Hindawi
Mathematical Problems in Engineering
Volume 2022, Article ID 1941558, 10 pages
https://doi.org/10.1155/2022/1941558

Research Article

Local Government Governance Path Optimization Based on Multisource Big Data

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Received 27 April 2022; Revised 16 May 2022; Accepted 26 May 2022; Published 21 June 2022

Academic Editor: Zaoli Yang

With the development of Internet technology, multisource big data can collect and analyze information so as to provide people with a good vision. In the process of governance, local governments will have problems of incomplete information. With the development of big data, multisource and big data will have advanced nature. Therefore, based on multisource big data, this paper analyzes the multisource big data algorithm in detail and establishes a local government governance model based on multisource big data. Then, the proposed model is applied to the local government governance process of Beijing, Shanghai, Chongqing, and Tianjin, and the local governance situation of each city is compared and analyzed so as to provide some reference for the optimization of the local government governance path. The experimental results show that the local governance model based on multisource big data can optimize the local government governance path and point out the direction for the local government governance path.

1. Introduction

With the continuous advancement of the modernization of the national governance system and capacity, the focus of China's social governance has sunk, and local governments have increasingly become the main body of social governance. As the governance subject corresponding to the central government, local government has both particularity and universality [1]. At present, there are two main types of research on the governance capacity of local governments: one is quantitative research, that is, to establish an evaluation model according to a specific index system and use the evaluation data to quantitatively evaluate the governance capacity of local governments. The other is qualitative research, which focuses on the theoretical research on the concept and element composition of local government governance capacity. To sum up, the existing quantitative research has grasped the particularity of local government as the main body of governance and paid attention to the detection of the governance process and effectiveness [2]. Qualitative research attempts to explore the common characteristics of local government as a kind of governance subject.

With the development of China's economy and social progress, the changes in China's main social contradictions have brought great challenges to the social governance of local governments. On the one hand, the public has changed from paying attention to material life and economic development in the past to paying more attention to social development indicators such as fairness and justice, and environmental security, which puts forward new requirements for social governance. On the other hand, due to the existence of unbalanced and insufficient development, the social needs of different social groups are also different, which puts forward new challenges to the social governance of local governments [3]. How to effectively respond to the diverse and changeable social needs, implement governance and make practical results is an important issue to be considered in the work of local governments.

With the rapid economic development since the reform and opening up, the focus of China's governance reform has shifted from economic governance and government governance to comprehensive governance in the social field. A large number of new social affairs and social problems have emerged, and social governance is facing new challenges.

However, local governments are often bound by traditional ideas when performing their governance responsibilities, which is difficult to deal with new governance problems effectively. One is the leading of administrative concept [4]. In the traditional governance model, the government, as a single governance subject, often relies on administrative orders to control and manage the society. Under the influence of this kind of political concept, local governments pay more attention to government rule than social autonomy in role orientation, government regulation than public service in functional cognition, and social stability than citizen participation in the exercise of power. These factors make it difficult for local governments to truly implement the concept of building a "service-oriented" government through the transformation of "release, management, and service," which seriously restricts the full play of the social governance efficiency of local governments. The second is the weak concept of numbers. Some government departments and their staff are unwilling to accept new things and take a negative attitude towards the advent of the big data era, so they are in a passive situation in the social governance in the big data era, which is difficult to effectively deal with the governance of network public opinion and can affect social stability and damage the credibility of local governments [5, 6].

Governance tools, also known as government tools or policy tools, are the means used by the government to achieve policy objectives. There are three main types: market-oriented tools, business management technology, and socialized tools. However, in the traditional governance model, the government often regards society as the object of control. When it comes to governance work such as social justice, public security, social security, and social services, the government most often uses the way of administrative orders and carries out social governance in the way that the superior issues document instructions, and the subordinate transmits and implements them, which reflects that the governance tools are relatively single, resulting in some governance difficulties [7]. For example, the relationship between the government and the market is misplaced, so the basic role of the market in resource allocation can not be brought into full play. The integration and allocation of government-led resources are often prone to "offside," "absence," and "dislocation," resulting in policy failure, fiscal deficit, and other negative effects. In terms of public services, due to the lack of reasonable competition, coordination, and complementarity of multiple subjects, the quality of public goods is low, and the capacity of public services is insufficient [8]. Under the traditional governance model, the government is used to overcontrol society with the attitude of taking charge of everything, which frustrates the enthusiasm of the public and leads to the lack of activity of social institutions and nongovernmental organizations. In addition, with the advent of the era of big data, local governments have also clearly exposed the blind spot in the application of new technology tools when using technical means for traditional social governance and emerging network governance [9].

