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Influence of the Kinship Networks on Farmers' Willingness to Revitalize Idle Houses

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Abstract: China is vigorously promoting the strategy of rural revitalization, encouraging farmers to revitalize their idle houses and developing rural tourism. In rural China, kinship networks are essential in farmers' willingness and decision-making tools. It is significant to explore the influence of kinship networks on farmers' willingness to revitalize idle houses. This study constructs a research framework of "kinship networks–revitalization willingness–revitalization action". It describes farmers' kinship networks from five aspects: kinship networks structure, kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and their social participation enthusiasm. Taking Bishan Village, a typical rural tourism–type ancient village, as an example, this study surveyed 197 farmers to demonstrate the influence of kinship networks on farmers willingness to revitalize idle houses. This paper uses a multiple regression model to empirically study the influence of kinship networks on farmers' willingness to revitalize idle houses. The results show that: (1) In addition to the kinship networks structure having no significant positive impact on farmers' willingness to revitalize idle houses, kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and kinship networks members' social participation enthusiasm all have positive effects on farmers' willingness. (2) Considering the critical influence of kinship networks on farmers' willingness to revitalize idle houses, the government should use the structure of kinship networks to formulate relevant policies to guide farmers to increase their willingness to revitalize their idle houses.

Keywords: kinship networks; revitalize idle houses; farmers' willingness; rural revitalization; Bishan Village



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1. Introduction

With the continuous development of China's urbanization process, many farmers have relocated to cities for work, and many rural houses remain uninhabited and idle. Due to the restrictions of the old policy, they cannot transfer their idle houses in the countryside to people outside the collective economic organizations. The ability of farmers to revitalize idle houses is minimal, and capable individuals and organizations outside the collaborative financial organizations are not qualified to revitalize idle houses in rural areas. As a result, the problem of idle houses persists and cannot be solved. According to statistics from the Ministry of Natural Resources of China, there are at least 70 million houses and 2 million hectares of homesteads in an idle state across the country, and the sluggish rate of some rural homes even exceeds 35% [1–3]. How to effectively utilize idle houses and prevent the waste of land resources is an significant issue in current rural development.

The problem of idle houses exists in most parts of China, especially in the less developed central and western regions, where more rural residents work in cities. From the point of view of idle houses, the difference is relatively significant. Rural tourism area has

the support of passenger flow. People can use idle houses to carry out commercial activities; In non-rural tourism areas, farmers' idle houses are more willing to make use of them. The revitalization of idle houses refers to farmers' efficient use of idle houses for independent and cooperative operations, as well as leasing [4–7]. Their primary objective is to convert idle houses into homestays, modern houses, and small shops [8–10]. In recent years, the Central Government has paid close attention to the issue of idle homesteads and houses in rural areas and actively encouraged farmers to make full use of idle homesteads and houses, as well as promoting rural collective economic organizations [11–13]. In 2017, the Government proposed exploring rural collective organizations to revitalize idle houses and homesteads through leasing and cooperation [14–17]. In 2018, the Government proposed the separation of homestead ownership, qualification rights, and use rights, providing a policy basis for house sharing [18–21]. The new “Land Management Law”, first introduced in 2019, allows rural villagers who have settled in cities to withdraw from their homesteads with voluntarily compensation, as well as encouraging rural collective economic organizations and their members to revitalize and utilize idle homesteads and houses [22–24]. This policy will not only affect the willingness of a particular farmer to revitalize the idle house but also have a significant impact on other members of his kinship network.

As the owners of the property rights of idle houses, farmers' willingness to revitalize idle homes is crucial for the promotion of rural revitalization. Traditionally, in China's rural areas, it has been challenging to implement some government policies because of barriers to information transmission. In addition, farmers have a narrow channel to receive information, a relatively low level of education, and inadequate policy cognition ability, which makes it difficult for them to understand government policy documents. In contrast, the influence of kinship networks was evident in rural areas, where farmers were more likely to trust their kin network members. Fei Xiaotong, a famous Chinese sociologist, stated that, in rural areas, people's behaviors are mostly centered on themselves, and their relationship with others depends on how distant they are in themselves [25,26]. Relatives and family members are the closest people in farmers' social networks [27–29]. Farmers often communicate, learn, and imitate members of the kinship networks when deciding to revitalize and utilize idle houses [30]. However, the impact of kinship networks on Farmers' willingness to revitalize idle houses has yet to receive widespread attention from the academic circle. Research on the influence of kinship networks on Farmers' willingness to revitalize their idle houses is mainly reflected in the following two aspects.

The first aspect is the study of kinship networks theory [31–34]. Scholars at home and abroad attach great importance social networks, but kinship networks, as a manifestation of these social networks, are yet to have a unified concept [35–37]. The kinship networks refers to a kinship relationship, such as a family member or spouse [38,39]. The kinship networks is a personal relationship networks formed among farmers between family members and their spouses, and members of this kinship networks mainly include farmers' family members and relatives [40,41]. Through the review of relevant research, scholars' research on the influence of kinship networks primarily focuses on farmers' entrepreneurship [42,43]. Some study confirmed that a kinship networks has both advantages and disadvantages for developing rural tourism enterprises [43,44]. In terms of farmers' entrepreneurship, the kinship networks plays a role in farmers returning home to become entrepreneurs [45,46]. The survey confirmed that a kinship networks has a significant positive impact on Farmers' willingness to create a tourism business [47,48].

The second aspect is the research on factors that influence Farmers' willingness. The will and behavior of farmers have a fundamental impact on land transfer, and based on this, suggests encouraging farmers to cultivate different areas of land [49,50]. Differentiated compensation measures can effectively promote the withdrawal of home-stead work [51,52]. Concurrent industry differentiation significantly affects farmers' willingness to participate in crop rotation and the fallowing of farmland [53,54]. Current research on Farmers' willingness mainly focuses on the transfer of agricultural land and withdrawal of homesteads [55]. There are few studies that combine Farmers' willingness to revitalize idle

houses in the context of rural revitalization, and this topic should receive greater research attention [56]. Existing studies have analyzed the connotation and function of kinship networks but have yet to conduct in-depth research on the content of kinship networks, and their characterization and classification are not accurate. At the same time, existing studies have analyzed farmers' willingness to leave their houses idle and its influencing factors. Still, there are few studies on the influence of social relations, especially the influence of kinship networks. Based on the previous foundation, this study innovatively subdivides the kin network into five aspects, and Bin communicated a specific description of it through a questionnaire survey.

