Dynamic Mechanism Analysis of Local Public Debts Based on Financial Potential Theory

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Abstract

Based on the financial potential theory, this paper uses the fixed effect model to explore whether there is a micro-dynamic mechanism of growth in local public debts, and analyzes its influencing factors. The following conclusions are drawn from the research: first, the scale of local public debts has a gradual growth trend under the effect of the "credit gravity" formed by asset extension and risk joint guarantee. At the same time, this "credit gravity" has spatial heterogeneity, but there is no temporal heterogeneity. Second, in the process of exploring the factors affecting financial potential, it is found that asset extension will directly amplify the impact of industrial structure on the scale of local public debts, while the real effective exchange rate, fiscal autonomy, financial explicit centralization and implicit decentralization use financial potential as intermediary variables to affect the scale of local public debts.

Keywords

Financial Potential, Asset Extension, Risk Joint Guarantee, Local Public Debts

1. Introduction

The implementation of the new budget law in 2015 officially stipulates that the implicit local public debts cannot be included in the debt of local governments. During the promulgation of the law, the State Council stripped the government financing function of financing platforms and promised not to rescue local governments in crisis in principle (Guo, He, & Li, 2016). However, the local public debt has the endogenous growth momentum to finance as well as the risk which is easy to evolve into systematic financial risk. And if there is no reasonable debt financing mechanism, it is easy to cause the imbalance of local fiscal revenue and expenditure as well as the turbulence of the financial system, which further hind-

ers the development of our social economy. Therefore, the research on the dynamic mechanism of local public debt growth is of great significance for promoting China's economic development, deepening supply side reform, and stabilizing the order of the financial market.

The literature research on the growth mechanism of local public debt scale can be summarized as follows: first, the motivation of local public debts, mainly includes the mismatch of fiscal relations between governments, the acquisition of competitive advantage in economic development, and the pressure of official promotion; second, the institutional space for local governments to borrow money, including soft budget constraints, implicit guarantees and weak supervision; third, the basic asset instruments of local public debts; fourth, the potential source of funds for local public debts (Xu, Mao, & Guan, 2020). The endogenous analysis of debt growth in existing literature mainly focuses on local government financing platforms, and pays more attention to the implicit debt risk caused by financing platforms.

In reality, local governments are often used to using resource endowments and kinetic energy endowments to support the development of financing platform companies (Mao & Xu, 2019), so it can also be seen that the central government will use resource endowments and kinetic energy endowments to support the development of local governments. In a market-oriented economy, the financing ability of enterprises depends on the quality of assets and profitability. Similarly, the scale of bond issuance of local governments is also deeply affected by their asset status and solvency. In order to ensure that local governments can have enough funds to carry out infrastructure construction without adjusting the tax rate, increasing the scale of bonds issued by local governments has become an inevitable choice. The central government not only uses the form of explicit and implicit relief to increase the assets of local governments, but also provides implicit guarantee for the debts of local governments, which leads to the problems of asset extension and risk joint guarantee. Both of them jointly improve the financial potential and debt financing ability of local governments.

Financial potential refers to the advantages that financial institutions or non-financial enterprises that undertake investment and financing functions have in the process of transforming their own resource endowments (including asset growth and risk control) into financial credit (Zhao, 2003). Using the financial potential theory to analyze the relationship between the central government and local governments, it can be found that on the asset side, the central government improves the asset quality and credit level of local governments by means of asset extension; on the liability side, the central government uses the form of risk joint guarantee to reduce the probability of default of local governments. This asymmetry between the asset side and the liability side of local governments forms a "credit gravity", which produces financial potential.

Taking urban investment bonds as an example, Xu Junwei and Mao Jie ana-

lyzed the micro-dynamic mechanism of the growth of implicit local public debts (Xu, Mao, & Guan, 2020). This paper aims to study whether explicit local public debts have financial potential, analyze its influencing factors, and put forward reasonable suggestions for controlling their growth. The rest of this paper is structured as follows: the second part is literature review; the third part empirically tests the existence of financial potential of local public debts; the fourth part analyzes the influencing factors of financial potential from the perspective of asset extension and risk joint guarantee; the last part is the conclusions and suggestions of the whole text.

