



Research on the Coordination Dilemma and Institutional Innovation of Local Government Digital Governance Based on the SFIC Model

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Abstract. The deep embedding of digital technology is driving the transformation of local government governance models. However, there is a significant tension between the inherent fragmentation characteristics of the hierarchical system and the internal coordination requirements of digital governance. This paper integrates the theory of collaborative governance and the SFIC model to construct a four - stage analysis framework including initial conditions, catalytic leadership, institutional design, and collaborative process, and systematically analyzes the coordination dilemma and its generation logic of local government digital governance. The study finds that the coordination dilemma is essentially a systematic result of the superposition of multiple factors such as the lagging governance concept, fragmented technical standards, insufficient institutional supply, and cultural inertia. Therefore, this study proposes that we should promote the formation of a governance ecosystem with an organic linkage of concept - technology - institution - culture through paths such as connecting the data flow mechanism, strengthening the in - depth integration of high - level coordination and intelligent technology, constructing an institutional system that combines the rule of law and incentives, and cultivating an open and collaborative governance culture, so as to achieve the evolution of digital governance from fragmented response to holistic and intelligent coordination.

Keywords: Digital governance; Coordination dilemma; SFIC model; Theory of collaborative governance

1 Introduction

The rapid development of digital technology has brought profound changes to local government governance. Its core feature is to achieve cross - departmental and cross - level collaborative governance through data sharing and process reengineering. However, there is a structural contradiction between the departmental barriers of the traditional hierarchical system and the coordination requirements of digital governance, leading to frequent problems such as the repeated construction of data islands and unclear rights and responsibilities. The theory of collaborative governance emphasizes that multiple subjects can achieve effective governance of public affairs

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S. Garcia-Esteban et al. (eds.), *Proceedings of the 2026 5th International Conference on Social Sciences and Humanities and Arts (SSHA 2026)*, Advances in Social Science, Education and Humanities Research 1014, https://doi.org/10.2991/978-2-38476-577-5_101

through cooperation, negotiation, and resource sharing. The SFIC model provides a dynamic framework for analyzing the cross - departmental coordination process. This paper combines the two to construct a four - stage analysis framework of initial conditions - catalytic leadership - institutional design - collaborative process, aiming to reveal the coordination dilemma in local government digital governance and propose systematic institutional innovation paths.

2 Theoretical Foundation: The Integrated Framework of Collaborative Governance and the SFIC Model

(1) Collaborative governance theory emerged in the 1990s. Its central premise involves transcending the traditional, state-centric governance paradigm to establish a polycentric governance framework that incorporates diverse actors from government, market, and civil society. This theory comprises three fundamental components: Firstly, a polycentric governance structure, which emphasizes the equitable participation of multiple entities—including government agencies, businesses, and social organizations—fostering synergistic governance outcomes through resource integration and capability complementarity. Secondly, institutionalized dialogue mechanisms, which entail establishing formalized procedures for consultation, negotiation, and decision-making to ensure effective communication and consensus-building among stakeholders throughout the governance process. Thirdly, a public value orientation, which prioritizes the enhancement of public welfare as the ultimate objective, leveraging cross-sectoral collaboration to address complex governance challenges and mitigate the limitations inherent in unilateral approaches [1].

(2) The Four-Stage Analytical Framework of the SFIC Model

The SFIC model, proposed by Ansell and Gash, provides a dynamic analytical framework for understanding cross-sector collaboration, structured around four sequential stages: Initial Conditions, Catalytic Leadership, Institutional Design, and Collaborative Process. Contextualizing this model to the specificities of digital governance, this study adapts it as follows: Initial Conditions encompass the foundational aspects of data sharing, technical standard harmonization, and stakeholder capability alignment. Catalytic Leadership underscores the necessity of high-level cross-departmental coordination and the deep integration of intelligent technologies. Institutional Design focuses on the establishment of legal norms, incentive structures, and process re-engineering. Finally, the Collaborative Process emphasizes multi-stakeholder interaction, systemic adaptation, and the cultivation of a collaborative culture. This adapted framework more accurately reflects the characteristic high permeability, strong interdependency, and context-dependent nature of digital governance. The collaborative process itself, driven by the combined influence of data productivity, digital technologies, platforms, and infrastructure, achieves governance objectives through four key phases: resource flow, technological input, consensus formation, and the attainment of phased outcomes.

3 The Coordination Dilemma of Local Government Digital Governance: Analysis Based on the SFIC Model

(1)At the Level of Initial Conditions: The Triple Disconnection of Concept, Resources, and Capabilities

In the initial stage of digital governance, the flow of data resources and the imbalance of subject capabilities constitute the fundamental obstacles to coordination. The mechanism for the return of government data has not been fully established. Grass - roots governments often face the dilemma of a structural contradiction between insufficient data supply and strong demand in grass - roots governance. Although superior departments hold a large amount of data, due to concerns about security and unclear rights and responsibilities, there are obvious institutional and technical blockades in the return of data to the grass - roots level, forming an asymmetric pattern where data flow upwards easily but downwards difficultly [2]. Grass - roots governments generally have the phenomena of insufficient digital literacy and anxiety about technology application when facing intelligent systems. Although technology enterprises have development capabilities, they lack an understanding of government affairs scenarios, resulting in a disconnection between the system and the actual governance [3]. This mismatch between capabilities and needs further solidifies the fragmentation of resources and the inertia of coordination.