Scholars have noticed the importance of social networks and explored them. The formal social network analysis perspective can be employed to understand political, economic, and social organizations and individuals. Social Network Analysis can examine the interactions between nodes, measure the resource flows between nodes, and measure the information flows between nodes [57]. At the same time, people have also noticed obvious mutual influences among social network members. There has been considerable work on the power and contagion of health behaviors, such as smoking and obesity. Of course, individuals occupying certain network positions may also experience effects on attributes irrespective of the characteristics of network partners [58]. The kinship networks is one of the most important social relationships in rural China, and its social network members must influence farmers' willingness to revitalize idle houses.

From the perspective of the kinship networks, this study takes Bishan Village, Huangshan City, Anhui Province, as a case study, collecting data on Farmers' willingness to revitalize their idle houses. Based on the theoretical analysis framework of "relatives network—revitalization intention—revitalization action," as shown in Figure 1, this study established the hypothesis of farmers' willingness to revitalize idle houses. It analyzed the influence of relatives networks on farmers' willingness to revitalize idle houses. Theoretically, this study enriches the content system of farmers' willingness to research based on the research perspective of kinship networks. From a practical point of view, the results of this study provide a theoretical basis for the government to guide farmers on how to activate idle houses. This study will improve decision-making to develop a collaborative economy and encourage rural revitalization.

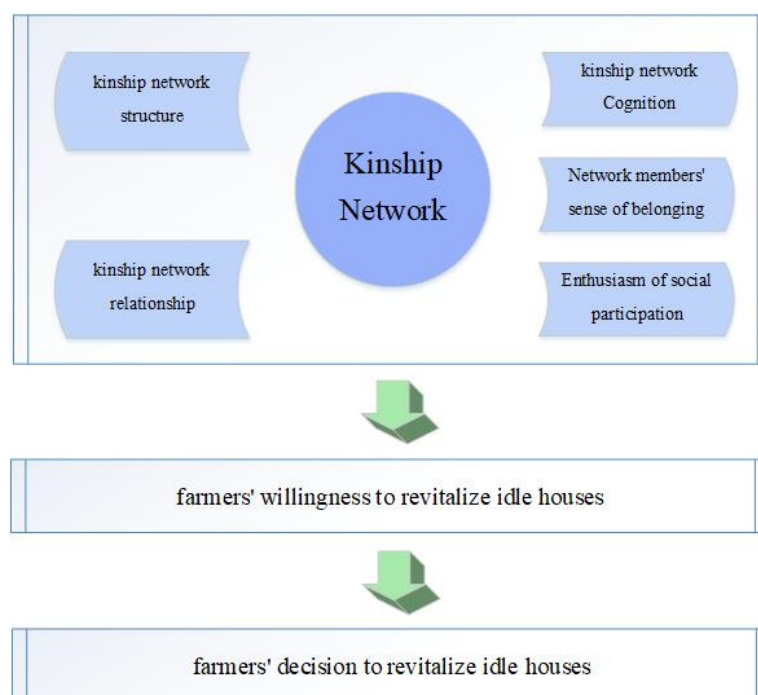


Figure 1. Analysis framework of the study.

The remainder of this paper is as follows: Section 2 presents our materials and methods, which include the research area, model, and hypothesis. Section 3 presents our results, including a descriptive analysis, data quality analysis, regression analysis, and hypothesis testing; Section 4 presents our discussion; and conclusions and future research direction are summarized in Section 5.

2. Materials and Methods

2.1. Research Area

Bishan Village is located in Yi County, Huangshan City, Anhui Province. It is a famous Huizhou ancient village and a traditional Chinese village. The houses here are historic and have distinct Huizhou architectural features, making them very attractive for foreign tourists. The village is an ideal location to revitalize idle houses and develop rural tourism. Bishan Village is only 4 km from the downtown area of Yi County, 60 km from Huangshan Mountain, and 15 km from Xidi and Hongcun, as shown in Figure 2. It has excellent tourism facilities and a large tourist population, as well as a civilian population of approximately 2900. In the past, local villagers mainly engaged in economic activities such as farming, growing tea, or other labor. Many villagers are now revitalizing their idle houses, using them to run homestays or restaurants, and thus generate income.

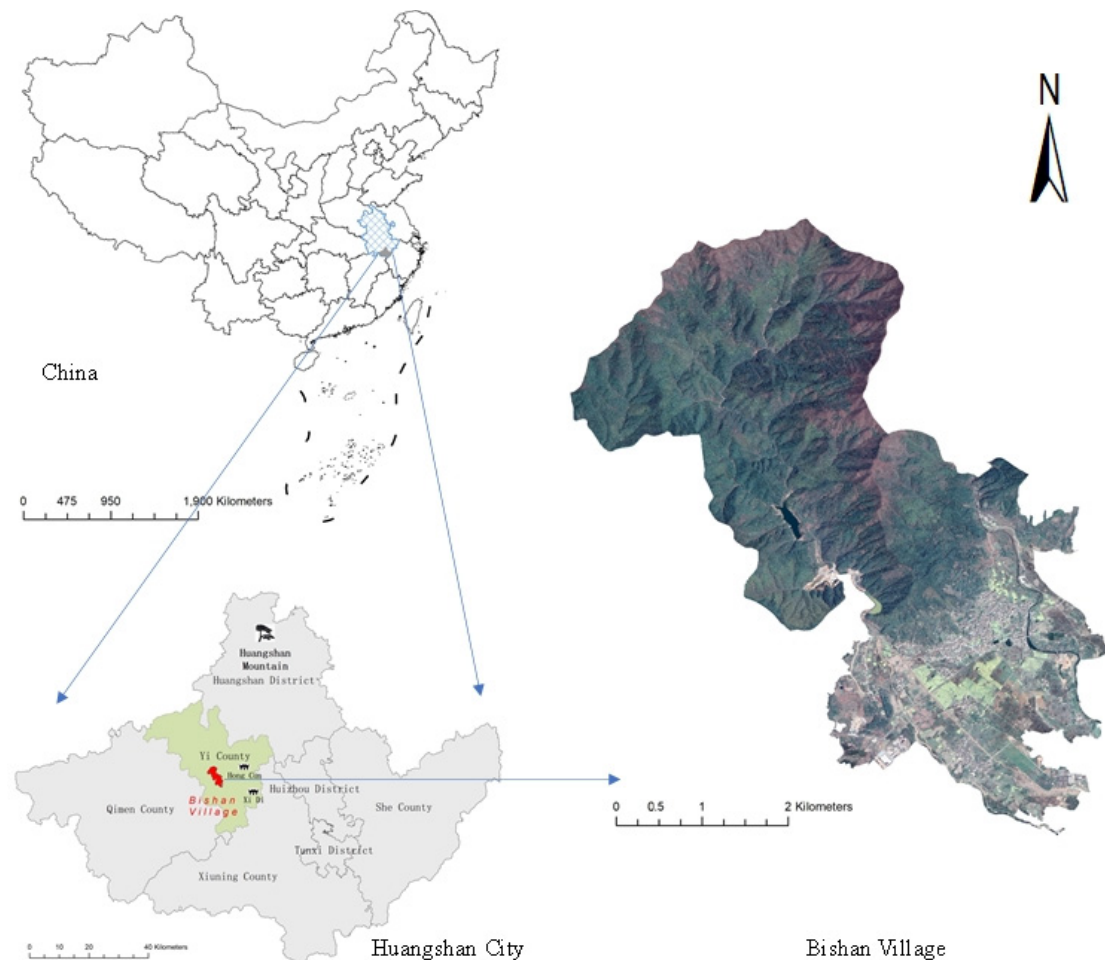


Figure 2. Map showing the location of Bishan Village.

