance management policy holds significant implications for the development of private enterprises in China. It serves to regulate enterprise conduct, ensure legal and compliant operations, and is characterized by its mandatory, universal, and authoritative nature. Furthermore, the compliance management policy can facilitate equitable competition, mitigate legal risks, enhance corporate reputation, and bolster sustainable development. For private enterprises, compliance management policies establish a regulatory environment conducive to lawful operations and exert a positive influence on enterprise development. These policies necessitate enterprises to fortify legal compliance management, thereby impacting corporate behavior through signaling and deterrence effects. According to signaling theory, positive compliance behavior sends favorable signals to external stakeholders, enhancing corporate reputation. On the other hand, the deterrent effect theory suggests that administrative penalties and economic sanctions effectively constrain illegal enterprise behavior, thereby strengthening their internal governance and reputational image. Ultimately, through information transmission, a good reputation allows enterprises to gain recognition in the market and among investors, reducing financing constraints and effectively addressing the major issues of financing difficulties and costs for private enterprises. Sufficient financial support enables enterprises to engage in R&D and innovation, improve overall performance, and ultimately achieve high-quality and high-efficiency development. Therefore, this study proposes the basic hypothesis 1.

H1: Compliance policies can effectively promote the high-quality development of small and medium-sized private enterprises.

## IV. Research design

### (i) Sample selection and data sources

To assess the impact of compliance management policies on the development of small and medium-sized private enterprises, the study selects small and medium-sized privately listed companies in the A-share market from 2016 to 2022 as the research sample. The acquired data undergoes initial preprocessing using tools such as Excel, Python, and other software. Subsequently, companies designated as ST, \*ST, PT, and financial enterprises are excluded from the research sample, and any missing variables are addressed. This comprehensive data screening process aims to enhance the accuracy and credibility of the research results, while minimizing potential negative influences. This study utilizes the release period of the policy documents “Guidelines on Compliance Management for Central Enterprises (Trial)” and “Opinions on Creating a Better Development Environment to Support the Reform and Development of Private Enterprises”, namely, November 2018 to December 2019, as the time point for the compliance management policy shock. The experimental group comprises listed private companies that committed violations of the law between 2018 and 2019 but were non-repetitive subsequently. Simultaneously, the control group encompasses listed private companies that remained violation-free as of December 31, 2023. After data screening and processing, the study gathered 61 experimental groups with violations and 282 control groups without violations, resulting in a total of 2,401 balanced panel observations. The legal compliance level index was derived from the China DIB internal control and risk management database, while data for other related research variables were obtained from the CSMAR, Flush, and WIND databases. To mitigate the adverse effects of outliers, all research variables underwent bilateral truncation ranging from the 1st to the 99th percentiles, and were empirically analyzed using Stata 17.0 software.

### (ii) Methods, models and variable definitions

#### 1. Research methods

Based on the theoretical analysis provided, the compliance management policy is considered a typical exogenous shock event. Therefore, when investigating the influence of compliance management policies on the development of small and medium-sized private enterprises in China, constructing a double difference model is deemed a more appropriate scientific approach.

The Double Difference Method is widely utilized in the fields of economics and statistics for panel data analysis, particularly for evaluating the effects of policy changes or experimental interventions on the causal relationships between treatment and control groups. The fundamental model of this method is as follows:

$$Y_{it} = \alpha + \beta \text{Treat}_i \times \text{Post}_t + \gamma \text{Treat}_i + \delta \text{Post}_t + \varepsilon_{it} \quad (i = 1, \dots, n; t = 1, 2)$$

In the preceding equations,  $Y_{it}$  represents the observation of an individual  $i$  at time  $t$ , typically serving as the response variable for the policy or intervention under evaluation;  $\text{Post}_t$  is a time dummy variable signifying the time effect;  $\text{Treat}_i$  is a treatment dummy variable denoting individuals who have undergone the policy alteration or experimental treatment;  $\text{Treat}_i \times \text{Post}_t$  is the interaction term between the treatment dummy and the time dummy variable, capturing the differential evolution between the treatment and control groups over time;  $\alpha$  is a constant term;  $\beta$ ,  $\gamma$ , and  $\delta$  denote the coefficients of the double-differenced effect, the treatment effect, and the time effect, respectively; and  $\varepsilon_{it}$  is an error term. The double difference model facilitates the estimation of the disparity in causal effects between the treatment and control groups before and after a policy change or experimental treatment.

