Exploring the Path of Realizing Community Governance Modernization Under the Digital Government

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Abstract. The modernization of community governance refers to a new model of community governance where the new generation of information technology such as Internet, big data, Internet of Things, cloud computing and artificial intelligence are applied into the community governance system. With the development of science and information technology, the existing community governance can no more adapt to the needs of social development. Starting from the background of digital government, this paper intends to propose paths of realizing modern community governance through the analyzing the necessity of smart community governance and the problems of the existing community governance.

Keywords: Community Governance · Digital Government · Smart City

1 Introduction

As the Internet of Things, cloud computing, mobile Internet, artificial intelligence, chain blocks have grow dramatically, the community governance in the new era is faced with new challenges. The 19th National Congress of the CPC proposed to improve social management socialization, legalization, intelligent and professional level, which will widely apply big data into social governance. In an intelligent era characterized by big data, cloud computing and artificial intelligence, the modernization of social governance aims to establish a clear and orderly governance model, a dynamically adapted regulations system, a precise and efficient governance mechanism, and an inclusive and shared governance pattern. It's not only a necessary demand and development trend for intelligent community construction and it is also the key to solve the present community governance problems by keeping up with the developing requirements, timely grasping the new technology, updating ideas and thoughts, less depending on traditional way, setting up the data thinking in the community governance and building up community big data with big data technology [1]. Modernization of community governance refers to a new model of community governance where the new generation of information technology such as Internet, big data, Internet of Things, cloud computing and artificial intelligence are

applied into the community governance system. Compared to other developed countries, China's new generation of information technology in the theory is still under developing and China's exploration to the modernization of urban community governance is not as early as other developed countries. In 2008, IBM in the United States had put forward the concept of "Smart Planet" for the first time, and proposed to the federal government to construct a new generation of intelligent information infrastructure in h2009; Singapore is one of the earliest countries to bring out the strategy of "Smart Nation". As early as 2006, Singapore had started the "Smart Nation 2015" Initiative [2].

The government plays an irreplaceable role in community construction. However, the existing community governance in China has problems such as the imbalance of main body structure and the lag of technology development, which have seriously affected the process of intelligentializing social governance in China. Therefore, under the background of digital government, this paper intends to explore ways to modernize community governance in China, in order to change the traditional model of community governance, improve the efficiency of community governance, and improve the life experience of community residents. By adopting the method of literature research, reading, collecting and sorting out the relevant journal literature, national policies, news reports and other electronic materials, this paper sums up the current situation of China's community governance and existing deficiencies; Meanwhile, through the simulation method, this paper analyzes the existing problems and the necessity of community governance in China, puts forward the methods to improve the construction of smart community in China and explains it by constructing a model.

2 The Necessity of Smart Community Governance

2.1 Promotion of National Policies and Principles

In recent years, China has attached great importance to the construction of smart city. Hence, Communist party of China and the government successively put forward series of policies and regulations to construct and develop smart city. For instance, in 2021, according to the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Outline of the Vision for 2035, in the construction of smart cities, digitalization should be used to stimulate both urban and rural development and innovation in governance mode, comprehensively improving the operation efficiency and livability. New types of smart cities will be promoted on a tiered basis, sensing facilities of Internet of Things and communication systems will be taken as public infrastructure to be constructed unified, municipal public facilities and other buildings will be reconstructed with intelligence and Internet of Things. As an important part of smart city construction, community governance is an effective contact and important carrier to construct smart city. Therefore, in comprehensive community governance, it's necessary to apply data thinking, Internet technology and intelligent platform to satisfy residents' needs for a better life in the new era. The government should also speed up building up digital government and drive the transformation of production mode, life style and governance mode as a whole through digital transformation and make community governance more intelligent and more digitalized [3].

2.2 The Existing Community Governance Model Has Not Adapted to the Society Nowadays

China is a developing country with a population of 1.4 billion. As there are increasingly social problems such as population aging, population loss population, unemployment; environmental problems such as environmental pollution and ecological destruction; traffic problems such as traffic congestion, parking problems, pedestrians, it's harder and hard to govern communities. The existing community management model can no longer adapt to the requirements of today's social governance [4]. Take the traffic problems caused by urban traffic congestion as an example. With the rapid development of China's economy and the improvement of people's consumption level, more and more families have cars. According to the data of the Traffic Management Bureau of the Ministry of Public Security, the car ownership in China will reach 281 million in 2020. It means that one out of every five people owns a car [5]. Although owning a car can bring convenience to every family, problems such as traffic jam, destruction of transportation infrastructure and deterioration of ecological environment caused by excessive vehicles also need to be dealt with. In the process of constructing smart community, intelligent transportation system can be built to effectively alleviate these problems. For example, the real-time traffic APP of the city can be developed. For car drivers, they can check on the traffic conditions of the city on the APP so that they can choose the appropriate travel time and take staggered shifts. For community administrators, they can also control the traffic information of all sections of the city in real time through the APP, so as to allocate corresponding police forces to deal with traffic problems and improve the efficiency and accuracy of community governance.

