Research on the High-quality Development Path of community governance Driven by Big Data in Shandong Province

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Abstract. As an important part of Shandong's social development strategy, community governance was an important symbol to measure the level of economic development of a province. Promoting the development and expansion of community governance had become an important goal and key driving force for the transformation of the driving force of Shandong's economic development. With the transformation of data into a valuable resource, the concept of digitalization came into being and had been applied to many fields. The value of big data would had a revolutionary impact on the development of modern service industry, which also put forward higher requirements for community governance. With the development of digital city and smart city in our province, community governance in our province had also initially embarked on the fast lane of intelligent development, and the application of data in community governance had been widely played.

Keywords: Big data; community governance; High quality development.

1. Introduction

In the Report on the Work of the Government of the first session of the 14th National People's Congress of Shandong Province, the term "high-quality development" was mentioned 26 times, involving many important areas related to the national economy and the people's livelihood. Establish "high-quality development" as the main tone, compass, and driving force for Shandong's national economic and social development. Shandong's economy was currently in a critical period of transformation between old and new driving forces, and transforming its development mode and optimizing its industrial structure was the general trend. As an important part of Shandong's social development strategy, Community Governance was an important symbol to measure the level of economic development of a province. Promoting the development and expansion of Community Governance had become an important goal and key driving force for the transformation of the driving force of Shandong's economic development. The development of industries was often closely related to technological progress. Nowadays, the massive amount of data and information had changed people's way of life, resulting in a grid and flat social pattern. As data was transformed into a valuable resource, the concept of digitalization had emerged and was inherently applied to many fields. The value of big data would have a revolutionary impact on the development of modern service industries, This also put forward higher requirements for Community Governance. With the development of digital city and smart city in our province, Community Governance in our province had also initially embarked on the fast lane of intelligent development, and the application of data in Community Governance had been widely used. However, at present, the unified data collection, storage, and processing platform had not been mature, the data sharing and sharing mechanism had not been established, and the application development was not in-depth enough, These problems still restrict the in-depth application of big data in Community Governance.

With the transition from traditional society to digital society, and the transition from traditional cities to smart cities, the foundation of management technology based on digital technology has changed, which had become an important factor affecting community development, and had also raised new challenges and demands for the high-quality development of Community Governance. Adhering to the basic attributes of digitalization and Community Governance, we used big data theory and industrial structure theory to explore the meaning and characteristics of high-quality development value of Community Governance, and expanded the theoretical perspective of

Community Governance research. Build a high-quality development system of Community Governance, evaluate the high-quality development level of Community Governance in our province, explore regional differences, and provide theoretical guidance for the decision-making of regional balanced development of Community Governance.

Based on the practical difficulties of high-quality transformation of current Community Governance, proposed coordination countermeasures, and test the applicability of theoretical analysis. Deeply explored the deep-seated reasons for the unbalanced regional development of Community Governance, and improved the scientific nature of Community Governance development decisions in our province; It helped to formulate a development path of Community Governance that conformed to the characteristics of Community Governance in Shandong Province, and enhanced the practical reference of high-quality development of community governance in Shandong Province.

2. Current research status at home and abroad

2.1 Research on Big Data

In international research on digitization, Alvin Toffler et al. foresaw the concept of digitization as early as 1980. Tony Cass published a paper in Science in 1998 introducing the software package HiQ for processing 'numbers'. Nature launched the Big Data special issue in 2008. At the World Economic Forum in Davos in January 2012, the integration and utilization of personal generated mobile data with other data was explored. In April of the same year, the European Association for Information Science and Mathematical Research published a publication called "Digitalization", discussing progress in data-intensive research. In May 2013, the United Nations released a report discussing the various opportunities and challenges that digitalization brings to developing countries. In 2015, the National Institute of Standards and Technology (KIST) of the United States conducted a study on the architectural commonalities of various digital solutions and proposed a digital reference architecture that aligns with logical roles and commercial applications. In China, in May 2012, the Xiangshan Science Conference organized discussions on topics such as "Big Data Science and Engineering". In June of the same year, a profound discussion on digital technology, theory, application and other issues was held at the forum held by the China Computer Federation. In terms of concept definition, Feng Wei (2019), Ma Jianguang, and Jiang Wei (2020) studied the concept and characteristics of digitization, introduced the important value of digitization, as well as the challenges in information security, and proposed suggestions for ensuring digital information security in China. Wang Jin (2020) had studied the management reform in the digital era. By analyzing the rise history and concept of digitalization, he clarifies that Community Governance must pay attention to the reform of management mode in the development process.

2.2 Research on community governance

Compared with traditional Community Governance, modern Community Governance had a great breadth in terms of content classification. In addition to the traditional property management for residential areas, it also involved community economy, community culture, community education, community health care and other aspects. The population it faces was also more concentrated to high-quality people, which had a higher requirement for the comprehensive quality of community administrators. At the same time of constantly improving infrastructure and updating and applying intelligent equipment, it also pay great attention to improving the sense of service to people, and pay more attention to shaping a good image of Community Governance, and was committed to creating a good sense of experience.

