

Research on the Dilemma of Digital Transformation of Mountain Village Economy under the Perspective of Rural Revitalization and the Countermeasures to Crack it

-- Jinzhai County, Anhui Province as an Example

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Abstract

In the context of digital economy, the digital transformation of Chinese mountain village economies, typically represented within Jinzhai County, is hampered by poor geographic and natural condition base, inconvenient transportation, and relative occlusion of information. The project team plans to conduct an in-depth field research in Jinzhai local area, assess the development of the current situation of digital economic transformation in Jinzhai County by introducing the evaluation index system of digital economy development based on the input-output perspective, and also conduct a study on the factors impeding the digital transformation of Jinzhai mountain village economy based on linear regression method, aiming to propose a cracking path to the digital transformation of agricultural and rural economy with Chinese characteristics represented by Jinzhai County. The aim is to propose a path to crack the digital transformation of agricultural and rural economy with Chinese characteristics represented by Jinzhai County.

Keywords

Digital Economy; Mountain Village Economy; Breakthrough Path.

1. Introduction

1.1. Research Overview

"When the countryside prospers, the country prospers". The strategy of rural revitalization is a major strategy proposed by the 19th Party Congress, which is a global and historical task related to the comprehensive construction of a socialist modern country. The rapid development of "Internet+" in China is bridging the "digital divide" between urban and rural economic development in China, enabling more people to enjoy the "digital dividend" in the information age. In this context, strengthening the rural digital economy and accelerating the overflow of digital dividends to the countryside will not only promote the expansion of the rural economy in terms of incremental volume, but also drive the transformation and upgrading of the countryside, helping to speed up rural revitalization.

The No. 1 document of the Central Government in 2021, "Opinions of the State Council of the CPC Central Committee on Comprehensively Promoting Rural Revitalization and Accelerating Agricultural and Rural Modernization", was officially introduced on the 21st. This is the 18th central document guiding the work of the "three rural areas" since the 21st century, highlighting the great importance the Party Central Committee attaches to agricultural and rural work in the new development stage. The document specifies that by 2025, agricultural and rural modernization has made significant progress, and the level of equalization of basic public services in urban and rural areas has increased significantly. Substantial improvements

and enhancements will be achieved in agricultural infrastructure, food and important agricultural products supply, agricultural quality efficiency and competitiveness, and rural ecological environment, and farmers' sense of access, happiness and security will be significantly improved.

From the national policies, we can know that the revitalization of rural areas is the primary task of economic and social development, which can improve the quality of life of rural residents and promote the upward development of agricultural economy. The implementation of rural revitalization strategy helps agricultural development, rural progress and farmers' improvement, which is an inevitable approach to solve the contradiction between people's growing demand for a better life and unbalanced and insufficient development.

To achieve the great rejuvenation of the Chinese nation and sustainable economic and social development, the focus is on the rural areas. The economic development of rural areas focuses on villages (including mountain villages). In the context of the national strategy of rural revitalization and digital economy, the digital transformation of the economy of mountain villages in typical domains, typically represented by Jinzhai County, is receiving more and more attention. The digital transformation of mountain village economy is hindered by a combination of factors due to its poor geographic location and natural conditions, low level of digitalization, and low digital literacy of farmers.

China's digital economy is developing rapidly. the total size of China's digital economy is estimated to be 35.9 trillion yuan in 2019, with a nominal growth of 14.7%, significantly higher than the GDP growth rate of that year, and accounting for 36.2% of GDP, an increase of 1.4 percentage points year-on-year. The digital economy has become a core driver of economic growth in recent years, and the contribution of China's digital economy to GDP is expected to be 76.1 % in 2019, a significant increase compared with 67.9 % in 2018. The digital economy has been rising in the national economy and has become a core key force driving the development of China's national economy.

The valorization of data has accelerated, and data has become a key production factor for the development of the digital economy. From the industrial point of view, China has formed a more complete data supply chain, formed a data industry system in various aspects such as data collection, data labeling, time-series database management, data storage, business intelligence processing, data mining and analysis, data security, data exchange, etc., and continuously improved data management and data application capabilities.