The governance path of local government needs to always adhere to the principle of people-centered. Taking the people as the center, adhering to being in power for the people, and practicing serving the people wholeheartedly are the fundamental purposes of the Party and the state [10]. Think about problems, make decisions and do things from the standpoint of the masses, understand the opinions, requirements, criticisms, and suggestions of the masses through various channels, truly solve people's worries, relieve people's grievances, and warm the hearts of the people, so as to make the people feel richer, happier, and more sustainable. Social governance is to pay attention to the needs of the people, the interests of the people, and the demands of the people [11]. Whether we can do a good job in employment services, livelihood security, assistance, and community governance directly related to the interests of the masses is not only an important indicator to test the effectiveness of local government social governance but also an important factor related to the popular support of local governments.

Local government should adhere to social governance in the general layout of "five in one." Social governance is an important part of social construction, including ensuring people's livelihood, improving social services, optimizing the social structure, and promoting the development of social organizations [12]. Society is the basic carrier of economic growth, political civilization, cultural prosperity, and ecological health. The development degree of social construction is directly related to the effectiveness of the construction of the other four aspects. At the same time, economic construction, political construction, cultural construction, and ecological civilization construction also restrict the effect of social construction and social governance. Therefore, when carrying out social governance, local governments must be clearly aware of the complementary and dialectical relationship between the five constructions and comprehensively coordinate and grasp the social governance work from the strategic height of the "five in one" general layout [13].

Local government should adhere to the unity of urban governance and social governance. At present, the essence of local government governance in China is social governance in the process of promoting new urbanization [14]. Urban governance has increasingly become an important part of local government social governance. With the development of new urbanization, the population of urban residents in China has increased significantly, which brings a variety of new needs such as employment, pension, education, medical treatment, and public services. It also puts forward new requirements for the capacity and quality of government public services and brings a great test to the social governance ability of local governments. Due to the continuous expansion of the urban population, urban governance has naturally become the focus of the social governance of local governments. Local governments are required to improve governance capacity, expand service capacity, and improve service quality [15]. Therefore, local governments should take the new urbanization as an opportunity to explore effective ways to improve the social governance capacity as a

whole by improving the urban governance system, exploring a more effective social governance system with urban governance as the starting point, comprehensively improving the social governance capacity of local governments, and carrying out comprehensive governance of comprehensively coordinating regions, population, economy, society, resources, and environment.

The local government should adhere to the principle of innovation. The modernization of the governance system and governance capacity is an important part of deepening the reform of party and state institutions in China. The purpose is to meet the requirements of the new era and improve and develop the socialist system with Chinese characteristics. Reform requires innovation, and reform must innovate. To effectively deal with the social problems of the era of "great changes not seen in a century," we must have the courage to innovate the governance system and improve the governance ability. Local governments should carry out all-around innovation from the aspects of governance concept, governance content, governance structure, and governance tools, drive theoretical innovation with the innovation of governance practice, form a virtuous circle, and finally achieve the goal of modernization of governance capacity and governance system [16].

With the rapid development of Internet technology, the shared resources in the network are increasing day by day, and the types of resources are also increasing. All kinds of resources are widely used in the path of local government governance. Therefore, how to efficiently transmit multisource data has become an important problem that relevant scholars need to solve [17]. In the process of traditional multisource big data prefetching, multiple nodes will output the same result, resulting in resource competition and increasing the time of data prefetching.

In data analysis, data should be collected first. The data collection content of multisource big data mainly comes from two kinds of statistical data: one is pixel statistical data and the other is vector statistical data. The multisource big data collection process is roughly divided into three parts: early data observation, medium-term data collection, and later data sorting, as shown in Figure 1. In my opinion, early data observation is a process of data screening, which can screen out some useless data information. Mid-term data collection is to collect and process useful information, which improves efficiency. Later data collation is to analyze the collected data and draw a conclusion.

Then, by monitoring the operation status of each real-time acquisition module, the alarm can be reminded by voice, e-mail, and other means in case of acquisition failure. On this interface, each acquisition module is managed, including monitoring, starting, and suspending relevant collectors and the configuration of collector parameters, and we can also remotely download the daily log of the collector [18].

After the collection and sorting of multisource big data, it is necessary to fuse and analyze the multisource big data. Multisource big data fusion is to collect all data and information obtained from investigation and analysis, conduct unified evaluation, and finally, obtain unified information,

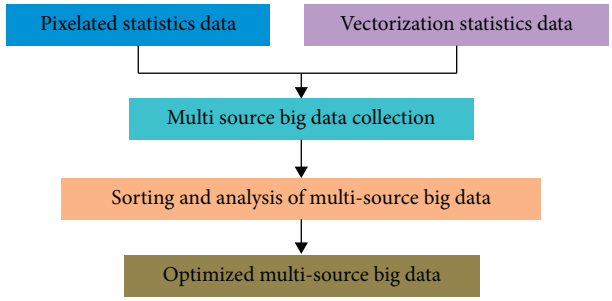

Figure 1: Frame diagram of the multisource big data acquisition process.

that is, integrate various different data information and absorb the characteristics of different data sources. And then extract unified, better, and richer data information than single data, mainly including three aspects, as shown in Figure 2.