2. Literature Review

The central government can provide financial potential for local governments from two aspects: asset extension and risk joint guarantee, which act on the asset side and liability side of local governments through market mechanisms, resulting in significant asymmetry. In fact, local governments can not only rely on their own financial management and investment activities to expand assets and resist risks, but also use the central government transfer payment, policy credit and other ways to quickly increase capital at a lower cost and extend the supply of assets. In the face of financial difficulties, considering that China's local governments cannot go bankrupt in principle, the central government will avoid the risk of the liability side outbreak through guarantee or assistance, leading to its small actual risk. This asymmetry between asset expansion and risk-taking has formed a "credit gravity" in the financial market, which makes local governments have obvious financial potential advantages over other financing subjects, and realize the rapid growth of debt financing under the condition of low risk and cost. This is a micro-dynamic mechanism to promote the endogenous growth of local government financing.

Asset extension mainly comes from the soft budget constraints of the central government on local governments, which are manifested in explicit relief and implicit subsidies. The concept of budget soft constraint was first put forward by the Hungarian economist *Kornai*, which means that when state-owned enterprises suffer losses or resource shortages, the government usually helps enterprises survive the crisis by means of additional investment, increased loans, tax relief and financial subsidies (Kornai, 1980). After this concept was put forward, domestic scholars studied the causes and influencing factors of local public debts in China based on the budget soft constraint framework. Using the game equilibrium model, Zhou Xuedong found that the budget soft constraint is the main reason for local governments' excessive borrowing, and regarded it as one of the conditions for the sustainability of local public debts (Zhou et al., 2014). Using the one-step generalized moment regression method, Wang Chong found that the existence of soft constraints on the transfer payment budget reduced the ability of local finance to raise funds independently, expanded fiscal expenditure and the gap between fiscal revenue and expenditure (Wang, 2014). Yao Yang

and Yang Lei believe that a large amount of borrowing by local governments is a manifestation of soft budget constraints. Many local government officials will borrow more than their solvency in order to meet the requirements of their superiors or the needs of political performance (Yao & Yang, 2003). Li Shangpu, Zheng Zhonghui and Luo Biliang believed that budget soft constraint was an important cause of local public debt expansion, and proposed that the regional heterogeneity of land factors and credit resources was the resource base leading to the regional heterogeneity of local government budget soft constraint (Li, Zheng, & Luo, 2015). Jiang Ziye and Hu Yurong focused on the "paradox of local public debt", and used the theory of fiscal decentralization to draw a conclusion that soft budget constraints will lead to excessive local public debts (Jiang & Hu, 2016). The research of above scholars can prove that asset extension with soft budget constraints as the core will lead to excessive borrowing by local governments, and the greater the extent of asset extension, the greater the financial potential, and the larger the scale of local public debts.

The core of risk joint guarantee comes from the implicit guarantee of the central government for local public debts, which is rooted in the inconsistency of the development goals of the central government and local governments. Actually, the central government pursues the long-term stability of the whole society and the coordinated development of various regions and provinces, while the goal of the local government is to maximize the GDP and economic development of the region. The inconsistency between them is easy to cause the local development gap to gradually widen. Su Zhonglin pointed out that the implicit guarantee provided by the central government to local governments will induce moral hazard. Specifically, local governments are more willing to enjoy short-term benefits in the form of excessive debt, and transfer the risk of future debt insolvency to the central government (Su, 2006). Wang Junqiang found that attracting investment is the fastest and most effective way for local governments to develop the economy and improve performance. However, when the investment funds are insufficient, although some governments in backward areas have weak solvency and great potential risks, due to the existence of implicit guarantees, local governments will still choose large-scale liabilities and let the central government undertake the bad debts and their risks (Wang & Zuo, 2012). Because the central government is responsible for the debt of local governments, even if its asset quality, fiscal revenue and expenditure are poor, local governments still have the motivation to issue bonds. Moreover, the greater the degree of this guarantee, the smaller the risk of issuing bonds, and the financial potential will increase, leading to the bigger probability of the moral hazard of local public debt financing.

The above literature research shows that asset extension and risk joint guarantee will improve the financial potential of local governments and increase their financing and debt capacity. However, the existing literature focuses on the impact on local public debts from one of these perspectives. It is necessary

to study the micro-dynamic mechanism of local public debts from the perspective of financial potential analysis, combining asset extension and risk joint guarantee.

