Research on the Influence Mechanism of Fiscal and Financial Synergy on Corporate Indebtedness--Provincial Panel Data Analysis Based on Moderating and Intermediary Effects

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Abstract. At present, China is facing the dual challenges of increasing macroeconomic downward pressure and rising enterprise debt risk, and the Third Plenary Session of the 20th CPC Central Committee emphasised deepening the reform of the fiscal and taxation system and promoting fiscal and financial synergy to reduce the level of enterprise indebtedness and provide support for high-quality economic development. Based on the data of above-scale industrial enterprises in 30 provinces from 2009 to 2022, this paper explores the extent of the impact of fiscal and financial synergy on corporate indebtedness, factors and mechanisms. It is found that fiscal-financial synergy significantly reduces the level of corporate indebtedness, and the findings are highly robust; fiscal decentralisation and the level of financial development play a positive moderating role, and the advanced industrial structure and financial regulation play a mediating role. In addition, the mitigating effect of fiscal-financial synergy is more significant in the western region, low industry concentration and high talent concentration. This paper provides important theoretical and policy insights for optimising corporate debt governance, fills the research gap in the field of fiscal-financial synergy, and expands the multidimensional perspectives of regional heterogeneity, industrial agglomeration and talent concentration for subsequent studies.

Keywords: fiscal and financial synergy; corporate indebtedness; industrial agglomeration; fiscal decentralisation; financial development.

1. Introductory

The Third Plenary Session of the Twentieth CPC Central Committee emphasised deepening fiscal, taxation and financial reforms, and coordinating and promoting reforms in key areas in order to enhance the synergy of macro policies and provide support for high-quality economic development. Against the background of increasing downward pressure on the economy and highlighting the risk of corporate debt, fiscal and financial synergy has become a key mechanism to resolve risks and optimise the financing structure of enterprises. Through the guiding role of financial funds and the precise allocation of financial resources, fiscal-financial coordination can effectively reduce the cost of corporate financing, enhance the ability to resist risks, and achieve a balance between "stable growth" and "risk prevention".

In terms of the direction and content of macro policies, China's economy has made remarkable achievements since entering a new stage of development. The National Bureau of Statistics (NBS) released on 17 January 2024 a report on the operation of the national economy, showing that China's gross domestic product (GDP) for the year 2024 reached 134.91 trillion yuan, with the total economic volume continuing to grow. However, the problem of abnormally high debt has become a "grey rhino" affecting China's economic development, according to IMF data, China's total indebtedness in 2024 reached 65 trillion US dollars, which is more than five times of GDP and close to the level of the United States. Among them, the high indebtedness of the enterprise sector is particularly prominent, with the asset-liability ratio of industrial enterprises above designated size reaching 57.5 per cent in 2024, which has become an important structural contradiction restricting the healthy development of the economy.

Although existing studies have explored the problem of corporate indebtedness from the perspectives of legal environment, industrial policy, financial marketisation, etc., there are generally two limitations: one is to analyse fiscal and financial policies in isolation, and the other is the lack of

empirical testing of the synergy mechanism. Based on this, this paper empirically analyses the effect and mechanism of fiscal-financial synergy on corporate indebtedness by applying two-way fixed effect, moderating effect and intermediary effect, and by selecting the data of industrial enterprises above the scale in 30 provinces from 2009 to 2022. It is found that fiscal-financial synergy can effectively curb over-indebtedness of enterprises, and this conclusion still holds after robustness and endogeneity tests, which provides important empirical evidence and decision-making references for reducing corporate indebtedness.

The marginal contribution of this paper is mainly reflected in three aspects: firstly, it breaks through the limitations of the existing research to analyse the fiscal and financial policies separately, and for the first time, it systematically constructs the theoretical framework of the synergistic impact of fiscal and financial policies on corporate indebtedness, which fills in the gaps of the research in this field. Secondly, it innovatively puts forward the new idea of synergistic governance of "fiscal guidance + financial support", which provides a brand-new perspective and policy tool for cracking the predicament of high corporate indebtedness. Finally, the introduction of fiscal decentralisation, financial development and other regulating variables into the empirical multi-dimensional analysis framework reveals the boundaries and transmission mechanism of policy synergy, which can provide important theoretical support and practical guidance for the formulation of accurate debt reduction policies.