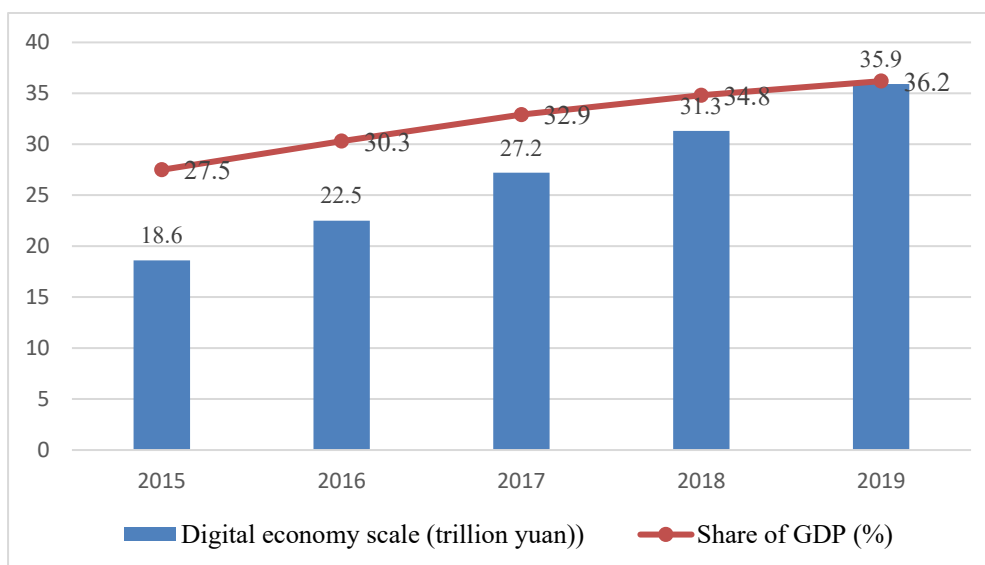


Figure 1. The Scale and proportion of China's digital economy

The level of development of digital economy in 2019 in each region basically continues the development trend of previous years. From the total amount, the added value of digital economy in Jiangsu, Zhejiang, Shanghai, Beijing, Fujian, Hubei, Sichuan, Henan, Hebei, Anhui and Hunan provinces exceeds 1 trillion yuan; from the perspective of the proportion, Beijing and Shanghai digital economy occupies a dominant position in the regional economy, and the proportion of digital economy GDP has exceeded 50%.

1.2. Main Content of the Study

Investigation and analysis of the current situation of digital transformation of mountain village economy in Jinzhai County. In order to investigate the current situation of digital transformation of mountain village economy in Jinzhai County, firstly, based on the method of finding literature, information was consulted to understand the current situation of economic development and the problems in the process of development in Jinzhai County in Dabie Mountainous Area. Second, based on the field research method, questionnaires were distributed in the local area and local residents were interviewed to investigate the income level, digital literacy, views and acceptance of digital transformation of residents within some typical mountain villages in Jinzhai County. Finally, the data and information obtained by the above two methods are summarized and analyzed to elaborate the current situation of digital transformation of mountain village economy in Jinzhai County and to analyze the development trend of digital transformation of mountain village economy in Jinzhai County.

Analysis of the dilemmas faced by the digital transformation of the mountain village economy in Jinzhai County. Based on the investigation and research on the status of digital transformation of mountain village economy in Jinzhai County in the previous paper, firstly, the dilemma factors faced by digital transformation of mountain village economy in Jinzhai County are analyzed in detail in terms of natural environment, human resources, financial needs, farmers' digital participation degree and digital talent cultivation, and the problems arising in the construction and implementation of digitalization of mountain village economy in Jinzhai County are studied. Secondly, by introducing digital development evaluation indexes, we analyze the deep reasons why the digital transformation of mountain village economy in Jinzhai County is in dilemma in terms of government governance, enterprise autonomy, and digital industrialization, and explore the development measures for the digital comprehensive transformation of mountain village economy.

