Guangxi Inclusive Finance Research from the Perspective of Rural Rejuvenation

Manlin Jiang\textsuperscript{a}, Yu Han\textsuperscript{b}

School of Guilin University of Electronic Technology, Guilin 541004, China
\textsuperscript{a}350328718@qq.com, \textsuperscript{b}hanyu199401@qq.com

Abstract. Based on the four dimensions of financial penetration, service availability, use effectiveness and Internet support service, this paper constructs the Guangxi Inclusive Financial Indicator System based on the actual situation in Guangxi, based on the coefficient of variation method for 89 cities in Guangxi from 2006 to 2017. The county's inclusive financial level was measured and correlated with the level of economic development. The study found that the overall level of inclusive financial development in Guangxi is low, the development of cities and counties is extremely uneven, showing contiguous poverty, and the level of economic development is significantly positively correlated with the level of inclusive financial development.

Keywords: Rural revitalization, comprehensive well-off, inclusive finance.

1. Introduction

The 19th National Congress of the Communist Party of China first proposed the strategy of rural revitalization and listed it as one of the seven strategies for the future development of the party and the country. The rural revitalization strategy is an upgrade of the new rural construction in the new era, and it is also the deepening of the "three rural issues". Rural construction is related to the country's destiny and national rejuvenation, and is the lifeline of a country. In his report to the 19th National Congress of the Communist Party of China, General Secretary Xi Jinping pointed out that the whole party has thoroughly implemented the people-centered development thinking and implemented the rural revitalization strategy.

In 2018, the Central Committee's No. 1 Document "Opinions of the Central Committee of the Communist Party of China and the State Council on Implementing the Rural Revitalization Strategy" fully deployed the implementation of the rural revitalization strategy. In 2019, the Central Committee of the CPC Central Committee "The Central Committee of the Communist Party of China and the State Council on Adhering to the Priority of Agricultural and Rural Development to Do a Good Job in the "Three Rural Issues" Several Opinions on Work suggest that there is a need to continue to focus on rural revitalization. In September 2019, the Central Committee of the Communist Party of China issued the "Regulations on the Rural Work of the Communist Party of China" demanding adherence to the road of rural socialist rejuvenation with Chinese characteristics. Achieving rural revitalization requires finding a fulcrum from within the country, and inclusive finance is one of the entry points. In recent years, Inclusive Finance plays an important role in the development of the global financial industry. As a financial service tool for the whole society, Inclusive Finance mainly targets poor areas, ethnic minority areas and remote areas. The development of inclusive finance aims to further expand social equity. Reduce financial exclusion and gradually eliminate poverty. Vigorously developing inclusive finance is conducive to promoting poverty alleviation in Guangxi and other poverty-stricken areas, and can also help China build a well-off society in an all-round way.