2. Literature review

As China's economy turns to high-quality development, the problem of high corporate indebtedness has become an important constraint on the healthy operation of the economy. Fiscal and financial policy coordination, as an important means of macroeconomic control, can optimise the financing environment of enterprises and reduce the cost of indebtedness through policy coordination and resource integration. In this paper, we systematically sort out the relevant literature in order to clarify the research status and theoretical framework.

Existing studies have explored the policy effects of corporate indebtedness governance from two dimensions: fiscal policy and financial policy. In terms of fiscal policy, Zhang Ling (2023) finds that industrial policy significantly reduces the level of corporate indebtedness through financial and tax support and capital structure optimisation; He Jia (2024) shows that the improvement of government audit independence can effectively curb the over-indebtedness of local state-owned enterprises; and He Kang (2024) demonstrates that tax retention rebate policy can have a positive effect on corporate indebtedness reduction by enriching the endogenous funds and enhancing the ease of equity financing. The scholars find that the tax rebate policy can effectively curb the over-indebtedness of local SOEs. At the level of financial policies, scholars find that financial system innovations such as financial market-oriented reform (Wang Lianjun et al., 2019), capital market opening (Ma Yongqiang, 2021), and short-selling mechanism (Song Fangxiu, 2022) can optimise the financing structure of enterprises and curb over-indebtedness. In recent years, with the development of digital technology, digital finance (Wang Jintao, 2023) has been shown to significantly reduce the level of corporate indebtedness by alleviating financing constraints and reducing financial frictions.

These studies have revealed the impact of a single fiscal or financial policy instrument on corporate indebtedness from different perspectives, but there is a general limitation of analysing fiscal and financial policies in isolation. Fiscal policy studies mostly focus on direct interventions such as industrial policies and tax incentives, while financial policy studies focus on indirect regulatory mechanisms such as market-oriented reforms and financial innovations, lacking a systematic examination of the synergistic effects of the two types of policies. This one-dimensional perspective makes it difficult to fully grasp the interaction between policy instruments in a complex economic environment, and it also fails to provide a holistic policy solution for corporate indebtedness governance.

It can be seen that there are obvious shortcomings in the existing research: firstly, it mostly focuses on the single effect of fiscal or financial policies, and lacks a systematic exploration of synergistic mechanisms; secondly, there is insufficient research on the indebtedness of industrial enterprises above designated size. Fiscal and financial synergy through the combination of direct support such as tax incentives and financial subsidies and indirect measures of financing environment optimisation can form policy synergy and make up for the limitations of a single tool. This paper deepens the understanding of policy synergy by integrating the research on fiscal and financial dimensions, and provides new ideas for the governance of corporate indebtedness. At the same time, this paper focuses on the impact mechanism of fiscal and financial synergy on corporate indebtedness to provide a more comprehensive theoretical basis for policy formulation.

3. Variable Selection and Study Design

3.1 Variable selection

The explanatory variable of this paper is corporate liabilities. This paper adopts the ratio of total liabilities of industrial enterprises above large scale to total assets of industrial enterprises above large scale, i.e., enterprise gearing ratio to measure enterprise liabilities. The core explanatory variable of this paper is fiscal and financial synergy. Drawing on Zhao Jing et al.'s (2022) concept of "synergy", this paper uses the cross-multiplication of internal R&D expenditures from the government with those from the financial market (Fu, Xinwei, and Xie, 2023) to measure fiscal-financial synergy. Referring to the research ideas of Fu Yong and Zhang Yan (2007), Chen Baodong and Deng Xiaolan (2017), this paper selects fiscal decentralisation and the level of financial development as the moderating variables. Referring to the research of Chunhui Gan (2011), this paper selects industrial structure advanced and financial regulation as mediating variables. Referring to the research ideas of Cao Chunfang et al. (2020), Zhang Qiancheng (2021) and Zhao Jun (2025), this paper selects the level of urbanisation, the degree of market competition, industrial structure, scientific and technological innovation and trade openness as the control variables.