#### 2. Models and variable definitions

By comparing the impact of compliance management policies on non-compliant private enterprises, the aim is to validate the research hypotheses outlined in this paper. The basic regression model is as follows:

$$lp_{it} = \alpha_0 + \alpha_1 did_{it} + \alpha_2 treat_i + \alpha_3 post_t + \alpha_4 Controls + \varepsilon_{it} \quad (1)$$

Where  $lp$  is the total factor productivity of enterprises, the paper uses the LP method to calculate the total factor productivity of listed companies and takes it as a representative of the high-quality development of private enterprises as the explanatory variables of the study. The larger the value of  $lp$ , the better the development of the enterprise; at the same time, the results of the calculations of the OLS and OP methods are used to carry out the robustness test. In addition, the core explanatory variable, “did” is obtained by multiplying “treat” and “post” interactively. The “treat” variable reflects whether a private listed company has violated the law, taking the value of 1 if the company has violated the law, or 0 if not. The “post” variable is a time dummy variable used to reflect the time before and after the compliance management policy. Based on the introduction of the policy background in the previous section, this paper designates the period from November 2018 to December 2019 as the compliance management policy operation period. The “post” variable takes the value of 0 before the implementation of the compliance policy, and 1 after the implementation of the policy. The impact of the compliance management policy on the high-quality development of small and medium-sized private enterprises in China is demonstrated through the coefficient  $\alpha_1$  in the interaction term “did”. A positive  $\alpha_1$  value indicates that China’s compliance management policy effectively restricts small and medium-sized private enterprises from violating laws, consequently promoting their high-quality development.

Additionally, the “Controls” refer to the group of control variables, where  $\alpha_0$  represents the intercept term of the regression model, and  $\varepsilon$  signifies the random disturbance term. Drawing from existing literature, this paper selects the following control variables: enterprise size (size), profitability (roa), growth opportunity (growth), financial leverage (lev), cash flow position (cfo), age of the enterprise (age), equity checks and balances (balance), two positions in one (dua), size of the board of directors (board), the proportion of independent directors (indep), the concentration of equity (first), whether Big 4 audited (big). The model also controls for individual fixed effects and yearly fixed effects, with specific definitions detailed in Table 1 below.

**Table 1 Definition of variables**

Typology	Variable names	Symbolic	Explanatory notes
Dependent variable	High-quality enterprise development	$lp$	Total factor productivity calculated using the LP method
Independent variable	Compliance policy effects	did	treat
			post
Intermediate variables	Audit regulation	Audit-inspect	Total audit and regulatory fees/total business assets
	Compliance level	Legit-level	Natural logarithm of (legal compliance index/100)
Control variables	enterprise size	size	Natural logarithm of annual total assets of private enterprises
	profitability	roa	Return on net assets = net profit/total assets
	growth opportunity	growth	Total assets growth rate = (total assets at the end of the current period - total assets at the end of the previous period)/total assets at the end of the previous period
	financial leverage	lev	Gearing ratio = total liabilities/total assets
	cash flow position	cfo	Net cash flows from operating activities/total assets at the beginning of the period
	age of the enterprise	age	Natural logarithm of (number of years private firms have been listed + 1)
	equity checks and balances	balance	Proportion of shares held by the 2nd to 5th largest shareholders/proportion of shares held by the 1st largest shareholder
	two positions in one	dua	Whether the chairman and general manager are both appointed by the same person, 1 if yes, 0 otherwise
	size of the board of directors	board	Natural logarithm of (number of directors in private sector + 1)
	the proportion of independent directors	indep	Ratio between the number of independent directors and the size of directors within private companies
	the concentration of equity	first	Shareholding of the largest shareholder within a private enterprise
	whether Big 4 audited	big	1 for Big 4 audits, 0 otherwise
	individual dummy variable	id	Control for individual fixed effects

	time dummy variable	year	Control for year fixed effects
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### (iii) Descriptive analysis

