

Resilience Building in Small and Medium-Sized Cities: Pathway Innovation Based on Existing Governance Resources

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Abstract: *Constrained by their resource endowments and financial capacities, small and medium-sized cities find it difficult to replicate the high-investment resilience building models of large cities. How to explore low-cost resilience pathways under resource constraints has become an urgent issue to be addressed. This paper employs collaborative governance theory to examine how local governments in small and medium-sized cities can utilize existing governance resources to enhance their risk resistance capabilities. However, in practice, problems such as the absence of key actors, resource fragmentation, and a lack of collaborative rules—collectively referred to as "collaborative failure"—commonly exist, which prevents the existing stock of resources from being transformed into resilience efficiency. This paper constructs a three-dimensional collaborative governance mechanism framework comprising "stakeholder mobilization, resource sharing, and rule guarantee," and elaborates on the role positioning of multiple actors, the three-dimensional allocation path of resources, and the key role of institutional guarantee, thereby providing theoretical references and practical guidance for small and medium-sized cities in exploring resilience building pathways.*

Key words: *small and medium-sized cities; collaborative governance; governance resources; resilience building*

1. Research Background and Theoretical Framework

Small and medium-sized cities generally refer to cities with a permanent urban population ranging from 100,000 to 1 million. According to the "Development Report on Small and Medium-Sized Cities in China (2025)", as of the end of 2024, the number of small and medium-sized cities in China was approximately 2,554. As key nodes of regional development, these cities occupy an important strategic position in China's administrative system. Based on existing resilience city research, the term "resilience" originates from the Latin word "resillo," which originally means to bounce back (to a previous state)^[1]. The Resilience City Research Center of Zhejiang University summarizes the theory of resilient cities as follows: a city is able to resist disasters with its own capabilities, mitigate disaster losses, and reasonably allocate resources to recover quickly from disasters; the city can also learn from past disasters and accidents to enhance its adaptive capacity to disasters^[2]. However, due to inadequate infrastructure development levels, relative shortages of talent, capital, and technology, lagging information dissemination, and insufficient social attention, small and medium-sized towns are more prone to collapse when responding to external shocks^[3]. Moreover, small and medium-sized cities are relatively weak in terms of resource endowments and fiscal capacities, making it difficult for them to engage in high-investment resilience construction like large cities. Therefore, how to utilize existing governance resources to enhance risk resistance capabilities and explore low-cost, high-benefit pathways for building resilient cities has become a pressing challenge for small and medium-sized cities.

The essential meaning of collaborative governance is that, in order to maximize the coordination of public resources within the government system and all positive factors across society to address public problems, the government makes corresponding institutional designs and arrangements to better leverage the roles of citizens, social organizations, and market entities in the management of social public affairs and the provision of public services. Through means such as consultation, coordination, collaboration, and synergy, the government effectively provides public goods and public services to society^[4]. Therefore, this paper applies collaborative governance theory to construct a three-dimensional analytical framework of "stakeholder mobilization, resource sharing, and rule

guarantee" (Figure 1), and it explains the mechanism innovation pathways for resilience building in small and medium-sized cities. By identifying and defining the core stock of governance resources and the synergy potential for resilience building in small and medium-sized cities, this paper analyzes the practical dilemmas of resilience building in these cities from the perspective of collaborative failure, and it constructs the core mechanisms for low-cost resilience building.