Multisource big data preprocessing includes multisource big data extraction, feature analysis, and dimension reduction modules. Multisource big data extraction is to extract useful information for the fusion system from the collection database according to the needs of the fusion analysis service, which can reduce the amount of data calculation in subsequent work. Then, preliminarily filter out the wrong data in the original data, retain the valid data, and mark the reliability of the original data. Then, the data feature analysis is carried out for the extracted and transformed data, mainly to check the concentration degree, dispersion degree, and distribution shape of the data. Through these statistics, some important properties of the data set as a whole can be identified to ensure the data quality of data fusion [19]. For the management and evaluation of upstream and downstream data quality, formulate a data quality evaluation system and conduct data evaluation and data feature analysis according to the evaluation system. At the same time, in order to avoid the dimensionality disaster faced by the data fusion algorithm, obtain essential features, save storage space, remove useless exposure, and realize data visualization, it is necessary to reduce the dimensionality and complexity of the data, mainly including feature selection and feature extraction.

Multisource big data analysis and control includes big data deep learning and service operation control. The core of a multisource big data fusion deep learning algorithm program is the model establishment and continuous optimization of multisource data fusion. Since data fusion involves decision theory, estimation theory, probability statistics, computers, and other disciplines and technologies, the design of the algorithm should be combined with the application background. The operation management control module controls and manages the operation status of data extraction, data fusion, file deletion service, log deletion service, and other services of fusion analysis service, monitors the real-time status of system operation nodes and displays the details of fusion operation [20].

The integrated big data warehouse specifically includes the access to multisource data of intelligent perception

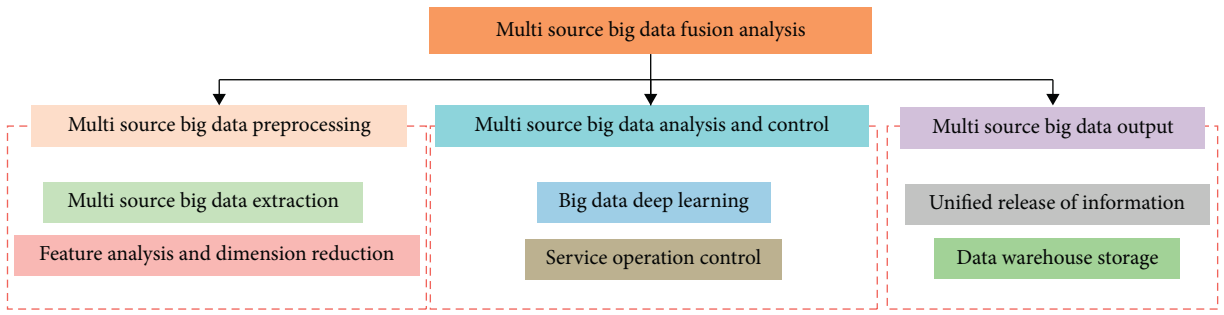

Figure 2: Flow chart of the big data fusion analysis.

systems. The information on local government governance between different cities, such as culture and education, urban planning, ecological environment, infrastructure, etc., and the data processed by the data fusion subsystem will be collected and analyzed by the storage platform, and the historical data in operation will be backed up to achieve the purpose of perfect data storage.

Li [21] analyzes the ways of local governments for the traffic management process based on multisource big data, which has good results. Chen et al. [22] use a multisource big data scheduling method based on load balancing to analyze the governance results of local governments in the process of housing construction, which greatly improves the governance efficiency of local governments in urban planning. Jia et al. [23] use a linear model to fit multisource big data, which improves the accuracy of multisource big data and has been verified in local government governance. Di Curzio et al. [24] use the graph model method, aiming at the problem of separate distribution and offset in different data sets. This paper puts forward the governance process of local government in soil, geoengineering, and environmental research based on multisource big data, and the effect is remarkable. Therefore, this paper first studies the scheduling method based on multisource big data and constructs a local government governance platform. Then, it compares and analyzes the governance capacity of local governments in different cities and puts forward the optimization method of local government governance path based on the multisource big data model. In general, based on multisource big data, this paper can provide a good way for local government governance path optimization.

2. Local Government Governance Model Based on Multisource Big Data

2.1. Building Queue Managers. Taking the queue manager as a buffer for maintenance services and dynamically adjusting the length of the buffer through the delay and rate requirements of different services plays a very important role in the scheduling of multisource data streams, including bandwidth and delay requirements. The Bellman-Ford (SPFQ) algorithm is used to build the queue manager. The multisource big data cross-source scheduling algorithm is mainly to eliminate the error of the data collection process and improve the accuracy of the algorithm. When building the queue manager to deal with the cross-source scheduling task of multisource big data, the following conditions need to be met:

$$bl_i \le bl_i^{\max},$$
$$bl_i^{\max} = \max\left\{b\omega_i^{\min} \times \tau_i^{\max}, \frac{\omega_j \times BL}{\sum_{keAQ(n)} \omega_k}\right\}, \tag{1}$$

where bl_i represents the scheduling source, $bl_i^{\max}$ represents the maximum scheduling source, $b\omega_i^{\min}$ represents the minimum bandwidth required, $\tau_i^{\max}$ represents the maximum delay of the system, BL represents the total length of the buffer, ke is the scheduling source calculation, and $AQ(n)$ represents the existing active queue set.

