How can Corporate Assistance Help Rural Revitalization? Empirical Evidence and Case Study from Wangmo County, Guizhou Province

Desheng Zhang[1], Junchao Zhou[2], & Zhaowei Zhang[3*]

[1] Hebei University of Engineering，management science and engineering，School of Management Engineering and Business, China

[2] Henan University of Technology, computer science and technology, College of Information Science and Engineering, China

[3] China University of Labor Relations, Master of Public Administration, School of Government, China

Correspondence: Junchao Zhou, Henan University of Technology, computer science and technology, College of Information Science and Engineering, Henan, China. E-mail: 2477057992@qq.com

*These three authors have put in equal effort for this paper and are working together.

Abstract

In the comprehensive promotion of rural revitalization today, how enterprises play a key role to help rural revitalization, is a question worth discussing. The previous study mainly discussed the correlation between enterprise assistance and rural revitalization from the perspectives of inclusive finance, digital economy and industrial structure. However, the influence mechanism of enterprise assistance on rural revitalization and typical case studies are not systematic enough. Therefore, this paper selects 12 villages in Wangmo County, Guizhou Province as samples, uses panel data to empirically test and analyze the relationship between enterprise assistance and rural revitalization, and takes Luolang Village's "four-party agreement" model as a typical case to analyze. The study found that enterprise assistance has a significant positive role in promoting rural revitalization, and the "four-party agreement" model has played an important role in poverty alleviation. Through the organic cooperation of the government, enterprises, leading enterprises and farmers, this model successfully established the development pattern of the whole industrial chain and realized the stable poverty alleviation of Luolang Village. This study verified the positive impact of enterprise assistance on rural revitalization, enriched the theoretical model of enterprise participation in rural revitalization, and provided a framework for the application and improvement of the "four-party agreement" model. This has important reference value for promoting enterprises to deepen rural revitalization.

Keywords: rural revitalization, Enterprise help, The whole industrial chain

1. Introduction

In 2015, the All-China Federation of Industry and Commerce, the Poverty Alleviation Office of the State Council and the China Glorious Society officially launched the action of "Ten thousand Enterprises helping ten thousand Villages". The action takes private enterprises as the party to help, poor villages and poor households that have established documents as the object of help, and the main form of signing pairs and village and enterprise construction, striving to use 3 to 5 years to mobilize more than 10,000 private enterprises across the country to participate in helping more than 10,000 poor villages to accelerate the process of poverty alleviation (Chen Qianhen, 2019; Wu Zhihong etc, 2018; Li xin, 2023). The Opinions of the Central Committee of the Communist Party of China and The State Council on Comprehensively Promoting the Key work of Rural Revitalization in 2022 proposed that social forces should be extensively mobilized to participate in rural revitalization and further promote the action of "10,000 enterprises rejuvenating 10,000 villages" (Li Ziyu etc, 2023; Fan Fan etc, 2022). From this document, we can see the state's concern and strong support for enterprises to participate in rural revitalization, and at the same time, it also shows that private enterprises have far-reaching significance for rural revitalization.

Rural revitalization, as an important part of the great rejuvenation of the Chinese nation, is an important research topic for scholars in both theoretical and practical fields. Under the guidance of Chinese national policies,

domestic scholars have explored many new paths and methods for rural revitalization of socialism with Chinese characteristics, and proposed many constructive research conclusions. The primary task of rural revitalization is industrial prosperity, which includes requirements such as coordinating industrial structure and developing regional characteristic industries. Zhang Hong, Wang Lu, et al. (2023) measured the level of rural development in the western region from the perspective of digital rural construction and proposed countermeasures and suggestions for the development of digital rural areas in the western region. Wang Keling et al. (2023) proposed the integration strategy of traditional villages and intangible cultural heritage using the Jinsha River Basin as an example, and proposed a new path for rural revitalization that features industries to drive the integrated development of "tourism+". Xiong Kangning et al. (2023) introduced the important role of ecological product value realization in rural revitalization from the perspective of rocky desertification control. Xu Dingzhong (2023) explores the contribution of optimizing ecological compensation mechanisms to the development of rural industries, taking the rural photovoltaic power generation industry as the background. The key to rural revitalization lies in talent revitalization, and young people are the main force of rural revitalization. Strengthening the ideological and political education of young talents and cultivating their identification with agriculture, rural areas, and farmers is a prerequisite for young people to devote themselves to the cause of rural revitalization (Sui Murong et al., 2023). Sun Qiaoqiao et al. (2023) studied the importance of rural talent revitalization strategy for the construction of teacher teams in small-scale rural schools. The social emotions of rural teachers are the endogenous driving force for the development of rural educational resources (Wang Fei et al., 2023). Chen Jiaqi et al. (2023) proposed the cultivation path and mode of rural talents in characteristic towns. Yan Bing (2023) proposed that the rural revitalization strategy will also empower the career development of young people in ethnic areas. In rural revitalization, young people are needed and given back. To implement the rural revitalization strategy, it is necessary to establish ideals and aspirations from a high level of ideology and politics, and implement strategic policies under the guidance of party and government organizations. In particular, it is necessary to fully leverage the talents of grassroots party organizations on the front line of rural revitalization (Wang Xinyi, 2023; Xin Shuangling et al., 2023; Han Xudong et al., 2023), promote regional characteristic cultural revitalization (Zhang Yu et al., 2023), and summarize the advanced experience of the party in poverty reduction (Wang Fei et al., 2023), The important role of efficient public governance (Zhang Yong, 2023; Mei Jixia et al., 2023) and other aspects.

In the research on promoting rural revitalization through enterprise assistance, domestic scholars have combined the characteristics of Chinese enterprises and analyzed the paths and methods of different types of enterprises driving rural revitalization from the perspectives of state-owned and private enterprises, exploring the feasible path of enterprise assistance empowering rural revitalization. He Xu (2023) proposed three types of rural revitalization enabled by state-owned enterprises: agriculture-business docking type, public service construction type and agriculture-related financial service type. Niu Meng and Li Fuqiang (2023) put forward suggestions on respecting farmers' wishes, scientifically formulating plans and creating demonstration highlights in order to do a good job in supporting central enterprises. Huang Lijing (2023) took advanced private enterprises in poverty alleviation as an example to analyze and explain the positive influence of enterprises' helping behavior from two aspects: market response and financial effect. Wu Wu (2022) summarized the experience and practice of deepening enterprise party building assistance and joint branch building assistance based on the work practice of party building assistance. Wang Ting (2022) proposed to build a long-term mechanism to prevent the return to poverty from the aspects of deepening the mechanism of industrial assistance and income increase. Yang Changyao (2022) explored how state-owned enterprises can give full play to their distinct political, intellectual, financial and industrial advantages in support work. Tian Mi (2021) took Chengdu Yimin Group as a case and conducted a path study based on key factors such as rural talent, rural industry and rural governance. Quite a number of scholars took different regions as cases to discuss the path and characteristic model of rural revitalization in different regions according to local conditions (Pu Meilin etc, 2023; Liu Ying, 2023; Jia Jinan etc, 2023; Xiao Hong etc, 2023; Lei Fei etc, 2023; Zhang Hanwen etc, 2023). There are also some scholars who have discussed the internal connection and methods to realize rural revitalization from the perspectives of consolidating the achievements of poverty alleviation (Lv Jing, 2023), consumer assistance (Li Junxing, 2023; Zhou Lixing, 2017), participation of industrial and commercial capital (Tu Shengwei, 2019), industrial structure (Liu Rui, 2019), and rural entrepreneurship (Zhuang Jincai, 2019). However, there are few articles on exploring the influence mechanism of enterprise assistance on rural revitalization and typical case studies. Therefore, this paper combines the empirical study of enterprise assistance on rural revitalization with the case analysis of Luolang Village, Wangmo County, Guizhou Province, to explore how enterprise assistance can help rural revitalization, which has certain practical significance in theory and practice.

