

# *A Study on the Supply Chain Structure of Rural Talents and Its Optimization Measures in the Context of Rural Revitalization—Take Putian City as an Example*

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**Abstract:** This paper combines the background of rural revitalization strategy, takes Putian City, Fujian Province as the research and investigation object, by drawing on the academic research results of other scholars and briefly analyzing the current situation of talent supply and demand in rural areas to argue the significance of building a rural talent supply chain. At the same time, we analyze the reasons for the contradiction of rural talent supply and demand which conclude the traditional concept constraints, imperfect rural talent policies and the overall low level of rural economic construction. To this end, the author explores a sustainable talent development model through a combination of fieldwork and questionnaire survey, taking the above attribution as the starting point and combining the survey results to construct five links of existing talent inventory, determining talent demand, attracting talent return, strengthening talent management and regular talent inventory, with a view to providing theoretical support for the structure of rural human and supply chain in the context of rural revitalization strategy.

## 1. Research ideas and methods

In this paper, mainly through reviewing literature, journals and media reports, we collect and organize relevant researches on rural talent supply chain structure by experts and scholars at home and abroad to understand the new principles and achievements of this discipline, and summarize them and refine the core ideas of relevant literature so as to develop the supply chain structure. At the same time, this paper also takes Putian City as the target of investigation, uses fieldwork and questionnaires to collect and organize data, and conducts data analysis through EXCEL to further study the rural talent supply chain and its optimization countermeasures in the context of rural revitalization.

## 2. Review of relevant theories

### 2.1 The significance of the rural talent supply chain Related studies

In February 2021, China achieved a comprehensive victory in the battle against poverty, with

98.99 million rural poor people having been lifted out of poverty under the current standards. The completion of the historical task of eliminating absolute poverty means that the focus of the "three rural areas" has shifted from poverty eradication to the comprehensive promotion of rural revitalization.<sup>[1]</sup> This means that the focus of the "three rural areas" has moved from poverty eradication to the comprehensive promotion of rural revitalization. The revitalization of the countryside cannot be achieved without the support of talents, but the current situation of talents in China's rural areas can hardly meet the needs of rural revitalization. According to Han Shifeng and others, for a long time, there has been a continuous loss of outstanding talents in rural areas, the total number of rural human resources is insufficient, the structure is unbalanced, the quality is not high, and the age is aging, and there is a big gap between the level of rural human resources and the demand for rural revitalization.<sup>[2]</sup> The contradiction between supply and demand of rural human resources has emerged, and human resources revitalization is facing major problems. Take the rural practical talents as an example, according to the statistics of the Ministry of Agriculture and Rural Affairs, there are about 22.54 million rural practical talents in China.<sup>[3]</sup> This accounts for only 4.42% of the total population of 50,979,000 in rural areas.<sup>[4]</sup> The Ministry of Agriculture and Rural Affairs (MOAR) statistics show that there are currently about 22.54 million rural practical talents in China, accounting for only 4.42% of the total population of 50.979 million. Tang Yuchi and others also believe that the overall scale of rural talents is small, the overall quality is low, the reserve force of rural talents is insufficient, and the disconnection between the training of talents and the actual demand is prominent.<sup>[5]</sup> It can be seen that the current quantity and quality of rural talents are not enough to support the comprehensive promotion of rural revitalization strategy. Therefore, attracting talents back to rural areas and retaining them to provide sustainable talent guarantee for rural revitalization is a problem that needs to be solved urgently, and building a rural talent supply chain is an effective way to solve the above problems.

## **2.2 Feasibility analysis of rural talent supply chain**

The No. 1 document of the Central Government in 2023 pointed out that before a strong country, we must first strengthen agriculture, and when agriculture is strong, the country is strong. It is necessary to strengthen the formation of rural human resources team. These programs aim to revitalize rural human resources, organize and guide talents in education, health, science, technology, culture, social work and spiritual civilization construction to work at the grassroots level, and support the development of human resources urgently needed in rural areas, implementing programs to train highly qualified farmers and develop rural entrepreneurs, and improve their education level. At the same time, we are implementing the "Doctors in the Countryside" program. Implementing the "Rural Women's Revitalization Initiative" and the "Youth Talent Training Initiative".<sup>[6]</sup> The program is also being implemented. This shows that the state has given great support to the construction of rural talents in terms of policy.