3. The Existence of Financial Potential of Local Public Debt Financing

3.1. Model Setting and Variable Description

According to the two components of financial potential, this paper tests the existence of local government financial potential by constructing the impact model of asset extension and risk joint guarantee on the scale of local public debts:

$$Debt_{it} = \varphi_1 AE_{it} + \varphi_2 TRG_{it} + u_i + m_t + \varepsilon_{it} \qquad (3\text{-}1)$$

where i and t represent provinces and years respectively, $Debt_{it}$ represents the scale of local public debts, AE_{it} is the proxy variable of asset extension, TRG_{it} is the proxy variable of risk joint guarantee, u_i and m_t represent space and time effects respectively, ε_{it} represents the error term of the model.

As the asset extension comes from the soft budget constraint of local governments, this paper refers to the practice of Zhang Yan and Zhao Yanpeng, and takes "local government budget expenditure—final revenue of the local government" as the main proxy variable of the soft budget constraint of local governments (Zhang & Zhao, 2016). In order to more intuitively compare the differences between the central government and the local governments of different provinces in injecting additional funds, this paper defines the asset extension as:

Asset Extension = (Local government budget expenditure −
Final revenue of the government)/(Central government budget
expenditure − Central government final revenue).

Risk joint guarantee comes from the implicit guarantee of the central government to local governments, which is difficult to quantify. Therefore, this paper uses the research of Ma Wentao and Ma Caoyuan for reference, and regards the financial subsidies of the central government to local governments as the proxy variable of explicit guarantee (Ma & Ma, 2018). And because the central government will not sit idly by when the local government has a debt crisis, which has become the "consensus" of the local debt investment and financing parties in the financial market, this paper defines the risk joint guarantee as:

Risk Joint Guarantee = 1 − Annual central government subsidies to
provinces/Total annual subsidy from the central government.

Meanwhile, the scale of local public debts is measured by the amount of local bonds issued by each province every year, and the logarithm is taken to reduce the regression error.

3.2. Data Source and Description

Since the local government debt of most provinces in China was issued in 2011, and considering the availability of data, this paper mainly selects the annual data of 31 provinces (cities and autonomous regions) from 2011 to 2020. Among them,

the annual issuance of local bonds of each province, the budget revenue and final accounts expenditure of the central government are from the wind database, and the budget revenue and final accounts expenditure of local governments as well as the annual subsidies of the central government to each province are from the CEIC China economic database. For the missing data, considering its continuity in time and location, this paper uses the pre-complement method to deal with it. The descriptive statistics of each variable are shown in Table 1.

3.3. Empirical Results and Analysis

As the existing data set is panel data, the *Hausman* test is first carried out on the model. The chi square value obtained by the test was 29.34, and its *P* value was 0. Therefore, the optimal model is the fixed effect model, which fixes time and space at the same time, and studies each province at different times as an individual, ignoring the influence of year and province. In addition, in order to better determine the impact of space and time, this paper fixes the year and province respectively to explore the impact of asset extension and risk joint guarantee. The results are shown in columns (2) and (3) of Table 2.

Table 1. Descriptive statistics of variables.

Variable Name	Observation	Meaning	Mean Value	Standard Deviation	Maximum Value	Minimum Value
Debt	204	Local public debts after logarithm (100 million yuan)	6.914992	1.039682	8.41444	2.757475
AE	204	Asset Extension (%)	0.0260526	0.0203725	0.1041071	−0.0550765
TRG	204	Risk Joint Guarantee (%)	0.0324228	0.0140297	0.0674546	0.0071831

Source: extracted from the wind database and the CEIC China economic database.

Table 2. Fixed effect model regression results table.

Variable Name	(1) Individual Effect	(2) Spatial Effect	(3) Time Effect
	Debt	*Debt*	*Debt*
AE	20.91***	7.91***	20.91***
	(4.275)	(2.139)	(4.275)
TRG	168.3***	17.51	168.3***
	(35.501)	(13.380)	(35.501)
Constant	−156.5***	−13.06	−156.5***
	(34.361)	(12.903)	(34.361)
Observations	204	204	204
R-squared	0.199	0.915	0.199
Ajusted R^2	0.0491	0.0491	0.0491

Note: the statistical value in parentheses is standard errors. ***, **, * in the regression results represent the confidence level under 0.01, 0.05 and 0.1 respectively. Source: calculated by the authors.

According to the results in Table 2, when the time and space effects are fixed at the same time, the asset extension and risk joint guarantee have a significant impact on the debt scale at the confidence level of 1%. On the asset side, the greater the explicit and implicit assistance of the central government to local governments, the more serious the problem of soft budget constraints, the greater the asset extension, and the larger the scale of local public debts. On the liability side, the higher the degree of implicit guarantee from the central government to local governments, the greater the degree of risk joint guarantee, and the higher the scale of local public debts. Under the joint action of the two, the formation of financial potential can promote the growth of the scale of local public debts.