#### 1. Univariate analysis

Table 2 presents the descriptive statistics for the relevant research variables. It is evident from the table that the mean value of total factor productivity for private enterprises is 12.81, with a standard deviation of 0.653 and a median of 12.75. This suggests a balanced and relatively stable overall development level among the private enterprises in the research sample. Furthermore, the mean value of “treat” is 0.174, with a median of 0, indicating that the majority of China’s private enterprises are currently in compliance with the law, while a small number have been found to be in violation. The findings align with the current developmental trends of private enterprises in China. In terms of enterprise size, the mean value is 22.33, with a median of 22.14, indicating a relatively consistent developmental scale among the enterprises in the sample. Furthermore, the observed mean values for other variables indicate marked discrepancies between China’s small and medium-sized private enterprises and state-owned enterprises in terms of profitability, growth rate, financial leverage, liquidity, and corporate governance capacity. These differences closely reflect the current state of private economic development. Small and medium-sized private enterprises often face challenges such as insufficient resources, relatively backward technology levels, and difficulties in obtaining financing, which significantly limit their development. Therefore, to promote the high-quality development of China’s economy, it is necessary to prioritize the development of private enterprises and collectively strive to enhance the high-quality development of small and medium-sized private enterprises.

**Table 2 Descriptive analysis of variables**

Variables	Statistics	Average	Standard deviation	Min	Median	Max
lp	2401	12.81	0.653	11.42	12.75	14.72
treat	2401	0.178	0.382	0	0	1
did	2401	0.076	0.265	0	0	1
size	2401	22.33	1.029	20.38	22.24	25.65
roa	2401	0.053	0.057	-0.172	0.048	0.219
growth	2401	0.132	0.192	-0.222	0.089	0.984
lev	2401	0.353	0.159	0.061	0.346	0.718
cfo	2401	0.074	0.074	-0.081	0.063	0.326
age	2401	2.233	0.462	0.693	2.197	3.219
balance	2401	0.788	0.565	0.067	0.639	2.512
dua	2401	0.344	0.475	0	0	1
board	2401	2.21	0.159	1.792	2.303	2.565
indep	2401	0.374	0.05	0.333	0.333	0.5
first	2401	0.299	0.132	0.085	0.28	0.666
big	2401	0.032	0.175	0	0	1

#### 2. Mean difference analysis

To further elucidate the relationship between compliance management policies and the high-quality development of private enterprises, a comparative analysis was conducted between the violation group and the non-violation group. The study tested the differences in the variables’ data between the groups, and the specific results are presented in Table 3 below.

**Table 3 Analysis of Variable Mean Differences**

Variables	Sample firms without violations		Sample firms with violations		Differences between groups of means
	Treat=0		Treat=1		
	statistics	average	statistics	average	
lp	1974	12.8230	427	12.7361	0.0869**
size	1974	22.3511	427	22.2271	0.1240**
roa	1974	0.0563	427	0.0379	0.0184***
growth	1974	0.1378	427	0.1071	0.0307***
lev	1974	0.3480	427	0.3734	-0.0254***
cfo	1974	0.0778	427	0.0555	0.0223***
age	1974	2.2200	427	2.2954	-0.0754***
balance	1974	0.8066	427	0.6992	0.1075***
dua	1974	0.3354	427	0.3841	-0.0487*
board	1974	2.2075	427	2.2244	-0.0169**
indep	1974	0.3750	427	0.3714	0.0036
first	1974	0.3009	427	0.2884	0.0124*
big	1974	0.0304	427	0.0375	-0.0071

Note: Tables \*\*\*, \*\* and \* indicate significance at the 1%, 5% and 10% significance levels, respectively.

As observed from the results in Table 3, there is a significant difference between the total factor productivity means of compliant and non-compliant private enterprises under the compliance management policy, which is significant at the 5% level. This initial evidence suggests that the compliance management policy has a certain impact on the development of private enterprises. Additionally, the table's results also demonstrate corresponding differences in the mean values of each variable for other control variables.

### 3. Correlation analysis

Table 4 presents the results of the correlation analysis of the main research variables. The findings indicate a correlation coefficient of -0.051 between the occurrence of violations in private listed firms (treat=1) and the firms' total factor productivity (lp), suggesting that violations have a negative impact on firms' high-quality development. Furthermore, the correlation coefficient between the interaction term "did" and total factor productivity under the implementation of the compliance management policy is 0.039, indicating a significant positive correlation between compliance management policy and the high-quality development of private firms. This suggests that the compliance management policy can effectively prevent the non-compliance behavior of small and medium-sized private enterprises, thereby promoting high-quality development. Additional correlation results for other variables are detailed in the table.