(2)At the Level of Catalytic Leadership: The Double Absence of Authoritative Coordination and Technological Empowerment

Catalytic leadership is crucial in promoting the leap of digital governance from informatization to intelligence. However, local governments still face the dual challenges of a weak coordination mechanism and the "suspension" of technology application in this process. In complex governance scenarios such as megacities, the evolution of the digital government needs to achieve a leap from human - machine coordination to human - intelligence coordination, which requires high - level leaders to have systematic thinking and cross - border integration capabilities [4]. In reality, many localities still use the project - based and department - based promotion methods, lacking a normalized high - level coordination mechanism, resulting in the fragmented pilot state of intelligent governance construction.

(3)At the Level of Institutional Design: The Systematic Absence of Rules, Incentives, and Evaluations

Currently, local governments in the field of digital governance are generally caught in the competition logic of the "intelligent championship", that is, by quickly launching intelligent projects and creating highlight projects to attract the attention of superiors and obtain resource inclination. However, this kind of competition often leads to repeated construction, inconsistent standards, and insufficient sustainability [5]. There is a lack of a solid legal foundation for the coordination of digital governance. In particular, there are still a large number of legal gaps in aspects such as data ownership, sharing procedures, and liability determination. The traditional administrative law system is difficult to meet the requirements of procedural justice and liability distribution in cross - departmental coordination in the digital age. The lag of legal innovation

behind governance practice makes the coordination process face the institutional risks of having no laws to abide by and difficulty in abiding by existing laws^[6].

(4)At the Level of Collaborative Process: The Deep - seated Obstruction of Interaction, Adjustment, and Culture

In the process of collaborative implementation, the participation of multiple subjects is often more in form than in essence, and it is difficult for all parties in government, enterprises, and society to form a real governance synergy. Digital governance systems generally lack the ability of dynamic adjustment and cannot be optimized in real - time according to environmental changes and coordination effects. If an intelligent question - answering system only relies on historical data training and fails to form a closed - loop feedback with offline work processes and cross - departmental policy updates, it is easy to have a disconnection between system output and user needs, resulting in low service efficiency^[7].

4 Institutional Innovation Paths: Four - Stage Breakthroughs Based on the SFIC Model

(1)Optimization of Initial Conditions: Building the Underlying Foundation for Collaborative Governance

In response to the disconnection of concept, resources and capabilities at the initial condition level, the initial foundation of collaborative governance is reshaped through mechanism connection, capability symbiosis and resource sinking, to realize the smooth flow of data resources, matching of subject capabilities and unification of governance concepts. Based on the Data Security Law and Personal Information Protection Law, a hierarchical and classified government data return mechanism is established to clarify data access authority and standardized use procedures, formulate unified data docking technical standards, and balance data sharing and security while solving the asymmetric pattern of easy upward flow and difficult downward flow of government data. A multi-subject capability symbiosis system is constructed, with hierarchical digital literacy training for grass-roots staff to eliminate their technology application anxiety, a government affairs scenario docking mechanism built for technology enterprises to promote customized R&D and the deep integration of technology and government affairs, and digital governance science popularization carried out for social subjects to improve their participation capacity. Digital governance resources are promoted to sink, with superior departments increasing investment in grass-roots areas especially remote and underdeveloped regions, a grass-roots digital governance resource sharing platform built to avoid repeated construction, and social capital guided to participate through policies to form a diversified resource guarantee system.

(2)Strengthening of Catalytic Leadership: Breaking Through the Startup Bottleneck of Collaborative Governance

Aiming at the double absence of authoritative coordination and technological empowerment, catalytic leadership is strengthened from the aspects of institutional upgrading and in-depth technology integration, to build a normalized high-level coordi-

nation mechanism and realize technological empowerment for governance coordination. Institutional upgrading is carried out by setting up a high-level digital governance coordination leading group with government main responsible persons as the core, formulating a unified local digital governance development plan, establishing a regular coordination meeting system and cross-departmental assessment supervision mechanism to form collaborative joint forces; for megacity governance scenarios, targeted development strategies are formulated to promote the leap of digital government from human-machine coordination to human-intelligence coordination. In-depth technology integration is promoted by building a cross-departmental data sharing trusted evidence-storage platform relying on blockchain and other technologies to realize full-process traceability of data flow and clear and traceable rights and responsibilities, constructing an intelligent decision-making platform with big data and artificial intelligence to provide scientific decision-making support for high-level coordination, and accelerating the R&D and application of government affairs scenario-based intelligent technologies to solve the suspension problem of technology application in practice.

