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Digital Inclusive Finance Empowering Rural Revitalization in China: A Case Study of Fujian Province

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Abstract: Digital inclusive finance has emerged as a transformative force in China's rural development, providing broad-based financial services through digital technology and thus contributing to the country's rural revitalization strategy. This paper examines the theoretical mechanisms by which digital inclusive finance can empower rural revitalization and analyzes China's progress in building digital financial infrastructure and adoption in rural regions. The study further presents Fujian Province as a case study, highlighting specific programs and platforms, such as Gutian County's "Minfu" inclusive finance service network and Longyan's "e-Longyan" digital finance platform, that illustrate the successful integration of digital finance with rural revitalization initiatives. Empirical evidence from Fujian shows that digital finance has improved access to credit for farmers and micro-entrepreneurs, supported agricultural modernization and rural industries, and spurred rural e-commerce and entrepreneurship. Comprehensive development of digital inclusive finance, coupled with supportive policies, can play a vital role in narrowing the urban-rural divide and achieving China's rural revitalization goals.

Keywords: Digital inclusive finance; Gutian County; Agricultural development; Financial technology; Rural credit; China

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1. Introduction

Rural revitalization has become a central pillar of China's development strategy in the post-poverty alleviation era. First proposed in 2017, the rural revitalization strategy aims to comprehensively address the "three rural issues" — agriculture, rural areas, and farmers — by promoting prosperity in rural industries, improving ecological livability, enriching rural culture, enhancing effective governance, and raising the living standards of rural residents. Achieving these objectives requires not only traditional policy support and investment but also innovative financial inclusion to ensure rural communities have access to the capital and services needed for sustainable development. In this context, inclusive finance — broadly defined as a financial system that provides affordable and effective financial services to all segments of society, especially the poor and underserved — is regarded as a crucial enabler for rural economic and social progress. The concept of inclusive finance was highlighted by the United Nations in 2005, which called for building financial systems that serve all social strata, particularly low-income populations. In China, the government has increasingly emphasized inclusive finance as a means to support rural development and poverty reduction.

With the rapid advancement of financial technology (fintech) over the past decade, digital inclusive finance has emerged as a new paradigm for delivering financial services in rural areas. Digital inclusive finance refers to the use of digital technologies, such as mobile internet, big data analytics, cloud computing, and online platforms, to broaden the reach of financial services in an inclusive manner. Unlike traditional finance, which often struggled to serve dispersed rural populations, digital finance can overcome geographic barriers at lower cost and offer innovative products tailored to small-scale users. By leveraging fintech, digital inclusive finance expands the coverage of financial services, deepens usage among those previously excluded, and diversifies financial products available to rural households and micro-enterprises. China's State Council issued a Development Plan for Inclusive Finance (2016–2020), which underscored building a multi-tiered, digitally-enabled inclusive financial service system across urban and rural areas. In recent years, the rise of mobile payment platforms, online lending, and e-commerce in China's countryside has provided a fertile ground for integrating digital finance with rural economic activities.

Existing research suggests that digital inclusive finance can significantly contribute to rural revitalization through multiple channels [1–2]. Theoretically, digital finance alleviates the longstanding bottlenecks in rural finance, such as information asymmetry, high transaction costs, and lack of collateral, thus enabling greater credit access and investment in rural industries [3–4]. By harnessing technology, digital finance reduces the cost of delivering loans and payments, making it viable for financial institutions to serve small farmers and businesses. It also uses alternative data to build credit profiles for rural borrowers, which helps overcome information gaps and collateral constraints. Furthermore, digital finance platforms can connect rural producers to markets and to wider financial markets, thereby integrating rural economies into the broader value chain. Through these mechanisms, digital inclusive finance is expected to boost rural incomes, encourage entrepreneurship, and facilitate structural upgrades in the rural economy — all key aspects of revitalization. However, empirical analysis is needed to substantiate these effects and to understand any pitfalls or regional variations [5].

This paper aims to provide a comprehensive analysis of how digital inclusive finance empowers rural revitalization in China, with a particular focus on Fujian Province as a case study. Fujian offers an illustrative example as an eastern province with both prosperous coastal cities and less-developed mountainous rural areas, making it a microcosm of regional disparities. Fujian has actively pursued digital finance innovations for rural development, and its experience can yield insights for other regions.