Due to different economic development levels in different regions, there would be differences in Community Governance. The level of Community Governance in areas with higher economic level would also be higher. In addition to improving the standards of residents' services, relevant community administrators would also pay attention to the impact of personal image on community

image. Yang Pian (2023) studied the characteristics of Community Governance, pointed out that modern Community Governance integrates upper and lower resources in terms of content, realized intelligent housekeeper system, and put forward suggestions on the development of modern Community Governance. Chen Xi (2023) made an in-depth study on the problems faced by Community Governance, introduced the digital connection between various departments of Community Governance enterprises, and the Internet platform for data collection, so as to achieve information integration.

Therefore, the use of digital technology to reshape Community Governance was a dual requirement of the times and development. It was urgent and important to explore a path of Community Governance that conformed to digital characteristics, management methods and serviced methods, and moved towards high-quality development.

3. Object of the research project

Taking community governance as the research object, the high-quality development path of community governance was studied with the help of digital technology. Digital drives high-quality development of community governance. One was to expand the scope of services on the basis of existing services. For example, online shopping and payment of property service fees could be provided on the APP platform, making residents' lived more convenient. At the same time, it could also tap into the potential needs of residents, cooperate with surrounding community enterprises, integrate resources such as catering, medical care, logistics, retail, etc., while meeting the diverse needs of residents, expanding the profit channels of community enterprises. The second was to establish a vertical and horizontal analysis model based on industry databases. Through data analysis and deduction, it effectively assisted community neighborhood committees in improving service system construction, meeting the needs of homeowners, and also provides data support for scientific policy formulation by administrative authorities.

Systematically sorted out the development context and basic ideas of big data, digital economy, artificial intelligence, etc., summarized the three characteristics of Community Governance: complexity, knowledge, and sociality, and clarified the theoretical relationship between the intelligent development of Community Governance and existing research.

High quality development of Community Governance was a social choice. Community Governance was greatly affected by business cycle fluctuations. With the acceleration of urbanization and the development of service industry, it was a livelihood issue that residents payed attention to. For example, property management was a part of community management, and the proportion of property management output value in the national economy would increase. Good property services could maintain and increased the value of real estate properties, create economic value for owners, and thus promoted the growth of the entire social wealth. Community Governance played an important role in improving the quality of people and their lives and strengthening the construction of spiritual civilization.

4. Research on the implementation path of big data promotion of high-quality development of community governance.

Establish a government led unified data platform for Community Governance in Shandong Province. The government should build a unified data platform for Community Governance in Shandong Province (including community sports, community politics, community education, community health care and other data), and open it to the public. The platform construction was divided into three links: grid division - database design - data collection method: divide the administrative region into several grid units according to certain strategies and rules, each grid unit was equipped with fixed investigators, who were responsible for the collection and reporting of

basic data of community intelligence; Store all basic data on a unified data platform, visualization, and disclosure of statistical data.

Actively carry out digital transformation within the community. Communities should develop and apply smart management systems and big data platforms, promote high-quality development of digital community sports, property management, community health care, and achieve cost control of Community Governance through human resources, financial expenses, material management and control, mobile inspection, equipment maintenance and other functional modules. Through big data platformed for control and decision-making, work order automation, task visualization, and process management automation were achieved, thereby achieving direct management of the community. By collaborating and sharing information, we managed the premid, and post service processes to enable community residents to clearly understand the progress of each service and whether the service meets standards and specifications. Utilize intelligent technology to deepen basic services and apply intelligent and information technology equipment to various scenarios of basic services.

Strengthened the construction of talent team, cultivated outstanding talents, increased talent reserves, and provided professional talent guarantee for Community Governance. Strengthened the training of Community Governance staff, cultivated social talents, provided college graduates with the opportunity to practice at the grass-roots level, test the theory learned with practice, actively encourage college students to work at the grass-roots level, went deep into the grass-roots level to exercise their professional ability, and provided fresh blood for Community Governance. Strengthen the training of community grassroots workers and cultivate the younger generation of grassroots talents. Adapt to the general direction of high-quality community development, strengthened the professional ability and service ability of grass-roots staff, and better serve the high-quality development of Community Governance. Community Governance had a wide range of contents and was highly professional, including property management, community economy, community education, etc. It should provide systematic training, understand basic policies, and strived to improve the high-quality development level of Community Governance.

5. Conclusion

5.1 Systematically sorted out the development history of Community Governance in Shandong Province. Understanding the application of digital technology in high-quality development of Community Governance, we believed that Community Governance, as a livelihood issue, played an important role in the national economy, and digital technology played an important role in Community Governance.

5.2 Determine the priority development status of Community Governance. Closely combined with the specific situation of Shandong province, the highest goal of Community Governance was to establish "data sharing, green low-carbon, efficient and convenient".

5.3 Point out the problems existing in the development of Community Governance, demonstrated that Community Governance should be an important livelihood issue, and provided a path choice for its integration with digital development.

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