In the process of helping rural areas get rid of poverty and revitalize, private enterprises continue to give full

play to their advantages and explore and form a number of valuable, referable and replicable excellent models. This paper will take Luolang Village, Wangmo County, Guizhou Province as the research object, analyze the "four-party agreement" model formed by the counterpart enterprise Junyao Group in the process of helping, study the development dilemma, and put forward countermeasures and suggestions for the further development of this model.

2. Theoretical Logic

2.1 Rural Revitalization

2.1.1 Concept Definition

Rural revitalization refers to the process of promoting rural economic development, social progress, and ecological civilization construction through policy guidance and financial investment, improving farmers' living standards and happiness, and achieving coordinated urban-rural development. Its connotation includes: industrial prosperity, which means developing agricultural production, achieving agricultural modernization, and promoting the integration and development of primary, secondary, and tertiary industries; Ecological livability refers to promoting green development, building beautiful and livable villages, and improving the living environment; Rural culture refers to inheriting local culture, promoting traditional Chinese virtues, and improving the level of rural civilization; Effective governance means innovating social governance, improving the system of autonomy and rule of law, and forming a good governance pattern; Living a prosperous life means continuously increasing the income level of farmers and enabling rural residents to share the fruits of development.

2.1.2 Implementation Model

With the introduction of the No. 1 Central Document in 2022, China is comprehensively promoting rural revitalization, and all localities are also actively exploring rural revitalization models that meet their own characteristics according to local actual conditions.

The model of rural revitalization in Korea is the model of autonomous coordination. This is a bottom-up approach to rural development, which is suitable for countries or regions with a large gap between urban and rural areas. In this mode, on the one hand, the government needs to transform the countryside in order to create a good image; On the other hand, farmers who have been in poverty for a long time have also taken the initiative to get rid of poverty and become rich.

The Dutch model is lean and intensive. Under the condition of limited rural resources, the Netherlands achieves large-scale and specialized economic benefits through fine operation. This model not only promotes rural economic development, but also realizes sustainable development.

Switzerland advocates an ecological model. The model emphasizes exploring the ecological and cultural values of the countryside and combining them with economic values to improve people's livelihood. This is suitable for developed countries with high levels of industrialization and urbanization, and is a model of rural modernization.

2.1.3 Related Performance

Prosperous industries, livable ecology, civilized rural style, effective governance and prosperity.

Industrial prosperity: This aspect focuses on the development and diversification of the rural economy. Specific performance includes:

agricultural production efficiency: agricultural output value in rural areas, which can also be measured by food output, agricultural product quality, agricultural income and other indicators.

Production diversification: Diversified agricultural production, including deep processing of agricultural products and diversified agricultural industries, can help reduce economic risks in rural areas.

Ecological livability: This focuses on the ecological environment and living conditions in rural areas. Specific performance includes:

Computer penetration: Measures the level of digitization in rural areas, where computer penetration contributes to improved access to information and communication. Vegetation coverage: Measuring the natural ecological environment of a rural area, high vegetation coverage usually represents a better ecology.

Number of roads: Good transport infrastructure, such as rural roads, helps to improve living conditions and quality of life in rural areas.

Rural civilization: This aspect focuses on the cultural and social atmosphere of rural communities. Specific

performance includes:

The number of civic squares: Civic squares are places for social and cultural activities that contribute to entertainment and interaction within the community.

Development of cultural and recreational programmes: Regular cultural and recreational programmes in rural areas help to increase the cultural activity and social interaction of communities.

Effective governance: This aspect focuses on social governance and government effectiveness in rural areas. Specific manifestations include:

government satisfaction: rural residents' satisfaction with government work, which can reflect the quality of government governance.

Dispute resolution: Measures the ability of governments and communities to resolve disputes and problems within rural areas, which contributes to maintaining social harmony.

Well-off life: This focuses on the economic status and quality of life of rural residents. The specific manifestations include:

consumption structure: reflects the consumption habits of rural residents, including the proportion of various expenditures such as food and entertainment.

Engel coefficient: Used in economics to measure the proportion of total household spending on food, it can reflect the quality of life and economic conditions.

These relevant performance indicators can help assess various aspects of rural revitalization to gain a more complete picture of the state of development in rural areas. In practical research, these indicators can be used to build a comprehensive rating system to evaluate and analyze the comprehensive development of rural revitalization.

2.1.4 Current Development Situation

Achievements:

(1) Industrial prosperity: China's agricultural output value continues to grow, the first, second and third industries in rural areas are deeply integrated, and rural industries show new development.

(2) Ecological livable: The level of green agricultural development has been continuously improved, the living environment in rural areas has been significantly improved, and rural ecology has taken on a new look.

(3) Rural civilization: The proportion of civilized villages and towns in the country has increased significantly, the level of rural education has improved significantly, and rural culture has taken on a new look.

(4) Effective governance: A new pattern of rural governance featuring party committee leadership, government responsibility, social coordination, public participation, and legal guarantee has been formed.

(5) Well-off life: The per capita disposable income in rural areas has been growing faster for a long time, the income of rural migrant workers has steadily increased, and the living standards in rural areas have significantly improved

Dilemmas:

The achievements in poverty alleviation need to be further consolidated and expanded. The homogenization of agricultural products is more prominent, which affects the sustainable development of industry. The channels for farmers to increase their income are limited, and the stability of industry and employment is affected to a certain extent under the changes in the macro environment. Compared with the expectations of farmers, there are still gaps in rural public services, infrastructure and living environment. Many rural areas rely too much on policy support, and their internal growth drivers need to be improved.

2.2 Support from Enterprises

2.2.1 Basic Concepts

Enterprise help can be divided into two categories, broad and narrow.

In a broad sense, enterprise help is a variety of poverty alleviation and charity activities carried out by enterprises. These activities are carried out in the name of enterprises, target poor areas or poor people, and have a certain scale and continuity.

In the narrow sense, enterprise assistance means that enterprises help poor objects participate in the production and operation activities of all links of the industrial chain according to their own industrial development needs.

By driving regional industrial development, help the poor people get rid of poverty and get rich, and realize the transformation from "blood transfusion type" to "blood transfusion type" poverty alleviation.

2.2.2 Model

Summarizing the practice over the past years, there are four main modes of enterprise help:

(1) Government-led, enterprise participation

The government plays a leading role in poverty alleviation activities, providing various elements of poverty alleviation and organizing activities. Enterprises participate in government poverty alleviation projects through supporting implementation and other means, providing useful supplements to government activities.

(2) Designated by the government and implemented by enterprises

The government directs relevant departments and units to assist in poverty alleviation. Enterprises carry out practical assistance work according to government arrangements.

(3) Enterprise autonomy and government support

Enterprises consider their own needs and invest directly in industrial projects in poor areas to cultivate farmers' production capacity. The government provides support in many ways, such as financing, land, training, infrastructure, etc.

2.2.3 Corporate Donation and Third-Party Implementation

Enterprises participate in poverty alleviation through independent organizations, and donations are often combined with public welfare activities, most of which are implemented by private enterprises.

2.3 Basic Performance

In October 2015, the All-China Federation of Industry and Commerce and other departments launched the "10,000 enterprises help 10,000 villages" action. The action is mainly supported by private enterprises.The target is poor villages and poor households, and the form is mainly signed by village enterprises. The goal is to mobilize more than 10,000 enterprises to participate in 3-5 years, help 10,000 poor villages get rid of poverty, and promote the development of non-public economy.

