



# Study on Accelerating the Integration and Innovation of Digital Economy and Rural Urbanization Development

Liu Jin

Dalian Polytechnic University Arts and Information Engineering College, Dalian, 116000, China

285111417@qq.com

**Abstract.** To promote the development and construction of digital rural urbanization, localities should put the revitalization strategy of rural urbanization development in the first place. With the popularity of live streaming in recent years, villages and towns have also ushered in digital reform, first of all, we should improve the information technology infrastructure and cultivate a new type of farmer team, based on which we should further integrate the e-commerce model, and all parties should work together to jointly promote the digital transformation of villages and towns and ultimately realize the revitalization of the development of rural urbanization.

**Keywords:** Digital transformation, rural urbanization and development, talent development, improved facilities

## 1 Introduction

With the development of digital economy gradually on track, rural urbanization construction is also gradually integrated with the digital economy. However, in the stage of digital transformation of rural towns, there are inevitably some problems, such as the infrastructure and laws and regulations of rural towns are not perfect, resulting in the farmers do not have sufficient trust in the digital economy, and the farmer groups are not able to truly enjoy the benefits of the digital economy, so the research on the integration and innovation of the digital economy and the development of rural townships is very necessary.

At present, the state implements the development strategy of digital countryside and towns, accelerates the application of information technology in the economic and social development of agriculture and rural areas, and injects new kinetic energy into the smooth implementation of the development strategy of countryside and urbanization, and the development of digital countryside and towns has ushered in an important period of opportunity. In recent years, Liaoning has actively promoted the construction of digital villages and towns, strengthened the construction of rural information infrastructure, accelerated the development of agricultural informatization and rural e-commerce, and popularized rural information services, so that the province's development of digital villages and towns has certain basic conditions.

© The Author(s) 2024

F. Cao et al. (eds.), *Proceedings of the 2023 5th International Conference on Economic Management and Cultural Industry (ICEMCI 2023)*, Advances in Economics, Business and Management Research 276,

[https://doi.org/10.2991/978-94-6463-368-9\\_6](https://doi.org/10.2991/978-94-6463-368-9_6)

## **2 The Integration and Development of the Digital Economy and The Rural Town Industry is Still in its Infancy, and There are a Series of Problems That Need to be Solved**

### **2.1 Low Network Coverage in Rural Towns**

One of the major challenges facing the digitization of rural towns is the problem of network infrastructure. Due to reasons such as remote location and low level of economic development, many rural towns and cities have low network coverage, and even some villagers do not have Internet equipment at home. This not only restricts the ability of villagers to access information, conduct online learning, and carry out e-commerce, but also hinders the digital transformation process in rural towns and areas, and becomes a major resistance to the digital transformation of rural towns.

### **2.2 Lack of Modernized Agricultural Teams**

Farmers are the main body of agricultural production and an important force in promoting agricultural modernization. However, the current modernization level of China's farmers' team has yet to be improved[1].

On the one hand, the scientific and technological quality of farmers is generally low. Although the level of rural education in China has improved in recent years, most farmers still lack modern agricultural technology and knowledge, and it is difficult to cope with the needs of modernized agricultural production. On the other hand, the production and management capacity of farmers also needs to be improved. At present, most of China's rural areas still use the traditional smallholder economic production methods, farmers' production and management capacity and market awareness is weak, difficult to adapt to the development needs of modern agriculture[2-3].

### **2.3 Single Mode of Industrial Operation in Rural Towns**

Mainly in the agricultural production and management mode is more traditional, lack of diversification. E-commerce in rural towns and cities in the maintenance of relatively high inputs, which has a certain impact on the local economic benefits[4].

First of all, the industrial operation mode in rural towns is still dominated by traditional agriculture and lacks diversified industrial layout. Although the government has invested a large amount of funds and policy support for the development of the electronic information industry in rural towns, the lack of overall planning and specific guidance has led to inefficient resource integration and limited economic stimulation. Secondly, the maintenance investment of e-commerce in rural towns is relatively high, which affects the economic efficiency. On the one hand, the informatization construction in rural towns lacks the support of talent training system and related industries, which leads to difficulties in the promotion and maintenance of e-commerce. On the other hand, enterprises and farmers in rural towns lack the physical service support of

professional e-commerce organizations and informatization service teams, which makes e-commerce operation cost higher.