**Table 4 Correlation analysis of main variables**

	lp	treat	did	size	roa	growth	lev	cfo	age
lp	1								
treat	-0.051**	1							
did	0.039*	0.618***	1						
size	0.824***	-0.046**	0.025	1					
roa	0.277***	-0.123***	-0.084***	0.129***	1				
growth	0.188***	-0.061***	-0.048**	0.190***	0.347***	1			
lev	0.484***	0.061***	0.067***	0.508***	-0.243***	0.121***	1		
cfo	0.238***	-0.115***	-0.066***	0.129***	0.581***	0.212***	-0.101***	1	
age	0.310***	0.062***	0.170***	0.380***	-0.037*	-0.161***	0.199***	0.004	1

## V. Empirical analysis

### (i) Baseline regression analysis

Table 5 presents the results of the benchmark regression analysis examining the relationship between compliance management policies and the high-quality development of private firms. The results indicate a positive relationship between the explanatory variable *lp* and the interaction term *did*, reaching at least a 10% level of significance. In column (1) of Table 5, the regression coefficient of *did* without control variables and fixed effects is 0.0953, significant at the 10% level. In column (2), the regression coefficient of *did* with control variables but without fixed effects is 0.0804, significant at the 1% level. Moving to column (3), with both control variables and fixed effects, the regression coefficient of *did* is 0.0812, remaining significant at the 1% level. Comprehensively, it can be observed that, under the influence of the implementation of compliance management policy, there has been a greater degree of standardization in the non-compliance with the business management behavior of private enterprises. This has served to enhance the constraining and reinforcing effects of the policy, thereby positively promoting the high-quality development of China's private enterprises. The research hypothesis of this paper has been effectively confirmed.

**Table 5 Compliance Management Policies and High Quality Development of Enterprises**

Variables	(1) lp	(2) lp	(3) lp
did	0.0953* (1.90)	0.0804*** (3.06)	0.0812*** (5.10)
size		0.4447*** (47.34)	0.4210*** (26.94)
roa		2.5134*** (15.29)	1.7791*** (19.02)
growth		-0.1725*** (-4.29)	-0.1336*** (-6.50)
lev		0.7954*** (14.56)	0.3111*** (5.72)
cfo		0.3733*** (3.28)	0.5621*** (8.81)
age		0.0241 (1.37)	0.0649* (1.90)
balance		0.0749*** (4.40)	0.0652*** (3.17)
dua		-0.0290** (-1.97)	-0.0203* (-1.67)
board		-0.2154*** (-3.50)	0.0208 (0.36)
indep		-0.4014** (-2.08)	0.2079 (1.19)
first		0.4099*** (5.45)	0.1966 (1.57)
big		-0.0324 (-0.76)	0.0864 (1.42)
Constant	12.8003*** (923.29)	2.8559*** (11.62)	2.7979*** (7.40)
Annual fixed effects	NO	NO	YES
Individual fixed effects	NO	NO	YES
statistics	2401	2401	2401
AdjustmentR <sup>2</sup>	0.0111	0.7393	0.9500
F-value	36.01	524.5	163.1

Note: Tables \*\*\*, \*\* and \* indicate significance at the 1%, 5% and 10% significance levels, respectively.



**(ii) Analysis of impact mechanisms**

As mentioned in the preceding theoretical analysis, the compliance management policy represents a pivotal instrument for regulating enterprise conduct and ensuring their adherence to legal and regulatory standards. It carries mandatory and binding implications. Adopting a process-oriented approach, fostering the high-quality development of enterprises necessitates a proactive promotion of internal governance and the restraint of managerial behaviors among leadership and employees. This proactive approach is essential for preventing and addressing the risks of enterprise violations and mitigating instances of non-compliance. Throughout an enterprise's life cycle, diverse business management behaviors, strategies, and outcomes emerge. To ensure lawful and compliant development, implementing mandatory and effective audit supervision across all operational processes is imperative. Such supervision enhances technical and scale efficiencies, as well as technological innovation levels within enterprises, thereby bolstering their reputation and ultimately facilitating high-quality development. Consequently, this study concludes that compliance management policies can advance the high-quality development of private enterprises through the reinforcement of audit supervision. Additionally, the implementation of compliance management policy, driven by its goal-oriented approach, aims to elevate the level of corporate legal compliance. As highlighted by Chen R.(2021), the establishment of an enterprise's compliance management system can yield various economic benefits, bolster external competitive advantage, foster a positive corporate image and brand, and play a vital role in advancing the high-quality development of enterprises. Therefore, this paper asserts that compliance management policy can promote the high-quality development of private enterprises by elevating the level of legal compliance.