2. Related Literature Review

Since the United Nations put forward the concept of inclusive finance in 2005, Inclusive Finance has swept the developing countries of the world like the fire of the original, and China has also actively followed up. In the decision of the Third Plenary Session of the 18th Central Committee in 2013, there was a general interest. The concept of finance. At the same time, some scholars have also keenly captured the inclusive financial concept in China, especially in the rural financial field, and
have a very broad application space. They believe that the development of inclusive finance can better serve the poor in China, ease financial exclusion, and optimize “The issue of agriculture, rural areas and farmers is to promote rural revitalization. He Dexu and Miao Wenlong (2015) have proved that in the development of poverty alleviation, the role of inclusive finance is irreplaceable, and it is proposed that financial products suitable for the poor should be designed to better achieve poverty alleviation goals. Li Wanfeng (2016) studied the importance of inclusive finance to rural financial development from the perspective of precision poverty alleviation. Wang Wei (2016) believes that rural financial poverty alleviation in the new era must be guided by inclusive finance, and practically enhance accuracy and effectiveness. Without the development of the rural economy, the rural revitalization strategy will be impossible to talk about, and the rapid development of inclusive finance is undoubtedly a huge thrust for rural revitalization. Domestic inclusive finance urgently needs a basic framework. Xing Wei (2016) put forward a basic theoretical framework for inclusive finance, tentatively put forward the "inclusive financial theory", and compare and analyze through the joint production possibility boundary model. The endogenous and exogenous evolutionary path of inclusive finance. The more underdeveloped areas, the more the main battlefield for poverty alleviation. The special nature of the autonomous region has made Guangxi stand on the cusp of the country's vigorous development of inclusive finance. Some scholars have considerable insights. Wang Yebin (2018) proved that Guangxi Inclusive Finance significantly reduced the urban-rural income gap through the econometric model. On the contrary, the depth of financial development significantly expanded the urban-rural income gap. Reducing the income gap between urban and rural areas is an important goal of inclusive finance, and it is also the top priority of rural revitalization. Zhou Mengliang (2018) believes that by concentrating financial resources and manpower to achieve good development of rural inclusive finance, it is the only way to achieve rural revitalization. And how to concentrate financial and human resources, Li Chuang, Wu Guoqing, Gong Huan (2018) proposed by drawing on the US “composite credit” rural financial system, Bangladesh’s “village bank” model and India’s “self-help group” model. Unclear rural property rights and the importance of improving the credit system. It is also suggested that from extensive poverty alleviation to precise poverty alleviation, accurate poverty alleviation is crucial for rural revitalization. The 2018 Central Document No. 1 "Opinions of the Central Committee of the Communist Party of China on Implementing the Rural Revitalization Strategy" pointed out that the focus of inclusive finance should be placed in the countryside, and then the "Village Revitalization Strategic Plan (2018-2022)" will implement the action rules for rural revitalization. One by one, since then the rural revitalization strategy has entered a solid stage of advancement. Feng Xingyuan, Sun Tongquan, and Wei Hong (2019) believe that the application of inclusive finance in rural areas directly affects the fruits of rural revitalization, and rural inclusive finance should be reformed and innovated from the supply side. General Secretary Xi Jinping proposed that innovation is the first driving force for development. Wang Linsheng (2019) believes that under the rural revitalization strategy, China's ethnic regions can achieve “curve overtaking” through the development of innovative cultural industries and creative economy.

On the whole, since the introduction of the rural revitalization strategy, it has entered a stage of vigorous promotion and rapid development. The issue of “agriculture, rural areas and farmers” is a long-term problem. It is a long-term battle for poverty alleviation. In addition, there are still rural areas in China. More problems need to be resolved. The emergence of the rural revitalization strategy has found an export for these thorny issues, provided a strategic assistance, targeted many practical issues, and broadened China's socialist modernization drive. The rural revitalization strategy needs the support of all aspects, and inclusive finance is not only its most important aspect, but also the most crucial one. Most of the inclusive financial research in China will focus on the construction of the inclusive financial development index system. The calculation of the level, and the selected indicators are different, the calculation method is slightly different, and some of the research focuses on the factors affecting inclusive finance. In the study of inclusive finance, China’s start is not too late, and the momentum is fast. However, the research on inclusive finance in Guangxi is still in the stage of the eagle. Some of the literature focuses on how to narrow the urban-rural income gap in
Guangxi, and some of them have targeted research on several towns or counties. These studies are on Guangxi. Poverty alleviation has played an important role in promoting poverty, but poverty alleviation and development in Guangxi is extremely difficult and requires more people's joint efforts. Based on the existing literature, this paper refers to the international and domestic inclusive financial indicators system. Based on the data availability and usability principles, combined with China's national conditions and the status quo of Guangxi, the construction of Guangxi Inclusive Finance The indicator system measures the level of inclusive finance in various cities and counties in Guangxi from 2006 to 2017 based on the coefficient of variation method, and analyzes the correlation with the level of economic development. Finally, according to the comparison between the inclusive financial index of counties and cities in Guangxi and the inclusive financial index of Guangxi and the whole country, the policy recommendations for promoting the development of inclusive finance in Guangxi under the strategic background of rural revitalization are put forward.

3. Rural Revitalization Strategy and Progress in Poverty Alleviation in Guangxi

Guangxi is one of the main battlefields in the country to get rid of poverty and to build the "old, young, side, mountain, and library". The long-term struggle against poverty has achieved remarkable results. However, due to historical factors, economic foundations and natural conditions, the situation of poverty, large poverty, and deep poverty in Guangxi has not yet been fully improved.

