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Study on the Practical Path and Mechanism of Digitally Enabled Rural Governance

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Abstract: *Based on the actual development of the times, this paper aims to explore the practical paths and mechanisms of rural governance based on digital empowerment, in order to gain a deeper understanding of how digital technology can enhance governance effectiveness in the rural environment. Through literature review, field survey and case study, we analyse the practical experience of digitally-enabled rural governance, explore the paths and mechanisms involved, and put forward relevant policy recommendations.*

Keywords: *Digital; Empowerment; Rural governance; Practical paths; Mechanisms*

1. Introduction

In recent years, with the globalisation of the global economy and the rapid development of the domestic economy, the importance of rural governance has become more and more prominent, but the traditional rural governance model can no longer meet the needs of the current rural development, and there is an urgent need to explore a new model of rural governance. At this time, digital empowerment is providing new opportunities for the development of rural governance and becoming an important force to promote the development of rural governance. The Action Plan for Digital Rural Development (2022-2025) has planned and deployed the direction, milestones and implementation path of digital rural development. Promoting the construction of digital villages is an inevitable requirement in relation to comprehensively promoting rural revitalisation, integrating urban and rural development, and constructing a digital social governance system for common governance and sharing. However, due to multiple factors such as economic, political and technological influences, there exists a considerable degree of digital divide in China's rural digital governance, restricting the pace of rural revitalisation. Accelerating the development of digital countryside requires efforts to dissolve, bridge and cross the rural digital divide through digital technology empowerment. This thesis is based on exploring the new path of digital empowerment of rural governance, which has important theoretical significance and practical value.

1.1 Theoretical implications

The excavation of the theoretical connotation and characteristics of digital empowerment enriches the theory of rural governance. Rural revitalisation is the core goal of rural governance, and digital empowerment is an important support for rural governance. Therefore, the study of the theoretical connotation of digital empowerment enriches and expands the connotation of rural revitalisation and rural governance.

1.2 Practical value

Digital empowerment opens up a new mode of effective rural governance and is the "last kilometre" of digital construction. It can effectively solve the problems of rural governance and improve rural governance capacity. The topic is based on the digital empowerment in rural governance, with the goal of building digital empowerment routes and mechanisms, exploring the practical path of digital empowerment in rural governance, and providing practical references for the top-level design of Zhejiang Province in the process of effective rural governance.

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2. The basic connotation and characteristics of digitally empowered rural governance

2.1 Basic connotations

Digital empowerment of rural governance" is to take digital knowledge and information as the key production factors, take digital technology as the core driving force, use modern information network as the important carrier, and "empower" agriculture, rural areas and farmers through the element of "digital technology", so as to transform it into the element of "ability", and give the internal power of rural governance. The "digital technology" element "empowers" agriculture, rural areas and farmers, thus transforming it into the element of "capacity" and endowing rural governance with endogenous power[1]. "Digital empowerment" is an internal and external integration model of rural governance, which not only mobilises external resources and makes full use of "digital technology" to break through the limitations of local development, but also activates the capacity of the countryside for its own development, pries up the local knowledge and local resources of the countryside, and stimulates the endogenous potential of rural governance. It can mobilise external resources, make full use of "digital technology" to break through the limitations of local development, and activate the development capacity of villages themselves, leveraging local knowledge and local resources in villages, stimulating the endogenous potentials of rural governance, and empowering villages with sustainable governance capacity[2].

2.2 Characteristics

On the road to comprehensive rural revitalisation, digital infrastructure development is the hardware foundation, providing efficient and reliable digital communications and network support for the countryside. Data-driven knowledge and information become key production factors, collecting and analysing agricultural and economic information through digital means to improve decision-making precision. Digital technological innovation becomes the core driving force, promoting rural industrial upgrading and intelligent agricultural development. The modern Internet information platform serves as an important carrier, connecting the government, enterprises and residents, and promoting information sharing and community interaction. The ultimate goal is to promote the realisation of comprehensive rural revitalisation, enhance governance effectiveness through digital empowerment, stimulate rural vitality and achieve sustainable economic and social development. These five elements are intertwined and together build a comprehensive framework for digitally-enabled rural governance, injecting new momentum and vitality into rural revitalisation[3] .