1.3. Methodology of the Study

Based on the previous analysis of the factors of transformation dilemma, firstly, by introducing the evaluation index system of digital economy development based on the input-output perspective, the current situation of digital economy transformation of mountain villages in Jinzhai County is assessed from three first-level indicators of input, environment and output, and by establishing SWOT model based on the field research situation of Jinzhai County in Dabie Mountainous Area, the digital transformation of mountain village economy in Jinzhai County in Dabie Mountainous Area is analyzed. The SWOT model is used to analyze the advantages and disadvantages, opportunities and threats of digital transformation of mountain village economy in Jinzhai County, Dabie Mountains. Secondly, the project explores the difficulties faced by the digital transformation of mountain village economy by taking Jinzhai County as an example, and studies the correlation and influence degree of digital economy development and external factors such as geographical location based on linear regression equation, so as to build a corresponding policy support system and propose further optimization of digital economy development policies to realize the success of digital transformation of mountain village economy in Jinzhai County.

Field research method: This project investigates the current situation of digital transformation of the mountain village economy in Jinzhai County by conducting field research in Jinzhai

County, taking the means of distributing questionnaires in the area, interviewing local residents and interviewing relevant local government departments to obtain materials and data.

Literature search method: Referring to the relevant literature on the digital transformation of mountain village economy to crack countermeasures and the latest policies on the development and promotion of digital economy, we synthesize and refine the viewpoints in the context of the new era.

Linear regression equation: Study the correlation and degree of influence between digital economy development and external factors such as geographical location, so as to find the optimal path for digital transformation of mountain village economy.

SWOT analysis: analyze the advantages and disadvantages, opportunities and threats in the development of digital transformation of mountain village economy in Jinzhai County, and explore the further optimization of digital economy development policies to achieve the success of digital transformation of mountain village economy in Jinzhai County.

1.4. Innovation Points

Project innovation point. At present, in the context of digital economy, most domestic scholars are more interested in joint research on digital transformation of rural economy and high-quality development of counties, but there is less research on digital transformation of mountain village type of economy. This paper aims to provide a cracking path for the dilemma faced by the digital transformation of mountain village economy through relevant research.

Project characteristics. Jinzhai County, as a national key poverty-stricken county, with its overlapping deep mountainous area and reservoir area, closed transportation, backward foundation, and county dominated by mountain villages, the study of the dilemma faced by the digital transformation of China's mountain village economy represented by it and the path to crack it is typical representative significance for accelerating the realization of common prosperity and creating a new pattern of rural revitalization. By introducing the evaluation index system of digital economy development based on the input-output perspective, the project team assesses the development status of digital economy transformation in Jinzhai County from three primary indicators, such as input, environment and output, and seven secondary indicators, such as digital innovation and government governance, and also researches the factors hindering the digital transformation of Jinzhai mountain village economy based on linear regression method.

This project plans to investigate the current situation of digital development of Jinzhai mountain village economy by using literature method and questionnaire method, and select panel data about Jinzhai County from China Urban Statistical Yearbook and Communication Industry Statistical Bulletin 2020 for relevant data analysis, so as to contribute to the innovative development of agricultural and rural areas with Chinese characteristics represented by digital transformation of mountain village economy in Jinzhai County.

2. The Current Situation of Digital Transformation of Mountain Village Economy under the Perspective of Rural Revitalization

2.1. General Situation of Digital Transformation of Mountain Village Economy in Jinzhai County

National policy support. The Central Document No. 1 was released on February 21 this year, which points out that: comprehensive efforts are made in digital economy fields such as rural digital infrastructure, smart agriculture, digital intelligence of rural public services and social governance, rural digital inclusive finance and rural e-commerce, aiming to smooth the Urban-rural economic cycle through Urban-rural integrated digital economy, and accelerate the modernization level of agriculture and rural areas with digital transformation. At present, the

digital countryside has become an important breakthrough in boosting rural development, a strategic direction for rural revitalization and an important element in building digital China.

The rural digital economy is developing rapidly. Under the development of mass entrepreneurship in rural areas, cell phones are becoming "new farming tools", data are becoming "new farming resources" and live broadcast is becoming "new farming activities". Among the 10.1 million people who have returned to their hometowns to start their own businesses and innovations, 55% are using the "Internet+" and other new models. Moreover, with the innovation of new e-commerce, such as live video broadcasting and network with goods, agricultural products e-commerce continues to maintain a double-digit growth rate, becoming a "super conventional weapon" to consolidate and expand the achievements of poverty eradication and rural revitalization.