## **3. Analysis of the current situation of rural talents in the context of rural revitalization**

### **3.1 Basic information of the questionnaire survey**

The theme of this questionnaire is "Questionnaire on the willingness of rural talents to return to their hometowns in the context of rural revitalization". The questionnaire has 18 questions, including 11 single-choice questions, 5 multiple-choice questions, 1 sorting question and 1 fill-in-the-blank question. The questionnaire contains three parts: the first part is the basic information of the respondents, the second part is the views of the respondents on the current situation of rural development and the important factors affecting the development of rural talents, and the third part

is the outlook of the respondents on the future development of rural talents.

The distribution method of this questionnaire mainly used QR code and electronic link, through questionnaire star, WeChat, Xiaohongshu and other online platforms, while combined with offline channels to distribute. A total of 227 questionnaires were collected, of which 41 were invalid, with an efficiency of 81.93%, and we can see it in Table 1.

Table 1: Questionnaire completion table

Variables	Classification	Frequency	Percentage of	Cumulative percentage
Gender	Male	78	41.94%	41.94%
	Female	108	58.06%	100%
Age	18-25	34	18.28%	18.28%
	26-30	52	27.96%	46.24%
	31-40	54	29.03%	75.27%
	41-50	23	12.37%	87.64%
	51-60	16	8.6%	96.24%
	Above 60	7	3.76%	100%
Education level	Junior college and below	19	10.22%	10.22%
	Specialized or higher education	70	37.63%	47.85%
	Undergraduate	86	46.24%	94.09%
	Master and above	11	5.91%	100%
Professional Background	Economics and Management	28	15.05%	15.05%
	Agriculture and Forestry	51	27.42%	42.47%
	Medicine	43	23.12%	65.59%
	Literature and Law	30	16.13%	81.72%
	Teacher Training	21	11.29%	93.01%
	Science and Engineering	13	6.99%	100%
Social Status	Current Students	12	6.45%	6.45%
	Unemployed	32	17.2%	23.65%
	Urban employed persons	142	76.34%	100%
Nature of household registration	Agricultural account	92	49.46%	49.46%
	Non-Agricultural Forestry Household	94	50.54%	100%

### 3.2 Analysis of the current situation

Through field visits and research, we found that there are currently problems in both supply and demand in the construction of rural talents. The supply is mainly reflected in two aspects: First, the total supply of rural talents is insufficient. The serious outflow of rural talents is one of the important

reasons for the insufficient supply of rural talents. Due to the continuous promotion of urbanization, there are more and more exchanges between urban and rural areas. In this context, rural land is less attractive to farmers and farmers are less dependent on it in this wave. Especially those rural talents with relatively high education level are flocking to the cities for better development. In terms of employment and entrepreneurship, cities and towns have a natural advantage over rural areas.

In addition, the difficulty of returning to the rural population is an important reason for the lack of supply of rural talent. People who leave the rural areas are more capable of integrating into the cities and becoming urban residents than those who live in the rural areas. After integrating into the city and raising a family in the city, "it is easy to go out but difficult to return to the countryside". In the process of returning the questionnaires, it was found that the number of people with agricultural and non-agricultural household accounts for about half (see Figure 1), but only 32.26% of the participants were willing to return to the rural areas (see Figure 2). Thus, it can be seen that most rural talents are more willing to stay in cities due to the higher income, better platform, better development prospect and wider social resources provided by cities for practical and prospective considerations. In contrast, rural areas are more backward in terms of development, employment and entrepreneurship, providing fewer social resources and making it difficult to form a platform for human resources.