3. Examination and analysis of the current situation of digitally-enabled rural governance in Zhejiang Province

The process of digital empowerment practice is essentially the process of "digital technology to the countryside". First, from the digital "hardware", and second, from the "software". Digital empowerment of rural governance is actually a process of constantly solving the real problems arising from the integration of digital technology and rural social governance, and ultimately helping the countryside to develop successfully.

3.1 Requirements for rural digital infrastructure development and digital empowerment

Rural digital infrastructure needs to meet high-speed and stable network coverage to support applications such as information delivery and smart agriculture. At the same time, digital empowerment requires upgrading the digital literacy of rural residents and promoting the application of digital technologies in agriculture, education, healthcare and other fields to achieve more efficient production and living[4] .

3.2 Growth points for digital innovation in rural agriculture

The growth of digital innovation in rural agriculture is mainly in the areas of smart agriculture, agricultural big data and the Internet of Things in agriculture. The efficiency of agricultural production is enhanced through the introduction of advanced technologies, such as drone inspections and smart irrigation systems. Agricultural big data, on the other hand, provides farmers with scientific decision support and optimises agricultural production processes. Agricultural IoT, on the other hand, enables

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the interconnection of farmland and equipment to build an intelligent agricultural ecosystem[5].

3.3 Status and needs of digital village construction

The current state of rural digital construction still faces a number of challenges, including insufficient network coverage and a need to improve digital literacy levels. Therefore, it is necessary to increase investment, optimise infrastructure construction, and promote digital education to enhance the digital skills of rural residents. At the same time, it is necessary to deeply understand the actual needs of rural residents and accurately promote the development of digital services.

3.4 Entry points for rural intelligence building and rural digital technology enrichment

The entry point lies in fostering digital agricultural enterprises and promoting branding and digital marketing of agricultural products. At the same time, through the construction of a digital rural service platform, it integrates resources and provides all-round support for agricultural production, marketing and finance, so as to promote farmers' income and prosperity.

In short, rural digital infrastructure construction, agricultural digital innovation, the current situation and needs of digital village construction, and rural intellectual construction are all interrelated, and together they construct a digital blueprint for rural revitalisation. Only when these aspects go hand in hand can the goal of comprehensive rural revitalisation be achieved.

4. The use mode and dilemma of digitally-enabled rural governance in Zhejiang Province

Digital Enabled Rural Governance attempts to modernise agriculture, rural areas and farmers through digital empowerment, and to crack the problem of unbalanced and insufficient development of agriculture, rural areas and farmers in order to narrow the development gap between urban and rural areas[6]. In order to develop the countryside, it is necessary to deeply implement the digital technological innovation drive, focusing on giving full play to the diffusion effect of technological innovation, the spillover effect of information and knowledge, and the universal benefit effect released by digital technology, so as to accelerate the modernisation of agriculture and rural areas. The main modes of application are: "Internet + Rural Governance", "Big Data + Rural Governance", "Internet of Things + Rural Governance", "Artificial Intelligence + rural governance". However, in the current rural society, the digital empowerment effect has not been brought into full play, and digital technology in the countryside has not been able to completely eliminate the existence of the "digital divide" between urban and rural areas[7].

4.1 Conceptual dilemma: the idea of empowering subjects to be intelligent has not yet been established

In some rural areas, the concept of digital empowerment for intelligence has not yet been fully established, and the understanding of digitalisation is stuck at the traditional level, lacking a deep understanding of the application of digital technology. This conceptual lag leads to insufficient impetus for digital empowerment in practice. Lack of a comprehensive understanding of the concept of digitisation limits the potential of rural areas to make full use of digital technologies. Enhanced education, promotion of the concept of smartness, and guidance from real-world examples are key to solving this challenge in order to stimulate widespread awareness and practical application of digital enablement.

4.2 Organisational dilemma: digital technology choices lead to imbalance in subject structure

Organisational dilemma is another challenge to digitally enabled rural governance. Digital technology choices have led to an imbalance in the structure of the main body, with some regions not investing enough in digital construction and organisational structures not being able to adapt to the needs of digital development. This may lead to poor information flow and lags in agricultural production and economic development.

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4.3 Process dilemma: Difficulty of organic integration of information, economic and human resources in empowerment

In the process of empowerment, there is also the problem of the difficulty of resource integration. Information, economic, human and other resources need to be organically integrated, but due to the constraints of various factors, the integration of resources is not smooth. On the one hand, information sources are scattered and data silos are difficult to break down, and on the other hand, the allocation of resources in finance, science and technology, and agriculture has failed to form a good synergy mechanism.

