

MEASUREMENT AND PATH OPTIMIZATION OF HIGH-QUALITY DEVELOPMENT OF RURAL REVITALIZATION IN OLD REVOLUTIONARY BASE AREAS -- A CASE STUDY OF GANZHOU CITY

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Abstract: Based on the perspective of new development concept, this paper explores the theoretical basis and logical mechanism of high-quality development of rural revitalization in Ganzhou old revolutionary base area, and constructs a high-quality development measurement system for rural revitalization in Ganzhou old revolutionary base area. The system includes 15 sub-systems and 47 measurement indicators in 5 dimensions (innovation leading, green development, cultural opening, governance coordination, and achievement sharing). The entropy method was used for empirical research to measure the high-quality development level of rural revitalization in Ganzhou old revolutionary Base area and analyze its longitudinal development law in time, so as to obtain the level and characteristics of each subsystem of high-quality development of rural revitalization in Ganzhou old revolutionary Base Area from 2011 to 2020. The research shows that: The overall level of high-quality development of rural revitalization in Ganzhou old revolutionary base area is not balanced, there is insufficient vitality of innovation and development in innovation-led industry development, the characteristics and advantages of green ecological environment development are not ideal, the quality and efficiency of opening up and development of cultural industry are insufficient, and the governance modernization level of coordinated development of rural governance needs to be improved, The situation in which the development fruits are shared by the people has not yet been fully formed. Therefore, it is proposed that: based on the concept of innovative development, promote industrial integration to consolidate the driving force of development, and vigorously develop the rural real economy to promote the high-quality development of agricultural modernization; Establish the concept of green development, activate development factors to improve development efficiency, give full play to the advantages of green resource endowment to promote the quantification of ecological value; Practice the concept of cultural openness, highlight the source culture to create a plateau of cultural openness, and carry forward the red gene to promote cultural prosperity; Uphold the concept of coordinated development, strengthen policy support to optimize the governance environment, improve the governance level and promote the harmony and order of rural society; Firmly share the concept of development, promote the sustainable and stable increase of farmers' income and improve the quality of life, and create the path optimization of the "Ganzhou model" of high-quality development of rural revitalization.

Keywords: Ganzhou old revolutionary Base area; Rural revitalization; High quality; Development measure; Path optimization

1 INTRODUCTION

The revitalization and development of old revolutionary base areas in the new development stage should take high-quality development as the primary task. On March 17, 2022, The State Council approved the Construction Plan of high-quality Development Demonstration Area in Ganzhou Old Revolutionary Base Area, which clarified that Ganzhou old revolutionary base Area should give full play to its advantages to promote high-quality development and build a model of revitalization and development of old revolutionary base areas in the new era[1]. The Ganzhou old revolutionary Base area is rich in agricultural resources, profound cultural heritage and excellent ecological environment. Transforming resource advantages into competitive advantages, comprehensively promoting the "Rural revitalization strategy" and exploring a high-quality development path for rural revitalization with characteristics of the old revolutionary base area is a major task facing The Times. The new development stage is based on the new development concept, on the basis of clarifying the theoretical implication of building a new pattern of high-quality development of rural revitalization in the old revolutionary base area, and combined with the actual situation of Ganzhou old revolutionary base area, it clarifies the realistic problems of high-quality development of rural revitalization in the old revolutionary base area and its promotion path. It is very important for Ganzhou old revolutionary Base Area to achieve the goal of promoting rural revitalization and common prosperity of farmers and rural areas in the high-quality development, and can also provide an important reference for other old revolutionary base areas in the country to comprehensively promote high-quality rural revitalization and development.

The research on rural revitalization and high-quality development has become a hot trend in the academic circle, and there are quite a lot of research results in their respective fields, but the research results on the high-quality development measurement of rural revitalization in old revolutionary base areas based on the new development concept are rare. The

research holds that the goal of high-quality development of rural revitalization is to realize agricultural and rural modernization and common prosperity of farmers and rural areas. In China's old revolutionary base areas are important carriers for the inheritance of revolutionary red genes. To comprehensively promote rural revitalization and achieve high-quality development in old revolutionary base areas, we should give full play to local[2-4] characteristics such as distinctive agriculture, ecological resources and red culture in the region. It is necessary to ensure the rational development and utilization of resources and transform ecological advantages into economic advantages[5] with core competitiveness, so as to fundamentally improve the well-being of the people's livelihood in the old revolutionary base areas. According to Xiao Weidong's research, the development of rural characteristic industries relying on rural advantageous resources is the source of living water to build a modern rural industrial system, promote the sustainable and high-quality development of agricultural and rural economy and realize the comprehensive revitalization of rural areas, which can effectively expand the multiple functions of agriculture and fully tap the multiple values [6] of rural areas. Li Wan jun et al. believe that agricultural science and technology innovation is an important support to promote rural revitalization, and it is necessary to increase investment in agricultural science and technology, cultivate agricultural science and technology talents, improve the quality of rural management subjects and improve [7] related supporting systems and mechanisms. Ge Xuanchong believes that the value of rural ecological resources can be realized [8] from the reform of the supply side of agricultural production, the repositioning of ecological functions, the property value of ecological resources and the ecological management mode. Yang Mengyu et al. believed that in order to complete the self-construction of ecological value, it should be applied in the policy fields such as rural revitalization and new development pattern to give full play to its effectiveness [9]. Xu Xiaozhou, Fan Jianhua et al. believe that rural cultural industry is the logical starting point for realizing the strategy of rural revitalization, and rural revitalization is the key variable [10-11] for realizing common prosperity. Chen Wenhua et al believe that the Party organization's political guidance, organizational embedment, interest integration and value shaping of rural society are the guiding directions [12] to promote the modernization of Chinese-style rural governance. Yan Lianfu, Shi Hui, Zhao Liang and others hold that welfare benefits in areas [13-16] of people's livelihood such as income distribution, equalization of public services, rural social security system, and employment security should benefit the whole people.

In summary, the academic community has explored the situation of rural revitalization and high-quality development focusing on developing rural characteristic industries, giving play to the value of ecological resources, developing rural cultural industries, giving play to the core role of grass-roots party organizations, and promoting the sharing of development achievements. However, the logical relationship among innovation-leading, green development, cultural opening, coordinated governance and fruits sharing has not been clarified from the theoretical level; Lack of systematic construction of high-quality rural development evaluation system and other problems [17]. In view of this, based on the new development concept, combined with the rural revitalization strategy and the requirements of high-quality development, the research discriminates the logical mechanism of high-quality development of rural revitalization under the new development pattern, constructs a high-quality development measurement system of rural revitalization, and uses the entropy method to conduct empirical research based on the data of Ganzhou City from 2011 to 2020. Measure the high-quality development level [1, 18] of rural revitalization in Ganzhou old revolutionary Base area (18 cities in Ganzhou), draw a conclusion according to the measurement results, and propose an optimization path to promote the high-quality rural development in Ganzhou old revolutionary base area based on the realistic problems reflected in the conclusion.

