



Start-up Process and Role of Migrant Entrepreneurs in Chinese Rural Areas

王, 帥

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Doctoral Dissertation

**Start-up Process and Role of Migrant
Entrepreneurs in Chinese Rural Areas**

中国の農村地域における起業
プロセスと移住起業家の役割

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Graduate School of Agricultural Science, Kobe University

WANG Shuai

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Chapter 1

Introduction

1.1 Research Background

Rural areas in developing regions commonly face challenges such as slower economic development, lower incomes, a singular industry structure with limited risk resilience, and insufficient social security mechanisms (United Nations, 2021). These factors have diminished the attractiveness of rural areas, leading to a significant labor migration from rural to urban regions (Irwin et al., 2010). ‘Enhancing the competitiveness of rural communities’ and ‘guiding population movement from cities to rural areas’ have become focal points of interest for various governments and scholars (United Nations, 2021).

Within this context, entrepreneurship is considered one of the pivotal strategies for revitalizing rural economies and promoting rural development (Bao et al., 2022). Entrepreneurial activities foster innovation, enhance market competition, and create employment opportunities (He et al., 2019; Li et al., 2022). Rural entrepreneurship, predominantly led by individual entrepreneurs and small businesses, helps rural residents attain self-employment, reducing urban migration and rural poverty (Miao et al., 2021). Additionally, it offers new development opportunities to diverse segments of rural communities, including youth, women, and the elderly, contributing to mitigating income inequality (Naminse et al., 2018). Immigrant entrepreneurs bring entrepreneurial resources from outside the community (such as knowledge, skills, and capital from urban areas or foreign sources) and facilitate cross-regional resource flows (Démurger and Xu, 2011). These flows typically optimize the entrepreneurial environment for immigrant entrepreneurs, thereby increasing their chances of success (Liu et al., 2022).

It is important to note that entrepreneurship requires multifaceted support and integration of resources, with inherent challenges and low success rates (Arafat et al., 2020). Many limiting factors, including remote geographical locations, inadequate logistics systems, the relative isolation of communities, and a lack of entrepreneurial training and service institutions, restrict the entrepreneurial resources that rural communities can provide (United Nations, 2021). Especially in severely impoverished rural areas, giving entrepreneurial resources and an enabling environment is nearly impossible (Sutter et al., 2019). This places higher demands on the capabilities of entrepreneurs. Compared to larger enterprises with access to abundant resources, individual entrepreneurs and small businesses face numerous challenges, such as difficulties in obtaining loans or investments due to limited funds and assets (AliResearch, 2020). They also need help competing with large corporations for resources and innovation capabilities (AliResearch, 2020; Karine, 2021) and may need more management, operational experience, and local community support (Karine, 2021). ‘How to support individual entrepreneurs and small businesses in rural entrepreneurship’ is a widely discussed topic among scholars (Pato and Teixeira, 2016).

China’s experience is worth noting. In recent years, certain regions of China have witnessed the emergence of entrepreneurial groups characterized by ‘individual entrepreneurs and small businesses’ and ‘urban-to-rural migration’ (Démurger and Xu, 2011; Bao et al., 2022). Some rural migrant workers who had initially worked in cities chose to end their urban employment and return to rural areas, establishing small individual enterprises with the capital and social resources accumulated in urban settings (Ning and Ye, 2016). Under their influence, some rural communities have experienced rapid development, forming clusters of rural entrepreneurs primarily comprised of small businesses and individual entrepreneurs (Zhuang et al., 2023). Some individuals born and raised in cities have also been drawn to work or start businesses

in rural areas or small towns (Wang et al., 2023). As their scale and impact continue to grow, these entrepreneurial migrants from urban to rural areas have gained recognition from the Chinese government. This has evolved into a group comprising individuals from diverse backgrounds, including rural migrant workers returning to their hometowns, university graduates, retired military personnel, and unemployed individuals (State Council of China, 2015)^{Note 1}). This paper collectively refers to them as Urban-to-Rural Migrant Entrepreneurs (UtRME). In 2020, the total number of UtRMEs reached 10.1 million, an increase of 1.6 million compared to 2019, marking a 19% year-on-year growth (Yu, 2021).

1.2 Research Questions

Currently, research on rural entrepreneurship by individual entrepreneurs and small businesses in China is in its early stages, with areas that have not been thoroughly explored (Liu et al., 2022). China has consistently had one of the highest rural populations (in terms of both numbers and proportion) globally, and the migration of rural populations to urban areas is a common phenomenon, while cases of urban-to-rural migration and entrepreneurship are less common (Ning and Ye, 2016). Compared to the total rural population in China (509.79 million) and the number of temporary urban migrant workers (29.251 million), the scale of UtRMEs remains relatively small (National Bureau of Statistics of China, 2021).

Chinese scholars, while researching China's UtRME, have taken note of the experiences from developed countries, with the United States as a prominent representative, conducting numerous comparative studies and drawing insights (Liu et al., 2022). Researchers from multiple countries, including China and the United States, have engaged in comparative studies and discussions on the 'Significance of UtRME for Rural Community Development.' The majority of scholars have reached a consensus from the findings: they confirm the knowledge advantage and remarkable potential of UtRME in rural entrepreneurship. Moreover, there exists an opportunity post-successful entrepreneurship to make sustained contributions to the development of local communities (Zhuang et al., 2023). However, many scholars have cautioned that significant gaps exist between UtRME and rural communities, potentially hindering acceptance within the community and thus impacting their entrepreneurship. Furthermore, existing literature has focused on numerous cases describing various rural entrepreneurial approaches with different characteristics. Analysis and discussions have encompassed multiple dimensions, including individual characteristics of entrepreneurs, environmental features of the community, and the characteristics of the industries created (Liu et al., 2022; Zhuang et al., 2023).

However, existing research has paid little attention to UtRME entrepreneurship in impoverished areas. Unlike entrepreneurship in typical rural areas, the entrepreneurial environment in impoverished regions is more challenging, often lacking conditions such as funding, access to advanced equipment, and skilled labor (Liu et al., 2022). UtRME not only faces challenges related to migration and insufficient entrepreneurial motivation but also lacks support in their entrepreneurial environment. 'Constructing rural entrepreneurial support mechanisms' becomes a crucial subject in entrepreneurship in impoverished rural areas. Moreover, questions about the role of UtRME in this process deserve more evidence and discussion. It's noteworthy that research on this topic should ideally operate under the premise of 'utilizing existing local resources and further developing the potential of these resources' (Liu et al., 2022).

This approach not only helps preserve the existing cultural features or production methods in local communities but also aids in replicating and implementing these support mechanisms in more impoverished areas.

Furthermore, this article focuses on the link between UtRME entrepreneurship and the poverty alleviation task within local communities, aiming to identify the role UtRME plays in the local community's poverty alleviation process. Poverty alleviation is a common development goal set by the government for impoverished areas. The Chinese government places significant emphasis on poverty alleviation, even considering it a political task for officials (Xing, 2017; Hu and Tian, 2019). However, the long-term reliance on the 'blood transfusion' poverty alleviation model, primarily based on fiscal transfers, has resulted in the development of impoverished areas heavily relying on national finances, lacking the drive and capacity for autonomous development (Xing, 2017; Naminse et al., 2018). This might lead to local governments losing flexibility and autonomy in financial matters, reducing their ability to formulate and implement local development plans (Sutter, 2019). Additionally, fluctuations or reductions in fiscal support could make it challenging for impoverished areas to cope, affecting both infrastructure construction and residents' living standards, thus compromising the sustainability of poverty alleviation efforts (Hu and Tian, 2019).

1.3 Literature Review

Entrepreneurship is the process by which individuals or teams create or develop new businesses, projects, or organizations from scratch. It typically involves innovation, risk-taking, and resource integration (Audretsch, 2012). Entrepreneurs usually drive their enterprises or projects with unique creativity, business concepts, or problem-solving approaches (Van and Versloot, 2007). Entrepreneurship is a complex activity that demands innovative thinking, business insights, decision-making skills, and execution capabilities (Audretsch, 2012). It is considered a crucial driver of economic growth, innovation, competition, and societal development and is deemed essential in modern society (Van and Versloot, 2007; Audretsch, 2012).

Early entrepreneurship research primarily focused on urban areas and laid the foundation for entrepreneurship theory. In contrast, research on rural entrepreneurship has been limited and typically framed within the context of entrepreneurship theory (Audretsch, 2012). It's worth noting that in the 1940s, rural communities were primarily seen as 'providers of food for cities' (Gkartzios and Lowe, 2019). Such a perception prioritized rural development to serve urban needs. Back then, 'rural entrepreneurship' was almost synonymous with 'entrepreneurship in rural areas,' where resources such as entrepreneurs, technology, and capital from outside rural communities were critical to entrepreneurial success, with large enterprises wielding significant influence. In contrast, rural communities mainly provided land and relatively inexpensive labor (Zhuang et al., 2023). However, much of the profits flowed back to the controllers of entrepreneurial resources, and the voices of local rural residents were seldom reflected in development planning (Pato and Teixeira, 2016). This situation raised issues of 'rural resource exploitation and labor exploitation,' drawing criticism from international organizations and scholars (Gkartzios and Lowe, 2019).

It wasn't until the 21st century, marked by economic structural adjustments and rural economic reforms, that rural entrepreneurship flourished (Gkartzios and Lowe, 2019). From this point on, research on rural entrepreneurship began to emerge with the premise of 'focusing on the autonomy of rural community development' (Zhuang et al.,

2023). Consequently, the viewpoint of ‘encouraging individual entrepreneurs and small businesses to start businesses’ gained acceptance (Sutter et al., 2019). For example, Greek scholars Petridou and Glaveli (2008) believed that rural economic transformation led to rural entrepreneurship and innovation. Entrepreneurs became the central drivers of entrepreneurial activities, with Meccheri and Pelloni (2006) highlighting the individual characteristics of entrepreneurs as significant factors affecting rural entrepreneurship, such as age, education, marital status, and more. Scott (2012) shifted the focus to the interaction between individuals and their environment, considering human capital accumulation, entrepreneurial capital acquisition, and social capital support as key elements influencing the success of rural entrepreneurs. Grande (2011) emphasized the influence of the external environment, finding that factors like traditional craftsmanship, local products, and landscape characteristics impart uniqueness and non-replicability to farm products, key to realizing value in rural entrepreneurship. Most rural entrepreneurs chose fields related to agriculture and daily life, leading to new formats derived from traditional agriculture. Niska et al. (2012) argued from a values perspective, providing an analytical framework for the dual roles of farmers as cultivators and entrepreneurs in rural community development.

This marks a shift in scholars’ recognition of the differences between rural communities and urban areas, with rural entrepreneurship theory now distinguishable from earlier entrepreneurship theories. At present, there is an ongoing debate about the precise definition of ‘rural entrepreneurship.’ However, what is clear is that contemporary ‘rural entrepreneurship’ significantly differs from the earlier concepts of ‘entrepreneurship in rural areas’ or ‘agricultural entrepreneurship’ (Zhuang et al., 2023). Its primary characteristic is that it no longer solely revolves around the economic dimension but also considers the impact of entrepreneurial activities on rural community development. Particularly in the 21st century, rural community development began to explore the possibilities of economic transformation (Petridou and Glaveli, 2008). In this context, scholars have started reexamining the relationship between rural and urban areas, constructing new entrepreneurial models tailored to the characteristics of rural communities. An important research direction has been the exchange of entrepreneurial resources, including migrant entrepreneurs, between rural and urban areas (Kalantaridis and Bika, 2006; Kalantaridis, 2010).

Most of the research findings currently available are from developed economies, with the United States and Europe serving as representative examples (Liu et al., 2022). In contrast, research in China started later, and the number of cases and research outcomes is relatively limited. On one hand, China’s long-standing ‘urban-rural dual system’^{Note 2)} has limited the exchange of talents and labor between urban and rural areas (Lin, 2018). On the other hand, factors such as inadequate infrastructure, lower entrepreneurial skill levels, and an imperfect entrepreneurial environment have all been detrimental to rural entrepreneurship (United Nations, 2021). Since the implementation of strategies aimed at promoting employment through entrepreneurship after the 17th National Congress of the Communist Party of China in 2007, private enterprises and individual economic activities have developed, and the community of entrepreneurs has expanded (Bao et al., 2022). In 2015, the State Council issued policy documents, such as ‘Opinions on Further Promoting Employment and Entrepreneurship in the New Situation,’ and ‘Guidelines on Accelerating the Construction of Support Platforms for Mass Entrepreneurship and Innovation,’ which elevated the importance of entrepreneurship to a key component of the national development strategy (State Council of China, 2015). To date, China’s policies supporting rural entrepreneurship cover various demographic groups, with entrepreneurial cases distributed across

multiple provinces, as shown in Table 1-1. These policies encourage entrepreneurship among urban migrant workers, college graduates, professionals, researchers, veterans, the unemployed, people with disabilities, and other groups, involving various specific rural talent development projects (State Council of China, 2015).

In terms of related academic research, substantial progress has been made. Due to their distinct characteristics in identifying opportunities, adapting to the environment,

Table 1-1 Target Groups and Supportive Policy Contents in China's Rural Entrepreneurship Promotion Policies

Targeted people	Supportive policy content
Migrant workers working in cities	• Encourage them to return to their hometown to start a business and enjoy a variety of tax reduction and exemption policies • In some areas, business parks for migrant workers returning home have been built to provide financial support and financial services
University graduates	• Encourage graduates to work in government agencies and institutions in villages and towns, especially those in need. • Those who work in grassroots units below the county level in the central and western regions, difficult remote areas and old industrial bases and perform a certain period of service will be given tuition compensation and national student loan reimbursement according to regulations. • College student entrepreneurs can apply for support from the College Student Employment and Entrepreneurship Fund
On-the-job personnel from universities or governmental scientific research institutes	• After consultation, they can leave their jobs and start a business, and their employer can retain their personnel relationship within 3 years. • Encourage scientific research institutions and colleges established with fiscal funds to transfer scientific and technological achievements to small and micro enterprises founded by college students • Improve the equity incentive policy for entrepreneurship for scientific and technological personnel, and relax restrictions on the age of establishment and profitability of companies for equity awards and equity sales
Retired military	• Encourage retired military personnel to work in rural areas or start their own businesses • Organize and implement education and training, strengthen employment guidance and services, and build an employment and entrepreneurship service platform
Unemployed or disabled people	• Encourage various units to provide them with job opportunities • For those who start their own businesses, the government will provide social insurance subsidies within a certain period of time • Get entrepreneurship-related consultation and support from relevant government agencies

Source: Author compiled, based on the 'Opinions on Further Improving Employment and Entrepreneurship under the New Situation' issued by the State Council of China in 2015.

emotional connections with rural communities, and integrating local resources, returned rural migrant workers have been a focal point in the field of rural entrepreneurship research (Liu, 2013). According to data from the central government in 2020, they accounted for 70% of UtRMEs in China (State Council of China, 2020; Yu, 2021). This has led to the development of several widely studied theoretical frameworks, such as the motivations and intentions of rural entrepreneurship, analysis of entrepreneurial behavior, and the entrepreneurial growth path. Wei and Luo (2014), using a dynamic capability perspective, argue that rural entrepreneurship is the process through which UtRMEs continuously learn and adapt in heterogeneous environments, transforming and aligning opportunities and resources until achieving dynamic equilibrium. Li et al. (2021) focused on the new generation of rural migrant workers, categorizing them into four types: affluent, opportunity-driven, resource-driven, and resource-deficient.

Research related to ‘entrepreneurship in rural areas’ and the establishment of industries primarily focused on agriculture started relatively late. The former emphasizes the interactive influence of entrepreneurs and the entrepreneurial environment (Chen et al., 2022). It defines ‘entrepreneurship in rural areas’ as entrepreneurs engaging in commercial activities, starting businesses, and developing specialized farming and animal husbandry, among other entrepreneurial activities in rural areas, primarily for wealth accumulation and personal development. Rural entrepreneurship, compared to urban entrepreneurship, is characterized by being ‘small-scale, individualized, and decentralized,’ with a significant small-scale agricultural economy feature (Han and Cai, 2011). Regional economic development levels (Hu and Tian, 2019), regional institutional environments (Huang and Jiang, 2017), and other factors all play important roles in influencing rural entrepreneurship. With changes in the consumption structure of urban residents, the ‘establishment of industries primarily based on agriculture’ has come into focus. This research mainly concentrates on conceptual definitions, impact mechanisms, and path studies (Kang, 2014).

1.4 Research Framework and Methods

1.4.1 Research Framework and structure of the article

In the subsequent sections, an analysis of China’s UtRME rural entrepreneurship and its impact on rural communities will be conducted from both quantitative analysis, primarily through text mining, and qualitative analysis, mainly through case studies (Fig. 1-1). (1) The first approach involves quantitative analysis based on policy texts. To clarify the position and significance of UtRME in the broader context of ‘rural talents’ in China, this study collected 72 policy texts related to rural talents, including UtRME, and conducted quantitative analysis using text mining software. This analysis encompassed keywords, word frequency, context, as well as comparisons and contrasts between policies. It provides insight into the role of UtRME within the spectrum of rural talents in China. In this process, an in-depth examination of the main objectives and measures of relevant policies was systematically carried out (Ning and Zhang, 2014). (2) The second approach involves qualitative analysis based on case studies. Building upon the results of the quantitative analysis, the author selected two influential groups within UtRME (returned rural migrant workers and university graduates) as subjects for case studies. These case studies involve on-site investigations, semi-

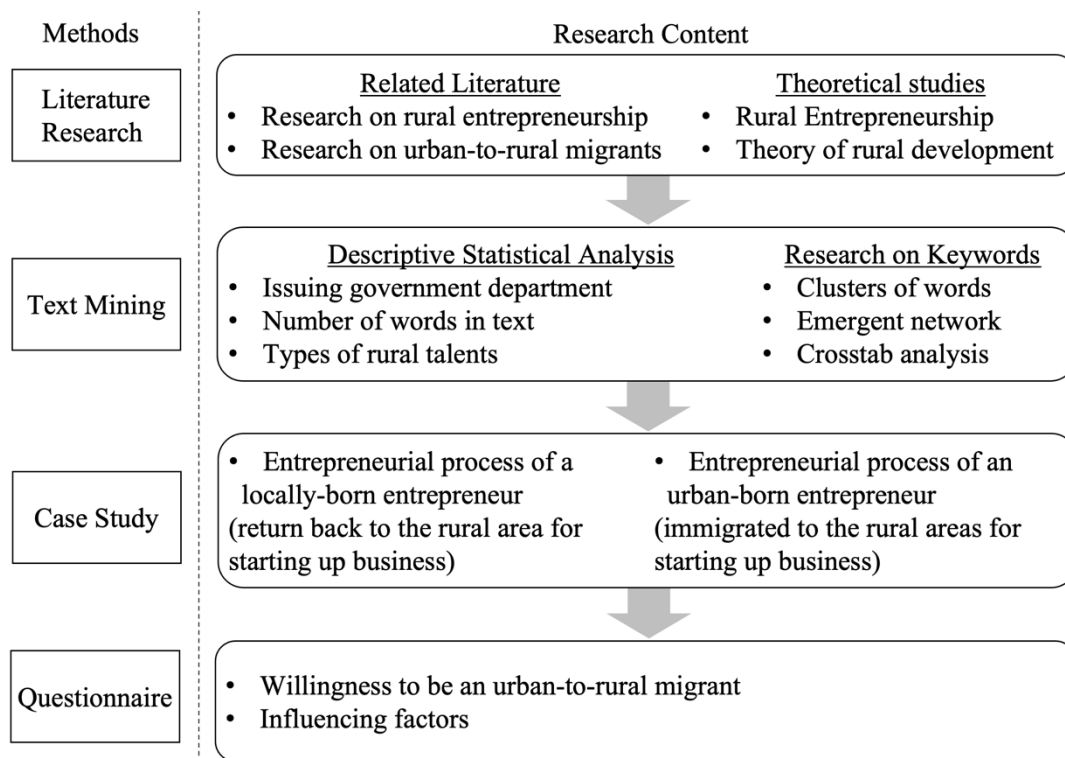


Fig. 1-1 Research Methods and Research Contents

structured interviews, and other methods to research their rural entrepreneurship processes (Gao and Du, 2017). The primary focus of the case studies was to identify entrepreneurial bottlenecks at various stages of entrepreneurship and analyze the characteristics of each stage. Based on these findings, a model for a rural entrepreneurial support environment emphasizing ‘collaboration within and beyond rural communities’ was constructed. This model serves as a foundation for further research on rural entrepreneurship and UtRME (Sun, 2022). (3) Furthermore, the fundamental issue driving the sustained development of UtRME is ‘how to foster the willingness for urban-to-rural migration’ (Gao and Du, 2017; Sun, 2022). Rural migrant workers typically hail from and grow up in rural communities, maintaining strong ties with these areas, thereby making it relatively easier for them to develop an inclination towards urban-to-rural migration (Gao and Du, 2017). However, for those born and raised in urban settings with minimal or no connection to rural communities, is there a willingness for urban-to-rural migration? In order to provide recommendations for the expansion and advancement of UtRME, this paper examines the motivations and influencing factors behind urban-to-rural migration, using college students as a sample.

This combined quantitative and qualitative strategy provides a comprehensive and in-depth research perspective, allowing for a macro-level understanding of policies and overall trends, as well as a micro-level exploration of individual experiences and practical outcomes (Li et al., 2019). It ensures that this study can comprehensively reveal the current status, challenges, and potential of rural entrepreneurship among China’s UtRME, offering more targeted references for advancing rural entrepreneurship (Liu et al., 2022).

The paper is structured into seven chapters (Fig. 1-2). Chapter 1 serves as the introduction, providing an overview of the research background, research questions, research approach, and research methods to facilitate readers’ understanding of the

paper's content. Chapter 2 introduces the main theories used in the study. Chapter 3 conducts a textual analysis of China's rural talent policies, using a quantitative analysis method through text mining to clarify the focus of the Chinese government on rural talent groups. On this basis, this chapter defines the position and importance of UtRME in China's rural development and identifies the main features and policies governing UtRME, serving as the foundation for the subsequent case studies. Chapter 4 presents the first case study of the paper, focusing on returned rural migrant workers as the research subjects. They represent the largest group of entrepreneurs within UtRME and have deep connections with local communities. The analysis of the entire process of rural migrant workers returning to start businesses provides insights into rural community entrepreneurship models and the existing entrepreneurial environment. Chapter 5 constitutes the second case study of the paper, examining university graduate entrepreneurs. University graduates constitute the second-largest group of UtRME, representing external 'newcomer' entrepreneurs from outside rural communities. This chapter discusses the opportunities and challenges these external entrepreneurs encounter in their rural entrepreneurship journey, offering insights into their potential contributions to local poverty alleviation efforts. Chapter 6 research into the motivations and influencing factors behind urban-to-rural migration, using college students as a presentative sample. This chapter's finding serve as a reference for the continuous development and promotion of UtRME. Chapter 7 concludes the paper, summarizing the research questions addressed and providing recommendations for the development of rural entrepreneurship in China.

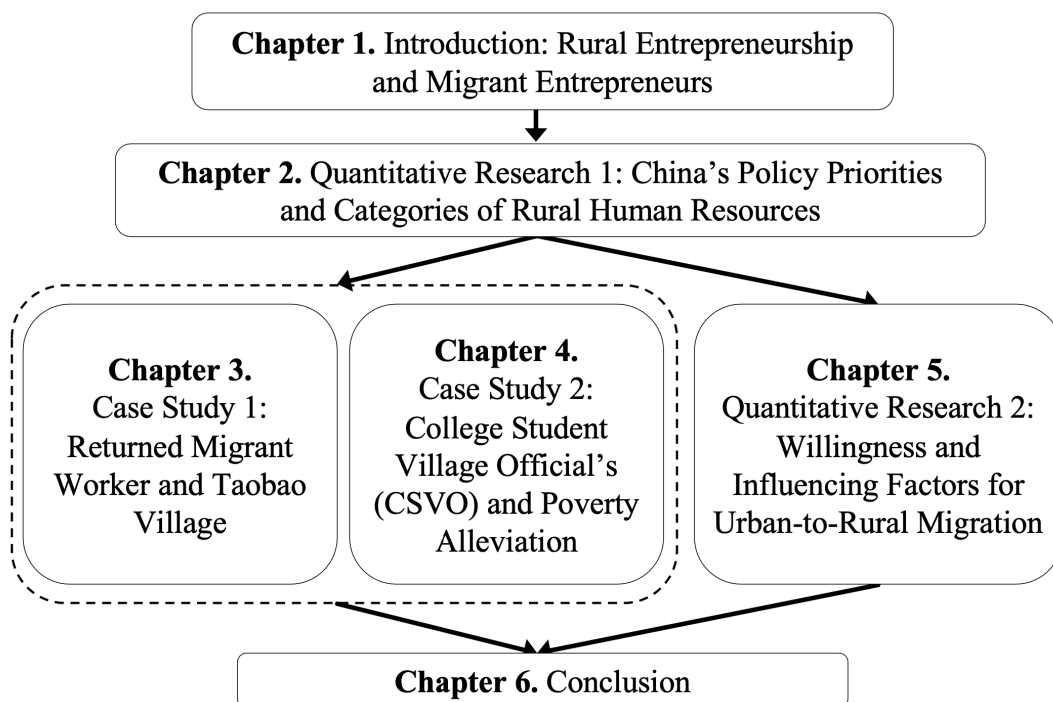


Fig. 1-2 Research Framework

1.4.2 Research Methods

Method 1. Literature Review

Literature review is a critical academic research method aimed at collecting, reviewing, and synthesizing existing literature, studies, books, and other sources of information in a relevant field. This method is typically used to establish a comprehensive understanding of a specific topic or area, provide a background and theoretical foundation for new research, and assess the outcomes of existing research (Du, 2022). Literature review assists researchers in gaining insight into past studies in their field, discovering important theories and methods, and identifying opportunities and directions for future research (Wang and Liu, 2018).

The importance and role of literature review are undeniable, with several key aspects: a) Theoretical and Conceptual Development: Literature review helps researchers understand the essential theories and concepts in their research area (Du, 2022; Zhuang et al., 2023). This aids in establishing research frameworks and theoretical foundations. b) Research Design and Methods: Existing literature provides examples of various research methods and approaches. Researchers can choose the most suitable methods for their research questions from this pool (Du, 2022). c) Background Knowledge: Literature review helps researchers comprehend the history and background of their field. This assists them in better situating their research and evaluating its innovativeness (Wang and Liu, 2018; Zhuang et al., 2023). d) Problem Identification: Through reviewing the literature, researchers can identify unanswered questions or unexplored areas in existing research. This helps them determine the direction and opportunities for future research (Wang and Liu, 2018). e) Supporting Empirical Research: Literature review provides evidence and background information to support research hypotheses and findings. This enhances the credibility and effectiveness of the research (Zhuang et al., 2023).

Method 2. Text Mining

Text mining is a technology used to automatically discover, extract, and analyze valuable information from large-scale textual data (Feldman and Dagan, 2018; Wang et al., 2021). It combines methods from natural language processing, machine learning, and data mining to reveal hidden patterns, relationships, and knowledge within text (Ruan et al., 2017). Key tasks in text mining include text classification (assigning predefined categories or labels to text, e.g., spam classification, news topic categorization), sentiment analysis (identifying emotional tendencies in text, such as positive, negative, or neutral sentiment, to understand user opinions and emotional attitudes), entity recognition (identifying named entities in text, such as names of people, places, organizations), keyword extraction (extracting important keywords or phrases from text to summarize the text's themes or content), topic modeling (identifying hidden topics and subjects in text by analyzing word frequencies and associations), association rule mining (discovering relationships between different items in text, such as market basket analysis, relevance in news reports), text clustering (grouping text into clusters based on similarity to discover the inherent structure and relationships in text data) (Higuchi, 2017).

The applications of text mining are extensive, including social media analysis, sentiment monitoring, market research, intelligence analysis, text retrieval, information extraction, and more. Through text mining, individuals can quickly extract valuable information from vast textual data, reveal potential insights and trends, and support decision-making and business development (Higuchi, 2014).

Currently, various software tools are available for corpus retrieval and analysis in the Chinese language, such as AntConc, wordsmith, HyConc, Sketch Engine, KH Coder, Multi Lingual Text Processor (<http://textdata.web.fc2.com/>), and others. This

article selects KH Coder (<http://kncoder.net/>) for the following reasons. The software was developed by Japanese scholar Koichi Higuchi and is open-source software for quantitative content analysis and data mining. It offers search capabilities and uses ChaSen, MySQL, and other backends (Higuchi, 2017:335). The software provides functions such as word frequency statistics, part-of-speech analysis, context keywords, keyword retrieval, similarity calculations, automatic classification, automatic clustering, summary generation, and visualization (e.g., bar charts, line charts, network diagrams, scatter plots, bubble charts, hierarchical cluster tree graphs). As of June 2023, KH Coder supports text mining in six languages, including English, Japanese, Korean, Spanish, French, and Chinese, with text annotation that complies with the Stanford POS tagger standard. Its analysis results have garnered wide attention from international scholars and have been used in research across various fields (Kino et al, 2017).

The logic of using KH Coder for text mining is to seek hidden issues and hypotheses through the analysis of specific textual information. Such research can generally be divided into two stages: the first stage involves preliminary descriptions of the linguistic and structural features of the text, including word frequency statistics, keyword retrieval, and cluster analysis, to identify hidden problems and hypotheses; the second stage involves creating detailed coding rules to extract concepts and specific features from the text, based on the specific research purpose and content (Higuchi, 2014). Based on the author's usage experience, the specific steps can be summarized as follows: a) collect and organize textual information and integrate all text into an Excel spreadsheet; b) import the spreadsheet into KH Coder and adjust the list of keywords through manual inspection; c) get an overview of high-frequency vocabulary in the text through the function of extracting words; d) observe the contextual information of high-frequency keywords through the keyword retrieval function in the software; e) finally, use the software to generate a network diagram of high-frequency keyword co-occurrence and analyze the relationships among the main elements.

Method 3. Case Study

Case study is a method for detailed and in-depth examination of specific phenomena or practical situations. It involves meticulous observation, investigation, and analysis of specific cases to gain a profound understanding of the case's background, processes, influencing factors, and outcomes. The characteristics of the case study method are specificity, thoroughness, and depth (Xing, 2017). It aids researchers in delving into the complexity, diversity, and uniqueness of specific phenomena (Wang et al., 2023). The case study method finds wide application in various disciplines such as management, sociology, education, medicine, and more. It provides rich empirical and practical experience and is of significant importance for theoretical development, policy formulation, and practical guidance.

This paper centers on Shandong Province, a significant agricultural province in China. According to data from the China Statistical Yearbook 2020, the five provinces with the highest income for rural residents in China are Jiangsu at 22,675 yuan, Zhejiang at 21,352 yuan, Fujian at 19,568 yuan, Guangdong at 18,818 yuan, and Shandong at 17,775 yuan (National Bureau of Statistics of China, 2021). One crucial reason is that they are all located in coastal regions, which have relatively developed economic conditions. However, the distinguishing factor lies in Shandong Province: its agricultural population constitutes around 40%, significantly higher than the other four provinces, and is close to the national average in China. Additionally, due to its immense total population (approximately 100 million people), Shandong Province

stands as one of the areas with the highest rural population in China (Provincial Bureau of Statistics of Shandong, 2021).

Shandong Province is located in the eastern coastal region of China, bordering the Bohai Sea and the Yellow Sea. Shandong Province possesses abundant land and water resources, making it conducive to agricultural development. It is a key production area for grains and agricultural products in China. The province yields a high amount of grain crops, which are cultivated in both the summer and autumn seasons. The main summer grain is winter wheat, while the principal autumn grains include corn, sweet potatoes, soybeans, rice, millet, sorghum, and minor cereals. Among them, wheat, corn, and sweet potatoes are the three major grain crops in Shandong. Shandong Province is known as a major agricultural province, with its agricultural total output value, agricultural product processing industry output value, agricultural product export value, and other indicators consistently ranking first in the country. In 2020, its total agricultural output value surpassed 1.019 trillion yuan, becoming the first province to exceed the ‘trillion-yuan’ milestone (Ministry of Agriculture and Rural Affairs, 2021). Shandong Province covers a land area of 156,000 square kilometers, characterized primarily by plains and hills, with mountainous areas rising in the central and southern regions.

It’s important to note that Shandong Province exhibits significant topographical differences across its various regions. The eastern part of Shandong comprises economically developed port cities like Qingdao, Yantai, and Weihai. Its development pattern resembles that of the southern coastal regions of China, characterized by high levels of urbanization and industrialization. Conversely, the western region of Shandong, situated in the eastern part of China, encompasses mountainous, hilly, and partially flat rural areas. This geographical diversity endows it with distinct features in agricultural development, land utilization, and ecological environment, different from other regions, which are less conducive to large-scale and industrialized cultivation. Due to the increasing demand for industrial land in the eastern regions, a majority of Shandong Province’s rural areas are situated in the western part. Furthermore, the income levels of farmers in the western regions are considerably lower than those in the eastern regions. Taking the surveyed cities of Heze (Chapter 3) and Dezhou (Chapter 4) in this paper as examples, their rural population percentages are 49.4% and 47.1% respectively, with rural per capita incomes standing at only 73.4% and 79.2% of the average Shandong Province income (Provincial Bureau of Statistics of Shandong, 2021). Their income levels align closely with mountainous regions like Sichuan Province, slightly higher than those in Xinjiang and Tibet (National Bureau of Statistics of China, 2021). Given the notable economic disparities between the eastern and western regions of Shandong Province, as well as the conditions it offers for internal population migration (owing to the overall favorable economic condition of the province), this paper selects Shandong Province as the target for the case study.

