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The Influence of External Environment Factors on Farmers' Willingness to Withdraw from Rural Homesteads: Evidence from Wuhan and Suizhou City in Central China

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Abstract: The external environment has an important impact on farmers' willingness to withdraw from rural homesteads. Based on the data from 392 farmers in Wuhan and Suizhou City from July to November 2021, we explored the significant role that the external environment played in farmers' willingness to withdraw from rural homesteads. The empirical results, according to the binary Logit model, showed that the number of homesteads, location, and economy positively affect farmers' intention to withdraw from their rural homesteads, and the effect in turn decreases. Famers in a village with no tourism resources are more likely to be willing to withdraw from their homesteads. Based on the empirical findings, this paper finally proposed that local governments should adopt a targeted policy to encourage farmers to orderly withdraw from their rural homesteads.

Keywords: rural homestead withdrawal; willingness; external environment; Hubei Province

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1. Introduction

The depopulation of rural areas is observed across the globe, including Australia, Japan, Europe, and North America [1–4]. As in any other country, since China's reform and opening up in the late 1970s, the rapid development of urbanization and industrialization has triggered a mass migration of rural populations to cities. According to statistics, by the end of 2015, there was 19 million hectares of rural residential land in China, among which nearly 20 per cent of housing was uninhabited all year round. From 2006 to 2014, the rural permanent population of China decreased by 160 million, while the rural residential land increased by 2.03 million hectares [5], which was called the paradox of population reduction and land growth [6,7]. This paradox has led to inefficient rural land use and even the phenomenon of "hollowing villages" (villages containing an enormous number of abandoned houses and homesteads) [8,9]. Therefore, the Chinese government has issued a set of rural land-use system reforms, which emphasize the crucial effects of the withdrawal from rural homesteads (WRH), for revitalizing rural land resources and promoting farmers' land value-added income [10–12]. In 2015, the Chinese central government decided to select 33 counties to carry out a pilot reform of the rural land system that aimed to explore a voluntary and paid withdrawal mechanism for homesteads, which is one of the important contents of the reform. Then, in 2018, the "Village Revitalization Strategic Plan (2018–2022)" was officially announced by the central government, and one of its major reforms was to establish and perfect the withdrawal from rural homesteads mechanism. Thus, these top-level policies provide strong support for rural households to withdraw from rural homesteads with compensation [13,14].

Withdrawal from rural homesteads has become a popular topic of rural land-use system reforms in recent years. The research content mainly focuses on the necessity of rural homestead withdrawal [15], the willingness to withdraw from rural homesteads [16–18], and the risk and mode of withdrawal [19–21]. As the process of withdrawal should be

carried out after the agreement of farmers, the key to withdraw from rural homesteads lies in the willingness of farmers [22]. Scholars have found that farmers' willingness to rural homestead withdrawal will be affected by many internal factors, such as farmers' gender, age, education, total family income, population size, etc. [16,17,23,24], which will determine farmers' cognitive level. In addition to internal factors, external environment factors, such as location conditions, also usually influences farmers' willingness to participate in rural homestead withdrawal [25,26]. Zhu and Ye asserted that rural homesteads in outer suburbs were limited by location conditions as land demand there was not strong. Therefore, farmers there usually had a stronger willingness to withdraw from homesteads to obtain fortune [27]. On the contrary, Huang et al. made a systematic analysis of the regional differences in the comprehensive income of homesteads withdrawal from the micro-scale and found that comprehensive income has a negative impact in the outer suburb, which means that the willingness to withdraw was relatively low based on the survey of Dongxihu District, Wuhan, Hubei Province in 2015 [28]. Zhao et al. echoed this conclusion by using distance to urban as one of the core variables of the logistic regression model [29]. Wu et al. pointed out that homesteads with tourism endowment could rely on local tourism resources to develop rural inns, with obvious asset attributes, thus farmers were more likely to accept homestead withdrawal [30,31]. Xia et al. selected different economically developed areas in Jiangsu Province and pointed out that the area of the homestead was the main affecting factor of willingness to withdraw from homesteads in developed areas, rather than economically developing areas [32].

