Research on Modernization of Rural Governance Capacity in the Age of Big Data

Jinqiong Wang

Marxist College (Law School), Tarim University, Aral, 843300 Xinjiang, China

409426643@qq.com

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Abstract: The level of modernization of rural governance capacity has also become an important standard to measure the level of modernization of state governance, and it is also the inherent requirement of modernization of state governance. At the same time, it also shows that upgrading the modernization of rural governance capacity is an important decision to realize rural revitalization. The application of big data technology has become an important way to promote the modernization of rural ecological governance. The author intends to take the modernization research of rural governance capacity in the era of big data as the breakthrough point, and discuss the practical dilemma and feasible path of the application of big data technology in rural governance. In the era of big data, rural party organizations should, on the basis of building the mutual trust relationship between villagers and cadres, sort out the value-added and distribution of rural interests, build an application platform of rural environmental big data, establish an open system of rural environmental information data, and speed up the cultivation of rural environmental governance big data talents.

1. Introduction

Big data, as a revolutionary technology model in the Internet age, has achieved remarkable results in the political, economic and other fields all over the world. At the same time, the arrival of the era of big data also brings opportunities and challenges to the existing governance model of our government[1]. Therefore, the use of big data technology has become an important way to promote the modernization of rural ecological governance. However, at present, China's rural ecological governance still faces some practical problems, such as the indifference of the concept of rural ecological community, the loose organization of trust, the blockage of symmetrical information, and the paradox of technical supervision.

In the era of big data, whether we can improve our social governance ability, promote the socialization, legalization, refinement and cooperation of rural governance, and promote the benign interactive situation of government governance, social cooperation and villagers' autonomy is a question directly related to the Party's consolidation of legitimate resources for rural governance[2-3]. The author intends to take the modernization research of rural governance capacity in the era of big data as the breakthrough point, and discuss the practical dilemma and feasible path of the application of big data technology in rural governance.

2. Modernization of Rural Governance Capacity

The main body of rural governance is diverse, whether the main body's own ability can meet the needs of modernization development, and whether the main body can form an effective cooperation mechanism through effective cooperation and interaction, which is also the concentrated embodiment of modernization ability. Modernization of rural ability to govern by virtue. Guide villagers' ideas and values to actively adapt to the values of modern society, build a civilized rural fashion that meets the needs of the spirit of the times, and promote the progress of rural spiritual civilization. Rural governance in national governance is a part that can't be ignored, and it is also

the core issue. For the modernization of national governance, if the modernization of rural governance can't be achieved, the task of national modernization can only be empty talk.

The level of modernization of rural governance capacity has also become an important standard to measure the level of modernization of state governance, and it is also the inherent requirement of modernization of state governance. At the same time, it also shows that upgrading the modernization of rural governance capacity is an important decision to realize rural revitalization[4].

Big data will inevitably bring about changes in people's lifestyles and fundamental changes in the social environment structure. When big data enters the governance field in the process of modernization, it will inevitably bring about the transformation of governance concepts and governance methods for the realization of the goal of rural governance. Through big data technology, we can analyze and process massive data such as farmers' production and life, migrant workers' situation, rural cooperative medical care, rural social security, farmers' education level, rural public security and village affairs of village committees, etc. The rural governance efficiency is relatively high and the cost is relatively low, thus forming such a situation: let the vitality of knowledge, technology, labor, capital, management, data and other essential resources generate and create wealth[5].

Modernization of rural governance capacity refers to giving full play to the function of rural governance system, making use of and serving these elements, transforming its mechanism into a kind of capacity, improving rural governance capacity, and making it possible for rural "good governance"[6-7].

3. The Dilemma of Rural Governance

3.1 There is a Lack of Good Intersubjectivity among Governance Subjects

Intersubjectivity lies in trying to overcome the modern philosophical thought and thinking mode of dichotomy between subject and object, emphasizing the dynamic process of dialogue, communication, integration and continuous generation between subjects and between subjects and objects. At present, as far as the landing and popularization of villages are concerned, it mainly relies on the government's promotion, index drive and incentive mechanism.