Method 4. Questionnaire

Questionnaire survey refers to a method of collecting data by formulating detailed and meticulous questionnaires, requiring respondents to provide answers based on which information is gathered (Zhang, 2010; Zhu and Wang, 2014). A questionnaire, in essence, is a set of questions related to the research objective or a questionnaire form prepared for conducting surveys, also known as a survey form. It stands as a commonly used tool in social survey research activities, enabling researchers to accurately and specifically assess the processes of social activities. Researchers utilize this tool to

quantitatively describe and analyze social activities using sociological statistical methods to acquire the necessary survey data.

Questionnaires, also known as survey forms, are tools for collecting data in social survey research. They take the form of systematically recording survey content in question format, essentially designed to gather information on people's attitudes, behaviors, characteristics, values, or beliefs regarding specific issues (Zhu and Wang, 2014). Questionnaire surveys, also called the questionnaire method, involve designers using uniformly designed questionnaires to understand the situation or gather opinions from respondents, collecting information through surveys.

Questionnaire survey is a research method used to explore the current factual situation. Its primary aim is to collect and accumulate fundamental data on various scientific and educational attributes of a specific target group. It can be classified into two major categories: descriptive research and analytical research (Zhang, 2010). When deciding whether to use the questionnaire method as a research tool, considerations should be given to whether it can successfully achieve the research objectives and the alignment of the research sample with the questionnaire. Furthermore, questionnaire surveys have their pros and cons; examining their characteristics in line with the research topic is essential to achieve their objectives (Zhu and Wang, 2014).

1.5 Theoretical Foundation

Theory 1. Rural Entrepreneurship

Entrepreneurship theory is the basis for studying a wide range of entrepreneurial activities. This paper draws on that theoretical framework while focusing on the characteristics of entrepreneurship in resource-limited and poverty contexts (Patel and Chavda, 2013). Unlike traditional urban entrepreneurship research, rural entrepreneurship theory focuses on the development of entrepreneurial behaviors within rural communities to meet social and economic development needs (Stathopoulou et al., 2004). This theoretical framework adopts a sustainable livelihood perspective, emphasizing the resources and capabilities required for rural entrepreneurship to address poverty issues (Pato and Teixeira, 2016). Rural entrepreneurship theory takes into account various factors such as women's participation, poverty alleviation measures, youth entrepreneurship, social entrepreneurship, and the roles of relevant institutions (Patel and Chavda, 2013; Pato and Teixeira, 2016).

In rural entrepreneurship, various resources are needed to support entrepreneurial activities due to the resource constraints often faced in rural areas. The following are some key resources required in rural entrepreneurship: a) Financial capital: Funding is a critical resource for rural entrepreneurship, used for starting and operating businesses (Müller and Korsgaard, 2018; Muñoz, P., and Kimmitt, J. (2019)). Entrepreneurs need financing to purchase equipment, raw materials, pay employee wages, and promote products or services. b) Material capital: This includes physical resources such as land, buildings, machinery, and agricultural tools (Patel and Chavda, 2013; Pato and Teixeira, 2016). Material capital is particularly important for rural entrepreneurship, especially in agriculture and rural industries (Patel and Chavda, 2013). c) Technological capital: Technological and knowledge resources are crucial for improving agricultural methods, increasing production efficiency, and developing new products or services. This includes modern agricultural technology, information technology, and marketing knowledge (Müller and Korsgaard, 2018). d) Social capital: Social capital encompasses

social networks and relationships that can provide support, cooperation, and partnerships. In rural communities, social capital is vital for gaining support, acquiring resources, and building trust (Woods, 2007). e) Human capital: The skills, education, and training of entrepreneurs and employees are essential resources for rural entrepreneurship. Possessing the necessary skills and knowledge can help businesses operate and grow effectively (Ashton and Morton, 2005; Bombiak, 2017). f) Policy support and institutions: Government policies and support from relevant institutions are crucial for the success of rural entrepreneurship. This includes providing financing opportunities, training programs, market access, and legal frameworks (Brunori and Rossi, 2007; Zhang and Zhang, 2020).

The goal of rural entrepreneurship theory is to understand the characteristics of entrepreneurial activities in rural areas, identify paths for sustainable development, and provide strategies to address poverty issues (Gkartzios and Scott, 2014). This theoretical framework provides a powerful tool for researchers and policymakers to promote economic and social development in rural areas while protecting natural resources and the ecological environment (Zhang and Zhang, 2020). Rural communities inevitably face a dilemma between poverty reduction and the risk of sacrificing some natural resources (Patel and Chavda, 2013). Analyzing and understanding rural entrepreneurship theory can better support and promote innovation and sustainable development in rural communities. Additionally, spaces should be provided for integrating different types of capital for vulnerable populations and rural enterprises (Brunori and Rossi, 2007). In this regard, institutions should vertically integrate these vulnerable groups with various levels of government and horizontally integrate various actors within society (Zhang and Zhang, 2018).

Regarding emerging issues, future research opportunities can focus on social entrepreneurship, especially concerning cultural factors that hinder entrepreneurial actions in rural areas by vulnerable social groups such as women, youth, and indigenous peoples (Lowe, P., Ray, C., Ward, N. et al. (1998); Eishrup M, Sanches A R, 2019). In terms of governance and institutions, research directions should involve case studies and quantitative research to examine the success of governance models, including both formal and informal institutions (Brunori and Rossi, 2007; Zhang and Zhang, 2018). Similarly, research can explore the relationship between sustainable livelihoods, the internationalization of rural markets, and the intermediary role of technological platforms in commercializing rural areas (RAY, 1999; Gkartzios and Lowe, 2019).

In summary, since the 1980s, the focus of entrepreneurship research has been on how to exploit opportunities. However, due to the lack of resources in rural areas, research on rural entrepreneurship theory should consider the premise of 'existing resources based on rural communities' with a focus on 'understanding how to discover or create opportunities' and 'how to obtain resources to leverage these opportunities.' Although rural entrepreneurship theory is still in a continuous development process, it will inevitably transition from linear methods to multidimensional, interactive, and multi-level methods (Gkartzios and Lowe, 2019).

Theory 2. Theory in Rural Development

Theory in Rural Development is a theoretical framework that focuses on the holistic development of rural communities, examining the economic, social, and environmental aspects of rural development (Wang and Wang, 2019). The needs and directions of rural community development determine the status of required talents (Baldanov et al., 2019). By referencing this theoretical framework, one can gain insights into the challenges and issues faced during the rural development process,

understand the key elements and driving factors of rural talent development, and provide crucial guidance and support for policies aimed at rural talent development (Guo et al., 2019; Zhang, 2019). Furthermore, the theoretical framework can reveal the interconnections between rural talent development and other related areas such as education, innovation, and industrial development, promoting interdisciplinary coordination (Guo et al., 2019; Zhang, 2019). Therefore, an analytical framework based on Theory in Rural Development is essential for researching policies aimed at rural talent development. It can offer theoretical support and guidance, enabling policymakers to systematically analyze issues, formulate strategies, and ensure that policy measures effectively promote the cultivation and development of rural talent (Du, 2017).

Theory in Rural Development has evolved into three main branches over time (Table 1-2): exogenous, endogenous, and neo-endogenous (RAY, 1999; Gkartzios and Lowe, 2019). Following World War II, the global economy was in need of recovery, and agricultural production capacity was severely impacted. An exogenous model of rural development, known as 'derived from outside,' emerged (Gkartzios and Lowe, 2019). In this model, rural areas were treated as dependent on urban centers in various aspects, such as technology, culture, and economy, with the primary function of providing food for urban populations (Lowe et al., 1998). While it led to increased employment in rural areas, technological improvements, better communication and infrastructure, and efforts to combat rural depopulation in some cases, the exogenous model gradually revealed inherent shortcomings (Herami, 1989; Nishigawa, 1989). It promoted dependent development relying on subsidies and decisions from distant authorities, distorted development favoring certain sectors, selected locations, and specific business types while neglecting others and ignoring non-economic aspects of rural life, and it led to destructive development erasing the cultural and environmental diversity of rural areas and dictated development devised by external experts and planners (Woods, 2005).

In 1975, the theory of endogenous development was introduced by the Dag Hammarskjöld consortium of Sweden in a UN report and further developed in Japan (Zhang and Zhang, 2020). In response to the shortcomings of the exogenous model, the endogenous perspective emphasized the impact of internal factors within rural areas on development. These factors included the resource base, cultural heritage, agricultural productivity, labor force, and rural organizational capacity (Herami, 1989; Nishigawa, 1989). For example, it emphasized the importance of social networks, trust, and cooperation in rural community development. It focused on sustainable community development, addressing rural residents' livelihood strategies, economic diversification, energy, and environmental issues in rural areas. Additionally, it highlighted community-led innovation behaviors, focusing on rural entrepreneurial spirit, innovation capability, and entrepreneurial skills (Miyamoto, 1989).

With the advent of the 21st century and the rapid development of the information industry based on the internet, trade and production became increasingly globalized. In this context, some scholars further developed Theory in Rural Development. Building on the endogenous approach, they allowed for the exchange of resources between urban and rural areas (Hobo, 1996). Ray (2001) eventually introduced the term 'neo-endogenous development' to describe an approach to rural development that is locally rooted but outward-looking. It is characterized by dynamic interactions between local areas and their broader environments. The neo-endogenous development theory overcomes the dichotomy between the external and internal systems, discussing regional development issues from the perspective of the integrity and dynamics of

internal and external relationships, thus enhancing the concept of endogenous development (Ray, 1999; Odagiri, 2012).

Table 1-2. Three Types of Rural Development Model: Exogenous, Endogenous, and Neo-Endogenous

	Exogenous	Endogenous	Neo-Endogenous
Key principle	Economics of scale and concentration	Harnessing local (natural, human and cultural) resources for sustainable development	Socio-spatial justice and balancing local needs while competing for extra-local people, resources, skills and capital
Dynamic force	Urban growth poles (drivers exogenous to rural areas)	Local initiative and enterprise	Fostering a new urban-rural and local-global relationship through inclusive, multi-scalar and multi-sectoral governance arrangements
Function of rural areas	Food and primary products for expanding urban economies	Diverse service economics	Sustaining rural livelihoods, while maintaining natural capital; A mosaic of re-emerging productivist functions and consumerist uses (including housing, services)
Major rural area problems	Low productivity and peripherality	Limited capacity of areas/groups to participate in economic activity	Exclusive countrysides; Neoliberal deregulation versus policy apathy and lack of regulation; Climate change challenges; Economic crisis
Focus of rural development	Agricultural modernization; encourage labor and capital mobility	Capacity-building (skills, institutions, infrastructure); overcoming exclusion	Place-making and community wellbeing; Building resilient rural places; Coping with the new politics of austerity; Coping with emerging geographies of exclusion and (im)mobility triggered by economic crises; Realising and valorising alternatives to development (especially non neoliberal) in times of crisis

Source: Author compiled, based on Lowe et al. (1998) and Gkartzios and Scott (2014).

Notes

Note 1) China's government has successfully enacted multiple policies to encourage urban-to-rural migration and rural entrepreneurship and innovation (named '返乡入乡创业创新' in China's policies). This has evolved into a group comprising individuals from diverse backgrounds, including rural migrant workers returning to their hometowns, university graduates, retired military personnel, and unemployed individuals. This paper collectively refers to them as Urban-to-Rural Migrant Entrepreneurs (UtRME).

Note 2) China's urban-rural dual system refers to the unequal institutional arrangements in areas such as land, social security, education, and employment between urban and rural areas. The Chinese government differentiates the management of urban and rural residents by establishing 'urban hukou' (household registration) and 'rural hukou.' This system has placed various constraints on rural development, including limited land resource utilization, inadequate social security, educational resource inequality, and, consequently, an expanded urban-rural income gap. The government has been implementing reform measures to reduce these disparities, but the urban-rural dual system remains one of the primary challenges facing rural development.

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Chapter 2

Quantitative Research 1: China's Policy Priorities and Categories of Rural Human Resources

2.1 Background: China's rural talent policy system

In the 'Opinions on Accelerating the Revitalization of Rural Talents' jointly issued by the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council in 2021, the Chinese government explicitly states that 'rural development requires the support of various talents, including UtRME,' and sets the development goal of 'establishing a basic framework and policy system for the revitalization of rural talents by 2025.' To clarify the position and importance of UtRME in the Chinese policy system, this paper first conducts a systematic analysis of China's rural talent policies (Du, 2017).

Rural talents are a relatively broad concept, typically referring to individuals living and working in rural areas, possessing certain knowledge, skills, and experience that can contribute to agricultural production or rural development (including aspects such as the economy, technology, education, healthcare, culture, and more) and can serve as intellectual or labor resources while also playing a demonstrative or leadership role (Bombiak, 2017; Du, 2017). Generally, rural talents play a crucial role in promoting sustainable rural development and improving residents' quality of life (Ashton and Morton, 2005; Baldanov et al., 2019). To address the issues of rural talent outflow and shortages, governments, institutions, or organizations in many countries have adopted various policies and measures to promote the development and retention of rural talents, aiming to complement talents for various rural undertakings. This falls under rural talent policies (Policy of Rural Talents Development, PRTD) (Kokkranikal and Baum, 2002; Wang et al., 2021; Yan and Guanggang, 2022).

China has consistently attached great importance to the development of rural talents, and the policy framework has undergone multiple adjustments (Gao and Du, 2017; Zhuang et al., 2023). In earlier times, the Chinese government did not use the term 'rural talents' but rather preferred expressions like 'agricultural talents,' as seen in the 'Decision on Further Strengthening Talent Work' issued in 2003. This was related to the urgent need for modernizing agriculture in China at that time. For example, in the specialized document 'Eleventh Five-Year Plan for the Construction of Agricultural Talent Teams (2006-2010)' issued by the Ministry of Agriculture and Rural Affairs, it emphasized that the 'Eleventh Five-Year Plan' period (2006-2010) was a critical phase for advancing modern agricultural development and, concurrently, the development of agricultural talent teams. In the 'Medium and Long-term Plan for the Construction of Practical Rural Talents and Agricultural Science and Technology Talents in Rural Areas (2010-2020),' the Ministry of Agriculture and Rural Affairs further clarified that 'agricultural talents' included practical rural talents and agricultural science and technology talents. Practical rural talents emphasized the ability to lead villagers, while agricultural science and technology talents emphasized knowledge and skills related to agricultural production. It was only with the release of the 'Fourteenth Five-Year Plan for the Construction and Development of Agricultural and Rural-Related Talent Teams (2021-2025)' by the Ministry of Agriculture and Rural Affairs that the expression 'rural talents' replaced 'agricultural talents' (Gao and Du, 2017). This change was primarily attributed to the release of the 'Rural Revitalization Strategy,' an important government document that elevated agricultural and rural development to a core national position (Zhang et al., 2018). The government expanded its focus from rural and agricultural development to small towns adjacent to rural areas and worked to enhance the connections between urban and rural areas. Consequently, the expression 'rural' was increasingly used in policy documents in place of 'agricultural,' and as a result, policy documents began using the term 'rural talents' (Gao and Du, 2017; Zhang et al., 2018).

Additionally, some documents used the term ‘rural-related talents’ ^{Note 1)} to emphasize its broader connotations (Song et al., 2014; Gao and Du, 2017). For the sake of convenience in this paper, the term ‘rural talents’ is uniformly used.

2.2 Data Acquisition and Preprocessing

2.2.1 Data Source

The data used for text mining in this paper are policy documents related to rural talent development publicly available on the official website of the Ministry of Agriculture and Rural Affairs of China (<http://www.moa.gov.cn/>) from 2006 to 2022. All textual data are in Chinese. The Ministry of Agriculture and Rural Affairs ^{Note 2)} is one of the constituent departments of the State Council (China’s central government, the highest administrative body) and is a national ministerial-level organization, an integral part of the central government. It is specifically responsible for formulating and implementing policies, regulations, and plans related to agriculture, rural development, and farmers. ‘Work related to rural talent development’ is one of the main responsibilities of the Ministry of Agriculture and Rural Affairs (Ministry of Agriculture and Rural Affairs, 2017). The official website of the Ministry of Agriculture and Rural Affairs is hosted by the Ministry of Agriculture and Rural Affairs and supervised by the Market and Informatization Department of the Ministry of Agriculture and Rural Affairs, with the Information Center of the Ministry of Agriculture and Rural Affairs responsible for its operation. This ensures the authority and public availability of the documents and data obtained from its website.

Another reason for choosing the Ministry of Agriculture and Rural Affairs as the data source is that the number of rural talent policies or government documents published by the Ministry of Agriculture and Rural Affairs is sufficient for text mining (Higuchi, 2017). It is well known that analyzing Chinese policies requires an understanding of the outline of the National Five-Year Plan for Economic and Social Development of China (referred to as the ‘Five-Year Plan’ hereinafter) ^{Note 3)} (Song Huaming, Yu Liu, Shan Zhengfeng, 2014; Gao Liangliang, Du Zhixiong, 2017). The Central Committee of the Communist Party of China regularly convenes meetings to discuss and determine the content of the next Five-Year Plan. The central government then breaks down the overall plan into specific tasks and indicators for various sectors. Government departments at all levels formulate development plans and policies each year based on the guidance of the Five-Year Plan. According to the requirements of the central government’s published ‘Five-Year Plan,’ the Ministry of Agriculture and Rural Affairs has been formulating corresponding talent development plans since 2006 (usually also for five years or multiples thereof). In brief, the ‘Five-Year Plan’ forms the basis for the formulation of rural talent policies, and the content of rural talent policies is developed around the goals of the ‘Five-Year Plan.’ In addition, in addition to the types of rural talents mentioned in the ‘Talent Team Development Plan,’ the Ministry of Agriculture and Rural Affairs will also develop other types of rural talent and issue relevant government documents separately (Ministry of Agriculture and Rural Affairs, 2017). In summary, as shown in Fig. 2-1, the Ministry of Agriculture and Rural Affairs has created a substantial policy framework for the development of rural talents.

This paper focuses on the period from 2006 to 2022, which encompasses four Five-Year Plans: the 11th Five-Year Plan (2006-2010), the 12th (2011-2015), the 13th (2016-2020), and the 14th (2021-2025). The choice of this timeframe is primarily based

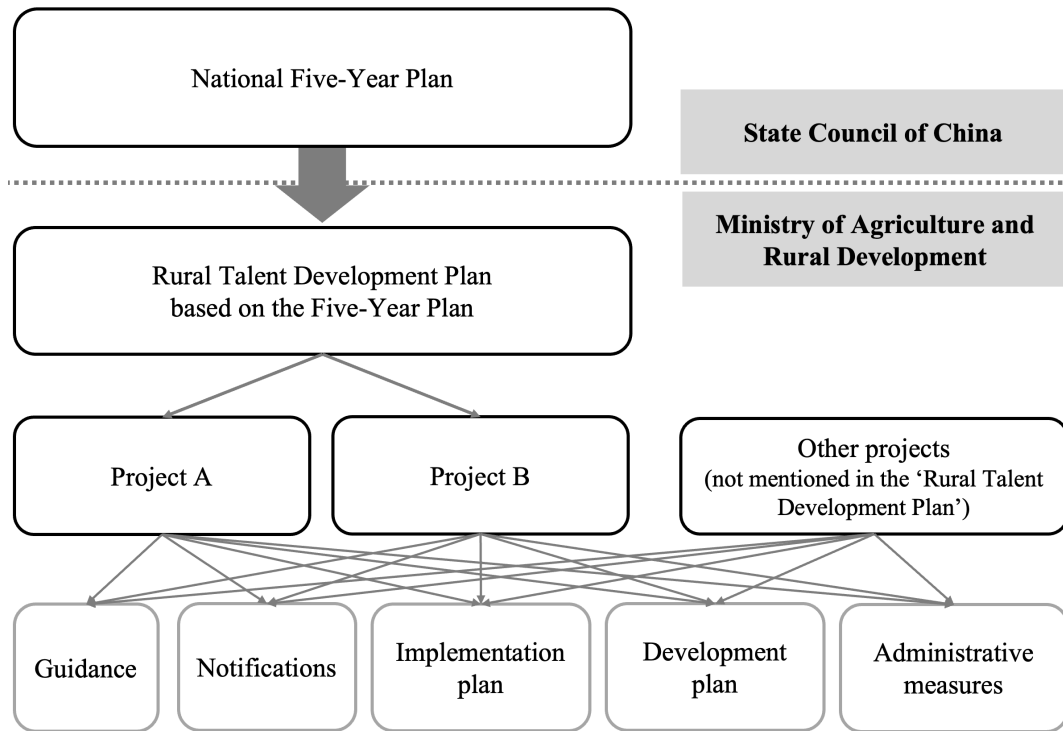


Fig. 2-1 Relationships among the collected policies and files

on the following two reasons. (1) In 2006, the Communist Party of China released a new ‘Five-Year Plan,’ and it was also the first year in which the ‘Five-Year Plan’ was officially renamed as the ‘Five-Year Plan.’ Around 2006, there were differences in the logic and standards of policy formulation (Gao and Du, 2017). Selecting policies and government documents from 2006 onwards helps to some extent avoid differentiated expressions in policy texts and provides the potential for temporal cross-sectional comparisons during the quantitative analysis process. On the other hand, the data for 2023 was not selected (data collection for this paper was completed in July 2023), primarily because policy documents for that year were still being gradually released, making the analysis of policy focus for that year less accurate. (2) According to the requirements of the central government’s published ‘Five-Year Plan,’ the Ministry of Agriculture and Rural Affairs has been formulating corresponding talent development plans since 2006 (usually also for five years or multiples thereof). These documents are easily identifiable because of their substantial length (as shown in Table 2-1, these documents are typically over 10,000 words; for more details, see section 3.2.2), and their titles contain the keywords ‘Talent Team Development Plan.’ The introductory sections of these government documents provide background information, including ‘which central government’s Five-Year Plan it corresponds to’ and ‘what rural talent issues it primarily addresses.’ They also clearly specify details of rural talent development projects, current status, standards, and requirements, among other things. These documents clarify the focus of rural talent policies and aid in understanding the evolution of rural talent policies. They include the ‘Eleventh Five-Year Plan for Agricultural Talent Team Development (2006-2010),’ the ‘Long-term Plan for Practical Rural Talent and Agricultural Science and Technology Talent Team Development (2010-2020, spanning two Five-Year Plans),’ and the ‘Fourteenth Five-Year Plan for Agricultural Rural Talent Team Development (2021-2025).’

Table 2-1 Policies with the largest number of text words

No.	Year	Title	Words	Departments
No.65	2021	14th Five-Year Plan' for Agricultural and Rural Talent Team Development	19,486	Ministry of Agriculture and Rural Development
No.53	2020	High-Quality Development Plan for New Agricultural Management and Service Talent (2020-2022)	12,828	Ministry of Agriculture and Rural Development
No.11	2011	Mid- to Long-Term Plan for Building Rural Practical Talents and Agricultural Technology Talents (2010-2020)	10,650	Ministry of Agriculture and Rural Development
No.43	2018	Vigorously Implement the Rural Revitalization Strategy to Accelerate Agricultural Transformation and Upgrading and Talent Cultivation	10,563	State Council of China, Ministry of Agriculture and Rural Development
No.6	2010	Strengthen the Construction of Rural Practical Talent Teams and the Development of Rural Human Resources	10,156	State Council of China

2.2.2 Data Acquisition Process

The process of searching, collecting, and screening policy and related government documents is as follows. (1) Firstly, in the search box of the official website of the Ministry of Agriculture and Rural Affairs, the term ‘talent’ was entered. The option ‘keywords must be included in the title’ was selected, and the category was limited to ‘public’. This search yielded a total of 114 results. (2) Subsequently, the author manually reviewed all the results and excluded documents that did not meet the criteria. These excluded documents fall into two categories. One category includes documents with low relevance to rural talents, which the author chose to remove. For example, news reports reprinted by the Ministry of Agriculture and Rural Affairs, speeches by leaders, personnel recruitment information from the Ministry of Agriculture and Rural Affairs, and other such documents. The other category comprises duplicate search results, with only one result retained. For example, government documents with attachments would be recognized as multiple search results (the main text and each attachment are listed as separate search results), as would documents released in multiple batches for the same project (each batch’s relevant documents were listed as individual search results). (3) In the end, 72 valid results were obtained, forming the database used for text mining, totaling 266,533 words ^{Note 4)}. Additionally, the author compiled other information related to policy and government documents (including policy titles, release dates, issuing agencies, etc., details can be found in Appendix 1), and then created an Excel file for text mining as required by KH Coder 3.

The selection of data in this manner is primarily to ensure that the obtained documents are highly relevant to rural talent, thereby enhancing the efficiency of text mining. In existing literature, some researchers have used texts from ‘Five-Year Plan’ and ‘Central Document No. 1’^{Note 5)} for their studies. However, it should not be overlooked that these documents cover multiple fields of rural development and various government departments, with limited discussions on the specific area of rural talent development. For example, the currently implemented 14th Five-Year Plan, ‘the 14th Five-Year Plan for National Economic and Social Development and the Long-Range Objectives Through the Year 2035’, is almost 65,000 words long, with only 53 mentions of talent, and even fewer instructions related to rural talent. This means that these literature databases have large volumes but contain little information unrelated to rural talents (Kino et al., 2017).

In contrast, the policy and government documents selected for this paper all originate from the Ministry of Agriculture and Rural Affairs and have ‘talent’ in their titles. This ensures that the content of the data is closely related to rural talent development (Kino et al., 2017).

2.2.3 Text Mining Pre-processing

(1) Keyword Identification

It should be noted that text mining software, including KH Coder 3, still has limitations in recognizing vocabulary. Natural Language Processing (NLP) technology is the fundamental principle behind current text mining software for identifying vocabulary. It involves splitting the input text data into individual words or tokens, followed by further analysis. However, this operational mechanism gives rise to two issues that affect the accuracy of analysis (Higuchi, 2017). On one hand, it cannot directly identify specific meaningful proprietary terms or compound words. For instance, it cannot directly recognize the term ‘农业农村部’ (Ministry of Agriculture and Rural Affairs) as a single entity; instead, it would recognize it as separate words such as ‘农业’ (agriculture), ‘农村’ (rural), ‘农’ (agriculture), ‘村’ (village), and ‘部’ (department). On the other hand, KH Coder 3 cannot recognize synonyms. For example, ‘人才培养’ (talent cultivation) and ‘人才培育’ (talent cultivation) have similar meanings, but KH Coder 3 would identify them as two different words.

The solution to these issues is manual intervention. Specifically, the analyst prepared a .txt file named ‘force to pick’, which was uploaded to KH Coder 3, allowing manual restrictions on the range and classification of vocabulary that the software recognized (Kino et al., 2017; Higuchi, 2017). Moreover, KH Coder 3 permits users to upload a ‘force to ignore’ file, which, through manual intervention, filters out frequently occurring vocabulary that does not directly contribute to the analysis results (Higuchi, 2017). In the force pick up document, this paper specifies proprietary terms such as ‘农业农村部’ (Ministry of Agriculture and Rural Affairs), ‘人才培养’ (talent cultivation), and ‘农村实用人才’ (Rural Practical Talents), among others. By uploading the force to ignore document, the impact of words such as ‘请’ (please), ‘可以’ (can), and ‘能够’ (able to), which have little impact on the analysis results, is avoided.

It is worth noting that manual reading of the titles of each document played a significant role during the debugging of the force pick up document. The author found that the titles of policy or government documents typically have a simple syntactic structure, making it easy to understand the core purpose of the document and identify keywords. Furthermore, in the titles of documents from different years, the Ministry of

Table 2-2 Policies related to rural talent development projects

No.	Year	Title
...	...	...
No.11	2011	Medium- and long-term plans for the construction of rural practical talents and agricultural science and technology talents (2010-2020)
No.12	2011	Implementation plan of modern agricultural talent support plan
No.13	2012	Allocate funds for the 2012 rural practical talent leader training project
No.14	2012	Implementation Measures for the Training Plan for Outstanding Agricultural Scientific Research Talents
No.15	2012	Funds for the 2012 Modern Agricultural Talent Support Plan were released
No.16	2012	Implementing a training plan for 10,000 key agricultural technology extension talents
No.17	2013	Carry out training activities for highly skilled talents and teachers in agricultural machinery maintenance
No.18	2013	Agricultural Skilled Talents Vocational Skills Appraisal Station Capacity Building Project
No.19	2013	Pilot work plan for identifying rural practical talents
No.20	2013	Strengthen the construction of agricultural radio and television schools and accelerate the construction of a new professional farmer talent education and training system
No.21	2014	Issued the 2014 Demonstration Training Plan for Rural Practical Talent Leaders and College Student Village Officials
...	...	...

Note: Excerpted from Appendix 1.

Agriculture and Rural Affairs generally maintains a high level of consistency in its use of keywords. For example, just by reading Table 2-2, it becomes evident that Rural Practical Talents is a keyword because it is consistently used in policy or government documents from 2011 to 2014. Additionally, this approach has another advantage: the frequency of keywords appearing in different years can confirm the duration and level of attention from the Ministry of Agriculture and Rural Affairs for corresponding policies. Using Rural Practical Talents as an example, it is clear that it was one of the most focused projects by the Ministry of Agriculture and Rural Affairs from 2011 to 2014 because relevant policies or government documents were introduced every year, covering topics such as the ‘mid- to long-term plan’ in 2011, ‘disbursement of project funds’ in 2012, ‘pilot certification rules’ in 2013, and the ‘demonstration training program’ in 2014.

(2) Criteria for Assessing Keyword Frequency and Importance

KH Coder 3 provides three methods for calculating keyword frequency. The first method is ‘Sentences.’ In this method, each instance of a keyword increases its frequency count by 1; in other words, it calculates the total number of times a keyword appears in all the text. The second method is ‘Paragraphs,’ which uses the frequency of

a keyword ‘appearing in different paragraphs’ as the measure of its frequency. Even if a keyword appears multiple times within the same paragraph, it is counted as a single increase in frequency. The final method is ‘H5.’ As mentioned earlier, when conducting text mining using KH Coder 3, data to be analyzed needs to be uploaded via an Excel file. The ‘H5’ method calculates keyword frequency as follows: each appearance of a keyword in an Excel data cell increases its frequency by 1; even if it appears multiple times within the same data cell, it is counted as a single increase in frequency.

In this paper, all ‘frequencies’ are calculated using the ‘H5’ method for the following reasons. During the process of organizing the text data into an Excel spreadsheet, the author compiled the text of each policy or government document into a single Excel data cell, with rows and columns arranged to match those in Appendix 1. In other words, in the Excel spreadsheet used for text mining, each row presents all the information about a policy or government document, including the document title, the entire text of the document, the publication date, and the relevant government departments. In this paper, ‘the frequency of a keyword’ represents the number of times that keyword appears in all 72 documents. The choice of this strategy is primarily due to the following two reasons.

a) Disregarding individual differences between policies or government documents. Depending on their content, documents may vary in length. For example, the document titled ‘Conducting a National Special Survey on the Construction of Veterinary Talent Teams’ from 2014 (Appendix 1, No. 22) contains 1,275 Chinese characters, and the term ‘veterinarian’ appears 43 times, accounting for 6.7% of the total character count. In contrast, the document ‘Conducting Demonstration Training for Rural Practical Talents and Those Assigned to Villages in 2021, Following the Management of College Student Village Officials’ from 2021 (Appendix 1, No. 67) contains 3,219 characters, and the term ‘College Student Village Official’ appears only 4 times, accounting for 0.6% of the total character count. The reason for this difference is that the former document deals with ‘assigning research tasks,’ which frequently mentions the term ‘veterinarian,’ while the latter dedicates much space to explaining ‘various training requirements,’ with the term ‘College Student Village Official’ only being used to describe the corresponding rural talent development project.

b) Differentiating the importance of keywords based on the ‘frequency of attention from the Ministry of Agriculture and Rural Affairs.’ As shown in Appendix 1, the Ministry of Agriculture and Rural Affairs has successively formulated multiple talent development projects, corresponding to different government work objectives or social conditions. Their number is large, making it difficult to observe each one individually. Therefore, selecting a standard to assess importance is useful for analyzing the policy focus of the Ministry of Agriculture and Rural Affairs. The ‘H5’ frequency calculation method can demonstrate the frequency with which keywords were mentioned by the Ministry of Agriculture and Rural Affairs from 2006 to 2022. The more years a keyword is mentioned, the longer its continuous influence, indicating greater attention from the Ministry of Agriculture and Rural Affairs. Let’s take the documents related to ‘veterinarians’ and ‘College Student Village Official’ as examples. When considering the number of times a specific keyword appears, ‘veterinarians’ has a higher repetition rate. However, documents related to ‘veterinarians’ were only published in 2014. In contrast, documents related to ‘College Student Village Official’ appeared in five different years (2014, 2017, 2018, 2019, 2020, and 2021) (further details will be explained in section 3.2.3 below). This paper aims to investigate the changing focus of policies at the Ministry of Agriculture and Rural Affairs. Considering the way data was organized in the Excel spreadsheet during preparation and in line with the requirements

of the analysis, choosing the ‘H5’ evaluation standard better suits the needs of this paper’s analytical discussion.

2.3 Text Mining Results

2.3.1 Publication Years and Quantity

The quantity of policies and government documents published in a specific field can indicate the government’s level of concern for that area. In particular, an increase in the number of policies generally signifies an elevated level of government attention to that field, with the aim of promoting development through various policies. Areas that receive government attention can access more policies and resources, thereby maintaining a more stable development status and faster growth rate. Moreover, changes in the annual publication count can provide insights into shifts in the government’s focus and the allocation of tasks.

As shown in Fig. 2-2, the number of rural talent policies and documents released by the Ministry of Agriculture and Rural Affairs varies in different years. Overall, while there are clear fluctuations, there is an upward trend. Particularly during the periods 2010-2011, 2015-2016, and 2019-2020, there was significant growth followed by gradual declines. This indicates a certain level of cyclical.