The northern region of Bishan Village is mountainous, while the central and southern regions comprise flat homesteads and cultivated land. The village has 39.26 hectares of rural homestead and about 130 idle houses. Some of them use their idle houses to engage in commercial activities related to rural tourism and have achieved good economic benefits, as shown in Figure 3.

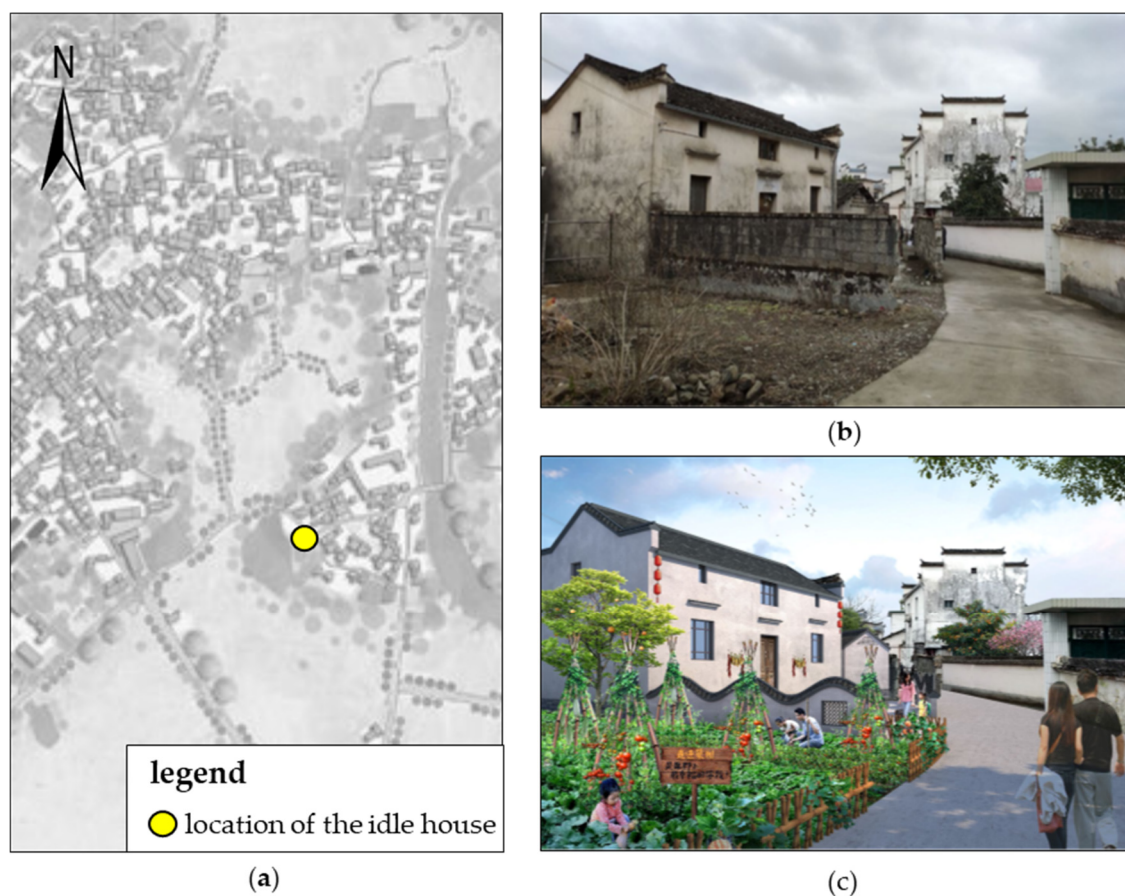


Figure 3. A typical plan of idle house revitalization in Bishan Village: (a) The location of the idle house; (b) Before idle houses are revitalized; (c) After idle houses are revitalized.

In 2019, the Idle Farm House Revitalization Pilot Work Plan was issued in Huangshan City to speed up the revitalization and utilization of idle houses. The introduction of this policy has further encouraged local farmers to revitalize their idle houses, providing many cases of revitalized idle houses to explore in this study. This survey was completed from July to August 2020, with a total of 230 questionnaires distributed and 197 valid questionnaires collected, with an effective questionnaire recovery rate of 85.65%. This study uses a combination of household surveys and network surveys. Since some residents worked outside during the survey, we used the Wen Juan Xing platform to conduct a supplementary online survey, and the ratio of offline to online respondents is 7.21. The questionnaire of this study set up scale questions such as “You are particularly interested in participating in the revitalization of idle farmhouses”, “You often consider whether to revitalize idle farmhouses at home”, and “You are fully prepared to participate in the revitalization of idle farmhouses”, “You will try your best to participate in the revitalization of idle farm houses” to measure farmers’ participation in idle farmhouses the intensity of the will to live.

2.2. Model

The market mechanisms and institutional environment in rural areas are understudied, and kinship networks are an important source of idle house revitalization and tourism entrepreneurship information [59]. Many scholars note the relationship between kinship networks and farmers’ idle housing revitalization [60,61]. Nonetheless, few studies focus on the influence of a kinship networks, a basic interpersonal relationship factor in rural China, on the willingness to revitalize idle houses. In this context, this paper describes the construction of a decision-making model for revitalizing farmers’ idle houses under the

logic of “kinship networks–revitalization willingness–revitalization action”. This study surveyed a sample of farmers in Bishan Village in order to conduct an empirical test via a model that could provide a basis for developing rural idle houses. The housing revitalization policy especially provides valuable evidence.

A kinship networks is a relatively vague concept. Previous studies describe a kinship networks from three perspectives: networks structure, relationship, and cognition [62]. There are also studies on the construction of farmers’ social networks relationships from five perspectives: networks size, networks tightness, trust and commitment, social atmosphere and sense of belonging, and social participation [63,64]. In order to better explore the influence of kinship networks on Farmers’ willingness to revitalize idle houses, this study divides the abstract concept of a kinship networks into kinship network structure, kinship networks relationship, kinship networks cognition, and kinship networks members’ sense of belonging—five factors for measuring the enthusiasm of social participation. These five dimensions influence farmers’ willingness to revitalize idle houses from different aspects, and their combined influence will directly impact and change farmers’ willingness and behavior to revitalize idle houses. Based on the five dimensions, this study adopts hierarchical regression analysis to construct the following model:

$$Y = \sum_{k,i=1}^n \beta_k * X_i \quad (1)$$

Y is the willingness of farmers to revitalize idle houses, and X1–X5 is the control variable.