There have been extensive studies on the subject of farmers' willingness to rural homestead withdrawal, which broke through the internal cognitive factors and began to try to incorporate external environmental factors into the study. Undeniably, it was generally believed that environment factors would have a differentiating effect on their willingness, but it was still yet to reach a consistent conclusion. Consequently, we investigate farmers' willingness to withdraw from rural homesteads, and it is important to substantiate and expand on these previous studies, using theoretical frameworks of external environmental factors. Then, we conducted an empirical test by drawing on the case of Wuhan and Suizhou City, Hubei Province in central China. This study contributes to providing references for arranging the withdrawal order of rural homesteads and accelerating the withdrawal process of rural homesteads in China under the debate on different influences from external environment factors.

2. Theoretical Frameworks

In China, the main content of the homestead system reforms is to explore the "separation of three rights", including collective ownership rights of rural homesteads, the qualification rights for homestead allocation, and homestead land use rights [33]. The qualification rights for homestead allocation mean rural homesteads are distributed by the village committees without any cost to members of rural collective organizations, but they cannot be sold or purchased on the land market. Farmers only have the right to use homesteads and the ownership of houses built for living [34–36]. Because homesteads and above-ground houses only have the function of living, the emergence of a large number of rural out-migrations leads to the large-scale idleness of rural homesteads. The separation of the three rights of rural homesteads makes it possible to establish and perfect the mechanism of rural homestead withdrawal, which is a good approach to solving this problem. In 2018, the "No. 1 Document of the Central Committee "was enacted, proposing that it is necessary to implement the collective ownership of homestead land, protect the qualification rights of farmers, and appropriately release the right to use rural homesteads. In addition, the amended Land Management Law of China in 2019 further stated in the form of legislation that "rural villagers who settle in cities are allowed to voluntarily withdraw from their rural homesteads with compensation; rural collective economic organizations and their members are encouraged to revitalize and make use of idle rural homesteads and unoccupied houses." It is obvious and clear that the policy orientation of guiding

the withdrawal of the right is to use homesteads based on the principle of voluntary compensation [37].

In our study, withdrawal from rural homesteads means farmers give up their usage rights to their rural homesteads and receive money or new houses as compensation. Because farmers have obvious differences in internal factors, such as education, the number of family members, household income, etc., when the large numbers of rural farmers move to cities, these factors can change farmers' perception of the land value and land dependence, which will then return to affect the farmers 'willingness to withdraw from homesteads. Generally, the higher the cognitive level of farmers, the more capable farmers are to make rational decisions [38]. The willingness directly depends on the farmer's comparison of the existing utilization value and expected income after the homesteads withdrawal, which comes from the farmer's comprehensive judgment of the external environment of the homesteads. When the compensation and operating income obtained by farmers who give up rural homestead use rights are higher than the economic value they receive from their own residence or other uses, this means that homestead withdrawal can increase their overall benefits, therefore, farmers tend to be willing to give up homesteads [27,28]. Referring to existing studies, external environmental influences on rural homestead withdrawal willingness include homestead situations and surroundings [32] (Figure 1).

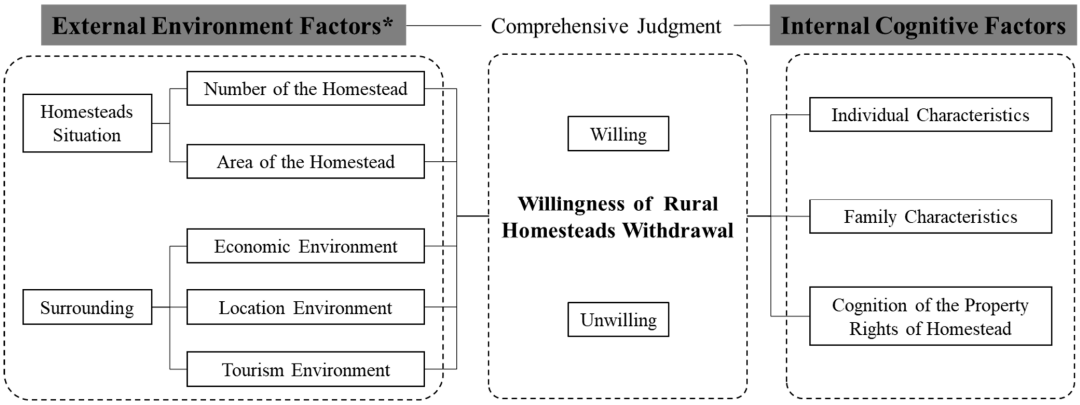

Figure 1. The theoretical analysis framework. Note: "*" indicates the focus of our study.