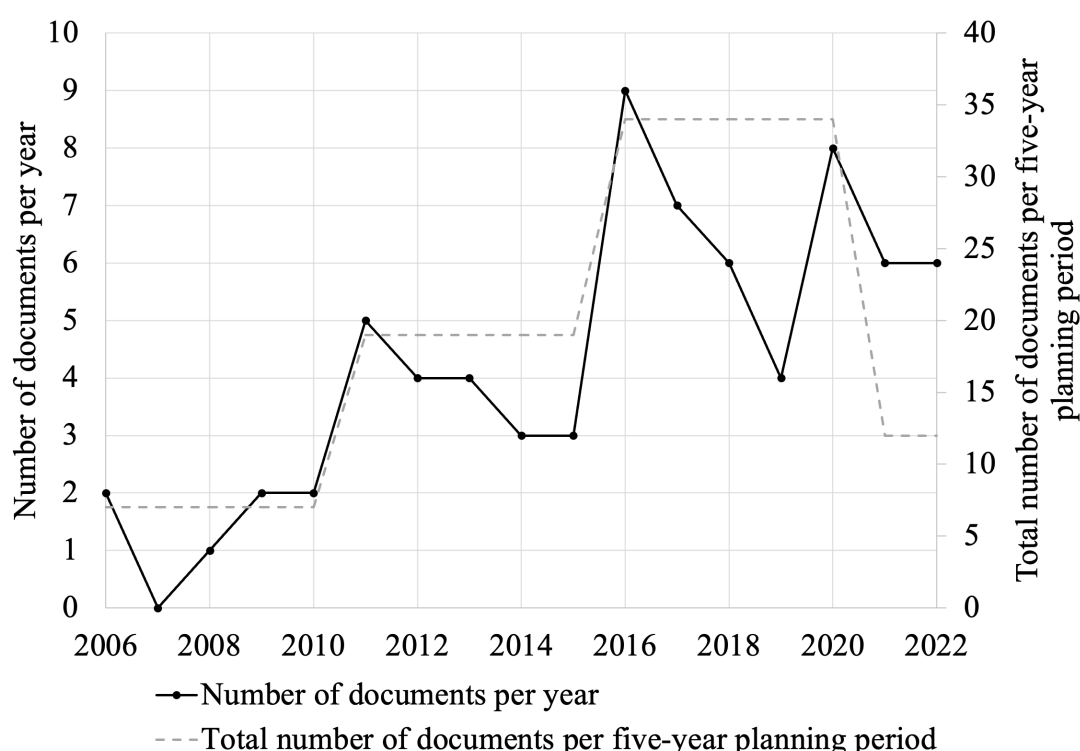


Fig. 2-2 The number of rural talent policies and documents released by the Ministry of Agriculture and Rural Affairs varies in different years

It can be observed that the fluctuations in quantity are related to policies with titles containing ‘Talent Team Development Plan.’ More specifically, it is related to the timing of the release of the Central Committee’s five-year plans. Although during the 11th five-year plan (2006-2010), the number of policies remained between 1 and 2 per year without a significant pattern, the changing trends during the other three five-year

plan periods are significant. As shown in Fig. 2-2, summarizing the total number of policies during each five-year plan period shows more pronounced cyclical patterns. The 12th five-year plan was released on March 16, 2011 (Xinhua News, 2011). In this document, the central government emphasized several tasks, including strengthening the education of rural talents, promoting agricultural technological innovation, and addressing the shortage of rural cadres and community workers. Correspondingly, the number of rural talent policies released by the Ministry of Agriculture and Rural Affairs saw a significant increase in 2011. Similarly, on March 17, 2016, the 13th five-year plan was released, which set the development goal of ‘eradicating absolute poverty by 2020.’ For rural communities with still 55.75 million poor people (State Council of China, 2018), the task of developing rural talents once again received high attention from the country and the Ministry of Agriculture and Rural Affairs, resulting in a significant increase in the number of policies. By the time the year reached 2018, the central government issued one of the most important policies for rural community development in recent years - the ‘Rural Revitalization Strategy’^{Note 6)}, which introduced new development goals such as ‘diversification of rural industries,’ ‘encouraging entrepreneurship in rural areas,’ and ‘integrated urban and rural development’ (Zhang et al., 2018). Subsequently, it continuously released policy documents, emphasizing the aforementioned objectives repeatedly. Specifically, in the 14th five-year plan issued on March 13, 2021, the central government formulated a vision for 2035 based on the ‘Rural Revitalization Strategy.’ Then, on May 7, 2021, the ‘Rural Revitalization Promotion Law’ was promulgated. The annual number of rural talent policy publications provides further insight: not only has the continuous growth trend from the 13th five-year plan been sustained, but it also shows a tendency for further growth. These actions demonstrate not only the central government’s urgency for rural community development but also indicate the continuous demand for an increased number and diversity of rural talents.

2.3.2 Word Count Analysis

The word count of each policy document is depicted in Fig. 2-3. Firstly, there is significant variation in the word count of policy documents across the entire dataset, ranging from the shortest at 341 words to the longest at 19,486 words. This reflects that some policies are concise, while others are more detailed and comprehensive. Secondly, the word count of different policy documents varies widely, ranging from 382 to 19,486 words, with an average of 3,702 words per policy. Notably, only 11 documents surpass the average word count; in other words, the word count of the remaining 61 documents does not exceed the average. It is also important to note that some policies have

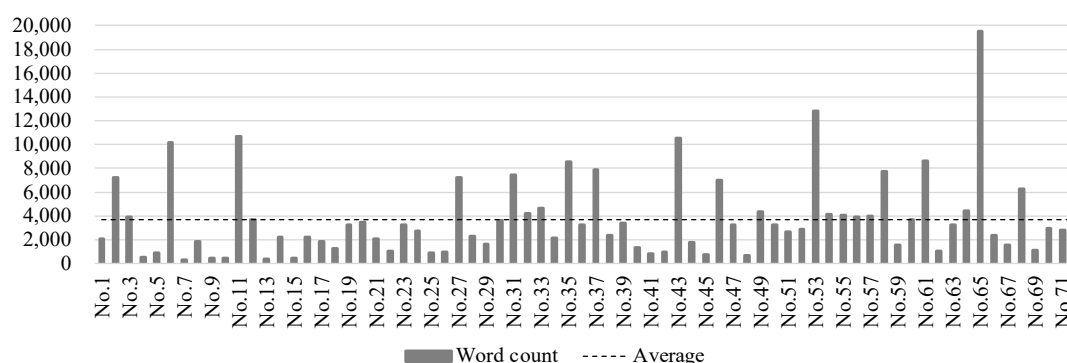


Fig. 2-3 Word count of text for each policy

significantly higher word counts. For example, policies with document numbers No. 11, No. 43, and No. 65 are relatively high, with word counts of 10,650, 10,563, and 19,486 words, respectively. As mentioned in section 3.1.1, these are primarily talent development plans formulated by the Ministry of Agriculture and Rural Affairs based on the central government's 'Five-Year Plan.' In contrast, there are also policies with very few words, such as No. 4, No. 9, and No. 15, with word counts of 511, 426, and 456 words, respectively. These policies are either instructive documents with simpler content or pertain to specific aspects of policy.

To gain a better understanding of the annual policy trends, the author compares the total word count of policy documents released in the same year, as shown in Fig. 2-4. Similar to the trends in policy publication quantity discussed in section 3.2.1, this figure also demonstrates a close relationship with the 'Five-Year Plan.' First, between 2006 and 2010, the total word count of talent policy documents remained relatively low, hovering around a few thousand words. However, after 2010, this number increased significantly, especially in 2016, when it peaked at over 41,000 words. This change reflects a major policy adjustment by the government to address new economic and societal challenges in terms of talent attraction and development. Secondly, it is evident that after 2016, the word count of policy documents experienced rapid growth. This indicates a significant increase in government attention to talent management and development during this period, responding to rapidly changing domestic and international environments. The word counts in 2016 and 2020 are particularly notable, reflecting a comprehensive review of talent strategies and significant policy adjustments. Additionally, it is worth noting that, although the word counts in 2016 and 2020 are significantly higher than in other years, in 2021 and 2022, they declined to 39,136 and 18,039 words, respectively. This reflects a shift or readjustment of policy priorities or a government focus on implementing existing policies in certain years rather than formulating new ones.

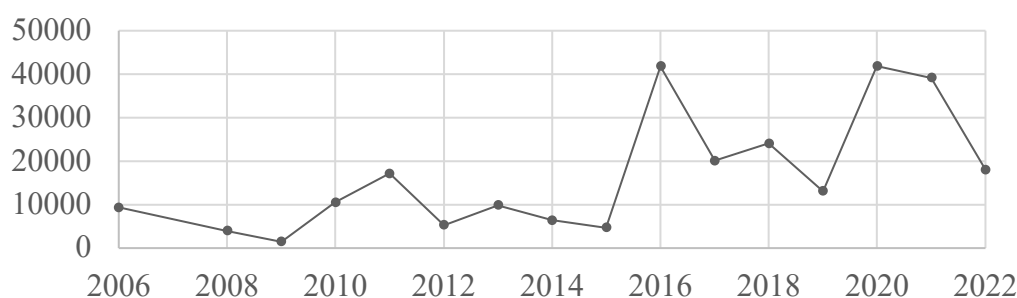


Fig. 2-4 The total number of words in policy documents per year

2.3.3 Government Departments as Sources

Rural talent policies require comprehensive consideration of needs across various sectors such as rural economy, society, education, healthcare, and more. The development and nurturing of rural talent extend beyond agricultural production and encompass rural infrastructure development, rural social affairs, rural education, and various other aspects. Different government departments possess distinct resources, and collaborative policy releases encourage these departments to integrate their resources for better support of talent development. In other words, when multiple government departments jointly issue policies, it usually signifies the complexity and

comprehensiveness of policy matters and the government's efforts in coordinating, cooperating, and addressing multifaceted issues. For a policy, the more departments are involved, the more fields and interest groups it typically covers, and the more intricate the professional knowledge it requires. Correspondingly, it demands higher levels of interdepartmental cooperation and has a more significant impact on society. Such multi-departmental collaboration helps formulate more comprehensive and effective policies, enhancing government efficiency to meet the diverse needs of the population.

Fig. 2-5 illustrates the government departments that have contributed to the release of rural talent policies. The 'Percent' values in the graph represent the frequency of departmental participation in policy release during specific years. Taking the example of the 'Percent' values for the State Council and the Ministry of Finance in 2010, on one hand, the early appearance of these two values indicates that compared to other departments, the State Council and the Ministry of Finance were among the first departments to participate in policy releases by the Ministry of Agriculture and Rural Affairs regarding rural talent. On the other hand, in that specific year, the 'Percent' values for the State Council and the Ministry of Finance are nearly equal to that of the Ministry of Agriculture and Rural Affairs. This suggests that the three departments issued an equal number of documents in that year, and the State Council and the Ministry of Finance shared the same level of concern for rural talent as the Ministry of Agriculture and Rural Affairs. As Fig. 2-5 illustrates, in the course of developing rural talent policies, an increasing number of government departments have become involved. In addition to the Ministry of Agriculture and Rural Affairs, 14 other government departments have participated, including the State Council, the Ministry of Finance, the Ministry of Education, the Ministry of Science and Technology, the Ministry of Human Resources and Social Security, the Organization Department, the National Bureau of Statistics, the Ministry of Science and Technology, the Ministry of Natural Resources, the Ministry of Veterans Affairs, the China Banking and Insurance Regulatory Commission, the National Development and Reform Commission, the State Forestry

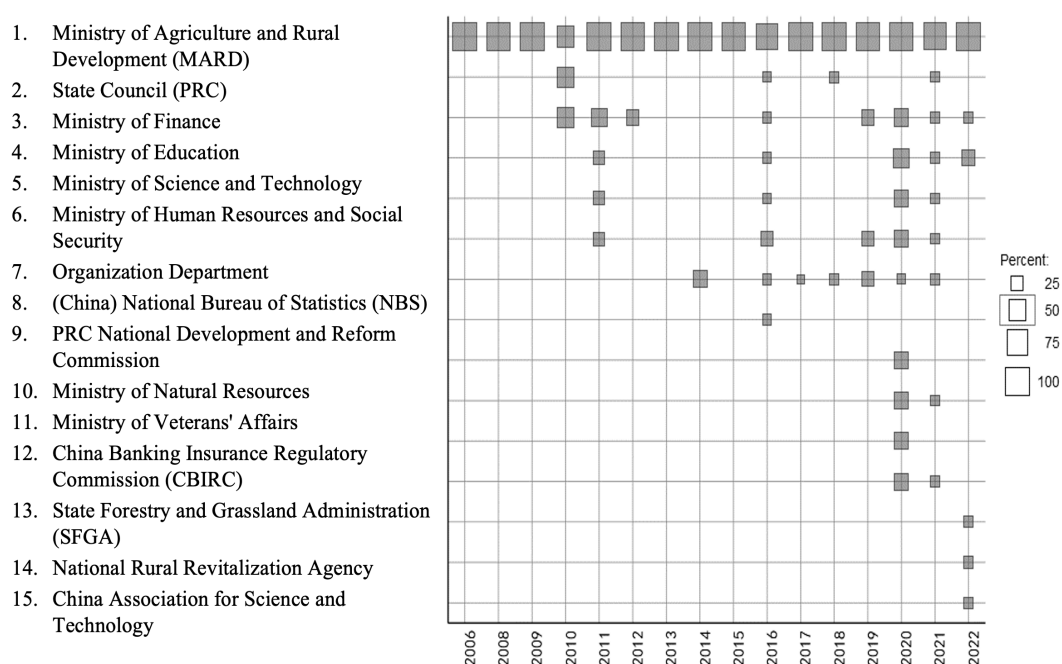


Fig. 2-5 Government department where policies issued

Note: Appendix 2 shows the Chinese-English translation of the keywords.

and Grassland Administration, the National Rural Revitalization Bureau, and the China Association for Science and Technology.

In contrast, the Ministry of Finance, the Ministry of Education, the Ministry of Science and Technology, and the Ministry of Human Resources and Social Security have similar frequencies of participation in rural talent policy releases, with their involvement concentrated in specific years like 2011, 2016, 2020, and 2021. Although the Organization Department only joined policy releases in 2014, it has been involved every year from 2016 to 2021, demonstrating a long-term and continuous collaborative relationship with the Ministry of Agriculture and Rural Affairs. Furthermore, the participation frequency of several other departments is relatively low, with their involvement limited to one or two years during the 16-year period.

2.3.4 Classification of Rural Talents and Disparities in Attention

Fig. 2-6 illustrates all the classifications of rural talents mentioned in the documents and the frequencies of their mentions. Among them, ‘Rural Practical Talents,’ ‘College-Graduate Village Officials,’ and UtRME have been mentioned most frequently. This implies that they are the projects with the longest continuous implementation, the highest number of related policies, and the ones that the Ministry of Agriculture and Rural Affairs is most concerned about. In contrast, none of the other projects have a continuous duration exceeding three years. They appear primarily in specific years or a couple of years, signifying that they are short-term policies rather than projects of long-term implementation by the Ministry of Agriculture and Rural Affairs. Therefore, this study will focus on the ‘Rural Practical Talents,’ ‘College-Graduate Village Officials,’ and ‘UtRME,’ and other projects will not be described in detail.

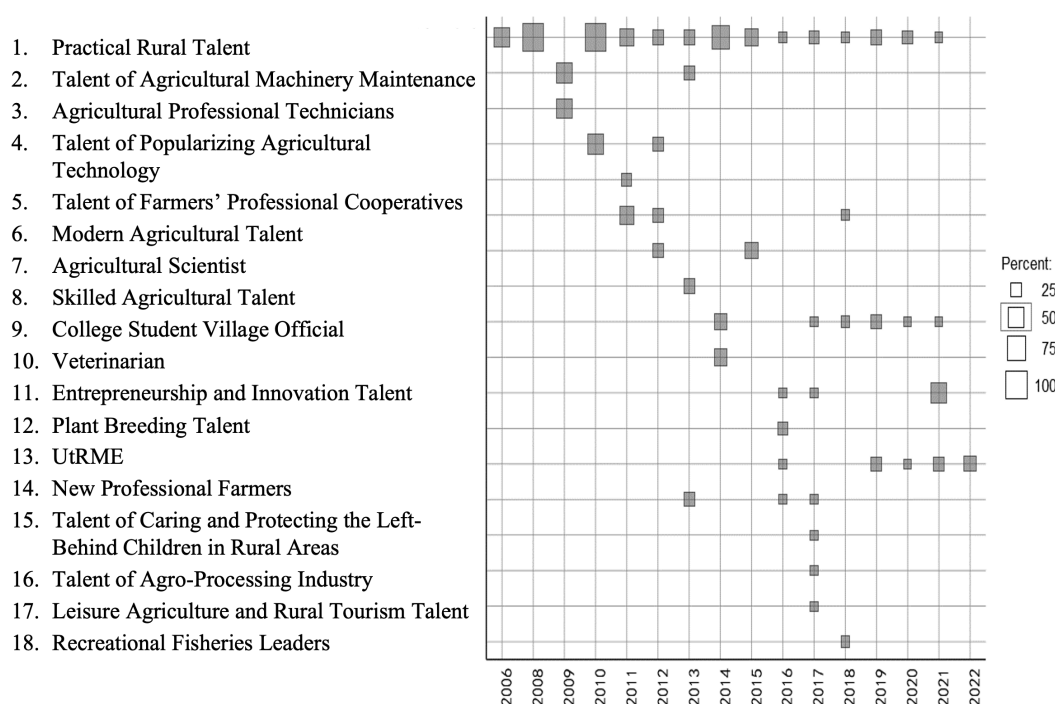


Fig. 2-6 Categories of Rural Human Resources

Note: Appendix 2 shows the Chinese-English translation of the keywords.

On the other hand, by observing the frequencies, it becomes apparent that the focus of the Ministry of Agriculture and Rural Affairs varies over time. For instance, the ‘Rural Practical Talents’ project had new policies almost every year, but its frequency of mention has gradually decreased since 2010, with no specific documents released in 2022. In contrast, during the period of 2019-2022, the Ministry of Agriculture and Rural Affairs exhibited a more consistent interest in the UtRME. Additionally, the UtRME project is the only rural talent project with targeted policies or government documents released in 2022.

Besides, here is a brief overview of the mostly mentioned projects.

(1) Rural Practical Talents

Firstly, it should be noted that, currently, within the Ministry of Agriculture and Rural Affairs’ database, there are no policy texts that clearly define ‘Rural Practical Talents.’ Scholars have proposed the following explanation based on research findings: Rural Practical Talents refer to rural laborers who hold rural household registrations and possess certain knowledge and skills, contribute to rural economic development, and play a demonstrative and leadership role in rural areas across various sectors, including agriculture, technology, education, culture, and healthcare (Gao and Du, 2017). This category includes experts in rural farming and animal husbandry, processing and fishing, entrepreneurship leaders, rural brokers, various skilled artisans, and others. It can be confirmed that ‘Rural Practical Talents’ encompass three main characteristics: being ‘local to rural areas,’ having ‘leadership qualities,’ and possessing ‘outstanding skills.’

The primary reason for establishing this talent project is to address the challenges of talent scarcity and outmigration in Chinese rural communities (Chen et al., 2022). China is an agricultural powerhouse with predominantly small-scale family farming. As a substantial number of rural residents have migrated to urban areas, rural community populations have sharply declined, severely impacting agricultural productivity (Ning and Ye, 2016). In this context, the development of rural communities in China has been slow, creating a widening urban-rural gap. Furthermore, China faces challenges of insufficient agricultural productivity and struggles to meet the central government’s goal of ensuring food production and food security (Cheng, 2022; Chen et al., 2022).

(2) College Student Village Officials

While rural communities face talent shortages, urban areas experience continuous population growth. Recent university graduates living in urban areas are facing significant employment pressures (Wang et al., 2023). To address these challenges, multiple Grassroot Employment Projects have been initiated by the national central government to encourage college graduates to work in rural areas. These projects aim at eliminating the rural human resource shortage in governmental agencies, village committees, village Communist Party branches (governmental autonomous institutions in village-level areas), and educational institutions. They also encourage college graduates to start businesses and to lead rural socio-economic development. Currently, the projects mainly include the following: 1) College Student Volunteer Service Western Program (CSVSW) from 2003, which places college students in national service agencies and clinics as volunteers (with limited payment and living expenses from the government) in seriously poverty-stricken areas of western China. 2) The Three Supports and One Assistance project (TSOA) from 2006, which is specifically for educational, agricultural (water conservancy), and medical support and poverty

alleviation services for less-developed rural locations. 3) The Special Post Teacher (SPT) from 2006, which is for primary and secondary school teachers in areas of serious poverty in central and western China. 4) The College Student Village Official (CSVO) from 2008, which places college graduates into the village-level Communist Party branch and village committee, working as assistants to the village party secretary or the head of the village committee. Since CSVO students are relatively easier to access (they exist in almost all provinces in China), this research focuses on the CSVO project.

Due to provincial autonomy, CSVO management in the province can be different from that of the central government. Recently, some provinces have attempted to merge the Selected Graduates Project (SG), which was designed to cultivate governmental cadres in 1965 by sending Communist Party members to work in rural areas, into the CSVO project and refer to it as the Selected College Student Village Officials (SCSVO). Shandong Province, which is the focus of this study, has also combined SG with CSVO since 2013, and the whole process has three steps for graduates: application and examination, serving CSVO contract for two years in rural areas, and being transferred into SG after an examination. Therefore, students that complete their contracts leave the position, opening it for newcomers, and a circulating system between rural and urban areas occurs. Different from the CSVO before 2013, under which the CSVO students were just contract workers, SCSVO students are now official civil servants. Moreover, since 2016, the National Civil Service Examination in China saves 10% of vacancies for the applicants who have completed the Grassroot Employment Project, especially for SCSVO students (Ministry of Human Resources and Social Security, 2015).

(3) Urban-to-Rural Migrant Talents

In 2016, the State Council of China introduced the concept of ‘returning to rural areas’ for the first time in the document titled ‘Opinions on Supporting Returnees and Migrants to Start Businesses, Promoting the Integrated Development of Agriculture, Rural Areas, and Farmers.’ In the government work report of 2019, this concept was renamed ‘returning and settling in rural areas.’ By the end of the same year, the Ministry of Human Resources and Social Security issued the ‘Opinions on Further Promoting the Work of Returning and Settling in Rural Entrepreneurship’ (State Council of China, 2016).

Although the official documents do not provide a specific definition of ‘returning to rural areas’ or ‘returning and settling in rural areas,’ both expressions are similar in terms of the target population and the emphasis on guiding direction. They both refer to talents such as migrant workers, university graduates, and veterans who return to rural areas for entrepreneurial endeavors.

Some scholars have proposed that based on the direction of entrepreneurial mobility, rural entrepreneurship can be categorized into ‘returning to rural areas’ and ‘settling in rural areas.’ ‘Returning to rural areas’ primarily involves various talents, including rural migrant workers who had previously moved from rural areas to cities for work, returning to their hometowns for entrepreneurial and innovative activities. On the other hand, ‘settling in rural areas’ mainly pertains to technology professionals, management talents, and entrepreneurs who were originally living and working in urban areas but choose to enter rural areas for entrepreneurial and innovative activities. Although the difference between ‘to rural’ and ‘in rural’ is only one word, it reflects China’s policy direction of encouraging the flow of urban resources into rural areas and their integration (Wang et al., 2021). According to statistics from the Chinese central government, 70% of UrRME are returning rural migrant workers (Yu, 2021).

2.3.5 Policy Focus and Main Content

(1) Keyword and Cluster Analysis

Using the vocabulary analysis tool in KH Coder, the author conducted a frequency analysis of the keywords mentioned in policies from 2006 to 2022. The results are presented in Table 2-3. The keywords and their frequency of occurrence to some extent reflect the policy's key areas of focus and development direction.

Table 2-3 List of keywords and frequency (excerpt)

	list of words (e.g. for language teaching purposes)	type	frequency (H5)		list of words (e.g. for language teaching purposes)	type	frequency (H5)
1	cultivation	Noun	65	16	Rural Revitalization	TAG	29
2	leaders	Noun	54	17	social resources	Noun	28
3	entrepreneurship	Noun	47	18	poverty alleviation	TAG	27
4	a example model	Noun	47	19	CSVO	TAG	27
5	exchanges	Noun	45	20	information technology	Noun	24
6	reforming	Noun	42	21	college graduates	TAG	23
7	Practical Rural Talents	TAG	42	22	public service	TAG	20
8	industrial integration	TAG	38	23	migrant workers	TAG	20
9	agricultural production	TAG	35	24	industry chain	Noun	19
10	educational institution	Noun	35	25	entrepreneurs	Noun	17
11	governmental finance	Noun	34	26	urban-rural combination	TAG	17
12	market-oriented	Noun	33	27	rural governance	TAG	16
13	scientific research	Noun	33	28	Urban-Rural Migration	TAG	13
14	modernize	Noun	32	29	rural electric commerce	TAG	12
15	local circumstances	Noun	30	30	return the countryside	TAG	10

Note: Appendix 2 shows the Chinese-English translation of the keywords.

First, ‘training’ and ‘entrepreneurship’ are frequently mentioned keywords, appearing 65 and 47 times, respectively. This indicates the government’s emphasis on training rural talents and providing them with entrepreneurship opportunities to promote rural economic development. Related terms such as ‘industrial integration’ and ‘agricultural production’ signify the policy’s efforts to upgrade and integrate rural industries to enhance rural production efficiency.

Second, ‘leaders’ and ‘demonstration’ are also crucial keywords, appearing 54 and 47 times, respectively. This reflects the government’s encouragement of rural talents to take on leadership and demonstration roles to drive the development of rural communities. ‘Rural practical talents’ as a label highlights the nurturing of talents with practical skills.

Third, terms like ‘social resources’ and ‘information technology’ are mentioned relatively frequently, with 28 and 24 occurrences, respectively. These terms indicate the policy’s focus on integrating social resources and promoting the application of information technology in rural areas to facilitate rural development. Additionally, ‘public services’ is a key term that underscores the provision of better infrastructure and services to improve the quality of life for rural residents. Other keywords, such as ‘poverty alleviation,’ ‘university student village officials,’ ‘urban-rural integration,’

and ‘rural governance,’ reflect the government’s concern for poverty reduction, attracting young talents, promoting urban-rural integration, and strengthening rural governance.

To further delineate the relationships between different keywords, the author conducted a vocabulary cluster analysis using KH Coder. By calculating the likelihood of different terms appearing together in proximity, the vocabulary was grouped, allowing a more intuitive understanding of the general policy content. The results are illustrated in Fig. 2-7, categorizing policies into six clusters.

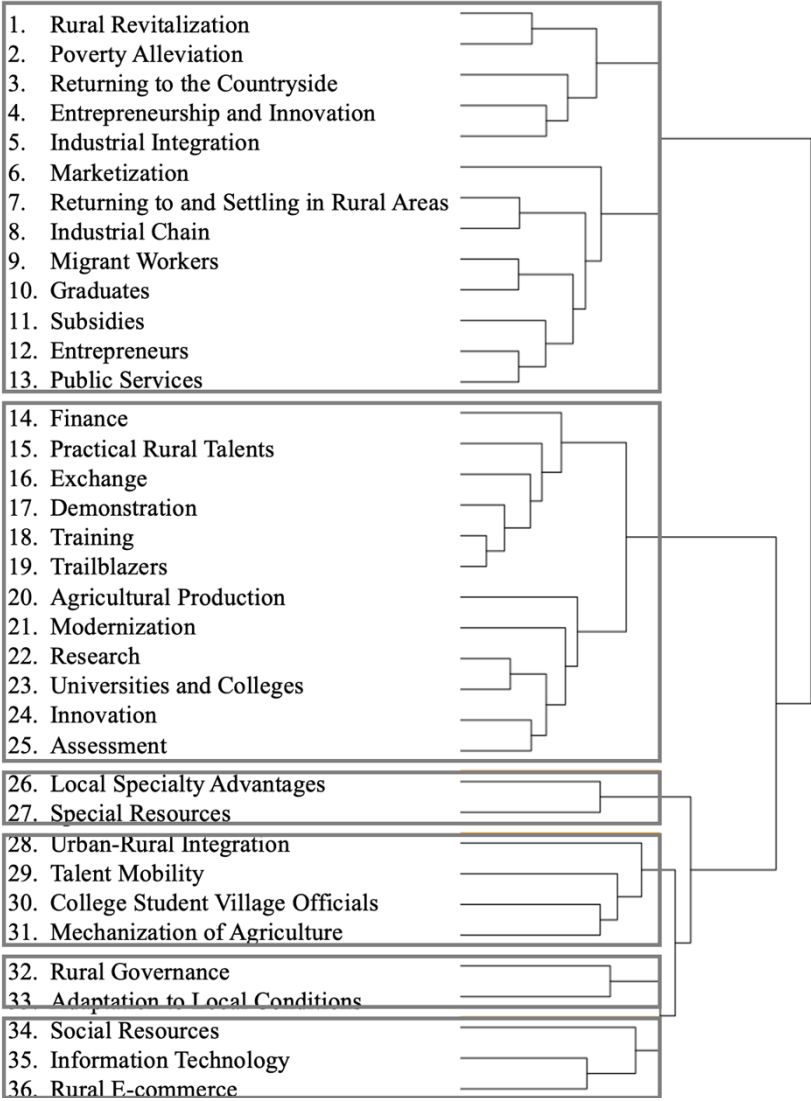


Fig. 2-7 Cluster analysis of the keywords

Note: Appendix 2 shows the Chinese-English translation of the keywords.

Among these clusters, the top two clusters with 13 and 12 keywords respectively are the richest in content, suggesting that they represent the most detailed and highly prioritized aspects of the policies. It’s important to note that the author assessed the optimal number of clusters but did not obtain significant results (i.e., no clear optimal cluster number). Therefore, the author chose to analyze the six clusters with the highest correlation coefficients.

Descriptions for each cluster are as follows, reflecting different aspects of policy focus and characteristics: a) Cluster 1 mainly focuses on rural revitalization and rural development. This cluster is closely related to the rural revitalization strategy formulated by the Chinese government, aiming to promote economic, social, and cultural development in rural areas. ‘Poverty alleviation’ and ‘industrial integration’ highlight the government’s efforts to reduce poverty and upgrade rural industries to enhance living standards in impoverished areas. ‘Entrepreneurship and innovation,’ ‘marketization,’ and ‘entrepreneurs’ indicate the policy’s encouragement of rural talents to engage in entrepreneurial and market activities to boost rural economic growth. ‘Public services’ emphasizes the provision of better infrastructure and social services to improve the quality of life for rural residents. ‘Migrant workers’ and ‘graduates’ reflect the government’s focus on different types of talents, including rural migrant workers and highly educated graduates. ‘Returning to rural areas’ and ‘settling in rural areas’ suggest government support for rural talents to return to or stay in rural areas and contribute to rural development. b) Cluster 2 centers around education, research, and finance. This cluster focuses on government policies related to rural talent development in the fields of education, research, and finance. ‘Finance’ reflects the government’s financial resources allocated to support rural talent training and rural development projects. ‘Rural practical talents’ emphasizes the government’s efforts to cultivate talents with practical work skills to meet rural community needs. ‘Exchange’ and ‘demonstration’ indicate the government’s encouragement of experience sharing between different regions and communities and the implementation of demonstration projects in rural development. ‘Training’ and ‘institutions’ reflect the government’s work in improving the educational level and skills of rural talents. ‘Research’ shows the government’s emphasis on the importance of technological innovation in rural development. ‘Reform’ and ‘evaluation’ imply the government’s desire to reform relevant policies and institutions and ensure effective policy implementation through evaluation. c) Next, Cluster 3 encompasses ‘distinct advantages’ and ‘unique resources,’ implying that the government focuses on the characteristics and strengths of rural areas related to local industries and culture. d) Following that, Cluster 4 concentrates on ‘urban-rural integration,’ ‘talent mobility,’ ‘university student village officials,’ and ‘mechanization.’ This reflects the government’s attention to the integration of urban and rural development, the mobility of young talents, and the modernization of agriculture. e) Cluster 5 includes ‘rural governance’ and ‘context-based policies,’ indicating the government’s efforts to improve rural governance mechanisms and develop policies tailored to different regional conditions. f) Finally, Cluster 6 consists of ‘social resources,’ ‘information technology,’ and ‘rural e-commerce,’ reflecting the government’s focus on integrating social resources, promoting the application of information technology in rural areas, and advancing rural development.

In summary, these clusters reflect the diversity and comprehensiveness of China’s rural talent development policies from 2006 to 2022. The government emphasizes various aspects, including rural revitalization, poverty reduction, rural economic development, talent development, technological innovation, distinctive industries, urban-rural integration, rural governance, and more, all aimed at promoting comprehensive rural community development and improving the living standards of rural residents. These policies address the multifaceted challenges faced by rural areas, such as poverty, resource utilization, rural governance, and education and training, with the goal of achieving sustainable rural development.

(2) Evolution of Policy Focus

China's rural talent development policies have shown significant evolution and changing trends in the mentions of keywords during different periods. From 2006 to 2015, the basic characteristics and features of China's rural talent development policies were marked by a set of prominent keywords. These keywords included technical services, farmer cooperatives, rural practical talents, agricultural technology extension, education and training, evaluation, and agricultural production. During this period, the government emphasized the importance of technical support for rural economic development and the training of rural talents. Specifically, the mention of 'technical services' reflected the government's focus on technical support in rural areas, including the introduction and dissemination of agricultural technology to enhance rural production efficiency. The keyword 'farmer cooperatives' highlighted the government's encouragement for rural residents to organize and engage in collective agricultural production and management to enhance their competitiveness in the rural economy. The mention of 'rural practical talents' reflected the government's emphasis on nurturing rural talents with practical skills, emphasizing the improvement of the quality of rural labor force. 'Agricultural technology extension' highlighted the government's efforts to promote advanced agricultural technology in rural areas to address agricultural production issues. The importance of 'education and training' in the policy indicated the government's focus on improving the education level of rural residents to enhance their vocational skills. The keyword 'evaluation' signified the government's emphasis on policy execution and effectiveness assessment to ensure the policies' successful implementation. Finally, the mention of 'agricultural production' reflected one of the government's policy priorities, namely agricultural production and industrial development in rural areas. Throughout this period, the fundamental characteristics and features of the policies included a focus on rural talents, aiming to achieve rural modernization, enhance rural governance, and promote rural industry upgrading.