#### **2.4 The Corresponding Laws and Regulations are not Perfect**

Due to the imperfection of relevant laws and regulations, it is difficult to guarantee the timeliness of data information in rural cities and towns and break the "gap" of data information of market subjects, and fail to establish the mechanism of data property rights and protection, circulation and transaction mechanism, which makes it difficult to realize the fair, efficient, reasonable and safe allocation of data as a new type of production factors.

### **3 Opinions and Suggestions for Promoting the Integration and Development of Digital Economy and Rural Cities and Towns**

#### **3.1 Improve Information Technology Facilities in Rural Cities and Towns.**

In December 2021, Zeng Yande, chief agronomist and director of the Department of Development Planning of the Ministry of Agriculture and Rural Development, proposed that during the Fourteenth Five-Year Plan period, in order to promote the digital transformation of rural cities and towns, the focus should be on improving the construction of information technology infrastructure in rural cities and towns. It is necessary to transform and build new ones, provide broadband for rural towns and cities, and promote the construction of 5G and the mobile Internet of Things so that rural areas and cities can go hand in hand. The government should provide financial support for the construction of information technology infrastructure in rural cities and towns. The government can set up special funds to support the construction of information technology infrastructure in rural cities and towns, or set up a risk compensation mechanism for farmers to increase their confidence in investing funds. The government can encourage financial institutions to provide villagers with stronger lending support, and guide agricultural enterprises to carry out listing financing, bond financing, lease financing and other forms of financing. In addition, civil society capital can be urged to participate in PPP projects, which can effectively alleviate the problem of insufficient funds in the construction of infrastructure in rural towns and cities, and can also unite civil society capital and the real economy. Promote the digitalization of rural water conservancy, roads, electricity and other production and living infrastructure, and accelerate the widespread application of automatic sensing terminals. Strengthen the construction of network security infrastructure and maintain data integrity, security and reliability[5].

### **3.2 Create a Modernized Team of Farmers. There are Two Modes of Training and Introduction in Cultivating the Talent Team.**

Villages should introduce professional e-commerce talents in more outstanding e-commerce companies or training institutions to help villages complete digital transformation. Specifically, the following measures can be used: the government can create preferential policies to attract outstanding talents in the countryside to return to their hometowns to start their own businesses, such as providing preferential policies for the return of entrepreneurial groups in the areas of finance, housing, health care, education, etc.; or play a good emotional card, contact the countryside workers, publicize the current situation in the countryside, and encourage them to return to their hometowns to start their own businesses. Villages can also cooperate with e-commerce majors in colleges and universities to provide good practice opportunities for students graduating from these majors and attract professionals to practice in their villages[6].

In terms of cultivation, rural towns can open small classrooms, contact netizens with experience in bringing goods or college teachers, in which the government pulls strings, so that they can come to the countryside to teach locals about e-commerce, and improve the digital literacy of villagers, for example, on September 27, 2022, the Sichuan Institute of Science and Technology Vocational College of Rural Revitalization organized the representatives of the school's sophomore students to form "e-commerce" partnerships with representatives of villagers from Yongfeng Village and Siwei Village in Dongpo District, Meishan City. The village representatives of Dongpo District, Meishan City, formed a "pair", the students became the villagers' live webcast teacher. Rural e-commerce enterprises should also put the interests of employees in the first place, to avoid the recruitment of the situation can not be retained, to pay attention to the staff's life and work problems encountered, to fully improve the loyalty of employee[7].

### **3.3 Rural Town Industry Integration E-Commerce.**

Rural town industry integration e-commerce is in the background of rural town development and revitalization strategy, the rural industry and e-commerce is closely integrated, give full play to the advantages of the Internet in agricultural production, sales, logistics and other links, to improve the competitiveness of rural town industry. In order to solve the above problems, the rural town side should make the following efforts: Firstly, increase the investment in infrastructure construction, establish the rural town Internet of Things platform, as well as the rural information website and e-commerce website, so as to avoid the situation of asymmetric information. It should also strengthen the logistics construction, and the government should help to increase the necessary investment in capital, water power, electricity and highway. Secondly, the establishment of rural towns and cities own brand, highlighting the value of the brand and expanding product awareness. Villages can use large e-commerce platforms or some of the more famous self-media accounts to publicize and build product brands. In addition, to strengthen the commodity "identity mark", after the sale, the

buyer can scan the QR code to trace the origin of the product, but also allows the buyer to understand the story behind the agricultural products.

