ISSN: 2710-0170

The performance evaluation of homestead exit under the background of rural revitalization

Haiting Guo

School of Public Administration, Sichuan University, Chengdu 610065, China.

Abstract

The reform of rural residential land system was piloted in 2015. Then, the scope of the pilot was expanded in 2020. An important part of the reform of the homestead system is the homestead exit, which is also a basic and important front-end link in the reform of the homestead system. In this study, the four pilot area: Pengshan District, Ziyang City, Cuiping District and Luxian District, which are close to Chengdu City of Sichuan Province, were investigated and questionnaires were distributed to the farmers. Based on the research data, from the perspective of farmers, this study selects indicators from three aspects including economic benefits, social benefits and living environment to make sub-objective evaluation and comprehensive evaluation of homestead exit performance. In the calculation process, the entropy weight method is used to calculate the weight of each index and the fuzzy comprehensive evaluation method is used to calculate the performance score. The research results show that the comprehensive performance of homestead exit in the surveyed areas is "good", and the performance evaluation results are "average", "good" and "good" respectively from the three aspects of economic benefits, social benefits and living environment.

Keywords

Sichuan province, homestead exit, performance evaluation, fuzzy comprehensive evaluation.

1. Introduction

The homestead is a type of rural collective construction land, which is used by rural villagers to build houses, ancillary rooms and courtyards. For the owner of the right to used the homestead, it not only has the residence function, but also has the security function, which shows its importance to the rural development.

1.1. Homestead System Reform and Rural Revitalization.

From the policy point of view, the pilot reform of the homestead system is closely related to the implementation of the rural revitalization strategy, and they complements each other.

In 2015, the first round of homestead system reform was launched, with a total of 33 pilot areas, including Pixian County and Luxian County in Sichuan Province. This round of reform has achieved obvious results by the end of 2018, laying a solid foundation for the emergence of the new Land Administration Law. In September 2020, there are 107 pilot areas in the new round of rural homestead system reform, including Pidu District of Chengdu City, Luxian County, Pengshan District of Meishan City, Cuiping District of Yibin City, Xichang City and Ziyang City in Sichuan Province. From the expansion of the pilot scope in the whole country and Sichuan Province, we can see that the Party and the state attach great importance to the homestead system reform.

Consider the homestead system reform in combination with the rural revitalization strategy. On October 18,2017, the "implementation of the rural revitalization strategy" was put forward for the first time, and "thriving businesses, pleasant living environments, social etiquette and

ISSN: 2710-0170

civility, effective governance, and prosperous life" were pointed out. On October 16,2022, the Report of the 20th CPC National Congress proposed to "comprehensively promote rural revitalization". Rural revitalization is an important measure to promote the priority development of agriculture and rural areas, in which thriving businesses is the key and prosperous life is the fundamental. Only by ensuring the demand for rural land a series of goals of rural revitalization be achieved.

Deepening the homestead system reform can promote the realization of the goals of rural revitalization. Firstly, while playing the residence function, if we can explore effective ways to use idle and inefficient homestead for industry development, it will promote the realization of "thriving businesses and prosperous life". Secondly, reasonable layout and effective use of homestead may promote "pleasant living environments". Finally, after the development of rural economy and the improvement of material living standards, farmers have more opportunities to improve their spiritual living standards, and in the process of the pilot reform of the homestead system, farmers' cognition has been constantly improved, and exchanges between cadres and masses have increased, which is conducive to "social etiquette and civility, effective governance".

1.2. The Research Status.

Since the 1990s, some scholars have studied the paid use of rural homestead, Zhongxiao Li et al put forward the drawbacks of free use of homestead, further discussed the basis of paid use of homestead, and introduced the practice of paid use and the determination of paid usage standard (1993). From 2005 to 2011, the number of domestic articles on homesteading related issues has increased significantly. In terms of homestead exit, scholars analyzed the intention, behavior and influencing factors respectively.