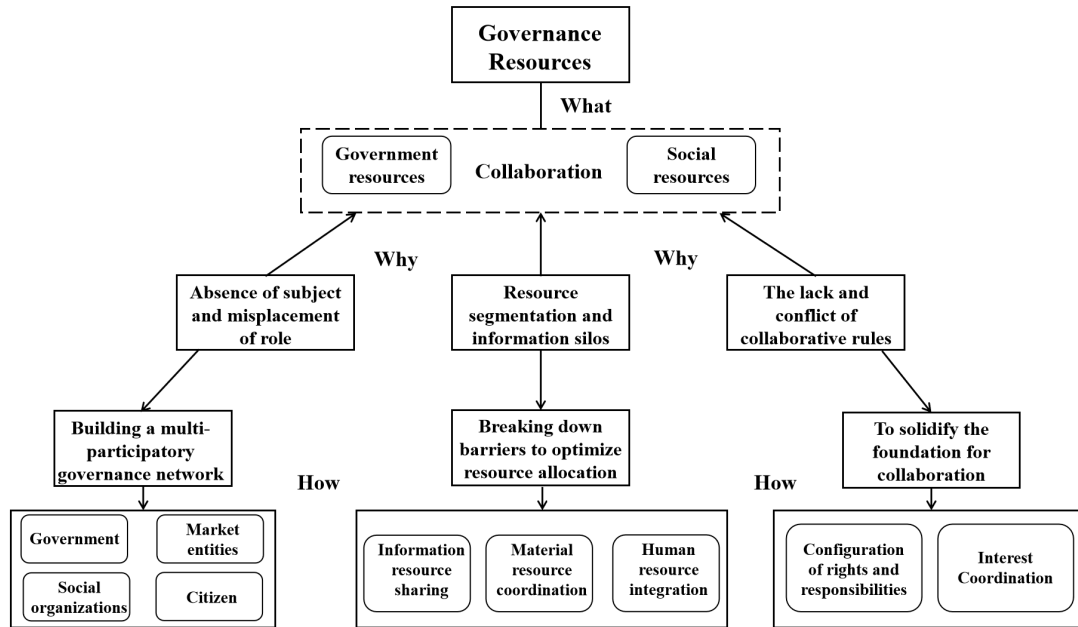


Figure 1: Three-dimensional analysis framework of "Main body mobilization - resource sharing - rule guarantee"

2. Existing Governance Resources for Resilience Building in Small and Medium-Sized Cities

As the key actors in regional governance, local governments bear multiple governance functions. The existing governance resources of small and medium-sized cities are primarily reflected in the totality of various tangible and intangible resources that local governments possess or can mobilize in the process of fulfilling their governance functions and achieving public objectives. These resources include not only those directly controlled by the government itself but also those social resources that can be integrated through diverse collaborative mechanisms.

Government resources serve as the foundation for resilience building in small and medium-sized cities and as the core support for the leading role of the government within the collaborative governance network. These resources mainly include administrative resources and institutional resources. As hard resources directly controlled by the government, administrative resources consist first of human resources that guarantee resilience building, including public servants in local governance and professional technical personnel in related fields, who constitute the core force of resilience building. Second, these resources include financial resources required for resilience building, primarily composed of local fiscal budgets and central transfer payments, which serve as a key lever for mobilizing social resources. Third, they include material resources as the carriers of resilience building, covering relevant urban infrastructure, emergency material reserves, and public service facilities that form the urban foundation and provide the hardware guarantee for cities to resist risk impacts and recover quickly. Fourth, they include information resources as the decision-making support for resilience building, encompassing urban operation monitoring data, risk and hazard information, etc., which provide a basis for risk identification, early warning issuance, and resource allocation. Institutional resources, as soft resources formed by the government through top-level design, include policies, regulations, governance systems and mechanisms, and the framework for allocating powers and responsibilities among departments and levels related to resilience building. These resources provide institutional norms and procedural guarantees for the collaborative integration of diverse resources, enabling administrative resources to form a synergy in governance.

Social resources represent the potential for resilience building in small and medium-sized cities, and they are also the key to resolving governance difficulties caused by resource constraints, compensating for the supply shortcomings of government resources, and activating the driving force of grassroots governance. These resources primarily consist of the resources carried by social organizations, market entities, and citizens. As a bridge connecting the government with the grassroots, social organizations possess abundant social capital and professional capabilities, and they have the advantages of being close to the grassroots, flexible, and efficient. They can participate in risk education, community rescue, and other aspects, effectively compensating for the shortcomings of government governance. Market entities, as participants in the market economy, include local supermarkets, logistics companies, construction firms, and other actors. They possess resources such as material reserves, transportation capacities, and technical equipment, providing material, technological, and service support for resilience building. Citizens, as the micro-actors of urban governance, can acquire self-rescue and mutual rescue capabilities and the willingness to volunteer through learning. They are the smallest units and the core peripheral force for the implementation of resilience building.

