

The Dilemma and Outlet of Rural Emerging Industries Based on Digital Finance

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Abstract: The objective of this article is to delve into the challenges and solutions confronted by rural emerging industries leveraging digital finance, aiming to offer theoretical and practical insights for the transformation and upgrading of the rural economy and the execution of the rural revitalization strategy. Our analysis reveals that while the adoption of digital finance in rural emerging industries remains limited, its catalytic effect is nascent. Nevertheless, rural emerging industries still grapple with financing challenges, high financing costs, and inadequate integration with digital finance. Additionally, outdated policies, regulations, and supervisory systems impede the progression of digital finance within these industries. Consequently, this article proposes several developmental pathways, including enhancing the prevalence and acceptance of digital finance, innovating financing models for rural emerging industries, fostering deeper integration between digital finance and rural emerging industries, and refining policies, regulations, and supervisory frameworks. By refining the developmental landscape, innovating financial products and services, and reinforcing the digital transformation and upgrading of industries, we can effectively expedite the rapid growth of rural emerging industries and fully realize the rural revitalization strategy.

1. Introduction

In recent years, digital finance has risen rapidly around the world, which has brought profound changes to the traditional financial industry with its convenience, efficiency and innovation [1]. Especially in rural areas, the development of digital finance provides unprecedented opportunities for the promotion of local economy and the breeding of emerging industries [2]. However, at the same time, rural emerging industries are also facing many difficulties in the development process, such as financing difficulties, information asymmetry and high market access threshold [3]. Therefore, exploring the development dilemma and outlet of rural emerging industries based on digital finance is not only helpful to promote the transformation and upgrading of rural economy, but also of great practical significance to realize the strategic goal of rural revitalization.

The objective of this study is to thoroughly investigate the mechanics of digital finance in fostering emerging industries in rural regions, analyze the current challenges these industries face, and propose effective solutions based on these findings. The specific research aims encompass: examining the current state of digital finance and rural emerging industries, and elucidating the inherent relationship between them; pinpointing the primary hindrances to the development of rural emerging industries, particularly those pertaining to digital finance; exploring how to harness the innovative advantages of digital finance to forge a novel path for the advancement of rural emerging industries. Centered around these objectives, this study will concentrate on addressing the following queries: What is the impact of digital finance on the development of emerging industries in rural areas? What digital finance-related challenges have rural emerging industries encountered during their development? How can digital finance and rural emerging industries be effectively integrated to achieve mutual growth?

2. Digital finance and emerging rural industries

(1) The definition and development of digital finance

Digital finance, also known as financial technology, refers to a new financial format that uses

modern information technologies such as big data, cloud computing and artificial intelligence to improve the efficiency of financial services, reduce operating costs, broaden the scope of services and innovate financial products and services [4]. Its development can be traced back to the rise of Internet finance in the 1990s. After decades of evolution, digital finance has developed from simple applications such as online banking and third-party payment to complex ecosystems covering loans, insurance, wealth management and blockchain [5]. Especially driven by technologies such as mobile Internet, big data and artificial intelligence, digital finance is changing the face of the traditional financial industry at an unprecedented speed.

(2) Definition and characteristics of emerging industries in rural areas.

Emerging industries in rural areas refer to a series of industries with innovation and growth potential, represented by modern agriculture, rural tourism, rural e-commerce and green energy [6]. These industries usually have the following characteristics: first, relying on rural resources, such as land, agricultural products, natural scenery and so on; Second, pay attention to technological innovation and model innovation to improve production efficiency and added value; Third, the market demand is strong and has great development potential; Fourth, it is closely related to rural economic development, which can drive farmers to increase their income and rural employment. However, due to the relatively weak economic foundation in rural areas, these emerging industries are often faced with challenges in capital, technology, market and other aspects in the development process.

(3) The influence mechanism of digital finance on rural emerging industries.