Since the "Twelfth Five-Year Plan", Guangxi's poverty alleviation work has achieved remarkable results. The number of poor people in the region decreased from 10.12 million at the end of 2010 to 1.4 million at the end of 2018, and the cumulative poverty reduction was 8.72 million. The incidence of poverty dropped from 24.3% to 3.3% (Figure 1). In 2018, 7 counties in Guangxi successfully removed poverty, but there are still 28 key poverty alleviation and development counties and 21 autonomous poverty-prone key counties in Guangxi, accounting for 44.95% of all counties and cities in Guangxi, and there are 4 extremely poor counties. In the 100 extremely poor villages, at the end of 2018, the per capita disposable income of rural residents in poverty-stricken areas reached 10,761 yuan, an increase of 8.3% over the previous year.

![Fig 1. Poor population and incidence in Guangxi at the end of 2010-2018](image)

As the autonomous region with the largest ethnic minority population in the country, and due to historical factors, economic foundations, and natural conditions, the central government has been paying close attention to poverty alleviation and development in Guangxi. The balance of agriculture-related loans in Guangxi increased from 225.602 billion yuan in 2010 to 811.325 billion yuan in 2018. However, on the other hand, agriculture-related loans cannot be fully used by the people, and poverty alleviation cannot be done because of the increase in numbers. Too optimistic, many agriculture-related loans are used in infrastructure construction such as real estate, road construction, and water circuits. In fact, this is a kind of amplification of agriculture-related loans.
4. Guangxi's Inclusive Financial Development Level Measurement

4.1 Construction of Indicator System.

| Measure dimension | Descriptive indicator | Specific indicators |
|-------------------|-----------------------|---------------------|
| Financial penetration | Geographical dimension of service penetration | Business network points per 10,000 square kilometers of financial institutions (a) |
| Service penetration in the population dimension | Financial institution business network points per 10,000 people (a) |
| Service availability | Deposit service availability | Residents' per capita savings deposit balance (ten thousand yuan) |
| | Loan service availability | Balance of per capita loans of financial institutions (ten thousand yuan) |
| Use effectiveness | Deposit validity | The proportion of household savings deposits to the GDP of the region (%) |
| | Loan use effectiveness | The proportion of financial institution loan balance to GDP in the region (%) |
| Internet support service level | Internet usage | Internet penetration rate (%) |

4.2 Method Selection.

This paper uses the comprehensive evaluation method to evaluate the development degree of Guangxi Huihui Finance. Considering that Inclusive Finance was only proposed in 2005, this paper finally sets the sample interval to 2006-2017. The index data of this paper are all from Guangxi Statistical Yearbook, Statistical Communiqué of National Economic and Social Development of Guangxi Zhuang Autonomous Region, Statistical Yearbook and Statistical Bulletin of Guangxi City, China Banking Regulatory Commission, China Internet Information Center, Wind Database and Guotaian database.

In order to objectively reflect the difference in the contribution rate of each specific index to the inclusive financial index, this paper uses the coefficient of variation method to determine the weight of each indicator, specifically using the following methods to measure the IFI value of each region:

First, in order to avoid the differences caused by the different dimensions of each indicator, the indicators are standardized in turn. Since the selected indicators are all positive indicators, the specific standardization process is as shown in (1):

\[ X_{ij} = \frac{(x_{ij} - m_{ij})}{(M_{ij} - m_{ij})} \]