In addition, the consumer Internet continues to extend and expand to the industrial Internet, "Internet + agriculture" flourishing, solid promotion of nine agricultural Internet of Things demonstration provinces, apples, soybeans and other 8 categories of 15 varieties of the whole industry chain big data construction pilot, 81 digital agriculture pilot project construction, agricultural digital transformation significantly accelerated, 2019 The national level of digitalization of agricultural production is 23.8% in 2019. In rural governance, digitalization has also become an important grip for Party committees and governments at all levels to enhance the modernization of the governance system and governance capacity.

2.2. Features of Digital Transformation of Mountain Village Economy in Jinzhai County

The red culture of Dabie Mountain helps to fight poverty in old areas. Jinzhai County in Anhui Province, located in the hinterland of Dabie Mountain, is a famous old revolutionary area and general county, and an important birthplace of China's people's army. Due to its location in the western border of Anhui Province, Jinzhai County's economic development is at a relatively low level due to unfavorable factors such as inconvenient transportation and relative lack of resources. Before the end of 2020, Jinzhai County will be the main battlefield for poverty alleviation in the country. Jinzhai County, which has 12 towns and 11 townships and one development zone, was successfully withdrawn from the poverty-stricken county in April 2020. Four or five years ago, Maohe Village and Xiao Nanjing Village in Jinzhai County were national key poverty-stricken villages, with most of the villagers living deep in the mountains, and the process of poverty alleviation suffered from a significant lag in policy implementation and a lack of human resources. As the second largest "general county" in China, Jinzhai is endowed with unique red cultural resources, and the linkage between economic development and the full utilization of red cultural resources and red tourism in Jinzhai County will help Jinzhai achieve poverty eradication in the county.

Regional coordinated development helps Jinzhai's digital economy transformation. It highlights the three major functions of industry undertaking, recreation service and ecological supply, actively integrates into the new pattern of regional development such as the integration of Yangtze River Delta, Hefei Metropolitan Circle and Yangtze River Economic Belt, promotes the deep integration of digital economy and real economy, advanced manufacturing industry and modern service industry, enhances the level of intellectual manufacturing, achieves zero breakthrough of 10 billion enterprises, creates several 10 billion industrial clusters and becomes an important ecological tourism and recreation destination. Build a railroad, highway and airport in one, an important transportation hub in the Yangtze River Delta connecting the central and western parts of China, western Anhui and Dabie Mountain areas, and create a modern comprehensive transportation, trade circulation and emergency logistics system to make Jinzhai's development faster and of higher quality.

Rural revitalization helps Jinzhai's economic digital transformation. It promotes the construction of four platforms of "Valley Library and Ridge Park", promotes "connecting two and three" in primary production, develops "six industries", and builds a green agricultural products production and processing supply base in Yangtze River Delta. Promote the construction of rural governance system from the pilot to the whole area governance. Strengthen the construction of roads, water, electricity, network, gas and other infrastructure, improve the level of rural environmental management, create a model of rural revitalization with prosperous industry, ecological livability, civilized countryside, effective governance and rich living, and make Jinzhai countryside more beautiful.

3. Problems Facing Digital Transformation of Mountain Village Economy in the Perspective of Rural Revitalization

3.1. Basic Characteristics of Digital Transformation of Mountain Village Economy in the Perspective of Rural Revitalization in Jinzhai County

Weak agricultural infrastructure and unsound service system. Nowadays, the agricultural infrastructure in China is relatively weak, especially in the central and western regions, and many places adopt traditional planting methods and rely on the sky for food, which not only restricts the development of the rural economy, but also affects the enthusiasm of farmers, causing many farmers to leave their hometowns and go out to work, which further aggravates the rural economy.

Agricultural structure adjustment is slow, and the degree of industrialization is not high. Now our farmers are still mainly traditional planting, industrial structure is relatively single, once there are force majeure factors, it will cause the situation of no harvest, so the traditional thinking and production methods need to make changes, can plant some high value-added cash crops. Now the rural areas are basically on their own, the degree of organization and intensification is not high, there is no competitiveness in the market, want to form an industrial scale still has a long way to go.