Rural homesteads provide basic housing security for farmers, so homestead withdrawal means the loss of living functions attached to them, after which finding alternative living spaces will be the primary task of farmers. When a farmer owns more than one rural homestead or has a relatively large homestead area, the farmer can make the most use of idle homestead withdrawal to revitalize "dead assets" and obtain income under the premise of residency security, which strengthens the willingness of the farmer to withdraw from the rural homestead. Our study selected the number and area of the homesteads to reflect the rural homestead situation.

Generally speaking, the more superior the surrounding where the idle homesteads are located, the more income benefits can be obtained after the withdrawal. In this paper, economic environment, location environment, and resource environment are selected to reflect the differences in the surrounding. Specifically, compared with less developed areas, developing areas have more diversified choices in the form of homestead reuse [39]. Additionally, the stronger operational ability of village collectives in developing areas can generally ensure that farmers can obtain more profits than before, so they will be more willing to hand over their homesteads to the village collectivity. Farmers in the outer suburbs are limited by location for obtaining some benefits through rental. Instead, they can get higher monetary compensation or housing compensation through the rural homesteads' replacement. In contrast, farmers in suburban areas are likely to have already used homestead rentals to obtain stable and generous economic returns and are more reluctant to withdraw than farmers in outer suburbs. Rural homesteads in villages with an

endowment of tourism resources can develop rural inn and agritainment to obtain more economic income, the asset attributes are obvious, so the farmers' willingness to withdraw from homesteads is stronger.

3. Data and Method

3.1. Study Area

Hubei Province is a typical agricultural province and an important province to export migrant workers in central China, where the rural construction land area is still growing [40]. It has 13 prefecture-level cities (Figure 2). In 2020, the total area of the province was 185.90 thousand km^2, and the permanent population was 57.75 million, among which the agricultural population was 21.43 million, accounting for 37% [41]. The study chose Wuhan City and Suizhou City for comparative analysis because of the following reasons. First, with the rapid development of urbanization, an obvious phenomenon of idle homesteads is caused by a large number of farmers working and living in cities both in Wuhan and Suizhou City. As early as 2016, there were 116,000 long-term idle houses in rural areas of Wuhan City and the number of rural labor transfers was as much as 982,000 [42]. Under the acceleration of urbanization, more people will settle in cities, and the idle area of rural homesteads will continue to expand in the future. In 2020, the idle area of village collective construction land in Suizhou City was 276.2 hectares, and there are 146,800 vacant homestead households, involving a population of up to 600,000 [43]. Secondly, there are significant differences in economic development between the two cities. Wuhan is the capital of Hubei Province and has a relatively higher level of economic development. Its per capita GDP is 125,500 CNY, which is much higher than the average level of the province. While per capita GDP of Suizhou City is 53,600 CNY and it is below the provincial average [41]. The economic developments of the two cities are at a medium level among the same type of cities in China, and Wuhan has a relatively better economic development, which can represent provincial capital cities, Suizhou can be the representation of the general prefecture-level cities.

