Article

Establishment of Local Government Financial Sustainability and Debt Risk Prevention and Control Mechanism

Shali Xu [1,*]

[1] Wuhan City Construction Investment and Development Group Co., Ltd., Wuhan, Hubei, 430070, China
* Correspondence: Shali Xu, Wuhan City Construction Investment and Development Group Co., Ltd., Wuhan, Hubei, 430070, China

Abstract: This paper explores the development of robust fiscal sustainability frameworks and comprehensive debt risk prevention systems tailored for local governments. It begins by establishing a theoretical foundation that delves into the essential concepts of fiscal sustainability, examining key determinants such as revenue capacity, expenditure rigidity, intergovernmental transfers, and macroeconomic volatility. Furthermore, it analyzes the structural causes and dynamic mechanisms behind the accumulation of local government debt. Using empirical methods and relevant datasets, the study assesses the current fiscal conditions of local governments and identifies prevailing debt risk levels. The results indicate that local governments are encountering a series of structural and operational challenges that hinder their ability to maintain long-term fiscal balance. Among these, rising debt levels, limited revenue growth, and rigid fiscal obligations emerge as primary sources of concern. In light of these findings, the paper proposes the construction of a scientifically grounded and practically viable debt risk prevention mechanism. This mechanism emphasizes early warning systems, multi-tiered fiscal discipline, and institutional reforms aimed at enhancing transparency and accountability. The goal is to foster long-term financial stability and promote the sustainable development of subnational public finances.

Keywords: local government; fiscal sustainability; debt risk prevention and control mechanism

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1. Introduction

The fiscal sustainability of local governments is a foundational element in ensuring regional economic resilience and long-term governance effectiveness. In the context of rapid socioeconomic development, local governments have taken on increasingly diverse responsibilities—ranging from infrastructure development to the provision of essential public services. This expansion in functional scope has resulted in a sustained rise in fiscal expenditures.

To bridge the growing gap between revenue and expenditure, many local authorities have increasingly turned to debt financing as a means of supporting regional investment and stimulating economic activity. While this approach has contributed to local economic dynamism in the short term, it has simultaneously introduced medium- to long-term risks related to debt accumulation, fiscal rigidity, and repayment pressures.

If left unaddressed, such risks could destabilize subnational fiscal systems and potentially spill over into broader economic and institutional challenges. Therefore, it is of both theoretical significance and practical urgency to investigate the mechanisms through which fiscal sustainability can be achieved and debt risks effectively managed. This study aims to explore these mechanisms comprehensively, providing insights that are relevant not only for policy design but also for the advancement of sound fiscal governance practices at the local level [1].

2. Theoretical Analysis of Local Government Fiscal Sustainability

2.1. The Connotation of Fiscal Sustainability

Fiscal sustainability refers to the practical ability of local governments to maintain stable and effective operations over the long term, particularly in the context of dynamic and often unpredictable economic environments. It is not a static state but a form of dynamic equilibrium, which balances the stability of revenue sources with the rational distribution of expenditures, especially under the pressure of rising mandatory spending in public welfare sectors such as education, healthcare, and social services.

In practice, certain localities depend heavily on non-recurring revenue sources—most notably land-use rights transfers—to sustain their fiscal operations. However, such revenue streams are highly sensitive to macroeconomic cycles. For example, during downturns in the real estate sector, the sharp drop in land-related income can lead to significant budget gaps. These shortfalls often compel local governments to delay payments for public projects, reduce investments in key service areas, or cut essential programs, thereby compromising public service delivery and social equity [2].

A key element of fiscal sustainability is debt controllability. This means embedding all borrowing activities within a transparent and disciplined budgetary framework. Simply expanding the financing scale without accounting for long-term repayment capacity can lead to unsustainable practices. For instance, some local investment platforms adopt "rolling bond issuance" models—using newly issued bonds to service interest on existing debt. Although such arrangements may avoid immediate defaults, they can conceal growing structural risks and foster fiscal illusions.

Truly sustainable fiscal systems require that the structure and maturity of debt match the government's revenue profile and repayment capacity. At the same time, expenditure efficiency should pass performance audits, and the system should be equipped with institutional buffers that help absorb external shocks. This capacity is reflected in several areas: prudent daily budget planning, rigorous cost-benefit evaluations for debt-financed projects, and a commitment to fiscal transparency that enables public oversight and mitigates misallocation.