In January 2022, the Central Committee of the Communist Party of China and The State Council proposed to continue to further promote the "10,000 enterprises rejuvenating 10,000 villages" action. This is an important decision made in accordance with the actual situation of China's rural areas, and is an integral part of the rural revitalization strategy, which is conducive to building a new development pattern and promoting sustained and healthy economic development.

3. Research Design

3.1 Data Sources

Based on the theoretical research results of literature review, this paper selects a suitable research model according to the relevant results and literature research of rural revitalization, and makes preparations for data collection and processing around the research model. This paper selected 12 typical villages in Wangmo County, Guizhou Province as research cases. Through information collection on government websites and field investigations and visits, measured data on rural revitalization of sample villages from 2015 to 2022 were obtained. Data collection, sorting and pre-processing were completed by EXCEL software. The construction of variables is completed by stata software programming. In order to eliminate the influence of extreme values in the sample on the research and ensure the accuracy of the data research, this paper carries out tailing processing at the level of 1% and 99% for the sample variables.

3.2 Variable Selection

1. Explained variable Rural revitalization. When selecting indicators to measure rural revitalization and development, this paper, based on the practices of Wang Min and Gu Yu et al. (2023), constructs the following rural revitalization rating and measurement indicators, involving five rating indicators: industrial prosperity, ecological livability, rural culture, effective governance, and prosperity, with 11 secondary indicators. The comprehensive index of rural revitalization was calculated by entropy weight method.

Table 1. Comprehensive index system of rural revitalization

Primary index	Secondary index	Two level index measurement method	Direction of influence
thriving businesses	productivity effect	Per capita output value of agriculture, forestry, animal husbandry and fishery in rural areas (in ten thousand yuan)	+
	Production diversification	Number of agricultural product processing enterprises	+
pleasant living environment	Computer penetration rate	Number of households with computers/total households	+
	vegetation coverage	Vegetation cover area/total area	+
	Number of roads	Number of rural roads	+
	Number of civic squares	Number of rural cultural square construction	+
rural civilization	Entertainment programs are carried out	Annual development of rural entertainment programs	+
Effective governance	satisfaction with government	People rate their satisfaction with the government	+
	settling dispute	Number of disputes resolved among villagers	+
affluence	consumption structure	Entertainment consumption expenditure/Total expenditure	+
	Engel coefficient	Rural expenditure on food, tobacco and alcohol/Total expenditure	−

Source. Literature Summary and Innovation Proposed.

2. Explain the variable enterprise help (Size). This index adopts the scale proportion of the primary industry, the secondary industry and the tertiary industry developed under the mode of enterprise assistance, mainly involving the proportion of the agricultural product planting scale, the output value of agricultural product deep processing enterprises, and the annual output value of tourism service industry in the total output value of the village. This index can comprehensively measure the direct economic benefits brought by enterprise assistance and its impact on various indicators of rural revitalization.

3. Control variable The control variable selected in this paper is per capita Income, which is used to measure the economic development level of each village. Talent return rate (Talent, the number of rural talents returning/total population), education penetration rate (Student, the number of people receiving junior high school education or above/total population) and Medical insurance penetration rate (Medical, the number of people covered by medical insurance/total population) are used to measure the education level, talent situation and medical level.

The details of each variable are as follows:

Table 2. Variable details table

types of variables	variable name	variable symbol	variable declaration
explained variable	rural revitalization	Rural	The evaluation system of the comprehensive index of rural revitalization is based on five rating indicators: industrial prosperity, ecological livable, rural style civilization, effective governance and rich life
explaining variable	Enterprise assistance	Industry Size ratio (Size)	The industrial scale developed under the mode of enterprise assistance
control variable	Per capita income level	Income	
	Number of returning talents	Talent	Local economic development, medical level, talent situation to eliminate the endogenous influence
	Educational penetration rate	Student	
	Medical insurance coverage rate	Medical	

Source. Literature Summary and Innovation Proposed.

3.3 Research Hypothesis

Existing studies on rural revitalization mainly focus on the research path to realize rural revitalization, involving various aspects such as inclusive finance, digital economy, and enterprise assistance. However, the internal

connection and influence path between corporate assistance and rural revitalization have not been fully demonstrated in the literature. Therefore, the following research hypotheses are proposed in this paper.

3.4 Model Construction

$$Rural_i = \alpha_0 + \alpha_1 Size_i + \alpha_2 Income_i + \alpha_3 Talent_i + \alpha_4 Student_i + \alpha_5 Medical_i + \varepsilon_i$$

Where, α_j represents the partial regression coefficient of item j, ε represents the random disturbance item, and subscript i represents the i sample year of sample villages in Wangmo County, Guizhou Province. $Rural_i$ represents the rural revitalization level of sample villages in year i, $Size_i$ represents the proportion of industrial scale of sample villages in year i, $Income_i$ represents the per capita income level of sample villages in year i, $Talent_i$ represents the talent return rate of sample villages in year i, $Student_i$ represents the education penetration rate of sample villages in year i, and $Medical_i$ represents the medical insurance penetration rate of sample villages in year i.

4. Empirical Results

4.1 Descriptive Statistical Analysis

Firstly, descriptive statistical analysis of the sample data is carried out, and the mean, median, standard deviation, maximum and minimum values of 96 sample data are analyzed. The average score of Rural revitalization rating (Rural) is 4.7813, which indicates that its score level is not high, and its average is lower than the median of 5, indicating that the rural revitalization rating score level of the sample as a whole is low, the standard deviation is 1.4953, and the highest score is 8, indicating that the dispersion degree of sample data is large. The difference in the overall rural revitalization rating level is obvious, reflecting the obvious difference in the rural revitalization construction level of each village in Wangmo County, Guizhou province. The mean value of the industrial scale (Size) built under the enterprise help mode is 0.1084, which is greater than the median value of 0.0709, indicating that the overall industrial scale built under the enterprise help mode of each village in Wangmo County is large, and the standard deviation is 0.1114, indicating that there is little difference in the intensity of enterprise help in each village in Wangmo County, and the sample data is relatively concentrated. It shows that Wangmo County's overall enterprise help mode is effective and has achieved remarkable results. From the perspective of control variables, the average values of per capita Income, Talent return rate, education penetration rate and Medical insurance penetration rate of villagers are all greater than the median, which shows that the overall economic level, medical level, education level and talent situation of various villages in Wangmo County are all in a good state. The development level of most villages is in the upper level, on the one hand, thanks to the local unique development mode, on the other hand, because of the effect of the enterprise assistance mode on their rural governance in recent years. Among them, the variance of villagers' per capita Income level, education penetration rate and Medical insurance penetration rate are all small, which shows that there is not much difference between each sample village. The variance of Talent return rate (Talent) reached 1.2359, and the degree of dispersion among the sample data was large. The uneven situation of talent return among the villages in Wangmo County was affected by the size and population of the villages on the one hand, and the effect of the policies and attractions of the villages on the other hand.

Tab.3 Descriptive statistical results

Variable	N	Mean	p50	SD	Min	Max
Rural	96	4.7813	5.0000	1.4953	2.0000	8.0000
Size	96	0.1084	0.0709	0.1114	0.0042	0.5477
Income	96	0.2833	0.2125	0.2492	0.0023	0.8930
Talent	96	0.2279	0.2236	1.2359	0.2122	0.2587
Student	96	0.5071	0.4934	0.1746	0.1478	0.9680
Medical	96	0.3088	0.3053	0.0865	0.1310	0.6199

Source. Stata Empirical Software Descriptive Statistics.