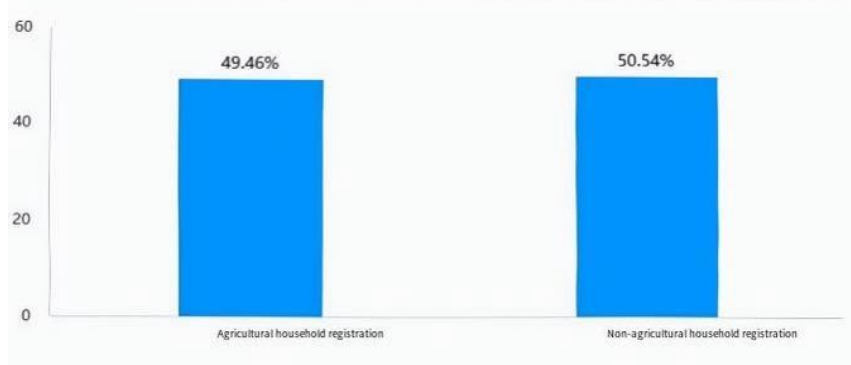


Figure 1: Distribution of household registration in the questionnaire survey

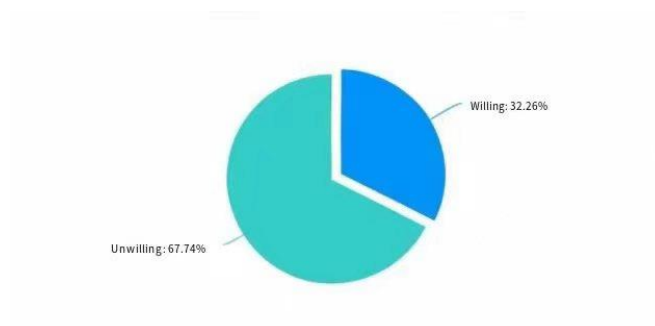


Figure 2: Willingness of talents to return to their hometown for development

#### 4. Analysis of the problems and reasons for building a rural talent supply chain

##### 4.1 The constraints of traditional concepts

Under the influence of China's thousands of years of agrarian civilization, the backward and conservative ideology is an important reason for the lack of rural talents. Traditional farmers believe that being a farmer has no future, and that inputs and outputs are not directly proportional to each other. Moreover, many people have a prejudiced perception of farmers, believing that they are unhygienic and uncivilized. The society has formed a social culture that rural areas are backward and

farmers are outdated. Secondly, in rural education, both teachers and parents instill discriminatory ideas about the countryside into children, forming the ideology that if they want to live better, they must leave the countryside. At the same time, as modernization continues to advance, urban development needs to rely on surplus rural labor, resulting in a large outflow of labor. Farmers who have left the countryside to get better development opportunities are not willing to return to the countryside, which further reinforces the idea that there is no development prospect in the countryside. This is also reflected by the questionnaire survey. (Figure 3)

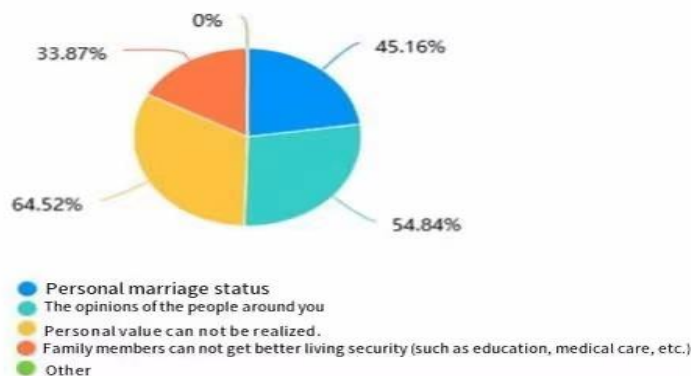


Figure 3: Return to the status of rural development concerns

#### 4.2 Imperfect policy on rural talents

Compared with urban talent policies, rural talent policies are inherently deficient in terms of wages, working conditions, social security, talent mechanisms and institutions. For example, there are relatively few civil service and career positions in rural areas, and there is still a shortage of applications and recruitment. The existing rural talent policy lacks coherence in talent mobilization and assessment, resulting in a situation where rural talents are mostly managerial and less technical. At the same time, the current situation of low income of rural talents leads rural talents to rely on their enthusiasm and love for rural areas in the process of rural construction. For example, in the evaluation of teachers, there are few senior teacher titles, and even fewer are assigned to rural areas. As a result, low-income rural teachers have little incentive to improve their skills in order to obtain higher titles, and the quality of education in rural areas is not high. Thus, the imperfection of rural talent policies also contributes to the contradiction between supply and demand of rural talent.

