

Research on the Impact of Local Public Debt on Enterprise Investment Structure

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Abstract: The paper studies the impact of local public debt on the investment structure of enterprises. Specifically, this paper selects the local public debt data at the prefecture-level and the financial data of Shanghai and Shenzhen A-share listed companies from 2007 to 2015 as research samples. Based on the tax burden theory and financing constraint theory, using the fixed effect model of panel data, empirically tests the impact of local public debt on enterprise investment structure. The research shows that the expansion of local public debt will increase the investment in fixed assets of state-owned enterprises and decrease the investment in financial assets; the investment in fixed assets of private enterprises will decrease and the investment in financial assets will increase. Therefore, the impact of local public debt should be managed according to the classification of different enterprises.

1 Introduction

Debt governance is an important part of national governance. Facing and responding to local public debt risks is a manifestation of the continuous improvement of debt governance capabilities and even national governance capabilities. At present, in the context of promoting the modernization of the national governance system and governance capabilities, clarifying the characteristics of local debt risks and preventing and defusing local debt risks is not only conducive to implementing the double bottom line thinking of "stable growth" and "risk prevention", but also high-quality economic development. important guarantee. At the same time, an in-depth understanding of the driving factors behind the financialization of real enterprises is of great significance for guiding funds to return to real entities and promoting high-quality economic development in the context of economic downturn, especially under the negative impact of the epidemic.

Throughout the literature at home and abroad, there are abundant research results on local public debt and enterprise investment structure. The existing literature not only studies the nature, scale and risk of local public debt itself, but also studies the relationship with other economic variables. However, the existing literature mainly focuses on the macroscopic aspects of local public debt, including economic growth¹, financial resource² allocation, and regional innovation³. There are very few studies on the micro level. In addition, most of the data used are government debt data at the provincial level, which makes the empirical results have certain measurement errors. The

existing literature on enterprise investment structure research mainly focuses on the premise of enterprise financialization⁴, including the influencing factors of enterprise investment structure and related economic consequences. Although academia has made a lot of useful explorations on local public debt and corporate investment structure, there are still some limitations in the research on the relationship between the two.

2 Theoretical assumption

Local governments tend to be 'paternalistic' towards state-owned companies. State-owned enterprises build closer relationships with local governments, help local governments perform social security functions, and facilitate the purchase of tax incentives from the government⁵. State-owned companies have close relationships with governments, which often provide support through appropriate measures such as bank loans and financial grants. Receiving appropriate subsidies makes state-owned enterprises less sensitive to performance and less motivated to plan asset allocation. Compared to non-state-owned companies, state-owned companies adopt smaller debt and employment tax shields to reduce their tax burden.

Based on the above analysis, the research hypothesis is put forward: local public debt will promote the investment structure of private enterprises to favour real investment by increasing the financing constraints of private enterprises and reducing the tax burden of state-owned enterprises.

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Local governments tend to show 'paternal love' for state-owned enterprises. State-owned enterprises are building closer ties with local governments, helping them to carry out social security functions and making it easier for them to obtain tax incentives from the government. State-owned enterprises have close ties to governments, which often provide appropriate support measures, such as: B. Bank Loans and Financial Grants. Receiving relevant subsidies reduces the performance sensitivity of state-owned enterprises and their motivation to plan asset allocations. Compared to non-state enterprises, state enterprises have less debt tax protection and employment tax protection to reduce their tax burden.

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3 Sample Selection and Data Sources

In 2007, my country began to implement new accounting standards. On January 1, 2015, the country's newly revised "Budget Law" came into effect. Therefore, considering the accuracy and consistency of the data, this paper selects the period from 2007 to 2015 as the sample research period.

Referring to the research of Cao Jing et al.⁶ and Rao Pingui⁷, this paper selects Shanghai and Shenzhen A-share non-financial listed companies as the research object. Eliminate ST and *ST enterprises, eliminate missing samples of relevant variables, and shrink the data by 1%.

The local g public debt data in this paper come from the China Banking and Insurance Regulatory Commission and the urban investment bond database in the Wind database. The corporate financial data and regional economic data mainly come from the Guotaian database and the "China Statistical Yearbook", "China City Statistical Yearbook" and "China Statistical Yearbook" over the years. China Regional Economic Statistical Yearbook.

4 Model building

In order to study the differential impact of local public debt on corporate investment structure, referring to the research of Wu Min et al.⁸ and Yu Minggui and Wang Kon⁹, a two-way fixed effect model is used for empirical testing. The following is the baseline regression model:

$$Instruct_{it} = \beta_0 + \beta_1 Debt_{jt} + \theta'X + \delta'Z + \gamma_i + u_t + \varepsilon_{it} \quad (1)$$

Among them, i 、 j 、 t respectively represent the enterprise, city and time. The explained variable $Instruct_{it}$ represents the investment structure of the enterprise, the explanatory variable $Debt_{jt}$ represents the local public debt of the city where the enterprise is located, and X and Z represent the control variable at the enterprise level and the control variable at the city level, respectively. γ_i represents the firm-level fixed effect, which controls the impact of inherent differences among different firms

on firm investment structure. u_t represents the time fixed effect, which controls the influence of unobservable factors that change over time on the investment structure of enterprises. ε_{it} represents the random error term.

4.1 Interpreted variables

In this paper, according to the different objects of the enterprise, the enterprise investment structure is divided into two types: fixed asset investment and financial asset investment. The investment structure is measured by the ratio of fixed asset investment to total assets and the ratio of financial asset investment to total assets.