2. Theoretical framework: Digital finance and rural revitalization

2.1. Concept of digital inclusive finance

Inclusive finance is rooted in the idea of offering financial services to all members of society, especially marginalized groups. In China, inclusive finance has been promoted as a means to support farmers, small businesses, and impoverished communities by improving their access to credit, savings, insurance, and payment services. Digital inclusive finance extends this concept by utilizing digital technology to achieve greater scale and efficiency. It encompasses services like mobile payments, internet banking, micro-loans via online platforms, crowdfunding, digital insurance, and other fintech solutions targeted at traditionally underserved populations. A key feature of digital inclusive finance is its universality — everyone (rich or poor, urban or rural) can potentially enjoy financial services via digital channels, as long as they have connectivity. Another feature is lowered cost and risk: fintech applications can automate processes and use data-driven algorithms, which reduces the cost of serving small clients and improves risk management. For example, digital credit platforms can algorithmically assess loan applications from farmers by analyzing data from their sales or even smartphone usage, thus partially substituting for physical collateral. Digital finance also offers convenience — rural clients can access services on mobile apps without traveling long distances to bank branches, which is particularly valuable in remote villages. These characteristics position digital inclusive finance as a catalyst for bridging the urban-rural financial services gap.

In the Chinese context, one widely used measure of digital financial inclusion is the Peking University Digital Financial Inclusion Index (PKU-DFIIC), which tracks the development of digital finance across regions since 2011 [6]. Studies using this index have documented a remarkable expansion of digital financial services in China over the past decade. This expansion has been facilitated by near-ubiquitous mobile internet coverage and the innovation drive of tech firms (e.g., Ant Group's Alipay and Tencent's WeChat Pay) in providing payment and lending products. By 2019, China had become one of the world's most advanced digital finance markets, with hundreds of millions of users conducting transactions and obtaining credit online. Yet, within China, the development was uneven — coastal and urban regions led in the adoption of digital finance, while some inland and rural areas lagged. Governments at various levels have thus sought to actively promote digital finance infrastructure in rural areas as part of the rural revitalization efforts.

2.2. Mechanisms linking digital finance to rural revitalization

Digital inclusive finance can empower rural revitalization through several interrelated mechanisms, corresponding to the multifaceted goals of the revitalization strategy.

2.2.1. Enhancing rural industries and entrepreneurship

A core component of revitalization is industrial prosperity in rural areas (e.g., modern agriculture, rural tourism, agri-business). Digital finance provides critical support by broadening credit access for farmers, cooperatives, and rural entrepreneurs. Fintech lending platforms and digital microcredit services increase the volume of credit available in rural regions, often through innovative products with low thresholds. Research by Li et al. finds that digital finance's technological advantages enable a wider coverage of borrowers and improved loan quality, which in turn promotes the development of rural industries [7]. By lowering financing costs and expanding channels, digital finance helps overcome the chronic issue of rural enterprises being credit-constrained. This fosters entrepreneurship and business expansion. For instance, digital inclusive finance has effectively provided reliable funding and convenient services for innovative start-ups and family businesses in rural areas that traditionally lacked collateral and credit history. With more capital flowing into rural industry, communities can invest in higher value-added activities, upgrade agricultural production, and develop local enterprises, driving rural economic diversification.

2.2.2. Improving household income and consumption

Ultimately, rural revitalization aims to improve the livelihood and affluence of farmers' increasing incomes and consumption levels [8]. Digital inclusive finance contributes here by raising the income-generating capacity of rural residents. It does so via micro-mechanisms like easing formal credit constraints on farm households (so they can invest in better seeds, equipment, or sideline businesses), and facilitating migrant workers or returnees to start small ventures back in their hometowns. Empirical evidence shows that digital financial inclusion has helped narrow the urban-rural income gap by empowering rural residents to earn more. One study, for example, finds that greater penetration of digital finance is associated with higher rural household income and a reduction in income inequality between cities and the countryside. As incomes rise, households are able to increase their consumption, which further stimulates the rural economy. Digital payments also make transactions easier, encouraging rural consumers to participate in e-commerce and broader markets. Li et al. demonstrate that digital finance directly boosts rural consumption and that rural revitalization mediates this effect, meaning digital finance and revitalization efforts together create a virtuous cycle of income and consumption growth [7].

2.2.3. Facilitating e-commerce and market linkages

Digital finance is tightly interwoven with the growth of rural e-commerce, which is a driving force for rural revitalization by connecting farmers to urban markets. E-commerce platforms combined with mobile payments allow farmers and rural artisans to sell products nationally [9]. This brings farmers closer to the market, promoting entrepreneurship and employment. The availability of digital payment infrastructure (QR codes, mobile wallets) in rural villages lowers barriers for farmers to participate in online business. Notably, China's rural e-commerce sales have surged from just ¥180 billion in 2014 to ¥2.17 trillion in 2022 — an indicator of how rapidly digital finance-backed online commerce has expanded. By the end of 2022, over 17.3 million online businesses operated in rural areas, ranging from local specialty sellers to livestream marketers. Such entrepreneurship contributes to rural revitalization by creating jobs, increasing farmers' share of the value chain, and spurring allied services (logistics, packaging) in townships. Digital finance underpins this ecosystem by providing secure payment solutions and often offering sellers micro-loans or insurance. It also helps smooth consumption for rural households, as mobile payment users tend to spend more and have better access to consumer credit. In fact, surveys in China show that by 2019, nearly half of the residents in small cities and rural areas used mobile payments as their primary payment method, reflecting the deep penetration of fintech in daily rural life.

