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Original Paper

Exploring the Code of Rural Talent Attraction: A Configurational Study on the Influencing Factors of College Graduates' Willingness to Work in Rural Areas—*Based on the Survey in City S and Analysis Using the fsQCA Method*

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Abstract

In light of the current situation where college graduates face employment difficulties and rural areas suffer from a shortage of talent, leading to slow development, and by integrating social cognitive theory, a ternary framework and research model for college graduates' willingness to work in rural areas have been constructed. Using fuzzy-set qualitative comparative analysis, the differential impact of various factors on the willingness of college graduates from City S to work in rural areas was studied. The research indicates that the willingness of college graduates to work in rural areas is influenced by multiple concurrent factors, yet these factors converge in different ways, and there exists an asymmetric nature of causality. The antecedent conditions leading to high willingness outcomes are not consistent with those leading to low willingness. Furthermore, the research reveals the sufficient and necessary conditions influencing the willingness of college graduates to work in rural areas. In addition, the study identifies two configurations each for high and low willingness groups, namely, high ability + resource-driven type, policy-led type, external deficiency type, and internal-external linkage deficiency

type.

Keywords

College graduates, Rural work, Willingness, Configuration study

1. Introduction

The report of the 20th National Congress of the Communist Party of China proposed to prioritize the development of agriculture and rural areas, integrate urban and rural development, and facilitate the flow of factors between urban and rural areas. It also emphasized that the key to rural revitalization lies in talent, especially young talent. Young talent plays a decisive role in rural revitalization and sustainable development. Therefore, attracting college graduates to develop in rural areas, injecting youthful energy into rural development in the new era, and driving the revitalization of rural areas is an important solution to the current shortage of rural talent. However, with the rapid development of urbanization, the most significant issue in rural talent development at this stage is the poor effect of talent return: According to data from the National Bureau of Statistics in 2022, the number of rural employment personnel in China has been decreasing year by year for five consecutive years, showing a trend of continuous reduction. With the continuous loss of population, not only is the rural workforce of young adults decreasing, but a large number of young talents are also being lost, which to some extent has caused a situation where there is no one to carry on rural revitalization. At the same time, the main source of young talent—the universities—face difficulties in employment for college students. College graduates flock to the south, flock to cities, and do not want to return to rural areas, especially those in Northeast China. Therefore, on this basis, exploring the mechanism that affects the willingness of young people to work in rural areas, and further explaining how to bring young talent back to rural areas to promote revitalization and development, is particularly important.

For college graduates, the rural work they can participate in mainly falls into three categories: First, policy-oriented training positions, such as the "Three Supports and One Assistance" program and the selection and appointment of cadres plan. These jobs have a term and are mainly for training, after which one may no longer engage in rural work; Second, serving as village officials, such as the "College Student Village Official" program and special positions plans, some of which have a term, while others are long-term in rural areas; Third, starting a business in the village or taking on challenging positions, which is unstable in terms of security but has government policy support and subsidies. The willingness to work in rural areas, also known as the willingness to be employed in rural areas, refers to the process by which college graduates choose their careers based on their self-awareness of their employment abilities and their expectations for future professions. It is also an evaluation of work values and social dominant values, as well as an expectation for future personal development. Therefore, the willingness to work in rural areas can be seen as the aspirations and hopes of college graduates for their future careers, as well as the psychological needs for future career choices.

Research on the factors influencing college graduates' willingness to work in rural areas primarily focuses on internal and external factors. From the perspective of internal factors, scholars have introduced the concept of career decision-making self-efficacy (Bandura, 1977), which refers to college students' confidence in their ability to secure employment successfully. This concept examines the internal factors within college graduates themselves. Aligning with current academic research, various personal internal factors such as graduates' identification with the "Three Rural Issues" (agriculture, rural areas, and farmers), employment values, academic performance, innovative capabilities, social capital, and place of origin can be categorized under the dimensions of career decision-making self-efficacy. Furthermore, existing studies have demonstrated a negative correlation between career decision-making self-efficacy and the willingness to work in rural areas (Wang, 2023). Other internal influencing factors, such as weak identification with the "Three Rural Issues", deep affection for one's hometown (Sui, 2023), and limited entrepreneurial challenge capabilities, also impact college graduates' willingness to work in rural areas from an internal perspective. From the perspective of external factors, existing research offers diverse viewpoints. For instance, from the human capital theory perspective: Guan (2020) innovatively categorized human capital into education, health, experience, migration, and mobility costs to study the influencing factors of talent recruitment in the context of rural revitalization. Shan (2023), based on human capital theory and through empirical research, identified factors influencing talent returning to rural areas, including policy guidance, environmental optimization, integration of human resources and industries, and attracting and nurturing local elites (Shan, 2023). From the perspective of economic motivation theories, scholars have empirically demonstrated that factors such as employment opportunities, family background and social resources, job matching and quality, welfare factors, and urban living costs all influence talent returning to rural areas.Additionally, drawing on established theoretical models from previous research, current studies have also explored influences from the rural environment, such as low rural population quality (Hui, 2021), poor infrastructure (Liao, 2008), low development expectations (Shan, 2023), and limited resource allocation. The impact of talent policies has also been examined, including the significant trend of "emphasizing recruitment over cultivation" (Xu, 2023), weak policy feasibility and operability, and insufficient policy sustainability (Luo, 2017).