2.3 Examples of Western Countries Constructing Smart Cities

Since the third information technology revolution in the 1970s and 1980s, information technology has developed rapidly. In recent years, Internet + Ideas, big data and cloud computing have also been widely applied to all fields of society. Many cities in Western countries have seized the opportunity and started the construction of smart communities earlier. In 2009, New York launched the "City Interconnected" Action, applying information technology to the urban construction management, e-government service application and so on. For instance, New York's smart traffic service system can monitor the city's traffic, provides feasible route for motorists to avoid traffic jam, so as to ease the congestion of the city. In addition, New York City government consolidated public data on one platform, and updated the government E-mail system for the public to get exposed to relevant information and inquiries. The smart city construction of France's "Greater Paris Initiative" was mainly reflected in the application of urban management and public service. Through the construction of urban cadastre and underground pipeline GIS, the cleanliness degree of urban underground pipeline is monitored, and based on this, an intelligent system of Paris underground drainage pipe network is constructed. In terms of public service application, as early as 2007, Paris had successively launched the "Travel By Bicycle" Campaign and promoted "electric vehicles" based on electronic information technology, intelligently managing the urban transportation system and motivating the environmental and sustainable development of the city [6]. Although

China has started to explore the smart city construction in cities of rapidly developed, such as Hangzhou and Shanghai. However, generally, China's construction has started late and developed slowly, so it is urgent to learn from the other countries' construction experience to accelerate the pace of construction.

3 The Existing Problems of Traditional Community Governance

3.1 Low Degree of Resources and Business Datafication and Lack of Sharing

Traditional community governance, the government and individuals in the community residents, most of the market main body using the print data or bulletin board notice to release and transfer of the announcement, this kind of mode of information transmission speed is slow, low degree of information sharing, information transmission cost is high, and there is message is sent, difficult to change. The limitation of information dissemination causes the subjects in the community to "get things done hard", "get things done slowly" and "run back and forth", which greatly reduces the efficiency of community governance.

In addition, digital community governance business degree is not high also performance in information sharing mechanism is not perfect, although existing a lot of community governance adopts the model of the Internet, will be part of the data through into electronic files stored on your computer, but there are still most of the information is not true of city community sharing, the most common is on site to consult the data information, Will display data is not open to the public or login pay to view, and has set up web sites and data collection part is not comprehensive and updated in a timely manner, the problem of inaccurate data [7], common in the two government official documents the same indicators have different data content, this is undoubtedly brings want to participate in the main body of community governance, It will not only reduce their enthusiasm to participate in the community, but also cause a waste of information resources.

3.2 Lack of Community Governance Talents of High-Quality

To promote the modernization of community governance, we need not only talents with professional knowledge of law, economy and management, but also talents with knowledge of information technology and Internet thinking. However, for the moment, most of the administrative members of most communities in China graduated from majors of management, such as Executive Management and Public Administration, and some of the community administrators in under developing areas are even retired cadres and graduates of secondary school [8]. Nowadays, mastering interdisciplinary knowledge has become a must-have to be a digital talent, community governance needs talents of high quality with both science and information technology and management ability. However, at present, the talent cultivation is uneven, namely management talents lay emphasis on the theory over the practice and operation ability is weak; Although digital talents focus on more the practice, they do not know much about the theories of management [9]. Generally speaking, community governance is short of high-end

talents in the research and development of big data, Internet of Things, and artificial intelligence. Moreover, many technical personnel engaged in information management in towns and streets are unstable and not professional enough. As one of the main bodies of community governance, high quality talents of community governance are not only the operators of smart community service platform, but also the managers and maintainers who ensure high quality of community governance. The loss of high quality talents has already had negative effects on the service quality and development of smart community. Hence, it's urgent to speed up training and cultivating high quality talents of management to construct smart community.