For this reason, the paper designates "Audit-inspect" and "Compliance-level" as the intermediary mechanism variables in the study, with detailed definitions provided in Table 1. Through the utilization of sample research data, a mechanism regression test is conducted, and the outcomes are presented in Table 6. Based on the results, it is observed that the regression coefficients between compliance management policy and corporate audit supervision, as well as compliance level, are 0.0010 and 0.0234, respectively. Both coefficients exhibit significant positive correlations at the 10% level, indicating that the implementation of compliance management policy effectively encourages private enterprises to enhance internal audit supervision and elevate corporate governance standards. Within the intermediate mechanism, the regression coefficient of the interaction term "did" remains significantly positive and is notably correlated at the 1% level, suggesting that the interaction between compliance management policies, audit supervision, and compliance level synergistically fosters the achievement of high-quality development in private enterprises.

**Table 6 A test of the impact mechanism of compliance management policies and firms' high-quality development**

Variables	Audit regulatory mechanism		Compliance level mechanism	
	Audit-inspect	lp	Legit-level	lp
Audit-inspect		2.3622*** (3.93)		
Legit-level				0.0514* (1.94)
did	0.0010* (1.71)	0.0789*** (4.96)	0.0234* (1.74)	0.0809*** (5.04)
Constant	0.4400*** (31.71)	1.7586*** (3.82)	1.8227*** (5.75)	2.6867*** (7.03)
Controls	YES	YES	YES	YES
Annual fixed effects	YES	YES	YES	YES
Individual fixed effects	YES	YES	YES	YES
statistics	2401	2401	2392	2392
AdjustmentR <sup>2</sup>	0.9179	0.9504	0.2592	0.9499
F-value	121.2	153.6	0.782	151.3

Note: Tables \*\*\*, \*\* and \* indicate significance at the 1%, 5% and 10% significance levels, respectively.

**(iii) Robustness analysis****1.Parallel trend test**

Using the double difference model to assess the policy effect hinges on fulfilling the parallel trend test. This test necessitates that, prior to the implementation of the compliance management policy, the time-varying trends between the experimental and control groups are similar, with no

significant differences. In the context of this study, which investigates the impact of compliance management policy on the high-quality development of private enterprises, the parallel trend test primarily aims to demonstrate the absence of notable disparities in the total factor productivity of enterprises in the experimental and control groups before the implementation of the compliance management policy. Drawing on the works of Ma et al. (2022) and Amore et al. (2013), this study constructs time dummy variables for the periods: the initial three years (2016-2018), the policy implementation year (2019), and the final three years (2020-2022), capturing external impacts related to the compliance management policy. Subsequently, parallel trend tests are conducted. The outcomes, depicted in Figure 1, reveal that prior to the enforcement of the compliance management policy, the regression coefficients of total factor productivity for both the experimental and control groups are statistically insignificant during the policy year and the preceding years. This suggests a consistent trend of change between the two groups with no significant differences. Conversely, during the later years of the policy (specifically 2021 and 2022), the regression coefficients for both groups exhibit significant positive values, indicating a notable positive impact of the compliance management policy on the total factor productivity of the experimental group, with a significant deviation from the control group. Therefore, the parallel trend test is successfully validated.

## 2.Substitution of explanatory variables

To further substantiate the reliability of the research findings, this study assesses the high-quality development of private enterprises by adjusting the core explanatory variables and applying the calculation results from the OLS method and the OP method. The regression analysis is then conducted for the entire sample, and the results are presented in Table 7. Notably, it is evident from the table that the regression coefficient of the interaction term “did” remains positive and significantly correlated at the 1% level. This consistency with the baseline regression results serves to reinforce the evidence that the implementation of compliance management policies indeed yields a positive impact on the high-quality development of private enterprises. Consequently, the robustness of the findings in this paper is affirmed.