4.2 Correlation and Multicollinearity Analysis

In order to further study the relationship between enterprise assistance and rural revitalization, this paper uses pearson correlation coefficient analysis to analyze the statistical variables of sample companies. Without increasing control variables, the correlation coefficient between enterprise assistance and Rural revitalization rating score (Rural) is 0.451. From the perspective of control variables, the correlation coefficients between

villagers' per capita Income level (Income) and Talent return rate (Talent return rate) and Rural revitalization rating score (Rural) were 0.258 and 0.280, respectively, both at the level of 1%. The correlation coefficient between education penetration rate (Student) and Rural revitalization rating score (Rural) is only 0.006, which is significantly positive at the level of 10%. The correlation coefficient between Medical insurance coverage rate (Medical) and Rural revitalization rating score (Rural) is 0.249, which is significantly positive at 5% level.

Based on the correlation coefficient between explanatory variables and explained variables, the analysis shows that enterprise assistance (Size) and Rural revitalization rating score (Rural) are positively correlated at 1% level. The results show that there is a positive correlation between Size and Rural vitalization rating, that is, SIZE is conducive to improving rural vitalization rating. In addition, the per capita income level of villagers, the return rate of talents, the penetration rate of education and the penetration rate of medical insurance are also positively correlated with rural revitalization, indicating that the improvement and development of rural economy, talents and medical environment have a positive effect on rural revitalization.

Table 4. Correlation results

	Rural	Size	Income	Talent	Student	Medical
Rural	1					
Size	0.451***	1				
	0.1426					
Income	0.258***	0.191*	1			
	0.0049	0.0623				
Talent	0.280***	0.052*	0.312***	1		
	0.0058	0.6164	0.0020			
Student	0.006*	0.407***	0.245**	0.103		
	0.9544	0.0000	0.0160	0.3180		
Medical	0.249**	-0.243**	0.087*	0.324***	-0.013	1
	0.0142	0.0172	0.3979	0.0013	0.9035	

Note. */**/*** indicates significant correlation at 0.1, 0.05 and 0.01 levels (bilateral), respectively.

Source. Correlation Analysis Results of Stata Empirical Software.

Although the correlation coefficients among all variables in the correlation analysis are almost below 0.8, and the correlation coefficients are not particularly large, the significance level of some data is relatively high. In order to avoid having a large impact on the regression results, the multicollinearity test is conducted. According to the multicollinearity test, the overall VIF value is 1.24, which is less than the empirical value 5, and the VIF values of both explanatory variables and control variables meet the requirements. Therefore, it can be considered that there is no serious multicollinearity problem between the variables selected in this paper, and it will not have a great impact on the results of main regression.

Table 5. Results of multicollinearity test

Variable	VIF	1/VIF
Size	1.32	0.760056
Income	1.25	0.800390
Talent	1.24	0.808436
Student	1.22	0.822694
Medical	1.18	0.846990
Mean VIF	1.24	

Source. Stata Empirical Software Multicollinearity.

4.3 panel Regression Analysis

By testing the hypothesis between enterprise assistance (Size) and Rural revitalization rating score (Rural), regression results of sample data can be obtained. The adjustment coefficient Adj.R2 of the model is 0.5470, indicating that the model has a good degree of fitting, and the model construction and selection are reasonable.

The regression coefficient between enterprise assistance (Size) and Rural revitalization rating (Rural) is 2.9564, indicating that a 1% increase in the scale of the industry that grows with enterprise assistance will lead to an increase of 2.9564% in the rural revitalization rating index. With a T-value of 2.03, there is a significant positive correlation between enterprise assistance (Size) and Rural revitalization rating score (Rural) at the level of 5%, which verifies hypothesis H1: Enterprise assistance is positively correlated with rural revitalization. Among the control variables, the regression coefficients of villagers' per capita Income, Medical insurance coverage and Rural revitalization rating were 1.291083 and 4.097628, respectively, indicating that a 1% increase in villagers' per capita income would lead to a 1.29% increase in rural revitalization rating index. A 1% increase in the coverage rate of medical insurance will lead to a 4.10% increase in the rating index of rural revitalization, and there is a significant positive correlation at the level of 5%. The regression coefficient of Talent return rate (Talent) and Rural revitalization rating score (Rural) is 0.1691587, and there is a positive correlation between them, but not a significant positive correlation. It shows that the economic development level, medical level and talent situation of each region have a positive impact on the indicators of rural revitalization, so as to promote the improvement of the overall rating of rural revitalization. The regression coefficient between education penetration rate (Student) and Rural revitalization rating score (Rural) is -1.268137, and there is a negative correlation between the two, and the correlation is not significant. The popularization of education should be used as a positive indicator to affect the development of rural revitalization. The industrial structure of the population with a junior high school education or above is mostly the secondary industry and the tertiary industry, and its impact on rural revitalization is mostly positive. However, due to the time limitation of the sample data, a relatively small proportion of the existing rural population with a junior high school education or above, and most of the indicators are children of farmers, who have higher cultural education and are mostly scattered in urban areas for employment or study, which has not made substantive contribution to rural revitalization, but has caused a large number of labor force to drain and the rural population to be seriously aging. Therefore, there is a negative correlation between this index and the rating index of rural revitalization.

Table 6. Regression results

Rural	Coefficient	Std. err.	t	P>|t|	[95% conf.	Interval]
Size	2.9564	1.458686	2.03	0.046	.058465	5.854335
Income	1.291083	.6178867	2.09	0.039	.0635434	2.518623
Talent	.1691587	.1275062	1.33	0.188	-.0841545	.422472
Student	-1.268137	.9070948	-1.40	0.166	-3.07024	.5339647
Medical	4.097628	1.806364	2.27	0.026	.5089704	7.686286
_cons	-.3830867	2.748009	-0.14	0.889	-5.842485	5.076312

Source. Stata Empirical Software Regression Analysis Results.

5. The Classic Case of Luolang Village Enterprise Help Model

5.1 Case Background

Luolang Village, located in the south of Pingdong Street, Wangmo County, has jurisdiction over 5 village groups and a total of 7 natural villages, and 98% of the residents on this land are Buyi. The village covers a total area of 33.26 square kilometers, of which 6,627.5 mu of arable land, but only 450 mu of paddy field. In 2015, Luolang Village had a total of 500 families and 2,174 residents, while 136 poor households were registered and the number of people reached 507.

However, Luolang Village has long faced problems such as lack of funds, inadequate infrastructure, and shortage of talents, which have prevented effective economic and income growth, so the poverty alleviation work has been slow and the rural revitalization plan has been difficult to implement. Although the local chestnut was the main source of income for Luolang in the 1990s, it has the potential to become a large-scale industry because of its excellent taste and high potassium content. However, in recent years, the increase in labor costs, the increase in the cost of production materials, coupled with the lack of industrial chain support, makes the production of chestnuts cannot be processed and packaged, and it is difficult to carry out remote transportation and storage. As a result, the chestnuts that farmers grow can only be sold at low prices, sometimes less than 1 yuan per jin. This vicious circle makes farmers lose the enthusiasm to manage mountain chestnut trees, resulting in the once brilliant chestnut industry into the "low yield, low price, low benefit" dilemma.

However, in November 2016, the United Front Work Department of the CPC Central Committee, the China

Glorious Association and Guizhou Province signed a cooperation agreement entitled "Agreement on the Pairing of enterprises in the Designated Villages of the Central United Front Work Department". The agreement introduced Junyao Group, the vice president of the China Guanghui Association, to participate in the work of pairing assistance. Subsequently, Junyao Group set up a precision help working group, and donated 100 million yuan through the China Guangcai Cause Foundation for the establishment of the "Guangcai Junyao Poverty Alleviation Special Fund." The funds are used to support poverty alleviation in poor areas and poor people, as well as public welfare and charitable projects such as infrastructure construction. After the field visit, the local government and Junyao Group jointly determined the plan to build the "Wangmo County ten thousand mu of chestnut high-yield demonstration park" as the core to help local villagers get rid of poverty and get rich. In this process, a "four-party agreement" model in which enterprises help villages has gradually formed.