In the actual situation, the contact between cadres and the masses is still not close enough. We found that although the information on the platform has a certain amount of replies, we will find that most of the replies are those people who are fixed, mainly party member in the village. Some of the questions reflected by the villagers have not been answered, or some of them have been answered without specific solutions. It needs multi-dimensional interaction from grassroots cadres, administrators, the masses and technology suppliers, to effectively solve the problems existing in rural areas, and to tap the village's characteristic resources, so as to really play a lasting role in promoting the modernization of rural areas.

3.2 Modern Governance Concept is Backward

Due to the lack of the guidance of ideological and political work in rural governance, we should publicize the correct value orientation and standardize moral construction. In daily work, the ideological work of cadres and the masses is often neglected, and the phenomenon that personal interests are paramount will appear, and the simple feelings between people will be eroded by "money" and "utility".

Every household's management mode and private concept can be seen in every aspect of daily life, which not only weakens the interdependence among villagers, but also has a counter-effect on social stability[8]. We can find that when the individual interests are greater than the collective interests, there is no sense of mutual help and tolerance, but everything is only for the sake of individuals, and it is even more impossible to share interests and share responsibilities, and the development of villages cannot continue to advance, which is ultimately not conducive to strengthening the rural community.

3.3 The Data Process Lags Behind

Under the background of big data, in order to realize the modernization of rural governance, it is necessary to analyze and judge the data shared by grass-roots governments, functional departments and rural social organizations, and find out the hidden regularity behind big data. However, in the reality of rural governance, the opening process of big data is lagging behind, making it difficult for other subjects of rural governance to participate[9].

The number of rural Internet users in China has reached 284 million, and the Internet penetration rate in rural areas is 57.6%, 1.7 percentage points higher than that in December 2020. The difference in Internet penetration rate between urban and rural areas is 0.2 percentage points lower than that in December 2020 (Figure 1).
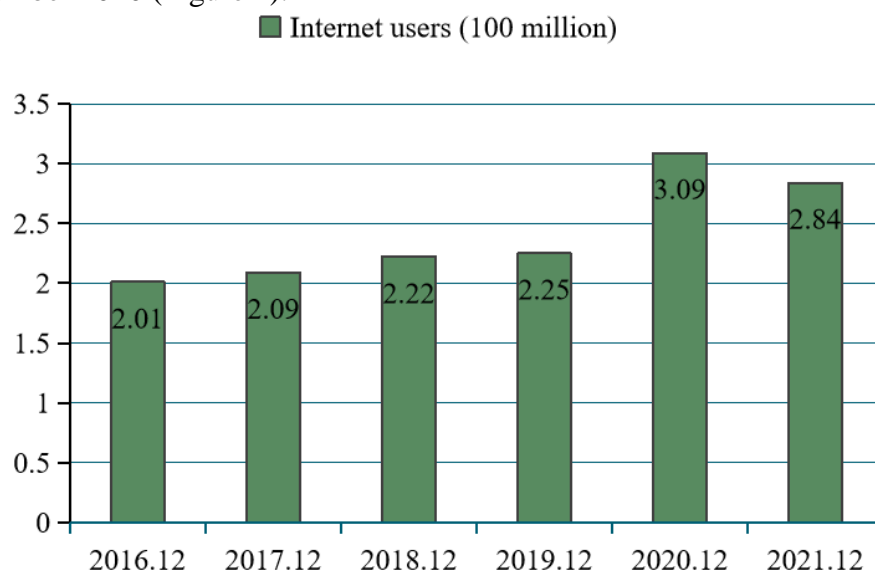

Fig.1 Statistics of Rural Netizens in China from 2016 to 2021

The era of big data requires the formation of an open governance structure, and the public has the right to know data that does not involve state secrets. Therefore, it is an indispensable and important means to share information and equip them with technology under the condition of big data. In the era of big data, governance transition and its development should not only share data and information among all governance subjects, but also ensure information security, control governance risks within a certain range, and avoid the interest harm of rural governance subjects caused by information leakage.

