WHIOCE PUBLISHING PTE. LTD.
PROVIDING
FIRST-CLASS SCIENTIFIC INFORMATION
FOR TOP SCHOLARS

2026 Volume 4, Issue 2
Educational Innovation Research
ISSN: 3029-1844(Print) ISSN: 3029-1852(Online)

Strategies for Improving Local Government Governance Capacity in the Context of Big Data

Liming Zheng*
People's Government of Xianning City, Xianning 437100, Hubei, China

**Author to whom correspondence should be addressed.*

Abstract: The advent of the big data era has profoundly impacted socio-economic development, driving productivity growth while simultaneously raising new demands for local government governance capabilities. This paper analyzes strategies to enhance local government governance capabilities in the context of big data. By examining the significance of such improvements and addressing existing challenges, it proposes evidence-based recommendations. The study aims to provide actionable insights for enhancing local government governance capabilities, aligned with contemporary developmental trends.

Keywords: big data; local government governance capacity; strategy

Online publication: February 26, 2026

1. Introduction

The governance capacity of local governments directly impacts regional economic development and social stability. In the era of big data, local governments must accelerate reform processes, fully leverage contemporary technological advancements to enhance social governance capabilities, and better fulfill their missions in social management and service delivery. By utilizing big data technologies, local governments can strengthen personalized service capabilities and improve the precision of social governance, enabling dynamic adjustments in social services and management. This approach better meets the evolving needs of the public, enhances public trust and satisfaction in local governments, and further promotes harmonious and stable social development.

2. The Significance of Improving Local Government Governance Capacity in the Context of Big Data

2.1. It helps to meet the needs of personalized public services.

With the advancement of society and the evolution of times, public expectations for local governments' social governance capabilities have grown. Meeting personalized public service needs has become a key focus in local government reforms and capacity-building. Leveraging technological innovations and the advantages of the digital era, local governments can better address these needs through big data. By employing big data analytics, they can accurately assess public preferences

and behavioral patterns. Through mining and analyzing vast amounts of data, governments gain deeper insights into the specific requirements of different groups, enabling them to deliver more tailored public services that align with real-world needs. This approach ultimately enhances public satisfaction with government performance.

2.2. Facilitates better response to social public crises

Addressing public crises constitutes a vital component of local government governance. In the big data era, enhanced governance capabilities enable more effective crisis management. With diversified information dissemination channels and expanded access to data, public crises are accompanied by massive data generation. Improved governance capabilities allow governments to efficiently collect, integrate, and analyze data, enabling timely and accurate monitoring of crisis developments to safeguard governmental credibility and social stability. Furthermore, technological advancements in the big data era facilitate public crisis risk prediction. By mining historical and real-time data, governments can establish risk early-warning models to identify potential triggers, thereby minimizing crisis impacts and preventing escalation of conflicts.

2.3. It facilitates the advancement of local government reform.

Amid the national reform drive, local government reforms are gaining momentum. In the big data era, enhancing governance capabilities can significantly accelerate these reforms. First, big data technology enables efficient information processing and sharing, helping governments streamline workflows and boost productivity while adhering to cost-effective principles. Second, improved governance capabilities foster more scientific and democratic decision-making. By using big data analytics to simulate policy outcomes and predict implementation effects, governments can select optimal solutions, ensuring decisions are both scientifically grounded and adaptable to local economic development and social stability. Additionally, big data technology creates open communication channels between governments and citizens. Through online platforms, public feedback on government operations is widely collected, effectively enhancing the democratic and scientific nature of policy-making.

3. Problems in Local Government Governance Capacity under the Background of Big Data

3.1. Insufficient capacity for personalized public services

In the era of big data, the public has increasingly demanded personalized services for socioeconomic development and government operations. Local governments must implement targeted measures to address citizens' actual needs, thereby enhancing governance capabilities. However, many local governments currently lack sufficient capacity for personalized public services. While they focus on macro-level statistical data collection, they often neglect micro-level data gathering regarding individual preferences, making it difficult to meet diverse population needs. Additionally, some local governments still cling to outdated mindsets and work philosophies, remaining accustomed to providing standardized public services without developing a people-centered approach to personalized services. This mindset gap ultimately results in the supply of personalized public services failing to meet public expectations.