With the passage of time, in November 2020, the last nine poor counties in Guizhou Province, including Wangmo County, successfully lifted out of poverty, and the people of Luolang Village, together with the people of the whole country, witnessed a major victory in poverty alleviation.

In 2022, the Opinions of the Central Committee of the Communist Party of China and The State Council on Comprehensively Promoting the Key Work of Rural Revitalization in 2022 were released, which put forward the goal of extensively mobilizing social forces to participate in rural revitalization and further promoting the action of "10,000 enterprises rejuvenating 10,000 villages". It is in this context that "Wan enterprises Xing Wan Village" has been formally established as a national strategy, and the "four-party agreement" between Junyao Group and Luolang Village continues to unfold.

This series of cooperation and efforts have brought new hope and opportunities to Luolang Village, and also made a positive contribution to the promotion of the rural revitalization strategy. Through the participation of social forces, Luolang Village has achieved remarkable development after overcoming difficulties, showing a bright prospect of rural revitalization.

5.2 Help Model

With the strong support of the United Front Work Department of the CPC Central Committee, the local government actively cooperated with the help enterprises, gave full play to their respective advantages in line with the actual situation, and effectively fulfilled their help duties. Closely relying on the grass-roots front line, they have formulated precise help plans, because of household policies, because of people to save, and pay attention to the combination of "blood transfusion" and "hematopoietic" in order to achieve short-term results and long-term sustainable development. They pay close attention to the development of the help industry and the core issues such as improving the help mechanism.

In order to effectively guide and support, they strive to promote well-known enterprises to set up pairing help funds, using intensive operations to expand employment, develop brand products, fund poor students and infrastructure construction and other ways to promote targeted precision help. In this process, close cooperation has been formed between the assistance enterprises and the designated counties/villages, and an innovative "four-party agreement" assistance model has been jointly explored and constructed. In this model, the local government, support enterprises, local leading enterprises (large growers) and poor households establish a close cooperation relationship. By integrating resources, they have built a complete industrial chain in the planting, acquisition, processing and sales links, thus achieving an organic economic chain. This deeply integrated industrial chain not only allows small chestnut to obtain a larger market space, but also shows the successful model of "Luolan sample", that is, from a small industry to gradually develop into a demonstration project with important influence. This successful example provides useful inspiration for the effective connection between poverty alleviation and rural revitalization.

5.2.1 The Whole Industrial Chain Model

The whole industrial chain refers to an industrial system that is demand-oriented, and the industrial chain of an enterprise starts from rural planting to a complete set of processes for food at the customer's table, including production and planting, food acquisition, food processing, logistics distribution, and food sales(Liu Qiuzi, 2023)[42]. In the process of helping the chestnut industry in Luolang Village, Junyao Group is committed to opening up the whole industrial chain from planting and harvesting to primary processing and then to product sales. Specific practices are as follows:

(1) Planting link:Introduce standardized planting technology, build high-yield chestnut demonstration park, provide free assistance funds to support villagers to expand planting area, and help solve the problem of shortage of planting funds

(2) Harvesting link: Make use of the advantages of Jixiang aviation resources, learn reasonable chestnut harvesting technology, guide villagers to use scientific methods to harvest chestnut, and improve production.

(3) Primary processing: Help villagers cooperatives to set up chestnut processing workshops to carry out simple processing such as chestnut drying, husking and packaging to extend the storage period.

(4) Product sales:Relying on Junyaxiang Airlines platform, develop chestnut channels for aviation meals; Through the e-commerce platform to create "Dojili" brand, expand the market of chestnut products.

(5) Establish an interest linkage mechanism so that farmers, cooperatives and enterprises can share the development dividends of the chestnut industry.

By integrating resources and opening up the whole industrial chain, the closed-loop operation of the industry from "field management to table consumption" has been realized, which has improved the added value of the industrial chain and increased the income of farmers, which has laid a solid industrial foundation for poverty alleviation in Luolang Village.

5.2.2 The Help Mode of "Four-Party Agreement"

The "four-party agreement" is a four-party agreement signed by the local government, foreign assistance enterprises, local leading enterprises (large growers), and poor households to help poverty alleviation and rural revitalization. In the process of poverty alleviation and vitalization of Luolang Village, Wangmo County people's Government, Junyao Group, large growers (which later became the local leading enterprise Guizhou Guangxiu Ecological Food Co., LTD.), and Luolang Village file registration four parties signed the Agreement on Junyao Group to Help Wangmo County build a Demonstration Park of 10,000 mu of Chinese millet high Yield. The provisions of the "four-party Agreement" are accurate and in place, forming a closed loop of management of the whole industrial chain.

In these four parties, Party A Junyao Group set up precise help Luolang fund; As the main operator, the major growers of Party C managed the chestnut garden with due diligence to increase production and efficiency, and led Party D to master chestnut planting technology. In the later stage, the local leading enterprise Guangxiu Food Company was introduced as the main operator to assume the responsibility of purchasing, processing and sales of Wangmo chestnut. Party B Wangmo County People's Government acts as the guardian of the forest land contract right, and plays the role of service guarantee, management and supervision; Through their own efforts, the poor households in Ding Fang initially get labor remuneration by working in the chestnut garden, and the labor remuneration is paid by Party A. At the same time, they learn planting techniques so that they can plant and manage themselves in the future.

The Quartet adheres to the principle of "precise poverty alleviation targets, precise project arrangements, precise use of funds, precise measures, precise dispatch of personnel, and precise poverty alleviation results", adheres to local conditions, proceeds from reality, and fully relies on local organizations at all levels. Adhere to overall arrangements, distributed implementation, active exploration, and continuous improvement. Jointly build the "Shanghai Junyao Group support Project - Luolang Village Shuanghekou Chestnut high-yield Demonstration Park, Luolang Village Kuonai Chestnut high-yield Demonstration Park", with chestnut garden as the implementation carrier, organic integration of all parties, to help rural poverty alleviation and revitalization.

In the practice of the "four-party agreement" in Luolang Village, the parties have played the following roles:

(1) Junyao Group (Party A) -- to invest 10 million yuan for the construction of demonstration park and other infrastructure construction -- to provide interest-free loans to subsidize farmers to expand chestnut planting -- to subsidize school-age children in Luolang Village and outstanding students to go to school -- to carry out chestnut planting technology training, Teaching scientific conservation methods - using Junxiang Airlines resources to develop aviation food chestnut channels - through the e-commerce platform to build "Doji chestnut" brand sales chestnut

(2) Wangmo County Government (Party B) -- to provide policy support and support the chestnut industry -- to coordinate resources to ensure the smooth implementation of the project -- to supervise the use of funds to ensure the effectiveness of the project -- to help contact wholesalers in Guangdong, Hunan and other places to expand sales channels

(3) Guangxiu Company (Party C) -- signed an agreement to become the main body of chestnut operation and sales -- classified processing and packaging of products -- cooperated with Junyao Group to develop sales and improve efficiency -- purchased farmers' chestnut at a protective price to ensure the interests of farmers

(4) Farmers in Luolang Village (Ding Fang) - expand chestnut planting area and increase yield - work in the

demonstration park, learn scientific breeding techniques - master the whole process skills of chestnut operation - obtain stable income and improve living conditions

Through collaboration, all parties focused on the chestnut industry, so that Luolang Village to achieve poverty alleviation and prosperity, showing the powerful effect of the "four-party agreement" model.