For the data flow without any requirements, the protection of other service data flow and network congestion control requirements shall be fully considered. The protection of business data streams is to avoid useful data streams being filtered out during the collection process, so that valid data information can be extracted. The setting of queue buffer length shall meet the following conditions:

$$bl_i \le bl_i^{\max},$$
$$bl_j^{\max} = \frac{\omega_j}{\sum_{keAQ(n)} \omega_k} \times BL, \tag{2}$$

where ω_j stands for the queue weight.

The server adopts a unified buffer management strategy; that is, different services share the same free buffer. If a packet arrives, the adaptive service probability calculator is used to calculate the average length and service probability of the packet, respectively, so as to effectively eliminate the unfairness caused by different packet lengths.

The observer uses the packet length feedback link to receive the forwarded packet length, which is mainly used to update the current average packet length. In order to reduce the complexity of the algorithm, the exponential movement can simplify the analysis of data by assuming the exponential power level of the data, so the exponential moving average is used to estimate the average length of the current packet as follows:

$$l_{j+1} = \mu \times l_j (1 - \mu) \times l_j^{curr}, \tag{3}$$

where l_j represents the estimated average length of the current packet, l_{j+1} represents the estimated value after data

update, l_j^{curr} represents the length of the forwarded packet, and μ represents the weight factor.

The single server system has the characteristics of simple operation and rapid calculation, but due to the limitations of the system, high-precision arithmetic operations cannot be performed, and its calculation accuracy is low. Therefore, considering the single server system, if N queues are set to forward packets using this node, the service weight of the ith queue is ω_i. If the length of each queue packet is the same, we have the following:

$$p_i = \begin{cases} \dfrac{\omega_i}{\sum_{j \in AQ(N)} \omega_j}, & i \in AQ(N), \\ 0, & i \notin AQ(N). \end{cases} \tag{4}$$

Because the data information carried by variable-length data packets may be inconsistent, this will lead to certain errors in the calculation process of multisource big data. For the variable-length packet network, it is modified as follows:

$$p_i = \begin{cases} \dfrac{\omega_i / l_i}{\sum_{j \in AQ(N)} \omega_j / l_i}, & i \in AQ(N), \\ 0, & i \notin AQ(N), \end{cases} \tag{5}$$

where p_i is the packet probability, and l_i represents the average length of the data packet given by the observer.

When l_i changes, the length observer refers to the service probability calculator to recalculate the service probability of each business, then:

$$p_i = \begin{cases} p_i, & i = 1, \\ p_{(i-1)} + p_i, & 2 \le i \le N, \\ 1, & i = N. \end{cases} \tag{6}$$

It can be seen from the above that the SPFQ algorithm mainly forwards packets according to the service probability of different queues. In the process of forwarding, the server obtains the corresponding random number in the random number generator so as to complete the construction of the queue manager.

2.2. Multisource Big Data Scheduling Method. According to the characteristics of the queue manager and multisource data acquisition system constructed in the previous section, it can be seen that the system will have multiple data entering the network at any time, and the data rate generated by the system will determine the overall amount of data. Suppose N_i is used to represent n data nodes in the network, where $i = 1, 2, \ldots, n$. GW_i represents the G-th local off, $i = 1, 2, \ldots, G$. The node packet arrival rate is λ_i. The sending rate of the data packet is μ_i, and the capacity of the buffer zone is C_i. The following shows the packet switching rate of each node in the network congestion state:

$$PLR_i = \frac{\beta_i - \mu_i - C_i}{\beta_i} = 1 - \frac{\mu_i + C_i}{\beta_i}. \tag{7}$$

PLR_i represents the packet switching rate in the multisource big data network and reflects the scheduling accuracy of the multisource big data algorithm. The intelligent data acquisition system should not only fully consider the accuracy and integrity of data but also ensure the consistency of data and end-to-end delay. If all single-hop transmission times are set to be the same, all are t^{tra}, and the queue length is l_i, the queue time is $(l_i - 1) \times t^{oen}$, delete other relevant influencing factors, then the time of each hop of a single packet is as follows:

$$t_i = t^{oen} + t^{oen} \times (l_i - 1) + t^{tra} = t^{oen} \times l_i + t^{tra}. \tag{8}$$

t_i represents the waiting time of a single data packet in the process of data acquisition, which represents the speed of data acquisition time. For specific nodes, t^{tra} and t^{oen} remain unchanged and only need to reduce l_i. Suppose a data packet jumps to any local area network after k, and the time from the local area network to the remote acquisition data management system is set to a fixed value t^{g2m}. When packet loss occurs, it is necessary to reconsider the additional transmission time overhead caused by data packets.