2 ANALYSIS OF SCIENTIFIC CONNOTATION AND LOGICAL MECHANISM OF HIGH-QUALITY DEVELOPMENT OF RURAL REVITALIZATION

2.1 Scientific Connotation of High-Quality Development of Rural Revitalization

The description of high-quality development of rural revitalization in the report of the 20th National Congress of the Communist Party of China "high-quality development is the primary task of comprehensively building a modern socialist country, comprehensively promoting rural revitalization, building a regional economic layout of high-quality development to promote regional coordinated development" systematically summarizes the rich connotation [19] of high-quality rural development. Comprehensively promoting rural revitalization in high-quality development based on the new development concept is a key measure to achieve high-quality development of rural revitalization, and high-quality development of rural revitalization is a key task in comprehensively building socialist modernization. In the new development stage, we will build a new pattern of high-quality development of rural revitalization based on the new development concept, and realize high-quality development of rural revitalization by promoting innovative development of rural industries, green development of rural ecology, open development of rural culture, coordinated development of rural governance, and shared development of benefits to the people. Therefore, the connotation of high-quality development of rural revitalization is to stimulate the innovation vitality of the agricultural industry, give full play to the green advantages of rural ecological resources, explore the open path of cultural industry development, improve the organizational and coordination ability of rural governance modernization, promote the development of the benefits of the sharing of the situation, promote the high-quality development of agriculture and rural areas, farmers and rural common prosperity, We will continue to raise the level[20] of agricultural and rural modernization.

2.2 Logical Mechanism Analysis of High-Quality Development of Rural Revitalization

The pursuit of high-quality development of rural revitalization is to achieve strong agriculture, beautiful countryside and rich farmers, to lead the development of agricultural industry with innovative concepts, to lead the construction of rural environment with green concepts, to lead the prosperity of rural culture with open concepts, to lead the modernization of rural governance with coordination concepts, and to lead the benefits of development with sharing concepts, so as to give new momentum to the high-quality development of rural revitalization.

2.2.1 Leading the development of agricultural industry with innovative ideas is the driving force for achieving high-quality development of rural revitalization

High-quality agricultural development must be driven by innovation, and technological innovation is the hard strength to achieve high-quality agricultural development. Grasp the new characteristics of high-quality agricultural technology, from the perspective of the entire agricultural industry chain and agricultural technology chain, ensure investment in agricultural science and technology, increase support for agricultural industry innovation, and focus on the core technologies of modern agriculture to make breakthroughs. Reform and innovation-driven development is the soft power to achieve high-quality agricultural development. The factors of high-quality agricultural development are closely related to the system and mechanism of efficient and orderly operation of the industry, and the system and mechanism of high-quality agricultural development need to be guaranteed through reform and innovation. The high-quality development of rural revitalization needs to be driven by the high-quality development of agriculture, and leading the development of the agricultural industry with innovative ideas is the driving force for achieving high-quality development of rural revitalization.

2.2.2 The green concept leading the construction of rural environment is a common form to achieve high-quality development of rural revitalization

Leading the construction of beautiful villages with green concepts is an important part of the country's implementation of the rural revitalization strategy and the practice of harmonious coexistence between man and nature. Promote the development of rural green economy, build an ecological livable environment, clarify the internal logic of rural economic construction and natural ecological livable environment, uphold the concept of sustainable development and ecological security, give play to the leading role of green ecological advantages, fully explore and release the potential economic effects of ecological resources, and realize the dual effects of "green appearance level" and "golden value" in rural environmental construction. The high-quality development of rural revitalization needs to be guaranteed by the capitalization of ecological resources and the greening of production methods. Leading the construction of rural environment with green concepts is a common form to achieve high-quality development of rural revitalization.

2.2.3 Leading the prosperity of rural culture with the concept of opening up is the only way to achieve high-quality development of rural revitalization

Cultural opening is a concrete manifestation of cultural confidence and a basic path to cultural development. Cultural "going global" is an important manifestation of disseminating and carrying forward excellent culture and enhancing cultural soft power. As the main carrier of China's excellent traditional culture, the opening and development of rural culture should give full play to its inclusiveness of "moral commitment" and "sea embracing all rivers", strengthen the improvement of internal cultural literacy and foreign cultural exchanges and cooperation, promote the exchange of cultural information and the sharing of cultural resources, and achieve a win-win situation on the level of cultural value. The high-quality development of rural revitalization requires the open development of rural culture to give full play to its cultural value, and the only way to achieve high-quality development of rural revitalization is to lead the prosperity of rural culture with the concept of openness.

2.2.4 Coordinating ideas to lead the modernization of rural governance is the endogenous feature of achieving high-quality development of rural revitalization

The coordinated development of rural governance and rural social and economic development is a powerful help to accelerate the construction of a modernized rural governance system. Rural governance should meet the people's demands for diversification of income channels, party building leading the construction of grass-roots organizations, and a livable living environment. Strengthening the coordinated development of rural collective economic organization construction, grass-roots governance party organization construction, and rural living environment improvement is the basic support for promoting the construction of rural governance system. The effective development of rural governance system is to realize the modernization of rural governance. The coordinated development of rural economic governance, grass-roots governance and environmental governance is an important guarantee to realize the modernization of rural governance. Leading the modernization of rural governance with the concept of coordination is an endogenous feature of achieving high-quality development of rural revitalization.

2.2.5 Sharing the fruits of development Sharing the people is the fundamental purpose of achieving high-quality development of rural revitalization

Sharing the fruits of development with the people is a perfect interpretation of the concept of shared development in the new era. Marx and Engels once pointed out that "all people will enjoy the welfare created by all" and "production will aim at the prosperity of all people". The concept of shared development is an inheritance and development of the Marxist thought of "sharing" and "common prosperity". It is also a theoretical response to the practical problems facing socialism with Chinese characteristics in the new era. It has rich and profound ideological connotations and clear practical directions. The ultimate goal of high-quality development in rural revitalization is to realize people's survival and development, promote increased agricultural production, farmers' income, rural prosperity, ecological livable and

rural beauty, and benefit farmers to benefit the whole society, so that farmers and the whole society can share the fruits of high-quality development in rural revitalization. Sharing the fruits of development with the concept of sharing is the fundamental purpose of achieving high-quality development of rural revitalization.

3 MEASURE OF HIGH-QUALITY DEVELOPMENT OF RURAL REVITALIZATION IN GANZHOU OLD REVOLUTIONARY BASE AREA

3.1 Measurement Principles and Index System of High-Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Area

3.1.1 Measurement principles of high-quality development of rural revitalization in Ganzhou old Revolutionary Base Area

First, take into account the principle of theoretical guidance and policy practice. According to the rural revitalization strategy, new development concepts, and the requirements of high-quality development, the content of indicators is set, taking into account the actual situation of rural revitalization and development, and emphasizing the cutting-edge theory and forward-looking practice. Second, the principle of systematism. Rural revitalization involves all aspects of rural life, and there is a close logical relationship between the requirements of the two guidelines and the new development concept, which should not only ensure their mutual independence, but also reflect their internal systematic links and realize their organic integrity. Third, the principle of data availability. Considering the reliability and collection of data acquisition, ensuring quantitative calculation, and analyzing according to the characteristics of regional development imbalance in Ganzhou old revolutionary base area.