## 3.PSM-DID test

In this study, to mitigate the endogeneity effect arising from sample differences, a combination of propensity score matching and double differencing was utilized to re-examine the sample data. Initially, the original sample data was randomly arranged and subjected to nearest neighbor matching in a 1:1 ratio using the Logit model, resulting in 628 valid study samples. Subsequently, a regression test was performed on this new sample data. The PSM-DID test results are presented in Table 7, indicating that the regression coefficient of the interaction term “did” is 0.0727, significantly and positively associated with the high-quality development of the enterprise at a 5% significance level. This further reinforces the robustness of the research findings.

**Table 7 Robustness test results**

Variables	Substitution of dependent variable			PSM-DID test
	lp	op	tfpols	lp
did	0.0812*** (5.10)	0.0938*** (4.08)	0.1002*** (4.59)	0.0727** (2.19)
Constant	2.7979*** (7.40)	6.8955*** (12.63)	5.4551*** (10.54)	4.0731*** (2.90)
Controls	YES	YES	YES	YES
Annual fixed effects	YES	YES	YES	YES
Individual fixed effects	YES	YES	YES	YES
statistics	2401	2401	2401	628
AdjustmentR <sup>2</sup>	0.9500	0.9059	0.9065	0.9473
F-value	163.1	57.49	66.55	17.89

Note: Tables \*\*\*, \*\* and \* indicate significance at the 1%, 5% and 10% significance levels, respectively.

## (iv) Heterogeneity analysis

### 1.Heterogeneity in enterprise size

This paper further investigates the influence of compliance management policies on the high-quality development of firms, taking into account the varying sizes of private firms. The size of private firms plays a significant role in firm development, particularly in the realms of external corporate finance and bank lending. Large-scale enterprises, in contrast to their smaller counterparts, exhibit enhanced debt-servicing capacity, easier access to external financing and financial lending, and ample liquidity, which reduces the likelihood of illegal and irregular behavior. Conversely, smaller enterprises encounter greater external financing pressure, and efforts to stimulate enterprise development can inadvertently foster motives for illicit activities, thereby increasing the risk of enterprise violations. This study investigates the impact of heterogeneity in firm size by dividing the research sample into two groups based on the mean value of firm size. Separate regression analyses are subsequently conducted for each group, and the results are presented in

columns (1) and (2) of Table 8. The findings indicate that the regression coefficients of the interaction term “did” are positive in both the large and small enterprise size groups. The regression coefficients are significantly positively correlated at the 5% level for the small enterprise size group, whereas the effect is not significant for the large enterprise size group. These results suggest that compliance management policies can effectively mitigate the occurrence of illegal and illicit behaviors in small-sized private enterprises, with a more pronounced impact on promoting their high-quality development.

## 2.Heterogeneity of business performance

Building upon disparities in the developmental status and profitability of private enterprises, this paper endeavors to investigate the impact of heterogeneity in the business performance of such enterprises. According to Li Y.(2019), the financial strain resulting from a company’s financial characteristics is likely to precipitate the emergence of irregular managerial behavior, particularly within enterprises experiencing poor profitability and declining business performance. In China, the development of private enterprises is influenced by a multitude of factors encompassing the market environment, policy support, economic cycles, industry competition, enterprise scale, and managerial proficiency. These divergent factors have given rise to substantial variations in the business performance of private enterprises. Therefore, the paper stratifies the sample data into two groups based on enterprise performance, categorizing them as high- and low-performance according to the mean business performance, before conducting separate regression analyses. The results are displayed in columns (3) and (4) of Table 8. It is evident from the table that the regression coefficient of the interaction term in the low business performance sample group is 0.1000, signifying a significant positive correlation with the high-quality development of enterprises at the 1% level. Conversely, while the positive relationship persists in the high business performance sample group, the regression coefficient does not reach significance. Consequently, this implies that compliance management policies can effectively curb the occurrence of illegal and unethical behaviors in private enterprises with low business performance and significantly promote their high-quality development.

## 3.Geographic regional heterogeneity

Based on the industrial structure division of different regions in China, the influence of compliance management policies may vary. Consequently, this study delves into the heterogeneous impact of geographical regions on private enterprises. The study systematically segments 31 provinces and cities (excluding Taiwan, Hong Kong, and Macao) into three geographic directions: east, central, and west. Subsequent regression analyses are performed on private firms within these distinct regional categories, and the outcomes are presented in columns (5), (6), and (7) of Table 8, respectively. The findings reveal that the regression coefficients of the interaction term “did” in the three regional categories are all positive. Specifically, the regression coefficients of the interaction term in the eastern and central regions exhibit a significant positive correlation at the 1% level, whereas those in the western region are not statistically significant. These results suggest that the enforcement of compliance management policies is more effective in the eastern and central regions of China. Consequently, it can effectively curtail illegal and unethical behaviors within private enterprises and thereby foster high-quality development.