In the period from 2016 to 2020, the policies centered around multiple keywords, including 'regulations' and 'rural management.' This indicated the government's emphasis on rural governance and its efforts to improve rural management systems by formulating relevant regulations to enhance the government's decision-making capacity and execution. Simultaneously, the policy placed a strong emphasis on 'modern agricultural talents,' reflecting the government's focus on rural modernization goals and its desire to attract talents with modern agricultural knowledge and skills to drive agricultural industry upgrading. Furthermore, the policy involved 'distance education,' implying that the government encouraged rural residents to acquire relevant skills and knowledge through distance education to meet the demands of modern agriculture. The policy also mentioned 'leaders,' signifying the government's aspiration to cultivate leaders and role models in rural areas who can play a key role in the rural revitalization process. Additionally, the policy included 'publicity,' suggesting the government's desire to attract more talents to rural areas by extensively promoting rural talent policies. Moreover, the policy addressed 'agricultural product quality' and 'agricultural product processing,' indicating the government's commitment to improving the level of rural economic development by increasing the value of agricultural products through processing. The policy also mentioned 'university graduate village officials,' which is a way in which the government encourages university graduates to serve in rural areas, thereby promoting rural development. Lastly, the policy focused on 'rural tourism' and 'agritourism,' reflecting the government's encouragement of diversified industries in rural areas, attracting tourists and investment, and improving the quality of life for rural residents. Overall, during

this period, the policy emphasized the importance of rural governance, modern agricultural talents, agricultural product processing, rural tourism, and other factors, reflecting the government's efforts to promote rural revitalization, enhance rural economic development, and improve the quality of life for rural residents. The keywords in this period reflected the government's policy measures at various levels to achieve the goals of rural talent development and rural revitalization.

In the recent years from 2021 to 2022, government policies have placed more emphasis on public services, government subsidies, selecting and appointing talent, returning to rural areas, and policy guidance. This indicates that the government is increasing its investment in rural talent development, emphasizing the provision of more public services and government support to attract more talents to return to or stay in rural areas. The policy also mentioned international cooperation, signifying China's willingness to draw lessons from international experiences, strengthen cooperation with the international community, and promote rural development (Song et al., 2014).

In summary, the fundamental characteristics of China's rural talent development policies have gradually evolved from a focus on technology dissemination and agricultural production towards comprehensive rural revitalization and modern agricultural development (State Council of China, 2016). The changing trends in policy content reflect the shifting government priorities from technology and education to management, industry, and social services. Government policy goals have progressively shifted from improving rural labor skills to comprehensive development in rural areas and poverty alleviation. This transformation demonstrates the government's adaptability to the evolving needs of rural development and globalization challenges, aiming to promote the comprehensive development of rural talents and the implementation of rural revitalization strategies. Additionally, the policies have evolved from focusing on education and training, career development, rural entrepreneurship, rural revitalization, to public services and government support. This evolving approach reflects different strategic adjustments and policy objectives of the government at different time periods (Bombiak, 2017). This transformation also mirrors the comprehensive progress in China's rural development and the increasingly sophisticated policy system.

2.4 Discussion

2.4.1 Policy Contrasts Over Time

From 2006 to 2022, China's rural talent policies underwent a significant evolutionary process, transitioning from early stages of limited and singular focus to the current diversification and collaborative development, with the policy focus shifting from enhancing agricultural production capacity to encouraging diversified talent entrepreneurship and the integration of multiple rural industries (State Council of China, 2016). This evolutionary process exhibits noticeable changes in various aspects, including policy quantity, government collaboration, the focus of talent projects, target demographics, policy priorities, and talent management strategies (Table 3-4).

a) Firstly, in terms of policy quantity, early rural talent policy documents were relatively few, primarily the responsibility of the Ministry of Agriculture and Rural Affairs. However, over time, the number of policies significantly increased, with various government departments collaborating on policy issuance, expanding the scope and increasing the frequency. This reflects an increasing level of government attention

Table 2-4 Policy Development Trends during 2006-2022

Aspect	Early Stage	Current Status
Number & Content	Fewer	Significantly increased
Government Departments	Primarily led by the Ministry of Agriculture and Rural Affairs	Increased policy quantity, frequency, and involvement of multiple government departments
Focus of Talent Development	Mainly talent directly related to agricultural production, represented by the 'Talents for Rural Use' program	Encouraging diverse talents to go to rural areas, emphasizing entrepreneurship and guiding them, represented by the 'Returning Hometown and Entering Rural Areas' program
Targeted Population	Mainly rural community cadres and university student village officials, representing the elite within communities	Mainly returning rural migrant workers and university graduates, representing innovative entrepreneurs
Policy Focus	Core task is to enhance agricultural production capacity	Government responsibilities now include providing education and training opportunities and resources, establishing relevant qualification and assessment systems, and providing financial support
Talent Management Strategy	Mainly focused on 'talent cultivation' and 'talent evaluation'	Significant increase in attention to 'talent mobility' and 'talent incentives,' with increased talent exchange between urban and rural areas

to rural talent policies and the growing robustness of the policy system. b) Secondly, concerning the focus of talent development projects, early policies primarily emphasized talent directly related to agricultural production, with the core task of improving agricultural production capacity, exemplified by the 'rural practical talents' project. However, as the demands of economic and social development evolved, current policies place more emphasis on diverse talents in rural areas, encouraging them to start businesses, with the 'return to and start businesses in rural areas' project as an example. This change reflects the government's evolving understanding of the need for diversified talent in rural areas. c) Thirdly, the target demographic has also undergone significant changes. Early policies mainly targeted village cadres and college student village officials within rural communities, representing the local elite. In contrast, current policies pay more attention to rural migrant workers returning to their hometowns and college graduates, representing individuals with innovation potential. This shift indicates the government's gradual transition in how it perceives talent, from community elites to individuals with innovative potential. d) There has been a fundamental change in policy priorities. Early policies primarily focused on enhancing agricultural production capacity, with government responsibilities mainly involving providing educational and training opportunities and resources, establishing relevant qualification certification and evaluation systems, and offering financial support. However, current policies place a stronger emphasis on encouraging diversified talent entrepreneurship and the integration of multiple rural industries, leading to changes in government responsibilities, with a heightened focus on market-driven strategies. The government seeks to engage social resources by constructing a public service system and issuing promotional and guiding policies. This shift reflects the government's increased emphasis on leveraging market mechanisms and integrating social resources in talent policies. e) Lastly, talent management strategies have also seen significant

adjustments. Although early policies still emphasized ‘talent cultivation,’ current policies clearly increase attention to ‘talent mobility’ and ‘talent incentives.’ This reflects the government’s recognition that attracting and retaining talent is equally important. It highlights the need to not only cultivate talent but also incentivize them to stay in rural areas and unleash their entrepreneurial and innovative potential.

Since 2006, talent projects related to agricultural production, exemplified by ‘rural practical talents,’ have consistently been the focus of the Chinese government. The primary goal of cultivating rural talent has been to address the task of improving agricultural production efficiency and accelerating agricultural modernization. This is related to the government’s concern at the time for ‘ensuring food security.’ Some scholars have pointed out that China’s food self-sufficiency level has significantly decreased (from 93.6% in 2000 to 65.8% in 2020), and China urgently needs to improve the construction of the agricultural supply chain (Cheng, 2022).

However, ten years later, the introduction of ‘return to and start businesses in rural areas’ has shifted the primary task away from agricultural production towards ‘entrepreneurship and innovation.’ Researchers attribute this shift to the changing structure of China’s rural economy. Specifically, China has achieved significant economic growth since the beginning of its reform and opening-up, leading to a significant increase in production capacity in rural areas and heightened demand from villagers for more diverse professions. Some researchers also attribute this to the Chinese government’s increased focus on rural development. In particular, the ‘Rural Revitalization Strategy Plan (2018-2022)’ released in 2018 raised the level of importance the central government placed on ‘developing modern agriculture and revitalizing rural community economies’ (State Council of China, 2018). Consequently, the development goals emphasized in the plan, such as the ‘talent support system for rural revitalization,’ have become the main direction of rural community development at present (and in the coming years). Additionally, the rapid spread of technological products in China (including internet applications, mobile phones, and logistics) has broken down the barriers between rural and urban areas. These factors provide a solid foundation for talents to innovate and start businesses in rural areas.

It’s worth noting that during this period, the government primarily undertook most tasks related to talent cultivation and agricultural technology dissemination, with limited involvement of social resources. As seen from the text mining results in this paper (Fig. 2-8), the main method of talent cultivation was ‘the Ministry of Agriculture and Rural Affairs offering training courses,’ indicating a relatively single model. Moreover, the participation of schools and other social institutions was limited, and a systematic talent education and cultivation mechanism had not yet been established (universities and agricultural research institutes did not offer corresponding enrollment and educational processes; they made few contributions in terms of agricultural production technology from social resources). In contrast, in recent years, various social resources are encouraged to participate in rural talent training. The most significant development is the establishment of a rural talent education system based on universities and colleges at all levels. This system not only provides a more diverse range of opportunities for college students but also offers targeted educational opportunities for farmers with limited education.

2.4.2 Recent Policy Focus

Based on the above analysis, it is evident that ‘urban-to-rural migration’ has been a recurrent keyword in recent policies and a focal point of rural talent policies. For the

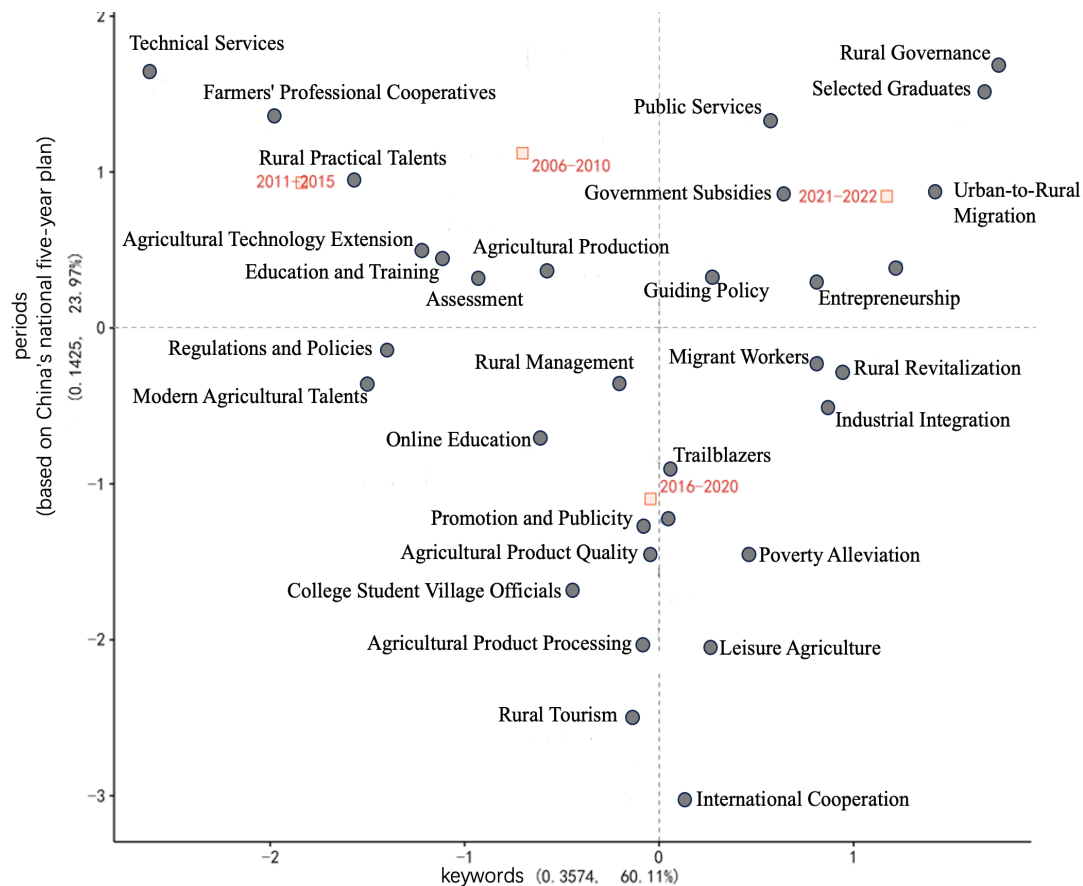


Fig. 2-8 Rural Talent Policies' keywords during different periods

Note: Appendix 2 shows the Chinese-English translation of the keywords.

subsequent case analysis, further text mining is required to explore the relevant content in policies and government documents. Here, we utilize the 'co-occurrence network analysis for selected keywords' feature provided by KH Coder 3. This feature allows researchers to select specific keywords, and KH Coder 3 automatically searches all text data to identify the words that most frequently co-occur (i.e., 'co-occur') with the selected keyword, forming a network graph. The proximity of words in the graph indicates the likelihood of their co-occurrence, thereby revealing the words most closely related to the selected keyword. In this paper, 'urban-to-rural migration' is the chosen keyword, and a co-occurrence word network specific to it was generated using KH Coder 3, with the results presented in Fig. 2-9. A detailed explanation follows.

All co-occurring words are grouped into three word clusters, each of which reveals specific themes and central meanings. a) Firstly, surrounding the keyword 'urban-to-rural migration' and closest to it, numerous words with high co-occurrence probabilities cluster together. These words also exhibit a relatively high likelihood of co-occurring with each other. Examples include 'rural revitalization,' 'resources,' 'entrepreneurship,' 'support,' 'rural migrant workers,' 'college graduates,' 'industrial development,' and more. This indicates that government policies emphasize the utilization of rural characteristics, resources, and support for talent mobility, entrepreneurship, and social welfare in the rural revitalization process. The words in this group form a comprehensive network, reflecting policy concerns in multiple areas, such as rural industrial development, social welfare improvement, and talent attraction. In Chapter 4 of this paper, 'rural migrant workers' will be the primary focus for a more detailed study

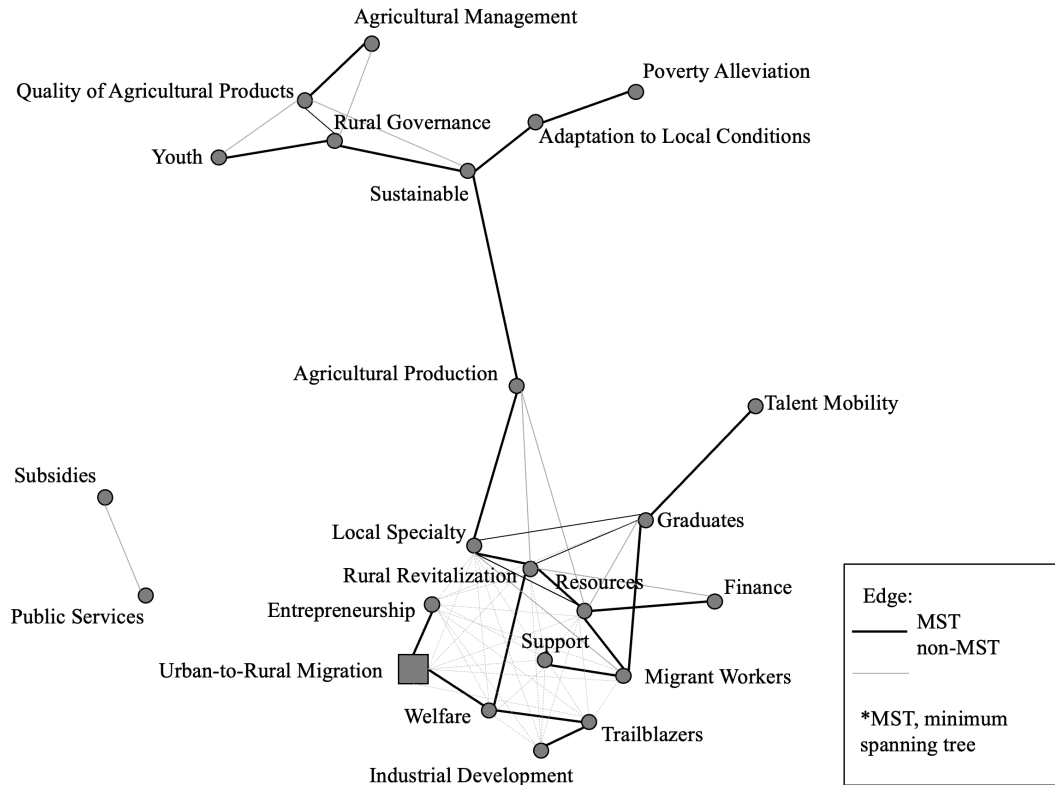


Fig. 2-9 Co-occurrence network for UtrME

Note: Appendix 2 shows the Chinese-English translation of the keywords.

of issues related to entrepreneurship and industrial development in the rural revitalization process.

b) Above the ‘agricultural production’ cluster, there is a word group encompassing words such as ‘agricultural operation,’ ‘agricultural product quality,’ ‘youth,’ ‘rural governance,’ ‘poverty alleviation,’ and more. This group focuses on rural economic development and rural governance, emphasizing the importance of sustainable agricultural operation, improving the quality of agricultural products, and the participation of youth in rural revitalization and poverty alleviation efforts. The central theme of this group is to promote rural revitalization through tailored agricultural development and enhanced rural governance. In Chapter 5 of this paper, ‘poverty alleviation’ will be the primary focus, with an examination of China’s rural community poverty alleviation experiences, particularly highlighting the involvement of ‘youth’ and the model of ‘rural governance’ in this process.

c) Finally, in cluster 3, the keywords ‘subsidies’ and ‘public services’ appear. This indicates that government policies recognize the importance of providing financial support and public services for those urban-to-rural migrants. These measures may include various forms of subsidies and the establishment of additional public service facilities to attract and support rural talent in their return and entrepreneurship endeavors. It should be noted that these two keywords are not directly connected in a linear manner with ‘urban-to-rural migration,’ implying that their co-occurrence relationship with ‘urban-to-rural migration’ is relatively weak, and their likelihood of co-occurring with the other two word clusters simultaneously is not high. Therefore, further individual elaboration is not provided.

2.4.3 Reasons for the Shift in Chinese Policy Focus

During the period from 2006 to 2022, there has been a noticeable shift in the focus of Chinese policies, transitioning from an emphasis on enhancing agricultural production capacity to encouraging diversified entrepreneurship of talents and the integration of multiple industries in rural areas. Scholars have provided various explanations for this transformation from different perspectives.

Firstly, China has achieved significant economic development since the onset of economic reforms and opening up. This has led to a substantial increase in production capacity in rural areas. Economic growth has not only improved the living standards of rural residents but has also heightened their demand for a more diverse range of occupations. Rural residents no longer rely solely on traditional agricultural production; instead, they seek broader employment and entrepreneurship opportunities (Zhang et al., 2018). The continuous migration of rural labor to urban areas and non-agricultural sectors over nearly half a century is a driving force behind this transition (Ning and Ye, 2016). However, due to the long-standing urban-rural dual structure in China, the ‘urbanization of rural residents’ faces numerous challenges (Zhuang et al., 2023). Moreover, to provide a safety net for rural migrant workers who may fail in urbanization, such as by retaining their homesteads in rural areas and allowing them to return to continue agricultural production, the policy’s focus remains on ‘sustainable development of rural communities’ (Song et al., 2014). In policy terms, this is reflected in supporting the development of various industries in rural areas, including rural industries, social welfare, and talent attraction.

Secondly, there has been an impact from the declining food self-sufficiency rate. In recent years, China’s food self-sufficiency rate has significantly decreased, from 93.6% in 2000 to 65.8% in 2020 (Cheng, 2022). This decline has lowered the nation’s food security level and intensified the government’s focus on the agricultural supply chain. The government recognizes the need to enhance agricultural production and improve the quality of agricultural products to meet domestic demand. Therefore, the policy’s focus has naturally shifted from enhancing production capacity to a more comprehensive utilization of rural industries and resources. In 2018, the government released the ‘Rural Revitalization Strategic Plan,’ elevating rural revitalization to a national strategy and further emphasizing the development of rural communities. This strategic plan underscores the importance of developing modern agriculture and revitalizing rural community economies. Guided by this strategy, the government’s policy focus has gradually shifted from a singular emphasis on enhancing agricultural production capacity to a broader direction emphasizing the quality of agricultural products and diversified agricultural production (State Council of China, 2016).

Furthermore, there has been rapid technological dissemination and widespread use of the internet in rural areas in China, including internet applications, mobile phones, and logistics. The adoption of these technologies has broken down information barriers between rural and urban areas, making rural areas more accessible to the outside world (Zhuang et al., 2023). Rural residents can more easily access information, markets, and resources, providing a better foundation for talent entrepreneurship and innovation. The government also needs to adapt to this new trend, encouraging and supporting diversified entrepreneurship and industrial development in rural areas.

Some scholars have attempted to provide explanations from a political perspective. The discussion is based on the Chinese government’s planning for the overall development of China, particularly its efforts to limit the expansion of cities and redirect developmental resources from larger cities towards relatively impoverished areas (Huang and Jiang, 2017; Hu and Tian, 2019). In recent years, substantial

investments have been made in infrastructure like information technology and transportation. In the field of information and communication technology, as of December 2021, China had cumulatively built and activated 1.425 million 5G base stations, with an annual addition of 654,000 new 5G base stations (Guangming Daily, 2022). The Chinese government has also been extensively expanding high-speed railways across the country, with a total accumulated length reaching 42,000 kilometers (Ministry of Transport of China, 2023). Concurrently, various regional economic circles characterized by regional features have emerged in China, such as the Yangtze River Delta, the Beijing-Tianjin-Hebei region, and the Shandong Peninsula, each possessing industries with distinct characteristics (Han and Ren, 2023; Xia et al., 2023). For instance, Guizhou has established an Internet cloud base, Guangzhou and Shenzhen focus on high-tech precision manufacturing, Jiangsu and Zhejiang specialize in shipping, and the three provinces in northeastern China ensure China's food supply.

In essence, the Chinese government is establishing regional development centers across various corners of the country and interconnecting them through the internet and transportation infrastructure (Xia et al., 2023), aiming to prevent excessive concentration of resources and talent in a few mega-cities. This development strategy, to some extent, stems from China's early experiences with urbanization. Back then, due to the concentration of a large number of rural migrant workers in cities, the central government-initiated reforms to the household registration system in 2014 (State Council of China, 2014). This reform aimed to eliminate the distinction between urban and rural household registrations, facilitating freer population movement between urban and rural areas. However, this led to a significant increase in urban population, resulting in issues like traffic congestion, soaring property prices, and environmental pollution (Ning and Ye, 2016). Consequently, 'Rural Revitalization' and the 'Return-to-Hometown Entrepreneurship for Rural Migrant Workers' are also interpreted as part of China's planned economy. In other words, the government seeks to moderately curb the influx of rural populations into cities and guide them towards destinations planned by the government (Roberts, 2020).

While scholars have approached the analysis from different angles, it is clear that the shift in the focus of Chinese policies is driven by the need to adapt to new economic, social, and rural revitalization requirements. The evolution of government policies reflects an understanding of changing national development and rural area needs, as well as broader recognition of diversified talents and industrial development. This policy evolution not only aligns with current economic and social trends but also contributes to achieving more comprehensive rural revitalization and raising the economic level of rural communities.

2.5 Conclusion

Over the past sixteen years, China's rural talent policies have undergone significant evolution. Early policies focused on enhancing agricultural productivity, but over time, the emphasis shifted towards encouraging diversified talent entrepreneurship and rural industry integration. This transformation has manifested in evident changes across various aspects such as the number of policies, the focal points of talent projects, target demographics, and policy priorities. Early policy documents were fewer and under the jurisdiction of agricultural departments, whereas now, policies are issued through collaborative efforts of various governmental levels, resulting in a substantial increase in their quantity. While past policies aimed at boosting agricultural

productivity, current policies stress the development of diverse talents and rural industries. There has been a shift in government attention from cultivating talents to attracting and retaining talents in rural areas to harness their entrepreneurial and innovative potential. Since 2006, the government has focused on talent projects related to agricultural production. However, a decade later, the policy emphasis shifted towards entrepreneurship and innovation. This change is attributed to the evolution of China's rural economic structure, declining self-sufficiency in food, and the government's emphasis on rural revitalization.

While the government previously dominated rural talent cultivation, recent years have witnessed encouragement for diverse social resources to engage in rural talent training. Particularly, there has been the establishment of rural talent education systems based on various levels of universities and colleges. This policy shift reflects an understanding of the changing demands of national development and rural needs, contributing to a more comprehensive rural revitalization and elevation of rural economic standards.

The recent policy focus has been on 'rural-urban migration,' becoming a focal point in rural talent policies. To explore the relevant content in policies and government documents, we employed the 'selected keyword co-occurrence network analysis' function in KH Coder 3. We found that the keyword 'rural-urban migration' clustered around three word groups. The first cluster revolved around the policy emphasis, covering terms like 'rural revitalization,' 'resources,' 'entrepreneurship,' 'support,' 'migrant workers,' 'college graduates,' and 'industrial development,' reflecting policy concerns regarding rural industries, social welfare, and talent attraction. The second cluster highlighted the importance of sustainable agricultural management, improving the quality of agricultural products, and engaging youth in rural revitalization and poverty alleviation efforts. The third cluster focused on the significance of providing financial support and public services for rural-urban migrants. These findings reveal the focal points and areas of concern in government policies, contributing to a more comprehensive understanding of issues related to rural revitalization and talent migration.

Over the past decade, China's policy focus has undergone significant changes, transitioning from an initial emphasis on enhancing agricultural productivity to gradually encouraging diversified talent entrepreneurship and integrating diverse rural industries. This change stems from multiple influences. Firstly, China's rapid economic development has increased productivity in rural areas and spurred farmers' pursuit of broader career opportunities. Additionally, the continuous migration of rural labor to urban and non-agricultural sectors over the years has driven this transformation. Secondly, the decline in self-sufficiency in food raised government concerns about the agricultural supply chain, prompting the policy shift from enhancing production capacity towards comprehensive utilization of rural industries and resources. Moreover, rapid technological dissemination has provided the groundwork for innovation and entrepreneurship in rural areas, propelling government support for diversified rural development. The government also aims to prevent excessive concentration of resources and talent in a few mega-cities by constructing regional development centers to attract talent and resources towards relatively impoverished areas. This policy change aims to adapt to new economic and social demands, provide more comprehensive support for rural revitalization, and elevate rural economic standards.

Notes

- Note 1) ‘涉农’ implies ‘related to at least one aspect of the rural sector.’ The Three Rural Issues, or San Nong (simplified Chinese: 三农), encompass three key aspects of rural development in mainland China: agriculture, rural areas, and farmers. The term ‘Three Rural Issues’ was initially coined by economist Wen Tiejun in 1996 and was highlighted by the General Secretary of the Chinese Communist Party Hu Jintao and Chinese Premier Wen Jiabao as areas in China’s rural development that require attention.
- Note 2) The Ministry of Agriculture of the People’s Republic of China, established alongside the People’s Republic of China in October 1949, was one of the state council’s direct departments responsible for managing industries such as agriculture, animal husbandry, aquaculture, land reclamation, township enterprises, and feed industries. In 2018, the Central Government of China issued the ‘Rural Revitalization Strategic Plan 2018-2022,’ further emphasizing the importance of rural development. To prioritize agriculture and rural areas, the central government reorganized the responsibilities of the former Ministry of Agriculture, along with the responsibilities for managing agricultural investment projects of the National Development and Reform Commission, Ministry of Finance, Ministry of Natural Resources, and Ministry of Water Resources. This restructuring led to the formation of the Ministry of Agriculture and Rural Affairs of the People’s Republic of China, and the former Ministry of Agriculture ceased to exist. For the convenience of the readers, this article uniformly uses ‘Ministry of Agriculture and Rural Affairs (MARA)’ to refer to both the former Ministry of Agriculture (existing from 1949-2018) and the Ministry of Agriculture and Rural Affairs (existing from 2018 to the present).
- Note 3) Since 1953, the Central Committee of the Communist Party of China has updated its economic and social development goals every five years, known as the ‘Five-Year Plan for National Economic and Social Development.’ This is a vital means of governing and managing China by the Communist Party. Within these five-year plans, the central government outlines plans for major national construction projects, the distribution of productive forces, and the important proportional relationships within the national economy. This helps set long-term targets and directions for national economic development, guiding the government and various sectors in their development directions and priorities during specific periods. Typically, the five-year plans encompass multiple areas, such as economic structure, technology, social welfare, and the ecological environment. Specific, more feasible implementation plans are developed by the corresponding government departments. Since the release of the ‘Eleventh Five-Year Plan for National Economic and Social Development’ in 2006, the Central Committee of the Communist Party of China officially changed its Chinese expression from ‘Five-Year Plan’ to ‘Five-Year Plan for National Economic and Social Development,’ while retaining the English name as ‘Five-Year Plan.’ Throughout this article, it is referred to as the ‘Five-Year Plan.’ Scholars have interpreted this change as a significant turning point in the role of the Central Committee and the Central Government, as they have loosened some regulations, providing more space for the free allocation of social resources. It marked an important transition in government functions and policy formulation logic (Chen Erhou, Liu Zheng, Wang Libin, 2005).
- Note 4) This figure represents the results obtained from ‘retaining only the main text part’ of the documents. Some government documents provide additional information, such as data tables, departmental responsibilities, location lists, and

personnel lists. These additional details were not included in the database used for text mining in this article due to their large volume and lower relevance.

Note 5) ‘Central Document No. 1’ refers to the first significant document released each year by the Central Committee of the Communist Party of China. Its formal name is ‘Opinions of the Central Committee of the Communist Party of China on Rural Work.’ This document typically addresses crucial issues related to rural and agricultural development in China, covering various aspects, including rural economy, rural reforms, and rural social development, and it exerts significant influence on China’s rural policies and development directions.

Note 6) The Rural Revitalization Strategy was introduced by Xi Jinping on October 18, 2017, in his report to the 19th National Congress of the Communist Party of China. This strategy emphasizes the national requirement to ‘give priority to the development of agriculture and rural areas’ and advocates the development of rural regions through the innovative mechanism, resource allocation, and reforms. Key areas of focus include modernizing agriculture, developing rural industries, building rural infrastructure, protecting the rural ecological environment, and constructing rural governance systems. This strategy was officially incorporated into the Communist Party of China’s charter in 2017 (People’s Daily, October 30, 2017, <http://paper.people.com.cn/rmrbhwb/page/2017-10/30/05/rmrbhwb2017103005.pdf>). It signals China’s increased emphasis on rural development, marking it as a core policy affecting the Communist Party of China and China’s development.

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Chapter 3

Case Study 1: Returned Migrant Worker and Taobao Village

3.1 Introduction

3.1.1 Rural E-commerce Development Meets Challenges

With the development of internet technology, e-commerce is playing an increasingly important role in rural areas (The World Bank and Alibaba Group, 2019; Karine, 2021). It has brought new business opportunities and economic dynamism to rural areas by breaking down the relatively closed market networks of rural communities through instant contact and wide coverage (Couture et al., 2020). E-commerce can make it easier for villagers to access urban products, meet their diverse needs and improve their quality of life; it can also bring products from rural areas to a wider market, increasing villagers' income levels and production efficiency (Li & Piachaud, 2019). Therefore, the development of rural e-commerce is seen as an effective measure to revitalize the economies of rural communities, and some countries, such as Egypt, India, Vietnam, and China, have already started to promote related projects (Organization for Economic Co-operation and Development [OECD], 2017; Kshetri, 2018; Couture et al., 2020; Karine, 2021).

It is important to note that there are a number of necessary elements (see Table 3-1) that need to be prepared for developing rural e-commerce (Lawrence & Tar, 2010). This is generally challenging for rural communities (The World Bank and Alibaba Group, 2019). In particular, for developing and poor rural areas that are geographically isolated, lacking development resources, and experiencing brain drain and ageing population issues (Chatterjee, 2019). For instance, consider the accessibility of internet facilities: As of 2021, approximately 2.9 billion individuals worldwide (representing 37% of the global population) lacked internet access, with a significant majority residing in rural areas (International Telecommunication Union, 2021). Similarly, logistics facilities, electronic payment systems, human resource cultivation systems and other related services and institutions are all inadequate in rural areas (Lawrence & Tar, 2010; OECD, 2017; Chatterjee, 2019). In addition, issues external to rural communities, such as 'influential e-commerce platforms mostly serving urban areas' and 'the lack of corresponding supportive government policies,' are also repeatedly mentioned challenges (The World Bank and Alibaba Group, 2019; Chatterjee, 2019).

3.1.2 China's Taobao Villages Can Provide Lessons

Compared to other countries, rural e-commerce grew faster in China (Chatterjee, 2019; Karine, 2021). Between 2016 and 2021, rural e-retailing grew from 894.5 billion Renminbi (RMB) to 2,050.0 billion, and rural internet coverage grew from 33% to 58% (China International Electronic Commerce Center [CIECC], 2022). Among them, the Taobao Village Project of the Alibaba Group is considered one of the landmark achievements of rural e-commerce in China (Li & Piachaud, 2019; Couture et al., 2020). In those villages, not only are the necessary elements for rural e-commerce being rapidly deployed but many local entrepreneurs and businesses are growing and becoming new pillars of local community development (The World Bank and Alibaba Group, 2019; Zhao et al., 2021).