3. Practical Dilemmas of Resilience Building in Small and Medium-Sized Cities

The limited availability of emergency governance resources severely restricts the normal performance of emergency governance effectiveness at the local grassroots level^[5]. Therefore, how to fundamentally enhance emergency governance effectiveness has become an urgent issue that needs to be resolved. However, small and medium-sized cities have fallen into the dilemma of collaborative failure, where the multi-resource system finds it difficult to achieve effective synergy, resulting in the failure to transform limited governance resources into actual resilience efficiency. This situation constitutes the practical obstacle to the lagging resilience building in small and medium-sized cities.

First, the absence of key actors and the misalignment of their roles leave the participation of diverse governance actors without adequate support. The government still exhibits a mindset of overreaching in resilience building, and it lacks the capacity to reserve reasonable participation spaces for social organizations, market entities, and citizens. Social organizations generally suffer from vague role positioning and limited rights and responsibilities, and their functions in resilience building have not been effectively realized. Enterprises lack endogenous motivation to participate in resilience building, and the absence of clear incentive mechanisms and defined responsibility boundaries results in generally low enthusiasm for their participation. Citizens have weak risk prevention awareness, and the channels for their participation in resilience building are obstructed while platforms are lacking; in most cases, citizens remain passive, and the knowledge and capabilities they possess have not been effectively activated.

Second, resource fragmentation and information silos lead to low efficiency in the integration and allocation of diverse resources. Under the bureaucratic administrative system and traditional governance models, the governance resources of small and medium-sized cities are often in a fragmented state. The resource barriers between departments, between administrative levels, and between the government and society are difficult to break easily. At the data level, the lack of interoperability among data from relevant departments creates information silos, making it difficult to share risk information and urban operation information with each other, which results in a lack of data support. At the material and human resource level, emergency material reserves are scattered across various levels and units, and the absence of unified coordination and dispatch leads to a lack of collaborative operational capability. At the financial level, the rigid constraints of the fiscal system are strong, and the channels for social capital to enter the field of resilience building are obstructed with high thresholds, further exacerbating the tension in resource supply.

Third, the absence and conflict of collaborative rules undermine the foundation for resource mobilization among diverse actors. Small and medium-sized cities have obvious shortcomings in the design of collaborative rules for resilience building, which constitute institutional obstacles that constrain resource mobilization. First, the allocation of powers and responsibilities remains unclear, and the coordination relationships and boundary of responsibilities among diverse actors have not been clearly defined. Such ambiguity easily leads to problems such as conflicting directives and shirking of responsibilities, making it difficult to smoothly mobilize resources. Second, institutional guarantees are insufficient, and the legal status and behavioral boundaries for social forces to participate in resilience building lack clear institutional norms. As a result, the participation behaviors of relevant actors cannot be adequately protected, and governance effectiveness is greatly compromised. Third, there is a tendency to replace two-way interaction with one-way commands. The government still relies primarily

on administrative orders in resilience building, and various social actors are treated instrumentally, lacking the willingness for active participation.

However, affected by the above factors, these resources find it difficult to achieve effective integration and coordinated interaction, which prevents the full realization of resource efficiency and ultimately constrains the improvement of urban resilience. Therefore, local governments should, based on the risk characteristics and development needs of their cities, create more effective project operation models and fiscal fund utilization models^[6]. Through institutional innovation, they should break down various barriers to collaborative governance, activate the synergistic potential of existing governance resources, and enable diverse resources to form a joint force for resilience building.

4. Mechanism Innovation for Low-Cost Resilience Building in Small and Medium-Sized Cities: Pathways to Realizing Collaborative Governance

4.1 Stakeholder Mobilization Mechanism: Building a Multi-Actor Participatory Governance Network

The stakeholder mobilization mechanism serves as the prerequisite for collaborative governance. Its goal is to break away from the governance pattern dominated solely by the government and to build a multi-actor participatory governance network characterized by government leadership, social participation, market support, and citizen co-construction. On the one hand, the government needs to transform its traditional concept of social management that relies on a unitary subject and administrative control, and it should establish a governance concept of multi-actor governance, co-construction, and shared benefits. The government should comprehensively employ various management methods and tools, including administrative management, rule-of-law measures, moral constraints, market mechanisms, and social policies. On the other hand, the government needs to establish and improve institutionalized communication channels and participation platforms for society in the process of social governance^[7].