This paper draws on the research of Hu Yiming et al.¹⁰ and Zhang Chengsi and Zheng Ning¹¹, and does not consider monetary financial assets, but considers investment real estate.

The formula for measuring the explained variable is as follows:

Investment in financial assets = (trading financial assets + derivative financial assets + net loans and advances to customers + net available-for-sale financial assets + net held-to-maturity investments + net investment properties) / total assets

Investment in fixed assets = net investment in fixed assets / total assets

4.2 Explanatory variables

Considering the availability and accuracy of data, this paper draws on the research of Wu Min et al.⁷ and uses the data of local government financing platforms for measurement.

The explanatory variable measurement formula is as follows:

Local public debt = balance of interest-bearing debt of local government financing platform companies/GDP of the city where the company is located

Among them, the interest-bearing debt balance of financing platform companies is the sum of short-term loans, accounts payable, notes payable, short-term bonds payable, long-term loans, bonds payable, and non-current liabilities due within one year in the balance sheet data of financing platform companies. Specifically, this paper sums up the interest-bearing debt balances of all local government financing vehicles by city and year, and standardizes with local GDP to obtain the scale of local public debt at the city level.

4.3 Control variables

In order to eliminate the influence of other variables on the investment structure of enterprises as much as possible, this paper controls the investment structure from the enterprise level and the regional level. Among them, the enterprise level mainly includes: (1) enterprise size (Size): reflects the scale of the enterprise; (2) return on assets (ROA): reflects the profitability of the enterprise; (3) leverage ratio (Leverage): reflects the liabilities of the enterprise (4) Enterprise value (TobinQ): reflects the value capability of the enterprise; (5) Proportion of independent

directors (Independ): reflects the organizational structure of the enterprise. The regional level includes: (1) The proportion of the secondary industry (Sec_gdp): reflects the economic level of the region; (2) the natural population growth rate (Gpop): reflects the population size of the region.

5 Result analysis

Figure 1 shows the econometric regression results under the baseline regression model. The dependent variable uses fixed asset investment and financial asset investment, and the independent variable uses data from local government financing platforms. Column (1) is the regression result of the full sample, column (2) is the regression result of state-owned enterprises, and column (3) is the regression result of private enterprises. This

paper controls regional and firm-level control variables, as well as regional and year fixed effects. The estimation results show that: for every 1% increase in local public debt, the proportion of fixed asset investment increases by 0.019%, and the proportion of financial assets decreases by 0.022%. In terms of enterprise ownership, for every 1% increase in local public debt, the proportion of fixed assets of state-owned enterprises increased by 0.054%, and the proportion of financial assets decreased by 0.067%; the proportion of fixed assets of private enterprises decreased by 0.056%, and the proportion of financial assets increased by 0.061%. This shows that local public debt has promoted the transformation of state-owned enterprises from the virtual to the real, but has promoted the transformation of private enterprises from the real to the virtual. The coefficients of the control variables are basically in line with expectations.

Fig. 1. Benchmark regression results

VARIABLES	(1) Full sample		(2) State-owned enterprises		(3) Private enterprises	
	Fix	Fin	Fix	Fin	Fix	Fin
zwl	0.019** (2.03)	-0.022** (-2.48)	0.054*** (4.45)	-0.067*** (-4.47)	-0.056*** (-5.09)	0.061*** (4.03)
Size	-0.012*** (-6.23)	-0.002 (-1.17)	-0.021*** (-5.69)	-0.022*** (-7.48)	-0.000 (-0.12)	0.015*** (5.02)
Leverage	0.004*** (5.53)	-0.004*** (-6.23)	0.014 (1.64)	0.005*** (4.99)	-0.018** (-2.27)	-0.005*** (-4.97)
ROA	-0.003*** (-3.34)	0.002*** (2.63)	-0.036*** (-3.54)	-0.017*** (-5.99)	0.026*** (2.79)	0.018*** (6.14)
TobinQ	-0.000*** (-5.68)	0.000*** (5.58)	-0.006*** (-6.21)	-0.001*** (-4.99)	0.005*** (5.05)	0.001*** (4.92)
Independ	-0.000 (-0.58)	0.000 (1.09)	-0.000 (-1.61)	0.000 (0.84)	0.001** (2.44)	-0.000 (-0.83)
sec_gdp	0.000 (0.67)	-0.000 (-0.38)	0.000 (0.92)	-0.001 (-1.13)	-0.000 (-0.24)	0.001 (1.40)
Gpo	0.000 (0.06)	-0.000 (-0.11)	0.000 (0.34)	-0.000 (-0.38)	0.000 (0.02)	-0.000 (-0.14)
Constant	0.504*** (11.25)	0.755*** (17.10)	0.751*** (9.14)	0.685*** (10.22)	0.646*** (8.53)	0.423*** (6.23)
year	√	√	√	√	√	√
individual	√	√	√	√	√	√
Observations	12,895	12,895	6,246	5,952	6,052	5,897
R-squared	0.030	0.031	0.035	0.083	0.041	0.087
Number of groups	2,156	2,156	936	1,215	933	1,214

Notes. *** p<0.01, ** p<0.05, * p<0.1

Therefore, local public debt management should be strengthened, and debt risk should be managed through overall planning; the impact of local public debt should be managed according to the classification of different enterprises. At the same time, we should optimize the allocation of financial resources of banks and pay attention to the financing difficulties of private enterprises.

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