Table 3-1 Necessary Elements for Rural E-commerce Development and Characteristics of Taobao Villages

Necessary elements for rural e-commerce development			In Taobao Village
Internal elements	Community	Farmers and rural enterprises are the main actors and key players in the development of rural e-commerce (Rahayu & Day, 2015; Principe, 2022). However, they have insufficient education and a limited ability to learn new technologies and need the help of external agencies to help them master e-commerce technologies (Lawrence & Tar, 2010; Chatterjee, 2019).	People in rural areas use e-commerce platforms to start small-scale businesses (Zhao et al., 2021; Zhou et al., 2021)—especially the returned migrant workers and college students from cities (Zeng et al., 2019; AliResearch, 2020; Wang et al., 2023).
	Characteristic resources	Regional characteristic resources refer to the special resources given to an area by specific geographical location, climatic conditions, soil environment, history and culture (The World Bank and Alibaba Group, 2019). It is necessary to explore and use regional characteristic resources and enhance products' added value and popularity (Lawrence & Tar, 2010; Couture et al., 2020). This includes local products and enterprises; labour and land; traditional manufacturing methods, and natural tourism resources (OECD, 2017; Qiu & Qiao, 2021).	More commonly discussed resources with geographical characteristics include geographical location (proximity to urban centres) (AliResearch, 2020), relatively cheap labour and land (Li & Long, 2015), and handicrafts and cultural heritage with a historical legacy (AliResearch, 2020).
	Infrastructure	Infrastructure provide the necessary physical conditions and technical support for e-commerce transactions, including internet facilities, logistics facilities, electronic payment systems, and human resource training (Kshetri, 2018; AliResearch, 2020; Couture et al., 2020). E-commerce highly depends on the above infrastructure (The World Bank and Alibaba Group, 2019).	Network infrastructure has developed rapidly in China (China Internet Network Information Center, 2021). The construction of logistics facilities has also been strengthened by both the government and e-commerce platforms (AliResearch, 2019).
External elements	E-commerce platforms	E-commerce companies promote rural e-commerce development through their own technological and market advantages, such as building e-commerce platforms and providing training and employment (Lawrence & Tar, 2010; The World Bank and Alibaba Group, 2019; Principe, 2022). In addition, due to its broad reach, it can attract (or partner with) logistics and financial service providers to form a better development environment (Rahayu & Day, 2015; Kshetri, 2018).	The influence of e-commerce platforms (especially Alibaba Group) is huge; C2C was the dominant model in the early stages of e-commerce development in China—in 2015, the B2C model overtook C2C (CIECC, 2022).
	Government	Governments can promote rural e-commerce by introducing relevant policies and providing financial support and technical guidance (The World Bank and Alibaba Group, 2019). Even in some cases, government agencies play the role of organizers who research and formulate policies to systematically develop rural communities (Chatterjee, 2019; Principe, 2022).	In addition to encouraging policies, the government also provides some financial support (mainly for internet and transportation) (China Internet Network Information Center, 2021; Lin et al., 2022; Wang et al., 2023).

Source: Authors (based on Cui et al., 2017).

Alibaba Group's Taobao was one of the first and most influential e-commerce platforms in China to adopt the Customer-to-Customer (C2C) model (CIECC, 2022). It offers a one-stop service for opening online shops for free, live chat, online ordering and payment, and assistance with delivery, and quickly attracted a large number of small and micro-entrepreneurs, expanding into rural areas in 2013 (AliResearch, 2020). Alibaba Group selects several rural villages each year based on statistical data and provides them with e-commerce services and support (e.g., training, technical support, logistics, etc.) to help local farmers and businesses use Alibaba's e-commerce platform more smoothly (AliResearch, 2020; Yang et al., 2021). In particular, rural villages that meet the following three criteria are labelled as 'Taobao Villages' by the Alibaba Group and are the focus of cultivation: (1) located in rural areas, united by village; (2) annual sales of e-commerce businesses reach 10 million RMB; and (3) the number of active online shops reaches 100, or the number of active online shops reaches 10% of the number of local households (The World Bank and Alibaba Group, 2019). As a result, Taobao Villages are also often considered to be the areas with the most complete e-commerce entrepreneurial environment and the highest density of entrepreneurs among a large number of rural areas in China (Zeng et al., 2019; Karine, 2021; Zhou et al., 2021).

The number of Taobao villages has grown yearly from 20 in 2013 to 5,425 in 2020 (AliResearch, 2020). Their total e-commerce sales have also climbed year by year, exceeding RMB 700 billion in 2019 (AliResearch, 2020). Currently, the rural e-commerce development model represented by Taobao Villages has become one of the key strategies for rural revitalization in China and is being promoted nationwide (Ministry of Finance, Ministry of Commerce, and Poverty Alleviation Office of the State Council of China, 2019). In recent years, there has been a succession of international scholars who are equally interested; some Southeast Asian countries, also dominated by smallholder farmers, are attempting to replicate the Taobao Village experience (Chatterjee, 2019; Principe, 2022).

This study examines a Taobao Village in Shandong Province, which has maintained active e-commerce operations for more than a decade, focusing on the gradual implementation of necessary e-commerce elements throughout its development (Cui et al., 2017). The objective of this paper is to construct an analytical framework that elucidates the swift deployment of these Taobao village elements, thereby enabling the village to acquire market competitiveness and enhance the promotion of rural e-commerce (Zeng et al., 2019; Yang et al., 2021).

3.2 Data Collection and Methodology

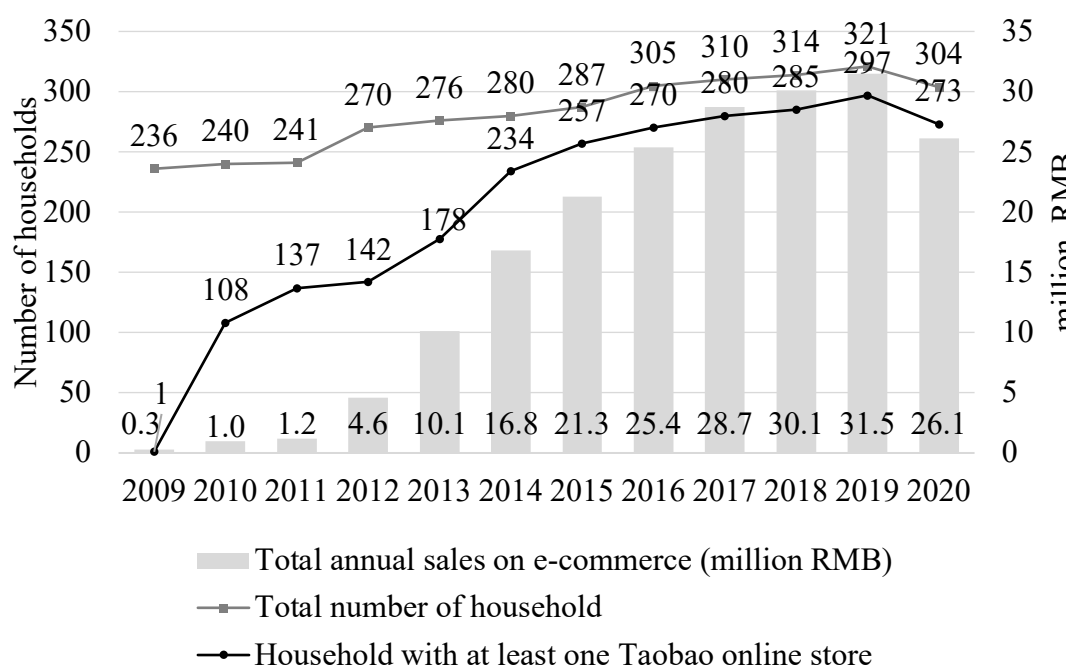
3.2.1 Case Introduction

Village D, Cao County, Heze City, Shandong Province, China, is located in the southwest of Shandong Province, on the border with Henan Province. It is located in

the lower reaches of the Yellow River, and most of the land is alluvial plains with a temperate monsoonal continental climate. It is suitable for a wide range of crops, apart from more disastrous weather conditions. It is 20 km from the centre of Cao County, 50 km from the two nearest railway junctions (Shangqiu National Railway Junction in Henan Province and Heze Railway Junction in Shandong Province) and 190 km from the nearest airport (Xinzheng International Airport in Zhengzhou City, Henan Province). Accordingly, D Village has poor transport links. There is no local presence of foreign businesses, and agriculture is the main source of income, making it one of the poorest rural areas in Shandong Province (Cao County Local Chronicles Compilation Committee, 2018).

However, the area is rich in traditional folk activities and is particularly famous for its ‘Yangge’—a traditional form of Chinese folk dance, usually performed in group sequences and often associated with rural life (Ministry of Culture and Tourism of China, 2019). Many villagers not only dance the Yangge but also make dance costumes. They earn extra income by working part-time as set photographers and costume makers for performances. As shown in Fig. 3-1, the number of local Taobao shops and sales has increased yearly, with over 90% of households owning their own Taobao shops. According to the local Two Village Committees (TVC) ^{Note 1)}, there are already 72 registered costume production enterprises, 32 home-based production workshops and 346 online shops in the area; about 200 young people (including more than 40 university graduates) have returned to their hometowns.

Fig. 2-1 Number of households, number of Taobao shops and annual sales amount of Village D



Source: Interview with the Two Village Committees of Village D.

3.2.2 Interview Based on Resource-Based Theory

Led by TVC, the authors completed field research in January 2020 and collected and validated information on geography and natural conditions, infrastructure construction (internet facilities and transportation), living conditions of villagers, and factory buildings of business owners. Afterwards, the authors used semi-structured interviews to collect primary data.

This paper required a large amount of data and information, requiring respondents to provide information from many years ago. The semi-structured interviews, framed by keywords, were able to provide more freedom of expression for the interviewees (Wang et al., 2023). This helped to increase the richness and completeness of the information provided by the interviewees. The keywords for the interviews were taken from the factors influencing the development of rural e-commerce and Taobao Villages shown in Table 3-1. As shown in Table 3-2, there were 16 interviewees from the Town government, TVC, and villagers' enterprises, and it is important to note that Mr. R started the first local Taobao shop and was subsequently elected as the local village party secretary and village head (2014-present). This study uses Mr. R as a representative of the villagers to demonstrate behaviour within the community.

Table 3-2 Interviewees' Identity and Interview Questions

Interviewees' identity		Interview questions
Town government	Mayor, Director of E-Commerce Office (2 people)	Motives, government measures, implementation roles, and risks assumed by grassroots governments to promote e-commerce development
TVC of Village D	Village secretary & village chief (Mr. R), and village accountant (2 people)	The motivation, measures, and effects of village committees promoting the development of e-commerce
E-commerce enterprise	Owners (4 people)	Entrepreneur's identity characteristics, entrepreneurial process, difficulties experienced, and help received

Source: Authors.

Note: Appendix 3 shows all the semi-structured interview questions for Mr. R.

3.3 The Growth Process of Village D (Table 3-3)

3.3.1 Up Until 2009, a Traditional Agricultural Village & The First E-commerce Entrepreneur

In 2009 and before, village D was dominated by agricultural production. The skills of dancing and hand-made garments were passed on from generation to generation by

Table 3-3 Taobao Business's Growth Process in Village D

Time	Mr. R	Villagers	Alibaba Group	Government and Village D TVC
Before 2009	Graduated from high school in 1990. Farmer and a migrant worker.	Agriculture was the primary source of income. Hand-made costumes and sold to neighbouring villages.	C2C was Alibaba’s main e-commerce business. Opening an online store only needed a few requirements.	Paid attention to building local infrastructure. At the beginning of 2010, the government of Daji Town built the first postal logistics center, which is located in the central area of Daji Town. In 2011, the electricity system of Village D was upgraded.
2009	Opened the first Taobao shop in Village D.	Villagers copied Mr. R’s entrepreneurial model. Electricity consumption in Village D surged.		Village D was identified as Taobao Village by AliResearch. The town government established the ‘Rural E-commerce Development Work Leading Group’.
2010	Built ‘family workshop’ for producing customs.			
2011	Bought mechanized facilities to increase production efficiency.			
2013	Rented and rebuilt idle houses in Village D into production workshops and warehouses.			
2014	He was elected as the village party secretary and village head. Registered a brand for his company.	Idle land and houses were rebuilt into production workshops. Upstream and downstream industries emerged. Villagers compete with each other.	B2C took C2C’s place. Alibaba initiated requirements to increase sellers’ service and product quality.	Daji Town government encouraged college students to return home and focus on building an environment for entrepreneurs.
2015	Attracted his relatives to return home and work for his company.	Several village entrepreneurs moved into the e-commerce park and were directly led by the government’s e-commerce leading group. Started to pay attention to product quality.		The government of Daji Town used abandoned industrial land to build an e-commerce park to promote branding and industrial upgrading.
2017	Moved his company into the e-commerce park, which was built by the Daji Town government.			Cao County was included in the National Comprehensive Demonstration County of E-Commerce Entering the Rural Areas and received special subsidies from the central government.
2019	Was elected as a representative of the Shandong Provincial People’s Congress.		Cao County and Shandong Fashion Design Association jointly established the ‘Cao County Hanfu Design Institute’.	
2020	Started live webcasting and encouraged the villagers to produce a variety of clothing.			

Source: Authors.

word of mouth (there were no standardized teaching materials, such as books). The women of the village were the main producers of costume-making. They use very simple tools such as needles, thread and scissors; families with higher incomes use foot-operated sewing machines. The costumes are mainly Yangge dance costumes, and a small number of costumes for babies and children are also made. Most of these costumes are used by the villagers themselves, with villagers from nearby villages buying them from time to time. The village sells up to 500 pieces a year, earning around 3,000 RMB.

In village D, at least 50% of the villagers have experience working in cities. Mr. R, for example, has worked as an electrician in many cities and earns roughly 3,000 RMB per month (8-10 hours of work per day at 100 RMB per day). His wife, who used to work in a textile factory in Cao County, lost her job in 2008 when the textile factory was closed down. In order to take care of his family, Mr. R. looked for opportunities to work back in his hometown. During his working life, Mr. R used Taobao to buy everyday items. After five months, he completed his first profitable order, selling 36 sets of costumes and generating a total sales amount of 1,000 RMB. Since then, he has realized the potential of an online shop and has put more effort into running it.

3.3.2 2010-2013, Villagers' Family Workshops & Village D Became Taobao Village

Mr. R's online shop was the first of its kind in D Village and has grown ever since. The clothing he sells is made by his wife, and the quality and style are according to traditional local specifications, which has received many positive comments from customers. As the number of orders gradually increased and his wife alone could not fulfil them, Mr. R contacted nearby villagers to buy their unused garments or hire women to participate in the production. Following this, news of his online shop spread from his neighbours and relatives to the entire village. Many villagers followed Mr. R's example, buying computers, registering online shops and selling the costumes made by their women. To meet their production needs, villagers converted their yards into simple workshops and warehouses and bought small production machines (such as electric sewing machines, baling machines, electric ironing machines, etc.). This led to a surge in electricity consumption and numerous power cuts and fires in the old electrical circuits in Village D. TVC applied to the town government for funds to upgrade the electrical facilities in Village D. It was only then that the town government of Daji gradually became concerned about the changes in the village.

In 2013, the town government set up the E-commerce Leadership Group to encourage Village D to share its experience with nearby villages; at the same time, the group applied for funding from the higher government to focus on upgrading electricity, internet, and other related infrastructure. The group is headed by two employees of the town government, while the other members are TVC leaders or villagers from the villages under the jurisdiction of the town (including Mr. B, the maximum number of the members has reached 20). The group generally meets once a month, and members are free to speak and make decisions by voting. By the end of 2013, 80% of the area of Village D was connected to the internet (in 2010, this value was less than 20%); the first village logistics station was built, making it easy for villagers to post parcels close

to their homes (previously, they would have had to go to the town centre of Daji to do so.) In 2013, Village D met the criteria to be recognized as a Taobao village by the Alibaba Group.

3.3.3 2014-2016, Independent Workshop & Division of Labour and Competition Between Villagers

In 2014, 84% of households in Village D already had at least one online shop. The production capacity of different households varied considerably, and a division of labour emerged. The few households represented by Mr. R, with better sales and larger production scale, absorbed most of the labour and were mainly responsible for supply. Accordingly, the smaller families begin to withdraw from the production process and become middlemen—buying from the former and selling on their own online shops for a price difference. Traditional clothing styles became more fixed, and the choice of styles available to consumers was limited. Both supplying and buying families chose to sell their products at a lower price and higher volume. Gradually, the quality of D Village products and consumer ratings began to decline.

At this stage, their own yards were no longer sufficient for those families who produced on a large scale. They rented unused local houses and converted them into workshops dedicated to garment production, especially those near the road (because of the ease of transport). With the limited space available, some villagers illegally built workshops on land marked as ‘farmland,’ causing problems for the town council.

3.3.4 2017-2018, Modern Factory & County Government Regularisation

To address the problem, the town government developed a management system. (1) Establishing a list of Taobao shops inside Daji Town and monitoring the changes, periodically; (2) making a list of their main products (especially costumes’ templates and designs); and (3) monitoring and managing the two lists to make sure that villagers could not illegally copy from each other. The Alibaba Group also provides support to help large-scale companies move from C2C to B2C platforms by providing branding know-how and reduced fees when upgrading services.

In addition, the town government consolidated unused building sites and built an e-commerce industrial park to provide local villagers entrepreneurs with specialized production workshops at low rents. The E-Commerce Development Office has also applied for government tax breaks and subsidized funds for businesses to relocate and purchase new equipment.

3.3.5 2019-2020, Central Government’s Project & Collaboration with Provincial Agencies

In 2019, Village D was included in China’s national e-commerce demonstration project in rural areas, becoming one of the key rural e-commerce development models promoted by the central government, receiving direct leadership and funding from the Shandong Provincial Government (Ministry of Finance, Ministry of Commerce, &

Poverty Alleviation Office of the State Council of China, 2019). This means that Village D will try more experimental policies and development strategies and experience new changes and challenges, such as absorbing young people returning to their hometowns and addressing the issues of children and the elderly left behind. The year 2020 saw a rapid decline in demand for performance clothing due to the epidemic; many villagers received a shock and closed their businesses and online shops. With the assistance of the government and Village D TVC, Village D received support from the Shandong Province Fashion Design Association to set up a 'Hanfu Design Institute,' complete with a new product line, and begin a new phase of development.

3.4 Discussion

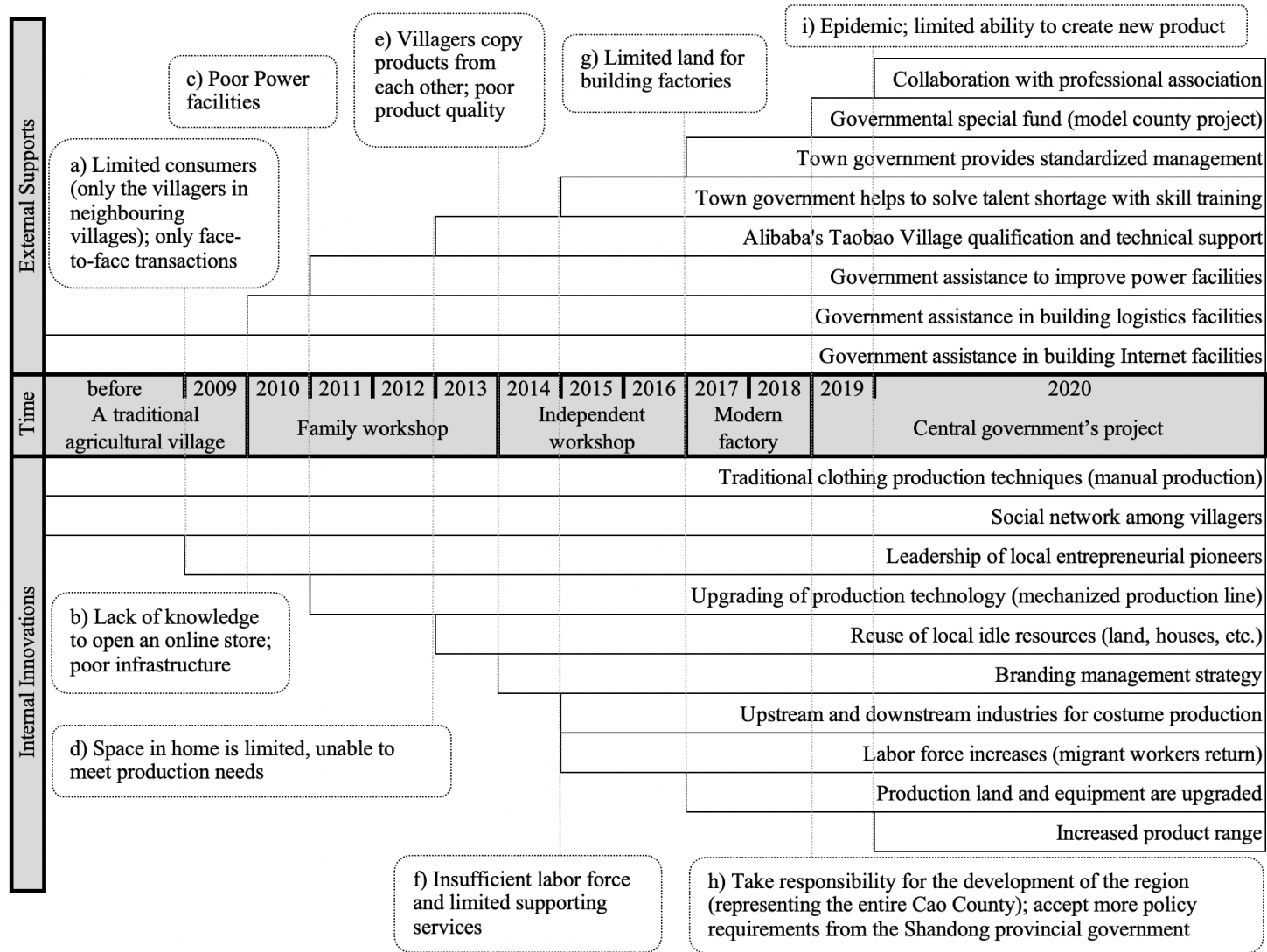
As demonstrated in Fig. 3-2, the evolution of Taobao Villages represents a process of overcoming various bottlenecks. Echoing previous literature, this study confirms that the relatively insular social networks of rural communities are insufficient to meet the financial and technological prerequisites for full deployment of e-commerce, thereby necessitating external resources, notably government infrastructure investments and technical assistance from e-commerce platforms (Lawrence & Tar, 2010; Chatterjee, 2019; Gkartzios & Lowe, 2019).

Previous research into the growth dynamics of Taobao villages has credited their formation and development to certain key elements, such as villagers' small and micro-entrepreneurship (Zeng et al., 2019; Zhao et al., 2021), the assimilation and utilization of e-commerce technologies (Yang et al., 2021; Zhou et al., 2021), government establishment (Yang et al., 2021; Lin et al., 2022), and regulatory system creation (Yang et al., 2021; Lin et al., 2022). These elements' status also underpins the classification of development stages. For instance, Zeng et al. (2019) divided the development of an agriculture-centric Taobao village into four stages: technology introduction, technology diffusion, quality crisis, and industrial agglomeration. However, this fails to clarify why some rural communities can foster e-commerce while others cannot (Lawrence & Tar, 2010; Chatterjee, 2019; AliResearch, 2020).

Contrastingly, this case study offers an 'internal innovation & external support' analytical framework, which foregrounds changes in the productive capacity of rural entrepreneurs (Qiu & Qiao, 2021). The development stages are determined by the arrangement of these key elements, and distinct paths of development may manifest in different stages. The underlying concept is that, as innovation within the community and external support gradually accumulate, the productive capacity of the villagers' entrepreneurs is upgraded, product competitiveness is enhanced, and consumer trust and sales are earned (Zhou et al., 2021).

This study presents a model of rural e-commerce development spearheaded by village entrepreneurs (Gkartzios & Lowe, 2019; Zhao, 2021). Intra-community entrepreneurship and innovation were integral to the development of Taobao Villages, playing a pivotal role in e-commerce promotion. Concurrently, the participation of external actors, be it the e-commerce platform or higher-level government, primarily provided service-oriented support, rather than exploiting or depleting the villagers'

Fig. 2-2 Internal innovations and external supports during the development



Source: Authors.

assets (Li & Long, 2015; Gkartzios & Lowe, 2019). By leveraging and integrating internal resources and knowledge, entrepreneurial opportunities for diverse individuals are created, thereby promoting community diversification and sustainability (AliResearch, 2020; Zhao et al., 2021). This offers a viable strategy for rural communities under the potential threat of resource and technology-rich ‘large farms and companies’ exploiting rural communities through e-commerce development (OECD, 2017; Chatterjee, 2019; The World Bank and Alibaba Group, 2019).

The Alibaba Group’s diverse e-commerce platform offers services for entrepreneurs of different sizes (in terms of technology, marketing, logistics, etc.) and is also relatively cost-effective (AliResearch, 2020). Such service availability significantly reduces the obstacles to entrepreneurship, thereby encouraging more rural villagers to engage in entrepreneurial activities. Consequently, villagers can share knowledge, integrate resources, and innovate independently, fostering overall community development. Through the amalgamation and support of external resources, Taobao villages expedite the utilization and expansion of internal resources (Gkartzios & Lowe, 2019). With the establishment of appropriate management mechanisms, diverse entrepreneurs are encouraged to participate in entrepreneurship and competition, which leads to the long-term development of the entire community.

3.5 Conclusion

Through an in-depth investigation of a single case study, this paper examines the entire growth process of a Taobao Village. Based on its eleven-year history and data, this paper proposes an analytical framework based on the perspective of ‘internal innovation and external support collaboration in rural communities.’ While visualizing the development process of Taobao Villages, the framework explains the reasons for their rapid development and continuous competitiveness upgrades. Finally, the paper confirms that Taobao Villages are a model of rural e-commerce development led by villagers who are entrepreneurs within the community. This model fosters entrepreneurial diversity, promotes intra- and inter-community collaboration and innovation, and holds significant potential for further exploration and replication.

Nevertheless, the present study has certain limitations. Given the extensive range and diversity of Taobao Villages in China, research funding and epidemiological restrictions have precluded the precise situating of the selected case within the broader context of all Taobao Villages. As such, the ‘internal innovation-external support’ analytical framework proposed herein requires further validation through more comprehensive case studies.

Notes

Note 1) The TVC is not a state organ but a mass self-governing organization, which is based on the Organic Law of the Chinese Villagers’ Committee. The former consists of Communist Party members, led by the party branch secretary (the most powerful person in the village). The latter consists of local villagers, who are partly

not party members; the leader is the villagers' committee director (the second most powerful person in the village), the most powerful person in the village. The latter consists of local villagers, who are partly not party members; the leader is the villagers' committee director (the second most powerful person in the village), elected by local villagers.

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Chapter 4

Case Study 2: College Graduate and Poverty Alleviation

4.1 Introduction

Rural development is a crucial driving force for achieving sustainable economic and social development (United Nations, 2021). It is necessary to introduce urban resources (especially human resources and capital) to rural areas, to create an entrepreneurial support environment (Du, 2022). Cheaper land and labour costs reduce entrepreneurs' financial burden (Du, 2022) and entrepreneurship creates nearby employment opportunities for local villagers (Sutter et al., 2019). Further, external talent brings advanced knowledge, which can contribute to the development of rural communities (Zhang and Yang, 2021). Several rural areas have practiced this strategy to escape poverty (Lv, 2017).

Notably, most of the researched cases have a certain location value (located near a city or transportation line) or investment value (with natural scenery for tourism or exotic handicrafts) (Du, 2022). However, some regions do not possess these valuable resources, and their situations are much worse (United Nations, 2021). How to support entrepreneurship and attract external talents has become an international issue worthy of attention (Zhang and Yang, 2021). These areas are often far from political and economic centres (Pinkovskiy, 2017). Besides, they have few resources that can be directly used to generate revenue, making it difficult to attract external talent and investment (Si et al., 2020). As a result, few successful cases exist (Du, 2022; Sutter et al., 2019). Existing cases demonstrate that directly providing entrepreneurial resources is the main solution, especially in developing countries that require rapid growth (Sutter et al., 2019). This strategy assumes that people in poverty-stricken areas are vulnerable and need external help (United Nations, 2021). Therefore, ample literature emphasizes the government's importance (Sutter et al., 2019; Lv, 2017). Some countries have initiated supportive policies, relying on urban talents to work and start businesses in rural areas and provide them with funds or loans (or in conjunction with banking institutions) (Si et al., 2020).

China has achieved remarkable results in poverty reduction (Fig. 4-1) with the strong support from the Chinese government. The rural poverty-stricken areas usually

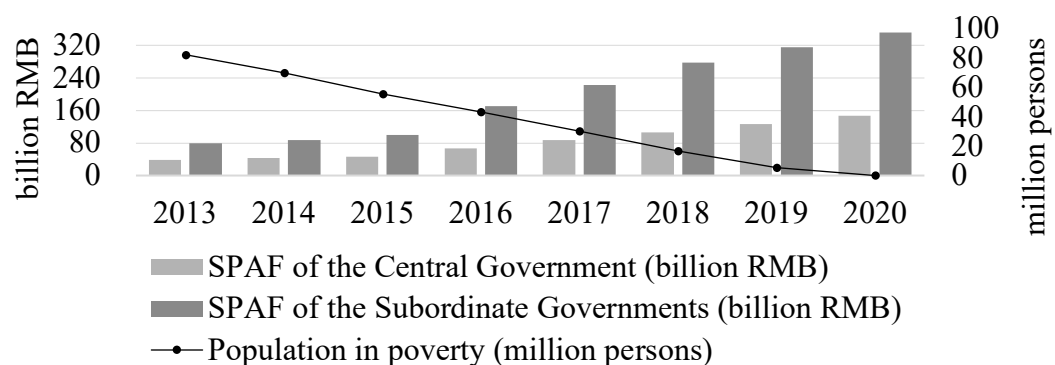


Fig. 3-1 Number of residents in poverty and amount of Special Poverty Alleviation Fund

Source: The State Council Information Office of China (2021)

rely on government investment (Gkartzios and Lowe, 2019) and the government established a series of Grassroots Employment projects (introduced in the following chapter) to attract external talents to work in those areas (Wang et al., 2021). After the Mass Entrepreneurship and Innovation policy ^{Note 1)} was initiated in 2015, participants were encouraged to start businesses. Besides, the government has prepared various funds, providing services for entrepreneurs in these areas, such as loans, tax reductions, cash incentives, and so on (State Council of China, 2016; Yu, 2021). It lowers the threshold for entrepreneurship, improves the ability of start-ups to deal with risks, and increases their success rate (Development Report of College Student Village Officials 2016-2017, 2017). In some cases, these funds enhance entrepreneurship's economic value and even leverage private or corporate funds (China Youth Entrepreneurship and Employment Foundation, 2020). As a result, in 2020, the total number of people who started or participated in entrepreneurship from urban to rural areas reached 10.1 million, an increase of 1.6 million over 2019 (Yu, 2021). Chinese studies also focus on government behaviour ⁴⁾; few studies also consider the Two Village Committees (TVC) ^{Note 2)} and individual entrepreneurs (Lv, 2017). The leadership of TVC strongly influences the villagers, which may bring unpredictable effects on external talents (Qian and Liu, 2018). In some cases, TVC leaders welcomed external talents and actively provided the resources required for entrepreneurship; however, in some cases, TVC leaders demonstrated obvious distrust and non-cooperation (Development Report of College Student Village Officials 2016-2017, 2017; Qian and Liu, 2018). In addition, there is still no solution to the low entrepreneurial success rate (China Youth Entrepreneurship and Employment Foundation, 2020).

This study takes the Selected College Student Village Official project (SCSVO) as an example of obtaining external talent in poverty areas. It also considers the Special Poverty Alleviation Fund (SPAF, introduced in the following chapter) as an example to analyse the methods of obtaining financial support. This study investigates the entrepreneurial process, focusing on the help provided by TVC. Therefore, this research tries to figure out a support system for external talents' entrepreneurship in rural areas ridden with poverty.

4.2 Overview of the SCSVO and SPAF

4.2.1 Overview of the SCSVO project

(1) Brief introduction

The College Student Village Official project (CSVO) was implemented in 2008 to cultivate village cadres in almost every province (Wang et al., 2021), who are criticized for low working efficiency because of aging and brain drain challenges (State Council of China, 2019). During this project, college students are placed into the village-level Communist Party branch and village committee, working as assistants to the village party secretary or the head of the village committee. The percentage of entrepreneurs increased after the Mass Entrepreneurship and Innovation policy ^{Note 4)}, which was

initiated in 2015. As a result, by 2016, the percentage had grown to 8.8% (Development Report of College Student Village Officials 2016-2017, 2017).

Since it was criticized due to participants' unsecured careers, some provinces (including Shandong) merged the Selected Graduates project (another national project that cultivates graduates into Chinese Communist Party members and officials in government) into the CSVO project and named it the Selected College Student Village Official project (Wang et al., 2021). The SCSVO project operates as follows: graduates submit applications based on recruitment information from the Organization Department of the Provincial Party Committee; after passing an exam, they start an SCSVO career as assistants to a village leader for two years; after passing another exam, they can be promoted to civil servants as Selected Graduates (Wang et al., 2021). As a result, 0.5 million graduates had joined the project by 2016 (Development Report of College Student Village Officials 2016-2017, 2017). It is noteworthy that after the introduction of the SCSVO (Selected and Appointed College Students Village Officials) program, some provinces ceased recruitment under the CSVO (College Students Village Officials) program. In these regions, the SCSVO initiative replaced the CSVO program (Wang et al., 2021). Owing to the SCSVO program's ability to offer a relatively stable career advancement path, some areas refer to it as 'selected and appointed college students village officials' (or simply 'selected candidates') or 'service appointments in villages.'