The transformation of the government's role is the core prerequisite for stakeholder mobilization. Governments in small and medium-sized cities should abandon the mindset of omnipotent governance and shift from direct assumption of all tasks to building platforms and cultivating participation capabilities for social forces. The specific pathways for realization include the following: first, platform construction. They should establish cross-actor platforms for resource coordination, information sharing, and collaborative deliberation, thereby providing physical carriers for multi-actor cooperation and breaking down communication barriers among stakeholders. Second, capacity cultivation. Through means such as government procurement of services and professional training, they should provide financial support and professional guidance to social organizations, enabling social forces to competently undertake tasks related to resilience building.

Within the multi-actor participatory governance network, social organizations should serve as an important link between the government and the public. In the area of risk education, they should leverage their advantage of being close to the grassroots, conduct normalized disaster prevention and mitigation publicity and education in communities and villages, and enhance the public's risk awareness. In the area of volunteer services, they should integrate grassroots volunteer forces, form specialized emergency volunteer service teams, carry out regular training and drills, and achieve the reserve and management of volunteer forces. In the area of needs feedback, they should collect the actual needs and opinions of the public regarding resilience building, provide a basis for the government to formulate targeted resilience building policies, and play a bridging role in policy transmission and public opinion communication.

The participation of market entities requires the construction of a mechanism that combines contractual collaboration with incentives to fully stimulate their endogenous motivation for engaging in resilience building. The government can sign emergency material reserve agreements with local supermarkets, logistics companies, manufacturing enterprises, and other businesses to establish a government-enterprise collaboration model. This approach not only reduces the government's material reserve costs but also leverages the advantages of market-oriented operations of enterprises. Through measures such as setting up special subsidies for technological innovation and building industry-university-research cooperation platforms, the government should encourage enterprises to develop low-cost risk monitoring and early warning equipment as well as emergency response technologies suitable for small and medium-sized cities, thereby providing technical support for

resilience building. At the same time, the government should use incentives such as tax preferences and financial subsidies to guide enterprises to actively fulfill their social responsibilities.

The participation of individual citizens should achieve a transformation from being managed to co-construction, making citizens the core micro-actors of resilience building. Therefore, the government should rely on the existing grassroots governance grids of small and medium-sized cities to deeply embed citizen participation into the grid governance system, and it should promote citizen involvement in risk and hazard identification as well as grassroots self-rescue and mutual rescue within the grids, thereby activating the peripheral forces of grassroots risk response. Through participatory methods such as community consultations and online solicitation of opinions, the government should fully solicit citizens' suggestions and recommendations regarding resilience building planning, making decision-making more aligned with grassroots realities. Through regular emergency drills and skills training, the government should strengthen citizens' emergency response capabilities and enhance their level of self-rescue and mutual rescue, equipping citizens with the practical abilities needed to participate in resilience building.

4.2 Resource Sharing Mechanism: Breaking Barriers to Achieve Optimization of Resource Allocation

Local governments possess various resources such as power, funds, and personnel necessary for their actions, and they hold the discourse power in resource allocation^[8]. Therefore, the resource sharing mechanism serves as the material foundation of collaborative governance. Its goal is to break down resource barriers between departments, levels, and actors, to fully mobilize the resources owned by local governments, and to achieve the overall coordination and optimized allocation of government resources and social resources, thereby forming a joint force from the limited stock of governance resources.

Information resource sharing is the core and prerequisite of resource sharing. Small and medium-sized cities should rely on their existing e-governance infrastructure to achieve the sharing and efficient utilization of information resources. On the one hand, they should break down data barriers between relevant departments, integrate various types of risk monitoring data and urban operation data into a unified platform, and realize real-time information interoperability and collaboration among departments, thereby providing comprehensive data support for risk identification and emergency dispatch. On the other hand, they should promote the moderate opening of the platform to society, allowing enterprises and social organizations to access public risk information and urban planning information, which provides a data basis for their participation in resilience building. At the same time, they should establish citizen participation feedback channels on the platform, encourage the public to report risks and hazards and propose suggestions for resilience building, and form a pattern of government collection, social feedback, and public participation.