3.1.2 Ganzhou old Revolutionary Base area of rural revitalization high-quality development measurement index system

Based on the above theoretical and mechanism analysis, according to the existing literature research basis, according to the needs of high-quality development of rural revitalization, and on the basis of following the principles, an evaluation index system consisting of 15 sub-systems and 47 specific indicators in 5 dimensions (innovation leadership, green development, cultural opening, governance coordination, and achievement sharing) is constructed. Based on the data of Ganzhou Old Revolutionary Base Area (18 cities in Ganzhou) from 2011 to 2020, the overall measurement and regularity of high-quality development level of rural revitalization under the perspective of new development concepts are explored. See Table 1.

Table 1 Measurement Index System of High-Quality Development of Rural Revitalization

5 Dimensions	15 Subsystems	Indicator Number	Level Three Indicators	Efficacy		
Innovation Leads A	Industrial Innovation Supports A1	A11	Value added of agriculture, forestry, animal husbandry and fishery (yuan)	positive		
		A12	Output value of agricultural, forestry, animal husbandry and fishery commodities (yuan)	Positive		
		A13	Food production per capita (tonnes / person)	positive		
		A14	Arable land per capita (ha/person)	Positive		
	Industrial Innovation Driving A2	A15	Degree of investment in agricultural insurance (RMB/ha)	positive		
		A21	Agro-processing level (%)	Forward direction		
		A22	Agricultural industrial structure	negative		
		A23	Commodity rate of agriculture, forestry, animal husbandry and fishery (%)	Positive rate		
	Industrial Innovation Guarantee A3	A31	Utilization of land resources (tons/ha)	Forward direction		
		A32	Level of agricultural expenditure (10, 000 yuan/hectare)	Positive		
		A33	Mechanization level (kW/ha)	Forward direction		
		A34	Facility agriculture degree (%)	Positive		
		Green Development B	Environmental Green Development B1	B11	Degree of pesticide use (tons/thousand hectares)	negative
				B12	Degree of fertilizer use (tons/thousand hectares)	negative
B13	Degree of plastic film use (tons/thousand hectares)			negative		
B14	Air quality ratio (%)			Positive		
Green Environment Livable B2	B21	Rural electrification level (million KWH)	Positive			
	B22	Standard degree of village clinic (individual)	Positive			
Green Resource Value B3	B31	Land resource utilization rate (10, 000 yuan/ha)	Positive			
	B32	Agricultural output level (yuan)	Positive			

Culturally Open C	Culture Open And Inclusive C1	C11	Per capita collection level of rural residents (volumes)	positive	
		C12	Civilized village level (per)	Positive	
		C21	Retention rate of nine-year compulsory education (%)	Positive	
	Cultural Openness And Win-Win C2	C22	Rural teacher load (per)	negative	
		C23	Number of township cultural stations (units)	Positive	
		Culture Open Path C3	C31	Popularity of cultural activities in towns and villages (field)	Positive
	C32		Popularization of literary and artistic activities in rural areas (field)	Positive	
	C33		Richness of spiritual and cultural life (%)	Positive	
	Governance Coordination D	Balanced economic development D1	D11	Agricultural labor productivity (10, 000 yuan/person)	positive
D12			Degree of agricultural added value (10, 000 yuan/person)	Positive	
D13			Gini coefficient	negative	
Coordinate Grassroots Governance D2			D21	National "One village, one product" model village degree (number)	positive
		D22	Level of employment in rural agriculture (%)	Positive	
		D23	Grassroots rule of law level (individual)	Forward direction	
		D24	Incidence of rural poverty (%)	negative	
Coordinate Environmental Governance D3		D31	Safe drinking water coverage in rural areas (%)	Positive	
		D32	Penetration rate of sanitary toilets in rural areas (%)	Positive	
		D33	Rural road perfection (km)	Positive	
		Outcome Sharing E	Building, Sharing And Promoting E1	E11	Per capita income of rural residents (Yuan)
E12				Growth rate of per capita net income of farmers (%)	Positive
E13	Wage income level (%)			negative	
E14	Property income level (%)			Positive	
Mutually Beneficial Development Outcomes E2	E21		Income gap between urban and rural residents (x)	negative	
	E22		Rural living standards (%)	negative	
People's Livelihood Outcomes Shared E3	E31		Rural resident living level (SQM/person)	Positive	
	E32		Car ownership by rural residents (units)	Positive	
	E33		Affordability of rural residents (people)	negative	

3.2 Measurement Methods and Data Sources of High-Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Area

This paper uses the entropy method to measure the high quality rural development level of Ganzhou old revolutionary Base area, which avoids the subjectivity of expert empowerment and has the advantage of considerable empowerment. In order to avoid the meaninglessness of the entropy value, the data is shifted by 0.0001. The specific formula is as follows:

Forward index:

$$Y_{ij} = \frac{X_{ij} - \min(X_{ij})}{\max(X_{ij}) - \min(X_{ij})} + 0.0001 \quad (1)$$

Negative indicators:

$$Y_{ij} = \frac{\max(X_{ij}) - X_{ij}}{\max(X_{ij}) - \min(X_{ij})} + 0.0001 \quad (2)$$

Where is the raw data of the first indicator in the first year. $i = \{1, 2, 3, \dots, m\}$ $j = \{1, 2, 3, \dots, n\}$ X_{ij} i J Y_{ij} For the data after standardization of the first indicator in the first year. i J

The second step is to determine the indicator weights: The formula for calculating the information entropy of an index is as follows:

$$E_j = \frac{1}{\ln m} \sum_{i=1}^m P_{ij} \ln(P_{ij}) \quad (3)$$

Of which,

$$P_{ij} = \frac{Y'_{ij}}{n - \sum_{i=1}^n Y'_{ij}} \tag{4}$$

The weights of each indicator are calculated as follows:

$$W_j = \frac{1 - E_j}{n - \sum_{j=1}^n E_j} \tag{5}$$

The score for each indicator is calculated as follows:

$$S_i = \sum_{j=1}^m w_j X_{ij}, (i = 1, 2, 3 \dots n) \tag{6}$$

S_i A larger value indicates i a higher j level of high-quality development under the first indicator of rural revitalization in the region in the first year S_i ; conversely, a smaller value $i j$ indicates a lower level of high-quality development under the first indicator of rural revitalization in the region in the first year.

The data used for empirical analysis were Ganzhou Statistical Yearbook, Jiangxi Statistical Yearbook from 2012 to 2021 and Statistical communiques of Jiangxi Province, Ganzhou City and counties (cities and districts) under their jurisdiction from 2011 to 2020, as well as data published on the official websites of national and local governments (Jiangxi Province, Ganzhou City and counties (cities and districts) under their jurisdiction).

3.3 Measurement Results of High-Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Areas

The demonstration demonstrates the comprehensive level of rural revitalization and high-quality development in Ganzhou old revolutionary base area. It is shown in Table 2.