Since factors do not operate in isolation, some scholars have investigated the combined effects of various factors. For instance, internal factors such as personal development plans and external factors including family, job market, and employer considerations collectively influence college graduates' willingness to work in rural areas (Jiang, 2014). Through surveys of rural-origin college students, scholars have identified family background and social resources as key factors affecting graduates' willingness to work in rural areas.In summary, despite differences in theoretical perspectives and research levels, several issues emerge: within the combined influences on college graduates, which conditions play a core role and which are peripheral, whether there are different configuration mechanisms among multiple conditions, and whether different research conclusions are

symmetrical—all these require further explanation. Therefore, there is an urgent need to explore the differential impacts of various factor configurations on the willingness of S City's college graduates to work in rural areas (Mok, 2017), thereby addressing the aforementioned questions.

Consequently, exploring the "individual pathways" of college graduates' participation in rural work from a configurational perspective and summarizing the synergistic mechanisms of multiple factors in their decision-making process are not only crucial for rural talent revitalization but also pressing practical issues for advancing overall rural revitalization. By understanding these mechanisms, we can enhance graduates' enthusiasm for participating in rural work under different configurations and translate this enthusiasm into action.

Based on this, this paper will utilize the fuzzy-set Qualitative Comparative Analysis (fsQCA) method to analyze and explain the above issues through configurational analysis. The aim is to identify the key conditions for transforming from "attracting talent" to "talent voluntarily entering," thereby breaking the current constraints on attracting young talent to rural areas and providing more insights for rural talent revitalization.

2. Theoretical Foundation and Model Construction

Watson and Skinner believed that external stimuli were the determining factors of behavior, but Bandura identified the limitations of this basic behaviorist perspective. By integrating cognitive elements into traditional behaviorist personality theory, he proposed the Social Cognitive Theory in 1986, introducing the concept of "triadic reciprocal causation," which emphasizes the continuous interaction between individual cognition, environment, and behavior (Li, & Zhao, 2008). This theory not only expanded Social Learning Theory but also incorporated cognitive factors such as beliefs, self-perception, and expectations.

Albert Bandura argued that, in addition to environmental factors, an individual's cognitive abilities and expectations of action outcomes also directly influence behavior. First, personal factors include self-efficacy, which refers to an individual's belief in their ability to successfully complete a specific activity and their subjective perception of their own capabilities. In the context of college graduates' career decision-making, scholars refer to this as "career decision-making self-efficacy," representing graduates' belief in their ability to navigate the job search process. Second, behavioral factors include outcome expectations, which refer to an individual's anticipation of the potential results and feedback from performing a specific behavior, such as material rewards, sensory experiences, or emotional satisfaction. For college graduates, policy perceptions align closely with outcome expectations. Clearly, if an individual believes that imitating others' behavior can lead to similar success, they will be motivated by outcome expectations. Furthermore, when deciding whether to perform a behavior, individuals carefully consider the expected outcomes, known as behavioral expectations. Third, environmental factors, such as social and family support, can significantly influence individual behavior.

Building on the aforementioned analysis of Social Cognitive Theory and aligning it with the realities of college graduates' participation in rural work, as well as insights from interviews and surveys, this paper proposes a triadic model combining personal factors, behavioral expectations, and environmental factors to explain the influences on graduates' willingness to work in rural areas. As shown in Figure 1, personal factors include career decision-making self-efficacy, reflecting graduates' subjective perception of their cognitive abilities, career decision-making skills, and past experiences. Behavioral expectations include policy perceptions, referring to graduates' anticipation of the potential outcomes and feedback from participating in rural work, such as the policy support and incentives they might receive. Environmental factors encompass social perceptions and family circumstances, indicating that graduates' decisions to work in rural areas may be influenced by social support and family pressures.