The wide application of big data technology is inseparable from the support of the Internet. At present, with the deepening of national informatization and poverty alleviation, the construction of information infrastructure in rural areas and poverty-stricken areas has been further strengthened. The weak information infrastructure in rural areas has a negative impact on the production and collection of big data, which further affects the follow-up data analysis and the application of big data in rural governance.

4. Big Data Embedded in the Path of Modernization of Rural Governance Capacity

4.1 Building a Smart Countryside

In the era of big data, digital new countryside has already become the main trend of rural governance. Therefore, local governance departments have begun to improve the construction of digital supporting facilities, laying the foundation for the subsequent rural revitalization and modernization. In terms of agricultural product sales, optical fiber network can provide strong support for online sales activities and help farmers improve their agricultural production revenue.

In this process, the integrated cloud conference system, as a new digital government office system, has applied big data technology, cloud computing, Internet and other technologies, enabling

government departments to communicate efficiently and remotely. Figure 2 shows the smart rural government service platform.
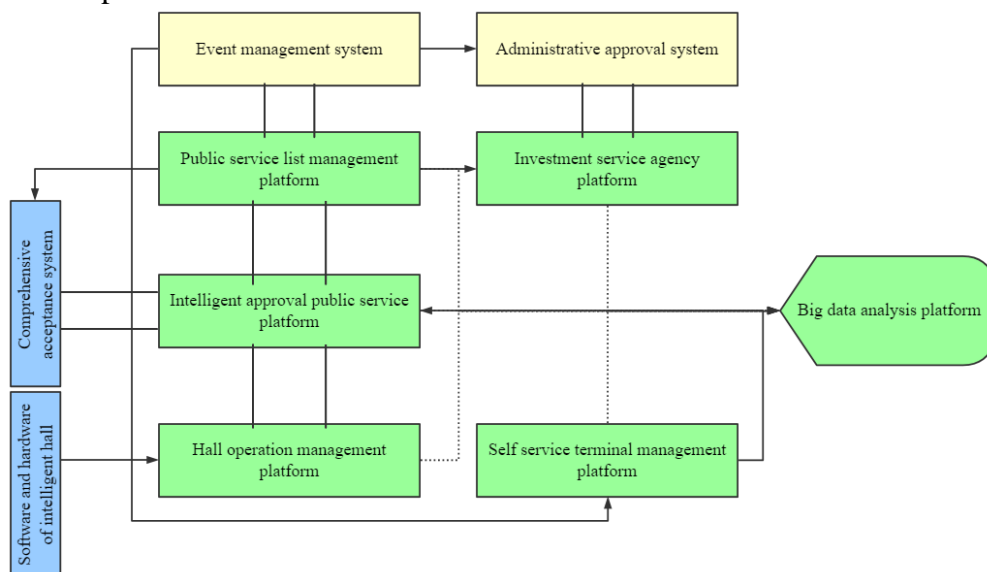

Fig.2 Smart Rural Government Service Platform

Around "internet plus", it has promoted the development of rural modernization and intelligence. In this process, big data, as the basic technology to support e-commerce operation, takes on the heavy responsibility of linking up the production and marketing of agricultural products and upgrading and transforming agriculture. In the construction of smart countryside, smart agriculture is the key point of the construction work.

At present, local government departments have taken production and sales as the main breakthrough point to control this key point, in order to achieve high quality and high price to drive agricultural production. In terms of sales, based on big data technology, government departments are gradually improving the online sales service system of agricultural products in counties and townships, promoting the development of smart agriculture and realizing rural governance.