Table 2 Comprehensive Level of High-Quality Development of Rural Revitalization in Ganzhou Old revolutionary Base Area

Three-Level Indicators	Ej	Gj	Wj	Secondary Indicators	5 Dimensions	
A11	0.8731	0.1269	0.0172			
A12	0.8788	0.1212	0.0165			
A13	0.9543	0.0457	0.0062	Industrial innovation support (0.0784)		
A14	0.9309	0.0691	0.0094			
A15	0.7857	0.2143	0.0291			
A21	0.8954	0.1046	0.0142	Industrial Innovation-driven (0.0464)	Innovation leadership (0.2113)	
A22	0.8900	0.1100	0.0149			
A23	0.8729	0.1271	0.0173			
A31	0.9543	0.0457	0.0062	Industrial Innovation Guarantee (0.0865)		
A32	0.9085	0.0915	0.0124			
A33	0.5930	0.4070	0.0553			
A34	0.9071	0.0929	0.0126			
B11	0.7061	0.2939	0.0399	Environmental green development (0.1127)	Green development (0.1756)	
B12	0.7345	0.2655	0.0361			
B13	0.7926	0.2074	0.0282			
B14	0.9369	0.0631	0.0086			
B21	0.8639	0.1361	0.0185	Green and livable environment (0.0332)		
B22	0.8917	0.1083	0.0147			
B31	0.8909	0.1091	0.0148	Green resource value (0.0297)		
B32	0.8903	0.1097	0.0149			
C11	0.8357	0.1643	0.0223	Cultural openness and inclusiveness (0.0557)	Cultural openness (0.2415)	
C12	0.7539	0.2461	0.0334			
C21	0.7922	0.2078	0.0282	Cultural openness and win-win (0.1043)		
C22	0.8996	0.1004	0.0136			
C23	0.5401	0.4599	0.0625			

C31	0.6549	0.3451	0.0469	Cultural Open Path (0.0814)	
C32	0.8100	0.1900	0.0258		
C33	0.9356	0.0644	0.0087		
D11	0.8837	0.1163	0.0158	Coordinated economic development (0.0564)	
D12	0.8720	0.1280	0.0174		
D13	0.8291	0.1709	0.0232		
D21	0.9020	0.0980	0.0133	Coordinating grassroots governance (0.0554)	Coordinated governance (0.1783)
D22	0.8909	0.1091	0.0148		
D23	0.8948	0.1052	0.0143		
D24	0.9045	0.0955	0.0130		
D31	0.8886	0.1114	0.0151	Coordinating environmental governance (0.0665)	
D32	0.8865	0.1135	0.0154		
D33	0.7351	0.2649	0.0360		
E11	0.8731	0.1269	0.0172	Build, Share and promote (0.0888)	
E12	0.8431	0.1569	0.0213		
E13	0.7415	0.2585	0.0351		
E14	0.8884	0.1116	0.0152		
E21	0.8996	0.1004	0.0136	Reciprocity in development outcomes (0.0246)	Sharing results (0.1932)
E22	0.9191	0.0809	0.0110		
E31	0.7152	0.2848	0.0387	People's livelihood outcomes sharing (0.0798)	
E32	0.7834	0.2166	0.0294		
E33	0.9136	0.0864	0.0117		

Based on the scientific connotation and logical mechanism of high-quality development of rural revitalization from the perspective of new development concepts, this paper constructs a high-quality development measurement and evaluation system for rural revitalization based on Ganzhou old Revolutionary Base Area as an analysis case, and adopts entropy method to measure the high-quality development level of rural revitalization in Ganzhou Old revolutionary base area based on the data of Ganzhou city from 2011 to 2020. The weight of innovation leading is 0.2113, the weight of green development is 0.1756, the weight of cultural opening is 0.2415, the weight of coordinated governance is 0.1783 and the weight of shared development is 0.1932.

3.3.1 Comprehensive Level Analysis of High Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Area

After determining the weight of each indicator of high-quality development of rural revitalization, the comprehensive score of high-quality development level of rural revitalization in Ganzhou old revolutionary base area from 2011 to 2020 was obtained by multiplying and summing the distribution of each indicator with the weight. The specific results are as follows:

Table 3 Comprehensive Score of High Quality Development Level of Rural Revitalization in Ganzhou Old Revolutionary Base Area

Year	Combined score	Rankings
2011	0.3727	5
2012	0.3847	4
2013	0.2931	8
2014	0.2459	10
2015	0.2762	9
2016	0.3084	7
2017	0.3591	6
2018	0.4674	3
2019	0.6261	2

2020	0.6948	1
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From the comprehensive score of high-quality development level of rural revitalization in Ganzhou old revolutionary Base area from 2011 to 2020, the comprehensive level of high-quality development of rural revitalization shows a trend of first rising, then decreasing, and then rising again. From 2011 to 2012, the comprehensive score of high-quality development of rural revitalization increased from 0.3727 to 0.3847, showing a small increase; From 2012 to 2014, the comprehensive score of high-quality development level of rural revitalization dropped from the original 0.3847 to the lowest value 0.2459, because the implementation of Several Opinions in 2012, in the process of revitalizing Gannan Soviet Area, it is necessary to re-layout the economic, political, cultural, social and ecological civilization construction of Gannan Soviet Area. There was a short period of development lag and relaxation; From 2014 to 2020, the comprehensive score of high-quality development in rural revitalization increased from 0.2459 to 0.6948. On the whole, since the implementation of the rural revitalization strategy in 2017, the high-quality development results of rural revitalization in Ganzhou old revolutionary base area have improved significantly.

In order to more clearly describe the high quality development level of rural revitalization in Ganzhou old revolutionary base area, the graphics can directly reflect the high quality development level of rural revitalization in this area. See the following figure for details:

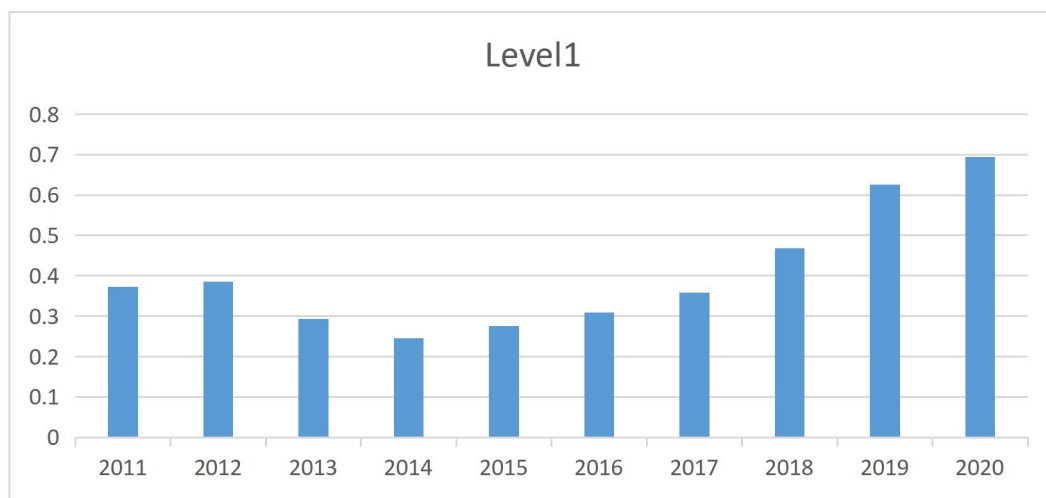


Figure 1 Comprehensive Score of High-Quality Development Level of Rural Revitalization in Ganzhou Old Revolutionary Base Area from 2011 to 2020

The comprehensive scores of innovation leadership, green development, cultural openness, coordinated governance and result sharing were measured empirically in 5 dimensions. The specific results are as follows:

Table 4 Scores in Five Dimensions of Ganzhou Old Revolutionary Base Area from 2011 to 2020