If only fixed time, the coefficient and the significance of the fixed effect model will change. The coefficient of asset extension will decrease from 20.91 to 7.91. Similarly, its t value will also decrease from 4.89 to 3.697, but its significance will not change. The coefficient of risk joint guarantee decreased from 168.3 to 17.51, a change of nearly 10 times, and its t value decreased from 4.740 to 1.309, becoming no longer significant. The change of the above indicators shows that the impact of asset extension and risk joint guarantee on the scale of local public debts is spatially heterogeneous, and the financial potential of different provinces is different. This is because the central government gives different assistance to different provinces, and the degree of assistance to the same province on the asset side and the liability side is also different, so there are differences in the "credit gravity" between provinces, which lead to the differences in financial potential between regions. If there is only fixed space, there is no difference between the model and the individual effect model in terms of coefficient, t value and significance, which shows that there is no time heterogeneity in asset extension and risk joint guarantee, and the "credit gravity" that causes the existence of financial potential will also not change with time. Therefore, it is more necessary to requires the central government to actively play its role of macro-control to solve these problems.

4. Influencing Factors of Asset Extension and Risk Joint Guarantee

4.1. Model Setting and Variable Description

A large number of domestic literatures have studied the influencing factors of soft budget constraints of local governments. Zhang Zenglian and Yan Qiusi selected the consumer price index (CPI), gross domestic product (GDP), fiscal self-sufficiency rate (SELF) and per capita debt ratio (PPLD) as control variables to study the impact mechanism of land finance and budget soft constraints on the scale of government debt (Zhang & Yan, 2018). Using China's provincial panel data, Zhang Yan and Zhao Yanpeng found that after controlling variables such as per capita real GDP, urbanization rate, per capita fixed asset investment, population, the proportion of the added value of the secondary and tertiary in-

dustries in GDP, soft budget constraints are positively correlated with local public debts. Even if these indicators are changed, the estimation results are still robust (Zhang & Zhao, 2016). Therefore, referring to the research of the above scholars, this paper selects the second industry GDP/third industry GDP and the consumer price index (CPI) as the factors that affect the asset extension at the local micro level. The main purpose of the government issuing local bonds is to obtain funds for infrastructure construction, and its ultimate purpose is to promote the development of the local economy. Therefore, the above two indicators are selected to represent the development of the local economy. Monetary policy and the real effective exchange rate are selected as the factors that affect the asset extension at the macro level. The decline of the growth rate of money supply and the rise of the real effective exchange rate will make the financial market more nervous in terms of funds, thus increasing the financing difficulties of local governments. Besides, the monetary policy and real effective exchange rate indicators refer to the practices of Wang Yongqin, Chen Yinghui and Du Julan who use the dummy variables constructed by the quarterly average of the year-on-year growth rate of money supply M2 to measure the tightness of monetary policy. If the average of the quarterly growth rate decreases year-on-year, the value is 1, otherwise the value is 0. The impact of exchange rate is measured by using a dummy variable constructed by the quarterly mean of the real effective exchange rate. If the mean of the real effective exchange rate rises between quarters, the variable is taken as 1, otherwise it is taken as 0 (Wang, Chen, & Du, 2016).

At present, the research on the implicit guarantee of the central government to local governments believes that the main reason comes from fiscal decentralization and financial decentralization. Zhan Xinyu and Liu Wenbin believe that the decentralization system with Chinese characteristics enables local governments to have a certain degree of income autonomy and expenditure responsibility, so local governments can play a leading role in the economic development of their jurisdictions and have the power to use policy means to dominate state-owned enterprises to achieve government policy goals (Zhan & Liu, 2020). He Dexu and Miao Wenlong found that under the condition of asymmetric financial returns and risks, the mismatch between financial decentralization and fiscal decentralization has formed the "decentralization of limited accountability" of the central government to local governments, which further encourages the autonomous behavior of local governments. Local governments, aiming at the economic interests of their jurisdiction, rely on their own power to carry out circular economic expansion from financial funds to bank loans and other financial resources, so trigger a variety of fiscal and financial risks (He & Miao, 2016). Guo min, Duan Yixuan and Huang Yixuan pointed out that the dual role of fiscal decentralization and financial implicit decentralization has greatly expanded the scale of implicit local public debts originating from local state-owned enterprises in China, and accumulated a large number of risks in the process (Guo, Duan, & Huang, 2020). Based on the above literature, this paper selects per capita GDP, local fiscal autonomy, explicit financial centralization and im-