4.3 Inclusive Financial Measurement Results and Analysis.

Figure 3 shows the average level of inclusive financial development in various cities and counties in Guangxi from 2006 to 2017. It can be seen from the figure that the minimum IFI of cities and counties in Guangxi is 0.045, the maximum value is 0.318, and the IFI level of most cities and counties is below 0.150. Only a few cities and counties have IFI values between 0.150 and 0.318, and this part the cities and counties are mainly prefecture-level cities, county-level cities, counties and districts close to prefecture-level cities, and coastal cities, and are radiated by surrounding areas with several IFI-high prefecture-level cities. Among the municipal-level administrative districts, IFI is the highest in Nanning, Liuzhou, Beihai, Fangchenggang, Guilin, etc., and IFIs in the county-level administrative districts, Dongxing City, Pingxiang City, Lingchuan County, Pingguo County, Heshan City, etc. The highest, and only Nanning City (the provincial capital) is higher than the national average in all cities and counties, only a few cities and counties are higher than the average level in Guangxi, which shows that the development level of Guangxi Inclusive Finance is still relatively low and needs to be further improved.
It can be seen from Figure 3 that the cities and counties with the highest level of development of inclusive finance are concentrated in the northwestern part of Guangxi and belong to the Beibu Gulf Economic Zone. The Beibu Gulf Economic Zone is a successful business card for the revitalization of rural areas in Guangxi. In 2008, the state approved the implementation of the Guangxi Beibu Gulf Economic Zone Development Plan. Since then, the Beibu Gulf Economic Zone has soared and become a pioneer in the revitalization and development of Guangxi's rural areas. From a poverty-stricken area, it has become the leading development of Guangxi, and it has also developed material from one place to a national development strategy. In 2015, General Secretary Xi Jinping gave Guangxi development. “Three major positionings”, Beibu Gulf has become one of the important links between China and foreign countries in the “Belt and Road” strategy. In terms of the development level of inclusive finance, Liuzhou, Guilin, Fangchenggang and Beihai in Nanning have been at the forefront of Guangxi. From the perspective of rural revitalization, Nanning is the capital of Guangxi and the central city of the Beibu Gulf Economic Zone. The core city of ASEAN has always been the leader of Guangxi in the road of rural revitalization. The development of Nanning City is obvious to all. The latter is a world-famous tourist city. Driven by the rural revitalization strategy, the development prospects of the two are very broad. Rural revitalization needs assistance. The Beibu Gulf Economic Group is one of the thrusts of rural revitalization and development. However, the level of urban development in the Beibu Gulf Economic Group is mixed, with Nanning, which has a high degree of rural revitalization, and a moderate degree of Fangchenggang and Beihai. And the lower degree of Qinzhou City, Yulin City, Chongzuo City, Fangchenggang City is the largest port in western China, is a logistics platform linking China-ASEAN and serving the west, Qinzhou is the “Belt and Road” southward channel land In the sea-node city, Beihai City is the only batch of 14 coastal cities in the western part of China that are further open to the outside world. These three coastal cities have developed rapidly under the operation of inclusive financial policies and are also dark horses under the rural revitalization strategy. In contrast, the rural revitalization development of Hechi City, Baise City, Laibin City, Zhangzhou City, Hezhou City and Guigang City is not ideal. Although it has improved under the influence of inclusive finance, it is compared with the Beibu Gulf economy. The cities within the group have fewer resources, start late, and have a higher degree of financial exclusion. However, the original intention of inclusive finance is to solve financial exclusion. This is intrinsically consistent with the rural revitalization strategy, promoting equal development of urban and rural areas, and complementing each other. In the new era of economic environment, rural revitalization must not be alone. The report of the 19th National Congress proposes that rural revitalization requires various mechanisms and policy support. As the core of the modern economy, finance, especially inclusive finance, is a crucial and crucial support factor for rural revitalization strategy. This paper finds that from the actual situation of 14 prefecture-level cities in Guangxi, the development degree of rural revitalization There is a certain positive correlation between the development level of Huihui Finance. It can be seen that if the city with better development of inclusive finance is taken from the perspective of Guangxi, the rural revitalization work is also better implemented. In turn, the rural revitalization and development is good. Financial advancement will also be at a good level. This paper ranks the rural revitalization level of 14 prefecture-level cities in Guangxi, which can be roughly divided into three steps. The first step is Nanning City, and the second step is Liuzhou City, Guilin City, Beihai City, Fangchenggang City, and the third. The stairs are Qinzhou City, Yulin City, Baise City, Hechi City, Laibin City, Zhangzhou City, Hezhou City, Guigang City, and Chongzuo City. In order to facilitate the connection between the two, according to the measurement results, 14 places in Guangxi the level of inclusive finance in the city is also divided into three steps to facilitate the visual display of the relationship with the degree of rural revitalization.
5. Conclusions and Policy Recommendations