The impact of digital finance on rural emerging industries manifests primarily in several key aspects: Firstly, it offers convenient and efficient financing avenues, addressing the funding challenges faced by these industries. Secondly, by leveraging big data and information technology, it mitigates information asymmetry and enhances the market competitiveness of rural emerging industries. Thirdly, it innovates financial products and services to cater to the diverse financial requirements of rural emerging industries. Lastly, it facilitates the digital transformation and upgrading of rural emerging industries, thereby elevating their overall development level. Consequently, exploring the influence mechanism of digital finance on rural emerging industries holds immense value for fostering their integration and development.

3. The current situation of emerging rural industries based on digital finance

The application of digital finance in emerging industries in rural areas is becoming increasingly widespread. Rural e-commerce platforms provide convenient online payment and financing services for agricultural product sales through cooperation with financial institutions; Green energy projects utilize digital financial methods for fundraising and risk management; The rural tourism industry utilizes digital tools such as mobile payment and online booking to enhance tourist experience and business efficiency. These applications not only optimize the resource allocation of emerging rural industries, but also enhance their market competitiveness and sustainable development capabilities [7]. Table 1 presents some application cases of digital finance in emerging industries in rural areas.

Table 1 Application cases of digital finance

Rural Emerging Industry	Digital Finance Application Cases	Application Effects
Rural E-commerce Platform	Online Payment, Financing Services	Simplify transaction processes, improve capital turnover efficiency
Green Energy	Fundraising, Risk Management	Reduce project costs, increase investment returns
Rural Tourism	Mobile Payment, Online Booking	Enhance tourist experience, increase operational revenue

Digital finance has played an important role in promoting the development of emerging industries in rural areas. First of all, it broadens the financing channels of emerging industries in rural areas, lowers the financing threshold, and enables more innovative projects to get financial support. Secondly, by providing individualized financial products and services, digital finance

meets the diversified financial needs of emerging industries in rural areas and promotes the rapid development of industries. In addition, digital finance has also promoted the digital transformation and upgrading of emerging industries in rural areas, and improved their overall operational efficiency and market competitiveness.

4. Difficulties in the development of emerging industries in rural areas

(1) The popularity and acceptance of digital finance.

Although the application of digital finance in rural areas is gradually increasing, its popularity and acceptance are still limited. On the one hand, the digital infrastructure in rural areas is relatively weak, and the limited factors such as network coverage and bandwidth speed have affected the popularity of digital finance. On the other hand, rural residents' awareness and trust in digital finance are low, and traditional financial concepts and usage habits also restrict the acceptance of digital finance.

(2) The difficulty and expensive financing of emerging industries in rural areas.

In the process of development, rural emerging industries are generally faced with the problems of financing difficulty and expensive financing. Due to the relative lack of financial resources in rural areas, traditional financial institutions have limited loan support for emerging industries. At the same time, the credit rating and risk assessment of rural emerging industries are difficult, which leads to higher financing costs. These factors restrict the fund acquisition and rapid development of rural emerging industries.

(3) The integration of digital finance and rural emerging industries is insufficient.

Currently, the integration between digital finance and rural emerging industries remains insufficiently profound. One limitation lies in the restricted application scenarios of digital finance in rural areas, which have not fully permeated into various emerging industries. Additionally, rural emerging industries exhibit inadequate demand for digital finance, coupled with a dearth of effective collaboration with financial institutions and tailored financial solutions. Consequently, the synergistic potential between digital finance and rural emerging industries remains largely untapped.

(3) The lag of policies, regulations and supervision system.

Under the background of the rapid development of digital finance and emerging industries in rural areas, the relevant policies, regulations and supervision system are relatively lagging behind. On the one hand, the policies and regulations for digital finance and emerging industries in rural areas are not perfect, and there are regulatory gaps and gray areas. On the other hand, the regulatory system is not adaptable to new technologies and new formats, and it is difficult to effectively cope with the risks and challenges brought by digital finance. This restricts the standardized development and innovative application of digital finance in rural emerging industries.