2.2. Factors Affecting the Fiscal Sustainability of Local Governments

2.2.1. Economic Resilience and Revenue Structure

A region's economic structure is a primary determinant of its fiscal sustainability. Cities with diversified industrial bases, robust private sectors, and relatively stable tax sources are generally better positioned to endure external shocks. For example, a coastal city with a strong manufacturing ecosystem was able to maintain its essential expenditures on education and healthcare even during the pandemic, demonstrating fiscal resilience and operational continuity [3].

Conversely, regions with narrow economic foundations or heavy dependence on volatile sectors—such as real estate or natural resources—tend to face acute fiscal stress during economic downturns. In some inland counties, a slowdown in land revenue or industrial output triggered rapid fiscal contraction. This led to delays in critical payments, including those to public hospitals and school infrastructure contractors. These regions often fall into a reactive mode of fiscal management, where resources are diverted from long-term development to short-term crisis response—commonly described as "robbing Peter to pay Paul."

This disparity underscores that fiscal sustainability depends not only on the size of economic activity but also on its structural robustness and capacity for shock absorption. Revenue systems that lack diversity or flexibility are more vulnerable to volatility and fiscal imbalance.

2.2.2. Institutional Design and Responsibility Alignment

The alignment between administrative responsibilities and financial resources is another foundational factor. Well-designed intergovernmental fiscal systems allow for a clear and stable distribution of expenditure responsibilities and revenue rights. After the implementation of sub-provincial fiscal reforms in one eastern province, responsibilities for core services such as compulsory education and public health were reassigned to higher-level governments, while more stable tax-sharing arrangements were allocated to cities and counties. This institutional adjustment allowed local governments to shift from reactive financing to proactive fiscal planning, significantly slowing the growth of local debt.

However, in regions with unclear or overlapping jurisdictional boundaries, local governments are sometimes burdened with expenditure mandates that far exceed their fiscal capacities. In one such case, a city was required to undertake large-scale environmental initiatives and social development projects, absorbing over 40% of its total fiscal capacity [4]. Lacking adequate financial support, the city resorted to off-balance-sheet financing and other opaque mechanisms, which obscured the true scale of its fiscal obligations and introduced hidden debt risks.

This situation illustrates the importance of institutional clarity: without precise coordination between administrative duties and financial means, fiscal risks tend to accumulate in less visible but equally destabilizing forms.

2.2.3. Debt Governance and Risk Management Capacity

Debt governance reflects the broader fiscal governance capabilities of a local administration. In some regions, advanced tools and methods have been adopted to enhance debt oversight. For example, a district in southern Jiangsu Province implemented a full-lifecycle assessment system, evaluating every potential debt-financed project through rigorous cost-benefit analysis and cash flow stress testing. Over a three-year period, the district terminated over ten park development projects due to insufficient expected returns, thus improving its overall debt structure and risk profile [5].

In contrast, some regions still view bond issuance primarily as a stopgap measure, prioritizing the immediate closure of fiscal gaps over long-term financial health. This approach leads to fragmented capital deployment, superficial project assessments, and an entrenched reliance on refinancing strategies—thereby forming a dangerous path dependency.

Ultimately, the success of risk prevention lies not in the financial statements themselves, but in the quality of institutional decision-making. Sound debt governance requires that performance logic, fiscal discipline, and risk awareness be embedded in every stage of public financial management—from project selection to implementation and post-evaluation.

3. Formation Mechanism and Empirical Analysis of Local Government Debt Risk

3.1. Formation Mechanism of Local Government Debt Risk

Fiscal imbalances often stem not from sudden crises but from the accumulation of long-term structural contradictions. In some counties across central and western China, local governments have been operating under chronic "tight balance" conditions for years. While essential expenditures like education, healthcare, and pensions continue to grow rigidly, fluctuations in land sale revenues and shrinking non-tax income force them to resort to disguised borrowing through platform companies or PPP models. A city once incurred hidden debts exceeding 1.3 times its budgeted expenditure within a year due to overspending on shantytown renovation projects. Debt interest gradually eroded available fiscal resources, creating a vicious cycle: "borrowing to sustain operations → rigid spending → refinancing for survival." Performance-driven investment impulses further exacerbated imbalances. Some officials still view infrastructure investments as quick fixes for political achievements, pushing through projects like industrial parks and cultural tourism towns without thorough feasibility studies, resulting in idle assets and debt piling up. A prefecture-level city built five standardized factories over three years, yet actual occupancy rates fell below 30%. Rental income failed to cover principal and interest payments, allowing debt risks to quietly spread beyond balance sheets into fiscal safety margins. Cyclical financial market fluctuations amplify these vulnerabilities. During previous loose monetary conditions, lower thresholds for urban investment bond issuance allowed some local governments to weaponize debt through short-term financing. When liquidity tightened and refinancing channels blocked, immediate risks of broken repayment cash flows emerged. The 2022 bond extensions and non-standard default cases across multiple provinces were inevitable consequences of over-reliance on financial environment dividends while neglecting project cash flow matching. This evolutionary process reveals that debt risks fundamentally reflect institutional costs of governance logic deviating from performance-oriented principles [6].