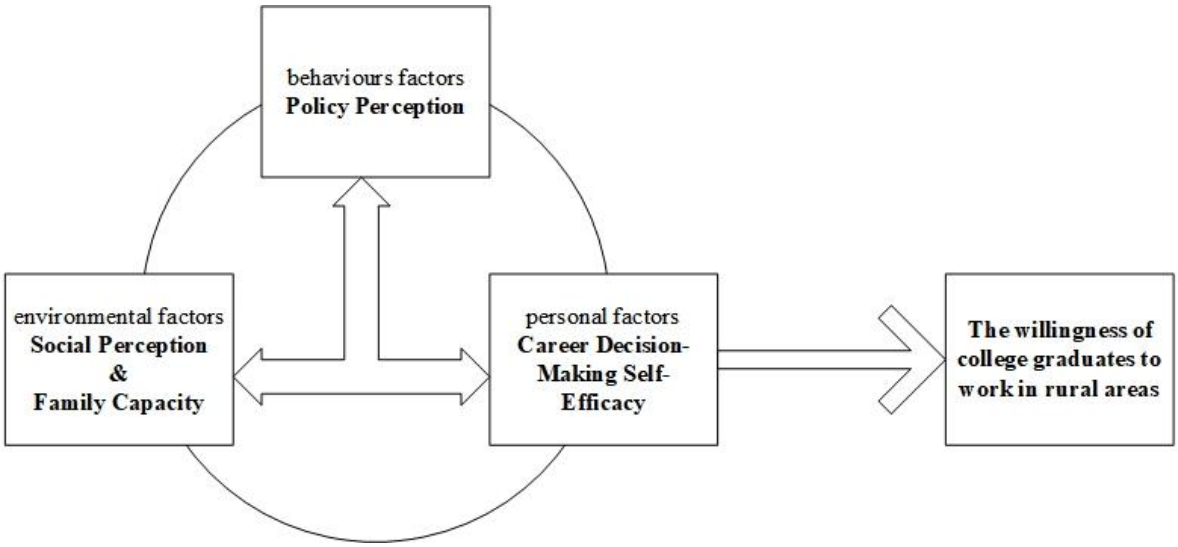

Figure 1. Ternary Model of College Graduates' Willingness to Work in Rural Areas

3. Research Design

3.1 Research Methodology

Qualitative Comparative Analysis (QCA), grounded in set theory and Boolean algebra, is designed for case-level research and facilitates cross-case comparative analysis. It treats cases as configurations of conditions and examines the set-theoretic relationships between specific combinations of antecedent conditions (configurations) and outcomes. Through these relationships, QCA can explain the "combined effects" on specific phenomena. Among its variants, fsQCA (fuzzy-set Qualitative Comparative Analysis) is particularly advantageous as it can handle not only categorical variables but also matters of degree. Unlike crisp-set QCA, which relies on binary distinctions, fuzzy-set QCA employs a more rigorous subset relationship, with its continuous membership scores better aligning with the continuous phenomena often studied in social sciences (Wang, 2003). This characteristic makes fsQCA particularly suitable for exploring the synergistic effects of different configuration logics

on college graduates' willingness to work in rural areas, which is the focus of this study. Therefore, this paper adopts the fsQCA method to investigate this issue.

3.2 Variable Measurement

3.2.1 Outcome Variable

The willingness of college graduates to work in rural areas (WC). Drawing on previous research (Wang, 2023) with some modifications, a Likert five-point scale and five aspects of work-related questions were used to measure their willingness. Respondents were asked to self-assess their situations based on the options: "completely disagree, disagree, neutral, agree, strongly agree." Given the definition of rural work willingness in this study, entrepreneurship in villages was included, resulting in a total of six questions. These questions cover participation in the Western Region Service Plan, the Three Supports and One Assistance Program, Special Post for Rural Teachers, Village Official Positions, Special Post for Rural Technicians, and Entrepreneurship in Villages.

3.2.2 Causal Conditions

Career Decision-Making Self-Efficacy (CD). Drawing on previous research (Long, 2003), a Likert five-point scale and eight questions across four dimensions were used to measure career decision-making self-efficacy. Respondents were asked to self-assess their situations based on the options: "completely disagree, disagree, neutral, agree, strongly agree." The four dimensions include self-evaluation, information gathering, planning, and problem-solving.

Policy Perception (PP). Based on the coding analysis results from previous research (Xu, 2023), policy perception was summarized into four dimensions with eight questions. A Likert five-point scale was used to measure policy perception, with respondents self-assessing their situations based on the options: "completely disagree, disagree, neutral, agree, strongly agree." The four dimensions include policy design, policy implementation, policy support, and policy environment.

Social Perception (SP). Drawing on the literature review summary of "beyond economic behavior" in return migration research from previous studies (Zhou, 2023), social perception was categorized into four dimensions with eight questions through literature synthesis. The questions were adapted from existing research by other scholars or evaluated by experts. A Likert five-point scale was used to measure social perception, with respondents self-assessing their situations based on the options: "completely disagree, disagree, neutral, agree, strongly agree." The four dimensions include social norms, social belonging, social relationships, and social capital.

Family Capacity (FC). Similar to social perception, family capacity was categorized into four dimensions with eight questions. The questions were adapted from existing research by other scholars. A Likert five-point scale was used to measure family capacity, with respondents self-assessing their situations based on the options: "completely disagree, disagree, neutral, agree, strongly agree." The four dimensions include family background, family expectations, family resources, and family pressure.

3.3 Data Collection

This study focuses on college graduates from S City as the research subjects, aiming to explore the

differential impacts of various factor configurations on their willingness to work in rural areas. S City was chosen for two main reasons: first, as a resource-based city, it faces severe population outflow and relatively underdeveloped economic conditions, making it a representative case for this study.

Drawing on previous research, this study employs a questionnaire survey to measure college graduates' perceptions and judgments of various factors, investigating the differential impacts of different factor configurations on their willingness to work in rural areas. Additionally, interviews were conducted with 10 college graduates who have returned to their hometowns (and are already employed) to provide in-depth exploration and further theoretical explanations. The survey targeted high school graduates from S City, with questionnaires distributed through one-on-one online invitations and acquaintance referrals. The survey period ran from January 4, 2024, to January 20, 2024, spanning 16 days. A total of 830 questionnaires were collected, and after screening, 824 were deemed valid for research, resulting in an effective sample rate of 99.27%. The basic demographic data of the sample are presented in Table 1 (Shen & Qiu, 2019; Zhou, 2020).

Table 1. Survey on College Graduates' Willingness to Work in Rural Areas - Descriptive Statistics - Basic Information

Question	Options	Frequency	Percentage
What is your gender?	Male	355	43.08%
	Female	469	56.92%
What is your domicile?	Rural	441	53.52%
	Urban	383	46.48%
What is your political affiliation?	Communist Youth League Member	393	47.69%
	CPC Member (including probationary)	155	18.81%
	Democratic Party Member, Masses, or Non-Party Democrats	276	33.50%
What is your highest academic qualification?	Graduate Student	140	16.99%
	Bachelor's Degree	456	55.34%
	Associate Degree	228	27.67%
What is your economic status?	Impoverished Student	288	34.95%
	Non-Impoverished Student	536	65.05%
What is your experience as a student leader?	Student Cadre	346	41.99%
	Non-Student Cadre	478	58.01%
What type of institution are you currently studying at?	211 and 985 Universities	262	31.80%
	Non-211 and Non-985 Universities	562	68.20%
What is your field of study?	Science and Engineering	398	48.30%

	Humanities and Social Sciences	426	51.70%

3.4 Common Method Bias Test

Due to the self-reporting nature of the survey and the potential for certain questions to be misleading, to test for common method bias in a set of data, the Harman single-factor method was employed using SPSS 27.0 software. The results are shown in Table 3. From Table 2, it is evident that there are 5 factors with eigenvalues greater than 1, exceeding one; the variance explained by the largest factor is 44.769%, which is below 50% (Tang & Wen, 2020). Therefore, it can be concluded that there is no severe common method bias in the study.