#### 5. Rural talent supply chain architecture and optimization path

Through combing and analyzing the existing research data and combining with the real survey, the main structure of rural talent supply chain in this paper contains five major links: talent combing, demand determination, attracting talent back, talent management and regular talent inventory. The main purpose of talent combing is to match the existing talents with the jobs by mapping the existing talents, so that the value of talents can be maximized; the determination of talent needs is based on talent combing, and the current and future needs of talents are clarified based on the current situation of rural development and future development direction; attracting talents to return is an important and central link to realize the sustainable development of rural talents. Talent management is the scientific and effective management of rural talents to enhance their creativity and guarantee their long-term development in rural areas; finally, in the form of regular talent inventory, we can grasp talent trends in real time and provide a basis for determining talent needs in the next step, just as shown in figure 4.

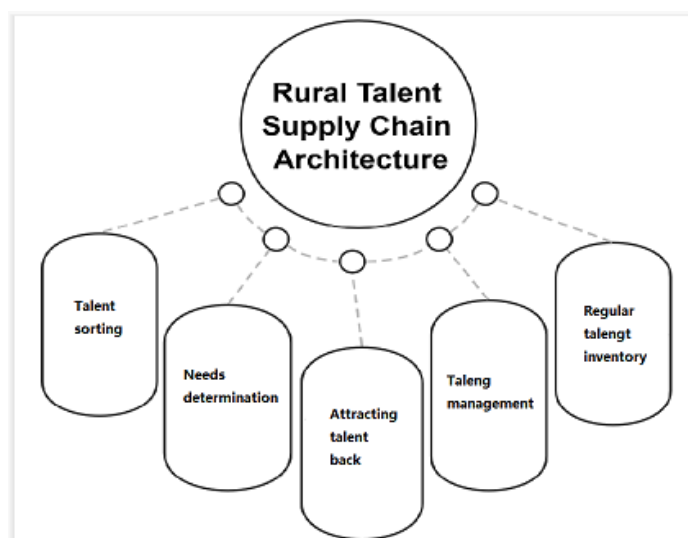


Figure 4: Rural talent supply chain architecture

Based on this, the following five areas of optimization responses are given.

### 5.1 Consider the current situation, Conduct a full range of talent sorting

Rural talents refer to all kinds of talents with certain skills and knowledge in the fields of agricultural production, technical services, science and technology promotion, processing and circulation, ecological and environmental protection, etc., which directly serve the economic and social development of rural areas. Specifically, they include agricultural technicians, business management talents, production talents, rural brokers and farmer entrepreneurs. Based on the current situation in rural areas, the existing talents can be sorted out from several aspects, such as the number of personnel, personnel types, talent categories and talent distribution. The structure of rural organizations is generally complex, and it is also a key consideration when sorting out talents. In the rural talent combing should focus on the needs of different positions of personnel, it is a continuous and systematic process of understanding the development status of rural talent. It is designed to provide a basis for the development of a reasonable talent plan.

### 5.2 Determine the demand for talents, taking into account the reality and future needs of rural areas

Combining the reality of rural development and the needs of future development, we do demand for talents and reasonably formulate the talent plan. The overall can be divided into two categories: First, based on the current situation, it can be based on job vacancies, fill the lack of existing talents, form a complete talent ecology, and drive rural development with talent development. The second is based on the future development of rural economy, based on the blueprint of future development of rural areas, to develop the future talent development needs.