In terms of performance evaluation of the homestead system reform, some scholars, starting from the perspectives of agriculture, rural areas and farmers, used the survey data of farmers in 11 villages of 5 districts and counties around Chengdu, to calculate their performance scores of homestead system reform by entropy weight method and fuzzy comprehensive evaluation method (Sijie Fan et al., 2014). Jian Tang et al. compared and analyzed the effects of the homestead system reform in Jinjiang City of Fujian Province, Yiwu City of Zhejiang Province, Yujiang District of Jiangxi Province, Yicheng City of Hubei Province, and Luxian County of Sichuan Province, and evaluated the performance of homestead system reform based on five models (2018). In terms of homestead exit alone, some scholars made a comparative analysis of the homestead exit reform modes in three typical pilot areas of Jinjiang City, Yujiang District and Yiwu City (Xingming Zheng et al., 2022). Runqiu Liu et al. used DSP identification, analytic hierarchy process and comprehensive evaluation to build theoretical framework and index system for performance evaluation on rural homestead exit (2019). In their another paper, the S-CAD method was used to evaluate the rural homestead exit pilot policy in Chengdu from the two perspectives of the policy itself and the policy implementation (Runqiu Liu et al., 2021). In the existing literature, scholars mostly use qualitative methods supplemented by quantitative methods in the whole article or a part of the article to analyze the effects of the homestead system reform in different regions or different models, while there are few articles on the performance evaluation of the homestead exit reform.

Based on the above analysis, this study intends to evaluate the performance of homestead exit in some pilot areas of Sichuan Province from three aspects: economic benefits, social benefits and living environment, and quantitatively analyze the effect of homestead exit reform from the perspective of farmers.

ISSN: 2710-0170

2. Mechanism Analysis

2.1. Homestead Exit and Changes of Farmers' Economic Conditions.

From the perspective of economic benefits, some measures in several pilot areas of the survey are conducive to improving rural household income.

In Cuiping District of Yibin City, Lizhuang Town has explored a four-party co-construction model of "homestead + collective economic organization + investment corporation + design and operation company", taking advantage of its location near the urban area and good tourism resource endowment to develop homestay and catering business. Luxian County of Luzhou City allows farmers to acquire the homestead across regions to the new village settlement site. the cross-regional paid use fee belongs to the collective economic organization of the housing land. Ziyang City has established a rural benchmark land price system, explored the paid withdrawal of homestead use rights, established the homestead and rural housing transfer system, innovated the collective economic development model, promoted the mortgage financing of rural housing property rights, and adopted a variety of models to make full use of the homestead to develop shared kitchens, health care, markets, e-commerce courtyards. Thus, while increasing the opportunities for farmers to increase their income, it can provide supporting facilities for local tourist attractions such as "Reclining Buddha Tourist Attraction" and "Swing Fantasy Island". The villages and towns in Pengshan District of Meishan City take a variety of ways to revitalize the homestead, develop leisure tourism, rural accommodation, cold chain logistics base and so on.

The above measures are conducive to providing land for the development of rural industries and employment opportunities for rural households. Because the right of homestead qualification belongs to farmers, farmers can also get certain benefits after taking various ways to revitalize homestead.

2.2. Homestead Exit and Changes of Farmers' Social Life Convenience.

After the homestead exit, the village collective needs to be equipped with certain infrastructure when using the surplus homestead to develop tourism or storage and other industries. In the process of village development, it is inevitable to construct various facilities such as places of amusement and recreation and roads. For example, Fuxing Village, Jiaming Town and Daping Village, Fuji Town of Luxian County, adopted the construction of centralized resettlement sites to provide rural housings for farmers and built roads. The above measures can make it more convenient for farmers to obtain the services needed in production and life.

2.3. Homestead Exit and Changes of Farmers' Living Environment.

When the village collective uses the homestead to develop related industries, it needs to create a better environment to attract tourists, and it must also improve the rural environment to enhance the satisfaction of farmers who withdraw from the homesteads. Xinqiao Village, Gongyi Town, Pengshan District of Meishan City, combined with the homeatead exit to optimize the village layout, activate stock homestead , composite utilization, to build a beautiful and livable village; in the process of tourism development, Lizhuang Town in Cuiping District of Yibin City has formed a good village layout and characteristic rural landscape. Some villages have built domestic sewage and garbage treatment facilities in centralized resettlement sites, and the greening level has also been improved. All these are conducive to improving the living environment of rural households and building beautiful villages.

ISSN: 2710-0170

3. Data and Model

3.1. Data Collection and Sample Characteristics.

The research area is 4 pilot areas of homestead exit around Chengdu City, including Pengshan District of Meishan City, Ziyang City, Cuiping District of Yibin City and Luzhou County of Luzhou City.

The study used survey data from August to October 2022 in the above regions. A total of 114 valid questionnaires were obtained. The characteristics of the investigated samples are shown in Table 1. More than 80% of the respondents are over 45 years old, and nearly half of them are over 60 years old. More than 90% of the respondents have a junior high school education or below. Most of the respondents work as farmers. Nearly 30 percent of the surveyed families have bought houses in cities and towns. Most families have a registered population of three to five people.