plicit decentralization as the main factors affecting the degree of risk joint guarantee. For the establishment of indicators, this paper uses the practices of Chen Baodong and Deng Xiaolan for reference, takes the ratio of fiscal revenue within the provincial level budget to total fiscal expenditure within the provincial level budget as a measure of the fiscal decentralization, and uses the ratio of the number of employees of local financial institutions to the number of employees of all financial institutions in the region to characterize the size of local financial institutions. At the same time, explicit financial centralization is measured by the ratio of provincial bank loans to national bank loans (Chen & Deng, 2017).

Based on the above analysis, the influencing factor models of asset extension and risk joint guarantee are constructed respectively:

$$AE_{it} = \alpha_1 STP_{it} + \alpha_2 CPI_{it} + \alpha_3 M2_{it} + \alpha_4 DFX_{it} + a_t + \varepsilon_{it} \tag{4-1}$$

$$TRG_{it} = \beta_1 GDPP_{it} + \beta_2 FED_{it} + \beta_3 FID_{it} + \beta_4 DFA_{it} + b_t + \varepsilon_{it} \tag{4-2}$$

At the same time, in order to confirm whether these influencing factors affect the scale of local government debt through asset extension and risk joint guarantee, this paper takes asset extension and risk joint guarantee as intermediary variables to build four regression models:

$$Debt_{it} = \gamma_1 STP_{it} + \gamma_2 CPI_{it} + \gamma_3 M2_{it} + \gamma_4 DFX_{it} + c_t + \varepsilon_{it} \tag{4-3}$$

$$Debt_{it} = \theta_1 GDPP_{it} + \theta_2 FED_{it} + \theta_3 FID_{it} + \theta_4 DFA_{it} + d_t + \varepsilon_{it} \tag{4-4}$$

$$Debt_{it} = \eta_1 AE_{it} + \eta_2 STP_{it} + \eta_3 CPI_{it} + \eta_4 M2_{it} + \eta_5 DFX_{it} + e_t + \varepsilon_{it} \tag{4-5}$$

$$Debt_{it} = \lambda_1 TRG_{it} + \lambda_2 GDPP_{it} + \lambda_3 FED_{it} + \lambda_4 FID_{it} + \lambda_5 DFA_{it} + f_t + \varepsilon_{it} \tag{4-6}$$

where i and t represent provinces and years respectively, $Debt_{it}$ represents the debt scale of local governments, AE_{it} is the proxy variable of asset extension, STP_{it} represents the second industry GDP/third industry GDP, CPI_{it} represents the consumer price index, $GDPP_{it}$ represents the per capita GDP, $M2_{it}$ represents the dummy variable of monetary policy, DFX_{it} represents the dummy variable of real effective exchange rate, and TRG_{it} is the proxy variable of risk joint guarantee, FED_{it} and FID_{it} represent financial explicit centralization and financial implicit decentralization respectively, DFA_{it} represents fiscal autonomy, and a_t, b_t, c_t, d_t, e_t, f_t represent the time effect of each model respectively, ε_{it} represents the error term of the model.

4.2. Data Source and Description

When building the model of influencing factors, the second and third industry GDP, the annual GDP of each province, CPI, the annual population of each province, the year-on-year growth rate of money supply M2 and the quarterly average data of the real effective exchange rate in this part are all from the CEIC China economic database. The variable STP is obtained by using the annual secondary and tertiary GDP data of 31 provinces (cities and autonomous regions) in China. The per capita GDP is calculated by combining the annual GDP level and the total population of the province, and the logarithm is taken to re-

duce the regression error. In addition, the fiscal revenue within the provincial budget, the total fiscal expenditure within the provincial budget, the number of employees of local financial institutions and the loan data of provincial banks are all from the wind database. For the missing data, considering its continuity in time and location, this paper uses the pre-complement method to deal with it. The descriptive statistics of each variable are shown in Table 3.

4.3. Empirical Results and Analysis

1) Analysis on the direct influencing factors of asset extension and risk joint guarantee

In the third part, the fixed effect model is used to study the financial potential. It is found that there is spatial heterogeneity but no temporal heterogeneity. Therefore, the fixed effect model is also used in the study of influencing factors, and the time effect is fixed to exclude the interference of time trend in their respective variables. The regression results are shown in Table 4.