Years	Innovation-led	Green development	Cultural openness	Coordinated governance	Sharing results
2011	0.1095	0.0633	0.0933	0.0218	0.0849
2012	0.1237	0.0611	0.1085	0.0331	0.0583
2013	0.0824	0.0568	0.0547	0.0424	0.0569
2014	0.0757	0.0516	0.0305	0.0495	0.0386
2015	0.0795	0.0485	0.0390	0.0582	0.0510
2016	0.0736	0.0577	0.0437	0.0718	0.0615
2017	0.0749	0.0569	0.0576	0.0994	0.0704
2018	0.0775	0.0910	0.0738	0.1107	0.1144
2019	0.0944	0.1072	0.1387	0.1492	0.1366
2020	0.1188	0.1336	0.1584	0.1624	0.1217

From 2011 to 2020, In Ganzhou old revolutionary Base area, the leading level of rural revitalization, high-quality development and innovation shows a process of first rising and then declining and then rising, the level of green development shows a process of first declining and then rising, the level of cultural opening shows a process of first rising and then declining and then rising, the level of coordination and governance shows a constantly rising process, and the level of achievement sharing shows a process of first declining and then rising. Overall, since the implementation of the rural revitalization strategy in 2017, the rural revitalization of Ganzhou old revolutionary Base

area has been in a stage of rapid development in terms of innovation leading level of high-quality development, green development level, cultural opening level, coordinated governance level, and achievement sharing level. In 2020, due to the impact of the epidemic, there was a short lag in the level of achievement sharing. The development level of the region can be directly reflected by the graph in five dimensions. See the following figure for details:

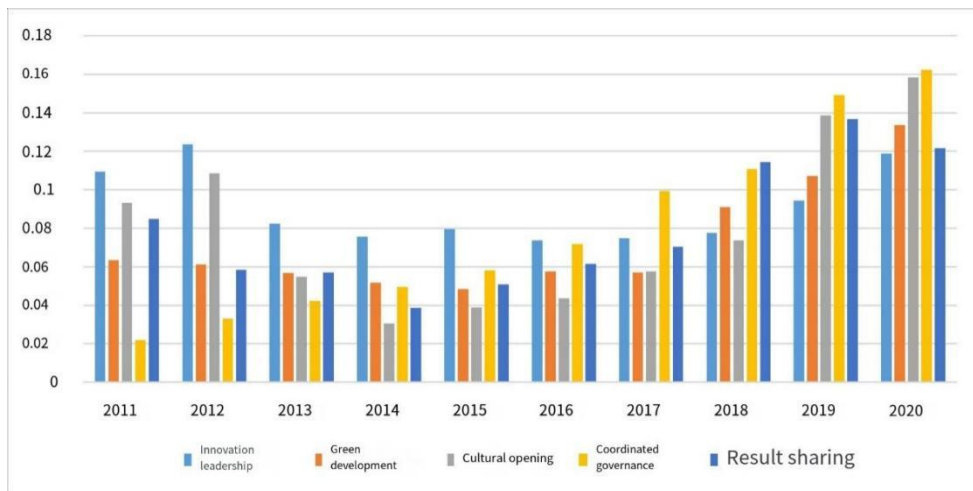


Figure 2 Comprehensive Score of Five Dimensions of High-Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Area from 2011 to 2020

As can be seen from Figure 2-1 and Figure 2-2, the overall evaluation value of each dimension of the high-quality development measurement of rural revitalization in Ganzhou old revolutionary base area is low, mainly because the realization of rural revitalization depends on the feeding back of urban industrialization, and rural resources and other factors converge from rural areas to urban areas before the implementation of the rural revitalization strategy. After the implementation of the rural revitalization strategy, talents, capital, technology, ecology and other elements of resources will gather in the countryside to give full play to the resource advantages of agriculture and rural areas. However, due to the low start of development, rural revitalization requires the comprehensive construction of rural political, economic, cultural, social and ecological civilization, which will be a long process. In each dimension, there are different levels and the phenomenon of short lag or even retrogression. Therefore, in the process of promoting the high-quality development of rural revitalization in Ganzhou old revolutionary base area, there are still shortcomings such as insufficient overall development, unbalanced regional development and incomplete regional characteristics. Specific analysis is made from five dimensions: innovation-leading level, green development level, cultural opening level, coordinated governance level and achievement sharing level.

3.3.2 Analysis of the leading level of innovation and high-quality development of rural revitalization in Ganzhou old Revolutionary Base Area

The innovation leading level is specifically divided into three sub-systems: industrial innovation support, industrial innovation drive and industrial innovation guarantee. From 2011 to 2020, all of them show a process of rising, declining and then rising. Compared with previous years, the industrial innovation support in 2020 has improved. However, the industrial innovation driving and industrial innovation guarantee in 2020 have decreased compared with the previous years.

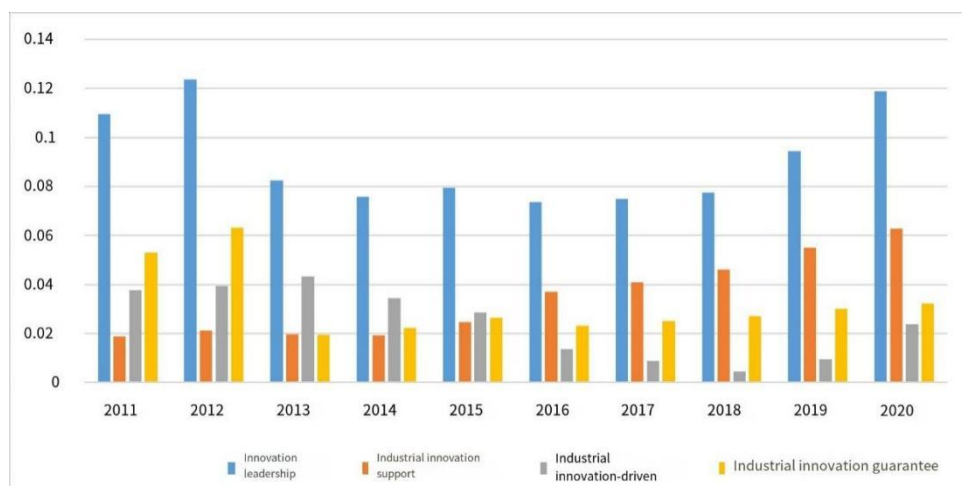


Figure 3 Leading Level of High-Quality Development Innovation in Rural Revitalization of Ganzhou Old Revolutionary Base Area

Revolutionary Base Area from 2011 to 2020

As can be seen from Figure 2-3, the innovation leadership level of Ganzhou old revolutionary Base area is generally low, and the phenomenon of lagging or even regressing in terms of industrial innovation drive and industrial innovation guarantee. The reason is that the Ganzhou old revolutionary base area did not give full play to the local characteristics and advantages into the development of agricultural industry, the core competitiveness of agricultural industry development is slightly declining, the investment in scientific and technological enabling agricultural modernization development needs to be strengthened, and the vitality of cultivating diversified industrial integration development needs to be innovated.

3.3.3 Analysis of the green development level of rural revitalization, high-quality development in Ganzhou old Revolutionary Base Area

The level of green development is specifically divided into three sub-systems: environmental green development, green livable environment and green resource value. According to the data, in terms of environmental green development, there is a process of first decline and then rise from 2011 to 2020. In terms of green environmental livable development, it showed a process of first rising, then declining and then rising from 2011 to 2020. In terms of the value of green resources, it showed a rising process from 2011 to 2020.