The specific calculation steps based on the multisource big data scheduling method are given below:

(1) At the initial time t, each node of the system exchanges status information, maintains its NB_i, and updates l_i.

(2) Traffic scheduling is carried out in the time period $(t, t + T)$, where t is the data processing cycle.

(3) At time $t + T$, exchange the information of nodes, update the data in combination with the generated data, and repeat step (2) at the same time to realize multisource big data cross-source scheduling.

$$(t, t + T)^{i+1} = \left(N_j\right) + l_i N B_i^{-1}. \tag{9}$$

To sum up, cross-source scheduling based on multisource big data is completed.

3. Analysis of Local Government Governance Path Based on Multisource Big Data

3.1. Governance Paths of Different Local Governments. Due to different cities, the economic development capacity and local governance paths are also different. In view of the above situation, this paper selects the local government governance paths of Beijing, Shanghai, Chongqing, and Tianjin for analysis. In the paper, multisource big data is obtained through information statistics among different cities. Figure 3 shows the statistics of governance paths of local governments in different cities based on multisource big data. It can be seen that Beijing has the best application of multisource big data, followed by Shanghai and Chongqing, and Tianjin has the lowest application rate of multisource big data. At the same time, with the increase of time, Beijing and Shanghai show the same fluctuation, while the application rate of multisource big data in Chongqing is relatively stable,

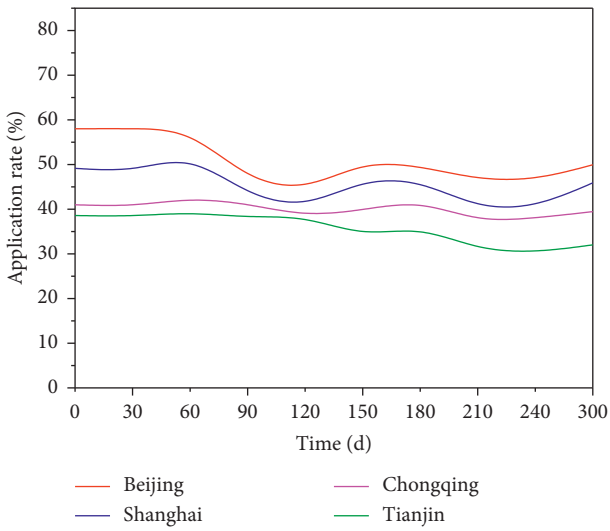

Figure 3: Statistics of governance paths of local governments in different cities based on multisource big data.

and Tianjin shows a stable application in the early stage, which decreases slightly in the later stage, but the downward trend is low. The main reason is that the economic development level of different places is different, which leads to differences in environmental governance, urban civilization governance, and political governance. Among them, the economic development capacity of Beijing and Shanghai ranks among the top two in China, so their application rate is high. The economic development level of Tianjin is the lowest, so the local government governance is facing great challenges, resulting in the reduction of the application rate based on multisource big data. Therefore, we should guide the optimization of local government governance paths according to local conditions based on multisource big data analysis.

3.2. Innovative Governance Concept of Local Government Based on Multisource Big Data. The main concepts existing in the social governance of local governments are fixed, which is manifested in the weak traditional administrative concept and digital concept. In this regard, local governments should take the initiative to innovate the governance concept, get rid of the governance concept of replacing public services with administrative orders, actively reshape and transform the concept, truly get out of the thinking pattern of "official standard" and "power standard," and move towards the thinking position of "rights centered" with "people as the center." In addition, social governance in the era of big data is moving from empirical, closed, and fragmented governance to precise, open, and holistic governance.

In principle, these changes require local governments to innovate their governance concepts, cultivate digital concepts, and deal with the new era and new problems with the concepts of "accurate governance," "open governance," and "overall governance." "Precise governance" refers to the accurate identification of problems, the accurate docking of needs, and the accurate implementation of policies. "Open governance" refers to the further openness of government power and behavior to the public, the openness and transparency of power operation, and the courage to accept the supervision of the masses. "Overall governance" means that local governments should have the courage to break through the separation of functions, departmental barriers, and cooperation difficulties caused by the division of functions, integrate resources with the spirit of the era of the interconnection of all things, create an "overall government" and "seamless government," optimize services, and improve governance capacity.

