Digital Rural Construction under the Background of New Quality Productivity Efficiency Improvement and Countermeasure Optimization

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Abstract: With the ubiquitous application of information technology,digital technology has been transformed into new production factors and governance tools, and is becoming an important driving force to solve the "urban and rural division,one country and two policies" and promote the integrated development of urban and rural areas.This paper analyzes that the digital process of agricultural production is relatively lagging behind, the digital divide between urban and rural areas,and the serious shortage of talent support capacity have become the biggest restriction factor of digital rural construction.It explains that through the construction of rural information infrastructure, with informatization, digitalization and network as the important carrier,the digitalization of rural industry, governance data,service informatization and life wisdom are realized, the modern rural economic development form is reconstructed, and a new model of rural governance informatization is created.

Keywords: Rural revitalization; Digital countryside; Digital production; New economic business form

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1. The Question is Raised

At present,the innovation of the new generation of information technology is unprecedentedly active,constantly promoting new technologies,new products and new models, and promoting the deep reform of the global economic pattern and industrial form.The pace of the integrated development of digital economy and rural industry has been significantly accelerated,which also provides unprecedented opportunities for promoting rural revitalization in the digital economy era.We have further liberated and developed digital productive forces,promoted integrated development between urban and rural areas,and promoted the replacement of old growth drivers with new ones.Digital rural development has become an important node of digital China and rural revitalization.[1]Current China digital rural construction "digital divide" between urban and rural areas, suitable for the characteristics of "three rural" rural information service system is not sound,rural digital talent shortage of such real problems is still outstanding, lead to digital rural construction to promote rural revitalization and realize rural modernization transformation is still facing many challenges and uncertainty.

2. The Policy Combing of Digital Rural Construction under the Background of New Quality Productivity

Under the condition of the new technological revolution, the construction of the digital concept not only drives the human society into the era of the Internet of everything,but also gives birth to the social community concept of mutual promotion and mutual integration.The traditional dual division of urban and rural relations is

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declining.Digital can be through the Internet dividend sharing,facilities hardware coordination and technology diffusion reverse propulsion capital,talent, science and technology,public service elements between urban and rural economic,social and ecological system to accelerate the circulation and transformation,so as to realize the sustainable of the urban and rural areas each promote, ultimately for the construction of digital urban and rural complementary mutually promote the new rural production mode to lay the foundation.[2] Realizing rural revitalization is an important strategic goal for economic and social development in the new era. Rural revitalization will become the biggest new driver of economic growth,and it will also be the fifth major structural adjustment task faced since the reform and opening up.

In the next step,it will explore the overall pilot demonstration at the county level across the country. Digital economy brings new opportunities for agricultural and rural development,promoting digital rural construction,to promote data chain and agricultural industry chain,supply chain and value chain,support the transformation and upgrading of agriculture and high quality development,establish the effective docking mechanism of farmers' production and citizen consumption, promote small farmers and modern agricultural development organic link,out of a Chinese characteristics, data driven agricultural rural modernization road.

3.China's Digital Rural Construction Faces Realistic Risks and Challenges

(1) The overall construction is lack of planning, and the digital rural development force is insufficient

Digitization is a booster to accelerate the integrated development of urban and rural areas.It is an inevitable trend to coordinate the construction of smart city and digital countryside, and the integrated development of urban and rural areas is an inevitable trend of digital rural development. Digital rural construction involves many fields such as production and operation, rural management, public management and service.The implementation of digital rural strategy and overall planning and design are the primary task.If the construction direction is not clear,it is easy to lead to problems such as good image,less connotation,more view and less use in the construction.However, in the process of digital rural construction, some areas lack a thorough research and understanding of the areas under their jurisdiction,lack of efficient guidance mechanism,have not yet formed a reasonable investment mechanism,do not adapt measures to local conditions,fully explore local characteristics,and do not form a digital rural development model with local characteristics and development advantages. Related data show that in 2019,the penetration rate of digital economy in agriculture only accounted for 8.2% of the agricultural added value, far lower than the level of 19.5% in industry and 37.8% in service industry.[3]To strengthen the comprehensive planning of all levels, combined with the "difference" planning and 2035 vision, in the existing digital agriculture rural development related planning and documents,can consider the digital rural construction planning implementation plan and detailed rules for the implementation, do effective cohesion with the top design, and the development of different areas, to ensure that the digital rural planning is scientific and operability.