2.3. Research Hypothesis

2.3.1. Kinship Networks Structure and Farmers’ Willingness to Revitalize Idle Houses

The structure of a kinship networks is the breadth and scale of relationships in a family networks. This study measures kinship networks structure using relatives’ occupations and work experience. farmers with diverse kinship networks structures receive more material and technical guidance to help them revitalize their idle houses. For example, relatives who carry out business can provide financial support for farmers; relatives who work in government departments can communicate with farmers about the policy of revitalizing idle houses and provide farmers with information; relatives who work in banks and other financial institutions can provide farmers with credit services; and relatives who work in the tourism service industry and have experience in revitalizing idle houses can give technical support to farmers.

Previous studies confirmed that networks structure positively impacts farmers’ willingness regarding entrepreneurship [65]. The number of entrepreneurs in farmers’ networks positively impacts farmers’ willingness regarding entrepreneurship. The scale and breadth of farmers’ social networks significantly impact their willingness regarding entrepreneurship. The kinship networks structure positively impacts farmers’ willingness regarding entrepreneurship in tourism.

Hypothesis H1. *The kinship networks structure significantly impacts farmers’ willingness to revitalize idle houses.*

2.3.2. Kinship Networks Relationship and Farmers’ Willingness to Revitalize Idle Houses

Kinship networks relationships refer to the quality of relationships among relatives. In other words, kinship networks relationships measure the closeness of relationships between relatives and the support that they offer to farmers. Generally speaking, the closer the relationship between farmers and their relatives, the more that relatives can help farmers, which is conducive to revitalizing their idle houses.

Previous studies have confirmed that social networks relationships positively impact individual entrepreneurial willingness [66]. Stronger personal social networks relationships lead to stronger entrepreneurial willingness. A robust social networks relationship can pro-

vide college students with more entrepreneurial resources, information, and opportunities, positively impacting college students' willingness to participate in entrepreneurship.

Hypothesis H2. *The kinship networks relationship significantly impacts farmers' willingness to revitalize idle houses.*

2.3.3. Kinship Networks Cognition and Farmers' Willingness to Revitalize Idle Houses

Networks cognition refers to the value system that relatives share. In this study, kinship networks cognition refers to relatives' recognition of the value of farmers' willingness to revitalize their idle houses. Relatives often believe that farmers' decisions to revitalize their idle houses are valuable and support their decision making. Hence, farmers' willingness to revitalize the idle houses become more significant.

Previous studies confirmed that kinship networks cognition positively impacts farmers' willingness to revitalize [67]. Farmers' cognition of the homestead three-right separation policy has a significant positive impact on farmers' willingness to convert their homes into homesteads. Farmers' recognition of rural revitalization policies also significantly impacts their willingness to participate in this practice. Kinship networks cognition positively impacts farmers' willingness regarding entrepreneurship in tourism.

Hypothesis H3. *Kinship networks cognition significantly impacts farmers' willingness to revitalize idle houses.*

2.3.4. Networks Members' Sense of Belonging and Farmers' Willingness to Revitalize Their Idle Houses

The sense of belonging refers to the degree of identification and closeness of the association between an individual and a thing or phenomenon. In this study, the sense of belonging for members of a kinship networks refers to the degree of satisfaction and recognition of farmers' relatives living in the village. Farmers' life satisfaction significantly impacts their willingness to participate in rural revitalization; the higher the life satisfaction, the stronger the farmers' willingness to participate in rural revitalization, and vice versa. Based on this, we believe that the more satisfied relatives of farmers are with living in their village, the more farmers are willing to remain there to revitalize their idle houses [68].

Hypothesis H4. *Kinship networks members' sense of belonging significantly positively impacts farmers' willingness to revitalize their idle houses.*

2.3.5. Enthusiasm of the Social Participation of Kinship Networks Members and Willingness of Farmers to Revitalize Idle Houses

Social participation refers to the degree of concern and devotion of members of a social networks to political and public affairs within the networks [69]. In this study, the enthusiasm of social participation of kinship networks members refers to the degree of concern and investment of farmers' relatives in the village's political and public affairs. The higher the enthusiasm of farmers' relatives to participate in village affairs, the more willing they are to improve economic and ecological conditions in the village. This also leads to greater support for the behavior of revitalizing idle houses that can bring economic benefits.

Hypothesis H5. *The enthusiasm of kinship networks members regarding social participation has a significant positive impact on farmers' willingness to revitalize idle houses.*

3. Results

3.1. Descriptive Analysis

In total, 46.9% of the people being surveyed were male, and 53.1% were female. The surveyed villagers were generally not highly educated: 89.8% have a high school education

or lower (74% have a junior high school education or lower). Half of the surveyed villagers were farmers (50%). The results show that 76.6% of the surveyed rural households had an annual income of less than CNY 80,000, and 65.8% of the surveyed villagers were willing to revitalize idle houses, a relatively high value.

3.2. Data Quality Analysis

3.2.1. Reliability Test

In this study, the single consistency index, Cronbach's alpha (α), was used to analyze and test the degree of each change. The scale α value of farmers' participation and idle farmers' willingness to revitalize idle houses is 0.939. The α value of the kinship networks degree item is 0.951, and thus is greater than 0.7 (empirical values that meet the reliability requirements), indicating that the included measurement items all meet the reliability requirements.

3.2.2. Validity Test

Validity refers to the degree to which psychological and behavioral characteristics can be accurately measured using a test or scale tool, i.e., the accuracy and reliability of the test results. This study adopts a Likert scale, and the results obtained using the test can effectively reflect the psychological characteristics of the respondents. The scale's validity was tested using a confirmatory factor analysis (CFA), and the analysis results are shown in Table 1. The factor loading of each measurement item is more significant than 0.5, the scale combination reliability (CR) is more significant than 0.6, and the average variance extraction value (AVE) is between 0.448 and 0.845, indicating that the overall measurement model has qualified validity, as shown in Table 2.

Table 1. Table of land use status in Bishan Village.