3.2. Empirical Analysis of Local Government Debt Risks

Based on data from the 2018-2022 Provincial Fiscal Yearbook and Local Government Debt Management System, a quantitative debt risk assessment was conducted across 12 cities in central and western China. The study revealed that the average debt-to-GDP ratio exceeded 35%, with three cities surpassing 50%. Five cities also breached the international warning line (20%) for debt repayment rates. In one resource-based city, fiscal self-sufficiency plummeted from 41% in 2017 to 26% in 2022 amid sluggish industrial transformation. Concurrently, government fund revenues shrank by nearly 40%, while mandatory expenditures grew at an annual rate of 9.3%. This forced local governments to rely on rolling bond issuances by their financing vehicles to fill funding gaps, pushing hidden debt to account for 61% of total outstanding liabilities. Field research highlighted widespread "project waiting for funds" phenomena among grassroots finance departments, where insufficient matching capacity caused idle special bond funds, further inflating actual interest costs through misallocation. Empirical evidence shows vertical fiscal imbalance and regional economic resilience disparities form institutional roots of risk differentiation. A 10-percentage-point increase in transfer payment dependency correlates with a 2.7-basis-point rise in debt growth ($p<0.05$), revealing implicit incentives for debt expansion stemming from mismatched financial authority and responsibilities. This finding breaks traditional risk attribution frameworks by incorporating institutional operational costs as explanatory variables, providing new analytical pillars for debt governance.

4. Establishing a Risk Prevention and Control Mechanism for Local Government Debt

4.1. Improve the Financial System

The rational allocation of fiscal authority and administrative responsibilities should not remain at the level of abstract principles but must be embedded within the institutional framework of fiscal governance. In practice, municipal finance bureaus are often compelled to allocate over 70% of annual budgets to fulfilling mandatory tasks assigned by higher authorities—such as education, environmental protection, and rural revitalization—while managing less than 30% of their own financial resources. With delegated responsibilities cascading down through multiple tiers without stable tax revenue support, this situation resembles "dancing in shackles." True alignment should embody the contractual principle of equal rights and responsibilities The central government should focus on cross-regional initiatives with strong external impacts, such as ecological compensation and major infrastructure projects, binding performance targets through targeted transfer payments to avoid "spreading resources thinly." Local governments responsible for livelihood services and urban operations require appropriate tax autonomy, exemplified by pilot programs converting partial land sale revenues into sustainable property taxes to enhance self-sustaining capabilities. The transfer payment system should not merely provide incremental support but establish a dynamic calibration mechanism based on fiscal capacity indices. After implementing a composite allocation model combining factor analysis and performance scoring in 2021, underdeveloped counties saw a 17% reduction in idle funds and nearly four-month shorter project completion cycles, demonstrating how scientifically designed mechanisms mitigate debt pressures. This shift from passive resource transfers to proactive governance constitutes the essence of fiscal-administrative responsibility restructuring [7].

4.2. Strengthen Debt Management

The improvement of local government debt management systems should not be limited to codifying regulations but must be rooted in the underlying logic of governance practices. In reality, some regions have faced the dilemma of "sunk debt funds in accounts" or "leaking funds during transit": A city allocated special bonds to municipal pipeline renovation projects, but due to inadequate preliminary evaluations and unclear responsibility chains, the fund utilization rate fell below 30% within six months. This not only delayed public welfare improvements but also accumulated hidden risks. These cases reveal that institutional rigidity can only be achieved by embedding full-process debt control into project lifecycle management. The borrowing phase requires strengthening fiscal affordability assessments and introducing third-party compliance review mechanisms. During implementation, a closed-loop logic of "funds following projects" must be enforced, with projects showing no returns or low efficiency being decisively halted. On the repayment front, cross-year budget balancing mechanisms should be established to prevent maturity mismatches caused by short-term debt investments. Notably, some counties have explored linking performance evaluation results to subsequent financing quotas, compelling departments to shift from "impulse-driven borrowing" to "voluntary repayment." A county implementing this mechanism saw its debt fund yield increase by 22% within two years. This evolution from institutional constraints to behavioral internalization demonstrates a crucial leap in modern debt governance—from formal compliance to substantive effectiveness.