Table 1 Sample Characteristics of Homestead Exit

Feature	Option	Quantity	Proportion (%)
Gender	Male	74	64.91
	Female	40	35.09
Age	30-45	14	12.28
	45-60	45	39.47
	≥60	55	48.25
Education	Elementary school and below	72	63.16
	Junior High School	33	28.95
	Senior High School	5	4.38
	Vocational/technical secondary college	1	0.88
	specialized subject in college	0	0.00
	undergraduate college	3	2.63
	Postgraduate and above	0	0.00
occupation	Personnel of government departments, enterprises and public institutions, party and government organs and public organizations at all levels	4	3.51
	Professional and technical personnel (teachers, doctors, engineers and technicians, etc.)	1	0.88
	Enterprise staff and management personnel	0	0.00
	self-employed	5	4.39
	freelancer	3	2.63
	farmer	85	74.56
	Student	1	0.88
	the emeritus and retired	3	2.63
	soldier	0	0.00
	others		
Whether to buy a house in town	yes		
	no		
Family size	≤2	30	26.31
	3-5	69	60.53
	≥6	15	13.16

3.2. Research Method.

In this study, the fuzzy comprehensive evaluation method is used to calculate the homestead exit performance. Before using the fuzzy comprehensive evaluation method, the weight of each

ISSN: 2710-0170

index should be determined in advance. Since the data obtained from the investigation is complete, the entropy weight method can be used to calculate the index weight.

Since the 10 indicators used in the study are all positive indicators, the data are standardized according to the following formula.

$$x_{ij}' = \frac{Max(x_{ij}) - x_{ij}}{Max(x_{ij}) - Min(x_{ij})}$$

Where x_{ij} represents the data of the JTH indicator of the ith sample, there are n indicators, m samples, i=1,2,3,... m, j=1,2,3... n. In this study, it is clear that m=114. In order to avoid ln0 in the subsequent calculation process using entropy method, the data is translated, that is, 0.01 is added on the basis of data standardization. Then the processed data is used to calculate the sample weight. The calculation formula is as follows:

$$p_{ij} = \frac{x_{ij}}{\sum_{i=1}^{m} x_{ij}}$$

Then calculate the entropy of each index:

$$e_j = -k\sum_{i=1}^{m}(p_{ij}\ln(p_{ij})), k > 0, 0 \le e_{ij} \le 1$$

Where k=1/ln(m), that is, Take the inverse of the natural log of the number of samples. Then, the difference coefficient d_j of each indicator is calculated. The information utility value of item j is equal to the difference between its entropy value e_j and 1. The greater the information utility value of this indicator, the greater its importance to the evaluation and the greater its weight. The d_j is calculated as follows:

$$d_j = 1 - ej$$

Finally, the weight of each evaluation index is calculated. The weight of item j is calculated as follows:

$$w_j = \frac{d_j}{\sum_{j=1}^{n} d_j}$$

In the investigation, it is impossible for farmers to accurately quantify the changes when they describe the situation after the exit of homestead, and there is no clear boundary between different descriptions under subjective evaluation. Therefore, it is necessary to adopt a method that can solve the non-deterministic problem. Fuzzy comprehensive evaluation method is a method to make comprehensive evaluation of a thing for a certain purpose under the fuzzy environment, considering the influence of various factors. Its general model is as follows:

$$S = W \circ R = (\mu_1, \mu_2, \mu_3, \ldots, \mu_m) \circ \begin{pmatrix} r_{11} & r_{12} & \cdots & r_{1n} \\ r_{21} & r_{22} & \cdots & r_{2n} \\ \cdots & \cdots & \cdots & \cdots \\ r_{m1} & r_{m2} & \cdots & r_{mn} \end{pmatrix} = (s_1, s_2, \ldots, s_n)$$

In this formula, W is the weight vector, R is the evaluation matrix, "º" is the fuzzy synthesis operator, S is the fuzzy evaluation vector, s_j represents the overall membership degree of the evaluated object to the fuzzy subset element v_j of the evaluation grade, m is the number of evaluation indicators, and n is the evaluation grade value.