3.2 Modelling

(1) Two-way fixed effects model

According to the previous analysis, this paper establishes the following two-way fixed-effects model to systematically examine the impact of fiscal and financial policy synergy on the liabilities of industrial enterprises above designated size in China, and the model is as follows:

$$DAR_{it} = \beta_0 + \beta_1 FFC_{it} + \beta_2 Urban_{it} + \beta_3 Z_{it} + \eta_i + \mu_t + \epsilon_{it} \quad (1)$$

Where i and t represent provinces and cities and years respectively,DAR_{it} is the explanatory variable, denoting the corporate indebtedness index of the *ith* province and city in year t;FFC_{it} is the core explanatory variable, denoting the fiscal and financial policy synergy index of the *ith* province and city in year t; Z_{it} denotes the vector set of control variables; β_i denotes the estimated coefficients,η_i denotes the province fixed effects,μ_t denotes the time fixed effects, andϵ_{it} denotes the random error term.

(2) Moderating effects model

In order to verify whether fiscal decentralisation and the level of financial development have a moderating effect on the fiscal-financial synergy affecting the level of corporate indebtedness, and the direction of its moderating effect, this paper therefore constructs the corresponding moderating effect model on the basis of equation (1), as shown in equation (2). In conducting the moderating effect analysis, this paper centred the core explanatory variables and moderating variables to alleviate the possible multicollinearity problem between the interaction terms and the core explanatory variables and moderating variables (Balli & Sørensen, 2013; Rasoolimanesh et al., 2021).

$$DAR_{it} = \beta_0 + \beta_1 c\_FFC_{it} + \beta_2 c\_M_{it} + \beta_3 c\_FFC_{it} \times c\_M_{it} + \theta Z_{it} + \eta_i + \mu_t + \epsilon_{it} \quad (2)$$

Where *i* and *t* represent provinces and cities and years respectively,DAR_{it} is the explanatory variable, indicating the corporate debt index of the *ith* province and city in year *t*;FFC_{it} is the core explanatory variable, indicating the fiscal and financial policy synergy index of the *ith* province and city in year *t*;M_{it} denotes the moderating variable, and this paper selects fiscal decentralisation ($Fiscal_{it}$) and the level of financial development (DL_{it}) as the moderating variables; the rest of the variables are set up consistently with equation (1).

(3) Mediation effects modelling

On the basis of the basic regression, in order to test the mediation effect of industrial structure advanced (*Str*) and financial regulation (*FR*), this paper refers to the research of Jiang Boat (2022) and adopts the mediation effect test, the specific model is as follows:

$$ME_{it} = \beta_0 + \beta'_1 FFC_{it} + \theta Z_{it} + \eta_i + \mu_t + \epsilon_{it} \quad (3)$$

Where *i* and *t* represent provinces and cities and years, respectively;FFC_{it} is the core explanatory variable, indicating the fiscal and financial policy synergy index of the *ith* province and city in year *t*;ME_{it} represents the mediator variable (*Mediator*), and this paper selects two industrial structure advanced (Str_{it}) and financial regulation (FR_{it}) as the mediator variables. The rest of the variable settings are consistent with equation (1).

3.3 Descriptive statistics

Based on the principle of data availability, this paper selects the panel data of 30 provinces in China from 2009 to 2022, and the main data sources are EPS database, statistical yearbooks of provinces and cities, and the official website of the National Bureau of Statistics. In order to ensure the completeness of the data, this paper supplements the individual missing data according to the interpolation method. The results of descriptive statistics are shown in Table 1.