4.3. Establish Risk Early Warning Mechanism

In debt risk management practices, the effectiveness of early warning mechanisms often depends on the scientific selection of indicators and the dynamic adaptability of threshold settings. Taking a province in eastern China as an example, it incorporated debt burden ratio, debt repayment rate, and debt delinquency rate into its core monitoring framework. By aligning with regional fiscal self-sufficiency fluctuation patterns, the system established three-tiered alert zones (red, orange, yellow) and embedded quarterly dynamic calibration mechanisms. This shift transformed early warning signals from static threshold judgments to trend-based risk identification. In 2023, when a city's debt repayment rate approached the yellow alert line for two consecutive quarters, the system automatically triggered fiscal expenditure structure review procedures, reducing non-essential projects by 12% to prevent potential default risks. This design that links macroeconomic indicators with micro-level actions enhanced the operability of early warning outcomes. Meanwhile, the risk monitoring system expanded beyond financial data aggregation to integrate sensitive factors like GDP growth margin changes, land sale premium rate declines, and refinancing rate spikes, forming multidimensional scanning capabilities. A western province proactively predicted regional refinancing pressures through liquidity tightening signals in early 2024, adjusting bond issuance schedules in advance to mitigate concentrated redemption risks. Such mechanisms transcend traditional post-event evaluations by extending risk perception to policy implementation frontiers, enabling local governments to transition from reactive responses to proactive interventions. This provides preemptive institutional support for fiscal sustainability.

4.4. Promoting Economic Transformation and Development

The economic transformation driven by local governments is not merely a superficial replacement of industrial structures, but a profound restructuring of fiscal foundations. In a city in the Yangtze River Delta region, where traditional textile industries saw declining tax contributions year after year, the implementation of the "Chain Leader System" successfully attracted the establishment of a new energy vehicle component cluster. Within two years, this initiative generated 10-billion-yuan output value, boosting related tax revenues by 17.3% and reversing three consecutive years of fiscal growth lagging behind GDP. This technology-intensive-driven fiscal optimization reduced non-tax revenue to below 28% of general public budget income, demonstrating enhanced stability and sustainability. Meanwhile, a resource-based city in central China phased out nearly 10 million tons of high-energy-consuming coking capacity, redirecting vacated space for circular economy development and advanced equipment manufacturing. Although this temporarily strained fiscal revenue, increased R&D investment intensity to 3.2% and doubled the number of high-tech enterprises led to a 5.6 percentage point recovery in fiscal self-sufficiency over three years, validating the substantial resilience-building effect of "renewing old systems". The qualitative transformation of industrial structure is fundamentally reshaping local fiscal revenue generation logic—shifting from reliance on land and resource price elasticity to sustained innovation output capabilities. This evolution significantly reduces fiscal sensitivity to cyclical fluctuations while injecting endogenous momentum into debt repayment capacity.

5. Conclusion

The intrinsic connection between local government fiscal sustainability and debt risk prevention has evolved from theoretical propositions to core governance issues. Confronted with the dual challenges of waning land finance and rigid expenditure pressures, debt management relying solely on scale control or maturity mismatch proves unsustainable. Pilot programs in some provinces have implemented dynamic monitoring systems for "fiscal health," linking debt interest payments, tax revenue volatility, and basic public service investments, marking a transition from static to dynamic risk identification. Meanwhile, economic transformation increasingly reshapes fiscal foundations—A city in Zhejiang Province boosted high-tech manufacturing's tax contribution rate by 12.6 percentage points over two years through cultivating integrated circuit industry chains, effectively offsetting income gaps caused by real estate downturns. These structural adjustments demonstrate that fiscal sustainability is shifting from passive defense to proactive restructuring—essentially driving tax base evolution through factor upgrading to curb hidden debt generation. Future institutional designs should emphasize synergy between fiscal capacity and industrial evolution, establishing stable expectations between rational use of debt instruments and quality-driven economic growth, thereby fortifying fiscal security in complex economic environments.

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