3.3. Index System.

Based on the fuzzy comprehensive evaluation method, the paper constructs the performance evaluation index system of homestead exit. The index system selects a number of evaluation indicators from economic benefits, social benefits and living environment, and

ISSN: 2710-0170

comprehensively considers the impact of homestead exit on farmer's production and life. The corresponding relationship of each layer and the detailed description of each indicator are shown in Table 2:

Table 2 From the Perspective of Farmers, Homestead Exit Evaluation Index System

goal layer	criterion layer	index layer	Indicator evaluation grade description
Homestead exit performance(A)	economic benefits (B_1)	C1=Change in annual net household income after homestead exit (RMB)	[60000,100000)=5，[20000,60000)=4，[-20000,20000)=3，[-60000,-20000)=2，[-100000,-60000)=1
	social benefits (B_2)	C2=Changes in the area of community cultural and recreational activities	Much better=5，a little better=4，unchanged=3，a little worse=2，much worse=1
		C3=Number of recreational activities organized by the community	
		C4=Access to medical care	
		C5=Accessibility to school	
		C6=Ease of access to integrated services such as supermarkets and express delivery	
	living environment (B_3)	C7=Treatment of domestic sewage	
		C8=Domestic waste disposal situation	
		C9=Village appearance changes	
		C10=Change of afforestation in residential areas	

4. Results

The weights of indicators were calculated according to the aforementioned entropy weight method, and each evaluation indicator was divided into 5 levels. Thus, the fuzzy membership matrix and weight vector of each evaluation indicator under each criterion layer are obtained, which are sorted out in Table 3.

Table 3 Homestead Exit Performance Evaluation Related Data

	Index	Weight（%）	5	4	3	2	1
economic benefits (B_1)	C1	100.00	0.0175	0.0877	0.8596	0.0263	0.0088
social benefits (B_2)	C2	22.34	0.2632	0.3596	0.3684	0.0088	0.0000
	C3	19.95	0.2544	0.4211	0.3158	0.0088	0.0000
	C4	6.22	0.2368	0.3509	0.3596	0.0526	0.0000
	C5	27.33	0.2632	0.3246	0.3860	0.0263	0.0000

ISSN: 2710-0170

living environment (B_3)	C6	24.16	0.2368	0.4123	0.3246	0.0263	0.0000
	C7	12.59	0.2807	0.4035	0.2895	0.0175	0.0088
	C8	14.35	0.3509	0.3860	0.2281	0.0175	0.0175
	C9	58.57	0.1053	0.5526	0.1754	0.1667	0.0000
	C10	14.49	0.1754	0.5088	0.2632	0.0351	0.0175

The performance of homestead exit in economic benefits, social benefits and living environment is calculated according to the index weight and membership matrix of each element, then the following results are obtained:

$$B_1 = W_1 \circ R_1 = [0.0175, 0.0877, 0.8596, 0.0263, 0.0088]$$
$$B_2 = W_2 \circ R_2 = [0.2534, 0.3745, 0.3516, 0.0205, 0]$$
$$B_3 = W_3 \circ R_3 = [0.1728, 0.5036, 0.2100, 0.1074, 0.0062]$$

Evaluation grades were assigned according to the last column of Table 2, and the performance scores of economic benefit, social benefit and living environment were further calculated as S_1, S_2 and S_3, respectively. Among them, the performance score results are 5-point scale, with 5 points indicating very good, 4 points indicating good, 3 points indicating average, 2 points indicating poor, and 1 point indicating very poor.

$$S_1 = B_1 \circ [5,4,3,2,1]^T = 3.0785$$
$$S_2 = B_2 \circ [5,4,3,2,1]^T = 3.8608$$
$$S_3 = B_3 \circ [5,4,3,2,1]^T = 3.7294$$

It can be seen that the homestead exit performance scores under the three target layers of economic benefits, social benefits and living environment are 3.0785, 3.8608 and 3.7294, respectively.

In order to comprehensively understand the homestead exit performance and make a comprehensive evaluation, a new comprehensive performance membership matrix R is formed by integrating B_1, B_2 and B_3 calculated above:

$$R = \begin{bmatrix} 0.0175, & 0.0877, & 0.8596, & 0.0263, & 0.0088 \\ 0.2534, & 0.3745, & 0.3516, & 0.0205, & 0 \\ 0.1728, & 0.5036, & 0.2100, & 0.1074, & 0.0062 \end{bmatrix}$$

The index weights are calculated according to the entropy weight method, and the results of fuzzy comprehensive evaluation of homestead exit can be calculated as follows:

$$A = W \circ R = [0.2099, \quad 0.4230, \quad 0.3045, \quad 0.0595, \quad 0.0030]$$