3.2. Limitations of Media Crisis Public Relations Capability

In the era of big data, local governments face increasingly severe media crisis management challenges. The rapid development of new media has accelerated information dissemination and expanded its influence, leaving some local governments struggling to handle such crises effectively. On one hand, many lack effective crisis management capabilities, failing to clearly communicate government positions and response measures during sudden media incidents, which leads to public misunderstandings. On the other hand, inadequate public opinion monitoring and early warning mechanisms result

in delayed responses to local public events and lagging information disclosure. These limitations highlight the constraints of local governments' media crisis management under big data conditions, posing critical challenges for enhancing governance capabilities.

3.3. Proactive service awareness requires enhancement

Building a service-oriented government is an inevitable direction in local government reform. Local governments must continuously focus on creating service-oriented governance based on public needs, better fulfilling the principle of wholeheartedly serving the people. In this process, they need to transform their work philosophy and enhance proactive service awareness. However, in reality, some local governments lack initiative in understanding public demands. Their work often involves reactive responses to problems rather than proactive intervention, which affects public satisfaction with government services. Meanwhile, some local governments underutilize big data technology, failing to leverage its advantages to identify public needs and optimize service processes. This makes it difficult for them to meet the new demands of the public for government services in the big data era.

4. Strategies for Enhancing Local Government Governance Capacity in the Context of Big Data

4.1. Enhance personalized service capabilities through big data technology

In the context of big data, the enhancement of local government governance capabilities requires full utilization of big data technology to improve personalized social public service capabilities, thereby better meeting the diverse public service needs of society.

In the context of big data, local governments must precisely differentiate social management and service content, implementing personalized public services tailored to the needs of different social entities. Big data technology enables multi-dimensional categorization of social entities. Taking age as an example, adolescents prioritize educational equity. To address this, governments should increase investments in under-resourced regions to upgrade school infrastructure, enhance teacher training, and ensure quality education for all youth. Middle-aged adults focus on employment opportunities. By analyzing job market trends through big data, governments can provide targeted vocational training and career guidance to boost their employability. Elderly citizens demand elderly care services. Big data analysis of demographic patterns and needs helps optimize the layout and construction of senior care facilities, offering diversified services. Through multi-dimensional categorization of social entities using big data, local governments can better meet diverse public service needs, enhancing the precision and effectiveness of social governance.

Secondly, local governments should actively transform traditional mindsets and operational approaches by adopting a people-centered social service philosophy. By leveraging big data technology to identify public concerns, they can conduct in-depth analysis of underlying causes and needs, thereby formulating more practical and targeted public service policies. For instance, in addressing residents' transportation issues, local governments may utilize big data to collect and compile feedback on public transportation problems. This enables targeted optimization of bus routes, improvement of road infrastructure, and effective application of big data in local governance, ultimately enhancing personalized service capabilities.

In the context of big data, local governments should prioritize addressing the personalized public service needs of vulnerable social groups. Taking people with disabilities as an example, their physical or mental impairments impose significant limitations on daily life and employment. By leveraging big data technology, local governments can conduct precise statistical analysis of disabled populations within their jurisdictions. Through field visits, they can categorize and organize diverse social public service demands of this group, providing tailored services based on specific needs. Simultaneously, establishing long-term tracking and support mechanisms ensures continuous improvement in their quality of life. These data-driven precision service initiatives can genuinely enhance public well-being, further demonstrating the localized service capabilities of local governments in social governance.

4.2. Integration of big data resources to enhance media crisis PR capabilities

In the era of big data, government media crisis management serves as a key indicator of social governance capabilities and a crucial benchmark for evaluating the quality of social administration and services. Local governments should continuously integrate big data resources to enhance their public crisis response capabilities, effectively guide mainstream public opinion, and shape societal values, thereby providing a solid foundation for the stable development of the social economy [1].

First, local governments should establish a media oversight mechanism, particularly for new media platforms, utilizing big data technology to monitor real-time information and promptly identify potential crisis-related public sentiment. On one hand, a government-led media information release mechanism should be established, with strict review processes for information dissemination. Clear accountability and standardized procedures must be defined, with professionals responsible for organizing, reviewing, and publishing information. This ensures accurate information can be swiftly released through official channels during major events or crises, preventing the spread of rumors and false information. On the other hand, local governments should strengthen collaboration with new media platforms, which have become primary channels for information dissemination. By enhancing cooperation and communication with these platforms to build positive media relations, authorities can stay updated on public opinion trends and respond promptly to public concerns through new media channels, thereby ensuring social stability and guiding public discourse.