5.2.3 Education and Assistance Model

In the implementation process of the "four-party Agreement", Junyao Group also pays attention to the advantages of corporate resources and carries out education and assistance, so as to drive the improvement of the quality of the population in Luolang Village.

Specific practices include:

(1) Set up Junyao Luolang Hope Primary School Education Fund to subsidize school-age children in Luolang Village to enroll. This provides financial support for children from poor families to attend school and guarantees them access to primary education.

(2) Targeted grants to subsidize the tuition fees of high school and university for outstanding students in Luolang Village. This further encourages students to be active in their studies and also motivates parents to support their children's education. This helps nurture local talent and break the vicious cycle of poverty.

(3) Organize after-school tutoring activities for staff volunteers to provide study counseling for primary school students in Luolang Village to supplement the deficiencies of classroom teaching. This improves students' interest in learning and grades.

(4) Invite technical personnel to conduct training on agricultural knowledge and planting techniques. This helps farmers master advanced farming methods and increase agricultural productivity.

(5) Help build the library of Luolang Village, purchase books, periodicals and magazines, and enrich the cultural life of the villagers.

Through educational assistance, Junyao Group not only provides equal educational opportunities for children and adolescents in Luolang Village, but also improves the overall cultural level and skills of Luolang Village, laying a human resource foundation for rural revitalization. This practice is worth promoting in the practice of enterprises helping rural revitalization.

6. Mode Exploration and Experience Summary of Rural Revitalization

6.1 "Four-Party Agreement" Model of Poverty Alleviation and Prosperity in Luolang Village

Under the promotion of the "four-party agreement", the chestnut industry in Luolang Village has developed rapidly, the villagers' income has increased significantly, and the poverty alleviation goal has been successfully achieved. The specific effects are as follows:

(1) The planting area of chestnut increased from 3,000 mu in 2016 to 18,600 mu in 2022, and the planting scale increased by more than 6 times.

(2) The yield of chestnut per mu has increased from less than 100 jin to more than 300 jin, and the yield and benefit have been significantly improved.

(3) The sales volume of "Dojiri" chestnut products of Guangxiu Company increased from 9 million yuan in 2016 to 45 million yuan in 2021, an increase of 5 times.

(4) The purchase price of Guangxiu Company for farmers increased from 1 yuan per catty to 3.5 yuan, ensuring the enthusiasm of farmers.

(5) All 136 poor households in the village achieved poverty alleviation in 2019, and the average annual household income increased by about 20,000 yuan.

(6) Entering 2022, the output value of chestnut in the village has reached 4 million yuan, and the average household income has increased by about 12,000 yuan.

(7) Luolang Village was rated as a characteristic rural demonstration village in Autonomous Prefecture, and the chestnut industry became one of the "five color" industries.

This fully shows that under the "four-party agreement" mechanism, all parties have exerted their comparative advantages and worked together to promote the development of the chestnut industry, and finally achieved the goal of stable poverty alleviation for farmers in Luolang Village. This has laid a solid industrial foundation for the rural revitalization of Luolang Village. The popularization of this model also has important implications for

other poor villages.

6.2 Analysis of the Mode of "Four-Party Agreement" and the Mode of the Whole Industrial Chain

(1) The "four-party agreement" mode realizes the organic combination of the government, enterprises, leading enterprises and poor farmers, gives play to the comparative advantages of all parties, and forms a joint force. The government provides policy support and supervision, enterprises inject funds and management, leading enterprises are responsible for industrial operation, and farmers directly participate in production to jointly promote industrial development.

(2) In the mode of the whole industry chain, Junyao Group helps Guangxiu Company to open up all links from planting, acquisition, processing to sales, and realize the closed-loop operation of the industry. This whole chain operation from the "field to the table" has effectively improved the industrial efficiency.

(3) The whole industry chain extends to achieve product branding and large-scale production, and opens up high-end sales channels such as aviation meals and e-commerce. This further enhances the added value of chestnuts and the sense of gain for farmers.

(4) Social development such as education and culture complement each other, laying the human resources foundation for rural revitalization (Ni Daqin, 2023). Balanced development is the inherent requirement of the whole industrial chain model.

(5) This model is highly replicable, and with the support of government policies, it can be extended to other poor areas with industrial bases to help regional economic and social development.

(6) However, this model also faces the problems of weak village collective organizations, limited strength of leading enterprises, and low willingness of poor households to participate. This requires further strengthening multi-party communication and cooperation and improving support mechanisms.

(7) The next step can also improve operational efficiency through digital technology means, expand the industrial connotation, and realize the intelligent upgrading of the industrial chain.

6.3 The Dilemma of the "Four-Party Agreement" Model

6.3.1 Continuous and Weak Persistence of Free Investment (Party A)

Under the "four-party agreement" mode, Junyao Group, an enterprise assisted by Party A, is the main driving force for the development of the chestnut industry. However, due to the following reasons, the continuity and durability of enterprises' free investment face certain difficulties:

(1) Large scale of investment. Junyao Group has invested heavily in the development of the chestnut industry in Luolang Village, and the construction of a demonstration park requires a large amount of early investment, which causes a certain pressure on the capital chain of the enterprise.

(2) Long return time. The development cycle of the agricultural industry is long, and it takes a long time for enterprises to invest in the effect, which is not conducive to the rapid cost recovery of enterprises.

(3) Market uncertainty. The market price of agricultural products fluctuates greatly and the market prospect is uncertain, which also increases the return risk of enterprises.

(4) Managing complexity. Enterprises directly participate in the management of agricultural industry, which increases the operation and management costs of enterprises.

(5) Continuous lack of power. After the completion of corporate social responsibility, whether it will continue to invest heavily is a question.

(6) Imperfect industrial chain. At present, the processing and sales of chestnut are not strong enough, which also restricts the enthusiasm of enterprises.

In order to improve the investment sustainability of enterprises, it is suggested to further improve the upgrading of the industrial chain and expand the added value space of products; The government will increase support for leading enterprises and share the pressure on enterprises to invest. Establish a benefit-sharing mechanism to enhance the motivation of enterprise participation; Strengthen organizational leadership and form joint forces for industrial development.

6.3.2 Planting Is Greatly Affected by the Weather, But Still "Depends on the Weather" (D)

Despite participating in the "four-party agreement", poor farmers in Ding Fang still face the following problems in chestnut cultivation:

(1) Weak technical equipment. Most farmers rely on the traditional way of planting, the technical content is not high, low production efficiency.

(2) Limited financial strength. Farmers themselves are short of funds, it is difficult to buy the fertilizer, pesticides, machinery and other factors that affect the output.

(3) Weak anti-risk ability. Once encountered bad weather such as wind, hail, rain and ice and other disasters, farmers' losses are serious and unbearable.

(4) Scale management is difficult. Farmers with dispersed management generally have small planting scale, which is not conducive to machine operation and industrialization.

(5) The interest linkage mechanism needs to be improved. It is necessary to strengthen the interest linkage mechanism between farmers and upstream and downstream enterprises to reduce the operational risks of farmers.

(6) The degree of organization needs to be improved. At present, the farmers' organization is loose and the risk of word of mouth is large, which is not conducive to jointly responding to market changes.

It is suggested that through technical training, financial support, agricultural insurance subsidies, the promotion of cooperatives and other ways to enhance the comprehensive production and management ability of farmers, so that they really get out of the state of "relying on the sky to eat". This requires concerted efforts to improve agricultural stability and farmers' sense of gain.