Table 1 Results of descriptive statistics

variable code	sample size	average value	(statistics) standard deviation	minimum value	maximum values
DAR	420	0.582	0.056	0.421	0.761
lnFFC	420	5.936	2.583	-0.943	12.444
Fiscal	420	0.186	0.092	0.028	0.521
lnDL	420	1.124	0.314	0.417	2.096
Str	420	1.307	0.729	0.527	5.283
lnFR	420	1.892	1.418	-4.678	5.082
Urban	420	0.588	0.127	0.299	0.896
NES	420	1.311	1.457	0.034	7.07
TAV	420	0.469	0.099	0.286	0.839
lnQPAA	420	1.426	1.48	-2.998	4.599
TIEV	420	0.258	0.271	0.007	1.457

4. Empirical findings

4.1 Benchmark regression results

The analysis in Table 2 reports the results of the benchmark regression of fiscal and financial synergies with corporate indebtedness. The results of the F-test and Hausman test for model discrimination indicate that a panel data fixed effects model should be used in this paper. In particular, column (1) shows the results of the test without any control variables and without controlling for year and province fixed effects; column (2) shows the results of the test without any control variables but controlling for year and province fixed effects; column (3) shows the results of the test that incorporates all the control variables but without controlling for year and province fixed effects; and

column (4) is the result of the test that introduces all the control variables and controls for year and province fixed effects. Results.

Table 2 Baseline estimation results

DAR	(1)	(2)	(3)	(4)
lnFFC	-0.006 ***	-0.009 ***	-0.010***	-0.008 ***
	(0.001)	(0.003)	(0.003)	(0.003)
Urban			-0.047	0.245 ***
			(0.057)	(0.087)
NES			-0.007**	-0.010**
			(0.003)	(0.004)
TAV			0.077**	0.334 ***
			(0.038)	(0.055)
lnQPAA			0.006	0.012**
			(0.004)	(0.005)
TIEV			0.031(*	-0.024
			(0.017)	(0.024)
Constant	0.620 ***	0.627 ***	0.625 ***	0.384 ***
	(0.011)	(0.015)	(0.025)	(0.048)
Year FE	NO	YES	NO	YES
Province FE	NO	YES	NO	YES
N	420	420	420	420
R^2	0.036	0.064	0.076	0.187

Note: ***, **, and * denote 1 per cent, 5 per cent, and 10 per cent significance levels, respectively; robust standard errors are in parentheses.

The results in columns (1) to (4) show that the regression coefficients of fiscal-financial synergy range from -0.006 to -0.010 and pass the 1% significance test, confirming that it has a robust effect on reducing corporate indebtedness. The model in column (4) has the highest R^2 value of goodness of fit, and its estimation results show that for every 1 per cent increase in the level of fiscal-financial synergy, corporate indebtedness significantly decreases by 0.008 per cent units on average. This effect is economically significant: given that provincial fiscal and financial synergies are generally on the order of hundreds of billions to trillions of dollars, a 1% change corresponds to a change in the actual size of liabilities that can be in the hundreds of millions of dollars (e.g., a change in liabilities of about $800 million for a ten trillion dollar province). Therefore, the study is of great practical value, both from the point of view of statistical significance and economic significance.

4.2 Analysis of moderating effects

Table 3 reports the results of the moderating effects of fiscal decentralisation (*Fiscal*) and the level of financial development (*DL*). Columns (1) and (2) show the moderating effects of fiscal decentralisation; columns (3) and (4) show the moderating effects of DL. Where columns (1) and (3) do not include any control variables and columns (2) and (4) include all control variables.