Table 2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.46	44.769	44.769	17.46	44.769	44.769
2	4.287	10.994	55.763	4.287	10.994	55.763
3	2.119	5.433	61.195	2.119	5.433	61.195
4	1.622	4.158	65.353	1.622	4.158	65.353
5	1.436	3.683	69.036	1.436	3.683	69.036

Note. The eigenvalues less than 1 in the composition have been omitted.

3.5 Reliability and Validity Test

Firstly, by conducting a reliability and validity test on the collected data of the willingness of college graduates from City S to work in rural areas, as shown in Table 3, the data was subjected to validity testing. Factor analysis was applied, and the average variance extracted (AVE) was calculated from the rotated component matrix. The values involved for the antecedent variables were all close to or greater than 0.5, the factor loadings were all greater than or close to 0.5, and the composite reliability values (CR) for each variable of the antecedent variables were all greater than 0.7, indicating that the variables have a high level of convergent validity (Shen, Wang, & Liu, 2023).

Table 3. Results of Reliability and Validity Test

causal conditions	Second-order Dimension	Factor loading	AVE		CR	
CD	Self-Evaluation	0.699-0.845	0.601	0.518	0.749	0.895
	Information Gathering	0.704-0.717	0.505		0.671	
	Planning	0.682-0.709	0.484		0.652	
	Problem-Solving	0.693-0.694	0.481		0.65	
PP	Policy Design	0.661-0.798	0.537	0.465	0.697	0.874

	Policy Implementation	0.652-0.653	0.426		0.597	
	Policy Support	0.650-0.676	0.44		0.611	
	Policy Environment	0.664-0.689	0.458		0.628	
SP	Social Norms	0.670-0.805	0.548	0.48	0.707	0.88
	Social Belonging	0.685-0.690	0.473		0.642	
	Social Relationships	0.670-0.672	0.45		0.621	
	Social Capital	0.662-0.678	0.449		0.62	
FC	Family Background	0.816-0.852	0.696	0.622	0.821	0.928
	Family Expectations	0.808-0.809	0.654		0.791	
	Family Resources	0.831-0.844	0.701		0.825	
	Family Pressure	0.448-0.819	0.436		0.587	

4. Data Analysis

4.1 Variable Calibration

The data used in this study for the fsQCA research process were collected from survey results. Therefore, before calibration, the data must first be processed and converted into fuzzy membership scores. Regarding the selection of key anchors for fully out, crossover point, and fully in, although existing literature has suggested using "5, 3, 1" from the Likert scale as thresholds for fully in, crossover point, and fully out, respectively, the actual data distribution does not align with these points. To ensure the research is more meaningful, this study refers to previous literature (Wang, 2021) and calculates the average score of the eight questions related to each antecedent variable. The 25th percentile (lower quartile), 50th percentile (median), and 75th percentile (upper quartile) of these average scores are used as thresholds for fully out, crossover point, and fully in, respectively. The variable calibration results are shown in Table 4.

Table 4. Variable Calibration

Variable type	Variable name	Calibration		
		upper quartile	median	lower quartile
outcome variable	WC	4.14	3.43	2.71
causal conditions	CD	4.25	3.88	3
	PP	4.25	3.75	3
	CP	4.25	3.88	3
	FC	4.13	3.5	2.38

4.2 Necessary Conditions Analysis

Consistent with mainstream research, this study first examined whether the outcome constitutes a subset of a single condition. Consistency is a crucial criterion for measuring necessary conditions. If a condition is a subset of Y (with a single condition consistency greater than 0.9), it constitutes a necessary condition, meaning the condition is a core factor. As shown in Table 5, this study used fsQCA 3.0 software to test for necessary conditions. The table indicates that the consistency of all variables is less than 0.9. Therefore, none of the antecedent conditions examined in this study are necessary conditions for rural work willingness.

Table 5. Results of Necessary Condition Analysis - Total Sample

outcome variable	WC		~WC	
causal conditions	Consistency	Coverage	Consistency	Coverage
CD	0.7373	0.7196	0.3924	0.3797
~CD	0.3643	0.3768	0.7102	0.7284
PP	0.7528	0.7362	0.3739	0.3626
~PP	0.3482	0.3593	0.7279	0.7449
PP	0.7198	0.7509	0.3422	0.354
~PP	0.3807	0.3686	0.7592	0.7287
FC	0.5958	0.5935	0.5213	0.5149
~FC	0.513	0.5194	0.5885	0.5908

Note. The symbol "~" represents the negation in logical operations.