The core of material resource coordination lies in establishing a material reserve and allocation system that combines normal and emergency use, achieving multi-functional utilization of the existing stock of material resources and reducing the costs of resource reserves and construction. First, they should adopt a model that combines government reserves with social storage. In addition to the standardized emergency material reserve warehouses built by the government, they should establish social storage points relying on local enterprises, supermarkets, and communities, thereby realizing the distributed storage of emergency materials and improving the timeliness of material allocation. Second, they should promote the transformation of public facilities for dual use in normal and emergency situations. They should carry out low-cost transformations of urban public facilities, which can serve daily public service needs under normal conditions and be converted into emergency shelters, material distribution points, and rescue command centers under emergency conditions, thereby achieving efficient utilization of facility resources.

The key to human resource integration lies in achieving the coordinated allocation of professional forces and social forces, and in building a specialized, diversified, and dispatchable team. First, they should establish a cross-disciplinary expert database, recruit professionals from relevant fields in universities and research institutions, and provide specialized technical guidance for risk assessment, plan formulation, and facility construction in small and medium-sized cities. Second, they should establish a cross-regional emergency coordination mechanism, strengthen collaboration among small and medium-sized cities and between small and medium-sized cities and surrounding large cities, and realize the cross-regional dispatch of professional rescue forces and volunteer forces, thereby compensating for the resource shortcomings of a single city.

4.3 Rule Guarantee Mechanism: Laying a Solid Foundation for Collaboration

The rule guarantee mechanism is the key to collaborative governance. Its core objective is to clarify the power and responsibility boundaries of diverse actors and balance the interests of all parties through institutionalized and standardized design, thereby providing a solid institutional foundation for the effective collaboration of diverse actors and ensuring that collaborative governance has rules to follow.

The institutionalization of power and responsibility allocation serves as the foundation of collaborative governance, and its goal is to clarify the rights, obligations, and boundaries of diverse actors in resilience building and emergency management through institutional design. First, it should clarify the allocation of command authority under emergency conditions, establish a unified emergency command system, define the command and dispatch powers of various government departments and levels, and specify the coordination responsibilities among different actors. Second, it should improve the legal guarantees for the participation of social forces; through legislation or policies, it should clarify the scope of participation and the protection of rights for social forces in resilience building, thereby providing a basis for their participation behaviors. Third, it should affirm the rights of citizens, clarify their various rights under emergency conditions as well as their rights related to risk screening and information feedback, and ensure the lawful participation behaviors of citizens.

The interest coordination mechanism, on the other hand, needs to build an incentive-compatible institutional design, balance the interest demands of the government, social organizations, market entities, and individual citizens, and fully mobilize the endogenous motivation of all parties to participate in resilience building. First, it should establish a risk-sharing mechanism, introduce risk-sharing tools such as catastrophic insurance and work safety liability insurance, disperse the government's pressure in disaster response and post-disaster recovery, and protect the legitimate rights and interests of market entities and citizens. Second, it should broaden the access channels for social capital, and it may set up resilience-building-related access or market mechanism models to attract social capital to participate in the construction of resilience infrastructure, thereby achieving an effective combination of government fiscal funds and social capital.

5. Conclusion

As the "nerve endings" of regional risk prevention and control, small and medium-sized cities face frequent natural disasters and complex risk challenges, and they find it difficult to replicate the high-investment resilience building model of large cities due to resource constraints. However, the core obstacle to resilience building in small and medium-sized cities is not the absolute scarcity of governance resources but the failure to achieve effective integration and coordinated interaction of the existing stock of resources. Therefore, the government needs to transform toward an enabling role, while social organizations, market entities, and citizens need to take their respective positions and fulfill their respective functions. By breaking down resource barriers, they should achieve the allocation of information, materials, and human resources. Through institutionalized power and responsibility allocation and interest coordination, they should solidify the foundation for collaboration and lay the groundwork for creating a low-cost resilience building pathway.

Fund Projects

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