Land Use	Area (Hectares)	Percentage (%)
agricultural land,	1571.95	92.58%
rural homestead	39.26	2.31%
other urban and rural	40.03	2.36%
construction land		
regional infrastructure land	5.74	0.34%
other developed land	4.09	0.24%
water bodies	36.88	2.17%
total	1697.95	100.00%

3.3. Regression Analysis and Hypothesis Testing

3.3.1. Correlation Coefficient Analysis

Before conducting a multiple regression analysis in this study, we first conducted a correlation analysis on independent and dependent variables to determine whether there is a significant correlation between the variables; this is the basis for the next step of multiple regression analysis. The results show that the significance level of farmers' willingness to participate in the revitalization of idle houses, as well as the significance levels of kinship networks structure, kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and kinship networks members' social participation enthusiasm, is less than 0.05, passing the significance test. The Pearson correlation coefficients are 0.912, 0.826, 0.901, and 0.886, respectively, and the correlation coefficients are all greater than 0.8, indicating a strong correlation between the above variables. The Pearson correlation coefficient between the kinship networks structure and farmers' willingness to revitalize their idle houses is only 0.211, indicating a weak correlation between kinship networks structure and farmers' desire to revitalize idle houses.

Table 2. Results of confirmatory factor analysis.

Variable	Measurement Topic	Factor Loading	CR	AVE
Farmers' intention to revitalize idle houses	You are interested in revitalizing idle houses.	0.928	0.956	0.845
	You often consider whether to revitalize the idle house at home. You are fully prepared to revitalize your idle house.	0.920		
	You will try your best to revitalize the idle house.	0.917		
	You are interested in revitalizing idle house.	0.911		
Kinship networks structure	How many relatives do you have in business?	0.548	0.796	0.448
	How many of your relatives work in government departments?	0.568		
	How many of your relatives work in banks and other financial institutions?	0.851		
	How many relatives do you have working in the tourism service industry?	0.778		
	How many relatives of yours have revitalized idle houses?	0.538		
Kinship networks relationship	Do you often discuss with your relatives about revitalizing idle houses?	0.885	0.943	0.804
	Do you and your relatives often borrow money and other things from each other?	0.886		
	Do your relatives always support and help you when you are in trouble?	0.915		
	Are you a trustworthy person in the eyes of your relatives?	0.900		
Kinship networks cognition	Are your relatives encouraging you to revitalize your idle house to make money instead of working out of town?	0.896	0.936	0.831
	Are your relatives envious of those who became rich by revitalizing idle homes?	0.924		
	Do your relatives think revitalizing idle homes is a good idea?	0.914		
Kinship networks membership	Do your relatives feel good about living in their village?	0.898	0.938	0.791
	Do your relatives think it is good to live in your village?	0.910		
	Do your relatives feel that life in the village is more secure?	0.899		
	Do your relatives think making money in your village is better than elsewhere?	0.850		
Kinship networks members' social participation positivity	Will your relatives actively offer excellent suggestions for the village?	0.898	0.945	0.811
	Are your relatives enthusiastic about garbage sorting, garden landscaping, and other beautiful rural construction?	0.901		
	Are your relatives very active in cultural entertainment and tourism activities?	0.914		
	Are your relatives highly motivated to join village committees and party organizations?	0.889		

3.3.2. Multiple Regression Analysis

In this study, farmers' willingness to participate in the revitalization of idle houses is selected as the dependent variable, and kinship networks structure, kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and kinship networks members' social participation enthusiasm are selected as independent variables. The results of the multiple regression analysis are shown in Table 3.

The regression coefficients of kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and kinship networks members' enthusiasm for social participation are 0.345, 0.141, 0.260, and 0.231, respectively. The significance levels are 0.000, 0.007, 0.001, 0.001, as shown in Table 4. The *p* values are all less than 0.05. In other words, there is a significant positive correlation; the regression coefficient between the kinship networks structure and farmers' willingness to participate in the revitalization of idle houses is -0.009 , the significance level is 0.769, and the significance value is more significant than 0.1, i.e., there is no significant correlation. The above analysis verifies hypotheses H2, H3, H4, and H5, while hypothesis H1 is not verified.

Assuming that the strength of farmers' willingness to participate in the revitalization of idle houses is *Y*, the kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and kinship networks members' social participation enthusiasm are *X*1, *X*2, *X*3, and *X*4, respectively. A multiple linear regression model can be established:

$$Y = 0.345 * X1 + 0.141 * X2 + 0.260 * X3 + 0.231 * X4. \quad (2)$$

Combined with this model, it can be seen that each dimension, especially networks cognition and kinship networks structure, has a large or small relationship with the intensity of farmers' willingness to participate in the revitalization of idle houses.

Table 3. Correlation analysis.

Variable		Correlation					
		Farmers' Willingness to Revitalize Idle Houses	Kinship Networks Structure	Kinship Networks Relationship	Kinship Networks Cognition	Kinship Networks Membership	Kinship Networks Members' Social Participation Positivity
Farmers' willingness to revitalize idle houses	Pearson correlation Sig. (two-tailed)	1	0.211 ** 0.003	0.912 ** 0.000	0.826 ** 0.000	0.901 ** 0.000	0.886 ** 0.000
Kinship networks structure	Pearson correlation Sig. (two-tailed)	0.211 ** 0.003	1	0.197 ** 0.006	0.289 ** 0.000	0.206 ** 0.004	0.215 ** 0.002
Kinship networks relationship	Pearson correlation Sig. (two-tailed)	0.912 ** 0.000	0.197 ** 0.006	1	0.840 ** 0.000	0.926 ** 0.000	0.903 ** 0.000
Kinship networks cognition	Pearson correlation Sig. (two-tailed)	0.826 ** 0.000	0.289 ** 0.000	0.840 ** 0.000	1	0.827 ** 0.000	0.788 ** 0.000
Kinship networks membership	Pearson correlation Sig. (two-tailed)	0.901 ** 0.000	0.206 ** 0.004	0.926 ** 0.000	0.827 ** 0.000	1	0.899 ** 0.000
Kinship networks members' social participation positivity	Pearson correlation Sig. (two-tailed)	0.886 ** 0.000	0.215 ** 0.002	0.903 ** 0.000	0.788 ** 0.000	0.899 ** 0.000	1

** Correlation is significant at the 0.01 level (two-tailed).

Table 4. Regression model coefficients.

Variable	Standardized Coefficient	T	Significant
	Beta		
kinship networks structure	−0.009	−0.294	0.769
kinship networks relationship	0.345	4.219	0.000
kinship networks cognition	0.141	2.711	0.007
kinship networks membership	0.260	3.290	0.001
kinship networks members' social participation positivity	0.231	3.451	0.001

4. Discussion

In this survey, because the relatives of the survey subjects are farmers, their occupations and work experience are relatively homogeneous, resulting in their kinship networks structure indicators essentially being the same, and the relatives of the farmers cannot give the farmers too much in terms of materials, technology, and support. Therefore, this study found that farmers' willingness to revitalize their idle houses is not closely related to the structure of kinship networks.