**Table 8 Results of heterogeneity test**

Variables	large-scale (1) lp	small-scale (2) lp	high performance (3) lp	low performance (4) lp	east (5) lp	center (6) lp	west (7) lp
did	0.0400 (1.43)	0.0457** (2.09)	0.0279 (1.27)	0.1000*** (4.20)	0.0840*** (4.44)	0.1064*** (2.86)	0.0043 (0.07)
Constant	10.7996*** (30.05)	11.4342*** (39.81)	3.1074*** (6.28)	4.8198*** (6.34)	2.7647*** (6.05)	3.3572*** (3.53)	3.9113*** (3.07)
Controls	YES	YES	YES	YES	YES	YES	YES
Fixed annual	YES	YES	YES	YES	YES	YES	YES
Individual Fixed	YES	YES	YES	YES	YES	YES	YES
statistics	1096	1267	1106	1237	1714	471	215
AdjustmentR <sup>2</sup>	0.9229	0.8776	0.9683	0.9333	0.9504	0.9445	0.9600
F-value	32.90	44.86	62.26	25.59	107.6	36.04	26.55

Note: Tables \*\*\*, \*\* and \* indicate significance at the 1%, 5% and 10% significance levels, respectively.

## VI. Conclusion and discussion

### (i) Research conclusions

This paper empirically examines the impact of compliance management policies on the high-quality development of small and medium-sized private enterprises within the 2016-2022 A-share listed companies. It utilizes a double difference model to analyze the research sample and further explores issues such as the mechanism underlying the impact role and the characteristics of heterogeneity. The study's main conclusions are as follows: Firstly, compliance management policies effectively regulate the business management behavior of non-compliant private enterprises, consequently positively promoting the high-quality development of small and medium-sized private enterprises in China, with robust conclusions. Secondly, compliance management policies facilitate the high-quality development of private enterprises by bolstering enterprise audit supervision and enhancing compliance levels. Finally, the heterogeneity analysis demonstrates that compliance management policies can effectively curb the illegal and unethical behavior of small-scale and low-performance private enterprises, significantly bolstering their high-quality development. Additionally, the implementation of compliance management policies is notably pronounced in the eastern and central regions of China, effectively curbing illicit behavior and fostering high-quality enterprise development.

### (ii) Management implications

Based on the research findings, the following management recommendations are made: Firstly, government and regulatory agencies should comprehensively promote the strengthening of compliance management within China's enterprises. Since 2018, various industries and government agencies in China have actively promoted the development of corporate compliance management, particularly in sectors such as banking, securities, insurance, and state-owned enterprises. This effort aims to reinforce corporate compliance management, mitigate the risks of legal and regulatory violations, reduce economic losses, and foster the high-quality development of the national economy. However, the construction of compliance management systems still lags behind among small and medium-sized private enterprises in China. In light of the global economic downturn and other unfavorable factors, private enterprises face increased risks of legal and regulatory violations. Therefore, it is recommended that governmental bodies and regulatory agencies expedite the establishment of compliance management for private enterprises, formulate and enhance relevant policies and regulations, encourage enterprises to establish robust compliance management systems, and comprehensively promote the construction and development of compliance management for private enterprises. Secondly, private listed companies should proactively establish corporate compliance management systems to mitigate compliance risks. Presently, China's compliance management initiatives are primarily concentrated within centralized state-owned enterprises and larger companies. In contrast, small and medium-sized private enterprises face relative gaps in compliance management and encounter challenges such as difficulties in financing and high financing costs. The absence of policy support and limitations in financial credit and capital market backing substantially hinder enterprise development. The proliferation of illegal behaviors significantly compromises enterprise development, tarnishes their reputation, and damages their image. Consequently, small and medium-sized private enterprises should actively seek insights from the advanced experiences of compliance management pilot enterprises to develop tailored compliance management systems. Proactive risk prevention can create advantageous opportunities for enterprise development, thereby promoting sustained, healthy, and high-quality business growth.