The ratio of males to females is about 4:6, 80.4% are undergraduate students, and more than half of them major in social science; 68.0% are promoted into civil servants or governmental personals (by contrast, 8.8% have started up businesses); 64.0% have experienced entrepreneurial failure at least once (Development Report of College Student Village Officials 2016-2017, 2017). Challenges for SCSVO entrepreneurs mainly include: (1) Insufficient funding is the most commonly existing but difficult-to-solve issue; 76.2% use savings or donations from family members (Lv, 2017). (2) Low salary and difficulty gaining local villagers' trust during daily work (Development Report of College Student Village Officials 2016-2017, 2017; Qian and Liu, 2018). (3) Limited education about agriculture and entrepreneurship in China's universities; students can only rely on online resources; only 8.5% have never used any e-commerce platforms ^{Note 5)} (China Youth Entrepreneurship and Employment Foundation, 2020).

(2) Reasons why focus on SCSVO

University students constitute one of the primary entrepreneur groups in China's UtRME (Under the Rural Revitalization of the Mass Entrepreneurship and Innovation). According to reports from the Chinese government, UtRME in China comprises primarily four demographic groups: migrant workers, university students, veterans, and women, among whom university students are a significant entrepreneurial cohort (People's Daily, 2021). Multiple studies have indicated that university students within UtRME are relatively young in age but possess higher education levels. Enterprises initiated by them typically exhibit advanced technological expertise, enabling the

provision of novel services and industries to local communities (Yang et al., 2021; Zhao et al., 2021). Particularly in ventures involving digital information and internet-related entrepreneurship, which require higher technical and equipment standards, most returning rural migrant workers (and other UtRME categories) struggle to identify entrepreneurial opportunities (The World Bank and Alibaba Group, 2019).

National grassroots employment projects, including SCSVO (Selected and Appointed College Students Village Officials), constitute significant channels for university students to work and start businesses in rural areas ^{Note 3)}. In recent years, mounting employment pressure and living costs in urban areas have led to a gradual decline in the employment rate of Chinese university graduates, reaching 85% in 2022. Conversely, the number of university graduates has been steadily increasing, surpassing 10 million in 2022 (Li and Qin, 2021). Consequently, many university graduates find it challenging to secure jobs in urban areas and turn to seek employment opportunities in small towns and rural areas (Zhou, 2022). Against this backdrop, grassroots employment projects have become a popular choice for university graduates (Wang et al., 2021). These projects typically require university students to work in rural areas rather than urban centers, offering relatively lower salaries. However, they provide formal positions and, due to government financial support, relatively stable income and welfare benefits. Another reason this paper focuses on the SCSVO program is its almost ubiquitous presence in every province of China (Wang et al., 2021). On one hand, university graduates have the freedom to choose their desired locations and apply, which amplifies the attention towards SCSVO (in contrast, most other grassroots employment projects mainly target China's western regions with harsher natural conditions and relatively backward economic situations). On the other hand, it ensures to some extent the possibility of replicating the research findings outside Shandong Province in other regions across China.

4.2.2 Overview of the SPAF

The government of China provides various funds for rural development (such as infrastructure construction, education, environmental protection, and medical care), aiming at separated fields and are managed by various governmental departments (State Council of China, 2016). Among them, the SPAF is exclusive to those areas that are in poverty (Wang and Liu, 2018). China has fought the poverty issue for decades, and the amount of SPAF has increased yearly (Fig. 4-1). Currently, it has become the main source of finance in those areas (Wang and Liu, 2018). Funds are collected from the central, provincial, municipal, and county governments and are transferred to the county-level governments (the most grassroots government), which hold the right to pay SPAF to every village ridden with poverty (Ministry of Finance and Ministry of Agriculture and Rural Affairs of China, 2017). Besides, the central government has set the Rules for Special Poverty Alleviation Funds Management (SPAF Rules) (Ministry of Finance and Ministry of Agriculture and Rural Affairs of China, 2017). It regulates that SPAF can be used to cultivate characteristic industries and improve small-scale

public welfare facilities but cannot be used for large and medium-sized infrastructure and expenditures not related to poverty alleviation tasks.

In multiple cases, SPAF is used for infrastructure construction and cash payments to families in poverty (about 3500 RMB per person per year) (21). The reason is that governmental project managers do not want to violate the SPAF rules and prefer short-term gains (Wei and Chen, 2018). It is criticized for increasing the dependency and laziness of the people in poverty (Gao and Wang, 2014). Besides, allocation of government funds involves multiple departments of multi-level governments, and there exist problems such as funds not arriving on time, idle funds, and imperfect supervision (Yu, 2016). Therefore, the government encourages innovative funds usage, such as purchasing services and investments for extra returns (Ministry of Finance and Ministry of Agriculture and Rural Affairs of China, 2017). Some areas no longer distribute SPAF to individuals but manage them and invest together, and the investment targets are mostly large-scale and technologically advanced enterprises (Wang and Xia, 2021).

4.3 Research Methods

The number of rural areas is high, and different entrepreneurs may experience different entrepreneurial processes (China Youth Entrepreneurship and Employment Foundation, 2020). Besides, their background, entrepreneurial environment, and the time of starting a business may also vary (Du, 2022). Therefore, this research applies semi-structured interviews for data collection. Interviewees can freely express themselves, which can obtain their personalized experiences and impressions (Mannan and Afni, 2020).

To obtain a picture of the whole entrepreneurial process, the author conducted the interviews based on chronological order (from starting the business to ending it). Interviewees described the challenges and solutions they encountered at different times. Besides, the author investigated whether they had encountered the issues mentioned in the existing literature; for example, government support (policy and funding) (Development Report of College Student Village Officials 2016-2017, 2017; Zhang and Yang, 2021), insufficient funding for entrepreneurs (Lv, 2017; Wang and Xia, 2021), and impacts of local TVC (Development Report of College Student Village Officials 2016-2017, 2017; Qian and Liu, 2018).

Specifically, the interviewees and the main interview contents are: (1) Ms. Y (the SCSVO entrepreneur) was interviewed about her background, motivation to participate in the SCSVO project and to start up a business (especially the encountered challenges and solutions), and data of the start-up business (Appendix 3 shows all the semi-structured interview questions for Ms. Y). (2) Mr. C (the 2009–2020 TVC Leader) and Mr. L (the 2012–2020 Accountant of TVC and a TVC leader since 2021) were interviewed using Village D's historical data, to assess TVC's support and attitude.

4.4 Case Description

West-Dukouyi Village (Village D), Dukouyi Township, Xiajin County, Dezhou City, is located to the west of Shandong Province, bordering the neighbouring Hebei Province. It has a temperate monsoon climate; the average annual temperature is 10°C, and average yearly precipitation is 450 mm. It is 21.5 kilometres from Xiajin County and 105.9 kilometres from Dezhou city centre. As a traditional agricultural village in the lower reaches of the Yellow River's alluvial plain, the 312 families living there maintain a rotation planting of winter wheat and summer corn (three crops every two years). The available arable land is 1.0 million m² in total, 0.9 million m² of which is used for growing food (0.4 million m² each for wheat and corn). The per capita arable land is 783.3 m², slightly lower than the 800.0 m² in Shandong (Shandong Provincial Bureau of Statistics, 2015). This number is shrinking because of high-intensity utilization and over-exploitation (Shen, 2014). Besides, some neighbouring villages close to city centres lease the lands for companies to build factories, such as charcoal kilns and lime kilns, which cause air pollution and kill crops.

Only one primary school in the village; most villagers have only junior high school education. Most young people choose to work in cities and rarely come back. In terms of the population, 66.6% of villagers are aged 65 and above, and 22.2% were disabled or injured while working in cities; both figures are much higher than the average of Shandong (11.6% and 7.3%) (Shandong Provincial Bureau of Statistics, 2015). There is no public transportation system, and the 3G signal covers only 50.6% of the village. Only 41.3% of the villagers have cell phones (only 9.2% are smartphone users), but there are no computers; even the cell phones are mainly for connecting with family members, not to handle or access online businesses.

In 2014, there were 7,003 (9.4%) provincial poverty-stricken villages in Shandong, with a combined population of five million (Zhao and Zhang, 2014). Village D is one of them, with an average annual net income of 2,514.9 per person (Fig. 4-2). By contrast, rural residents' average annual net income was 12,135 RMB per person in Dezhou (Dezhou City Bureau of Statistics, 2015). Additionally, different from the national poverty standard in Fig. 4-1, each province has its own standard, usually higher than the national one—3,000 RMB per person per year in 2014 in Shandong and then annual increases; the net income is the remainder of all income minus all expenses.

4.5 Entrepreneurial Process

4.5.1 Ms. Y's entrepreneurship, 2014

Ms. Y was born in 1989 and brought up in the Dezhou city centre by her parents, who run a small supermarket. The city centre is located in an urban area 105.9 kilometres away, which also shares different administrative organs and social systems with Village D. Therefore, Ms. Y is defined as an external talent.

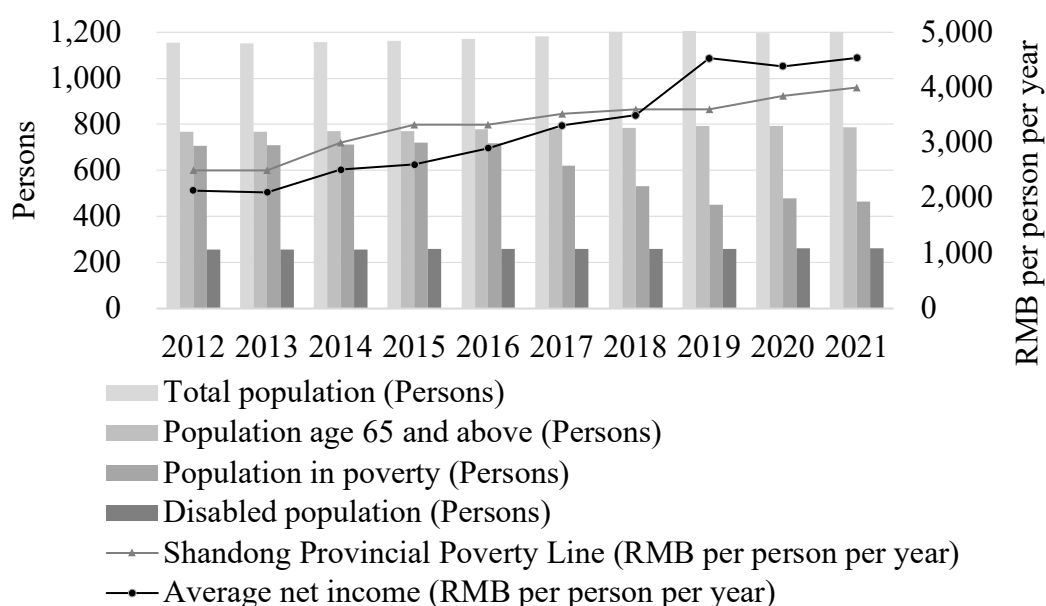


Fig. 3-2 Population and annual income of Village D

Source: Interview with Mr. C (2009-2020 Leader of TVC) and Mr. L (2012-2020 Accountant of TVC, 2020- Villagers' committee director).

She graduated from Dezhou University with a master's degree in International Business. Unlike most college students who only accept jobs in cities, she says she is willing to work and live in rural areas. She explains that (1) Since her parents have invested in some agricultural projects, she also has an interest in the countryside. (2) Being a civil servant was her dream job because of the stable salary and welfare benefits, but the exam for civil servants is competitive—2.8 million candidates competed for 6,866 positions in the Shandong civil service exam in 2014. In contrary, the competition for SCSVO was not as fierce—12,000 competitors for 1,450 positions.

She passed the exam and became the SCSVO in Village D, working as the assistant of Mr. C. Her salary for a month from the governmental finance was 2,850.5 RMB, lower than the average salary of Dezhou (3,605.6 RMB a month) (Dezhou City Bureau of Statistics, 2015). She considered starting a business for extra income. She did not know much about agriculture, so she went to her parents for help. They figured out that cultivating mushrooms could be achievable because (1) agricultural sideline products were huge in Village D, such as cottonseed hulls and corncob stalks, which can act as the raw materials for making mushroom sticks; (2) mushrooms grow fast and are cultivated in greenhouses, which cannot be adversely affected by air pollution; (3) the benefit-cost ratio ^{Note 6)} is high. Based on their collected data: except the costs of land and labour (land is free, she and her husband were the workers), mushrooms can grow at a 233.3% higher rate than wheat and corn (14.2% and 15.9%, respectively).

She shared her calculation with Mr. C. He convinced the villagers and lent her 3,906.9 m² of idle land for free, which had been uncultivable and abandoned for years. Since receiving loans from banks was not easy in rural areas, she turned to her husband,

who worked in a government company in Dezhou and persuaded him to use their savings as seed funding. Accordingly, she started a personal farm with two 670 m² greenhouses. She bought strains from her parents' business partners. Growing mushrooms requires a specific environment, and the yield depends on workers' technique, especially in terms of injection, pest control, classification, and packaging. To assist with the same, her husband would come to Village D to help during the holidays. Unlike the local face-to-face trading method, she used online platforms for orders and used delivery services in Xiajin County. Most products were sold, and she bought a small second-hand truck for delivery with the profit.

4.5.2 Establishment of Cooperative S, 2015–2016

Mr. C is also interested in mushroom production and is looking forward to cooperation from other villagers. In July 2015, five villagers also expressed their willingness to participate. As a result, they established the SXY Mushroom Farmers' Professional Cooperative (Cooperative S) in July 2015.

Ms. Y stated in the interview that the members of Cooperative S discuss and make discussions together; each member has one vote, and the majority prevails; besides, they apply joint-stock management: members lend personal assets for unified management and receive a stable dividend each year. The assets include cash, land, production machinery, and facilities. Table 4-1 shows the calculation of dividends: the rate of return on cash refers to (usually slightly higher than) the fixed one-year deposit rate of the rural credit cooperatives in that year; production machinery and facilities are also converted into cash and calculated together; the rate of return on land is based on (usually slightly higher) the current year's land rent. Besides, if the cooperative is dissolved (or member leaves the cooperative), the member can recover the usage right of their invested land.

Regarding members' responsibilities, Ms. Y is in charge of formulating technology-related solutions, especially online sales. Villagers (including Mr. C) first learned mushroom cultivation techniques from Ms. Y and then created groups for production, packaging, and transportation. Unlike the members, employees had not invested any personal assets. The salary was 60 RMB a day per person. They were usually local villagers in poverty or immigrants from neighbouring villages, working with members' groups as the labour force.

4.5.3 Cooperative S and poverty alleviation, 2017–2019

TVC stated in the interview that all funds came from the government, but that the amount annually fluctuates. 2014–2016, since there were several poverty-reducing projects, the amount was relatively high—an average of 5.1 million RMB a year, including 3.0 million RMB SPAF (the rest was dedicated for medical and educational issues). The SPAF includes 10% central finance, 30% provincial, 40% municipal, and 20% county allocations. SPAF usage has been relatively fixed for certain issues. For example, in 2016, 46.3% was allocated for land reclamation and agriculture, 33.9% for

Table 4-1 List of members of Cooperative S and their annual guaranteed dividends in 2015

Name	Position in Village D	Position in cooperative	Invested land (m ²)	Guaranteed dividends (RMB)	Percentage of shared net profit (%)
Ms. Y	SCSVO and the 2015-2019 Women committee of TVC	Chairman	3,906.9	3,980.0	25.2%
Mr. C	2009-2020 Leader of TVC	Chief Supervisor	6,000.3	3,132.0	19.8%
Ms. Z	2013-2014 Women committee of TVC	Member	4,691.4	2,345.7	14.9%
A	Farmer in Village D	Member	2,964.0	1,482.0	9.4%
B	Farmer in Village D	Member	3,276.0	1,638.0	10.4%
C	Farmer in Village D	Member	4,247.0	2,123.5	13.5%
D	Farmer in Village D	Member	2,160.0	1,080.0	6.8%
Total			27,245.6	1,5781.2	100.0%

Source: Interview with Ms. Y and Mr. C (2009-2020 Leader of TVC).

expenses related to families in poverty, and 19.8% for small infrastructure. In 2015, TVC planned to use 2.0 million RMB SPAF for farmland improvement. The county government completed the payment in February 2016. However, the commissioned company had problems with its operation, and the fund was idle.

During the first two years (2015–2016), the cooperative lacked cash to purchase greenhouses and machinery. Ms. Y renewed the SCSVO contract in 2016 and borrowed from her savings for additional help (Table 4-2, I4). To start production quickly, most of the cash was spent on greenhouses and a medium-sized truck for transportation. Besides, in January 2017, the central government initiated a policy to encourage college graduates to join rural economic organizations (including farmers' professional cooperatives), providing policy support for poverty alleviation-related projects (State Council of China, 2017). Therefore, Mr. C wanted to financially support the cooperative with the idle fund. In February 2017, the county government agreed to his requirement with the following rules: (1) Cooperative S undertook the poverty alleviation mission with TVC (Village D's average income should exceed the provincial poverty line before 2020); (2) the SPAF can only be used for fixed assets or cultivation materials (Table 4-2, I3 equals II3). Besides, Ms. Y (representing Cooperative S) and Mr. C (representing TVC) had signed an agreement for cooperation. TVC claimed to pay in instalments for five years, and repayment was not required. With SPAF's financial support, production

Table 4-2 Income and expenditure status of the cooperative and the number of members

Unit (RMB)	2015	2016	2017	2018	2019	2020
I. Income	293,749.5	195,331.7	1,218,135.9	638,866.8	645,141.0	204,854.1
1. Operating income	84,357.0	87,257.5	165,771.0	213,376.0	256,551.1	156,551.1
2. Outsourcing and submitting*	7,838.4	13,628.3	32,223.4	45,214.8	40,303.0	48,303.0
3. TVC fund (SPAF)	0.0	0.0	1,020,141.5	380,276.0	348,286.9	0.0
4. Borrowed from Ms. Y	201,554.1	95,445.9	0.0	0.0	0.0	0.0
II. Expenditure	293,749.5	195,331.7	1,218,135.9	638,866.8	645,141.0	204,854.1
1. Operating expenses	8,987.8	9,684.6	11,272.2	21,620.2	22,931.4	25,931.4
2. Management costs	5,342.1	2,452.2	4,231.2	9,245.8	9,587.9	12,273.2
3. Plant and Equipment	224,073.7	124,927.3	1,020,141.5	380,276.0	348,286.9	52,141.8
4. Year-end payment for members	55,345.9	58,267.6	69,741.3	110,163.6	134,620.5	63,214.1
5. Cash aid for the poverty	0.0	0.0	112,749.7	117,561.2	129,714.3	51,293.6
III. Number of Workers	7	16	27	39	46	61
1. Members	7	7	12	15	16	16
2. Employees	0	9	15	24	30	45

Note: The Outsourcing and Submitting account are used to calculate the contracting fees handed in by farmers and contracting units for contracting collective resources, and the realization and carryover of profits handed over by village (group)-run enterprises.

Source: Ms. Y, Mr. C (2009-2020 Leader of TVC), and Mr. L (2012-2020 Accountant of TVC, 2020- Villagers' committee director).

efficiency increased significantly. The cooperative built nine greenhouses and purchased a shredder to process mushroom sticks.

To continue serving the cooperative, Ms. Y renewed her SCSVO contract for the second time in 2018. In addition to being members or employees, the cooperative offered special treatment to families in poverty that have no working ability: in addition to maintaining the same SPAF cash subsidy system as before, the cooperative pays an additional cash subsidy (at least 2,000 RMB per person). Therefore, it also contributed to completing the poverty alleviation mission in 2019 (Fig. 4-2).

4.5.4 Cooperative S was dissolved, 2020

Due to health reasons, Mr. C had to leave the TVC leadership in June, when the agreement has completed. The county government appointed a new village committee secretary (Mr. G), and villagers elected another villagers' committee director (Mr. L, also the TVC's accountant before 2020). They did not sign any agreement with Ms. Y. Besides, they claimed that a large amount of SPAF was only used by the cooperative,

which was unfair to other villagers, and that Ms. Y must refund the received SPAF. Ms. Y explained that the new leaders wanted to use the money for new projects initiated by themselves because it was Mr. C who achieved poverty alleviation.

Because of TVC leaders' massive influence in the local area, Ms. Y believed that regardless of whether she won the case, it would be difficult for her to stay. So, she chose to leave Cooperative S and mortgaged the relevant assets to the TVC. She finished the last SCSVO contract in 2020 and became a Selected Graduate, working in the Women's Committee of Dezhou City. After she left, the cooperative was dissolved, and farmers took back their lands. The remaining assets were divided among the members to keep on producing mushrooms.

4.6 Discussion

4.6.1 Entrepreneurial process and available supports

SCSVO and poverty reduction were previously separate projects, but they merged into a hybrid support system in this case, by re-organizing existing resources without asking for extra external support. The entrepreneurial supporting system for SCSVO is shown in Fig. 4-3, and the whole entrepreneurial process can be summarized into the following periods: Period 1, an external talent is embedded into the local TVC through the SCSVO project and figures out a profitable seed business that suits the local situation, benefiting from family members, TVC, and self-learning; Period 2 benefited from TVC's leadership, and local resources were gathered into a farmers' professional cooperative for large-scale production of seeds. In Period 3, SPAF is injected to finance the cooperative's fixed assets, accelerating its expansion and increasing local villagers' income; Finally, in Period 4, the support system ends after the external talent leaves. However, the aggregated assets become heritages, including the tangible (such as the mortgaged greenhouses and trucks) and the intangible (such as cultivating skills and e-commerce marketing networks).

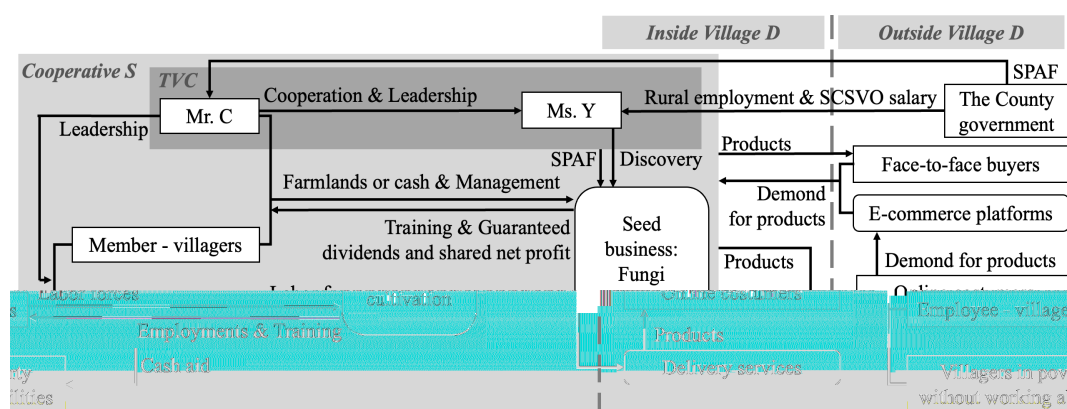


Fig. 3-3 Entrepreneurial supporting system for SCSVO

Source: Author' original, based on field survey and interview research.

4.6.2 Features of the system

(1) In such a strategy based on the existing policies and resources, flexible integration is carried out for win-win cooperation between external entrepreneurs and local villagers. On the one hand, the SCSVO project introduces external talent to work in a poverty-stricken rural village, who becomes an entrepreneur and starts a business based on local conditions. Benefiting from the SCSVO project, the external talent can participate in rural politics as an assistant to the village head. It has laid the foundation for Ms. Y to enhance her prestige in the village. Ms. Y continues to renew SCSVO contracts during her entrepreneurship, which has extended her stay in the village.

Besides, during Ms. Y's entrepreneurial process, the TVC led by Mr. C played an important role and provided crucial support. It strategically invested in management resources (land use rights, buildings, funds) and directly participated in the operation of cooperatives. Because TVC cadres are supportive, there is almost no difficulty in integrating local resources for cooperatives and recruiting obliging villagers.

(2) SPAF is a supportive government fund. The money does not lower the threshold for starting a business nor leverage assets from other sources, as mentioned in other studies. Instead, for Ms. Y, this money solves the problem of insufficient cash in the initial stage of the cooperative. It reduces the burden of investing personal savings in starting a business. Ms. Y started a business with her deposits, mainly supported by her family members. It is difficult for entrepreneurs to obtain SPAF for the birth of the business. On the contrary, if the entrepreneur has found suitable technology and a mature entrepreneurial model, it is easier to obtain SPAF and expand the business scale. Besides, if it solely relies on Ms. Y's input, it would be difficult for the cooperative to create employment.

Moreover, because of the SPAF Rules, how the money can be used is limited to those working toward poverty reduction. SPAF has been used for purchasing fixed assets and expanding production scales. It is used for creating employment and increasing income for local villagers. The purchased fixed assets always belong to the village collective. In other words, TVC and local villagers always hold the decision-making power of SPAF and the ownership of most cooperative assets. Even the cooperative is dissolved, production will not stop. Therefore, it reduces the risk of possible investment failure.

4.6.3 Drawbacks of the system

Obtaining TVC's support is important for entrepreneurs in rural areas. For example, some grassroots governments and TVCs encourage villagers to plant specific crops, revealing a possible direction for entrepreneurs (Qian and Liu, 2018); some help entrepreneurs obtain loans and funding (Lv, 2017); besides, TVC can assist SCSVO to communicate and collaborate with villagers (Development Report of College Student Village Officials 2016-2017, 2017).

In this case, the cooperative's development benefits from SPAF. Using government funds requires the consent of TVC and villagers. Therefore, the TVC leader's attitude

can significantly influence the operation of the cooperative. Ms. Y works directly as an assistant to the TVC leader through the SCSVO project. SCSVOs work as assistants to TVC leaders, so their activities are influenced by the TVC. Ms. Y was able to build a good relationship with the previous TVC leader. As a result, her personal business and the cooperative's expansion, which require village collective property, can gain TVC's support with relative ease. However, the new TVC reveals a conflict and a different development plan (including SPAF's usage). As a result, Cooperative S is no longer the TVC's major project. Without SPAF's support, it faces survival challenges, and Ms. Y has to cease entrepreneurship and eventually leave Village D.

4.7 Conclusion

This research analyses the entrepreneurial process of establishing a rural professional cooperative, focusing on a poverty-stricken rural village in China as an example. A system to support external talents to start businesses in such rural areas is proposed. Accordingly, this study reveals the following findings. (1) Obtaining the trust and support of TVC is crucial for the success of external talent entrepreneurship. Due to the massive local influence of TVC, it can help external talents easily obtain local entrepreneurial resources and villagers' participation. (2) Government funds are crucial for an external entrepreneur to deal with insufficient cash and reduce the burden of investing personal savings in starting a business.

Therefore, this research suggests: (1) Case studies should be promoted in various rural villages while investigating local villagers' autonomous organizations. (2) A part of the government fund can be specially prepared to support the entrepreneurship of external talents. (3) External entrepreneurs should pay attention to the changes in TVC and prepare for its potential negative impacts.

There are also limitations to this study. Due to the COVID-19 pandemic and funding constraints, we failed to visit more poverty-stricken villages to conduct interviews as initially planned. Therefore, further analysis of poverty reduction effects and local impacts could be carried out.

Notes

Note 1) The government encourages all forms of entrepreneurship, especially for low-income people, with policy support, such as tax relief, lower loan requirements, or financing business incubators.

Note 2) Previously, the term '村两委' was used in China. In Chinese literature, it is usually translated it to 'the Two Village Committees,' such as Lv (2017) and Qian and Liu (2018). Recently, 'the Two Village Committees' has also been used in English literature, such as by Mao (2019) and Mao and Xie (2022). TVC consists of the Communist Party Branch Committee and the Villagers' Committee. The former consists of Communist Party members, led by the party branch secretary

(the most powerful person in the village). The latter consists of local villagers, who are partly not party members; the leader is the villagers' committee director (the second most powerful person in the village), elected by local villagers. TVC of Village D had three TVC members before 2020: a village leader (the party branch secretary and the villagers' committee director), an accountant, and a women's committee.

Note 3) The Grassroot Employment Projects aim at eliminating the rural human resource shortage in governmental agencies, village committees, village Communist Party branches (governmental autonomous institutions in village-level areas), and educational institutions. They also encourage college graduates to start businesses and to lead rural socio-economic development. Currently, the projects mainly include the following: 1) College Student Volunteer Service Western Program (CSVSW) from 2003, which places college students in national service agencies and clinics as volunteers (with limited payment and living expenses from the government) in seriously poverty-stricken areas of western China. 2) The Three Supports and One Assistance project (TSOA) from 2006, which is specifically for educational, agricultural (water conservancy), and medical support and poverty alleviation services for less-developed rural locations. 3) The Special Post Teacher (SPT) from 2006, which is for primary and secondary school teachers in areas of serious poverty in central and western China. 4) The College Student Village Official (CSVO) from 2008, which places college graduates into the village-level Communist Party branch and village committee, working as assistants to the village party secretary or the head of the village committee.

Note 4) The Mass Entrepreneurship and Innovation policy is a strategic initiative introduced by the Chinese government to encourage innovation and entrepreneurship. It aims to promote greater participation in entrepreneurial and innovative activities and drive the shift of China's economy from traditional manufacturing to an innovation-driven model. This policy includes a range of supportive measures, such as reducing the cost of entrepreneurship, providing startup financing, encouraging technological innovation and intellectual property protection, and advancing innovation and entrepreneurship education. The goal of this policy is to unleash innovation and entrepreneurial vitality, spur economic growth, and create more employment opportunities, ultimately leading to sustainable economic development. The policy has become a crucial component of China's innovation and entrepreneurship ecosystem and has achieved significant successes.

Note 5) According to the financial report of Alibaba Group in May 2020, Taobao is the biggest online shopping platforming China and accounted for 63.4% of the market share, followed by Jingdong 25.8%, Suning Tesco 5.4%, and other websites such as Vipshop, Gome, Amazon, Jumei Youpin.

Note 6) The data results are calculated based on the following formula.

$$BCR = \frac{\sum_{n=1}^{\infty} (Benefits)}{\sum_{n=1}^{\infty} (Costs)} * 100\%$$

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Chapter 5

Quantitative Research 2: Willingness and Influencing Factors for Urban-to-Rural Migration

5.1 Introduction

Rural migrant workers usually hail from and grow up in rural communities; even while working in cities, their families or children often remain in the rural areas (Ministry of Human Resources and Social Security, 2015). In other words, they maintain strong ties with rural communities, making it relatively easier for them to develop an inclination toward urban-to-rural migration (Fu, 2010). On the contrary, those born and raised in urban areas typically have minimal connection to rural communities (Ministry of Human Resources and Social Security, 2015). ‘How to foster their willingness for urban-to-rural migration’ stands as the fundamental question driving the continuous development of UtRME.

In this context, it becomes imperative to investigate the inclination for urban-to-rural migration among those born in urban settings. It is especially crucial to identify significant influencing factors shaping this motivation (Zhang, 2010). This holds decisive importance for their potential growth into UtRME participants (Fu, 2010; Zhang, 2010). College students constitute a primary segment of UtRME and are relatively easier to survey (Fu, 2010). Additionally, considering that SCSVO represents one of the primary means of urban-to-rural migration for college students currently (Zhu and Wang, 2014)^{Note 1}), this chapter focuses on the ‘willingness of college students to join SCSVO.’

5.2 Research Method

5.2.1 Influencing factors

The factors tested in this study, including their data type, value, mean, and standard deviation (SD) are reported in Table 5-1. Since few studies focus specifically on this topic, we refer to research on ‘the development of SCSVO project’ and ‘participants’ evaluation of SCSVO’. On the other hand, since SCSVO is a rural-located position aimed at college students, research on both ‘preference for working location’ and ‘rural working motivation’ are also reviewed.

x1 to x6: Zhu and Wang (2014) applied questionnaire research in Jiangxi Province to examine the influencing factors of undergraduates’ desire to be SCSVO candidates. A total of 19 factors were tested, and the capacity for taking pains (including the pains from both manual labour and emotional shocks), parents’ attitude, and willingness towards SCSVO job showed significant effects. However, referring to Shao’s (2012) logistic research on rural-hukou students’ willingness to work in a hometown in Fujian Province, the current study is limited because hukou^{Note 2}), only child or not, education degree, and college major are not tested, which are statistically significant factors in the aforementioned study.

x7: Huang (2018) examines the family’s influence on undergraduates’ employment and suggests that family members’ living location impacts educational resources and opportunities for students. A rural located family usually offers farming

Table 5-1 Definition of the research variables, data type, and values

Variable	Data type	Value	Mean	SD
y. Willing to join SCSVO	Binary	1=Yes, 0=No	0.370	0.484
x1. Gender	Binary	1=Male, 0=Female	0.374	0.485
x2. Hukou	Binary	1=Rural, 0=Urban	0.192	0.395
x3. Only child	Binary	1=Yes, 0=No	0.644	0.480

or agricultural-related knowledge, and the longer they stay in rural areas, the higher the provide agricultural-related information.

x8: As a type of social activity, a part-time job is widely mentioned in previous research. Carney, Mcneish and Mccoll (2005) suggest that part-time job experience has a significant effect on a student's preference. They argue that a part-time job helps students to be independent and adventurous, to understand the value of money and the difficulties during making it, and determine the working situation they prefer.

x9, x10, x11: Wang and Yu (2010) indicate that when choosing a job, most college graduates care more about the opportunity for further promotion and self-satisfaction, not salary. Furthermore, SCSVO regulation has clearly illustrated that even when students are given bonuses, such as living allowance and social insurance, their salary is in the mid-level for the local area (Ministry of Education of China). Since Shao (2012) highlights that more than 40% of the respondents are not familiar with the SCSVO project at all, 'whether the respondents know about the SCSVO project' should be assured during data collection.

x12, x13: Qian and Lu (2018) suggest that the relaxing natural environment, less-stressful work, and low-cost living conditions are usually key attractions of rural-located employment, and 'college graduates cannot adapt to rural living' can be answered with the concepts of 'embedment' and 'fusion', which means that the SCSVO students are embedded into the village with limited local information, especially in terms of cultural differences (mainly local language/dialect). Additionally, mandarin is widely spoken in cities, but many rural villagers cannot speak it fluently due to limited education resources, and communication may be difficult.

x14: Zhu and Wang⁴) proved that attitude of family has a significant impact. They concluded that children usually listen to their parents even after they grow up. Moreover, their findings also illustrate that the economic situation of the family shows no statistical significance.

x15: Pisman et al. (2011) claim that social networks are not drivers of migration. However, Wang and Yu (2010) highlight that Chinese college students usually consider cultivating personal social networks during employment, because they believe that it can help them access information and resources more easily.

x16: Local amenities are another factor when students are looking for employment. Wang and Yu (2010) revealed that college students prefer developed and convenient lifestyles in cities. On the contrary, Feijten et al. (2008) argue that people are willing to move to rural areas if there is an 'acceptable quality of life' and well-established outdoor recreation facilities, with a better natural environment than cities.