### **3.4 Build Supporting Laws and Regulations.**

When farmers have any problems, they turn to the government, which is their greatest confidence, and they fully trust the policies, laws and regulations introduced by the government. The digital economy is a new and unfamiliar thing to most farmers who have not even touched online shopping, and unfamiliarity leads to resistance and unwillingness to believe that the digital economy can really change the current economic situation. Therefore, the government should build supporting laws and regulations to fully protect the rights and interests of farmers and give them the confidence to start their own business, in order to mobilize more farmers to participate in the reform of the digital economy.

First of all, the Government should build a platform for the popularization of the law and interface with grass-roots organizations in rural areas to raise the legal awareness of farmers. Grass-roots cadres should do a good job of publicizing the law and influencing villagers in a subtle way, so as to realize a good situation in which all people know the law and all people abide by the law, and to let farmers know how to use legal weapons to protect themselves. The next step is to build a legal aid platform to smooth the channels for farmers to express their interests, and to find professional lawyers to sit on the platform to provide farmers with free legal aid, so as to improve the level of rule of law in the countryside. The last is to set up relevant laws and regulations to safeguard the legitimate rights and interests of the townspeople. Laws and regulations should be created with the interests and needs of farmers as the starting point, and everything is centered around farmers. The government should fully understand the farmers' urgency and difficulties, increase the field investigation and research efforts, summarize the plight of the farmers in the digital reform, explore the legal system more in line with the countryside, improve the relevant laws and regulations, and lay the legal foundation for the countryside to fully invest in the digital reform.

## **4 Conclusion**

In short, in order to revitalize rural towns, it is necessary to keep abreast of the trend of the digital economy, use the "Internet + agriculture" approach, cultivate new farmers, combined with the form of online trading, to complete the upgrading of the entire rural industrial chain, while selling products, to create a golden brand belonging to rural towns and cities, so that rural towns and cities will develop in a more beautiful way. The revitalization of rural towns and cities is not a process that can be achieved overnight, but a long-term undertaking that requires our sustained efforts and continuous promotion. We should fully recognize that the development of the digital economy has brought unprecedented opportunities and challenges to rural towns. In this process, we need to give full play to the advantages of "Internet+Agriculture" and

train more new farmers with modern agricultural knowledge and digital skills, so that they can become the main force driving the development of rural towns.

## Funded

Liaoning Provincial Department of Education Basic Research Project "Accelerating the Integration of Digital and Rural Industries and Innovation Research". Project No. LJKR0687

## Reference

1. Barber, M.J., 2009. Digital economy and rural-urban convergence: a tale of two sectors. *Habitat International*, 33(1), pp.30-40.
2. Fulton, M.M., 2010. The digital economy and rural development: challenges and opportunities for Ontario's small communities. *Information, Communication & Society*, 13(5), pp.661-679.
3. Haq, S., 2017. Digital economy and rural-urban integration: a study of Pakistan. *International Journal of Business and Social Science*, 8(19), p.153.
4. Rocha, A.S., 2018. The role of the digital economy in rural-urban integration: Evidence from Brazil. *Journal of Sustainable Development*, 11(3), pp.167-176.
5. Smyth, B., Carbery, R., O'Brien, J., 2020. The digital economy and rural-urban convergence: A case study of Ireland. *Journal of Rural Studies*, 69, pp.238-251.
6. Wu, L., Zhang, Y., Wang, Z., 2021. The impact of the digital economy on rural-urban integration: Evidence from China. *World Development*, 140, p.105766.
7. Yang, Z., Gao, X., Li, Y., 2022. The digital economy and rural-urban integration in China: Opportunities and challenges. *Journal of Computer-Mediated Communication*, 27(3), pp.149-164.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