4.3 Configuration Analysis

The purpose of configuration analysis is to reveal the sufficiency of different configurations of multiple conditions leading to the outcome. Therefore, configuration analysis is the core of this study and a central aspect of the QCA methodology. Following previous literature, this study sets the consistency threshold for condition configurations at 0.8, the Proportional Reduction in Inconsistency (PRI) threshold at 0.70, and the case threshold at 2 (Shen, Z. B., Wang, M., & Liu, 2023). Since existing research and established theories cannot provide precise expectations for counterfactual cases in this study, both "presence" and "absence" were selected as states that could lead to either high or low rural work willingness. By setting high rural work willingness and low rural work willingness as outcome variables, two distinct configurations were identified. The overall consistency of all configurations was close to or exceeded 80%, indicating that nearly or more than 80% of college graduates exhibited high or low rural work willingness when the configurations were met. This demonstrates that the condition variables are sufficient conditions for the outcome variables. Following previous research, the results of the configuration analysis are reported in Table 6.

Table 6. Configuration Analysis Results

causal conditions	WC		~WC	
	z1	z2	z3	z4
CD	●			⊗
PP		●	⊗	⊗
CP	●	●	⊗	⊗
FC	⊗	⊗	⊗	
consistency	0.9221	0.9139	0.8174	0.7982
raw coverage	0.2976	0.2959	0.4805	0.57
unique coverage	0.0178	0.0161	0.0477	0.1373
overall consistency	0.9023		0.7931	
overall coverage	0.3137		0.6177	

Note. “●”and “⊗” represent the presence or absence of core conditions, while a blank indicates that the condition is optional with respect to the outcome.

First-hand Presentation of Configuration Analysis Results:

1) The "intermediate solution" and "parsimonious solution" derived from the configuration analysis are consistent, indicating that the antecedent conditions involved in this study are all core conditions in the configurations.

2) The "parsimonious solution," "intermediate solution," and "complex solution" for the outcomes are also consistent, suggesting that the large sample size of this study has no logical remainders and covers all possible combinations.

From the perspective of the relationships between configurations:First, both z1 and z2 have the presence of "social perception" as a core condition and the absence of "family capacity" as a core condition. This indicates that the presence of social perception is a necessary condition for high rural work willingness, and the absence of family capacity is also a necessary condition for high rural work willingness.Similarly, both z3 and z4 have the absence of "policy perception" and "social perception" as core conditions, indicating that the absence of policy perception and social perception are necessary conditions for low rural work willingness.Furthermore , In the case of high rural work willingness, the antecedent variables career decision-making self-efficacy and policy perception exhibit a substitutive relationship.In the case of low rural work willingness, the absence of career decision-making self-efficacy and the absence of family capacity exhibit a substitutive relationship.Finally, there is a property of causal asymmetry, meaning the configuration paths influencing high willingness outcomes are not the same as those influencing low willingness outcomes. To further elaborate on the mechanisms through which the configuration analysis results affect the outcome variables, the article provides a detailed analysis in Part 5.

4.4 Robustness Test of Results

This article conducts a robustness check using a simplified approach, by adjusting the threshold of PRI consistency from 0.7 to 0.8, the configuration remains consistent before and after, with only some minor differences in coverage (Cheng & Wang, 2023). Therefore, it can be considered that this article has passed the robustness test.

5. Results Analysis and Discussion

5.1 The Mechanism of Multiple Factors Jointly Affecting the Willingness to Work in Rural Areas

Configuration 1: High Capability but Lacking Conditions. The main characteristics of this configuration are graduates with high career decision-making self-efficacy, strong social perception, and the absence of family capacity. In this configuration, the presence or absence of policy perception has no direct impact on graduates' willingness. Under this configuration, graduates with high career decision-making self-efficacy have a significant advantage in terms of social perception. High career decision-making self-efficacy indicates that graduates in this state are more autonomous, have strong planning awareness, and can carefully consider their post-graduation career plans, weighing the relationship between policy benefits provided by the state and their own needs in rural work. Strong social perception confirms that, for graduates in this state, the rural environment enhances their sense of social belonging, enabling them to carry out related work more effectively. The absence of family capacity means that no one is available to guide or assist these graduates, leaving them to rely solely on themselves. However, some graduates may no longer choose rural work if their family capacity improves or if they gain high family capacity, opting instead for urban life.

"Looking back at my life before and after graduation, I was the vice president of the student union and a class monitor, involved in many student activities. But after returning home, the only benefit I received was an extra 10 points on the special post exam for rural teachers. I didn't get anything else. Seeing classmates whose families arranged jobs for them, I sometimes wonder why my family doesn't have that kind of capacity. I think more young people will return to their hometowns in the future, but if I had a better opportunity, I would still choose to work in the city."

Excerpt from Interviewee ft001

Configuration 2: Policy-Driven Type. Configuration z2 is characterized by the presence of policy perception and social perception, along with the absence of family capacity, as core conditions. The presence or absence of career decision-making self-efficacy has no direct impact on graduates' willingness. First, the adequacy of the policy environment directly influences the direction and intensity of graduates' career choices. Therefore, in the process of choosing rural work, graduates place more emphasis on whether policies are well-implemented and whether they can gain 'additional benefits' beyond rural life, which are key factors guiding their decision to participate in rural work. Additionally, the presence of social perception is also a core condition of this policy-driven configuration. This means that the richness of local social resources and whether the social

environment is conducive to rural work are important factors in their willingness to participate. Finally, the absence of family capacity is another core condition of this configuration. The lack of family capacity is a controlling factor in this state, as it compels graduates to take the risk of participating in rural work to enjoy the benefits of rural work policies. Moreover, most returning youth under this configuration have rural household registration, making rural work their preferred choice.

"The main reasons for returning home to work are the proximity to home and the availability of a permanent position. When I lived in H City, I mostly stayed on campus and studied in the library. What motivated me to return to rural employment was the stability of the job, the permanent position, and the fact that my household registration is in a rural area... The extra points on the special post exam were the main reason I wanted to return. This might be the only policy benefit I enjoyed during the job search process, and it actually worked."