Table 3 Results of moderating effects

DAR	(1)	(2)	(3)	(4)
c_lnFFC	-0.010***	-0.010***	-0.001	-0.003
	(0.003)	(0.003)	(0.003)	(0.003)
c_lnFiscal	-0.013	-0.001		
	(0.017)	(0.020)		
c_lnFFC x c_lnFiscal	-0.005***	-0.005***		
	(0.002)	(0.002)		
c_lnDL			0.086 ***	0.081 ***
			(0.014)	(0.014)
c_lnFiscal×c_lnDL			-0.012***	-0.009 ***

			(0.003)	(0.004)
Constant	0.577 ***	0.328 ***	0.604 ***	-0.009**
	(0.008)	(0.051)	(0.007)	(0.004)
control variable	NO	YES	NO	YES
Year FE	YES	YES	YES	YES
Province FE	YES	YES	YES	YES
N	420	420	420	420
R^2	0.090	0.206	0.208	0.278

Note: ***, **, and * denote 1 per cent, 5 per cent, and 10 per cent significance levels, respectively; robust standard errors are in parentheses.

Columns (2) and (4) have higher R^2 values *for* the model fit superiority, and their results indicate that both fiscal decentralisation (*Fiscal*) and the level of financial development (*DL*) have a significant positive moderating effect on the debt-reducing effect of fiscal-financial synergy (*FFC*). The interaction term coefficient of Fiscal decentralisation is -0.005, indicating that the higher the degree of Fiscal decentralisation, the stronger the inhibitory effect of FFC on corporate indebtedness. This is mainly due to the fact that fiscal decentralisation gives local governments greater financial autonomy, enabling them to coordinate fiscal and financial policies more effectively and reduce firms' reliance on debt financing (Weiwei, 2015). The interaction term coefficient of the level of financial development is -0.009, indicating that an increase in the level of financial development strengthens the debt reduction effect of fiscal and financial synergy. Its mechanism of action lies in the fact that a developed financial market provides diversified financing channels (Lin Yifu, 2005), reduces the cost of financing, and reduces inefficient liabilities by optimising the allocation of resources (Zhao Huawei, 2014).

4.3 Analysis of intermediation effects

Table 4 reports the results of the baseline regression of fiscal-financial synergy (*FFC*) with the two mediating variables. In this case, columns (1) and (3) are without any control variables and fixed effects, and columns (2) and (4) are with the inclusion of all control variables as well as year fixed effects and province fixed effects.

Table 4 Intermediary effect results

	Str	*Str*	*lnFR*	*lnFR*
	(1)	(2)	(3)	(4)
lnFFC	0.195 ***	0.067 ***	0.442 ***	0.300 **
	(0.010)	(0.017)	(0.037)	(0.119)
Urban		-4.194 ***		-3.695
		(0.446)		(3.215)
NES		-0.016		-0.162
		(0.021)		(0.154)
TAV		1.935 ***		-2.752
		(0.280)		(2.021)
lnQPAA		-0.041		0.151
		(0.028)		(0.202)
TIEV		-0.194		1.467
		(0.124)		(0.897)
Constant	0.152	2.133 ***	-0.732 ***	1.970
	(0.137)	(0.244)	(0.258)	(1.763)
control variable	NO	YES	NO	YES
Year FE	NO	YES	NO	YES
Province FE	NO	YES	NO	YES
N	420	420	420	420

R^2	0.482	0.804	0.272	0.357

Note: ***, **, and * denote 1 per cent, 5 per cent, and 10 per cent significance levels, respectively; robust standard errors are in parentheses.

The results in columns (2) and (4) indicate that fiscal-financial synergy significantly reduces the level of corporate indebtedness through two intermediary paths, namely, promoting the advanced industrial structure (*Str*) and strengthening financial regulation (*FR*). In the industrial structure path, fiscal-financial synergy promotes industrial structure upgrading by optimising resource allocation and supporting the development of high-technology industries, which in turn improves corporate productivity and optimises the capital structure, and ultimately reduces the level of indebtedness (Alvarez-Botas, 2019). In terms of the financial regulation path, fiscal and financial synergy significantly improves financial regulation by strengthening the input of regulatory resources and improving the regulatory mechanism, thus reducing the risk and cost of corporate financing and suppressing over-indebtedness (Hong Jinming and Yuan Yichen, 2024).