4.2 Cultivate Mature Rural Governance Subjects

Under the strong impact of science, technology and information, rural governance will inevitably join the tide of modernization. However, in the process of governance, rural subjects often show weak participation awareness and ability. To change the inherent thought of rural subjects, it is necessary to strengthen the education and publicity of rural legal system and improve the awareness of rural subjects' rights. Only by making villagers understand their own rights and rights can villagers' awareness of participation be aroused. With the improvement of villagers' awareness of participation, a soft governance atmosphere of good governance in rural society will be further formed, and the broad participation of rural subjects will be expanded, which will react to rural governance and improve the level and quality of governance[10].

In this case, the function of "internet plus" will be greatly reduced. In order to avoid this phenomenon, strengthening the education of Internet knowledge of rural subjects has become another task that needs to be paid attention to. Township governments or village committees can carry out Internet education for the masses through various forms. For the elderly and the disabled, special personnel should be arranged to teach them to use the Internet to participate in rural governance, and the follow-up education content should not be updated regularly. In the new "internet plus" rural governance model, a rural subject cannot be left behind.

4.3 Strengthen the Training of Professional Talents

In response to the shortage of talents in the era of big data, we should constantly strengthen the conceptual understanding of the importance of big data. Qualified data innovation talents are comprehensive human resources, which need systematic and complete development planning and

training methods. Build a team of big data talents, and strengthen the talent guarantee of multi-collaboration and co-governance. Optimize the talent introduction policy, build a multi-level big data talent selection and training system, and build a multi-level big data talent team. Through the industry to cultivate rural big data talents, attract more outstanding young talents to invest in rural revitalization, solve the problem of brain drain, and break the talent bottleneck of embedding big data into rural governance.

4.4 Transforming Governance Structure and Realizing Modernization of Rural Governance System

Under the background of big data, it is necessary to change the rural governance structure in a timely manner and build a multi-agent cooperation and co-governance model that meets the needs of the era of big data. This sharing of diversified subjects also happens to form the cooperation and co-governance of the government, social organizations and farmers. Openness, participation and interaction are the most basic characteristics of the era of big data, and this characteristic is highly compatible with diversified governance subjects. By combing the governance process and information sharing of big data as the core, we can dynamically analyze and track the data we have, so as to achieve targeted governance and response, and improve the scientific nature of rural governance. Focusing on the mining, development and application of big data, we will establish a modern governance system of rural governance structure with the goal of improving rural governance performance.

The use of science and technology is irreversible, and the use of science and technology means the inevitable follow-up update and upgrade. When using science and technology to change the face of governance, we should also beware of being ruled by technology. Science and technology have achieved dreams may come, but the goal of governance needs the design of human wisdom, so behind science and technology is the support of talents. A large amount of data involves personal privacy and corporate information. Ensuring that information is respected and protected as it should is the prerequisite for implementing modern governance measures. While enjoying convenience, we should do a good job in data supervision and data protection to avoid the dilemma of "more governance, more trouble".

The government should give full play to the role of guide, take relevant enterprises as the core, and take public participation as the bridge, so as to create a unified big data application platform for rural environmental governance, which includes wired networks, mobile networks and various social networks. Provide people with more diverse, fast and convenient environmental public services. Therefore, strengthening the cooperation between government and enterprises and contracting some businesses to enterprises is an important way to achieve efficient governance of rural environment and promote the construction of big data application platform in rural environment.

5. Conclusions

At present, China's rural ecological governance is faced with some practical problems, such as the indifference of the concept of rural ecological community, the loose organization of trust, the blockage of symmetrical information, and the paradox of technical supervision. Modernization of rural ability to govern by virtue. Guide the villagers' ideas and values to actively adapt to the values of modern society, build a civilized rural fashion that meets the needs of the spirit of the times, and promote the progress of rural spiritual civilization. In the era of big data, digital new countryside has long been the main trend of rural governance, and the use of science and technology is irreversible, which means the inevitable follow-up update and upgrade. When using science and technology to change governance, we should also beware of being ruled by technology. In the future, we should give full play to the power of modern science and technology, introduce big data technology into it, promote the comprehensive innovation of governance methods, and enhance the synergy of governance subjects, the scientificity of process decisions, and the effectiveness of problem response.

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