(2) Urban and rural development is extremely unbalanced and lack of data acquisition mechanism

In recent years,China's telecom universal service pilot is increasing, and the construction of optical fiber broadband and other information infrastructure in rural areas continues to increase.However, compared with cities, there is a lack of data access, and there is a big gap between infrastructure construction and cities, and it is facing the problem of upgrading.Compared with the construction of smart cities, the development of digital rural construction is relatively slow, and the digital divide between urban and rural areas cannot be effectively eliminated in the short term.At present, almost all cities, districts (counties) have no mature way to obtain grassroots data and lack of digital rural comprehensive service big data platform, it is difficult to timely and accurately report grassroots data;a unified grassroots information co-construction and sharing mechanism

has not been established, and task division and coordination are difficult.In addition, the foundation of digital rural construction itself is weak, and the lack of a large number of professional talents and construction funds, leading to many challenges in the coordinated development of smart city and the construction of digital countryside.[4]At the same time, the corresponding laws and regulations are not perfect,it is difficult to guarantee the timeliness of rural data information and break the "gap" between market subject data information,and failed to establish data property rights and protection mechanism, circulation and transaction mechanism, it is difficult to realize the fair, efficient, reasonable and safe allocation of data as a new production factor.

(3) Insufficient scale of agricultural production and lack of standards for digital production

The digitization of production can further realize the improvement of the production and operation mode by combining the existing technology with the digital means.However, compared with the service industry, industry and other fields,the digital research and application in the agricultural field obviously lag behind, such as the lack of special agricultural sensors, the poor adaptability of agricultural robots and intelligent agricultural machinery and equipment, and the research and development of key core technologies are also obviously insufficient.At present,most of the agricultural land is mostly retail, not formed large-scale planting,and even individual land into wasteland because of abandoned seed.Lack of agricultural sensors,low accuracy of animal and plant models and intelligent decision making,poor adaptability of agricultural robots and intelligent agricultural machinery equipment. Compared with urban areas and other fields,the application of digitization in agriculture and rural areas obviously lags behind.At the same time,in recent years, the construction of digital agriculture standard system in China has made some achievements,and a number of national and industrial standards have been issued, providing important support for promoting the development of digital agriculture and smart agriculture. However, these standards are only limited to agriculture itself, and they are the local standards of the industry. The overall construction of the digital rural standard system is still lagging behind, which is still far from the requirements of comprehensively promoting rural revitalization.

(4) To meet the requirements of digital rural construction, the talent support capacity is seriously insufficient

The difference between the ability of urban and rural residents to use the Internet and modern information technology.With the continuous acceleration of industrialization and urbanization, more young and middle-aged people in rural areas go out for work,the average age of rural residents is older and the educational level is low.Some elderly people have a low level of education and their ability to accept modern technology is weak. The same digital products and services extend from urban areas to rural areas, and they may encounter the problems of incomplete functional utilization and inadequate convenient enjoyment.Digital rural construction needs to take talents as the engine.[5]At present,there are few enterprises engaged in the development of information services and information products related to "agriculture, rural areas and farmers",and it is difficult to implement the industry-university-

research model.There is particularly a lack of talents who understand both agriculture and digital technology, which is an important bottleneck to be broken through.

4. To Improve the Construction and Development of Digital Rural Countermeasures and Suggestions

(1) Take information infrastructure as the digital base to consolidate the foundation for digital rural development

The construction of new rural infrastructure is an important support for the construction of digital rural

areas.Efforts should be made to improve the development speed of "new infrastructure" in rural areas, accelerate the layout of 5G, artificial intelligence and the Internet of Things in rural areas, actively introduce mainstream information technology,realize the deep integration of digital technology and agriculture, and lay a solid foundation for the development of digital countryside.In addition, attention should be paid to improving the construction of infrastructure in rural areas that is compatible with new technologies.For example, express delivery in rural areas of China is mainly popularized in towns and townships areas,and the popularity of express delivery outlets in villages is still not enough,which forms a certain restriction on the development of e-commerce in rural areas. For rural areas, intelligent express cabinets are an important way to achieve non-contact services. Therefore,it is suggested to promote the construction of intelligent express cabinets and other related infrastructure in rural areas to solve the problem of "the last kilometer" of rural express logistics.It should also be noted that traditional rural infrastructure is still an important foundation for the development of agriculture, rural areas and farmers, and conditions should be created to promote their digital transformation.In particular,we will accelerate the digital and intelligent transformation of infrastructure such as farmland, water conservancy, roads, electric power, cold-chain logistics, and agricultural production and processing in rural areas, and promote the construction of smart water conservancy, smart transportation, smart power grid,smart agriculture and smart logistics.Promote China's digital infrastructure to open the road of "going to the countryside", take the original digital products as the base, assist a series of exclusive capabilities and hardware capabilities, provide digital district and digital rural solutions for the government, enterprises, rural areas, people's livelihood and other fields, and support the digital transformation of district and county economies.

