

# Study on the Impact of Digital Inclusive Finance on Rural Revitalization Strategy in Anhui Province

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**Abstract:** Digital inclusive finance is an important driving force to promote the process of rural revitalization strategy. Taking Anhui Province as an example, this paper constructs a rural revitalization index based on the general requirements of rural revitalization strategy: "prosperous industry, pleasant ecology, civilized countryside, effective governance, and rich life", and empirically studies the impact of digital inclusive finance on the development of rural revitalization in Anhui Province. The results show that the development level of rural revitalization in Anhui Province from 2015 to 2022 has been improving, and digital inclusive finance has a significant positive influence on the development of rural revitalization in Anhui Province. Finally, relevant policy recommendations are given based on the empirical results.

**Keywords:** Digital Inclusive Finance; Rural Revitalization Strategy; Indicator System

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## 1. Current status of domestic and international research

In terms of the definition of digital inclusive finance, Xie Shengfeng (2020) <sup>[1]</sup> proposed that compared with G20 countries, China has advantages in terms of digital inclusive finance acceptance and infrastructure construction, while in terms of digital platform innovation. Innovation is needed in digital means, so China should strengthen the training of digital inclusive finance and increase the relevant supervision.

In terms of the impact of digital inclusive finance on rural revitalization, Zhang Xiaoyan (2021) <sup>[2]</sup> measured the level of rural inclusive finance development and rural revitalization in Yancheng City, Jiangsu Province from 2012-2018 through the coefficient of variation hair and entropy method, and found that rural inclusive finance development has a significant positive effect on rural revitalization, and the effect is non-linear when it works, showing a U-shaped trajectory of first decreasing and then increasing. Meng Qinghai (2019) <sup>[3]</sup> points out that digital inclusive finance provides a low-cost and high-efficiency financing channel for rural revitalization, and the advantages of digital inclusive finance should be given full play to strengthen the reform of institutional mechanism and ecological construction to serve rural revitalization.

Based on this, this paper conducts an empirical analysis using the rural revitalization development data of Anhui Province from 2015-2022 to study the impact study of digital inclusive finance on rural revitalization development in Anhui Province.

## 2. Theoretical analysis of the impact of digital inclusive finance on rural revitalization strategy in Anhui Province

### 2.1 Analysis of the demand for digital inclusive finance to support rural revitalization in Anhui Province

The development of rural revitalization in Anhui Province needs support from new resources introduced by digital inclusive finance. Digital inclusive financial services with low threshold for loan issuance are needed in infrastructure construction, promotion of industrial prosperity and improvement of ecological environment to meet the financing needs of rural residents.

## 2.2 Supply analysis of digital inclusive finance supporting rural revitalization in Anhui Province

The main ways of digital inclusive finance to help rural revitalization are issuing loans, injecting more capital into rural agricultural development, promoting food crop acquisition, providing agricultural insurance, etc. While providing these helps, there are also some issues and problems. Firstly, banks in townships have little authority to approve loans, so loan issuance is insufficient; secondly, financial institutions have insufficient motivation to innovate financial products for rural areas; thirdly, small and micro enterprises in rural areas have the problems of single structure and insufficient risk resistance, which make it difficult to pass the credit rating of loans from financial institutions. The following hypothesis is thus proposed: digital inclusive finance has a catalytic effect on rural revitalization strategy in Anhui Province.

## 3. Research design and regression results

### 3.1 Model setting

The model of the relationship between digital inclusive finance and rural revitalization development constructed by referring to the research method of Huang Dunning (2019)<sup>[4]</sup> is as follows:

Where RURA represents the rural revitalization development index of Anhui Province; Index represents the digital financial inclusion index of Anhui Province; Gs represents the level of financial support to agriculture, PGdp represents the degree of economic development, and Ur represents the urban level;  $\beta$  is the parameter to be estimated; and  $\epsilon$  is the random disturbance term of the model.