Financial exclusion is widespread in the country and even in the world. It is particularly prominent in economically underdeveloped areas. As one of the main battlefields for poverty alleviation in the country, Guangxi has been deeply plagued by financial exclusion and has not been able to develop good opportunities. The proposal of Inclusive Finance pointed out that the rural revitalization in Guangxi refers to a broad road, and the process of fighting poverty from poverty in Guangxi has affected the progress of the realization of a comprehensive well-off society and the construction of socialist modernization. In 2015, Secretary Xi Jinping gave Guangxi the “three major positionings”. In 2018 and 2019, the No. 1 Document of the Central Committee repeatedly mentioned the strategy of inclusive finance and rural revitalization. The development of Guangxi has increasingly affected the heart of the country, along with inclusive finance and with the advancement of green finance, the construction road of Guangxi Inclusive Finance will achieve a new leap. Based on the inclusive financial indicators given by existing literature, international organizations, domestic institutions and scholars, this paper combines China's basic national conditions with the actual situation of Guangxi based on the principle of availability and usability of data. Based on the inclusive financial indicators issued by the alliance, based on the four dimensions of penetration, service availability, effectiveness of use, and Internet support services, according to the actual situation of Guangxi's inclusive financial development and the availability of indicator data, A representative Guangxi Guangxi Pratt Financial Indicators Evaluation System was used to measure the inclusive financial level of various cities and counties in Guangxi from 2006 to 2017 based on the coefficient of variation method. The research shows that the overall development level of inclusive finance in Guangxi cities and counties is still relatively low. Among the cities and counties, only Nanning City (the provincial capital) has a higher level of inclusive financial development than the national average, and only a few cities and counties have higher levels of inclusive financial development than the average in Guangxi, and the development of cities and counties is uneven, especially in the middle. The level of inclusive financial development in the region, the eastern region and the western region needs to be improved. And the development level of inclusive finance shows the central city radiation, and the levels of the four counties surrounding the urban areas with high development level of Nanning, Liuzhou, Fangchenggang and Beihai are also higher. For ethnic minority autonomous counties, only the Jinxiu Yao Autonomous County has a development level of inclusive finance in the middle and upper reaches of Guangxi. The other 11 minority autonomous counties have an inclusive financial development level in the middle and lower reaches of Guangxi, and 12 minority autonomous counties in Guangxi. All are poor counties, which indicates that poverty alleviation and development work in ethnic minority autonomous counties is still very serious. The paper also finds that there is a significant positive correlation between the development level of inclusive finance and the level of economic development. It is not difficult to find that financial exclusion still exists in most cities and counties in Guangxi, although governments at all levels are striving to promote Pratt & Whitney. The development of finance, but as far as Guangxi is concerned, there is still a long way to go to fully realize rural revitalization.

From the research results of this paper, the development of inclusive finance in various cities and counties in Guangxi is extremely unbalanced, and the level of inclusive financial development is far below the national average. In order to improve this situation and promote the development of Guangxi inclusive finance, the village will be realized as soon as possible. Revitalization can start from the following three aspects:

First, adhere to the peasants as the main body to promote rural revitalization, and solve the problem of rural financing difficulties. Under the traditional rural development model, the farmers are scattered, that is, the small farmers in the true sense. The financial needs of these farmers have obvious micro-financial characteristics, and according to the Rural Revitalization Strategic Plan (2018-2022), Along with the development of rural industries and the adjustment of industrial structure, the financial needs of rural infrastructure, agricultural parks, agricultural parks, one village (township), one county, one county, beautiful villages, characteristic towns, etc. have increased, large farmers, family farms, Farmhouse and rural tourism, creative agriculture, rural e-commerce, agricultural social service
organization, modern agricultural manor, farmer owners, "double-creation" main body, integration of the first two or three industries, the main body of the rural complex construction. The subject is constantly producing. At this time, the peasants are new-type professional farmers and belong to new farmers. From small farmers to new farmers, the main body of rural revitalization is still farmers, but the role can change dramatically. Xinnong people are the main business operators of large-scale agricultural operation, but financing difficulties are still the main obstacles affecting rural development. For the problem of financing difficulties, policy finance should play the role of the main force of poverty alleviation, including the Agricultural Development Bank and the China Development Bank. Policy loans, as well as policy-based loan business undertaken by rural credit cooperatives, the Postal Savings Bank, and the Agricultural Bank of Agriculture, Agriculture and Fisheries Department, may stipulate that the proportion of newly added policy-type poverty alleviation loans by county financial institutions shall not be less than 50% of newly-issued loans. The People's Bank of China can regulate and control poverty alleviation. For poor areas, the amount of poverty-stricken population and poverty level can be increased by 30%~50% based on the amount of normal poverty alleviation loans, and the central bank's poverty alleviation effect is highlighted.