Finally, the value is assigned according to the five-point system, and after the fuzzy calculation, the comprehensive performance is obtained as follows:

$$S = A \circ [5, \quad 4, \quad 3, \quad 2, \quad 1]^T = 3.777$$

From the calculation results, the evaluation of each target layer of the homestead exit performance in the 4 pilot areas near Chengdu investigated is as follows. For economic benefits, social benefits and living environment, the rates rated as “5 points” were respectively 1.75%, 25.34% and 17.28%; those rated as “4 points” were respectively 8.77%, 37.45% and 50.36%; those rated as “3 points” were respectively 85.96%, 35.16% and 21%, those rated as “2 points” were respectively 2.63%, 2.05%, and 10.74%, and those rated as “1 points” were respectively 0.88%, 0%, and 0.62%.

The performance scores of homestead exit in these three aspects are respectively 3.0785, 3.8608 and 3.7294, which indicates that homestead exit in the study area has a average performance in promoting economic benefits and a good performance in promoting social

ISSN: 2710-0170

benefits and improving living environment. The performance ranking of the three target layers is as follows: Social benefits > living environment > economic benefits, and there is little difference between social benefits and living environment.

In terms of comprehensive performance, the proportions of economic benefits, social benefits and living environment are respectively 3.18%, 52.15% and 44.67%. In the three target layers, the proportion of economic benefits is relatively low, and the proportions of social benefit and living environment are relatively close. Finally, the comprehensive performance score is 3.777, close to 4 points, indicating that the overall evaluation of farmers on the performance of homestead exit is "good".

5. Conclusion

On the whole, the target level of economic benefits accounts for a small proportion in the overall performance. The reason may be that the indicators of economic benefits involve private property, and the surveyed farmers will conceal their income and misinform their household income out of the instinct of self-protection. The family annual net income given by those with higher income may be lower than the actual income. Those with low income may report a higher income than their actual income because of vanity, or report a lower income because they want to get the opportunity to be helped. Therefore, the data of economic benefits may be distorted for the above reasons. Although the above reasons may make the calculation result less referential, to a certain extent, it can also show that the income of farmers did not increase or decrease significantly before and after the homestead exit.

In addition, the indicators of "social benefits" in the target layer are more comprehensive, considering many aspects such as entertainment, medical care, education, supermarkets and express delivery services needed to narrow the gap between urban and rural areas. The index of old-age care is not included because the current way of old-age care in rural areas is still dominated by family old-age care, and there is less demand in this aspect. In terms of "living environment", four indicators related to sewage treatment, garbage treatment, village appearance and greening were also selected, which can play a more comprehensive role in reflecting the changes in the living environment before and after the homestead exit.

Based on the above analysis results and discussion, the following policy recommendations are proposed. First, actively make use of the village's own resource endowment, consider its own geographical location to develop appropriate industries with sufficient market demand, create more collective village wealth, increase farmers' dividends at the same time, provide more employment opportunities for farmers. Second, agriculture is an important part of the rural economy, so it is necessary to take certain measures to promote the development of agriculture. For example, establish agricultural socialization service systems with village collectives as units or multiple village collectives forming groups, to provide shared agricultural machinery and agricultural technology training for farmers engaged in agricultural production. It can also establish a reasonable system to provide farmers with production materials such as pesticides and fertilizers, and establish an agricultural e-commerce platform to uniformly collect and sell agricultural products produced by farmers. Villages with conditions can establish an industrial chain for the production and processing of agricultural products. Third, find and make up for deficiencies in enhancing social benefits and improving the living environment. For example, the current rural express service still has some problems, in many cases, the supermarket or retail store in the village as a collection point, charging farmers 1 to 1.5 RMB per package. To solve this problem, we need to cooperate with express delivery service companies to provide farmers with more convenient and affordable express delivery services. In addition, although there is less demand for social old-age care in rural areas, there are more permanent elderly people in rural areas. In the sample of this survey, the proportion of respondents over 60 years

ISSN: 2710-0170

old is 48.25%. Villages can consider establishing activity centers for the elderly to provide comfortable activity places and popularize health knowledge. Finally, in terms of living environment, we need to continue to improve and standardize the treatment of sewage and garbage, do a good job in the construction of village greening, and create a beautiful village environment.

References

[1] Zhongxiao Li , Hongsong Zhao, Li Chengyuan. Study on paid use and charging standard of Rural homestead. Journal of Jilin Agricultural University. (1993) No. 04, p. 94-98.