5.2.2 Data Collection and Analysis

This study utilised both questionnaires and open-ended interviews; the former aims at statistical evidence, and the latter focuses on determining respondents' personal opinions and explanations. After the questionnaire data were collected, the general features of the respondents were identified, and logistic regression was applied to

determine the statistically significant factors in the questionnaires. Results from the interviews are used to identify the keywords and reasons from the respondents, and the results of logistic regression can determine which factors are statistically significant. Questionnaires and interviews focused on identical questions from x9 to x16. Additionally, interviews further aim at ‘why and how’, such as ‘why do you care about self-satisfaction during employment?’ and ‘how do you feel when facing cultural differences?’

Most researchers apply only one research method, and they usually prepare clear content for respondents to choose (Shao, 2012; Zhu and Wang, 2014). In contrast, the current study applied open-ended interviews and interviewees could answer freely. Furthermore, simple and easily understandable questions are applied to minimise the impact of ‘low standardised answers.’ Therefore, more accurate and complete data can be obtained (Wang, 2018).

Data were collected at Binzhou University (BZU), Shandong Province, in June 2018. The BZU’s annual employment rate of graduates is stable at 97.5% with 19,500 full-time students, which is one of the highest employment rates in Shandong. With BZU’s permission, students in certain classrooms were able to participate in this research during classes; they were on optional courses. Almost 400 students participated. Questionnaires were distributed and interviews were conducted. We started with a brief introduction of the SCSVO project, including its working process and welfare (considering that someone has never heard about SCSVO) and a question-and-answer section (eliminating the issue of misunderstanding of the questions). We then distributed and collected the questionnaires by hand. In addition, since some of the students had already found jobs or further study opportunities, they did not participate in this research. After the questionnaires were collected, the respondents were randomly invited to participate in another open-ended face-to-face interview lasting 10 minutes. In addition, confidentiality and anonymity of the respondents were ensured.

Considering that it is relatively easier to assure the regression formula, a binary logistic regression was applied for the statistical analysis. In equation (1), β is the parameter used to estimate the conditional probability of the outcome given the observed independent variables x , where f is the logistic density function, and the maximum likelihood method is applied. In equation (2), the dependent variable y is the willingness to join SCSVO, x is the 27 variables (including the factor variables generated from different categories), and β is the coefficient to estimate. The calculation was performed using Stata IC 16.

$$Pr\ y = 1|x_1; \beta = f\ x_1; \beta = \frac{1}{1 + e^{-\beta'x_1}} = \frac{e^{\beta'x_1}}{1 + e^{\beta'x_1}} \quad 1$$

$$L\ \beta|y; X = \prod_{i=1}^n \frac{f(x_i; \beta)^{y_i}}{1 - f(x_i; \beta)^{1 - y_i}} \quad 2$$

5.3 Results

5.3.1 Questionnaire Results

A total of 300 questionnaires were sent out and 281 valid questionnaires were collected. The detailed description of the results is presented below.

y: A total of 177 of the respondents (63.0%) chose 0=No and the remaining 104 (37.0%) chose 1=Yes, which means that most were not willing to join SCSVO. x1: 176 (62.6%) were female, 105 (37.4%) were male. x2: 227 (80.8%) had an urban hukou, 54 (19.2%) had a rural hukou. x3: 181 (64.4%) were only children, 100 (35.6%) were not. x4: 189 (67.3%) were undergraduate students, 74 (26.3%) were masters, and the remaining 18 (6.4%) were PhD students. x5: Based on the number of people, majors were: 2=economics (31.3%), 8=engineering (17.4%), 7=sciences (10.3%), 11=management (8.9%), 4=education (6.8%), 12=arts (6.4%), 5=literature (6.0%), 3=law (5.0%), 9=agronomy (3.6%), 10=medicine (2.8%), 1=philosophy (0.7%), 6=history (0.4%), and 13=military (0.4%). x6: 101 (35.9%) were 24–26 years old, 100 (35.6%) are 21–23 years old, 43 (15.3%) are 27–29 years old, years, and 37 (13.2%) were 18–20 years old. x7: 143 (50.9%) did not have any rural living experience, 84 (29.9%) had 1–3 years' experience, 30 (10.7%) had 4–6 years, 9 (3.2%) had 7–9 years, and 15 (5.3%) had 10–12 years' experience. x8: 117 (41.6%) did not have any part-time job experience, 132 (47.0%) had 1–3 years' experience, 26 (9.3%) had 4–6 years, 3 (1.1%) had 7-9 years, and 3 (1.1%) had 10–12 years.

Referring to x9 to x16, the detailed questionnaire data is reported in Table 5-2. Most respondents received more agreed grades (including 4=Agree and 5=Strongly agree) than disputed grades (including 1=Strongly disagree and 2=Disagree), except x14. This means that the respondents agreed with most of the statements. For example, since Grades 4 and 5 are considered as agreement, 74% of the respondents said that

Table 5-2 Questionnaire data on x9 to x16

	1=Strongly disagree	2=Disagree	3= Neutral	4=Agree	5=Strongly agree
x9	5 (1.8%)	18 (6.4%)	50 (17.8%)	171 (60.9%)	37 (13.2%)
x10	3 (1.1%)	11 (3.9%)	23 (8.2%)	191 (68.0%)	53 (18.9%)
x11	12 (4.3%)	80 (28.5%)	38 (13.5%)	141 (50.2%)	10 (3.6%)
x12	26 (9.3%)	59 (21.0%)	83 (29.5%)	104 (37.0%)	9 (3.2%)
x13	11 (3.9%)	72 (25.6%)	51 (18.1%)	121 (43.1%)	26 (9.3%)
x14	26 (9.3%)	103 (36.7%)	52 (18.5%)	97 (34.5%)	3 (1.1%)
x15	3 (1.1%)	40 (14.2%)	60 (21.4%)	153 (54.4%)	125 (44.5%)
x16	4 (1.4%)	34 (12.1%)	34 (12.1%)	170 (60.5%)	39 (13.9%)

further promotion opportunities are important in x9. Based on the numbers of Grade 3, Neutral, x12 is the highest among the eight factors (83), while x10 is the lowest (23). This means that respondents show relatively more undefined attitudes on x12 than x10.

5.3.2 Logistic Regression Results

Based on the p-values in Table 5-3, only x1 and x5 (compared with arts, only education, agronomy, and medicine are statistically significant), x6, x12, x13, and x14 are statistically significant. x12, x13, and x6 are significant at the 1% level. x14 and x1 are significant at the 5% level. In particular, four of the questionnaires were not valid for the regression test because the results were predictable; only 2, 1, and 1 students were majoring in philosophy, history, and military, respectively. Referring to x5, even though the three significant sub-variables show extremely high coefficients, it does not mean that x5 has the strongest influence because the total sample of the sub-variables is less than 277. Therefore, we discuss the majors in x5 separately. Regarding the three statistically significant subjects in x5, agronomy and education are significant at the 5% level, and medicine at the 10% level. Since the larger absolute value of marginal effect represents the larger influence on y and +/- of the coefficient indicate positive/negative effects, the results in Table 5-2 clarify ‘how much the variable x can affect the variable y’. Based on the absolute value of marginal effects, x12 shows the greatest effect, followed by x1, x13, x14, and x6 (which is extremely weak). In x5, agronomy shows the largest effect and is followed by medicine and education.

5.3.3 Interview Results

A total of 62 of the 281 questionnaire respondents were interviewed. As shown in Table 5-4, their reasons were divided as follows: Disagree (respondents who answered 1=Strongly Disagree or 2=Disagree in the questionnaire), neutral (3= neutral in the questionnaire), and agree (4=Agree or 5=Strongly Agree in the questionnaire).

Most interviewees gave similar answers (38 of the 62 respondents agree with x9, etc.), which suggests that college students have the same aspirations for employment, except x14 (23 agree and 26 disagree). In addition, some questions appeared that ‘one interviewee with multiple reasons’, for example, one interviewee, who shows Disagree attitude on x11, choose both ‘Money is never enough’ and ‘I deserve a higher salary’. It shows that among the ‘one interviewee with multiple reasons’ factors, students have multi-dimensional demands. It cannot be ignored that some reasons have been repeatedly mentioned in multiple questions (including high salary, pressureless working conditions, parents’ attitude, and stable employment), and these factors can be influenced by each other (e.g. parents’ influence can also affect x9, x12, and x13). This research presents a detailed discussion in section 4.

5.4 Discussion

5.4.1 Statistically significant factors

Table 5-3 Results of Logistic Regression

Variable	Coef.	Robust se	z-stat	p-value	(95% Conf. Interval)	Marginal Effect
x1	0.744	0.366	2.030	0.042 **	0.026 1.462	0.146
x2	-0.174	0.725	- 0.240	0.811	- 1.594	-0.034
x3	-0.539	0.446	- 1.210	0.227	- 1.412	-0.106
x4	undergraduate graduate master		(base group)			
		-0.395	0.409	- 0.334	- 1.197	-0.077
	graduate PhD	-0.791	0.944	- 0.402	- 2.642	-0.155
x5	economics	0.781	0.639	1.220 0.222	- 0.472	0.153
	law	-0.368	1.027	- 0.360 0.720	- 2.380	-0.072
	education	1.541	0.780	1.970 0.048 **	0.012 3.070	0.302
	literature	0.603	1.011	0.600 0.551	- 1.378	0.118
	sciences	0.605	0.722	0.840 0.402	- 0.809	0.119
	engineering	0.239	0.703	0.340 0.734	- 1.139	0.047
	agronomy	2.625	1.090	2.410 0.016 **	0.489 4.761	0.515
	medicine	1.834	1.038	1.770 0.077 *	- 0.200	0.360
	management	1.176	0.788	1.490 0.136	- 0.369	0.231
	arts		(base group)			
x6		-0.085	0.032	- 0.007 ***	- 0.147	-0.017
x7		-0.024	0.033	- 0.480	- 0.089	-0.005
x8		0.059	0.119	0.490 0.623	- 0.175	0.011
x9		-0.070	0.256	- 0.270 0.785	- 0.572	-0.014
x10		0.132	0.231	0.570 0.566	- 0.320	0.026
x11		0.028	0.176	0.160 0.873	- 0.316	0.005
x12		1.638	0.306	5.350 0.000 ***	1.038 2.239	0.321
x13		-0.557	0.179	- 0.002 ***	- 0.907	-0.109
x14		0.385	0.184	2.090 0.036 **	0.025 0.746	0.076
x15		0.093	0.205	0.450 0.652	- 0.310	0.018
x16		-0.170	0.230	- 0.740 0.458	- 0.621	-0.033
N		277				
Pseudo R2		0.370				
Log pseudolikelihood		-				
		114.873				

Note: 1) ***, **, and * indicate significant differences at 1%, 5%, and 10% levels, respectively.

2) To assure the robustness, we conduct another regression test only for the significant variables. The results do not differ significantly, while the pseudo-R-squares is 0.370 and the log pseudolikelihoods is -115.

Table 5-4 Interview results: Key reasons for the answers

Questions		Number of respondents & Main reasons	
x9	Disagree	5	(3 people) Pressureless working condition (2 people) Fixed working hours
	Neutral	19	-
	Agree	38	(20 people) For a higher salary
			(11 people) Fear of unemployment
			(6 people) Parents' wishes (1 people) Increasing self-satisfaction
x10	Disagree	2	(2 people) Income is more important (1 person) A secure position is more important
	Neutral	11	-
	Agree	49	(35 people) Bring me happiness
			(14 people) Help me to continue working
x11	Disagree	22	(20 people) Money is never enough (3 people) I deserve a higher salary
	Neutral	8	-
	Agree	32	(23 people) Limited daily expenses
			(9 people) Pressureless working condition
x12	Disagree	13	(5 people) Only urban jobs are acceptable
			(4 people) The rural living standard is low
			(3 people) Far away from parents
			(2 people) Parents' attitude
	Neutral	24	-
	Agree	25	(13 people) Lower requirements and pressureless job in rural locations (9 people) Healthy natural environment in rural locations (7 people) Governmental policies and great future of rural development (4 people) Grew up in rural area
x13	Disagree	18	(11 people) Well developed Information Technological infrastructure (5 people) Confident in my adaptability (2 people) Basic communication is enough
			-
			-
	Agree	28	(13 people) Inconvenient communication with others
			(7 people) Difficult to meet a marriageable person
			(5 people) Parents' attitude (3 people) Low working efficiency
x14	Disagree	26	(14 people) The generation gap is huge (10 people) Only my preferences and ambitions matter (3 people) Parents never interfere with my choices
			-
			-
	Agree	23	(13 people) Believe in parents' wisdom in life (10 people) Shandong's culture and following parents' guidance
x15	Disagree	5	(3 people) Depends on their working competence (2 people) Used to be isolated
	Neutral	16	-
	Agree	41	(32 people) Improve my working efficiency
			(9 people) Help me to deal with the issues that I cannot take alone
x16	Disagree	8	(4 people) China is developing fast and backward state only exists temporarily (3 people) Less-developed areas need talented people (2 people) Confident in my capacity for taking pains
			-
			-
	Agree	43	(29 people) Easier and Pressureless living conditions
			(15 people) More opportunities to learn new knowledge

Note: In the 'main reason' part, because it is an open-ended answer, an interviewee may mention multiple reasons.

x1. In contrast to Zhu and Wang (2014) and Shao (2012), gender significantly influences desire, and male students are more interested in being an SCSVO candidate than females. Based on the interview survey, interviewees show a subjective belief that rural living is more laborious than an office job in cities (Disagree reasons, 9 respondents). Female students may be more concerned about the laborious nature of rural living. On the other hand, because the locations are different, the diverse results can also be explained by regional variations.

x5. The possible reason for the statistical significance is that students in these three majors can receive relatively more knowledge and frontier news on rural development during their study period (Zhu, 2014). On the other hand, the government has initiated several bonus initiatives to encourage agricultural and medical college students to work in rural areas, such as tuition fee reduction, exemption or refund, and student loan compensation (Wang and Yu, 2010). On the contrary, referring to the Disagree response 'Money is never enough' in x11, interviewees mentioned that the tuition fee refund is not sufficiently attractive to motivate them to work in rural locations. Specifically, they mention that the tuition fee for an undergraduate student is about 6,000 RMB a year, while a job in urban areas can bring an average 31,597 RMB (from China Statistical Yearbook 2019, an average of both rural and urban areas). Therefore, they prefer jobs in urban areas for higher income rather than working in rural areas with refunded tuition fees.

x6. Unfortunately, since none of the questions focused on the influence of age and a limited amount of information can be determined, the reason for its significance cannot be perfectly answered. Statistically, Zhang (2010), who investigated the factors that affect the intention to stay in SCSVO, suggests that the educational environment is influential. In other words, as age increases, respondents' intention to join SCSVO decreases because they consider their children's educational environment and family-related issues. As evidence, the marriage issue was repeatedly mentioned during interviews (7 respondents, x13's Agree reasons).

x12: A total of 40.2% of the questionnaire respondents are willing to accept rural jobs, and this result is similar to that of Wang (2018), who argues that students prefer urban-located jobs for two reasons: 1) they have adapted to the modern and convenient lifestyle during their years of study, and 2) they usually believe that urban-located jobs offer a higher salary. Referring to the reasons, it should be emphasised that 'rural locations are usually far away from industrial facilities and the natural environment is well-protected' was repeatedly mentioned by nine people for Agree reasons, while seven believe that the rural areas will be better developed with a series of governmental policies. It indicates a diverse finding that, when shifting jobs, students also consider the natural environment and health issues along with high salary.

x13. As shown in Table 5-2, 52.4% of the respondents agreed with the expression in the questionnaires, and the results of the logistic regression analysis indicates that both the coefficient and the marginal effect were negative. This means that more than half of respondents cannot accept cultural differences (mainly local language) when

looking for employment in a new place. Referring to these reasons, interviewees agree that language differences increase inconvenient communication with others and decrease work efficiency. Moreover, interviewees were worried that cultural difference (mainly language difference) is a serious problem during marriage, and the SCSVO job cannot be an opportunity to meet a marriageable person. However, on the contrary, it should be noted that 11 interviewees mentioned that rural development is unpredictably fast, and the infrastructure is no longer incompatible with cities. Additionally, thanks to the widespread 4G (or 5G) base stations throughout China ^{Note 3)}, smartphones and computers can help communication. Therefore, it can be concluded that even though cultural differences (mainly local language) have a statistical effect, there are methods to decrease its influence. This finding is in contrast to Qian and Lu (2018), who argue that students should adapt to the local cultural environment rather than maintain their modern lifestyle. In other words, rural areas are no longer entirely less-developed areas; instead, rural areas can be ready for more kinds of industries, such as information technology (IT), than agriculture-related areas.

x14: Unsurprisingly, parents' attitudes had a significant influence on the regression results. Referring to the reasons, 13 interviewees believed in parents' decisions due to their wisdom and experience, and 10 mentioned that Shandong people share a long-historical culture in which family and parents are always irreplaceable. Compared with Zhu and Wang (2014), who only explain blood relations, it enriches the bonding with both rational (rich experience) and region-cultural (long-historical culture in Shandong) aspects. However, it cannot be ignored that students show significant signs of independent thinking, which can be proved by the data in Table 5-2; in the questionnaires, 47% disagreed vs. 35.6% agreed. This finding is similar to Shen and Wang (2019), who suggest that, from the perspective of developmental psychology, college students are facing the stage of emotional separation and individualisation.

5.4.2 Statistically Insignificant Factors

It should be emphasised that most factors share a similarity in that more than half of respondents show the same attitude in the questionnaire (agree with the statements of the factors), including the insignificant ones of x2, x3, x7, x8, x9, x10, x11, x15, and x16. In other words, there are limited samples of disagreed attitudes, and the samples are not equal. Therefore, the statistical insignificance in logistic regression can be explained by the fact that the collected data are not suitable for fully testing the factors. For example, for x8, a significant proportion of the respondents (117 of 281) of respondents had no part-time job experience, while many others (132) had only 1–3 years' experience; there are insufficient samples in other periods classification for statistical analysis.

On the other hand, the insignificances can be explained by the opposite opinions during interviews on the same factor (for a certain factor, the most repeatedly mentioned disagree and agree reasons have a similar number of interviewees), especially x11, x13, and x14. For example, x11, 20 interviewees mention that 'money is never enough,

therefore, middle-income is not enough' as a disagree reason and 23 mention that 'since they spend limited daily expenses, middle-income is enough' as an agree reason. Therefore, it can be explained that these two reasons simultaneously exist among the interviewees, and none seriously affect interviewees' willingness to join SCSVO.

5.5 Conclusion

Due to the imperfections in previous research, this study applied modified research questions and research methods, and revealed different results. Students with the following factors are more likely to join SCSVO: younger, male, majoring in education/agronomy/medicine, with positive impression towards rural areas, cultural-difference tolerance, and parents' agreement. In addition, our results revealed different statistically significant factors based on participants responses and these differed from previous research. On the other hand, since most of the respondents and interviewees agree with statements of the insignificant factors, it can be determined that these can show the general condition of the graduates. For the further development of the SCSVO project, we suggest that governments pay more attention to disseminating the attractiveness and the richness of life in rural locations, such as stable and low-stress working conditions, natural environment, well-established infrastructure, and the future of rural development. In addition, to deal with cultural differences, to know more about the SCSVO-hosting regions and focus on developing a local understanding of the SCSVO system and local counterparts. Furthermore, to bring salary levels in line with those in cities, but this may not be realistic when considering the financial situation in rural regions, instead, further improving the preferential treatment for the SCSVOs and promoting the understanding that working in rural areas can be an effective career for college graduates (such as bonuses in postgraduate and civil service examinations, recruitment into the civil service). It will also be helpful to address family's or parents' outdated perceptions of rural areas.

Referring to the limitations and shortcomings of this study, multiple-meaning concepts in the questionnaire can be further clarified and further researched, such as the 'preference to work in rural areas' in x12 and the 'cultural differences' in x13. Therefore, this research cannot perfectly answer the questions of 'what kind of rural employment is the most attractive to college students?' and 'what kind of cultural differences are the most challenging for them?' Second, due to limitations of funding and time, only 62 of the 281 respondents were interviewed and only questions x9 to x16 were tested; thus, x6 cannot be perfectly tested. For further analysis, all tested factors should be identical in both questionnaires and interviews.

Notes

- Note 1) ‘Regulations on the Work of Rural Grassroot Organizations of the Communist Party of China’ was first issued by the Central Committee of the Communist Party of China in 1999. Due to the dramatic development in rural areas, it was amended in 2019. Available at http://www.gov.cn/zhengce/content_5356764.htm. This policy has set a clear goal for the development of CSVO project - ‘One CSVO per village’. The figure ‘530,000’ is a dynamic number, it is set based on the number of rural villages in China. ‘Village’ means an administrative village, the smallest autonomous unit in China. According to the ‘2020 China Public Service Industry Analysis Report’, there were 533,000 administrative villages in 2019.
- Note 2) ‘Hukou’ is a household registration system in China, which is usually determined by the birthplace. Since 1958, it has been divided into two types: agricultural (or rural) and non-agricultural (or urban), with different management systems and different public welfare; since 2014, the Chinese government has been working on reforming this system, hoping to unite the two types.
- Note 3) As of June 2019, 77.6% of rural villages are covered by 4G base stations. Available at <http://www.miit.gov.cn/c7696411.html> , February 27, 2020.

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Chapter 6

Conclusion

6.1 Research Standpoints

With the implementation of strategies like ‘Mass Entrepreneurship and Innovation’ and rural revitalization, the Chinese government has issued a series of policies aiming to improve the unidirectional flow of labor from rural to urban areas and ensure prioritized development of agriculture and rural regions. This implies a future trend where more industrial resources will flow to rural areas, fostering increasing activity in rural entrepreneurship. However, it’s important to note that rural entrepreneurship faces numerous challenges in reality, such as inadequate exploration of rural values, insufficient focus on entrepreneurship in impoverished areas, a simplistic business model for rural entrepreneurship, and severe homogenized competition among products, leading to difficulties in the survival of new ventures. Therefore, theoretical research on rural entrepreneurship must target enhancing the vibrancy of rural entrepreneurship and improving the sustainable growth capacity of new ventures. It should deeply deconstruct rural entrepreneurship based on the logic of ‘where to undertake entrepreneurship, who the entrepreneur is, and what business they pursue’ according to entrepreneurial development theory.

(1) Entrepreneurial Capability of Rural Entrepreneurs: As the micro-level subjects of entrepreneurial behavior, the heterogeneity of entrepreneurs significantly determines the diversity of entrepreneurial activities (Wei and Luo, 2014). Rural entrepreneurship is primarily undertaken by farmers, a unique entrepreneurial group characterized by three aspects. Firstly, they face relatively scarce entrepreneurial resources. Over time, rural society has been predominantly engaged in farming or migrating to urban areas for work, with inadequate provision of public goods in rural areas under the urban-rural dual system, resulting in deficient infrastructure. Hence, rural entrepreneurs, lacking sufficient resources, struggle to meet the threshold needed for entrepreneurship. Secondly, forming entrepreneurial teams poses a challenge. The complexity and diversity of the entrepreneurial process necessitate team strength for effective responses. When rural entrepreneurs build teams, they predominantly rely on social network connections for human capital, making it easier to garner support from network members (Zhuang et al., 2019). The social network of rural farmers exhibits characteristics of ‘strong ties,’ displaying high homogeneity among network members in resource endowment, knowledge structure, and information channels, severely impacting the team’s ability to handle the complexity and dynamism of entrepreneurship. Lastly, inadequate knowledge capacity of entrepreneurs persists. Despite a general improvement in rural education levels, the unidirectional trend of talent migration from rural to urban areas through the college entrance examination system remains unchanged. Consequently, most rural entrepreneurs are individuals without higher education who haven’t returned to rural areas after migrating to urban areas.

(2) Rural Entrepreneurship and Agricultural Expansion: Traditional rural industries are primarily agriculturally centered, with farming being the primary activity of rural residents. With the government’s emphasis on environmental protection, entrepreneurial activities in rural spaces should break the monotonous structure of rural industries without compromising the rural ecological environment (Kang, 2014). Thus, rural entrepreneurship, unlike other types of entrepreneurial activities, should neither rely solely on agriculture nor depart from it. Inspired by Japan’s ‘sixth industrialization of agriculture,’ this theory contends that agriculture not only involves the production of agricultural and livestock products but also encompasses secondary and tertiary industries associated with agriculture, such as agricultural product processing and

manufacturing, and agricultural product circulation. This doesn't merely follow the arithmetic of $1+2+3=6$ (indicating the simple division of primary, secondary, and tertiary industries) but emphasizes their interaction and integration, implying that if the output value of an industry in the rural industry chain is zero, the overall benefits from the sixth industrialization will also be zero. A good synergy among the tertiary industries can result in amplified effects. Inspired by this theory, the functionality of rural agriculture extends beyond ensuring food security; it acts as a carrier and inheritance of traditional culture, providing reliance and support for individuals at psychological and spiritual levels (Su et al., 2016). Amid the lingering urban-rural dualism, rural entrepreneurs leverage the multifunctionality of agriculture—ecological, recreational, and health functions—to elongate the agricultural value chain and enhance entrepreneurial benefits. Hence, research on rural entrepreneurship must encompass the expansion of rural industry functionalities, exploring entrepreneurial opportunities, innovating business models, and probing into entrepreneurial growth patterns.

(3) The Extensibility of Rural Entrepreneurial Spaces: Rural areas serve as the logical starting point for rural entrepreneurship research. Hence, economic conditions, natural endowments, cultural customs, etc., in rural spaces are influential factors in rural entrepreneurial activities. Conversely, the vigor of rural entrepreneurship and the performance of new ventures become drivers for rural regional development. The most significant manifestation is in breaking the dualistic system limitations, bridging the urban-rural connection through rural entrepreneurship. In this sense, rural entrepreneurship plays a pivotal role in helping traditional rural areas expand spatially, an area that the theory of rural entrepreneurship needs to address. In China, 'rural areas' are spatial concepts corresponding to 'urban areas.' Before 1978, land collective ownership and household registration systems divided China into two separate and closed systems of 'urban' and 'rural.' Rural areas focused on agriculture, while urban areas developed industry and commerce, with distinct boundaries between urban and rural areas. Industrial elements couldn't move freely, resulting in urban-rural disparities and hindering rural development (Wu and Han, 2018). Post-reform and opening-up, China has allowed urban and rural elements to freely move under market mechanisms. However, due to significantly higher returns in urban areas, resources like rural labor continuously flowed into cities, intensifying rural decline and impeding self-accumulation and development capabilities. The current Chinese government recognizes the need to change this scenario, striving to promote bidirectional urban-rural element flow, aiming for integrated urban-rural development. Theoretically, integrated urban-rural development has two paths: urban-driven rural urbanization and rural-driven rural urbanization. Practical evidence indicates that achieving rural urbanization relying solely on existing cities faces immense difficulties. For instance, over 290 million migrant workers who cannot assimilate into cities live in cyclical migration, causing rural deterioration and worsening the urban-rural dualism (Hu and Yang, 2019). Thus, bridging the urban-rural gap through rural revitalization is an inevitable choice to rectify imbalances in urban-rural development. The characteristics of rural entrepreneurship, based on the integration of primary, secondary, and tertiary industries in rural areas, first establish market connections between urban and rural entrepreneurship elements, importing urban elements like information, technology, and capital into rural areas and transporting rural entrepreneurial products to cities, thus establishing a bridge between urban and rural areas, altering the closed nature of rural spaces.

6.2 Summary of the Research Findings

(1) Literature review and research Question

Rural areas in China face issues like economic lag, low income, a singular agricultural structure, limited risk resilience, and inadequate social security. These factors have diminished the appeal of rural life, leading to significant labor migration from rural to urban regions. Entrepreneurship is seen as a key strategy for revitalizing rural economies. Rural entrepreneurship, primarily led by individual entrepreneurs and small-scale enterprises, aids in autonomous employment and poverty reduction. Immigrant entrepreneurs bring external resources to entrepreneurship, fostering resource mobilization. However, rural entrepreneurs encounter multifaceted challenges and resource constraints. China has witnessed the emergence of rural entrepreneurship groups predominantly comprising individual entrepreneurs and small-scale enterprises, notably cases of urban migrants establishing businesses in rural areas. These migrant entrepreneurs have gained recognition, continuously expanding in scale and influence. Research on individual rural entrepreneurs and small-scale enterprises in China is still in its nascent stages, with relatively fewer studies on entrepreneurial cases from urban to rural areas. Despite comparative studies between Chinese rural entrepreneurs and those in countries like the United States, there is scant attention given to entrepreneurial immigrants in impoverished areas. These regions often lack support in terms of funding, technology, and an entrepreneurial environment. Hence, more research and discussion are needed on ‘how to construct rural entrepreneurial support mechanisms’ and the ‘role of entrepreneurial immigrants in impoverished areas.’ Additionally, this paper will focus on whether entrepreneurial immigrants can facilitate local poverty alleviation and what role they play in local community governance.

Following the description of the research background and articulation of research questions, this paper conducted a series of studies. Initially, a quantitative analysis based on government policies was performed, followed by a case study analyzing the situations of local and immigrant entrepreneurs. Subsequently, policy recommendations for UtRME development were proposed, followed by a questionnaire survey. These studies covered aspects such as policy practice cases, development suggestions, and subjected them to systematic analysis and discussion.

(2) Policy environment in China

The authors collected 72 policy documents from the Chinese Ministry of Agriculture and Rural Affairs, forming a dataset of 266,533 words, which underwent text mining. Results revealed a significant evolution in China’s rural talent policies over the past sixteen years. Early policies focused on enhancing agricultural production capacity, but over time, the focus gradually shifted toward encouraging diverse talent entrepreneurship and rural industry integration. Initially, there were fewer policy documents, primarily overseen by the agricultural sector. Presently, policies are collaboratively released by various government levels, leading to a substantial increase in policy numbers. Past policies aimed at boosting agricultural productivity, while current policies emphasize diversified talent and rural industrial development. There has been a shift in government attention from cultivating talents to encouraging talents to stay in rural areas and leverage their entrepreneurial and innovative potential. This change is attributed to the evolution of China’s rural economic structure, declining food self-sufficiency, and the government’s emphasis on rural revitalization. While the government used to lead in rural talent cultivation, recent years have seen encouragement for various social resources to participate in rural talent training,

particularly the establishment of rural talent education systems based on various universities and colleges. This policy shift reflects an understanding of changes in national development and rural needs, contributing to a more comprehensive rural revitalization and enhancing rural economic levels.

Moreover, this change also demonstrates the Chinese government's encouragement of diverse talent entrepreneurship and integrated rural industries. This change is influenced by multiple factors. Firstly, China's rapid economic development has enhanced rural productivity and ignited farmers' pursuit of broader career opportunities. Long-term rural labor migration to cities and non-agricultural sectors has also propelled this transformation. Secondly, the decline in food self-sufficiency has raised government concerns about the agricultural supply chain, shifting policy focus from enhancing production capacity to utilizing rural industries and resources more comprehensively. Additionally, rapid technological dissemination has provided a foundation for innovation and entrepreneurship in rural areas, driving government support for diversified rural development. The government also aims to prevent excessive concentration of resources and talent in a few super-large cities, constructing regional development centers to attract talent and resources to relatively impoverished areas. This policy change aims to adapt to new economic and social needs, providing more comprehensive support for rural revitalization and enhancing rural economic levels.

(3) UtRME and Supportive System in Poverty-Stricken Chinese Rural Areas

In the section on case analysis, this paper places particular emphasis on entrepreneurs' processes in entrepreneurial activities in impoverished rural communities. Considering that UtRME of different backgrounds may experience variations, this paper selected two types of entrepreneurs: those originating locally (returning migrant workers) and those from outside the local community (college students in grassroots employment programs). Furthermore, based on the challenges faced by UtRME in the entrepreneurial process and their methods of overcoming them, this paper researched and discussed the topic of 'constructing an entrepreneurial support environment in impoverished rural areas.'