Local governments can directly advertise the owners of idle houses and encourage them to participate in revitalizing them. This can also indirectly promote the enthusiasm of farmers to revitalize idle houses as relatives of the owners. For example, local governments can widely carry out activities to promote family traditions in rural areas to enhance the cohesion of kinship networks members. In addition, local governments can carry out interactive activities among family members, enhancing kinship networks relationships.

Regarding kinship networks cognition, local governments can meet with relatives of house owners to conduct seminars to publicize government subsidies and support policies for revitalizing idle houses. In addition, participating in revitalizing idle houses can improve economic conditions for farmers and their families and aid in rural revitalization, recognizing relatives of the heads of households, and thereby improving the cognition of the kinship networks.

In terms of the sense of belonging of the members of the kinship networks, local governments should increase investment in rural infrastructure, actively improve living conditions in the village, create a unique rural culture of the village, and enhance the sense of belonging for members of the kinship networks, thereby further enhancing the retention of farmers and their willingness to revitalize idle houses in this village.

In terms of the enthusiasm of social participation in kinship networks members, we should improve the rural governance system, expand grassroots democratic self-governing

bodies, and improve rural self-government capabilities. Actively guiding kinship networks members to participate in rural governance is conducive to a better understanding of the significance of revitalizing idle houses to rural development, thereby enhancing members' willingness to revitalize their idle houses.

There are still some limitations to this study. The research method is relatively simple, the characterization of kinship networks needs to be in-depth, and the mechanism of influence of kinship networks on farmers' willingness needs more theoretical research. The number of survey samples can be increased.

5. Conclusions

This paper describes farmers' kinship networks from the five perspectives: kinship networks structure, kinship networks relationship, kinship networks cognition, kinship networks members' sense of belonging, and kinship networks members' enthusiasm for social participation. Our study explores the impact of these factors on farmers' willingness to revitalize idle houses. The empirical evidence based on the survey samples of farmers in Bishan, Anhui, verified the proposed research hypothesis. The main conclusions are as follows.

(1) The kinship networks significantly impacts farmers' willingness to revitalize their idle houses. The empirical results show that, although kinship networks structure has no significant positive impact on farmers' willingness to participate in the revitalization of idle farmhouses, the other four dimensions have a significant positive impact on farmers' willingness to participate in the revitalization of idle farmhouses. It shows that in rural areas where social and economic development is lacking, farmers' social networks can provide important information and technical and emotional support for farmers to revitalize idle farmhouses. This has a promoting effect on the formation of farmers' idle farmhouse revitalization decisions.

(2) The intensity of each dimension of the kinship networks on farmers' willingness to revitalize idle houses, from strong to weak, is as follows: kinship networks relationship, kinship networks members' sense of belonging, kinship networks members' enthusiasm for social participation, kinship networks cognition, and kinship networks structure. This shows that the influence of different dimensions is quite different, the influence of the kinship networks relationship is the largest, and the influence of kinship networks structure is the smallest. At the same time, due to the individual differences between farmers, the impact of these dimensions on different individuals is also significantly different.

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References

1. Zhang, H.; Li, Q.; Huang, Z. The influence of kinship networks on farmers' rural tourism entrepreneurial willingness—Based on the empirical study of farmers in Pujiang, Zhejiang. *Geogr. Sci.* **2019**, *39*, 1787–1795. (In Chinese)
2. Wang, Z.; Yang, Q.; Luo, D. Analysis of farmers' willingness to pay for homestead differences and its influencing factors. *China Land Sci.* **2018**, *32*, 28–34. (In Chinese)
3. Yu, Z.; Tan, Y.; Wu, C. Analysis of farmers' willingness to be compensated for crop rotation and fallow based on the perspective of concurrent industry differentiation—Taking Jiashan County, Zhejiang Province as an example. *China Land Sci.* **2017**, *31*, 43–51. (In Chinese)
4. Jia, Z.; Wang, J.; Tong, X. Research on Individual Entrepreneurial Willingness Based on Social Networks. *China Manag. Informatiz.* **2015**, *18*, 141–145. (In Chinese)
5. Li, F.; Zhang, J.; He, K. Analysis of the impact of sense of belonging on the environmental governance of farmers' villages—Based on the survey data of 1007 farmers in Hubei Province. *Resour. Environ. Yangtze River Basin* **2020**, *29*, 1027–1039. (In Chinese)
6. Wang, Y.; Zhang, X.; Zhang, Q. Can social networks promote the transfer of land by new agricultural management entities?—Based on the investigation of Hebei, Anhui and Shandong provinces. *China Land Sci.* **2018**, *32*, 51–57. (In Chinese)
7. Zhao, W.; Ritchie, J.B.; Echtner, C.M. Social capital and tourism entrepreneurship. *Ann. Tour. Res.* **2011**, *38*, 1570–1593. [\[CrossRef\]](#)
8. Nahapiet, J.; Ghoshal, S. Social capital, intellectual capital, and the organizational advantage. *Acad. Manag. Rev.* **1998**, *23*, 242–266. [\[CrossRef\]](#)
9. Chen, B.; Nakama, Y. Residents' preference and willingness to conserve homestead woodlands: Coastal villages in Okinawa Prefecture, Japan. *Urban For. Urban Green.* **2015**, *14*, 919–931. [\[CrossRef\]](#)
10. Chen, H.; Zhao, L.; Zhao, Z. Influencing factors of farmers' willingness to withdraw from rural homesteads: A survey in zhejiang, China. *Land Use Policy* **2017**, *68*, 524–530. [\[CrossRef\]](#)
11. Chen, Y.; Ni, X.; Liang, Y. The Influence of External Environment Factors on Farmers' Willingness to Withdraw from Rural Homesteads: Evidence from Wuhan and Suizhou City in Central China. *Land* **2022**, *11*, 1602. [\[CrossRef\]](#)
12. Cheng, W.; Cheng, S.; Wu, H.; Wu, Q. Homesteads, identity, and urbanization of migrant workers. *Land* **2023**, *12*, 666. [\[CrossRef\]](#)
13. de Boer, B. Translating science into practice to develop an innovative dementia care model: The homestead care model. *Innov. Aging* **2022**, *6*, 327. [\[CrossRef\]](#)
14. Fan, W.; Zhang, L. Does cognition matter? Applying the push-pull-mooring model to Chinese farmers' willingness to withdraw from rural homesteads. *Pap. Reg. Sci.* **2019**, *98*, 2355–2369. [\[CrossRef\]](#)
15. Gao, J.; Song, G.; Liu, S. Factors influencing farmers' willingness and behavior choices to withdraw from rural homesteads in China. *Growth Chang.* **2021**, *53*, 112–131. [\[CrossRef\]](#)
16. Guan, G.; Zhao, W. Using Risk System Theory to Explore Farmers' willingness towards Rural Homestead Transfer: Empirical Evidence from Anhui, China. *Land* **2023**, *12*, 714. [\[CrossRef\]](#)
17. Guo, B.; Yuan, L.; Lu, M. Analysis of Influencing Factors of Farmers' Homestead Revitalization Intention from the Perspective of Social Capital. *Land* **2023**, *12*, 812. [\[CrossRef\]](#)
18. Jin, Y.; Gomez-Pellon, E. Kinship networks and families of Chinese immigrants in Spain: Case studies. *Obets. Rev. Cienc. Soc.* **2023**, *18*, 189–206. [\[CrossRef\]](#)
19. Lu, M.; Guo, B.; Chen, G.; Yuan, L.; Xing, R.; Huang, Y. A Study on the Factors Influencing Farmers' Intention to Revitalize Idle Homesteads Based on Improved TPB Framework—Analysis of the Moderating Effect of Farmer Differentiation. *Sustainability* **2022**, *14*, 15759. [\[CrossRef\]](#)
20. Maviza, G.; Nzima, D. Intergenerational Kinship Networks of Support Within Transnational Families in the era of COVID-19 in the South Africa–Zimbabwe Migration Corridor. *S. Afr. Rev. Sociol.* **2022**, *52*, 89–104. [\[CrossRef\]](#)
21. Qi, W.; Li, Z.; Yin, C. Response mechanism of farmers' livelihood capital to the compensation for rural homestead withdraw-al-empirical evidence from Xuzhou City, China. *Land* **2022**, *11*, 2149. [\[CrossRef\]](#)
22. Rahman, M.; Chakraborty, T.K.; Al Mamun, A.; Kiaya, V. Land- and Water-Based Adaptive Farming Practices to Cope with Waterlogging in Variably Elevated Homesteads. *Sustainability* **2023**, *15*, 2087. [\[CrossRef\]](#)
23. Ruba, U.; Talucder, M. Potentiality of homestead agroforestry for achieving sustainable development goals: Bangladesh perspectives. *Heliyon* **2023**, *9*, 1454110. [\[CrossRef\]](#) [\[PubMed\]](#)
24. Shi, P.; Vanclay, F.; Yu, J. Post-resettlement support policies, psychological factors, and farmers' homestead exit intention and behavior. *Land* **2022**, *11*, 237. [\[CrossRef\]](#)