Excerpt from Interviewee ft002

The essential difference between the two configurations lies in the distinction between internal driving forces and external driving forces. The internal driving force is career decision-making self-efficacy, which, stemming from graduates' inner sense of capability and the absence of family capacity, internally motivates them to participate in rural work. The external driving force is policy perception, which attracts graduates (most of whom have rural household registration) to return to rural employment. By distinguishing between Configuration 1 and Configuration 2, a path model for high rural work willingness is constructed, as shown in Figure 2.

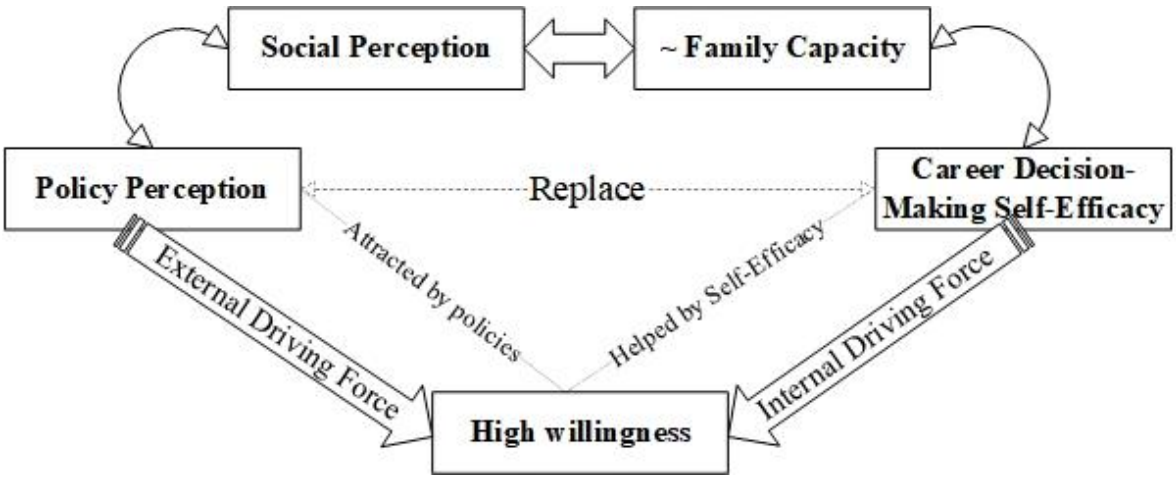

Figure 2. Path Model of High Rural Work Willingness

Based on the above results, case analysis, and the core conditions of the configurations, this study proposes the following propositions:

Proposition 1: In the process of influencing high rural work willingness, career decision-making self-efficacy acts as an internal driving force, motivating college graduates to stay and work in rural areas.

Proposition 2: In the process of influencing high rural work willingness, policy perception acts as an external driving force, motivating college graduates to stay and work in rural areas.

5.2 The Mechanism by which Multiple Factors Jointly Affect the Low Willingness to Work in Rural Areas

Configuration 3: External Deficiency Type. Configuration z4 is characterized by the absence of policy perception, social perception, and family capacity as core conditions. The presence or absence of career decision-making self-efficacy has no direct impact on graduates' willingness. First, the lack of policy perception creates significant uncertainty for graduates when considering rural work, making them more anxious and cautious, thereby reducing the attractiveness of rural work. Second, the lack of social perception also affects graduates to some extent. In the absence of social resources and support, graduates may feel work pressure and life difficulties, making them more hesitant about rural work. Additionally, the absence of family capacity negatively impacts graduates' career choices. Family expectations may further discourage them from choosing rural work due to the high cost of trial and error and the inability to repay their families. Therefore, even if rural work opportunities are available, graduates in this configuration are unlikely to be interested.

"When I graduated with my bachelor's degree, I remember the school offered me a position as a village official, but my family didn't agree. My family lives in the city, and my parents wanted me to find a job closer to home with a higher salary. They were afraid I might not return if I left. Now I wonder if things would have been better if I had taken that opportunity."

Excerpt from Interviewee ft003

Configuration 4: Internal and External Linkage Deficiency Type. Configuration z4 is characterized by the absence of career decision-making self-efficacy, policy perception, and social perception as core conditions. The presence or absence of family capacity has no direct impact on graduates' willingness. Under this configuration, graduates face numerous challenges, with low career decision-making self-efficacy, unfavorable policy perception, and a lack of social perception being the main barriers to their participation in rural work. First, graduates with low career decision-making self-efficacy lack life planning and may struggle with the realities of rural life, unable to find hope through planning or accurate employment awareness. Second, unfavorable policy perception indirectly affects graduates' willingness to participate in rural work. Insufficient government support and investment in talent development and employment guidance will lead to more difficulties and challenges for graduates in rural work. Furthermore, the lack of social perception means graduates lack strong support during their participation in rural work. They face significant limitations in information access, practical experience, and networking, which further reduces their willingness to work in rural areas.

"I don't really know much about the rural work policies you mentioned... To be honest, I don't want to work in rural areas. When I was in high school, my parents had to pull strings to get me in, and now it's the same with work—I rely on my family."

Excerpt from Interviewee ft004

Comparison of the Two Configurations,The essential difference between the two configurations also lies in the distinction between internal and external driving forces. The internal driving force is the lack of career decision-making self-efficacy, which, due to graduates' insufficient awareness and planning for employment, internally discourages them from participating in rural work. The external driving force is the absence of family capacity, as family expectations make them even more reluctant to choose rural work due to the high cost of trial and error and the inability to repay their families. By distinguishing between Configuration 3 and Configuration 4, a path model for non-high rural work willingness is constructed, as shown in Figure 3.