Agricultural materials rise too fast, farmers' income continues to decline. In recent years, the price of agricultural products fluctuates greatly, many farmers and planters did not make money but lost a lot of money, the risk has steeply increased a lot, hit everyone's enthusiasm, pesticides, fertilizers and agricultural machinery and other production of agricultural prices continue to rise, but the price of food has not gone up, and even the situation of failure to sell, increasing the burden of farmers, the phenomenon of money but not dare to invest.

The structure of the rural economy is relatively homogeneous. With the development of mechanization, many laborers have nothing to do, but they do not have certain skills, so it is difficult to transform, which directly leads to farmers' income not being raised, thus affecting the overall development of rural areas.

4. The Dilemma of Digital Transformation of Mountain Village Economy under the Perspective of Rural Revitalization and the Measures to Crack it

4.1. Cultivate Rural Digital Economy Talents and Support Innovative Entrepreneurial Activities

Farmers are the participants and beneficiaries of the digital countryside. In order to build a digital village more smoothly, we must consider the real needs of farmers from their perspective, so as to mobilize their enthusiasm, promote the construction plan more smoothly, and truly reap the convenience brought by the digital village. Let farmers know the meaning of

"digital", keep pace with the times, feel the progress of the times, strengthen organizational leadership, offer relevant courses, strengthen the construction of scientific research teams, increase training and other measures, innovative digital financial services, service "three rural" construction, and through this Innovate the digital agriculture industry and promote the integrated development of one, two and three industries.

4.2. Build Digital Villages According to Local Conditions

China's geography varies greatly, and the conditions of each place determine how to carry out the construction, and a variety of external factors must be accurately considered in order to better transform the construction of rural areas. For example, what technology to use, the choice of infrastructure and what other related processes to choose to promote the model. On the basis of the overall design, we should closely contact the local foundation and needs, scientifically grasp the local regional characteristics, folk customs and cultural history, and carefully develop supporting plans to design and innovate the digital countryside according to local conditions. Cultivate special products, standardize agricultural production and operation, improve the distribution system of agricultural products, and build digital sales channels.

4.3. Accelerate the Process of Urban-rural Integration

Urban-rural integration is our ultimate goal. To bridge the digital divide between urban and rural areas, it is essential for the promotion of rural Internet usage capabilities, and for farmers to be able to conduct more online activities. The digital countryside construction still needs the support of nearby cities in terms of technology. Unifying the spatial layout of urban and rural areas, promoting each other's industrial development, and integrating urban and rural areas will greatly reduce the Urban-rural digital divide. In the process of digital countryside construction, many applications in the city such as smart medical, smart education, smart transportation, etc. are slowly integrated into the construction of the countryside, exploring related technologies and continuously improving the digital countryside technology innovation and application system. Establish and improve the data resource directory and standard system, accelerate the construction of an integrated data resource collection system in the air and sky, promote the formation of government data, industry data, social data, enterprise data convergence, sharing and utilization mechanism, coordinate the construction of "three rural" thematic database and agricultural and rural big data decision-making information service platform, strengthen data acquisition In addition, we will strengthen the construction of data acquisition, analysis and application capacity to provide accurate data support for scientific decision-making.

References

- [1] Shen Feiwei. Mechanism and governance logic of rural revitalization from the perspective of empowerment theory--a practical investigation based on rural revitalization in the United Kingdom [J]. *World Agriculture*,2018(11):77-82. doi:10.13856/j.cn11-1097/s.2018.11.014.
- [2] Meng TG. Digital governance enables digital transformation in all aspects[J]. *Policy Outlook*, 2021 (03): 33-35.
- [3] Lei Hongzhu, Wang Qian. Technology-enabled, user-driven and innovative practices: innovation of government governance model in the era of intelligence[J]. *Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition)*,2021,42(02):234-240.
- [4] He Yupeng, Wu Shunchen. Connection is empowerment: Practice and reflection on the interface between small farmers and modern agriculture[J]. *China Rural Economy*,2019(06):28-37.