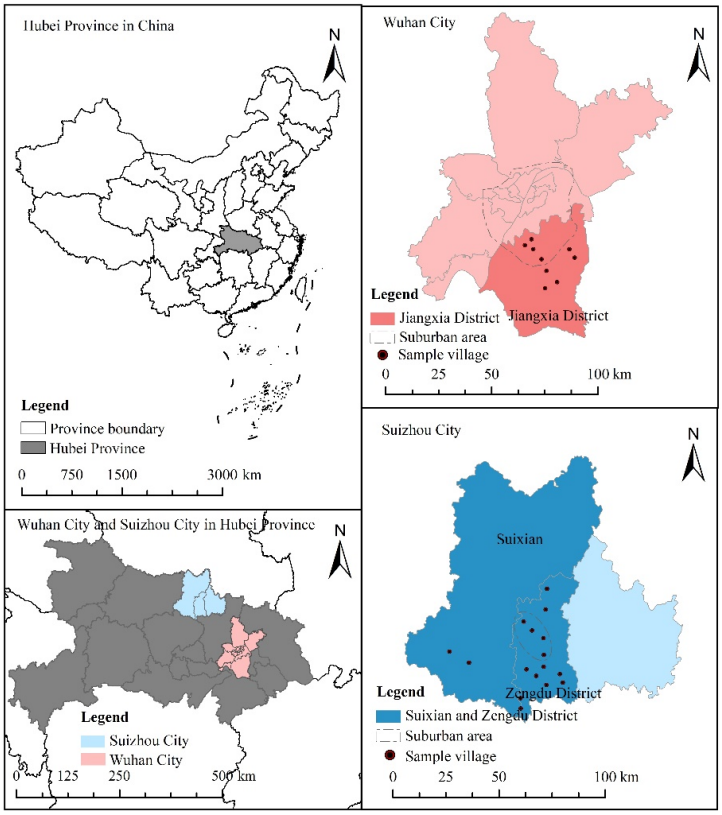

Figure 2. Study area and location of sample villages.

3.2. Data Collection

Data were collected from a field survey conducted in Wuhan City and Suizhou City in 2021. From April to May 2021, a questionnaire was designed. To ensure the validity and reliability of the questionnaire, between 5 and 12 June 2021, the pre-survey was carried out, covering every village of the final survey, and the questionnaire was modified several times to better serve the purpose. Under three professors' supervision and repeated discussion by the research group, the Supplementary Materials questionnaire consisted of three aspects: The first part was the basic information of farmers, including individual and family characteristics, cognitions of homestead rights; the second part was the status of homesteads; the last part was to measure the willingness of rural homestead withdrawal. From July to November 2021, 10 experienced and trained interviewers of the research group investigated the farmers in the two cities. The interviewers would translate the questions into vernacular languages and give oral explanations when the investigated farmers could not understand the questions well.

In addition, we distinguish between suburban villages and outer suburban villages according to the accessibility of urban public transport. Urban public transport can reach suburban villages and vice versa. The farthest outer suburban village is 65 km away from the city center. To ensure consistency within the cities as much as possible, taking the availability of data, location, and tourism resources into consideration, 9 villages in Jiangxia District of Wuhan City and 16 villages in Suixian District and Zengdu District of Suizhou City were selected to conduct field research in the form of face-to-face interviews. A total of 404 farmers were interviewed. Except for 12 samples lacking key information, the study finally obtained a total of 392 effective samples (Table 1).

Table 1. Profile of survey respondents in sample villages. (N = 392).

Feature	Options	Number	Percentage
Gender	Male	229	58.42%
	Female	163	41.58%
Age	<30 years old	37	9.44%
	30–50 years old	229	58.42%
	>50 years old	126	32.14%
Education level	Primary school and below	33	8.42%
	Junior high school	139	35.46%
	Senior high school or technical secondary college	117	29.85%
	Junior college	61	15.56%
	Undergraduate and above	42	10.71%
Number of family members	1–3	277	70.66%
	4–8	115	29.34%
Household annual income	10,000–50,000 CNY	216	55.10%
	50,000–100,000 CNY	176	44.90%
Pure farmer	The proportion of agricultural income in total income is over 90%	171	43.62%
	The proportion of agricultural income in total income is less than 90%	221	56.38%
Houses in urban area	Have	167	42.60%
	Do not have	225	57.40%
Cognitions of homestead disposal right	Homestead can buy and sell	149	38.01%
	Homestead cannot buy and sell	243	61.99%
Cognitions of homestead ownership	Belongs to the collective	199	50.77%
	Belongs to the personal/country	193	49.23%
Willingness of withdrawal from rural homesteads	Willing	149	38.01%
	Unwilling	243	61.99%