According to the regression results in Table 4, from the local level, only the secondary/tertiary GDP and the real effective exchange rate will have a very significant impact on the asset extension, with the former coefficient of 0.0773 and the latter coefficient of −0.0442. The larger the ratio of the secondary/tertiary GDP, it means that the local secondary industry has more development advantages than the tertiary industry. The rapid development of the manufacturing industry requires the government to increase investment in the construction of industrial infrastructure and environmental governance. However, the real effective exchange rate will have a negative impact on the asset extension. Within a stable exchange rate range, the rise of the real effective exchange rate will bring about the tension of RMB funds in the financial market, reduce the financing constraints on local governments, and thus reduce the asset extension.

In the regression results of risk joint guarantee, financial explicit centralization, implicit decentralization and fiscal autonomy will have a significant

Table 3. Descriptive statistics of influencing factors of 5 non dummy variables.

Variable Name	Observation	Meaning	Mean Value	Standard Deviation	Maximum Value	Minimum Value
GDPP	204	Per capita GDP level after logarithm	10.94727	0.3939211	12.01303	10.13714
STP	204	GDP of secondary industry/GDP of tertiary industry (%)	0.777568	0.2130177	1.419902	0.1887926
FED	204	Financial Explicit Degree of Centralization (%)	0.0364312	0.0279581	0.1162297	0.0026032
FID	204	Financial Implicit Degree of Decentralization of (%)	0.0346338	0.0217171	0.0945889	0.0021529
DFA	204	Fiscal autonomy (%)	1.208349	0.1212623	0.6065706	1.600596

Source: extracted from the wind database and the CEIC China economic database.

Table 4. Regression results of influencing factor model.

Variable Name	AE	TRG
STP	0.0773***	
	(0.015)	
CPI	6.32e−05	
	(0.002)	
GDPP	−0.00300	−0.00335
	(0.024)	(0.004)
M2	−0.00727	
	(0.005)	
DFX	−0.0442***	
	(0.014)	
DFA		−0.00632***
		(0.002)
FED		0.106**
		(0.045)
FID		−0.0911*
		(0.054)
Constant	−0.00489	1.005***
	(0.313)	(0.040)
Observations	204	204
R-squared	0.591	0.275
Ajusted R^2	0.0796	0.0796

Note: standard errors are in parentheses. In addition, ***, ** and * appear in the regression results, indicating the confidence level under 0.01, 0.05 and 0.1 respectively. Source: calculated by the authors.

impact on it. From the perspective of confidence level, the fiscal autonomy is the most significant (1%), followed by financial explicit centralization (5%) and financial implicit decentralization (10%). From the perspective of regression coefficient, since the three are percentage data, the coefficient can be used to compare the impact size. Although the fiscal autonomy has the most significant impact, the change of the impact is the smallest, only 0.00632. The sign is negative, which reflects that the stronger the local government's autonomy over local finance, the smaller the implicit guarantee the central government needs to provide. In addition, the influence effects of financial explicit centralization and implicit decentralization are relatively close, which are 0.106 and −0.0911 respectively, but the two have opposite directions, which indicates that the more centralized the power of local governments in the financial market, the more direct the mobilization and distribution of financial resources. However, this behavior is difficult to achieve without the guarantee of the central government.

2) Analysis of the influencing factors when asset extension and risk joint guarantee are used as intermediary variables

In the previous part of the study, this paper discussed the factors that directly affect the asset extension and risk joint guarantee. In order to further analyze the impact of these factors on the scale of local public debts, this paper also built four fixed effect models including intermediary variables. The results are shown in Table 5.

On the asset side, from the regression results, the secondary/tertiary GDP and the real effective exchange rate will both have a significant impact on the scale of local public debts. However, after introducing the asset extension as the intermediate variable, the regression coefficient of the secondary/tertiary GDP changes from −5.272 to −6.686, and its direction and significance have not changed. However, through the increase of the absolute value of the coefficient, it can be inferred that in the process of influencing the scale of local public debts, the soft budget constraint of the central government on the local government will have an amplification effect on the industrial structure, which can strengthen the impact

Table 5. Regression results table with mediating variables.