Figure 4 shows the innovative governance concept values of local governments between different cities based on multisource big data. It can be seen that the value of the innovative governance concept of local government in Beijing is the highest, up to more than 90, followed by Shanghai and Chongqing, while the value of the innovative governance concept of local government in Tianjin is low. The main reason for this phenomenon is related to the local economic level. As we all know, the economic development level of Beijing and Shanghai ranks among the top two in China. Local governments have funds to carry out government governance innovation, while the economic development of Tianjin is poor, and the innovative concept of local governments is not so strong. In addition, Beijing and Shanghai also have the best educational resources in China, which promotes local governments to learn advanced governance concepts. Therefore, the value of innovative governance concepts of local governments in these two cities is the highest. The educational resources of Chongqing and Tianjin need to be further strengthened, which also leads to the reduction of the value of local government innovation and governance. Therefore, according to the innovative governance concept of local governments in different cities, we should carry out creative innovation in the local government according to local conditions, learn from each other's strengths to make up for their weaknesses, and vigorously develop the weaknesses of the city, so as to improve the innovative concept value of the governance process of local government.

3.3. Optimizing the Governance Structure of Local Governments Based on Multisource Big Data. At present, China's society presents a highly complex reality. The traditional unitary governance model of the government is difficult to deal with complex and changeable social problems in a timely and effective manner, showing obvious governance weaknesses. Local governments should actively promote intergovernmental coordination and cross-sectoral cooperation, actively promote the participation of various nonprofit organizations, enterprises, individual citizens, and other stakeholders in governance, and establish a cooperative mechanism of collaborative governance. Only when multiple subjects participate in governance can we better realize the complementarity and integration of advantageous resources and effectively improve the effect of social governance.

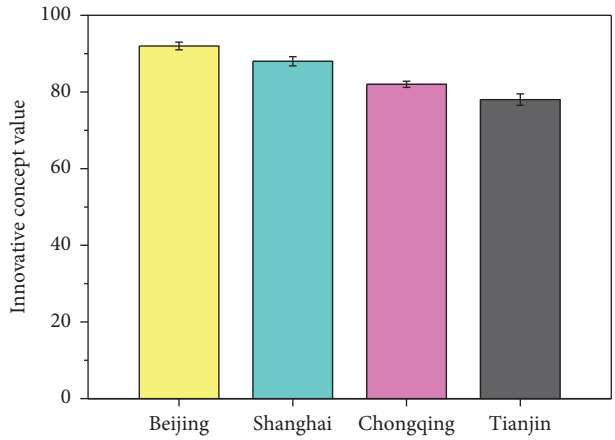

Figure 4: Innovative governance concept value of local governments between different cities based on multisource big data.

Figure 5 is an analysis of local government governance structure among different cities based on multisource big data. It can be seen that the participation of citizens and enterprises in local government management is different in different cities. Among them, for citizen participation in local government governance, Tianjin has the highest degree of citizen participation, followed by Shanghai, and Beijing has the lowest degree of citizen participation. For enterprises in local government governance, the participation of enterprises in Beijing is the highest, followed by Tianjin and Shanghai, and the participation of enterprises in Chongqing is the lowest. The main reason is that Tianjin is in the era of reform, and citizens are more consciously involved in local government governance. Beijing is the capital of China, with more politicians, and citizens' participation has been reduced to a certain extent. However, most entrepreneurs in Beijing have participated in local government governance and have the conditions to make suggestions on government governance. However, Chongqing is located inland, and entrepreneurs are not interested in local government governance, which leads to the above results. In order to better optimize the government governance path, we need to publicize the characteristics of the local government and adopt the way of online voting to learn from each other's strengths and make up for their weaknesses. At the same time, learn from the governance experience of other cities so as to optimize the governance structure of local government.

3.4. Local Governments Expand Governance Content Based on Multisource Big Data. The content of local government social governance changes with the changes of the times, but it can be roughly divided into the following five categories: political construction, economic construction, cultural construction, social construction, and ecological civilization construction. In terms of governance content, local governments should keep up with the development of the times in both types of governance work, constantly expand governance content and improve governance effectiveness. In terms of the content of traditional social governance, local governments should upgrade traditional governance as soon as possible, timely adjust the output direction of public services and public products according to the requirements of public social interests and changes in concerns, shift from the previous excessive pursuit of the single economic goal of GDP to the provision of more systematic and comprehensive public services in education, medical treatment, elderly care, and environmental protection, and strive to achieve higher quality more comprehensive services and more humanized care, track hot issues of public interest, effectively solve social contradictions, and maintain social stability. For emerging network governance, local governments should improve the network governance mechanism as soon as possible, strengthen the construction of government affairs platforms, provide convenient and efficient public service products based on mobile Internet, and realize the convenience and simplicity of many social services.