This study confirms that achieving entrepreneurial goals is possible even in economically challenged rural areas. However, this requires collaborative efforts from various stakeholders, including entrepreneurs, local rural communities, external community resources, and government support (Fig. 6-1). The Chinese government has shifted its policy focus from 'emphasizing increased agricultural production capacity' to 'promoting diversified entrepreneurial talent and the integration of multiple industries in rural areas.' Guided and supported by these policies, Urban-to-Rural Migrant Entrepreneurs (UtRME) have gained access to various channels for participating in rural entrepreneurship. These include adhering to government-led talent migration projects, joining existing rural entrepreneurial groups, and establishing cooperative relationships with rural businesses through technology transfer, among other means. Given the limited connections between urban and rural areas, UtRME and other rural entrepreneurs face several challenges, including technological, financial, and social obstacles, due to the lack of information and logistics exchange. To address these issues, entrepreneurs need not only to gain trust and support from local communities but also to rely on external support beyond the rural community. Local communities primarily provide resources such as land, labor, and necessary materials for production, while external organizations offer advanced technology, funding, policies, and solutions. By leveraging and integrating these resources, entrepreneurs

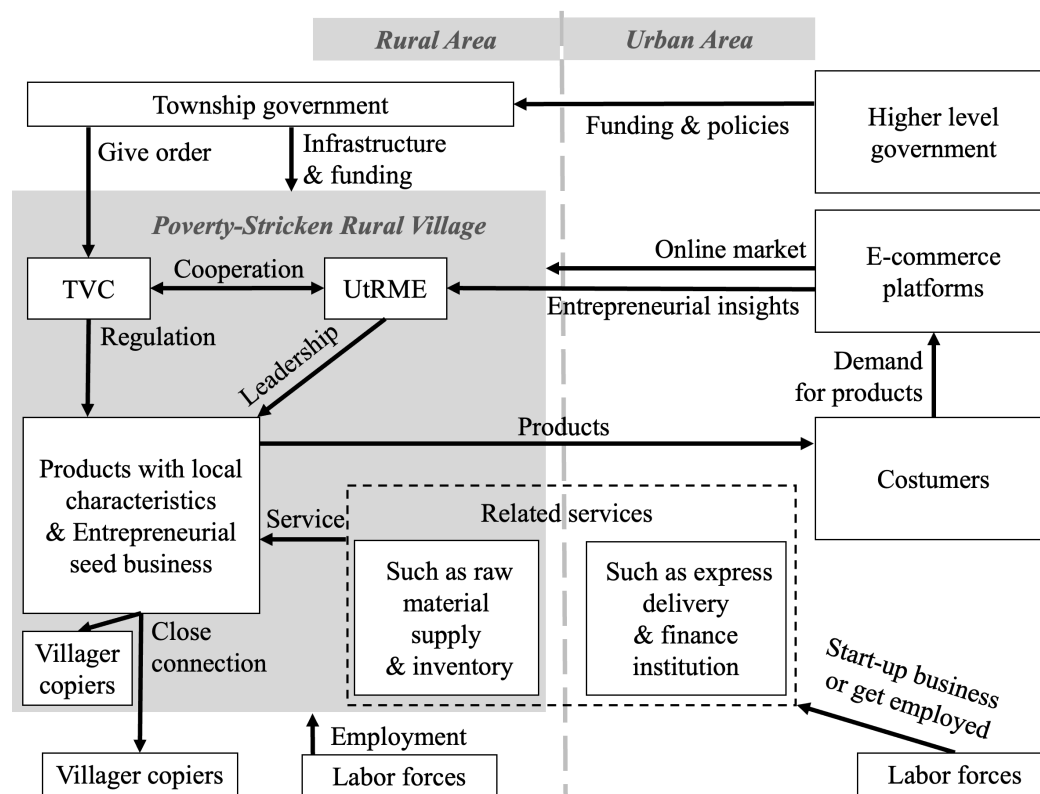


Fig. 6-1 UtRME entrepreneurship in poor rural China found in this study
Source: Author.

discover the potential for economic growth and establish new development opportunities and models within local communities.

In this study, several influential factors were identified, which can guide further research: (1) The primary factor is government funding support, which aids in alleviating initial financial constraints faced by cooperative societies and reduces the burden of personal savings for entrepreneurial investments. This serves as a vital financial support source for urban-to-rural migrant entrepreneurs wishing to engage in business activities in rural areas. (2) Trust from rural communities plays a significant role, with local rural governments and township-village corporations (TVC) being pivotal in supporting urban-to-rural migrant entrepreneurs. These institutions assist in accessing local entrepreneurial resources, integrating local resources, and encouraging village residents to actively participate in entrepreneurial activities. (3) The increasing prevalence of digital technology, particularly internet-based technologies, partially breaks down the ‘isolation between urban and rural areas’ stemming from geographical conditions and policy systems. This brings fresh solutions to rural community development. However, as illustrated in the case studies, a priority should be placed on ‘developing local cultural or agricultural characteristics.’ This approach helps preserve the unique features that have been passed down for years while, to some extent, avoiding the impact of homogenized competition.

(4) Factors influencing UtRME development

In order to promote the development of UtRME and provide a more conducive entrepreneurial environment, this chapter investigates the urban population's willingness for urban-rural migration and analyzes the factors influencing this willingness. This consideration stems from the observation that individuals born and raised in urban environments typically have minimal connections to rural communities compared to migrant workers originating from rural areas. Consequently, their inclination toward urban-rural migration is often lower. Additionally, it's crucial to note the following facts: China's underdeveloped rural areas have long grappled with talent shortages and an aging cadre, while university graduates face severe employment pressures, particularly in urban regions.

Given this context, several local governments across China, including Shandong Province, have initiated 'Grassroots Employment Programs for College Students' to establish labor mobility mechanisms between rural and urban areas. These grassroots employment programs typically require university students to work in rural areas rather than cities, offering relatively lower salaries. However, they provide formal employment positions and, backed by government financial support, ensure relatively stable income and welfare benefits. Among these programs, the SCSVO project exists in almost every province in China, allowing graduates the freedom to choose their desired location and apply, unlike other grassroots employment programs that mostly target the more environmentally challenging western regions of China. Consequently, the SCSVO project tends to attract greater attention from university students.

This paper focuses on the university student demographic, studying their willingness to participate in the SCSVO project and the influencing factors. The study highlights the target characteristics of potential SCSVO candidates and serves as a reference to guide more urban university students towards working in rural areas. The research collected original data through questionnaires and interviews, employing binary logistic regression analysis to analyze the collected data. The results indicate: a) 37% of respondents are willing to join the SCSVO. b) Students possessing the following objective factors are more likely to join the SCSVO: younger age, male, majoring in education/agriculture/medicine, positive personal impressions of rural areas, cultural inclusivity, and consideration of parental attitudes; these factors significantly influence students' willingness to join. c) To further develop the SCSVO project, the government and relevant organizations should promote the attractiveness of rural areas, such as highlighting low-pressure work conditions and the natural environment.

6.3 Role of UtRME in Rural Entrepreneurial System and the Local Community

In this context, the emergence of UtRME holds significant implications for the development of rural China. At an individual level, migrant entrepreneurs possess unique resource endowments. Compared to local entrepreneurs, migrant entrepreneurs may have higher levels of tacit entrepreneurial skills. They can leverage resources and network financing associated with their places of origin, unearth entrepreneurial opportunities, and bring additional knowledge, experience, and connections to the destination area. At a structural level, migrant entrepreneurs are embedded in the structures of both their places of origin and their destination, influenced by the economic, cultural environments, and social networks of both locations.

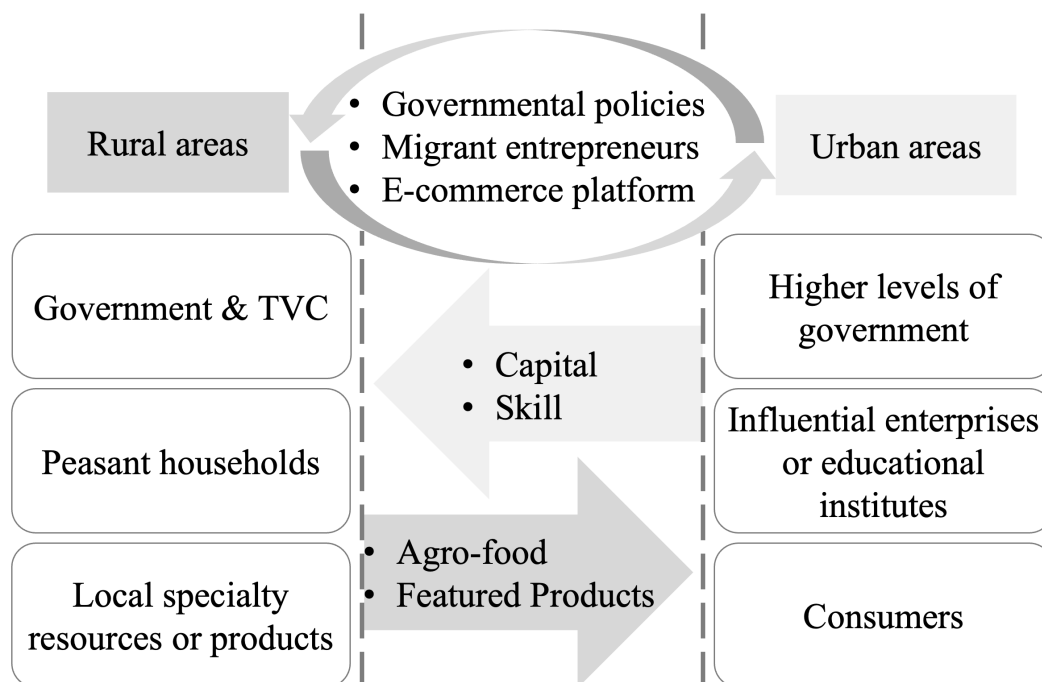


Fig. 6-2 Entrepreneurial environment and role of migrant entrepreneurs in China's rural areas

Source: Author.

As it shows in Fig. 6-2, UtRME play a significant role in both rural entrepreneurial system and rural community's development. Their actions not only promote the integration of urban and rural areas but also drive comprehensive regional development. UtRME typically bring the technology and expertise they have accumulated in urban areas to rural communities, which has a positive impact on rural development. Their entrepreneurial activities have multiple impacts, including providing employment opportunities, thereby improving local residents' productivity and living standards. This is particularly crucial for rural areas, as it helps alleviate poverty and promotes sustainable socioeconomic growth. Additionally, the advanced knowledge and technology they introduce contribute to improving rural production methods and business models. By facilitating technology transfer and knowledge transmission, they enhance the efficiency and competitiveness of the rural economy. Guided by this technology and knowledge, rural communities can better adapt to the modern business environment, leading to an improved standard of living for rural residents.

Furthermore, UtRME's entrepreneurial activities are often accompanied by increased job opportunities, alleviating labor shortages. The businesses established by UtRME in rural areas employ local residents, raising the employment levels within rural communities and improving residents' livelihoods. This not only reduces employment pressures in rural areas but also increases household incomes, fostering regional economic development. As entrepreneurial scale expands, local rural communities can access more social resources. This contributes to improving local infrastructure, including roads, communication, and power supply, which not only better serves the needs of businesses but also provides a higher quality of living for local residents. Based on this, the attractiveness of local communities for labor force significantly increases.

The research observed that the expansion of entrepreneurial scale can bring about substantial population growth in local communities.

6.4 Suggestions for the Further Development of UtRME

Based on the research findings mentioned above, this paper proposes the following recommendations for UtRME in rural entrepreneurship:

(1) Promote two-way talent flow between urban and rural areas

To encourage talent movement between urban and rural areas in both directions, authorities at all levels should create entrepreneurial systems that blend material incentives and motivational structures. This will attract urban migrants to participate in rural entrepreneurship actively. Moreover, governments should focus more on promoting the attractiveness and richness of life in rural areas, highlighting stable, low-stress work environments, natural surroundings, well-developed infrastructure, and the future prospects of rural development. Leveraging local culture and social networks is crucial for strengthening connections with rural-to-urban migrant workers. To further facilitate talent exchange, policies need refinement to eliminate barriers and encourage a smooth transition of talent back to rural areas.

(2) Establish entrepreneurial platforms

The establishment of an ecosystem for rural entrepreneurship is crucial, comprising entrepreneurial subjects, resource elements, institutional arrangements, business environment, and entrepreneurial culture. Key components of this entrepreneurial ecosystem include talent, capital, technology, and markets. Governments should formulate relevant policies to guide rural entrepreneurial activities, seize opportunities to build entrepreneurial platforms, and enhance the entrepreneurial environment.

(3) Set up dedicated funds to support entrepreneurship

Different from some scholars' viewpoint that 'the government should increase investment in funds and resources,' the author emphasizes more on the efficient utilization of existing funds and resources. Specifically, a specialized entrepreneurial fund account could be established to support entrepreneurship in impoverished areas. It's important to note that efforts should be made to establish mechanisms for the utilization and review of idle funds. The aim is to reduce the situation of fund idleness while ensuring their reasonable use, thereby providing timely support for local entrepreneurial activities.

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Appendix

Appendix 1. The 72 collected policies in this research

Note: The following abbreviations have been used in the ‘Departments’ column.

Ministry of Agriculture and Rural Affairs	MARA
State Council	SC
Ministry of Finance	MF
Ministry of Education	ME
Ministry of Science and Technology	MST
Ministry of Human Resources and Social Security	MHRSS
Organization Department (of the Communist Party of China)	OD
National Bureau of Statistics	NBS
National Development and Reform Commission	NDRC
Ministry of Natural Resources	MNR
Ministry of Veterans Affairs	MVA
	CBIRC
China Banking and Insurance Regulatory Commission	
State Forestry and Grassland Administration	SFGA
National Rural Revitalization Bureau	NRRB
China Association for Science and Technology	CAST

No.	Year	Title <Title in Chinese>	Departments
No.1	2006	Implement the ‘Millions of Technical Secondary School Students Plan’ to cultivate practical talents in rural areas<关于实施农村实用人才培养‘百万中专生计划’的意见>	MARA
No.2	2006	‘Eleventh Five-Year Plan’ Agricultural Talent Team Building Plan (2006-2010)<‘十一五’农业人才队伍建设规划（2006—2010 年）>	MARA
No.3	2008	Carry out pilot work on entrepreneurship training for rural practical talents<关于开展农村实用人才创业培训试点工作的通知>	MARA
No.4	2009	Carry out training activities for highly skilled talents in agricultural machinery maintenance<关于开展农机维修高技能人才培训活动的通知>	MARA
No.5	2009	Do a good job in the issuance and management of training certificates for the knowledge update project for agricultural professional and technical personnel<关于做好农业专业技术人员知识更新工程培训证书发放管理工作的通知>	MARA
No.6	2010	Strengthen the construction of rural practical talent teams and the development of rural human resources<关于加强农村实用人才队伍建设和农村人力资源开发的意见>	SC

No.7	2010	Funds for the 2010 Agricultural Technology Extension and System Construction Rural Practical Talents Project were released<关于下达 2010 年农技推广与体系建设农村实用人才项目资金的通知>	MARA, MF
No.8	2011	Measures for the Management of Farmer Professional Cooperative Talent Training and Training Bases (Trial)<农民专业合作社人才培养实训基地管理办法 (试行) >	MARA
No.9	2011	Funds for the 2011 Agricultural Business Training Rural Practical Talents Project were released<关于下达 2011 年农业业务培训农村实用人才项目资金的通知>	MARA, MF
No.10	2011	Funds for the 2011 Modern Agricultural Talent Support Plan were released<关于下达 2011 年现代农业人才支撑计划项目资金的通知>	MARA, MF
No.11	2011	Medium- and long-term plans for the construction of rural practical talents and agricultural science and technology talents (2010-2020)<农村实用人才和农业科技人才队伍建设中长期规划 (2010-2020 年) >	MARA
No.12	2011	Implementation plan of modern agricultural talent support plan<现代农业人才支撑计划实施方案>	MARA, ME, MST, MHRSS
No.13	2012	Allocate funds for the 2012 rural practical talent leader training project<关于下达 2012 年农村实用人才带头人培训项目资金的通知>	MARA, MF
No.14	2012	Implementation Measures for the Training Plan for Outstanding Agricultural Scientific Research Talents<农业科研杰出人才培养计划实施办法>	MARA
No.15	2012	Funds for the 2012 Modern Agricultural Talent Support Plan were released<关于下达 2012 年现代农业人才支撑计划项目资金的通知>	MARA
No.16	2012	Implementing a training plan for 10,000 key agricultural technology extension talents<关于组织实施万名农技推广骨干人才培养计划的通知>	MARA
No.17	2013	Carry out training activities for highly skilled talents and teachers in agricultural machinery maintenance<关于开展农机维修高技能人才及师资培训活动的通知>	MARA
No.18	2013	Agricultural Skilled Talents Vocational Skills Appraisal Station Capacity Building Project<农业技能人才职业技能鉴定站能力建设项目招标公告>	MARA
No.19	2013	Pilot work plan for identifying rural practical talents<农村实用人才认定试点工作方案>	MARA

No.20	2013	Strengthen the construction of agricultural radio and television schools and accelerate the construction of a new professional farmer talent education and training system<关于加强农业广播电视学校建设加快构建新型职业农民教育培训体系的意见>	MARA
No.21	2014	Issued the 2014 Demonstration Training Plan for Rural Practical Talent Leaders and College Student Village Officials<关于下达 2014 年农村实用人才带头人和大学生村官示范培训计划的通知>	OD, MARA
No.22	2014	Conducting a special survey on the construction of a national veterinary talent team<关于开展全国兽医人才队伍建设专题调研的通知>	MARA
No.23	2014	Measures for the Demonstration Training and Assessment Management of Rural Practical Talent Leaders<农村实用人才带头人示范培训考核管理办法>	MARA
No.24	2015	Strengthen the construction of new think tank talents for agricultural and rural economic development<关于加强农业农村经济发展新型智库建设的意见>	MARA
No.25	2015	Announcement of the list of outstanding agricultural scientific research talents and their innovation teams<关于公布农业科研杰出人才及其创新团队名单的通知>	MARA
No.26	2015	Carry out the application process for the 2016 annual funding project of 'National Outstanding Rural Practical Talents'<关于开展'全国杰出农村实用人才'2016 年度资助项目申报工作的通知>	MARA
No.27	2016	Deepen the reform of talent development systems and mechanisms<关于深化人才发展体制机制改革的意见>	SC
No.28	2016	Organize and carry out the pilot work of selecting scientific and technological support and talent training bases for agricultural foreign cooperation<关于组织开展农业对外合作科技支撑与人才培养基地遴选试点的通知>	MARA
No.29	2016	Carry out the 2015 National Rural Practical Talent Statistics<关于开展 2015 年度全国农村实用人才统计工作的通知>	OD, MARA, MHRSS, NBS
No.30	2016	Strengthen the promotion of farmers' entrepreneurial innovation leaders<关于加强农民创业创新带头人宣传工作的通知>	MARA
No.31	2016	Key points for talent work in 2016<农业部 2016 年人才工作要点>	MARA

No.32	2016	Expand the pilot program for talent development in the seed industry and reform of rights to scientific research results<关于扩大种业人才发展和科研成果权益改革试点的指导意见>	MARA, MST, MF, ME, MHRSS
No.33	2016	Support the entrepreneurship and innovation of people returning to their hometowns to promote the integrated development of rural primary, secondary and tertiary industries<关于支持返乡下乡人员创业创新促进农村一二三产业融合发展的意见>	SC
No.34	2016	National seed industry talent development and scientific research results rights reform work video conference<全国种业人才发展和科研成果权益改革工作推进视频会召开>	MARA
No.35	2016	‘Thirteenth Five-Year Plan’ National New Professional Farmer Talent Cultivation and Development Plan<‘十三五’全国新型职业农民人才培育发展规划>	MARA
No.36	2017	Deepen the reform of the agricultural and rural talent development system<关于召开深化农业农村人才发展体制机制改革座谈会的通知>	MARA
No.37	2017	Key points of talent work in 2017<农业部 2017 年人才工作要点>	MARA
No.38	2017	Issued the 2017 training plan for rural practical talent leaders and college student village officials<关于下达 2017 年农村实用人才带头人和大学生村官培训计划的通知>	OD, MARA
No.39	2017	Give full play to the role of social work professionals in the care and protection of left-behind children in rural areas<关于在农村留守儿童关爱保护中发挥社会工作专业人才作用的指导意见>	MARA
No.40	2017	National Agricultural Products Processing Industry Talent Training Action Plan<全国农产品加工业人才培训行动方案>	MARA
No.41	2017	Rural Entrepreneurship and Innovation Talent Training Action Plan<农村创业创新人才培训行动方案>	MARA
No.42	2017	National leisure agriculture and rural tourism talent training action plan<全国休闲农业和乡村旅游人才培训行动方案>	MARA
No.43	2018	Vigorously implement the rural revitalization strategy to accelerate agricultural transformation and upgrading and talent cultivation<关于大力实施乡村振兴战略加快推进农业转型升级的意见>	SC, MARA

No.44	2018	Fund Management Measures for Modern Agricultural Talent Support Plan Projects<现代农业人才支撑计划项目资金管理办法>	MARA
No.45	2018	China-EU Youth Agricultural Practical Talent Capacity Building Project<中欧青年农业实用人才能力建设项目>	MARA
No.46	2018	Key points of the Ministry of Agriculture and Rural Affairs' talent work in 2018<2018 年农业农村部人才工作要点>	MARA
No.47	2018	The 2018 Demonstration Training Plan for Rural Practical Talent Leaders and College Student Village Officials was issued<关于下达 2018 年农村实用人才带头人和大学生村官示范培训计划的通知>	OD, MARA
No.48	2018	Held the second training course for recreational fishery leaders and management talents in 2018<关于举办 2018 年第二期休闲渔业带头人和管理人才培训班的通知>	MARA
No.49	2019	Key points of the Ministry of Agriculture and Rural Affairs' talent work in 2019<农业农村部 2019 年人才工作要点>	MARA
No.50	2019	Released the 2019 Demonstration Training Plan for Rural Practical Talent Leaders and College Student Village Officials<关于下达 2019 年农村实用人才带头人和大学生村官示范培训计划的通知>	OD, MARA
No.51	2019	Encourage more outstanding technical talents to devote themselves to agricultural and rural development<鼓励更多优秀技术人才投身农业农村发展>	MARA
No.52	2019	Further promote the work of returning to hometowns to start businesses<关于进一步推动返乡入乡创业工作的通知>	MHRSS, MF, MARA
No.53	2020	High-quality development plan for new agricultural management talents and service talents (2020-2022)<新型农业经营人才和服务人才高质量发展规划(2020—2022 年)>	MARA
No.54	2020	In-depth implementation of rural innovation and entrepreneurship leaders and leaders to cultivate talents returning to their hometowns<深入实施农村创新创业带头人带头人培育行动返乡入乡人才>	MARA, NDRC, ME, MST, MF, MHRSS, MNR, MVA, CBIRC
No.55	2020	Implementation of the Cultivation Action for Rural Innovation and Entrepreneurship Leaders<实施农村创新创业带头人带头人培育行动>	MARA, NDRC, ME, MST, MF, MHRSS,

			MNR, MVA, CBIRC
No.56	2020	Cultivate leading talents in innovation and entrepreneurship and create an upgraded version of innovation and entrepreneurship<培育创新创业领头人才，打造创新创业升级版>	MARA, NDRC, ME, MST, MF, MHRSS, MNR, MVA, CBIRC
No.57	2020	Key points of the Ministry of Agriculture and Rural Affairs' talent work in 2020<农业农村部 2020 年人才工作要点>	MARA
No.58	2020	Promote and promote 10 experience models for demonstration training of rural practical talent leaders<宣传推介农村实用人才带头人示范培训 10 个经验模式>	MARA
No.59	2020	Promote high-quality schools for cultivating talents for rural revitalization<关于推介乡村振兴人才培养优质学校的通知>	MARA, ME
No.60	2020	Innovative ways to carry out demonstration training for rural practical talent leaders and college student village officials in 2020 in a safe and orderly manner<创新方式安全有序开展 2020 年农村实用人才带头人和大学生村官示范培训工作>	OD, MARA
No.61	2021	Accelerate the revitalization of rural talents<加快推进乡村人才振兴>	SC
No.62	2021	Use the national agricultural distance education platform to carry out knowledge update training for agricultural science and technology talents in 2021<利用全国农业远程教育平台开展 2021 年农业科技人才知识更新培训>	MARA, ME
No.63	2021	Carry out demonstration training for rural practical talent leaders and selected students who will serve in villages in 2021 and be managed by university student village officials.<开展 2021 年农村实用人才带头人和到村任职、按照大学生村官管理的选调生示范培训工作>	OD, MARA
No.64	2021	Promote the construction of entrepreneurship parks for returning to hometowns to enhance the entrepreneurship and innovation level of rural talents<推进返乡入乡创业园建设提升农村人才创业创新水平>	MARA, MST, MF, MHRSS, MNR, CBIRC
No.65	2021	The '14th Five-Year Plan' for the Construction and Development of Agricultural and Rural Talent	MARA

		Teams<‘十四五’农业农村人才队伍建设发展规划>	
No.66	2021	National ‘Returning Hometown Talents and Entrepreneurship and Innovation Policy’ Publicity Week Implementation Plan<全国‘返乡入乡人才和创业创新政策’宣传周实施方案 >	MARA
No.67	2022	Strengthen the cultivation of new talents who know and love farmers<强化知农爱农新型人才培养>	MARA
No.68	2022	In 2022, we will focus on policies to strengthen agriculture and benefit farmers, and encourage talents who return to their hometowns to start businesses.<2022 年重点强农惠农政策，鼓励返乡入乡人才创业>	MF, MARA
No.69	2022	Support the construction of a number of small science and technology institutes to help return people to their hometowns and revitalize talents<支持建设一批科技小院，助力返乡入乡和人才振兴>	ME, MARA, CAST
No.70	2022	Central Rural Work Conference: Strengthen the construction of rural talent teams and do a good job in revitalizing rural talents<中央农村工作会议：加强乡村人才队伍建设，做好乡村人才振兴>	MARA
No.71	2022	Selection and training methods for front-line talents in agricultural machinery use<农机使用一线人才遴选培养办法>	MARA
No.72	2022	Accelerate the construction of new agricultural science and promote the innovative development of higher agricultural and forestry talent education<关于加快新型农业科学建设，推进高等农林人才教育创新发展的通知>	ME, MARA, NRRB

Appendix 2. Chinese-English translation comparison of the keywords in policies

Fig. 2-5 Government department where policies issued

1	农业农村部	Ministry of Agriculture and Rural Affairs
2	国务院	State Council
3	财政部	Ministry of Finance
4	教育部	Ministry of Education
5	科学技术部	Ministry of Science and Technology
6	人力资源和社会保障部	Ministry of Human Resources and Social Security
7	组织部	Organization Department (of the Communist Party of China)
8	国家统计局	National Bureau of Statistics
9	国家发展改革委	National Development and Reform Commission
10	自然资源部	Ministry of Natural Resources
11	退役军人部	Ministry of Veterans Affairs
12	中国银行保险监督管理委员会	China Banking and Insurance Regulatory Commission
13	国家林业和草原局	State Forestry and Grassland Administration
14	国家乡村振兴局	National Rural Revitalization Bureau
15	中国科学技术协会	China Association for Science and Technology

Fig. 2-6 Categories of Rural Human Resources

1	农村实用人才	Rural Practical Talents
2	农机维修人才	Farm Machinery Maintenance
3	农业专业技术人才	Agricultural Professional and Technical Talents
4	农技推广人才	Agricultural Technology Extension
5	农民专业合作社人才	Talents in Farmers' Professional Cooperatives
6	现代农业人才	Modern Agricultural Talents
7	农业科技人才	Agricultural Science and Technology Talents
8	农业技能人才	Agricultural Skill Talents
9	大学生村官	College Student Village Officials
10	兽医人才	Veterinary Talents
11	农民创业创新	Farmers' Entrepreneurship and Innovation
12	种业人才	Crop-related Talents
13	返乡入乡人才	Urban-to-Rural Migrants
14	新型职业农民	New-Type Vocational Farmers
15	农村留守儿童关爱保护人才	Care and Protection of Left-Behind Children in Rural Areas
16	农产品加工业人才	Talents in Agricultural Product Processing Industry
17	休闲农业和乡村旅游人才	Talents in Leisure Agriculture and Rural Tourism

18	休闲渔业带头人	Leaders in Leisure Fisheries
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Table 2-3 List of keywords and frequency (excerpt)

1	培训	Training
2	带头人	Trailblazers
3	创业	Entrepreneurship
4	示范	Demonstration
5	交流	Exchange
6	改革	Innovation
7	农村实用人才	Practical Rural Talents
8	产业融合	Industrial Integration
9	农业生产	Agricultural Production
10	院校	Universities and Colleges
11	财政	Finance
12	市场化	Marketization
13	科研	Research
14	现代化	Modernization
15	因地制宜	Adaptation to Local Conditions
16	乡村振兴	Rural Revitalization
17	社会资源	Social Resources
18	脱贫	Poverty Alleviation
19	大学生村官	College Student Village Officials
20	信息技术	Information Technology
21	毕业生	Graduates
22	公共服务	Public Services
23	农民工	Migrant Workers
24	产业链	Industrial Chain
25	企业家	Entrepreneurs
26	城乡一体	Urban-Rural Integration
27	乡村治理	Rural Governance
28	返乡入乡	Urban-to-Rural Migration
29	农村电商	Rural E-commerce
30	返乡下乡	Urban-to-Rural Migration

Fig. 2-7 Cluster analysis of the keywords

1	乡村振兴	Rural Revitalization
2	脱贫	Poverty Alleviation
3	返乡下乡	Urban-to-Rural Migration
4	创业创新	Entrepreneurship and Innovation
5	产业融合	Industrial Integration
6	市场化	Marketization
7	返乡入乡	Urban-to-Rural Migration

8	产业链	Industrial Chain
9	农民工	Migrant Workers
10	毕业生	Graduates
11	补贴	Subsidies
12	企业家	Entrepreneurs
13	公共服务	Public Services
14	财政	Finance
15	农村实用人才	Practical Rural Talents
16	交流	Exchange
17	示范	Demonstration
18	培训	Training
19	带头人	Trailblazers
20	农业生产	Agricultural Production
21	现代化	Modernization
22	科研	Research
23	院校	Universities and Colleges
24	改革	Innovation
25	考核	Assessment
26	特色优势	Local Specialty Advantages
27	特色资源	Special Resources
28	城乡一体	Urban-Rural Integration
29	人才流动	Talent Mobility
30	大学生村官	College Student Village Officials
31	农机化	Mechanization of Agriculture
32	乡村治理	Rural Governance
33	因地制宜	Adaptation to Local Conditions
34	社会资源	Social Resources
35	信息技术	Information Technology
36	农村电商	Rural E-commerce

Fig. 2-8 Rural Talent Policies' keywords during different periods

1	技术服务	Technical Services
2	农民专业合作社	Farmers' Professional Cooperatives
3	农村实用人才	Rural Practical Talents
4	农技推广	Agricultural Technology Extension
5	教育培训	Education and Training
6	考核	Assessment
7	农业生产	Agricultural Production
8	管理办法	Regulations and Policies
9	现代农业人才	Modern Agricultural Talents
10	远程教育	Online Education

11	农村管理	Rural Management
12	宣传	Promotion and Publicity
13	农产品质量	Agricultural Product Quality
14	大学生村官	College Student Village Officials
15	农产品加工	Agricultural Product Processing
16	乡村旅游	Rural Tourism
17	公共服务	Public Services
18	政府补贴	Government Subsidies
19	乡村治理	Rural Governance
20	选调生	Seleted Graduates
21	返乡入乡	Urban-to-Rural Migration
22	政策引导	Guiding Policy
23	创业	Entrepreneurship
24	农民工	Migrant Workers
25	乡村振兴	Rural Revitalization
26	产业融合	Industrial Integration
27	改革	Innovation
28	脱贫	Poverty Alleviation
29	休闲农业	Leisure Agriculture
30	国际合作	International Cooperation

Fig. 2-9 Co-occurrence network for UtRME

1	农业经营	Agricultural Management
2	农产品质量	Quality of Agricultural Products
3	青年	Youth
4	乡村治理	Rural Governance
5	持续	Sustainable
6	因地制宜	Adaptation to Local Conditions
7	脱贫	Poverty Alleviation
8	农业生产	Agricultural Production
9	补贴	Subsidies
10	公共服务	Public Services
11	特色	Local Specialty
12	乡村振兴	Rural Revitalization
13	资源	Resources
14	扶持	Support
15	农民工	Migrant Workers
16	毕业生	Graduates
17	财政	Finance
18	人才流动	Talent Mobility
19	创业	Entrepreneurship

20	返乡入乡	Urban-to-Rural Migration
21	社会福利	Welfare
22	产业发展	Industrial Development
23	带头人	Trailblazers

Appendix 3. Semi-structured interview questions

No.	Questions and statements
Part one: Personal Background	
1	Gender, age, marital status, education status, where were you born?
2	Have you joined any governmental projects before this business?
3	How many years of professional experience do you have?
4	Are you from this region?
Part two: Business Background	
5	How did you start your business?
6	What is the biggest motivation for starting your own business?
7	How you got the idea of your business?
8	In what year did you start the business?
9	Do you have any previous experience in establishing a business? and what is it?
10	How do you classify the size of your business?
11	Is this business a partnership or your own? If a partnership, how many are you?
12	Did you get any financial support when you started the business? Sources of finance and capital?
13	How many workers did you start with? How many workers are there now?
14	What are the reasons for choosing this region to set up your business?
Part Three: Business activity and products	
15	Why did you choose this sector (agriculture)?
16	What is your coordination with the government's development policy?
17	Does this region have activities or products similar to your business?
18	What is the difference between your business and others? (creativity and innovation)
19	What are the important local resources you use?
20	What is your marketing scope (local, country)?
21	Do you have any networks (links) with other businesses (in this region or elsewhere)?
22	Do you have any future plans to develop your business?
23	What are the problems faced by this type of product affect business development?
24	Do you offer any training and technical support to employees or business?

Part four: Business contribution	
25	In general, what contribution do you make to the development of this region?
26	What economic benefits do you bring to the local community (creating jobs, income)?
27	What social benefits do you bring to the local community (services)?
28	Does this business contribute to the stability of the people in the region? give an explanation?
29	Does this business achieve a higher profit margin for the owner? What is the percentage increase (compared to the startup period)?
30	What contribution do you make to protecting the environment?
31	If you think your business is successful, what are the most important factors in your success?
Part five: Business strengths, weaknesses, opportunities, and threats	
32	What are your business strengths (internal characteristics)?
33	What are your business weaknesses (internal characteristics)?
34	What are your business opportunities (external environment)?
35	What are your business threats (external environment)?
36	What kind of support (scene) does your business need to more contribution to the regional development?
37	What role can the government play in your business to achieve regional development?
38	What role can the local community play in developing your business?
39	Do you have any further information?

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