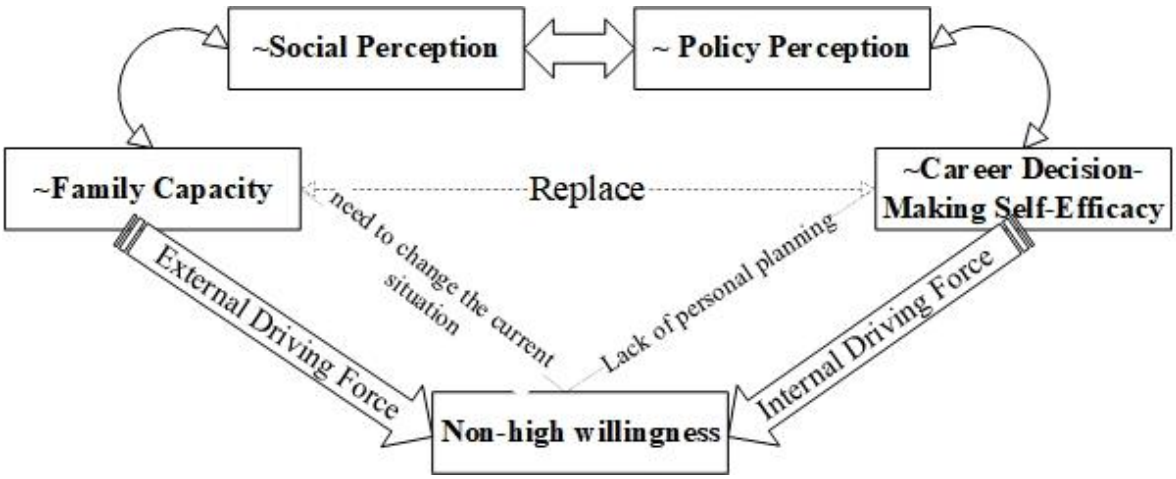

Figure 3. Path Model of Non-high Rural Work Willingness

Based on the above results, case analysis, and the core conditions of the configurations, this study proposes the following propositions:

Proposition 3: In the process of influencing non-high rural work willingness, the lack of career decision-making self-efficacy acts as an internal driving force, discouraging college graduates from staying and working in rural areas.

Proposition 4: In the process of influencing non-high rural work willingness, the absence of family capacity acts as an external driving force, discouraging college graduates from staying and working in rural areas.

6. Research Conclusions

6.1 Conclusions

From a configurational perspective and integrating social cognitive theory, this study constructs a theoretical and research model of college graduates' willingness to work in rural areas. Using college graduates from S City as the survey subjects, the fsQCA method was employed to explore the differential impacts of various factor configurations on their willingness to work in rural areas. The following conclusions were drawn:

1) Multiple Concurrent Causes with Convergent Outcomes: College graduates' willingness to work in rural areas is influenced by multiple concurrent factors, yet these factors lead to convergent outcomes. Although the configurations leading to high and low willingness differ, they ultimately result in either high or low willingness. Additionally, there is a property of causal asymmetry, meaning the antecedent conditions influencing high willingness outcomes are not symmetrical to those influencing low willingness outcomes.

2) Internal and External Driving Forces: Both high and low willingness are influenced by internal driving forces and external driving forces, validating the triadic framework of "individual, behavior, environment" in social cognitive theory. This framework explains how individual and environmental factors influence behavior.

3) Sufficient and Necessary Conditions: The study reveals that career decision-making self-efficacy, policy perception, social perception, and family capacity are sufficient conditions for rural work willingness. The presence of social perception is a necessary condition for high rural work willingness, while the absence of policy perception and social perception are necessary conditions for low rural work willingness. In the case of high rural work willingness, the antecedent variables career decision-making self-efficacy and policy perception exhibit a substitutive relationship. In the case of low rural work willingness, the absence of career decision-making self-efficacy and the absence of family capacity exhibit a substitutive relationship.

4) Configurations and Mechanisms: Using fsQCA, the study explores the mechanisms through which multiple factors influence rural work willingness. The results identify two configurations each for high-willingness and low-willingness groups:High-Willingness Configurations:High Capability but Lacking Conditions Type & Policy-Driven TypeLow-Willingness Configurations:External Deficiency Type & Internal and External Linkage Deficiency Type

Furthermore, in the process of influencing high rural work willingness, career decision-making self-efficacy acts as an internal driving force, motivating graduates to stay and work in rural areas, while policy perception acts as an external driving force. In the process of influencing low rural work willingness, the absence of career decision-making self-efficacy acts as an internal driving force, discouraging graduates from staying in rural areas, while the absence of family capacity acts as an external driving force.

6.2 Practical Insights

By studying the differential impacts of various factor configurations on the willingness of S City’s college graduates to work in rural areas, this research provides insights and guidance for governments in formulating rural work policies, universities in offering career guidance, and graduates in enhancing self-awareness.

1. Strengthen the Intrinsic Development of Rural Work Programs

The government should increase policy support and resource allocation to enhance graduates’ authentic perception of policies, thereby encouraging them to consider rural work. A robust incentive mechanism

should be established to motivate businesses and social organizations to set up branches or projects in rural areas, providing diverse employment opportunities for graduates. Local governments could also establish special funds to offer subsidies for graduates working in rural areas, reducing their living costs and enabling them to work with peace of mind.