(3) Innovation of Institutional Design: Building a Rule System for Collaborative Governance

In view of the systematic absence of rules, incentives and evaluations, systematic institutional innovation is carried out around strengthening the rule of law, reconstructing incentives and reengineering processes, to consolidate the legal foundation of collaboration and reverse incentive distortion under the "intelligent championship" tendency. The legal construction of digital governance is strengthened by formulating local special regulations such as Regulations on the Collaborative Governance of the Digital Government, clarifying core norms such as data ownership, sharing procedures, security responsibilities and dispute resolution mechanisms, revising the traditional administrative law system to adapt to the procedural justice and liability distribution requirements of the digital age, and establishing a data circulation rule combining negative list and positive authorization. The digital governance incentive mechanism is reconstructed by abandoning the single evaluation standard of focusing on highlight projects, building a comprehensive performance evaluation system with collaborative governance effect, public service efficiency and social satisfaction as the core, increasing the weight of cross-departmental collaboration in evaluation and linking results with budget allocation and cadre promotion, while establishing a restraint mechanism for ineffective collaboration. Digital governance business processes are reengineered by taking "whole process convenience" as the goal, breaking departmental barriers to build a "one-stop" digital governance service process, establishing a joint approval mechanism for cross-departmental business to realize closed-loop management, and setting up a dynamic process adjustment mechanism to continuously optimize the efficiency of collaborative governance.

(4) Deepening of the Collaborative Process: Cultivating a Sustainable Collaborative Ecosystem

Targeting the deep-seated obstruction of interaction, adjustment and culture in the collaborative process, the process is deepened through platform empowerment, system evolution and cultural cultivation, to solve the formalization of multi-subject

participation and the lack of dynamic adjustment capability of the system, and build a sustainable collaborative ecosystem. Platform empowerment is strengthened by integrating existing departmental platforms to build a unified cross-departmental and multi-subject digital governance collaboration platform, setting up functional modules such as information release, demand feedback and collaborative disposal, and improving the platform's technical support and operation guarantee system to realize multi-subject information sharing and interactive collaboration. System evolution is promoted by establishing a full-process monitoring and feedback mechanism for the operation of digital governance systems, regularly evaluating operation effects and carrying out targeted optimization, building a closed-loop feedback between systems and offline work processes and cross-departmental policy updates, and implementing a pilot promotion mechanism for system innovation to realize iterative upgrading of digital governance systems. Collaborative governance culture is cultivated by incorporating collaborative leadership and cooperation literacy into the compulsory training of government staff, widely carrying out cross-departmental joint problem-solving, job exchange training and collaborative innovation competitions to break cognitive barriers, strengthening cultural publicity through multiple channels, and establishing a multi-subject communication mechanism to form a social atmosphere of mutual trust, cooperation and joint governance.

5 Conclusion

The coordination dilemma of local government digital governance is essentially the manifestation of the structural contradiction between the traditional hierarchical governance paradigm and the coordination requirements of the digital age. This paper constructs a four - stage analysis framework including initial conditions, catalytic leadership, institutional design, and collaborative process by integrating the theory of collaborative governance and the SFIC model, reveals the deep - seated restrictive factors such as the lagging concept, fragmented technology, lack of institutions, and cultural inertia, and proposes corresponding institutional innovation paths. The study shows that solving the coordination dilemma requires breaking through the thinking of single - element optimization and establishing a systematic solution of concept - leading, technology - empowering, institution - guaranteeing, and culture - supporting to form an organic linkage and continuous evolution of governance elements.

References

1. He Xiaoting, Zeng Ruixue. The Theoretical Framework and Realization Path of the Overall Collaborative Construction of the Digital Government [J]. *Journal of Southwest Minzu University (Humanities and Social Sciences)*, 2024, 45(07): 223 - 230.
2. Ding Huang, You Hongbin. The Formation Mechanism and Governance Enlightenment of the Obstacles to the Return of Government Affairs Data - A Multi - Case Study [J]. *Journal of Gansu Administration Institute*, 2025, (02): 63 - 75.

3. Zhao Jinping and Institutional Change: A Study on the Digital Transformation Path of Grass - roots Governments - Taking the "Greatly Facilitate" Comprehensive Management Platform as an Example [J]. *Leadership Science*, 2025, (03): 143 - 151.
4. Suo Liming, Geng Jiahao. The Evolution of the Digital Government in Megacities towards Human - Intelligence Coordination - Based on the Theory of Complex Adaptive Systems [J]. *E - Government*, 2025, (06): 2 - 15.
5. Zhao Jingwu, He Aoxuan. Innovation of Digital Government Governance Theory and Governance Model under the "Intelligent Championship" - Analysis Based on the "DeepSeek + Government Affairs" Practice [J]. *E - Government*, 2025, (06): 16 - 30.
6. Zhao Zirui. From Technology to Procedure: The Legal Innovation of the Collaborative Governance of the Digital Government under the Rule of Law [J]. *Administrative Law Review*, 2025, (06): 134 - 149.
7. Zhang Nan, Suo Cheng. The Dynamic Mechanism and Practical Path of the Intelligent Leap of Government Affairs Services: A Diachronic Comparison of Government Affairs Intelligent Question - Answering Systems under the Impact of Large Models [J]. *E - Government*, 2025, (06): 31 - 46.

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