In the effective samples from the investigation of individual characteristics, there were 229 men and 163 women. Most of the surveyed farmers were between 30 and 50 years old, accounting for 58.42%, followed by farmers aged above 51 years old. The average educational level of the respondents reached the nine-year compulsory education requirement in China. When it comes to family characteristics, most family members were made up of two or three members. The household annual income ranged from 10,000 to 100,000 CNY in surveyed farming families, more than half of the families lived on a household income of no more than 50,000 CNY per year. In the form of farmer types, 56.38% were pure farmers whose agricultural incomes accounted for over 90% of their total income, while the rest 43.62% of interviewees were non-pure farmers. Regarding houses in the urban area, there were slightly more farmers without than with urban housing. Through the investigation of the farmers' recognition of homestead rights, we found that most farmers had a limited understanding of land ownership rights. Among the farmers' surveys, 50.77% regarded it as belonging to the collective. In response to the question "Whether it is possible to sell rural homesteads?", 41.33% of farmers thought that rural homesteads could be sold randomly to other people, while the other 58.64% of farmers held the opposite opinion.

3.3. Method

The study defined whether the interviewee was willing to hand over their homestead land use rights to the village collective as a dependent variable (Yes = 1, No = 0), as it is a discrete variable and cannot be directly estimated by the general linear model. Therefore, the binary Logit model is established to conduct an empirical analysis of the explanatory variables of homesteads withdrawal. The formula of the binary Logit model is expressed as:

$$Y = \beta X + \varepsilon \tag{1}$$

where the dependent variable Y is used to represent the willingness of handing over their homestead land use rights to the village collective, X is the factors influencing farmers' willingness to withdraw from rural homesteads; β is the regression coefficient of influencing factors; ε is the random disturbance term.

Then, the probability of homesteads withdrawal willingness is shown as follows:

$$P(Y = 1|X = x_i) = \frac{exp(\beta X)}{1 + exp(\beta X)} \tag{2}$$

where P is the probability that farmers are willing to withdraw from homesteads; x_i (i = 1, 2, 3, . . . , 14) represents a series of factors affecting farmers' willingness to withdraw from homesteads; the meaning of β and X are the same as Formula (1).

3.4. Variables

The dependent variable of this study is the willingness of farmers' withdrawal from homesteads. According to the theoretical analysis framework, the explanatory variables are homestead situations and surroundings. The homestead situation mainly describes the basic characteristics of homesteads, so the number of homesteads and the area of the homesteads are selected as the variables for this study. The surrounding mainly describes the development characteristics of the village where the homestead is located, and this study selects regional economic situation, location of homesteads, and tourism environment as specific indicators (See Table 2).

Referring to existing studies [27,44–48], control variables include the following three parts: (1) individual characteristics, including gender, age, and education level; (2) family characteristics, including the number of family members, annual income of the family, whether it is a pure farmer, and whether it has a house in urban areas; (3) cognition of the ownership of homestead, including cognition of homestead ownership and the disposal right of homestead. It has been reported that gender (male), education, family income,

and having a house in an urban area positively affect farmers' willingness to participate in homestead withdrawal, whereas age, number of family members, and being a pure farmer have a negative effect. In addition, previous studies have associated farmers' willingness to participate in homestead withdrawal with cognition of property rights, but the impact between the two is uncertain. These variables are coded as follows:

Table 2. Definition and descriptive statistics of each variable.

Variables Category		Definition	Mean	Std. Err.
Independent variable	Willingness to withdraw from rural homesteads	Willing = 1; unwilling = 0	0.38	0.49
Homestead situation	Number of the homestead	1 or 2	1.17	0.38
	Area of the homestead	100 m^2 or less = 1; 100–200 m^2 = 2; 200–300 m^2 = 3; more than 300 m^2 = 4	2.15	0.78
Surrounding	Economic Environment	Wuhan = 1; Suizhou = 0	0.41	0.49
	Location Environment	Outer suburbs = 1; suburbs = 0	0.65	0.48
	Tourism Environment	Have tourism resources = 1; no tourism resources = 0	0.31	0.46
Control variables	Gender	Male = 1; female = 0	0.58	0.49
	Age	<30 years old = 1; 30–50 years old = 2; >50 years old = 3	2.23	0.60
	Education level	Primary school and below = 1; junior high school = 2; senior high school or technical secondary college = 3; junior college= 4; undergraduate and above = 5	2.85	1.12
	Number of family members	-	3.16	1.06
	Household annual income	-10^4 CNY	4.26	2.12
	Pure farmer	The proportion of agricultural income in total income is over 90% = 1; the proportion of agricultural income in total income is less than 90% = 0	0.44	0.50
	Houses in urban area	Have = 1; do not have = 0	0.43	0.49
	Cognitions of homestead ownership	The ownership of homestead belongs to the collective = 1; the ownership of homestead belongs to the personal/country = 0	0.51	0.50
	Cognitions of homestead disposal right	Homestead can be bought and sold = 1; homestead cannot be bought and sold = 0	0.41	0.49