5. The development path of rural emerging industries based on digital finance

In order to improve the popularity and acceptance of digital finance in rural areas, the following strategies should be adopted: first, strengthen the construction of digital infrastructure, improve the network coverage and bandwidth speed in rural areas, and provide strong support for the application of digital finance; The second is to carry out digital finance education and training, improve rural residents' awareness and skills of digital finance, and enhance their trust and acceptance; The third is to promote successful cases of digital finance, show the practical application and effect of digital finance in the development of emerging industries in rural areas, and stimulate the willingness of rural residents to use it.

In view of the difficulty and expensive financing of emerging industries in rural areas, it is necessary to innovate the financing model: first, develop rural digital credit, use big data and artificial intelligence technology to conduct credit rating and risk assessment of emerging industries in rural areas, and reduce financing costs; The second is to explore rural industrial investment funds, guide social capital to invest in rural emerging industries, and broaden financing channels; The third

is to promote rural supply chain finance, focus on core enterprises, provide financing support for upstream and downstream enterprises, and promote the coordinated development of industrial chains. In view of the difficulty and expensive financing of emerging industries in rural areas, innovative financing modes are needed, as shown in Table 2.

Table 2 Paths for Innovating Financing Modes in Rural Emerging Industries

Path for Innovation	Description
Developing Rural Digital Credit	Utilize big data and AI technology to conduct credit ratings and risk assessments for rural emerging industries, reducing financing costs.
Exploring Rural Industry Investment Funds	Guide social capital into rural emerging industries, broadening financing channels.
Promoting Rural Supply Chain Finance	Center on core enterprises to provide financing support for upstream and downstream businesses, fostering collaborative development within the industry chain.

In order to promote the deep integration of digital finance and rural emerging industries, the following measures need to be taken: First, tap the digital finance demand of rural emerging industries, deeply understand the characteristics of financial demand in various industrial fields, and provide customized financial solutions; The second is to promote the digital transformation of emerging industries in rural areas, transform traditional industries with digital technology, and improve production efficiency and added value; The third is to strengthen the cooperation and coordination between digital finance and emerging industries in rural areas, build an industrial financial ecosystem, and achieve mutual benefit and win-win results.

In terms of policies, regulations and supervision system, the following suggestions need to be put forward: First, improve the policies and regulations related to digital finance and rural emerging industries, and clarify the industrial positioning, development direction and support measures; The second is to strengthen the construction of supervision system, improve supervision efficiency and ensure the standardized development of digital finance in rural emerging industries; The third is to establish a risk early warning and disposal mechanism to respond to the risks and challenges brought by digital finance in a timely manner and ensure the steady development of emerging industries in rural areas.

6. Conclusions

This study delves into the developmental challenges and avenues for rural emerging industries through the lens of digital finance. A comprehensive analysis of the current status, predicaments, and influence mechanisms of digital finance and rural emerging industries yields several key findings: while the application of digital finance in rural emerging industries remains limited, it exhibits robust potential; rural emerging industries confront financing difficulties, high financing costs, and inadequate integration with digital finance. Additionally, lagging policies, regulations, and supervisory systems hinder the progression of digital finance within rural emerging industries.

Based on these conclusions, this study proposes the following policy recommendations for fostering the development of rural emerging industries: Firstly, enhance the promotion of digital finance in rural areas to elevate its popularity and acceptance. Secondly, innovate financing models for rural emerging industries, broaden financing channels, and mitigate financing costs. Thirdly, facilitate deep integration between digital finance and rural emerging industries, promoting digital transformation and industry upgrading. Lastly, refine relevant policies, regulations, and supervisory systems to provide robust support for the advancement of digital finance and emerging industries in rural areas. Anticipating the future, the ongoing development of digital finance and the proliferation of rural emerging industries will deepen their integration, jointly catalyzing rural economic transformation and realizing the rural revitalization strategy.

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