The second is to use more Internet means to promote innovation in financial services. According to Mary Meeker's 2019 Internet Trends Report, by the end of 2018, about 51% of the world's (3.8 billion) people are Internet users, up from 49% in 2017 (3.6 billion people). For the first time, and surpassing 50% of the global population, China Mobile Internet users have reached 820 million, an increase of 9% year-on-year. Each adult spends an average of 6.3 hours per day on digital media, an increase of 7%. In the Internet age, the economy and life of residents have long been inseparable from the Internet. Providing financial services through the Internet platform can make the search of both borrowers and borrowers more efficient, and benefit the wider urban and rural residents in a low-cost way, which is conducive to deepening inclusive financial services. Rural revitalization of financial services is also necessarily based on the Internet. However, rural networks and platforms have almost no data and information advantages. The availability of Internet finance is not high, and the deepening of inclusive finance is difficult to advance. The author believes that it is necessary to strengthen the further Internetization of banking financial services, and strengthen the marriage of banks and Internet information platforms, and promote the digitization of financial services. For example, Industrial and Commercial Bank of China and Bank of China have signed strategic cooperation agreements with Tencent and Baidu respectively to promote Internet financial services. Using data technologies such as the Internet, big data, and cloud computing to build a wide-cover, multi-level convenience financial service network to meet the needs of rural residents for payment settlement and collection and payment of financial services, and to use online lending and mobile lending services. Create a rural Internet financial ecosystem, so that rural residents can also experience convenient and efficient mobile financial services.

The third is to build a poverty alleviation and help chain, and to Nanning, Liuzhou, Guilin, and Fangchenggang, the four cities with the highest development level of Guangxi Pratt & Whitney, to the periphery, and to conduct secondary radiation and three radiations in turn, to Nanning. For example, the surrounding Shangsi County, Fusui County, Long'an County, Wuming District, Binyang County, Heng County, and Lingshan County are all located downstream of Guangxi's Pratt & Whitney financial development level, and a helping group is set up for the surrounding counties. Different ways to help. Longan County has high-quality dragon fruit planting industry and traditional women's weaving textile industry. Shangsi County has forestry and aquaculture industry. Other counties also have their own characteristic industries. Rural revitalization needs to be united and requires the joint efforts of all villages. The development of each village is inseparable from the struggle of every village and everyone. Only the concerted efforts of all parties can realize the goal of inclusive finance at an early date, achieve comprehensive rural revitalization, and realize a comprehensive well-off society.
References

[1]. Zhang R, Naceur S B. Financial Development, Inequality, and Poverty: Some International Evidence [J]. International Review of Economics & Finance, 2019, 61: 1-16.

[2]. DEV S M. Financial Inclusion: Issues and Challenges [J]. Economic and Political Weekly, 2006, 41 (41): 4310-4313.

[3]. Sarma M. Measuring Financial Inclusion [J]. Economics Bulletin, 2015, 35 (1): 604-611.

[4]. Gupte R. Venkataramani, B. and D. Gupta. “Computation of financial inclusion index for India”, Procedia - Social and Behavioural Sciences, 2012, 37(1): 133-149.

[5]. Adrian T, Shin H S. Liquidity and Leverage [J]. Journal of Financial Intermediation, 2010, 19 (3): 418–437.

[6]. Allen F, Qian Y, Tu G, Yu F. Entrusted Loans: A Close Look at China's Shadow Banking System [J]. Journal of Financial Economics, 2019, 133 (1): 18-41.

[7]. Beck T, Demirgü-Kunt A. Access to Finance: An Unfinished Agenda [J]. The World Bank Economic Review, 2008, 22 (3): 383-396.

[8]. Göksu Aslan, et al., “Inequality in Financial Inclusion and Income Inequality,” IMF Working Papers from International Monetary Fund, 2017.

[9]. Buchak G, Matvos G, Piskorski T, Seru A. Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks [J].

[10]. Riggins F J, Weber D M. Information Asymmetries and Identification Bias in P2P Social Microlending [J]. Information Technology for Development, 2017, 23 (1): 107-126.

[11]. Martin A, Monnet C. Monetary Policy Implementation Frameworks: A Comparative Analysis [J]. Macroeconomic Dynamics, 2011, 15 (S1): 145-189.