6.3.3 Low Added Value of Products and Low Corporate Profits (Party C)

(1) The processing degree is not high. At present, the main products of Guangxiu company are original chestnut, only simple processing and packaging, and no deep processing products with characteristics have been formed.

(2) Limited brand influence. Although the "Dojili" brand has a certain popularity, there is still a gap compared with big brands, and the brand value needs to be improved.

(3) Single sales channel. E-commerce is the main sales channel at present, and offline channels need to be expanded.

(4) Efficiency needs to be improved. The internal management and operation efficiency of the enterprise are not high, which increases the operating cost.

(5) Limited financial strength. The enterprise's own capital scale is small, and it is difficult to support the expansion of the industrial chain.

(6) The supporting system is not perfect. Related supporting industries such as warehousing and logistics need to be improved.

It is suggested to further extend the industrial chain and develop functional chestnut products. Establish brand alliance of chestnut producing area to enhance brand influence; Expand online and offline sales channels; Promote digital and intelligent management to improve enterprise efficiency; Increase policy support to help enterprises expand capital channels; Build a sound modern industrial system. This will help increase the added value of enterprises and products and enhance the sustainability of development.

6.3.4 Insufficient Government Support for Industrial Development (B)

In the "four-party agreement" model, Party B's government, as the guardian and service guarantee party, plays a key role in industrial development. However, from the current situation, the government's support in the following aspects is not enough: financial support is weak. The government's financial subsidies and support for the chestnut industry are limited, such as planting subsidies, disaster relief and other aspects are insufficient, which limits the power of industrial development. The technical service is not in place. Government-led technical training and scientific research support are insufficient, and can not effectively promote the upgrading of the chestnut industry. Infrastructure is weak. Government investment in industrial park planning, farmland water conservancy, road transportation and other infrastructure construction is limited. Regulatory services are inadequate. Government supervision departments also need to strengthen quality monitoring, standards and norms in industrial operation.

6.4 The Development Proposals of the "Four-Party Agreement" Model

First: In order to improve the investment sustainability of enterprises, it is recommended to further improve the upgrading of the industrial chain and expand the added value of products; The government will increase support for leading enterprises and share the pressure on enterprises to invest. Establish a benefit-sharing mechanism to

enhance the motivation of enterprise participation; Strengthen organizational leadership and form joint forces for industrial development.

Second: It is suggested to enhance the comprehensive production and management ability of farmers through technical training, financial support, agricultural insurance subsidies, and the promotion of cooperatives, so that they can truly break away from the state of "relying on the sky to eat". This requires concerted efforts to improve agricultural stability and farmers' sense of gain.

Third: It is suggested to further extend the industrial chain and develop functional chestnut products; Establish brand alliance of chestnut producing area to enhance brand influence; Expand online and offline sales channels; Promote digital and intelligent management to improve enterprise efficiency; Increase policy support to help enterprises expand capital channels; Build a sound modern industrial system. This will help increase the added value of enterprises and products and enhance the sustainability of development.

Fourth: It is recommended that the government further increase financial support and play a greater role in technical services, infrastructure, market development, etc., in order to better promote the healthy development of the chestnut industry, governments at all levels need to attach great importance to the implementation of the national rural revitalization strategy, and take more powerful measures to promote industrial prosperity.

7. Conclusion

Based on the data indicators of 12 typical villages in Wangmo County, Guizhou Province from 2015 to 2022, this paper empirically studies the promoting effect and influencing mechanism of enterprise assistance on rural revitalization. Based on the case analysis of enterprises participating in the assistance in Luolang Village, Wangmo County, Guizhou Province, this paper draws the following conclusions by exploring the positive impact of the "four-party agreement" mode of enterprise assistance on rural revitalization and improving the "four-party agreement" mode of assistance:

Rural revitalization involves five rating indicators: industrial prosperity, ecological livability, rural culture, effective governance, and prosperity. In the process of implementing the enterprise assistance model to drive rural revitalization, it is necessary to fully grasp the characteristics of each region and strengthen investment in governance, culture, talents and other aspects besides economic assistance. The development of social undertakings such as education and talents is the basis of rural revitalization. Implement a comprehensive, specific and all-round rural revitalization model.

The "Four-party agreement" assistance mode has quite effective rural revitalization benefits, which realizes the multi-party cooperation of government, industry, university and research, forms a strong force to promote rural revitalization, gives full play to the advantages of all parties, effectively integrates resources, and plays an important role in the process of poverty alleviation and rural revitalization. The successful practice and application of poverty alleviation in Luolang Village, Wangmo County, Guizhou Province, plays a driving role in promoting the implementation of the "four-party agreement" assistance model throughout the country. With the support of government policies, this model can be extended to other qualified poor areas in China to provide a reference example for the realization of comprehensive rural revitalization.

The development model of the whole industrial chain formed under the framework of the "four-party agreement" has good economic benefits and plays an important role in industrial production and operation(Wang Lixia, 2010)[44]. This model realizes the integrated operation from product production to processing and sales, greatly improves industrial benefits and farmers' income, and provides a successful sample for agricultural products to realize the transformation from "local consumption" to "going out". In the process of promoting the revitalization of Luolang Village, the production mode of the whole industrial chain also has some problems, such as weak village collective organization and insufficient industrial sustainability. In the process of promoting the whole country, it is necessary to further strengthen policy support, strengthen government support for industrial development, improve the extension of the industrial chain of leading enterprises, enhance the degree of organization and technical equipment of farmers, and improve operational efficiency by means of digital technology. Improve the long-term mechanism to achieve better economic growth.

Under the background of in-depth implementation of the rural revitalization strategy, grasping the strategic overall situation of the great rejuvenation of the Chinese nation and the opportunity of the era of great changes in the world in a century, this paper systematically analyzes the positive impact of the enterprise assistance model on promoting rural revitalization and the successful case model. Through the case results, we can see that this model has important reference and promotion value, and this paper deeply studies the improvement and improvement of this model, and promotes the comprehensive revitalization of rural industry, organization,

culture, talent and ecology by enterprises, so as to better serve the national rural revitalization strategy.

Authors contributions

Researcher Desheng Zhang and Researcher Junchao Zhou were responsible for study design and revising. Researcher Desheng Zhang was responsible for data collection. Researcher Zhaowei Zhang and Researcher Junchao Zhou drafted the manuscript, and Researcher Desheng Zhang revised it. All authors, Desheng Zhang, Junchao Zhou, and Zhaowei Zhang, contributed equally to the study.

Funding

The research project has no source of funding

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal and publisher adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

Copyrights

References

Bing, Y. (2023). Research on the Career Development of "Small Town Youth" in Rural Revitalization and Empowerment of Ethnic Areas. *Guangxi Social Sciences*, (07), 130-138.

Changyao, Y. (2022). Reflections on the Assistance Work of State Owned Enterprises from the Perspective of the People's Centered View in the New Era. *Industry and Technology Forum*, *21*(23), 233-235.

Daqin, N. (2023). High yield and efficient cultivation techniques and benefit analysis of fruit type corn in Gulang County. *Agricultural Science and Technology Communication,* (01), 183-185.

Dingzhong, X., Hongming, Y., & Sheng, X. (2023). Optimization Decision of Ecological Compensation for Rural Photovoltaic Power Generation Adapting to Rural Revitalization and Sustainable Development. *Journal of Agricultural Engineering*, 1-9.

Fan, F., Xiaoqing, T., Yichen, W. (2022). A practical exploration of insurance industry helping Wuxi rural revitalization. *Finance and Economics*, (11), 78-83.

Fei, L., & Siyu, C. (2023). Research on the "Multi dimensional Integration" Path of Rural Revitalization in Guangxi Ethnic Areas under the New Development Concept. *Modern Commerce and Industry*, *44*(18), 37-39.