25. Liu, S.; Wang, Y. From Rural China to Urban–Rural China—A Perspective of Rural Change in China’s Transformation. *Manag. World* **2018**, *34*, 128–146+232. (In Chinese)
26. Jiao, C. From rural China to urban and rural China: The first half and the second half. *J. China Agric. Univ.* **2022**, *39*, 22–39. (In Chinese)
27. Si, W.; Jiang, C.; Meng, L. Leaving the Homestead: Examining the Role of Relative Deprivation, Social Trust, and Urban Integration among Rural Farmers in China. *Int. J. Environ. Res. Public Health* **2022**, *19*, 12658. [\[CrossRef\]](#)
28. Tao, D.; Wang, J.; Cai, H.; Zhao, K. Do kinship networks crowd out the new rural pension plan in China? Policy implications for an aging China. *Singap. Econ. Rev.* **2018**, *66*, 1647–1663. [\[CrossRef\]](#)
29. Verdery, A.M.; Entwisle, B.; Faust, K.; Rindfuss, R.R. Social and spatial networks: Kinship distance and dwelling unit proximity in rural Thailand. *Soc. Netw.* **2012**, *34*, 112–127. [\[CrossRef\]](#)
30. Walker, C. Space, kinship networks and youth transition in provincial Russia: Negotiating urban–rural and inter–regional mi-gration. *Eur.—Asia Stud.* **2010**, *62*, 647–669. [\[CrossRef\]](#)
31. Wang, J.; Zhao, K.; Cui, Y.; Cao, H. Formal and Informal Institutions in Farmers’ Withdrawal from Rural Homesteads in China: Heterogeneity Analysis Based on the Village Location. *Land* **2022**, *11*, 1844. [\[CrossRef\]](#)
32. Wei, R.; Fan, B.; Wang, Y.; Yang, R. A Query–Based Network for Rural Homestead Extraction from VHR Remote Sensing Images. *Sensors* **2023**, *23*, 3643. [\[CrossRef\]](#) [\[PubMed\]](#)
33. Wetherell, L. Holistic homesteading: A guide to a sustainable and regenerative lifestyle. *Libr. J.* **2022**, *147*, 63.
34. Yan, Y.; Yang, Q.; Su, K.; Bi, G.; Li, Y. Farmers’ Willingness to Gather Homesteads and the Influencing Factors—An Empirical Study of Different Geomorphic Areas in Chongqing. *Int. J. Environ. Res. Public Health* **2022**, *19*, 5252. [\[CrossRef\]](#)
35. Zantsi, S.; Mazwane, S.; Greyling, J.C. Determinants of potential land reform beneficiaries’ willingness to relocate from their former homeland homestead farms to commercial farms. *S. Afr. Geogr. J.* **2021**, *104*, 213–230. [\[CrossRef\]](#)
36. Zhang, J.; Liu, S.; Zhao, Z.; Li, B.; Fan, B.; Zhou, G. Spatio–Temporal Features and Influencing Factors of Homesteads Expansion at Village Scale. *Land* **2022**, *11*, 1706. [\[CrossRef\]](#)
37. Zhang, T.; Zhao, X. Do Kinship Networks Strengthen Private Property? Evidence from Rural China. *J. Empir. Leg. Stud.* **2014**, *11*, 505–540. [\[CrossRef\]](#)
38. Zhang, Y.; Torre, A.; Ehrlich, M. The impact of Chinese government promoted homestead transfer on labor migration and household’s well-being: A study in three rural areas. *J. Asian Econ.* **2023**, *86*, 10161610. [\[CrossRef\]](#)
39. Zhou, C.; Chan, R. State–scalar politics of rural land reform in China: The case of Wujin district. *Land Use Policy* **2022**, *114*, 105940. [\[CrossRef\]](#)
40. Moreda, T. The social dynamics of access to land, livelihoods and the rural youth in an era of rapid rural change: Evidence from Ethiopia. *Land Use Policy* **2023**, *128*, 106616. [\[CrossRef\]](#)
41. Liang, J.; Chen, J.; Tong, D.; Li, X. Planning control over rural land transformation in Hong Kong: A remote sensing analysis of spatio–temporal land use change patterns. *Land Use Policy* **2022**, *119*, 106159. [\[CrossRef\]](#)
42. Zhao, Q.; Jiang, G.; Yang, Y.; Tian, Y.; Fan, L.; Zhou, T.; Tian, Y. Multifunction change of rural housing land in metropolitan suburbs from the perspective of farmer households’ land–use behavior. *Land Use Policy* **2022**, *119*, 106206. [\[CrossRef\]](#)
43. Wang, Z.; Wang, W.; Yu, L.; Zhang, D. Multidimensional poverty alleviation effect of different rural land consolidation models: A case study of Hubei and Guizhou, China. *Land Use Policy* **2022**, *123*, 106399. [\[CrossRef\]](#)
44. Chen, H. Linking institutional function with form: Distributional dynamics, disequilibrium, and rural land shareholding in China. *Land Use Policy* **2022**, *120*, 106283. [\[CrossRef\]](#)
45. Wu, Y.; Long, H.; Zhao, P.; Hui, E. Land use policy in urban–rural integrated development. *Land Use Policy* **2022**, *115*, 106041. [\[CrossRef\]](#)
46. Zhou, N.; Cheng, W.; Zhang, L. Land rights and investment incentives: Evidence from China’s Latest Rural Land Titling Program. *Land Use Policy* **2022**, *117*, 106126. [\[CrossRef\]](#)
47. Jiao, M.; Xu, H. How do Collective Operating Construction Land (COCL) Transactions affect rural residents’ property income? Evidence from rural Deqing County, China. *Land Use Policy* **2021**, *113*, 105897. [\[CrossRef\]](#)
48. Zhao, S.; Jiang, Y. Heterogeneous effects of rural–urban migration and migrant earnings on land efficiency: Empirical evidence from China. *Land Use Policy* **2022**, *115*, 106003. [\[CrossRef\]](#)
49. Fu, H.; Peng, Y.; Zheng, L.; Liu, Q.; Zhou, L.; Zhang, Y.; Kong, R.; Turvey, C.G. Heterogeneous choice in WTP and WTA for renting land use rights in rural china: Choice experiments from the field. *Land Use Policy* **2022**, *119*, 106123. [\[CrossRef\]](#)
50. Komatsu, H.; Ambel, A.A.; Koolwal, G.; Yonis, M.B. Gender norms, landholdership, and rural land use fee and agricultural income tax in Ethiopia. *Land Use Policy* **2022**, *121*, 106305. [\[CrossRef\]](#)
51. Petrescu-Mag, R.M.; Petrescu, D.C.; Azadi, H. From scythe to smartphone: Rural transformation in Romania evidenced by the perception of rural land and population. *Land Use Policy* **2021**, *113*, 105851. [\[CrossRef\]](#)
52. Cao, Y.; Bai, Y.; Sun, M.; Xu, X.; Fu, C.; Zhang, L. Experience and lessons from the implementing of the latest Land Certificated Program in rural China. *Land Use Policy* **2022**, *114*, 105977. [\[CrossRef\]](#)
53. Qian, C.; Antonides, G.; Heerink, N.; Zhu, X.; Ma, X. An economic–psychological perspective on perceived land tenure security: Evidence from rural eastern China. *Land Use Policy* **2022**, *120*, 106294. [\[CrossRef\]](#)
54. Alphan, H.; Karamanli, E.; Derse, M.A.; Uslu, C. Analyzing pattern features of urban/rural residential land use change: The case of the southern coast of Turkey. *Land Use Policy* **2022**, *122*, 106348. [\[CrossRef\]](#)