### 5.3 Multi-strategy to help rural talent back to the development

#### 5.3.1 Accelerate the integration of urban and rural industries and increase employment opportunities

Rural enterprises are an important channel for employing rural talent. As part of the national rural renewal strategy focusing on agriculture and rural development, local governments should increase

financial and political investment in the context of rural realities, so that urban enterprises can reorient their development to focus on the quantity and quality of local agricultural production. In particular, they should vigorously develop agricultural products processing, agricultural products cold chain and agricultural products transportation, gradually forming a new round of growth of urban enterprises and promoting the integration of chains of agriculture, breeding and processing, production and marketing, agriculture, industry and commerce, trade and agro-industry.

### **5.3.2 Improve rural supporting infrastructure construction to retain talents**

In order to develop human resources in rural areas, it is important to consider not only how to increase their numbers, but also how to recruit them more effectively. To comprehensively solve the vicious circle of rural exodus, we must strengthen the construction of supporting facilities in rural areas, invest human, material and financial resources to improve the environmental conditions in rural areas in all aspects such as culture, education and health, narrow the gap between urban and rural areas, improve the comfort of rural life in general, attract and retain talented people and strengthen their sense of belonging. This will attract and retain talents, enhance the sense of belonging and identity to rural areas, and lay a good foundation for getting rid of poverty and getting rich.

## **5.4 Improve the management mechanism of rural revitalization talents**

### **5.4.1 Strengthen the improvement of the training mechanism of rural talents**

In order to actively cultivate the high-quality professionals needed for the construction of rural economy, it is necessary to adjust the vocational environment of colleges and universities accordingly, give full play to the vocational training function of vocational colleges and universities, improve the support mechanism of human resources, and promote the innovative vitality of human resources. Firstly, agricultural colleges and universities should optimize the educational environment, strengthen teacher training, improve teaching conditions, increase the number of agricultural teachers, improve students' literacy and vocational skills, expand students' opportunities to participate in social activities, and prepare them for future employment. Secondly, higher education institutions should increase the quantity and quality of agricultural disciplines, optimize the curriculum according to the needs of rural economic development, and actively carry out off-campus practical activities to promote the combination of theoretical knowledge and practical skills of rural talents.

### **5.4.2 Construction of big data platform to achieve real-time update of talent demand**

As rural talents contain many fields and are distributed in a wide geographical range, they cannot realize centralized and unified management of personnel like enterprises, at this time, they can be built in a data platform to realize real-time management of talents. Using information technology to build a large-scale trading platform to break the bottleneck of information asymmetry between supply and demand. In terms of talent training and supply, and the development needs of rural areas themselves, relatively accurate market demand data is needed to support the timely dynamic adjustment, in order to visualize the development of rural areas.

## **5.5 Regular talent inventory to achieve long-term development of talent**

Regular talent inventory is an important tool to improve the return on talent. Regular talent inventory can be divided into two types: one is to take a certain period as the limit, and regularly take inventory of existing rural talents to fully understand the current situation of the talent team, the number of each talent category and the gap between talents. Targeted training of talents can be carried

out to avoid the emergence of a talent supply and demand gap and redundancy of personnel in some positions, to provide direction for talent ladder construction and to adjust the talent structure at the right time. Also according to the talent inventory, let the talent themselves understand their own value, as well as the future development prospects. The second is the irregular talent inventory, real-time follow-up of the current situation of talent development, for the existing needs of the countryside, adjust the talent structure, positions and other content, to achieve talent without time difference supply, in order to meet the countryside development requirements. Regular talent inventory can be divided into the following steps:

First, combined with the rural development strategy, the rural strategy map will become a talent map to clarify the direction of rural development and the direction of human resources reserve; second, based on the talent map, external recruitment and internal training will be conducted according to the needs of rural development; third, an inventory of organizational structure, organizational climate, personnel composition and human resources quality will be conducted to improve the overall efficiency of rural organizations; Fourth, we should update human resource standards, identify high-potential talent, develop succession plans for key positions, and establish a dynamic talent pool; Fifth, developing training plans for key positions and levels are important to accelerate the development of high-potential talent; And sixth, relevant institutions can establish mechanisms to identify organizational and human resources and integrate them into the overall activities of the village so that human resource management can support the implementation of the village regeneration strategy.