Fei, W., & Ruijiao, H. (2023). The historical evolution, theoretical interpretation and practical enlightenment of poverty governance of the CPC. *Gansu Social Sciences*, 1-9.

Fei, W., & Shenqiang, L. (2023). The Mechanism, Generative Logic, and Era Education of Social Emotional Ability of Rural Teachers. *Contemporary Education Forum,* 1-13.

Hanwen, Z., Xinran, G., & Jinbing, Z. (2023). Exploring the Development Path of Rural Revitalization in the New Era: A Case Study of Fenghua District, Ningbo. *Business Exhibition Economy*, (14), 42-45.

Hong, X., & Xia, W. (2023). Exploring the Development Path of Cultural and Tourism Integration in Dishui Village of the Yao Ethnic Group in Guangxi under the Background of Rural Revitalization. *Architecture and Culture*, (01), 68-70.

Hong, Z., & Lu, W. (2023). Measurement and Promotion Path of Digital Rural Development Level in Western Regions. *East China Economic Management*, 1-9.

Jiaqi, C., & Yuhang, C. (2023). Exploring the Path of Cultivating Rural Revitalization Talents under the Background of Characteristic Town Construction. *Talent*, (30), 117-120.

Jinan, J., Shan, Z., Jichen, W. (2023). Analysis of the Restrictive Factors and Development Paths for Rural Talent Revitalization: Taking Hebei Province as an Example. *Journal of Beijing Agricultural Vocational College*, *37*(01), 58-64.

Jincai, Z., Jincheng, Y., & Ziyue, Z. (2019). The evolution trajectory and future prospects of rural entrepreneurship since the reform and opening up. *Agricultural Economic Issues*, (07), 83-92.

Jing, L. (2023). Exploration of the connection and path between consolidating the achievements of poverty alleviation and effectively connecting rural revitalization. *Smart Agriculture Guide*, *3*(14), 38-41.

Jixia, M., & Liming, X. (2023). How Public Leadership of Village Cadres Affects Rural Governance Performance: A Chain Mediation Model. *Journal of Management*, 1-17.

Junxing, L. (2023). Release the vitality of consumer assistance and promote comprehensive rural revitalization. *Longnan Daily,* (001).

Kangning, X., Rong, Z., & Zhenzhen, Z. (2023). Value realization of ecological products for karst rocky desertification control and its inspiration for rural revitalization. *Journal of Ecology*, 1-9.

Keling, W., Xin, T., & Jieli, H. (2023). The Connection Pattern and Integration Strategy between Traditional Villages and Intangible Cultural Heritage from a Spatial Perspective - Taking the Jinsha River Basin as an Example. *World Geographic Research*, 1-16.

Lijing, H. (2023). Research on the Aid Effect of Yiling Pharmaceutical Industry in the Context of Rural Revitalization. *Cooperative Economy and Technology*, (02), 119-121.

Lixia, W. (2010). Research on the Competitiveness of Citrus Industry in Yichang City. Huazhong Agricultural University.

Lixing, Z. (2017). Research on Rural Revitalization Strategy. *Scientific Decision Making*, (12), 19-34.

Meilin, P., Yue, D., & Ruoyun, C. (2023). Research on the Industrial Integration and Innovation Development Path of Characteristic Small Towns Based on AGIL Comfort Theory Model: Taking Anji Baicha Town as an Example. *Business and Management*, (01), 187-192.

Meng, N., & Fuqiang, L. (2023). Helping rural revitalization highlights Central enterprises' Social responsibility: Exploring the path for Central Enterprises to continue to promote rural revitalization. *Price Theory and Practice*, (01), 45-48.

Mi, T. (2022). Case Study on Chengdu Yimin Group's Participation in Rural Revitalization. University of Electronic Science and Technology.

Min, W., Yu, G., Zhaowei, L. (2023). Digital Inclusive Finance and Rural Revitalization: Theoretical Logic and Empirical Testing. *Journal of Northwest University* (Philosophy and Social Sciences Edition), *53*(01), 56-71.

Murong, S., Zhijing, Z., & Jin, D. (2023). Identification of "Three Rural Issues": Ideological Guarantee for Rural Talent Revitalization - Also on Strategies to Enhance Youth's Identification of "Three Rural Issues". *Journal of Northwest A&F University* (Social Science Edition), *23*(06): 50-58

People's Forum. (2019). Poverty alleviation by consumption: Building a bridge between urban and rural Demand. *People's Forum,* (23), 80-82.

Qiaoqiao, S., Huiqing, C. (2023). Construction of Teacher Teams in Small Rural Schools under the Rural Revitalization Strategy: A Case Study of Wuling Mountain Area. *Journal of Henan University of Science and Technology*, *43*(10), 19-26+62.

Qiuzi, L. (2023). Research on the development mode of the whole industrial chain of Wenzhou pastoral complex under the background of rural revitalization. *Special Zone Economy*, (01), 48-51.

Rui, L. (2019). Research on Rural Industrial Structure and Rural Revitalization Path. *Social Science Front*, (02), 189-198.

Shengwei, T. (2019). Research on the Construction of Interest Linkage Mechanism for Industrial and Commercial Capital to Participate in Rural Revitalization. *Economic Review*, (03), 23-30.

Shuangling, X., Ya, Y., Xian, Z. (2023). A Study on the Competence of Village Party Organization Secretaries from the Perspective of Rural Revitalization. *Journal of Yunnan Agricultural University* (Social Sciences), 1-9.

Ting, W. (2023). Research on the Long term Mechanism for Preventing Poverty Return in the Context of Rural Revitalization. *Southwest University of Science and Technology*, 2023

Wu W. (2022). Application Practice of Party Building Assistance in State Owned Enterprises in Rural Revitalization. *Guangxi Electric Power Industry*, (11), 54-57.

Xing, L. (2023). Research on the predicament and countermeasures of enterprises participating in poverty alleviation in Meizhou. South China Agricultural University.

Xinyi, W. (2023). Practical Research on the Assistance of Village Cadres in Ethnic Areas to Industrial Revitalization under the Background of Rural Revitalization: Taking Liangshan Yi Autonomous Prefecture as an Example. *Smart Agriculture Guide, 3*(19), 118-121.

Xu, H. (2023). Exploring the Path of State owned Enterprises Empowering Rural Revitalization from the Perspective of Common Prosperity. *Rural, Agriculture, and Farmers* (B Edition), (03), 49-51+55.

Xudong, H., & Fengtian, Z. (2023). Zheng Linyi. How capable village cadres affect the new endogenous development of villages: an analysis based on national village level panel data. *China Soft Science*, (06), 56-65.

Ying, L. (2023). On the Role and Path of Technology Finance in Supporting Rural Revitalization and Development: Taking Shandong Province as an Example. *China Business Review*, (12), 113-116.

Yong, Z. (2023). Efficient Governance of Grassroots Party Organizations in Rural Areas under the Background of Rural Revitalization. *Journal of Henan University of Science and Technology* (Social Science Edition), *41*(05), 9-14.

Yu, Z., & Jiansheng, X. (2023). Practical Exploration of Grassroots Party Organizations Leading Rural Cultural Revitalization. *Guangxi Social Sciences,* (07), 19-26.

Zhihong, W., & Huosheng, T. (2018). Human rights Practice in China where the rich first help the rich later: A case study of "10,000 enterprises helping 10,000 villages" targeted poverty alleviation action. *Human Rights*, (06), 31-42.

Ziyu, L., Ziru, Y., & Zixuan, L. (2023). Research on strategies for promoting rural revitalization in the era of digital economy: A case study of Nanchang City. *Director of Village Committee,* (02), 81-85.