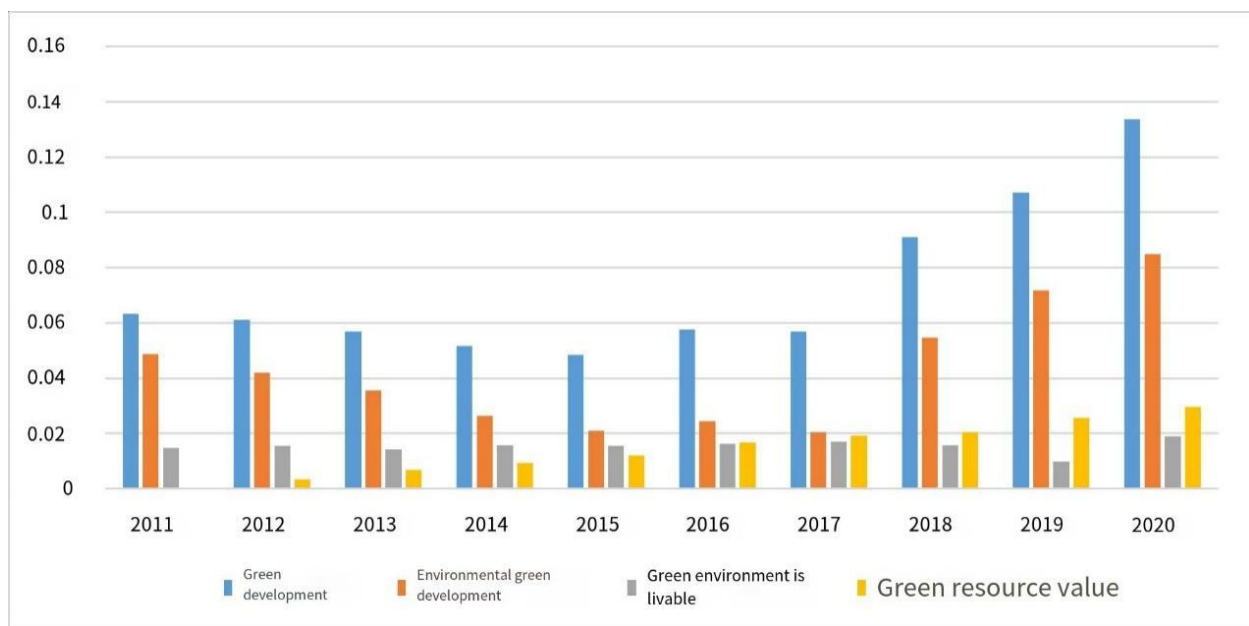


Figure 4 Rural Revitalization and High-Quality Development in Ganzhou Old Revolutionary Base Area 2011-2020 Green Development Level

As can be seen from Figure 2-4, the green development level of Ganzhou old revolutionary base areas is significantly different, and the environmental green development is increasing from high to low, indicating that after the implementation of the rural revitalization strategy, the rural ecological farming technology has been strengthened and the ecological literacy of farmers has been improved; In terms of green and livable environment, it turns from low to high and then to low, indicating that after the implementation of the rural revitalization strategy, rural land, medical care, education and other resource elements have been fully integrated; However, the overall increase in the value of green resources is slow, indicating that Ganzhou old revolutionary Base area is not ideal in exerting the advantages of rural green ecological resources value and has not realized the full transformation of ecological advantages into economic advantages.

3.3.4 Analysis of the opening level of the high quality development culture in the rural revitalization of Ganzhou old Revolutionary Base Area

The level of cultural openness is divided into three sub-systems: cultural openness and inclusiveness, cultural openness and win-win, and cultural openness and path. According to the data, cultural openness and inclusiveness show an overall rising process from 2011 to 2020. From 2011 to 2020, the overall level of cultural openness and win-win and path of cultural openness showed a process of first rising, then declining and then rising.

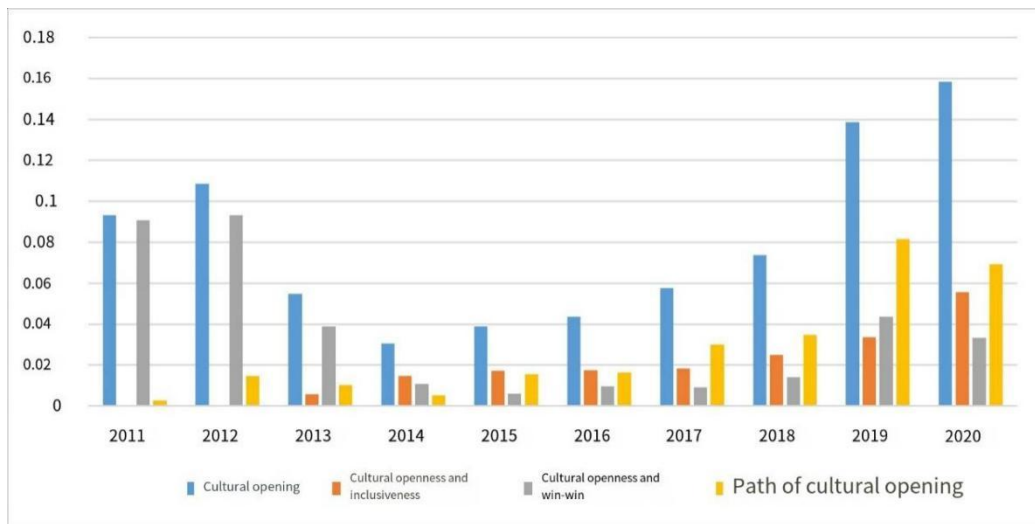


Figure 5 Cultural Opening Level of High-Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Area from 2011 to 2020

As can be seen from Figure 2-5, there are significant differences in the overall level of cultural opening up in Ganzhou old revolutionary base areas. In terms of win-win cultural opening and path of cultural opening, it shows that since the implementation of Several Opinions and the rural revitalization strategy, cultural resources in Ganzhou Old Revolutionary Base areas have been fully integrated, and the degree of cultural construction and cultural education opening has been improved from quantitative to qualitative, but the overall development is slow. Ganzhou old revolutionary Base area has a deep cultural heritage and is highly inclusive. It gives full play to its characteristic heritage advantages to promote the development of rural cultural industry, promotes the quantitative and qualitative improvement of rural cultural opening, and realizes the prosperity of rural culture. There is still a lot of room for progress.

3.3.5 Analysis of coordinated governance level of rural revitalization and high-quality development in Ganzhou old revolutionary base area

The coordinated governance level is specifically divided into three sub-systems: coordinated economic development, coordinated grass-roots governance and coordinated environmental governance. It is consistent with the coordinated governance level dimension in three aspects: coordinated economic development, coordinated grass-roots governance and coordinated environmental governance, and shows an upward trend from 2011 to 2020.