4.4 Effectiveness dilemma: inefficient operation of inter-subjective cooperation processes

The effectiveness dilemma is an obvious problem for digitally enabled rural governance. Inefficient operation of the cooperation process between subjects and inadequate synergy mechanisms have led to the digital construction not being promoted fast enough and not being as effective as it should be. This may involve multiple subjects such as government, enterprises, farmers, etc., and synergy is difficult[8].

To cope with these dilemmas, firstly, it is necessary to strengthen the publicity and training of the concept of digital empowerment, to raise the level of rural residents' awareness of digital technology, and to promote the in-depth implementation of the concept of smartness in rural areas. Secondly, a sound organisational structure for digital governance needs to be established to ensure that the selection and application of digital technologies can be adapted to the actual situation of the subject. At the same time, it strengthens the integration of resources, breaks down the information barriers, and builds a synergistic mechanism of digital governance. Finally, the optimisation of the cooperation process should be promoted to improve the efficiency of inter-subject cooperation and accelerate the pace of digitally enabled rural governance[9].

5. Practical Path and Guarantee of Digital Enabled Rural Governance in Zhejiang Province

Zhejiang Province has always excelled in promoting digital empowerment for rural governance, opening up a digital empowerment path for rural development with Zhejiang characteristics by building scientific paths, guaranteeing resource mobility, promoting industrial and agricultural integration, as well as innovative ecosystems[10] .

5.1 Pathways to Scientific Government Governance Government

The scientific path of governance has become the key to promoting digitally empowered rural governance in Zhejiang. The government should build a multifaceted synergy mechanism in this process, promoting cooperation at different levels and in different fields. At the same time, it should improve the construction of rural informatisation facilities and upgrade the level of rural infrastructure to provide a reliable foundation for digitalisation. Strengthen the construction of rural digital think tanks, establish a team of rural professional and technical talents, and promote the widespread application of digital technology in rural areas. Most importantly, establish a digital empowerment guarantee system, including measures for security protection and data privacy protection, to ensure a healthy and stable ecosystem for rural development[11].

5.2 Resource market liquidity path

The resource market liquidity path plays a key role in digital empowerment [12]. Zhejiang Province has made efforts to break through the limitations of innovation resource allocation, especially in the field of digitalisation, and realised the efficient allocation of innovation resources by guiding the free flow of resources such as human, financial and social capital. This initiative not only promotes the wide application of digital technology, but also greatly promotes the development of rural economy. Through the flexible allocation and flow of resources, rural communities are better able to respond to change and demand and provide strong support for innovation. This efficient allocation stimulates the potential development energy of villages and provides an important example of realising digital empowerment. The successful practice of this pathway also provides lessons that can be learnt from other regions, but there are still challenges in different contexts, such as resource imbalance and management mechanisms, which need to be further studied and addressed.

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5.3 Paths of integration between industry and agriculture

The path of industry-agriculture integration is seen as a key strategy for realising digitally-enabled rural governance. Zhejiang Province focuses on enhancing the innovation capacity of key core technologies in this regard in order to promote the support of digital innovation for rural development. By laying out the industrialisation of its innovations, Zhejiang strives to promote the integration of digital technologies with rural industries, thereby realising the upgrading of industries and the modernisation of agriculture. Collaborative innovation among government, industry, academic institutions and application fields has become an effective way for Zhejiang to promote digitally-enabled rural governance. Such collaborative innovation not only promotes the research and development and practical application of key technologies, but also provides comprehensive support for rural governance[13]. The government promotes the implementation of digital technology through policy guidance and support, the industry promotes the deep integration of digital technology and rural industry through industrial layout and marketisation, academic institutions provide technical support, and the application field contributes to practical scenarios. The successful practice of this path has enabled rural governance to achieve significant results in digital transformation. Through the organic integration of industry and agriculture, it not only promotes the upgrading of the rural economy, but also provides solid industrial support for digital empowerment and lays the foundation for the sustainable development of rural governance.