### 3.2 Variable definition

In the model, the explanatory variable is the rural revitalization development index. In this paper, five primary indicators and secondary indicators are selected, and the specific indicator system and weights are shown in Table 1.

Table 1 Index system and weights of rural revitalization development

Level 1 indicators	Secondary indicators	direction	weight
Industry prosperity	Effective irrigated area (thousand ha)	Positive	0 . 0009
	Total power of agricultural machinery (ten thousand kilowatts)	Positive	0 . 1028
	Per capita total output value of agriculture, forestry, animal husbandry and fishery (yuan)	Positive	0 . 1410
Ecological livable	Number of hospital beds per thousand units in rural areas (one)	Positive	0 . 1201
	Rural electricity consumption (100 million KWH)	Positive	0 . 1099
Rural civilization	Rural every 100 household color TV (Taiwan)	Positive	0 . 0909
Effective governance	The Engel coefficient of rural residents is (%)	Negative	0 . 1135
	The Green coverage rate of the built-up area is (%)	Positive	0 . 1206
fat city	Per capita disposable income of rural residents (yuan)	Positive	0 . 1099
	Per capita consumption expenditure of rural residents	Positive	0 . 0905

Data source: Anhui Provincial Statistical Yearbook

The explanatory variable is the Digital Inclusive Finance Index. The index is derived from the Digital Inclusive Finance Index compiled by the Digital Finance Research Center of Peking University.

The control variables are financial support to agriculture, economic development level and urbanization level.

### 3.3 Descriptive statistics

The variables were described using Eviews statistical analysis, as shown in Table 2 below:

Table 2 Descriptive statistics of variables

Variable description	variable symbol	average	standard	least value	crest value
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		number	deviation		
Rural Revitalization Index	RURA	3411 . 10	642.81	2425.81	4341.35
The Digital Financial Inclusion Index	Index	184 . 58	83.89	33.07	303.83
Financial support for agriculture	Gs	1012 . 53	216.45	653.05	1310.22
Economic development level	PGdp	35851.13	6934.41	25340	47712
urbanization level	Ur	26.53	3.91	22.69	32.65

Data source: Anhui Provincial Statistical Yearbook

### 3.4 Regression results and analysis

In the first step, simple linear regressions (original series) were performed on Ln(RURA), Ln(Index), Ln(Pgdp), and Ln(Ur) of the same order single integer to obtain regression results and generate residual series. The regressions were estimated using OLS on the explanatory variables digital financial inclusion index, economic development index, and urbanization level index, as in Table 3, and the regression equations were obtained:

Table 3 Results of cointegration test

variable	coefficient	T-statistic
C	0 . 014	1.441
Index	0 . 196	3.859***
PGdp	-3.301	-5.535**
Ur	-0.933	-6.717**

Note: \*\* and \*\*\* indicate significant at 5% and 10% levels, respectively.

The F-statistic of 15.35, the accompanying probability of 0.062, and the R<sup>2</sup> of 0.9584 are obtained from the regression results, and the regression equation is generally well fitted, and the regression coefficient passes the significance test. From the empirical results, it can be obtained that digital inclusive finance significantly promotes the development of rural revitalization, and for every 1% increase in digital inclusive finance, the development level of rural revitalization will increase by 0.196%, so the hypothesis is valid.

## 4. Conclusion

The research results show that digital inclusive finance has a significant positive influence on the rural revitalization strategy with other conditions unchanged.

Based on the research findings, this paper puts forward the following suggestions: first, continue to strengthen the construction of digital inclusive finance in townships; second, while the degree of digital inclusive finance is deepening, the cultivation of financial literacy of rural residents should be strengthened; finally, enterprises should differentially improve the development of digital inclusive finance for different rural characteristics, and digital inclusive finance can be improved from the three aspects of digital inclusive financial coverage, digital inclusive financial depth and Digital financial inclusion can be improved from three aspects: digital financial inclusion coverage, digital financial inclusion depth, and digital financial inclusion digitization, and the efforts can be precisely applied to the weaknesses of different villages.

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