5. Heterogeneity analysis

In order to examine the impact of regional heterogeneity of fiscal and financial synergistic policies, this paper tests the three dimensions of geographical, industrial agglomeration and talent concentration in groups, and the results are shown in Table 5:

Table 5 Results of heterogeneity analysis

	easter n part	central section	western part	High industrial agglomeratio n	Low industrial agglomeratio n	Clusterin g of High Talent	Low talent concentratio n
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
lnFFC	-0.002 (0.005)	0.007 (0.008)	-0.017** * (0.005)	0.002 (0.004)	-0.011** (0.005)	-0.026 *** (0.008)	-0.005 (0.004)
Constan t	0.102 (0.070)	0.264* * (0.119)	0.777 *** (0.144)	0.384 *** (0.055)	0.472 *** (0.086)	0.671 *** (0.139)	0.281 *** (0.059)
control variable	YES	YES	YES	YES	YES	YES	YES
time fixed effect	YES	YES	YES	YES	YES	YES	YES
area fixed effect	YES	YES	YES	YES	YES	YES	YES
N	168	126	126	162	258	107	313
R^2	0.445	0.342	0.541	0.617	0.207	0.391	0.231

Note: ***, **, and * denote 1 per cent, 5 per cent, and 10 per cent significance levels, respectively; robust standard errors are in parentheses.

From the results of columns (1)-(3), the debt reduction effect of fiscal-financial synergy shows significant regional differences. The coefficient of fiscal-financial synergy in the western region is -0.017 (1% significant), indicating that every 1% enhancement of policy can reduce corporate liabilities by 0.017%. This mainly stems from the fact that the financial system in the western region is underdeveloped, and the fiscal-financial synergy can effectively make up for market deficiencies and alleviate corporate financing constraints by optimising the allocation of resources and lowering the cost of financing (Lobsang Khyentse, 2024). In contrast, the impact of the East and Central regions

is not significant: on the one hand, their high degree of marketisation and diversified financing channels reduce the dependence on policy support; on the other hand, policies may be more translated into investment expansion momentum, which is not fully apparent in the debt indicators.

From the results of columns (4) and (5), the debt reduction effect of fiscal and financial synergy is significantly different in regions with different degrees of industrial concentration. Low industrial agglomeration areas show a significant negative effect. This is mainly due to the fact that enterprises in low-industry concentration areas face more serious financing constraints, and fiscal-financial synergy can effectively make up for the lack of financial resources and reduce the financing cost by optimising the allocation of resources. And the impact of high industrial agglomeration areas is not significant, because: on the one hand, the fierce competition among enterprises and the diversification of financing channels reduce the dependence on policies; on the other hand, the enterprises' own financing ability is stronger, which weakens the effect of policies.

From the results of columns (6) and (7), the debt reduction effect of fiscal and financial synergy has a significant talent concentration threshold effect. High talent concentration areas show a significant negative impact, that is, every 1% of policy enhancement can make the enterprise debt reduction of 0.026%, thanks to the talent concentration brought about by the enhancement of innovation efficiency and policy resources to enhance the ability to use. The impact of low talent concentration areas is not significant, mainly due to the lack of enterprise innovation capacity and productivity, which restricts the full effect of the policy.

6. Robustness check

Table 6 reports the results of the three robustness tests. Column (1) excludes samples from four municipalities; column (2) excludes data from the two epidemic years of 2020-2021; and columns (3) and (4) are two-stage least squares regressions using a one-stage lagged index of fiscal-financial cohesion (*LagFFC*) as an instrumental variable.

Table 6 Robustness test results

	OLS DAR	OLS DAR	IV-2SLS Phase I	IV-2SLS Phase II
lnFFC	-0.006*	-0.006*		-0.029***
	(0.003)	(0.004)		(0.010)
LagFFC			0.431***	
			(0.081)	
Constant	0.594 ***	0.370 ***	2.702***	0.294 ***
	(0.062)	(0.055)	(0.975)	(0.089)
Kleibergen-Paap rk LM statistic				22.67 ***
Stock-Wright LM S statistic				16.51 ***
control variable	YES	YES	YES	YES
time fixed effect	YES	YES	YES	YES
area fixed effect	YES	YES	YES	YES
N	364	360	390	390
R^2	0.162	0.172		0.823

Note: ***, **, and * denote 1 per cent, 5 per cent, and 10 per cent significance levels, respectively; robust standard errors are in parentheses.