4. Results

4.1. Descriptive Statistics by Farmers' Willingness of Rural Homestead Withdrawal

As illustrated in Table 3, when farmers were asked whether they were willing to withdraw from rural homesteads, only 38.01% answered "yes", but 61.99% refuse to withdraw. Obviously, farmers still had concerns about withdrawal from rural homesteads. For the impact of external environmental factors on homestead withdrawal, the phenomenon of multiple homesteads for one family was very common, with an average of 1.17 homesteads. There were 67.64% of farmers who own more than one block of homesteads and were willing to withdraw from rural homesteads, 31.79% of whom only own one piece. For the area of the homestead, farmers with a homestead of 100 m^2 to 200 m^2 were most willing to withdraw from the rural homestead, accounting for 41.67%. Compared to homesteads in less developed areas (Suizhou City), farmers whose homestead was in a developing area (Wuhan City) preferred to withdraw, accounting for 46.90%. Regarding the location conditions of rural homesteads, 42.75% of farmers with rural homesteads in outer suburbs had a higher probability of withdrawing from their homesteads, compared to only 31.74% in the suburbs. The endowment of tourism resources also reflected a difference in willingness, with 33.06% of farmers with homesteads near tourism resources willing to withdraw from their homesteads, compared to only 40.22% with no tourism resources.

Table 3. Willingness of rural homestead withdrawal in different external environments.

Feature	Options	Number	Percentage	Willingness of WRH
Number of the homestead	1	324	82.65%	31.79%
	2	68	17.35%	67.64%
Area of the homestead	<100 m^2	66	16.84%	34.85%
	100–200 m^2	228	58.16%	41.67%
	200–300 m^2	70	17.86%	31.43%
	>300 m^2	28	7.14%	32.15%
Economic Environment	developing areas (Wuhan)	230	58.67%	46.90%
	Less developed areas (Suizhou)	162	41.33%	31.70%
Location Environment	Outer suburbs	255	65.05%	42.75%
	suburbs	137	34.95%	29.20%
Tourism Environment	Have tourism resources = 1;	121	30.87%	33.06%
	no tourism resources = 0	271	69.13%	40.22%

4.2. Model Results

VIF is a widely used tool to test multicollinearity problems in linear regression models, and a value of VIF less than 10 assumes that there is no multicollinearity. The results show that VIF values of all variables are less than 10 and close to 1, indicating that there is no strong multicollinearity among independent variables in the model [49,50]. The study then adopts Stata16 software and uses the binary Logit model for empirical analysis. The omnibus test results of the model coefficients show that the chi square value of the regression model is 104.73, and the *p* value passes the significance tests at the 1% level. The Hosmer–Lemeshow goodness of fit test results show that the chi square value of the regression model is 11.90, and the *p* value is 0.16, which is greater than 0.05, indicating that the model has a goodness of fit and is suitable for the binary Logit model. The direction and size of independent variables can be analyzed and judged by regression results.

Table 4 shows the estimated results of the model. Four explanatory variables have significant impacts on the willingness of withdrawal from homesteads. Firstly, the coefficient of the number of homesteads is 1.905 with a significance of 1%-level, indicating that the farmers with more homesteads are more willing to withdraw from rural homesteads. Secondly, the coefficient of regional economic level is 0.905, significant at 1%-level, which indicates that in the areas with a higher economic level, the farmers are more willing to give up their usage rights to rural homesteads. Thirdly, the coefficient of location conditions of homestead is 1.401, significant at 1%-level, indicating that farmers in the outer suburbs are more willing to withdraw from rural homesteads than those in the suburbs. For each additional unit of the above three factors, the enthusiasm of farmers to turn over the homesteads will increase by 6.720, 2.471, and 4.060 times, respectively. Finally, the coefficient of tourism resources is −0.860, with a significance of 1%-level, which shows that without tourism resources, farmers have a higher willingness to withdraw their homestead use rights.