Secondly, local governments should continuously improve public opinion monitoring and early warning mechanisms to ensure timely grasp of local public sentiment and social hot topics. By leveraging big data technology for keyword searches and filtering of massive media information, they can accurately identify public concerns and potential crisis-related public opinion. Through in-depth analysis of media information from various types and sources, governments can understand the development trends and evolution patterns of public sentiment, predict potential crises in advance, and establish a scientific early warning indicator system. Different warning levels should be set based on the severity and impact scope of public opinion. When public sentiment reaches corresponding warning levels, emergency response plans should be swiftly activated to implement effective countermeasures. Meanwhile, given the rapid fermentation of social public opinion in the new media era, local governments must conduct dynamic management of public opinion monitoring and early warning mechanisms, regularly evaluate and optimize these systems to ensure they adapt to new requirements.

Furthermore, the crisis management capabilities of local government media are demonstrated through their responsiveness to public feedback and suggestions. In the era of big data, the rapid development of self-media platforms enables individuals to voice opinions online, while citizens can also provide suggestions and feedback regarding government social governance and services. Government responses to public concerns constitute a crucial aspect of media crisis management, reflecting local governments' social governance capabilities. Local authorities should prioritize communication and interaction with the public. After monitoring public sentiment trends, they must promptly release accurate information through official channels to address public concerns and clarify doubts, thereby preventing panic and misunderstandings caused by information opacity. Simultaneously, actively listening to public opinions and suggestions, adjusting response strategies based on feedback, and enhancing public trust in the government are essential. Through effective communication and interaction, authorities can guide the public to rationally evaluate public opinion events and collectively maintain social stability and harmony [2].

4.3. Enhancing proactive service awareness in the context of the big data era

Strengthening the sense of active service is the basic requirement of the construction of service-oriented government under the background of big data. Local governments should use big data technology to deeply explore the potential needs of the public, provide more accurate and active social public services for the public, and improve the public's satisfaction with local governments.

First, local governments can utilize big data technology to compile and organize public concerns regarding social livelihood issues. Through data analysis, they can identify hot topics of public interest and develop targeted solutions and

service measures, thereby enhancing the relevance and proactivity of government social public services. Taking winter in northern regions as an example, big data analysis can accurately determine that heating issues have consistently been a focal point of public attention. Local governments can conduct on-site inspections of local heating enterprises before the heating season to supervise their equipment maintenance and fuel stockpiling efforts, ensuring heating quality and stability while proactively addressing public concerns. Meanwhile, after the heating season begins, local governments can proactively employ big data technology to assess residents' satisfaction with local heating services. Based on the analysis results, they can optimize and adjust heating policies to provide residents with higher-quality heating services [3].

Secondly, building a service-oriented government requires enhancing local authorities 'proactive service mindset through a paradigm shift in governance philosophy. Governments should intervene proactively before social issues arise, thereby improving public satisfaction with governmental services. By leveraging big data technology, local governments can forecast urban development trends, strategically plan infrastructure and public service layouts, and adapt to potential population growth and industrial shifts, ensuring that public service provision meets residents' needs.

Moreover, the most remarkable feature of big data technology is its ability to achieve precise service and management. Local governments can accurately deliver relevant policy information and service content to target groups based on the characteristics and needs of different publics, thereby addressing their potential social public service demands and enhancing the relevance and effectiveness of public services.

5. Conclusion

The advent of the big data era has injected new momentum into enhancing local governments 'social governance capabilities, driving the evolution of governance philosophies and models. This advancement enables better fulfillment of the public's diverse expectations of government services, propelling continuous progress in local government reforms. Moving forward, local governments must leverage contemporary development trends to explore innovative approaches for governance capacity enhancement. By persistently strengthening social governance and service delivery capabilities, they can better embody the principle of wholeheartedly serving the people, thereby providing robust support for socio-economic development.

Disclosure statement

The author declares no conflict of interest.

References

[1] Zhang WB, Su WL, Jiang LJ, 2025, The Impact Mechanism of New Quality Productivity on Local Governance Capacity: An Analysis of Mediating Effects Between Digital Economy and Public Expenditure Structure Optimization. Journal of Baoji University of Arts and Science (Social Sciences Edition), 45(06): 64-74.

[2] Gao YY, Wang LY, 2025, How Digital Government Empowers Local Government Governance: Evidence from the Reform of Big Data Management Institutions. Economic Issues Exploration, (12): 18-36.

[3] Yi BL, 2025, Research on the Pathways to Enhance Local Government Governance Capacity in the Context of Big Data. Inner Mongolia Statistics, (01): 46-49.