3. Case study — Fujian province: Digital finance empowering rural revitalization

Fujian, located on China's southeast coast, has been an active player in digital inclusive finance, driven by both provincial policy and grassroots innovation. Known for its mountainous terrain (over 80% of Fujian's land area is mountains and hills) and significant rural population, Fujian has a strong imperative to leverage financial inclusion for development. The province's experience illustrates how digital finance can be harnessed in different rural contexts — from poorer inland counties to relatively affluent peri-urban areas — and what outcomes can be achieved. The study focuses on two representative cases: Gutian County in Ningde City, where a pioneering inclusive finance service model was established, and Longyan City, which has built a comprehensive digital finance platform as part of a national pilot. The study also discusses the overall progress and remaining issues in Fujian's rural financial inclusion.

3.1. Gutian County: “Minfu” inclusive finance service network

Gutian County is a primarily agricultural county in northeastern Fujian (under Ningde City), traditionally known for its edible mushroom industry. It was once a poverty-stricken area but has seen significant improvements, partly thanks to innovative financial inclusion efforts. In 2016, a Rural Finance Innovation Project in cooperation with the United Nations Development Programme (UNDP) and Chinese authorities led to the establishment of the “Minfu Center” in Gutian. The Minfu Center is essentially an inclusive financial service network that links together the government, banks, cooperatives, and farmers on a common platform. It was part of a UNDP-backed pilot to build an inclusive financial system at the county level in China, and Gutian was chosen for its unique characteristics and needs.

The Minfu Center model works by incubating and supporting farmer cooperatives and then connecting them with formal financial institutions for credit delivery [10]. Specifically, the center helped standardize local cooperatives (e.g., those for mushroom farmers), improving their governance and creditworthiness, and acted as a hub through which banks could channel wholesale loans to cooperative members. This arrangement tackled the problem of banks being reluctant to lend to scattered small farmers by using cooperatives as aggregation points and credit guarantors. Over time, the network expanded to cover the county, townships, and villages, forming a three-tier financial service system that integrates services and information flow from the grassroots to the county level. Farmers could get loans, make deposits, or buy insurance through village service stations connected to the Minfu network, without having to travel to town. The center also provides financial education to farmers and promotes credit consciousness.

The outcomes in Gutian have been impressive. According to UNDP reports, the Minfu Center boosted local farmers’ revenues significantly. By introducing modern finance into the mushroom industry, it enabled annual production of 50 million mushroom tubes and increased farmers’ income by nearly ¥200 million in aggregate. These gains came from farmers being able to expand cultivation (with loans for inputs), adopt better techniques, and market their products more widely. In 2022, Gutian’s success led to its selection as a pilot site for a new initiative titled “Leveraging Sustainable Finance, Accelerating Rural Revitalization.” Under this initiative, a Digital Brain platform was deployed in Gutian — essentially a big-data credit information system — which enabled local financial institutions to issue ¥234 million in new credit within less than a year to rural beneficiaries, including micro, small, and medium enterprises, women-owned businesses, and smallholder farmers. This reflects a scaling-up of the earlier model using more advanced digital tools to reach a broader range of rural clients.

Gutian’s case shows how a combination of institutional innovation and digital technology can solve the last-mile problem of rural finance. By networking various stakeholders (government, banks, cooperatives) and using digital credit data, Gutian has effectively extended financial services into the rural economy, supporting its pillar mushroom industry and related sectors. This, in turn, has been integral to its rural revitalization — poverty levels fell and Gutian became known nationally as the “Mushroom County”, contributing to both local livelihoods and food security. Gutian’s approach has been recognized as a model for sustainable, green, and inclusive rural development aligned with the Sustainable Development Goals. It demonstrates that digital inclusive finance is not just about apps and websites, but also about institutional frameworks on the ground that ensure fintech serves the real needs of farmers.

3.2. Longyan: “e-Longyan” digital finance platform

While Gutian is a county-level example, Longyan illustrates a city-level initiative under a government-driven pilot. Longyan, located in western Fujian, is a prefecture-level city with a large rural hinterland and is part of the old “Central Soviet” revolutionary base areas. In 2019, Longyan was designated as a National Pilot Zone for Inclusive Finance Reform (focused on old revolutionary base area revitalization). This designation spurred an ambitious experiment in building a comprehensive digital financial services platform to serve local enterprises and residents. The result was the “e-Longyan Digital Inclusive Finance Service Platform” launched by the People’s Bank of China Longyan branch in collaboration with the local Financial Supervision Bureau, Data Management Bureau, and a state-owned big data company.