Figure 6 shows the proportion of local government governance content among different cities based on multisource big data. It can be seen that in the process of governance, the Beijing municipal government pays more attention to political construction, followed by social construction, and the proportion of cultural construction is relatively low. In the process of governance, the Shanghai municipal government attaches importance to economic construction, and the proportion of cultural construction and ecological civilization construction is the lowest. Chongqing municipal government pays more attention to the construction of ecological civilization in the process of governance, and the proportion of political construction is the lowest. In the process of government governance, Tianjin pays attention to economic and social construction, followed by political construction, cultural construction, and ecological civilization construction. The main reason for the above phenomenon may correspond to the development level of local political, economic, social, cultural, and ecological civilization. Beijing has strong political factors, so it pays attention to political construction in the process of government governance. The economic level of Shanghai is the most developed, and the local government focuses on economic construction in the process of governance.

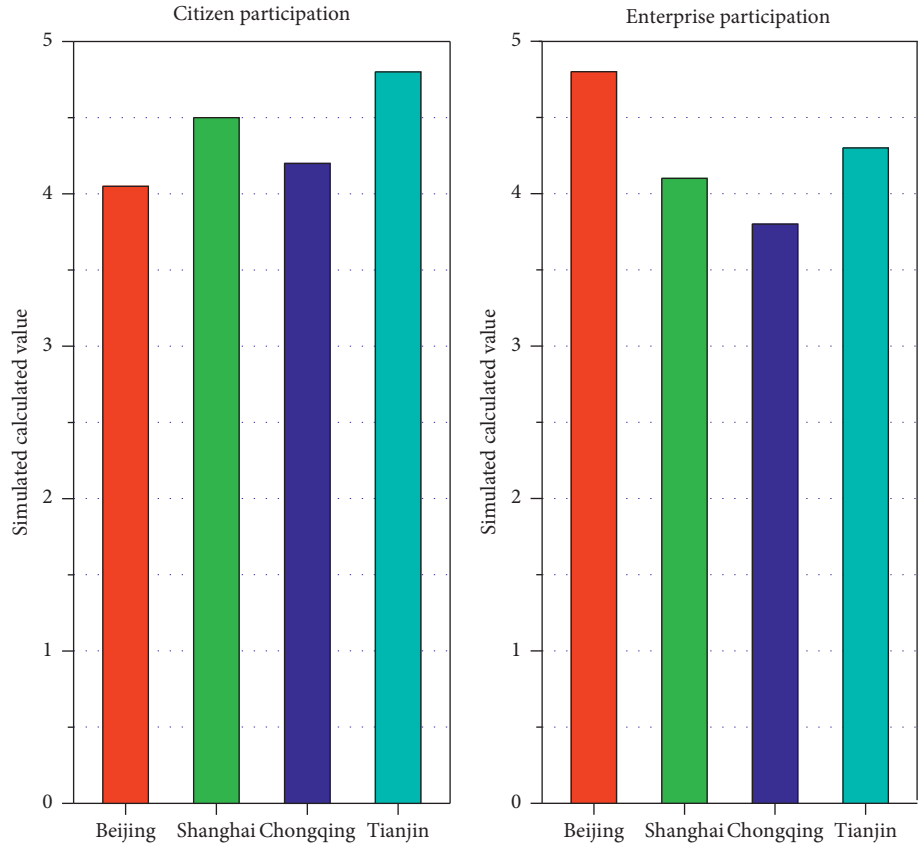

Figure 5: Analysis of local government governance structure among different cities based on multisource big data.

Chongqing's economy and Tianjin's economic capacity are also relatively good, so the local government also focuses on economic construction. Therefore, in the process of local government governance, governance should be carried out according to local conditions and local characteristics.

3.5. Innovative Governance Tools for Local Governments Based on Multisource Big Data. At present, China's local governments need to make good use of two tools for social governance: one is to make good use of "smart tools" such as big data, 5 g network, blockchain technology, and artificial intelligence. For example, at the beginning of COVID-19, China's government could take the lead in formulating scientific and rational epidemic prevention policies, rationally allocating medical resources, optimizing the allocation of materials, and making great contributions to the "smart tools" such as big data and blockchains. Data support based on cloud computing, such as health code and epidemic prevention itinerary code, is an important means to effectively curb the further spread of the epidemic in China. The practice has proved that relying on scientific and technological empowerment to break through the bottleneck of traditional governance is an effective way. Second, we should make good use of the tools of the rule of law." The key to the improvement of national governance capacity depends on the system." Social governance in the era of the rule of law should make full use of legal tools and promote the modernization and transformation of national governance through the construction of the rule of law. Innovation is the driving force for the continuous development of science and technology and the country. With good innovation ability, we can achieve unexpected results. In the process of local government governance, innovation can remove the bureaucratic atmosphere of government officials, develop their service concept, promote social development and ensure people's happy life. Local governments should improve the governance mechanism, improve their ability to handle affairs and govern according to law, clarify their rights and responsibilities, and combine morality and law.