3.3   The Position of Governance Subject is Unclear and Lack of Community Participation

At present, the mechanism of community governance has not yet fully come into play, and the characteristics of smart community collaborative governance have not been fully reflected. Digital government modernization system has not been completed in our country, part of government officials have not yet pay enough attention on multi-subject participation in community governance and haven't realized the urgency and importance of other governance subjects' participation, as a result of which, the participation rate of multiple subjects in digital government governance is quite, the awareness of rational participation and active participation is weak and multiple participation mechanism fails to fully come into play [10]. Taking residents' participation as an example, most residents in China do not have strong willingness to participate in community governance. Lacking the awareness of being one of the main bodies in governing community, they haven't realized the privileges they own and the obligations they are supposed to shoulder in the community and think it's what the government officials and managers should do to make important decisions and construct community. In addition to residents' personal reasons, residents lacking easy access to contact the government and give their opinions, which adversely affects the initiative of residents who would like to participate in community governance due to the complex procedures of giving feedback or the tardy response of the government. And many residents still persist that "the government should do everything". Therefore, in today's community governance empowered by big data, the government should build an intelligent community participation platform to stimulate the participation vitality of community subjects.

4   How to Promote the Transformation of Modern Community Governance

First, the government should introduce big data thinking, transferring from the traditional manual management to the Internet of Things and big data and promoting digital community governance. Meanwhile, establish a government business sharing platform by modern science and technology such as big data and artificial intelligence. Update information real time, enhance the digitization and refinement of government business and information and make it realize that the residents in community can handle their government affairs at home. For example, design an app for handling affairs, from which
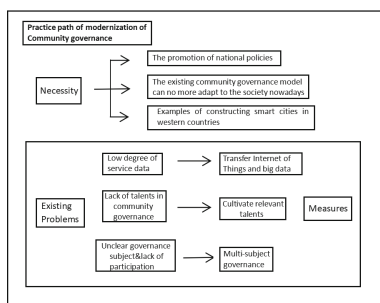
Fig. 1. Paths of Realizing Modernization of Community Governance

government announcements can be issued, and community subjects can feedback their opinions on the app when receiving the announcements. In this way, the government can understand the needs of community subjects, so as to change the management mode or provide necessary services to meet the requirements of community subjects. Secondly, the government should promote the openness of data information, taking openness as the norm and non-disclosure and non-openness as the exception. For non-confidential community management information, all departments can set access to the public according to relevant systems, which is conducive to establish an intelligent sharing mechanism for urban community governance [11] (Fig. 1).

Secondly, the government should massively introduce high-quality talents of big data, artificial intelligence, information technology and other professionals to cultivate a team of high quality talents in community governance. In this regard, China can learn from Singapore to launch scholarships and other programs to attract talents studying artificial intelligence and Internet of Things technology. In China, to attract overseas talents, Hangzhou has set up the Global Youth Talent Center, where all overseas young people coming to Hangzhou can enjoy equal services [9]. General Secretary Xi Jinping has said for many times that talents are the most precious resource, and the government should create a better environment to attract more excellent overseas talents. In addition, the government shall also improve the talent training mechanism in the community, through targeted training for community management staff about big data, information or management skills, improve staff's skills of operating and managing the intelligent terminal and community services sharing platform, as a result of which, to establish an incentive mechanism and competition mechanism conducive to the competitive growth and to train more talents of cross-field and high-quality to provide better service for community governance.

Finally, the government should play a coordinating role in community governance, leading the market, residents, enterprises and other parties to actively participate in community governance and play their influential roles respectively in smart community governance. The government can further strengthen the macroeconomic regulation and control of the community, providing necessary economic and policy to support the constructing the smart community [12] and promoting the financing of intelligent community construction. PPP model is the public management mode that the governments in

many areas have adopted in recent years, in which, the government and private organizations clarify the rights and obligations of both sides by signing an agreement and provide public services and products. Through this mode, enterprises' participation in community governance can be strengthened, in the meantime, the evaluation mechanism and incentive mechanism of community participation should be further improved to make community governance more standardized and institutionalized. Community residents should be actively encouraged to give suggestions and for community governance, so as to set access for government to communicate with the outside world, realize two-way interaction between residents and the government and gradually transform the role of the government from "leading" to "serving", giving full play to the various main bodies of community governance in managing community.

5   Conclusion

As the "last mile" of social governance, to urbanize community governance is an indispensable condition to construct the smart city. Under the background of digital government, this article has expounded the necessity of establishing smart community governance from the perspective of national policies, social reality and overseas experience, clarifying the existing problems of community governance in China and providing targeted paths of urbanizing community governance. Being instructed by the big data thinking and with the joint effort of governments and multi subjects, it can be expected to urbanize community governance, ensure and protect the vital interests of Chinese people and establish a harmonious society.

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