The e-Longyan platform is essentially a one-stop online financial services “supermarket” that aggregates data and services for credit matchmaking. It pools real-time data from 18 government departments (45 categories, over 2000 data points) — including social security records, housing provident fund, land and property registrations, utility payments (water, electricity), tax records, etc. — to construct a rich credit profile for individuals and businesses in the region. On the platform, 33 banks, 13 government guarantee institutions, and 3 insurance companies have onboarded, collectively offering over 600 financial products (mostly loan and credit products) for users. The system is interoperable with higher-level systems: it connects with the national “Xinyidai” platform and Fujian Province’s “Jinfu Cloud”, ensuring that credit information and financing done through e-Longyan are recognized beyond the city. Effectively, e-Longyan serves as a data-driven intermediary: small firms or farmers can apply through the platform, and the system will match them to appropriate financial products from participating institutions, while sharing necessary verified data with the lenders. This greatly reduces the paperwork and time for loan approval — many steps are automated, and risk control algorithms incorporate the multi-source data.

The benefits of e-Longyan became quickly evident. For example, a flower farmer in a township of Longyan (Mr. Lü, mentioned in a news report) needed financing to expand his flower nursery; through the e-Longyan platform, he applied to a local bank online and obtained a 500,000 yuan loan approval in one day. Such speed and convenience were unheard of in the past when rural loan applications might take weeks and require multiple in-person visits. The platform has special sections like a “Supply Chain Finance” zone, a “New Citizen” products zone (for rural migrant workers settling in cities), and a “Credit Recovery” zone (for those with temporary credit difficulties), showing its inclusive design. It also introduced instant credit products (with names like “Xing Flash Loan”, “Smart Quick Loan”, etc.) that can be approved in seconds based on data analytics. Additionally, e-Longyan digitized collateral management — it linked with the property registry so that things like land or house collateral registration could be done online, enabling “cloud” processing of mortgage registrations, which is particularly beneficial for rural property owners.

The Longyan case underscores the role of government-facilitated platforms in boosting inclusive finance. It shows that when local governments proactively organize data and participants, the synergy can drastically improve financial access for rural communities. The “e-Longyan” model is being watched as a template that could be replicated in other regions to build integrated county-level or city-level financial service platforms for rural revitalization. One of the keys to its success is the trust and collaboration between agencies — the financial regulator, various government departments, and banks agreed to share data under proper safeguards, which addressed the information problems that typically plague rural finance.

4. Conclusion

China's experience to date demonstrates that digital inclusive finance is a powerful enabler of rural revitalization, capable of unlocking new opportunities for communities that were long underserved by traditional finance. The theoretical underpinnings highlight that by reducing transaction costs and information barriers, digital finance expands credit access, boosts incomes, and links rural populations to broader markets — all essential for revitalization. The practical developments nationwide, such as the surge in rural e-commerce and widespread adoption of mobile payments, provide evidence that rural China is increasingly connected to the digital economy.

The case study of Fujian Province offers concrete insights into how policy and innovation can converge to make this a reality. Gutian County's Minfu Center illustrates a successful model of institutional innovation combined with digital tools to support agriculture and lift incomes, while Longyan's e-Longyan platform showcases the role of government-orchestrated data platforms in catalyzing inclusive lending at scale. These examples resulted in tangible economic improvements — from hundreds of millions in new agricultural revenue to tens of thousands of small loans disbursed in minutes — thereby contributing to the objectives of rural revitalization in Fujian.

For digital inclusive finance to truly empower all of rural China, efforts must continue to ensure it is inclusive in breadth and depth. That means extending the digital finance revolution to the poorest and remotest villages, educating users to make sound financial decisions, and safeguarding against new risks that technology may bring. The policy measures recommended — improving infrastructure, education, risk-sharing, coordination, and integration with development programs — provide a roadmap to enhance the effectiveness and resilience of digital finance initiatives. It is equally important to monitor outcomes and iterate policies, as the field of fintech is rapidly evolving (e.g., the rise of AI credit scoring or blockchain in agriculture finance could offer new tools, but also new regulatory questions).

In conclusion, digital inclusive finance should be viewed as both a means and an end in China's rural revitalization. It is a means to achieve broader goals — thriving industries, improved livelihoods, cultural and ecological progress — by financially empowering those driving rural development. And it is an end in itself as part of modernization: a rural society where everyone has access to affordable financial services is inherently more equitable and resilient. Fujian's case confirms that with thoughtful implementation, digital finance can significantly accelerate rural revitalization, turning the once "financially excluded" into active participants in development. As China continues on this path, sharing these lessons and models will be valuable for other developing regions seeking to harness digital finance for inclusive growth. The journey is ongoing, but the evidence thus far is encouraging that digital inclusive finance, under the right policies, can indeed help realize the vision of a prosperous, thriving countryside in the digital age.

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