5.4 Innovation ecosystem pathways

The innovation ecosystem path is one of the important strategies for promoting digitally empowered rural governance in Zhejiang Province[14]. The core idea of this path is to promote the synergistic development of different interests through the establishment of a digital technology innovation ecosystem with the synergistic coexistence of multiple subjects. Based on this, Zhejiang is committed to building a digital technology ecological innovation system, aiming to provide a demonstration sample for the whole country and promote the continuous innovation and application of digital technology in rural governance. In the innovation ecosystem, the government, enterprises, social organisations and other parties participate together to form a win-win situation. The government provides a favourable environment for the research, development and application of digital technologies through policy guidance and support. Enterprises play a leading role in innovation, and social organisations participate in community building and governance, forming an integrated digital empowerment system. The successful practice of this path not only produces positive results in Zhejiang, but also provides replicable and scalable experience for the whole country. Through the application of innovative digital technologies, rural governance has made remarkable progress and laid a solid foundation for sustainable development. However, to achieve long-term success, it is still necessary to focus on synergistic mechanisms within and outside the ecosystem, address challenges that may arise and ensure the sustainable promotion of digital empowerment for rural governance.

In summary, Zhejiang has taken multifaceted measures in digitally empowering rural governance, forming a complete set of pathway systems from government governance, resource market mobility, industry-agriculture integration, to innovative ecosystems. This provides a new impetus for the sustainable development of the countryside, and at the same time provides useful lessons and references for other regions[15]. In the future, with the continuous progress of science and technology, it is expected that rural development will pay more attention to the application of digitalisation, and digital empowerment will become a new trend in rural governance, bringing broader development space for the countryside.

6. Conclusion

The study shows that digital empowerment has a significant impact in rural governance and offers new possibilities for achieving sustainable development. Future research could delve deeper into the specific applications of digital technologies in rural community participation, information delivery, and so on. This study provides useful insights for understanding the role of digitalisation in rural governance, however, there are still some limitations in the study and a more comprehensive examination is needed to promote further development in related fields.

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References

[1] Warren M. The Digital Vicious Cycle: Links between Social Disadvantage and Digital Exclusion in Rural Areas[J].Telecommunications Policy,2007, Telecommunications Policy,2007, 31(6 /7) .
[2] Li R P, Chen K, Wu D. Challenges and Opportunities for Coping with the Smart Divide in Rural America [J]. Annals of the American Association of Geographers,2010,110(2).
[3] Atieno L V, Moturi A.Implementation of Digital Village Projects in Developing Countries-case of Kenya [J].British Journal of Applied Science& Technology,2014,4(5).
[4] Dang Guoying. Status and Prospects of Social Governance in Rural China[J]. Journal of Central China Normal University (Humanities and Social Sciences Edition),2017(3).
[5] Chen Ming, Liu Yiqiang. Interactive group governance:A study of rural governance models in the Internet era[J]. Agricultural economic issues,2019(2).
[6] Gao Qiang. Practical Exploration and Path Choice of Improving Modern Rural Governance System [J]. Reform,2019(12).
[7] Zhao Xiaofeng, Ma Rui. Theoretical Innovation of Rural Governance and Its Practical Exploration - Overview of the Seminar on "Implementing Rural Revitalisation Strategy and Promoting Innovation in Rural Governance Institutions and Mechanisms"[J]. China Rural Economy,2019(2).
[8] Tan Jiusheng, Ren Rong. Path innovation of big data embedded in rural governance[J]. Journal of Jishou University (Social Science Edition),2017(6).
[9] Yuan Fangcheng. Big data technology has great application value in rural governance[J]. China Civil Affairs,2018(10).
[10] Wang Huilin, Hong Ming. Interactive mechanism, theoretical explanation and policy revelation of government governance and villagers' self-governance - a case study based on "beautiful village construction"[J]. Learning and Practice, 2018(3).
[11] Wang Xinliang, Wei Lujing, Liu Fei. Path construction of big data-driven rural governance in the new era [J]. China Administration, 2018(11).
[12] Wang Xiaoli. Innovation of rural governance mechanism in China in the new period - A comparative analysis based on 20 typical cases[J]. Scientific Socialism,2019(6).
[13] Shen Feiwei. Rural technology empowerment: a strategic choice for effective rural governance[J]. Journal of Nanjing Agricultural University (Social Science Edition),2020(2).
[14] Feng Chaorui, Xu Hongyu. Practical Dilemmas and Breakthrough Paths of the Current Digital Village Construction [J].Journal of Yunnan Normal University (Philosophy and Social Science Edition) ,2021,(5).
[15] Shen Feiwei, Chen Xiaoling. Maintaining rurality:A theoretical elaboration for realising the characteristics of digital village governance[J]. E-government,2021(3) .