2. Enhance Rural Employment Education and Skills Training in Universities

Universities should emphasize the teaching of rural employment knowledge and skills to improve graduates' competitiveness in rural job markets. They should also cultivate a correct employment outlook among students, strengthen their awareness of the "Three Rural Issues" (agriculture, rural areas, and farmers), eliminate urban biases, and help them recognize the potential and opportunities in rural development. By organizing rural practical activities, universities can deepen graduates' understanding of rural living and working environments, fostering their passion for and commitment to rural service. Additionally, universities should strengthen the dissemination of rural employment policies to ensure graduates fully understand policy advantages and incentives, thereby boosting their willingness to work in rural areas.

3. Strengthen Collaboration Between Local Governments and Universities

Local governments and universities should improve communication and cooperation to establish effective interaction mechanisms. Governments should proactively understand graduates' needs and expectations to formulate targeted policies. Universities should stay informed about rural development trends, adjust academic programs and talent cultivation strategies, and strengthen university-local government collaboration. For example, universities could establish rural work bases to guide more students into rural areas.

4. Promote a Positive Social Environment

Local governments should foster a societal atmosphere that respects labor, knowledge, talent, and innovation. Through media and social platforms, they should widely publicize success stories of graduates who have achieved remarkable results in rural work. By highlighting exemplary cases and offering commendations, governments can inspire more graduates to contribute to rural revitalization.

6.3 Limitations and Future Research

While this study explores the differential impacts of various factor configurations on S City's college graduates' willingness to work in rural areas, it has several limitations.

Limited Generalizability. The focus on S City alone may restrict the generalizability of the findings. Including graduates from different cities or analyzing real cases of graduates already working in rural areas could enhance the validity of the results.

Narrow Scope of Antecedent Variables. The selection and depth of antecedent variables in this study are limited. Future research should incorporate more representative variables grounded in theoretical frameworks to enrich the analysis.

Subjective Measurement. This study relies on respondents' subjective perceptions to assess antecedent variables. Combining case studies with objective measures of non-subjective variables could yield

more practical and actionable insights.

References

Wang, C., & Li, D. Y. (2023). The influence of career decision-making self-efficacy on college students' willingness to work at grassroots level. *Heilongjiang Researches on Higher Education*, *41*(11), 132-140.

Sui, M. R., Zhang, Z. J., & Deng, J. (2023). "Three Rural Issues" identity: The ideological guarantee for rural talent revitalization. *Journal of Northwest A&F University (Social Science Edition)*, *23*(6), 50-58.

Guan, L. Y. (2021). *Research on rural talent revitalization from the perspective of human capital development* (Master's thesis). Hebei Normal University.

Shan, D. C. (2023). Research on rural talent revitalization strategy in Dalian (Master's thesis). Dalian Ocean University.

Hui, Z. D. (2020). *Research on agricultural universities serving rural talent revitalization under the rural revitalization strategy* (Master's thesis). Huazhong Agricultural University.

Liao, X. M., & Zhou, W. (2008). Research on the development countermeasures of rural public management talent resources in China. *Chinese Public Administration*, (7), 79-82.

Xu, Y. C., & Han, Y. (2023). Research on influencing factors of local talent policy effectiveness: A grounded theory analysis based on H Province's talent policies. *Enterprise Economy*, *42*(7), 68-77.

Luo, J. (2017). Tracking study on the implementation of innovation and entrepreneurship talent policies for Shanghai's science and technology innovation center construction. *Scientific Development*, (3), 11-18.

Jiang, C., Luo, Y., & Zhang, Y. Q. (2020). The influence mechanism of academic achievement and moral development of impoverished college students. *Educational Research*, *41*(6), 134-144.

Mok, K. H. J. (2017). Massification of higher education: Challenges for admissions and graduate employment in China. *Managing International*, 219-243. https://doi.org/10.1007/978-981-10-1736-0_13

Li, X. D., & Zhao, Q. (2008). *Educational psychology*. Peking University Press.

Wang, Y. G. (2023). *Management research methods: Theory, frontiers and operations*. China Renmin University Press.

Long, Y. M. (2003). *Research on career decision-making self-efficacy of college students* (Master's thesis). Shanghai Normal University.

Zhou, X. G. (2023). Simulation research on college students' returning home employment based on SD model: A case study of Zhejiang Province. *Journal of Anhui Agricultural Sciences*, *51*(16), 247-254.

Shen, J., & Qiu, F. H. (2019). The influence of family employment concept on financial engineering students' expected employment region choice: An empirical analysis based on ordered multiple

logistic regression. *Contemporary Economics*, (7), 156-160.

Zhou, Q. (2020). Family background, social mobility expectations and rural family education expectations. *Journal of Hainan Tropical Ocean University*, *27*(4), 64-71.

Tang, D. D., & Wen, Z. L. (2020). Common method bias testing: Problems and suggestions. *Psychological Science*, *43*(1), 215-223.

Shen, Z. B., Wang, M., & Liu, J. Z. (2023). The influence of open innovation community governance mechanism on users' knowledge sharing behavior: A two-platform comparative analysis based on fsQCA. *Science & Technology Progress and Policy*, 1-12.

Wang, C. (2021). *Influencing factors of intelligent customer service usage intention in e-commerce context* (Master's thesis). Anhui University.

Cheng, L. J., & Wang, L. Q. (2023). Institutional configuration research on high-quality economic development of resource-based cities: Analysis based on NCA and dynamic QCA. *Urban Problems*, (9), 22-33.