First, considering the special characteristics of the governance model and fiscal structure of municipalities, this study re-regresses the sample of four municipalities after excluding them. The results show that the coefficient of fiscal and financial synergy remains negative and significant, confirming that the baseline conclusion is not affected by special administrative divisions. Second, in order to exclude the interference of abnormal economic fluctuations during the new crown epidemic, the study excludes the 2020-2021 data and then regresses it. The results also show that the coefficient

of fiscal and financial synergy remains negatively significant, indicating that the study's conclusions still hold under normal economic conditions and that the study's conclusions are robust. Finally, to overcome the endogeneity problem, a two-stage regression is conducted using one period lagged fiscal-financial synergy (*LagFFC*) as an instrumental variable. Column (3) presents the results of the first stage regression, which confirms that the instrumental variable is significantly correlated with the endogenous variable (*FFC*) and satisfies the correlation; At the same time, the instrumental variable selected in this paper is the level of fiscal and financial cohesion in one period of lagging, and since corporate indebtedness in the current period will not affect the development of the fiscal and financial cohesion in the previous period, so it satisfies the exclusivity, shows that the instrumental variable is appropriately selected. Column (4) shows the regression results of the second stage, and the coefficients verify the debt reduction effect of fiscal and financial synergies, and the Kleibergen-Paap and Stock-Wright test statistics are significant at the 1% level, and the instrumental variables pass the weak instrumental variables test, which indicates that the instrumental variables selected in this study are valid and the results obtained do not have endogeneity problems.

7. Conclusions and recommendations

7.1 Findings

The basic regression results show that fiscal and financial synergy has a significant effect on reducing corporate liabilities, and this conclusion is verified by multiple robustness tests. Fiscal decentralisation and financial development have a positive moderating effect on the synergistic effect, in which fiscal decentralisation enhances the local government's resource allocation capacity and financial development broadens financing channels, which together strengthen the synergistic effect of debt reduction. Meanwhile, fiscal and financial synergy indirectly reduces corporate liabilities by promoting industrial structure upgrading and strengthening financial regulation. At the same time, the study reveals the heterogeneous characteristics of the fiscal-financial synergy: the synergy effect is significant in the western region, but not obvious in the east and central regions; the effect is significant in the low industrial agglomeration areas, but not in the high industrial agglomeration areas; the effect is significant in the high talent concentration areas, but not in the low concentration areas.

This paper focuses on the research on the impact mechanism of fiscal and financial synergy on reducing corporate indebtedness, which has important theoretical value and practical significance. In terms of theoretical significance, this paper breaks through the limitations of existing literature that analyses fiscal and financial policies in isolation, and systematically verifies the theoretical value of synergistic effects. In terms of practical application, the results of this paper can provide multifaceted suggestions for the government's policymaking, as well as important theoretical insights into the governance of corporate indebtedness in a complex economic environment.

7.2 Suggestion

Based on the research findings, this paper puts forward the following policy recommendations: firstly, improve the mechanism of fiscal decentralisation, and enhance the resource allocation capacity of local governments by optimising the local tax system and strengthening financial supervision and evaluation. Second, deepen the financial supply-side reform, develop multi-level financial markets, innovate financial products and services, and focus on strengthening financing support for small and medium-sized enterprises (SMEs) and technology-based enterprises. With regard to regional differences, it is recommended to implement differentiated policies: the eastern region focuses on supporting industrial upgrading and scientific and technological innovation; the central region promotes industrial transfer and regional coordination; and the western region strengthens infrastructure construction and resource integration. For regions with a low degree of industrial agglomeration, fiscal and financial support should be increased; and in regions with a

concentration of talent, emphasis should be placed on giving full play to the advantages of talent to promote policy synergies.

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