Variable Name	*Debt*	*Debt*	*Debt*	*Debt*
AE		32.44***		
		(2.929)		
STP	−5.272***	−6.686***		
	(0.520)	(0.418)		
DFX	−0.207**	−0.105		
	(0.092)	(0.071)		
DFA			0.142	0.659
			(0.584)	(0.564)
FED			−103.1***	−101.3***
			(21.912)	(20.742)
FID			22.64	29.74
			(29.373)	(27.844)
TRG				163.9***
				(35.957)
Constant	11.13***	11.33***	9.715***	−149.8***
	(0.400)	(0.307)	(1.496)	(35.025)
Observations	204	204	204	204
R-squared	0.414	0.660	0.120	0.216
Ajusted R^2	0.0588	0.0588	0.0588	0.0588

Note: standard errors are in parentheses. In addition, ***, ** and * appear in the regression results, indicating the confidence level under 0.01, 0.05 and 0.1 respectively. Source: calculated by the authors.

of industrial structure on the issuance of local public debts. In addition, the regression coefficient of the real effective exchange rate has changed from −0.207 to −0.105 with the same direction, but its effect has become small, and at the same time, it has changed from significant to insignificant. This can explain that the asset extension is an intermediate variable of the real effective exchange rate, and the macro policies related to the exchange rate change the "credit gravity" of the local government through asset extension, thus leading to the change of the local financial potential and finally leading to the change of the scale of local public debts.

On the liability side, only the financial explicit centralization will have a significant impact on the scale of local public debts, while the fiscal autonomy and the financial implicit decentralization have no significant impact. After introducing risk joint guarantee as an intermediary variable, the regression coefficient of financial explicit centralization changes from −103.1 to −101.3. Its direction and significance have not changed, but the degree of influence is slightly weakened. This reflects that financial explicit centralization will directly affect the scale of local public debts to a large extent, and at the same time, a small part will rely on risk joint guarantee as an intermediary variable to affect it. In contrast, fiscal autonomy and financial implicit decentralization still have no significant impact on it, but since these two variables will have a significant impact on risk joint guarantee, it can be concluded that risk joint guarantee is an intermediate variable that helps fiscal autonomy and financial implicit decentralization affect the scale of local public debts. Fiscal autonomy and financial implicit decentralization can only indirectly affect it through the intermediary variable.

To sum up, on the asset side, only the secondary/tertiary GDP and the real effective exchange rate will have a significant impact on the asset extension. Specifically, the asset extension will amplify the impact of the secondary/tertiary GDP, and serve as an intermediary variable of the real effective exchange rate to influence the scale of local public debts. On the liability side, fiscal autonomy, financial explicit centralization and implicit decentralization will have a significant impact on the risk joint guarantee, and indirectly affect the scale of local public debts through the intermediary variable.

5. Main Conclusions and Policy Recommendations

Based on the financial potential theory, this paper uses the fixed effect model to explore the micro-dynamic mechanism of local public debts and its influencing factors. Through the research, it is found that the scale of local public debts has a gradually increasing trend under the central government's explicit rescue and implicit rescue, explicit guarantee and implicit guarantee, which indicates that the existence of financial potential is the micro power of local public debt to increase, and it is realized under the dual effects of asset extension and risk joint guarantee. In the process of exploring the factors affecting financial potential, it is found that asset extension will directly expand the impact of industrial struc-

ture on local public debts, while the actual effective exchange rate, fiscal autonomy, financial explicit centralization and implicit decentralization need to use financial potential as an intermediary variable to influence it. Based on the above conclusions, this paper puts forward corresponding suggestions to the local government and the central government:

1) Local governments should improve the transparency of local finance and change from an economic growth oriented government to a public service-oriented government. Economic growth is easy to be assessed by superiors, and public services are oriented to the satisfaction of local residents (Zheng, 2011). Realize the adjustment and upgrading of the industrial structure, increase the proportion of the tertiary industry, and take advantage of the opportunity of the third information revolution to accelerate the development of the local economy, narrow the gap in economic development within the region, improve people's living standards, so as to reduce the dependence on the implicit assistance of the central government and realize its own sustainable development.

2) The central government should reduce the implicit subsidies and assistance to local governments, eliminate the expectations of local governments and the financial market on the implicit guarantee of local public debts through practical institutional measures, improve China's fiscal and financial system, and properly handle the relationship between fiscal decentralization and financial decentralization. So local governments can realize the matching of "financial rights" and "administrative rights", as well as the sustainable development of its fiscal revenue and expenditure.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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