### (iii) Research limitations

This study comprehensively analyzes the relationship between compliance policies and the high-quality development of private enterprises in China. Despite certain research results, there are still some limitations. Firstly, this paper focuses on small and medium-sized private enterprises in China, and the implementation of compliance policies is based on China's national conditions, aiming to promote the development of China's private economy. Therefore, the analyzed results may differ from the actual development of private enterprises in other countries. Therefore, future research can further analyze the relationship between compliance policies and private enterprise development in other countries to obtain rich references. Secondly, there are some limitations in the time frame and sample size of the study. Compliance management policy, as an exogenous shock event, selected listed private companies meeting the experimental requirements during the policy period as the experimental group. Simultaneously, violation samples with missing variables in the study sample were excluded (to ensure balanced panel data), overlooking whether the excluded samples and private firms with subsequent violations align with the findings of this paper. Based on this, subsequent studies should further explore the relationship between compliance policies and private firms' development from various aspects.

## Reference

- Almeida H., Campello M.(2007). Financial constraints, asset tangibility, and corporate investment. *The Review of Financial Studies*, 20(5), 1429-1460.
- Hao Y., Gong L.(2017). State-owned, private mixed equity participation and firm performance improvement. *Economic Research*, 52(3), 122-135.
- Lin Z., Long X.(2021). Can Social Capital Support the High-Quality Development of Private Enterprises in China? *Management World*, 37 (10), 56-73.
- Li X.(2023). The impact of economic policy uncertainty on the high-quality development of private enterprises. *Economic Issues*, (03), 94-101.
- Li Y.(2019). Research on the background of party members of executives in private enterprises and corporate violations. Hunan University.
- Mei D., Wen X., & Wu Y.(2021). Fiscal Expansion, Credit Default and Private Enterprise Financing Difficulties. *Economic Research*, 56 (03), 116-131.
- Ma S., Guo J.(2022). How does institutional innovation affect China's cross-border e-commerce exports? --Empirical evidence from the establishment of pilot zones. *Management World*, 38 (08), 83-102.

- Ni J., Peng K., & Hu Y.(2019). The role of “social person” of chain directors and the cost of corporate debt. *China Soft Science*, (02), 93-109.
- Qiang H., Yan H., &Zhang W., et al(2021). State-owned venture capital and corporate finance constraints: as expected or against the grain? *Financial Research*, 47(11), 154-169.
- Tian G., Zhao X.(2019). The Linkage Impact of Financial System Efficiency and Local Government Debt--A Dual Analytical Perspective on Financing Difficulties and Financing Expensiveness of Private Enterprises. *Economic Research*, 54 (08), 4-20.
- Xu G., Zhao X., &Wang Y.(2019). Can Targeted Support Policies Ease the Financing Constraints of Private Enterprises?—A study based on the policy of debt financing support tools for private enterprises. *Financial Research*, (12), 187-206.
- Xie B., Xu Z., & Chen Z. et al(2023). Innovation Investment and Innovation Efficiency of Private Enterprises—An Empirical Analysis Based on Micro-Innovation Survey Data. *Management Review*, 35 (01), 108-120.
- Yang D., Zhao C., & Cao W.(2017). Rent-seeking and corporate performance: “Stumbling block” or “lubricant”. *Finance and Trade Economics*, 38 (01), 130-145.
- Yang B.(2020). Research on Compliance Management System Construction of State-owned Enterprises under New Situation. *Journal of Jiangxi Normal University (Philosophy and Social Science Edition)*, 53(04), 96-102.
- Yan L., Nie Z., & Deng Y.(2023). Can Reverse Mixed-Ownership Reform Reduce the Cost of Equity Financing of Private Enterprises? *Emerging Markets Finance and Trade*, 1-16.
- Zhang W., Liu Y.(2021). Exploiting the new realm of Chinese discourse on political economy -- the innovative development of China's private economy theory. *Chinese Social Science*, (06), 77-97+205-206.
- Zhou Z., Luo J., & Li X.(2019). Identity and risk-taking level of private enterprises. *Management World*, 35(11), 193-208.
- Zhang Z., Ma Y.(2022). How Financial Reform Boosts the High-Quality Development of Private Enterprises. *Contemporary Finance and Economics*, (12), 64-74.