[2] Xueqin Liang, Xinan Lu, Jingxiu JIA. What should we do if we take up too much homestead? Dingtao County implemented several practices of paying for the use of rural overoccupied homestead. China Land. (2000) No. 10, p. 36-37.

[3] Tingchang Li, Caiwei Gong. Village renovation is urgent—Investigation on the use and management of rural homestead in Yinzhou District of Ningbo City. China Land. (2003) No. 03, p. 37-38.

[4] Dawei Zhu, Fanglin Zhu. A study on farmers' homestead withdrawal intention under different economic development levels: Based on 549 questionnaires in Jiangsu Province. Chinese Journal of Agricultural Resources and Regional Planning. Vol. 42 (2021) No. 09, p. 207-215.

[5] Xia Chen, Zhemin LI, Yuting WANG. Farmers' social capital and homestead withdrawal intention: an analysis of the mediating effect based on risk resistance ability. Chinese Journal of Agricultural Resources and Regional Planning. Vol. 43 (2022) No. 10, p. 232-245.

[6] Pengfei Sun, Renhui Zhang, Kai Zhao, et al. The influence of human capital on the homestead withdrawal behavior of farmers. Economic Survey. Vol. 39 (2022) No. 04, p. 41-50.

[7] Jun CAI, Lei ZHANG, Hongwei YUAN, et al. Research on Influencing factors of farmers' homestead withdrawal behavior intention based on improved TAM framework. RESOURCES SCIENCE. Vol. 44 (2022) No. 05, p. 899-912.

[8] Yuling Wu, Ruiying Xie, Yiyi Yu. Effects of livelihood Resilience and value Perception on farmers' homestead withdrawal Behavior response. Agricultural Economics and Management. (2022) No. 02, p. 69-78.

[9] Sijie Fan, Bixi Zhang, Wenxiu Zhang. Fuzzy evaluation of comprehensive performance of rural homestead reform: A case study of Chengdu. Chinese Journal of Agricultural Resources and Regional Planning. Vol. 35 (2014) No. 02, p. 132-137.

[10] Jian Tang, Qing-bin WANG, Rong TAN. Performance evaluation of homestead system reform: Based on land policy implementation monitoring in 5 provinces of China. Jianghan Tribune. (2018) No. 02, p. 36-41.

[11] Xingming Zheng, Guoquan Lei. Practical progress, effectiveness review and promotion path of rural homestead exit reform: Based on comparative analysis of three typical pilot areas. Reform of Economic System. (2022) No. 04, p. 73-79.

[12] Runqiu Liu, ZhibingHuang, Qian Cao. Research on performance evaluation of homestead exit based on rural resilience perspective: A case study of Sanshui Town, Guanghan City, Sichuan Province. Chinese Land Science. Vol. 33 (2019) No. 02, p. 41-48.

[13] Runqiu Liu, Zhibing Huang. Evaluation of homestead exit pilot policy based on S-CAD method: A case study of Chengdu. Journal of Sichuan University (Philosophy and Social Sciences Edition). (2021) No. 05, p. 138-147.

[14] Bailin Zhang, Fengrong ZHANG, Yanbo QU, et al. Research hotspot and prospect of homestead withdrawal and reuse. RESOURCES SCIENCE. Vol. 43 (2021) No. 07, p. 1277-1292.

[15] Fachao Liang, Caiyun Lin. A study on the welfare effects of rural homestead withdrawal under different models: A case study of Jinjiang City, Fujian Province. Chinese Journal of Agricultural Resources and Regional Planning. Vol. 42 (2021) No. 03, p. 240-248.

[16] Maolin Yang. Research on Handling Methods of Sensitive Questions in Questionnaire Survey. Marketing Research. (2014) No. 05, p. 46-48.

ISSN: 2710-0170

[17] Newburn DA, Berck P. Modeling suburban and rural-residential development beyond the urban fringe. Land Economics. Vol. 82 (2006) No. 04, p. 481-499.

[18] Ampofo JA. Rural housing challenges in the Upper West Region of Ghana: A case study of Kulmasa. International Journal of Management & Entrepreneurship Research. Vol. 2 (2020) No. 04, p. 194-211.

[19] Gkartzios M, Scott M. Planning for rural housing in the Republic of Ireland: from national spatial strategies to development plans. European planning studies. Vol. 17 (2009) No. 12, p. 1751-1780.