Figure 7 shows the implementation rate of innovative governance tools of local governments among different cities based on multisource big data. It can be seen that with the increase of time, the implementation rate of innovative governance tools of local governments among different cities based on multisource big data shows a trend of increasing first and then stabilizing. Among them, the realization rate of innovative governance tools of the Beijing municipal government is the highest. When the time reaches 270 days, the realization rate is as high as more than 50%. Shanghai takes second place, but the realization rate of innovative governance tools of the Shanghai municipal government can also reach about 45%. The realization rate of innovative governance tools of the Chongqing municipal government is not different from that of Tianjin, and the realization rate reaches more than 30% after 270 days. The main reason is that

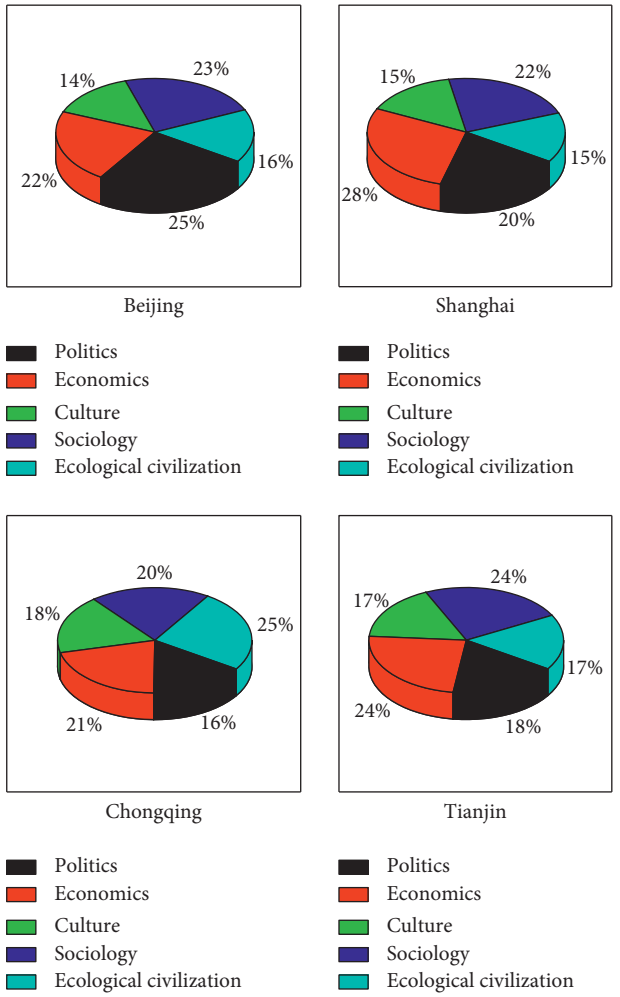

Figure 6: Proportion of local government governance among different cities based on multisource big data.

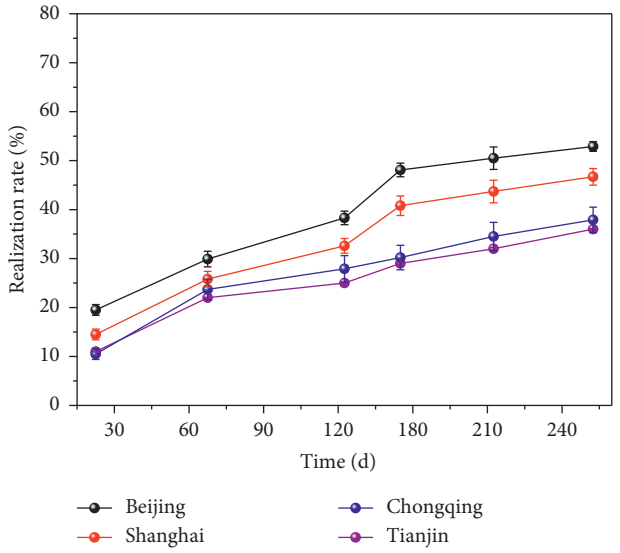

Figure 7: Realization rate of innovative governance tools of local governments between different cities based on multisource big data.

the scientific and technological level of Beijing is high, the innovation ability of local governments is strong, and the education level of Shanghai is second only to Beijing. Therefore, the innovation governance of local governments in Beijing and Shanghai is better, while the scientific and technological level of Chongqing and Tianjin is relatively weak, so the innovation governance level of local governments is also low.

4. Conclusion

With the development of big data technology, it has a wide range of applications. Based on multisource big data, this paper establishes a local government governance model based on multisource big data. The optimization method of local government governance path based on multisource big data is studied in detail. Then, it is applied to the process of local government governance in Beijing, Shanghai, Chongqing, and Tianjin, which compares the paths of local government governance among cities in detail, and puts forward the corresponding countermeasures. The experimental results show that the multisource big data model can optimize the local government governance path and promote the optimization of local government governance path so as to provide a good method for the optimization of local government governance path.

Data Availability

The data used to support the findings of this study are available from the author upon request.

Conflicts of Interest

The author declares that he has no conflicts of interest or personal relationships that could have appeared to influence the work reported in this paper.

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