Through regular talent inventory, not only to the current understanding of the full picture of talent, mapping the current situation of talent, to provide the basis for the next appointment of talent; more on the rural talent echelon construction to indicate the direction. In addition, the most important thing is that the talent inventory can reasonably determine the next step of talent development needs, so as to achieve long-term development of talent, just as shown in figure 5.

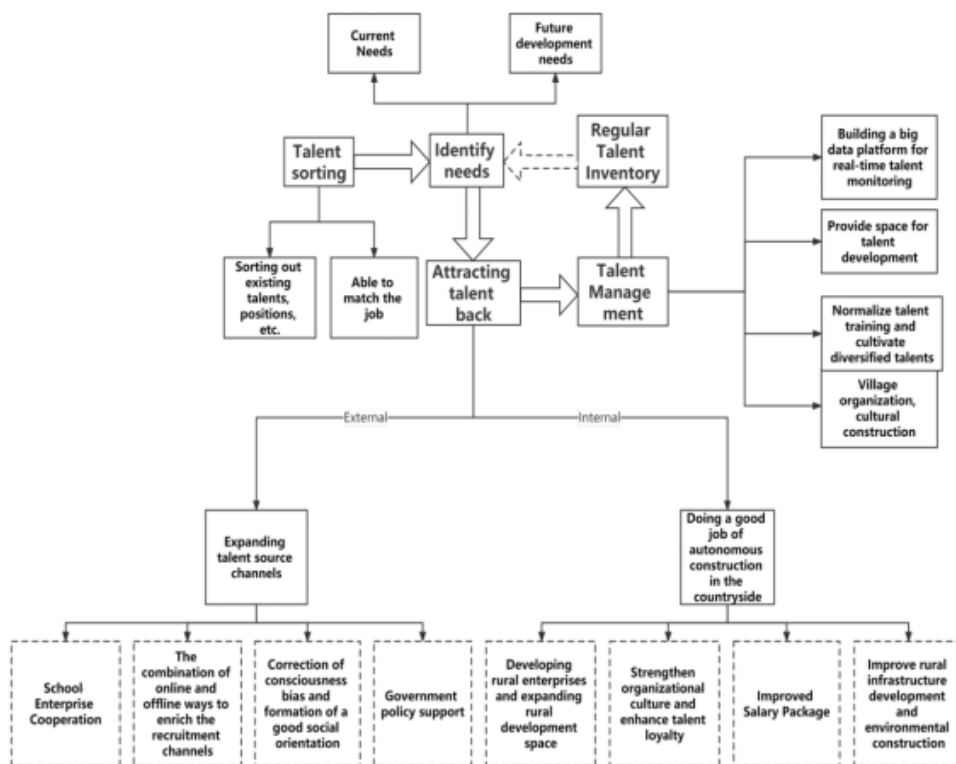


Figure 5: Ideas of countermeasures for rural talent supply chain



## 6. Conclusion

To implement the rural revitalization strategy, we must take talents as the first resource, establish a long-term institutional mechanism for talent revitalization, cultivate and display talents in a sound talent structure, make up for the gap of rural revitalization constrained by talent loss, and make greater contribution to the overall revitalization of the countryside. To realize rural revitalization, the most urgent and crucial link is to implement the talent revitalization strategy. To revitalize rural talents, it is not only necessary to bring in talents, but also to retain talents, and to achieve sustainable talent building. This paper intends to build a supply chain suitable for the development of rural talents and realize the sustainable development of rural talents through five links: combing existing talents, determining the demand for talents, attracting talents back, strengthening talents management and taking regular talents inventory. To achieve sustainable development of talent revitalization, it is not possible to rely on unilateral efforts alone, but requires multiple dimensions and multiple subjects to make joint efforts. The government needs to further optimize the social environment, the rural areas need to improve the institutional system, and individuals need to correct the consciousness bias, in order to make the sustainable development of rural talent revitalization possible as a result of multiple effects, instead of just staying on words. The supply chain of rural talents is a big topic with rich connotation and difficult task. Due to the limitation of my own knowledge, I have not yet been able to systematically clarify some issues on how to strengthen the construction of rural talent supply chain, so I need to further explore them in the future.

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