Three control variables have significant impacts on the willingness of withdrawal from rural homesteads among which education level and whether the farmer has a house in urban areas have a significant positive effect, with a coefficient of 0.281 and 1.067, respectively, significant at 10%-level and 1%-level. The results show that the farmers with a higher education level and who have houses in urban areas have a more positive intention to withdraw from rural homesteads. With the improvement of educational level and houses in urban areas, the enthusiasm of rural households to turn over their homesteads increased by 1.352 times and 2.906 times, respectively. In contrast, the coefficient of the number of family population is −0.397, with a significance of 1%-level, which shows that a smaller family tends to have the willingness to hand over homesteads for unified revitalization.

Table 4. Results of the binary Logit model regression.

Variables Category		Coefficient	S.D	Z Score	Marginal Effects
Homestead situation	Number of the homestead	1.905 ***	0.339	5.62	6.720
	Area of the homestead	−0.246	0.179	−1.38	−0.782
Surrounding	Economic Environment	0.905 ***	0.335	2.70	2.471
	Location Environment	1.401 ***	0.304	4.61	4.060
	Tourism Environment	−0.860 ***	0.324	−2.65	−0.423
Control variables	Gender	0.361	0.259	1.40	1.435
	Age	−0.108	0.244	−0.44	−0.898
	Education level	0.281 *	0.138	2.04	1.325
	Number of family members	−0.397 ***	0.128	−3.09	−0.672
	Household annual income	0.008	0.068	0.12	1.008
	Pure farmer	−0.458	0.298	−1.54	−0.633
	Houses in urban area	1.067 ***	0.298	3.58	2.906
	Cognitions of homestead ownership	0.250	0.266	0.94	1.284
	Cognitions of homestead disposal right	−0.113	0.301	−0.38	−0.893
	_cons	−3.226 ***	0.961	−3.36	−0.040
	Obs	392			
	Prob > chi^2	0.000			

Note: (1) *, *** indicate the level of significance of 10% and 1%, respectively. (2) Marginal effects represent the rate at which the dependent variable occurs when the explanatory variable changes.

5. Discussion

5.1. Comparison of Influence of External Environmental Factors with Existing Studies

On the whole, the results showed that there is a close and significant relationship between surrounding environment factors and famers' willingness to withdraw from rural homesteads, based on the descriptive statistics and binary Logit model. First, the number of homesteads and the economy positively affect willingness to withdraw from rural homesteads, which echoes the study of Zheng et al. and Zhao et al. [29,51]. The reason why the number of homesteads has the highest impact on the withdrawal willingness may be that although farmers in Hubei Province have more homesteads, they will not have enough money to build houses and rent them. Idle homesteads do not bring farmers any economic return, but withdrawal from rural homesteads can create more income.

Second, those with homesteads located in outer suburbs would have more of an intention to give up their usage rights. However, evidence from Xu and Liu showed that those whose homesteads were located in suburbs were more willing to withdraw from rural homesteads [52]. Contrary to the conclusions of this study, the possible reason is that their samples came only from the Jiangxia District of Wuhan City, while samples of this study also included the less developed areas (Suizhou City). Additionally, China's land acquisition is in accordance with the integrated district land price of compensation in recent years. When the suburb homesteads are within the scope of urban planning, farmers prefer letting their homesteads be expropriated as they believe that the one-time land expropriation compensation obtained through location advantages will be higher than the accumulated income of withdrawing from rural homesteads [53].

Third, our finding is that the endowment of tourism resources is a significantly negative indicator of the willingness to withdraw from rural homesteads. It is likely that due to incomplete development and the strong seasonality of tourism resources selected in this study, the income obtained by farmers from autonomous management of rural homesteads is more than the compensation obtained by the village collective after the withdrawal. Therefore, when there are tourism resources in the area where the homestead is located, the quality of tourism resources development and related policy support are also likely to positively affect the intensity of the willingness to withdraw from rural homesteads [54].