55. Molnar, V.; Fedorko, G.; Stehlikova, B.; Michalik, P. Analysis of a pipe conveyor's idler housing failure due to a missing roller in terms of contact forces. *Eng. Fail Anal.* **2021**, *127*, 10552710. [[CrossRef](#)]
56. Borkataki, D.; Sharma, C.K. Social network, trust, and rural informalities: Transfer of tribal land ownership in protected areas of Assam, Northeast India. *Asian Ethn.* **2023**, *24*, 445–462. [[CrossRef](#)]
57. Borgatti, S.P.; Mehra, A.; Brass, D.J.; Labianca, G. Network Analysis in the Social Sciences. *Science* **2009**, *323*, 892–895. [[CrossRef](#)]
58. Robins, G. A tutorial on methods for the modeling and analysis of social network data. *J. Math. Psychol.* **2013**, *57*, 261–274. [[CrossRef](#)]
59. Chen, H. State Power and Village Cadres in Contemporary China: The case of rural land transfer in Shandong province. *J. Contemp. China* **2015**, *24*, 778–797. [[CrossRef](#)]
60. Chen, L.; Peng, J.; Zhang, Y. Research on the Impact of Rural Land Transfer on Non-Farm Employment of Farm Households: Evidence from Hubei Province, China. *Int. J. Environ. Res. Public Health* **2022**, *19*, 15587. [[CrossRef](#)]
61. Huang, K.; Cao, S.; Qing, C.; Xu, D.; Liu, S. Does labour migration necessarily promote farmers' land transfer-in?—Empirical evidence from China's rural panel data. *J. Rural Stud.* **2023**, *97*, 534–549. [[CrossRef](#)]
62. Kan, K. Creating land markets for rural revitalization: Land transfer, property rights and gentrification in China. *J. Rural. Stud.* **2020**, *81*, 68–77. [[CrossRef](#)]
63. Ma, J.; Chen, S. Does land transfer have an impact on land use efficiency? A case study on rural China. *Natl. Account. Rev.* **2022**, *4*, 112–134. [[CrossRef](#)]
64. Song, M.; Wu, Y.; Chen, L. Does the land titling program promote rural housing land transfer in China? Evidence from household surveys in Hubei Province. *Land Use Policy* **2020**, *97*, 104701. [[CrossRef](#)]
65. Wan, J.; Liu, Y.; Zhang, X. Conflict in informal rural construction land transfer practices in China: A case of Hubei. *Land Use Policy* **2021**, *109*, 10557310.
66. Wang, J.; Xu, Y.; Zou, L.; Wang, Y. Does Culture Affect Farmer Willingness to Transfer Rural Land? Evidence from Southern Fujian, China. *Land* **2021**, *10*, 594. [[CrossRef](#)]
67. Wang, P.; Wang, F. A study of the impact of land transfer decisions on household income in rural China. *PLoS ONE* **2022**, *17*, e0276559. [[CrossRef](#)] [[PubMed](#)]
68. Wang, Y.; Xue, Y. Calculation of inter-provincial differences in the appropriate proportioning of land transfer income to support rural revitalization. *Front. Environ. Sci.* **2022**, *10*, 1061401. [[CrossRef](#)]
69. Xu, D.-D.; Cao, S.; Wang, X.-X.; Liu, S.-Q. Influences of labor migration on rural household land transfer: A case study of Sichuan Province, China. *J. Mt. Sci.* **2018**, *15*, 2055–2067. [[CrossRef](#)]

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