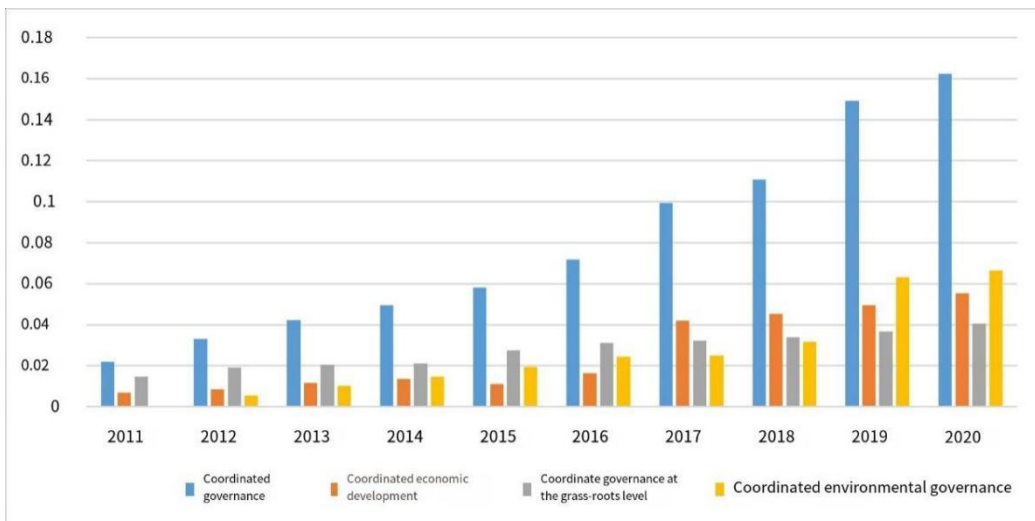


Figure 6 Coordinated Governance Level of High-Quality Development of Rural Revitalization in Ganzhou Old Revolutionary Base Area from 2011 to 2020

As can be seen from Figure 6, the coordinated development level of rural governance in Ganzhou old Revolutionary Base area has been steadily improved, but there is a huge room for improvement. The promulgation of several Opinions, the determination to win the battle against poverty and a series of rural revitalization policies, together with the revolutionary spirit deeply rooted in the people of the southern Revolutionary Old base area, have laid a solid foundation for rural governance in Ganzhou old revolutionary base Area. However, in the new era, to comprehensively promote rural revitalization to achieve agricultural and rural modernization, coordinate the rural "five-in-one" construction, improve the modern rural governance system to promote the modernization of rural governance, it is also

necessary to coordinate all forces to help the rural revitalization and high-quality development of continuous efforts.

3.3.6 Analysis on the sharing level of high-quality development achievements of rural revitalization in Ganzhou old Revolutionary Base Area

The level of achievement sharing is divided into three sub-systems: co-construction and co-development, mutual benefit of development, and sharing of people's livelihood. In terms of co-construction and co-sharing and co-development and co-development and co-development, it shows a trend of first decline and then increase from 2011 to 2020. In terms of reciprocity of development results and sharing of people's livelihood results, both showed an upward trend from 2011 to 2020.

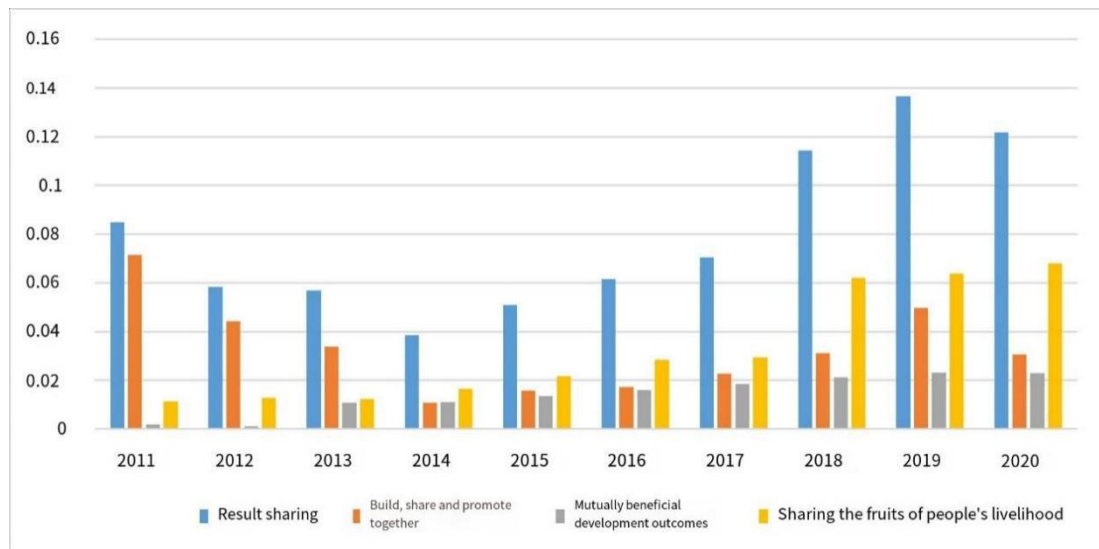


Figure 7 Sharing of High-Quality Development Fruits of Rural Revitalization in Ganzhou Old Revolutionary Base Area from 2011 to 2020

As can be seen from Figure 7, the rising trend of achievement sharing in Ganzhou old revolutionary base area is not obvious, the situation of co-construction, sharing and co-promotion has not been fully formed, and the co-construction, sharing and co-promotion in livelihood areas such as income distribution system, public service system, social security system, employment promotion system, and people's health promotion policy cannot be achieved overnight. The formation of the situation that the development fruits are shared by the people needs the sustained support of policies.

4 OPTIMIZATION OF HIGH-QUALITY DEVELOPMENT PATH FOR RURAL REVITALIZATION IN GANZHOU OLD REVOLUTIONARY BASE AREA

As a typical revolutionary old base area in the new era, Ganzhou Revolutionary old base Area should base itself on the new development stage, fully and accurately implement the new development concept, serve and integrate into the new development pattern, promote high-quality rural development, strive to build "national high-quality development demonstration area of old revolutionary base area", and accelerate the construction of common prosperity pilot area of old revolutionary base area. Taking into account the "characteristics of the new era and the characteristics of southern Ganzhou", in line with the requirements of the development stage and regional characteristics, highlighting innovative, green, open, coordinated and shared development, multidimensional efforts and multiple measures, based on the innovative development concept, promote industrial integration and consolidate the development momentum, and vigorously develop the rural real economy to promote the high-quality development of agricultural modernization; Establish the concept of green development, activate development factors to improve development efficiency, give full play to the advantages of green resource endowment to promote the quantification of ecological value; Practice the concept of cultural openness, highlight the source culture to create a plateau of cultural openness, and carry forward the red gene to promote cultural prosperity; Uphold the concept of coordinated development, strengthen policy support to optimize the governance environment, improve the governance level and promote the harmony and order of rural society; Firmly share the concept of development, promote the sustainable and stable increase of farmers' income and improve the quality of life, create a high-quality development of rural revitalization "Ganzhou model", and constantly improve the level of agricultural and rural modernization in Ganzhou old revolutionary base area.