Finally, our study includes nine control variables, such as age, gender, education level, and so on. This study focuses on the influence of external environmental factors on the

willingness to withdraw from rural homesteads, and it adds as many control variables as possible to avoid omitted variable biases [55]. Judging from the existing research, the above control variables are also critical factors in farmers' willingness to rural residential land consolidation in other countries [56–59]. Withdrawal from rural homesteads is a native method for China to guide farmers to participate in residential land consolidation. Farmers with good education, fewer family members, and houses in urban areas are more likely to be willing to withdraw. The influence directions of other control variables are in line with expectations [44,46,60].

5.2. Perspectives on the Generalizability of the Study

Scholars believe that there are differences in the willingness of farmers to withdraw from rural homesteads under different external environments, but they have reached heterogeneous conclusions. Some studies just add external environmental factors as explanatory variables to analyze the impact of these factors on willingness of rural homestead withdrawal, without establishing a rigorous theoretical framework and are limited to a particular village or a particular city. Consequently, our study constructs the theoretical framework of influencing factors of rural homestead withdrawal willingness and focuses on external environmental factors. Additionally, this study applies a well-representative sample of data to verify the influence of external environmental factors on the willingness of farmers to withdraw from their homesteads to promote the withdrawal from rural homesteads policies nationwide.

Based on the research results of the study in Hubei Province of central China, we can draw two valuable inferences. First, the suburban villages of capital cities in the eastern regions are the frontier areas of modernization and urbanization, which have the advantages of attracting enterprises sensitive to land cost and floating population agglomeration. This also means that the apparent degree of asset value is very high, meeting the requirements of self-occupancy [61]. The expected income after withdrawing from rural homesteads is likely to be much lower than the income obtained with existing use, and farmers lack the willingness to withdraw from rural homesteads. If the development of rural tourism in these areas is relatively better and the agglomeration effect is formed, then farmers may be willing to withdraw. Second, there is more land and there are fewer people in the western region of China, and the phenomenon of multiple homesteads for one family is also more prominent. However, the social economy of both provincial capital cities and general prefecture-level cities are less developed, and farmers do not have the conditions to build houses on rural homesteads, through leasing, homesteads as shares and other ways to make incomes. Thus, withdrawing from the idle homesteads can increase the area of arable land through land consolidation, thereby increasing the occupation index of arable land so that farmers can obtain more economic compensation, and homestead withdrawal can be prioritized in these areas.

5.3. Research Limitations

Due to the limitation of data sources, the selection of factors for the withdrawal of rural homesteads from external environmental impacts is not comprehensive enough, for example, the distance between villages and their major city can be used as a variable of location environment, which can be specified to more clearly see how it influences farmers' willingness. Future studies should establish a scientific index system of influencing factors and select more samples from different regions for verifying the generalizability of this study.

6. Conclusions

We examined the effects of the external environment on farmers' willingness behind withdrawing from rural homesteads. The results show that for a number of homesteads, location and economic environment are a significant positive impact on willingness, and the effect in turn decreases. Famers in a village with an endowment of tourism resources are

more reluctant to withdraw from their homesteads. Differences in the external environment of rural homestead withdrawal highlight the importance of adopting different policies according to local characteristics and not doing one policy for all. Based on the above findings, some possible policy implications present themselves. (1) Scientifically arrange the withdrawal of rural homesteads; consider the timing of withdrawing based on the willingness of farmers. Areas with a good level of economic development, outer suburbs, and "one family and multiple houses" may arrange withdrawal first. (2) Improve the quality of tourism resources, attract more tourists, and effectively increase the sustainable income level of farmers in villages with tourist resources. Take the withdrawal of homesteads as an opportunity to help rural revitalization. (3) Homestead rental is very active in the suburbs, standardizes the spontaneous circulation behavior of farmers, establishes perfect trading procedures and management policies, and maintains a good trading order in suburban areas.

Our research can be helpful to understand what external environmental factors affect farmers' willingness. The differences in the external environment of rural homestead withdrawal highlights the importance of the government's "implement policies according to the place". Comparing the external environment between the central region and the other two regions, the eastern region, and the western region in China, our government can lead farmers to withdraw from rural homesteads or provide other institutional guarantees to speed up the reform of the rural homestead system.

Supplementary Materials: The following are available online at https://www.mdpi.com/article/10.3390/land11091602/s1, Questionnaire (parts relevant to this study).

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