(2) Improve the rural industrial system by using the digital rural construction

Promote the development of smart agriculture as the starting point, and realize the digitalization of agricultural production.Great efforts should be made to upgrade and transform agricultural production and operation through digital development. With the support of digital technology,we will extend the industrial chain, connect the supply chain, upgrade the value chain, and comprehensively enhance the digital level of agricultural production and operation.The deep integration of the Internet and featured agriculture will also promote the vigorous development of new industries and new forms of business in rural areas. In this regard,it is necessary to further strengthen the interconnection of rural business and commerce, promote the connection between agricultural business entities and agricultural products circulation enterprises through various ways such as signing agricultural orders, direct purchase and direct sales and investment cooperation and build an agricultural products industrial chain closely combining production,supply and marketing. Develop shared agriculture,gather scattered and fragmented consumer demand information,form a scale, and realize accurate matching and docking with the supplier; build shared information platform, improve the utilization rate of production means and reduce the delivery cost and communication cost.In a word,we should give full play to the important role of digital rural construction in cultivating new industries and new forms of business in rural areas, and inject strong impetus into rural revitalization.

(3) Vigorously develop the informatization industry in agriculture and rural areas, and enhance the new drivers of digital rural development

Taking the application scenario as the breakthrough point, we will seek the optimal solution of digital countryside.The needs of the government, the market, farmers and other multiple subjects in various scenarios should be comprehensively considered to expand the grounded, simple, practical, convenient and efficient digital application scenarios.In the field of production and operation,it emphasizes the digital industrialization and industrial digitalization of agriculture, and solves the problems of information mismatch between urban and rural areas and low utilization rate of rural resources.In the field of rural governance,we will focus on solving problems such as insufficient personnel, trivial affairs, repeated filling of forms, and difficult supervision and

evaluation.In the field of public administration and service, digital application and transformation improvement are carried out with the education, medical care as the starting point, focusing on solving problems such as the relatively low level of public service guarantee in rural areas and the difficulty of villagers in handling affairs.Of course, for the grass-roots government, digital rural application scenarios do not need to be built in everything,but it is necessary to clarify the thinking, clear positioning, and build specific landing scenarios in line with local needs.

(4) Strengthening the supply of scientific and technological innovation in agriculture and rural areas

We should give full play to the diffusion effect of information technology innovation, the spillover effect of information and knowledge, and the universal effect of digital technology release, and accelerate the modernization of agriculture and rural areas."We will accelerate the comprehensive and in-depth integration of cloud computing,big data,the Internet of Things, and artificial intelligence and other emerging technologies with planting industry,seed industry,animal husbandry, fishery, and agricultural processing industries, and build smart agriculture,science and technology agriculture, and brand agriculture.We will actively develop new forms of rural business, and build foster agriculture,experience agriculture, sightseeing agriculture and urban agriculture based on digital agriculture, so as to increase the added value of agriculture.With the help of "Internet +", we will further strengthen online and offline sales channels, establish smart logistics distribution stations, deepen the demonstration role of e-commerce in entering villages, and form an e-commerce brand of featured agricultural products.We will move faster to make agricultural equipment more intelligent, promote the deep integration of next-generation information technology with agricultural equipment, and make the level of agricultural equipment more intelligent.

5. Conclusion

The significance of digital rural construction is far more than this. It is also a booster to resolve the shortcomings of rural finance, deepen the construction of rural governance system, and improve the level and efficiency of agricultural industry. Therefore,the digital transformation of agriculture and rural areas is undoubtedly of great significance to The Times.The list of the national digital rural pilot list, from the digital rural overall planning and design,improve a new generation of rural information infrastructure, explore new forms of rural digital economy, explore rural digital governance mode,improve the "three rural" information service system, improve the facilities resources integration sharing mechanism, explore the digital rural sustainable development mechanism, and other aspects to carry out the pilot construction.This means that digitalization and information technology have brought infinite possibilities to social development, and the "digital countryside" can also make rural revitalization have more "wisdom" and "quality".

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