4.1 Based on the Concept of Innovative Development, Promote Industrial Integration and Consolidate the Development Momentum, and Vigorously Develop the Rural Real Economy to Promote the High-Quality Development of Agricultural Modernization

Based on the concept of innovative development, drive the industrial development of Ganzhou old Revolutionary Base area with innovation, control the overall rural development strategy in the region, strengthen agricultural science and technology innovation and modern facilities and equipment upgrading, guided by the concept of "smart agriculture",

relying on the "industrial chain long system", combined with the construction of "1+3+N" modern agricultural industrial system in Ganzhou old Revolutionary Base Area. Focus on the development of new agricultural machinery manufacturing industry covering the whole industrial chain, gradually occupy the high-end of the industrial chain, and enhance the comprehensive competitiveness of modern agricultural industry. In combination with the construction of digital countryside, we will create high-end rural service industries, vigorously develop new agriculture-related business forms and models such as digital agriculture and rural e-commerce, and focus on strengthening the development of new agricultural machinery manufacturing. Focusing on the characteristic industries of the rural real economy, make use of resources, promote the play and transformation of characteristic resource advantages from multiple angles and levels, clarify the objectives of each county, as well as the integration of funds, industrial layout and project arrangement, optimize and integrate innovation resources, and accelerate the construction of innovation platforms in accordance with the idea of "one county, one industry". Form a collaborative innovation system with enterprises as the main body, the market as the guide, the combination of industry, university and research, and the coordinated development of industrial parks, and promote the value chain of characteristic industries from the low-end to the medium and high end. We will continue to build bases for scientific and technological innovation and transformation, demonstration of science and technology, and personnel training, and modernize the entire industrial chain.

4.2 Foster the Concept of Green Development, Activate Development Factors to Improve Development Efficiency, and Fully Leverage the Advantages of Green Resource Endowments to Quantify Ecological Value

Firmly establish the concept of green development, follow the laws of agricultural production, pay attention to regional characteristics, fully activate the factors of rural development (labor, land, capital, etc.) to enhance the dual efficiency of rural development, continue to promote the green development of agriculture, and take ecological environment friendliness and resource utilization as the guide to promote the formation of green agricultural production methods. To reduce inputs, make production clean, recycle waste and make industrial models ecological; We will strengthen the protection and economical utilization of resources, implement and improve the system of balance between the appropriation and subsidy of cultivated land, implement classified management of agricultural land, strengthen the protection of limited protection of cultivated land, and reduce the intensity of development and utilization of cultivated land. We will promote cleaner agricultural production and strengthen standardized management of agricultural inputs. Continue to promote the upgrading of green and organic geographical indication agricultural products with regional characteristics, focus on serving the overall situation of agriculture, rural areas and farmers, adhere to the unity of economic, ecological and social benefits of green and organic landmark agricultural products, promote the organic unity of economic value, ecological value and social value of ecological resources, and establish a smart agricultural system covering green and organic geographical indication agricultural products plantations. Lay out a complete ecological industrial chain of green organic geographical indication agricultural products with regional characteristics, give full play to the advantages of green resource endowment, scientifically quantify the value of regional ecological resources to enable rural revitalization, and achieve a "win-win situation" of ecological optimization, industrial development, and mass enrichment.

4.3 Practice the Concept of Cultural Opening, Highlight the Source Culture to Create a Highland of Cultural Opening, Inherit the Red Gene to Promote Cultural Prosperity

To practice the concept of cultural openness, improve the system of public cultural services, promote the control of county-level libraries and cultural centers, give full play to the radiating role of county-level public cultural institutions, strengthen the construction of comprehensive cultural service centers at the grassroots level, achieve full coverage of public cultural services in rural areas, and improve service efficiency. Rebuild the rural cultural ecology of Ganzhou old revolutionary base area, take both form and spirit as the guidance, protect the original architectural style and village layout of the old rural area, integrate red cultural elements into the rural construction, dig deep into the historical charm, promote the beauty of humanity, reshape the poetic and leisurely cultural environment and the living environment of green fields and grass, reproduce the original pastoral scenery and nostalgia, and enrich the rural cultural patterns. Promote the integrated development of culture and tourism industry, promote the integration and improvement of various elements and links of culture and tourism industry, give full play to the red cultural advantages, natural advantages and geographical advantages of the Soviet area, make good use of cultural relics and monuments, geographical features and intangible cultural heritage in southern Jiangxi, create a red cultural position, and adhere to the two-way interaction between the development of red culture and tourism industry. Accelerate the integration of business forms, industries, markets and services, make efforts in cultural facilities, cultural activities and cultural services, stimulate the creative inspiration of red culture, enrich the connotation of red culture, express the thoughts and feelings embodied in red culture, introduce new products and services with the characteristics of red culture and tourism, and better meet the spiritual and cultural needs of the people. To lead the development of cultural and tourism industry with the practical needs of the people, promote the inheritance of red culture and promote the prosperity of culture.

4.4 Uphold the Concept of Coordinated Development, Strengthen Policy Support to Optimize Governance Environment, Improve Governance Level and Promote Harmony and Order in Rural Society

Uphold the concept of coordinated development, gather forces from all aspects of rural society, empower rural

governance, provide a good development environment for promoting rural revitalization in old revolutionary base areas, and fully activate the vitality of rural revitalization. Strengthen policy support, improve the system of grass-roots governance organizations with grass-roots Party organizations as the core, uphold the core leadership position of rural integrated party organizations, deepen the practice of villagers' self-governance, strengthen the construction of rural mass self-governing organizations, promote the construction of rural rule of law, carry out in-depth publicity and education activities to introduce laws into villages, improve people's literacy in rule of law, and enhance the level of rural moral governance. Dig deeply into the moral norms contained in the rural acquaintance society and make innovations in accordance with the requirements of The Times; Mobilize all forces, integrate all kinds of resources, strengthen various measures, carry out in-depth concentrated remediation of human settlements and sanitation, and comprehensively improve the quality of rural human settlements; Formulate and improve a number of employment policies and systems, achieve "talent landing" that is, "policy landing", set good posts and positions, use the right talent to achieve the matching of people and posts, mobilize the enthusiasm of talent work, lay a solid and deep foundation for the use of good talent, create a first-class environment for talent development, so that every talent can shine in the right position, Maximize the potential value of talents, nurture the "reservoir" of rural revitalization talents, and guarantee the reserve of talents. To improve rural governance and promote social harmony and order in rural areas.

4.5 Firmly Adhere to the Concept of Shared Development, Promote Sustainable and Stable Increase of Farmers' Income and Improve their Quality of Life, and Create a "Ganzhou Model" for High-Quality Development of Rural Revitalization

We should firmly adhere to the concept of shared development, broaden the channels for farmers to increase their income, and ensure sufficient internal driving forces for farmers to increase their income and steady income growth. We will promote the flow of factors such as human flow, logistics and capital flow between urban and rural areas through the whole value chain of industries in the context of urban and rural spatial development, and promote integrated development between urban and rural areas. We will improve the system of basic public services, raise the level of public services, make them more balanced and feasible, jointly contribute to and share the fruits of development, and continue to improve people's well-being and ensure the quality of life. In combination with the resource endowment and characteristic advantages of villages in Ganzhou old Revolutionary Base Area, model villages such as "thriving industry, increasing farmers' income", "green", "profit" integration, "rich" and "beautiful" double income", "cultural and tourism integration, cultural inheritance", "urban-rural integration, Jiangxi talent return" should be built according to local conditions. To promote the rich villages, beautiful villages, Wenchang villages, thick "governance" villages and other rural revitalization high-quality demonstration sites and demonstration belt that can be promoted and people benefit, and build the "Ganzhou model" of rural revitalization and high-quality development in the old revolutionary base area.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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