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The Effect of Peasants Differentiation on Peasants' Willingness and Behavior Transformation of Land Transfer: Evidence from Sichuan Province, China

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Abstract: Based on the survey data of 540 peasants in Sichuan Province, the probit and unordered multi-classification logistic model regression models were used to explore peasants' differentiation on the transformation of willingness and behavior of land transfer and to provide a theoretical and empirical basis for promoting land intensification and large-scale management. The results show the following: (1) There is a significant negative correlation between the intention and behavior of part-time peasants, multiple occupations peasants, and non-agricultural peasants. (2) Part-time peasants and non-agricultural peasants promoted the change in willingness and behavior of land transfer out; part-time peasants, multiple occupations peasants, and non-agricultural peasants all promoted the willingness and behavior transformation of land transfer in. (3) The heterogeneity analysis results show that different household heads ages, the proportion of labor force in the total population of the household, and the terrain of cultivated land significantly impact peasants' willingness and behavior of land transfer. Peasants' non-agricultural differentiation is an important way to promote the rapid development of land transfer. The government should strengthen skills training and guidance services, broaden the channels for peasants to increase income, optimize the market environment of land transfer, and improve the social security system related to land transfer in order to promote the industrialization and large-scale development of agriculture.

Keywords: peasants' differentiation; land transfer; willingness and behavior transform; Sichuan Province; China

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1. Introduction

In 2022, the central government proposed to accelerate the construction of a standardized market for the transfer and trading of contracted rural land management rights. By the end of 2020, the transfer area of household-contracted farmland was 532 million mu, and the transfer proportion was only 34.08%. The land transfer market grew slowly, and a large number of cultivated land was still decentralized by small peasants [1]. Land transfer did not change the agricultural economic pattern based on small peasants. As the economy has grown over the past four decades of reform and opening up, rural labor has moved out in large numbers, driven by urbanization [2]. By 2021, there were 292 million migrant workers in China, among whom 172 million were migrant workers [3]. Many rural households gave up farming and chose to work in cities. They mastered relevant technical knowledge, broadened the sources of family income, improved the quality of family life, and accelerated the differentiation of the internal structure of rural households. However, the development of the land transfer market is slow, resulting in the phenomenon of land idleness and abandonment of non-agricultural transfer peasants [4].

At present, previous studies have found that pure farmers have a strong willingness to land transfer in. Land scale and pension security have a positive effect on the transfer

in of pure farmers to land, while the age of household head has a negative effect [5]. The willingness of part-time peasants to transfer out land is strong, but the agricultural production service system reduces the willingness of part-time peasants to transfer out land to a certain extent [6]. For farmers with a high degree of part-time employment, the higher the education level, the lower the tendency to participate in land transfer; farmers whose families grow cash crops on a large scale are more likely to transfer out land. In addition to factors such as education level, number of family labor force, non-agricultural employment level, age of household head, contracted land area, and recognition of ownership confirmation, land transfer policy has a positive role in promoting the differentiated intention and behavior of different types of farmers to transfer out of land [7–9]. Xu et al. [10] discussed the relationship between labor migration and land transfer of peasant and found that the proportion of part-time peasant in the total household labor force has an inverted "U"-shaped relationship with the direction and scale of land transfer in.

To sum up, there have been abundant achievements in the research of peasant differentiation on their willingness and behavior of land transfer. However, the existing studies have not distinguished the differences between the behavioral motivation and external constraints of peasants' land transfer, and lack of researches on the consistent influencing factors of peasants' willingness and behavior transformation at the individual and household levels, which is insufficient to explain the motivation of peasants' land transfer in depth. In addition, existing empirical studies do not have uniform criteria for the division of peasant differentiation, and ignore that there is a causal relationship between peasant differentiation and land transfer willingness and behavior to some extent in the selection of indicators. Therefore, from the perspective of peasant differentiation, this paper focuses on how significant differences such as peasants individual characteristics and family characteristics affect the direction of peasants' land transfer, and then systematically analyzes the correlation between peasant differentiation and the transformation of land transfer willingness and behavioral consistency, in order to provide enlightenment for the government to establish and improve the land transfer market.

2. Theoretical Analysis and Research Hypotheses

2.1. Theoretical Analysis

Land transfer is a deliberate behavioral choice made by peasants under the influence of complex factors such as economic benefits, information communication and subjective preferences. The cognitive ability of peasants directly affects their behavioral intention [11]. The explanation of individual behavior choice in the theory of planned behavior not only considers the objective factors directly related to the immediate interests of peasants, such as perceptual behavioral control, but also includes the irrational factors, such as the conceptual and psychological factors—such as the behavior attitude and subjective norms of peasants—into the behavioral response analysis framework, which can reflect the bounded rationality assumption of individual behavior [12,13]. When the individual behavior attitude is more positive, the willingness to take the behavior is stronger; when the surrounding people or organizations support and encourage individual behavior, individuals are more willing to carry out the behavior; the more positive an individual's behavioral intention is when he perceives that a certain behavior will bring benefits or positive effects. Behavioral attitude has the highest effect on peasants' willingness to transfer land, while subjective norms have the weakest control over the behavioral intention, and the perceived behavioral control performance is not good [14]. Due to the unified planning of village collective land, peasants' self-decision-making ability for land transfer is weak, and the willingness behavior of land transfer is not obvious [15]. Therefore, this study constructs the intention and behavior of peasant household land transfer attitude (policy on earnings cognition and cognitive functions), subjective norms (non-agricultural labor force transfer, soil, and land approval), behavior control, risk perception, the peasant's differentiation after household income structure change on the framework of the influence of the desire and behavior of land transfer.

2.2. Research Hypotheses

From the existing research, academic circles have reached different conclusions on the relationship between peasant differentiation and the willingness and behavior of land transfer [16]. Some studies have pointed out that the higher the proportion of non-agricultural income in the total annual household income, the higher the degree of differentiation of peasants, and the lower the proportion of agricultural income in the total annual household income, the lower the dependence of peasants on agricultural land, and the higher the willingness and behavior to transfer agricultural land out [8,17]. When the high-quality labor force within the family is concentrated in the secondary and tertiary industries, the surplus labor force of the family is not enough to bear the excessive agricultural production activities. When the rent price of land transfer reaches the psychological expectation, the willingness and behavior of peasants to transfer out land will be higher. When the rent price of a land transfer does not reach the psychological expectation, peasants tend to the small-scale operation or land abandonment [18,19]. However, some studies have pointed out that even though the degree of differentiation among peasants is deepening, some peasants have an emotional dependence on land in the process of long-term agricultural cultivation activities, which makes them more inclined to plant or transfer in land rather than transfer out of the land in a land transfer [3,20]. Under the background of the development of agricultural modernization, the agricultural socialization service system of the rapid development of advanced agricultural machinery widely used and highly efficient production technology has made peasants out of the labor shortage, low quality of the labor force, and the constraints of small operations, to encourage peasants to increase land transfer in and reduce the choice of land transfer out [21]. With the continuous expansion of the land management scale, peasants with family management as the main body will face multiple selectivity and complexity in agricultural production links with the help of professional services provided by the socialized service market [19]. When the transaction costs are greater than the benefits of specialization, the differentiation of peasants will be limited. In addition, willingness is the subjective idea and psychological tendency of actors and the leading factor for actors to make decisions. Peasants' willingness to land transfer represents peasants' ideas and the tendency of land transfer. Of course, the subject's willingness is also affected by the social and economic environment, policy and system changes, and individual demand changes [20–24]. Based on this, this paper puts forward the following research hypotheses (as shown in Figure 1):

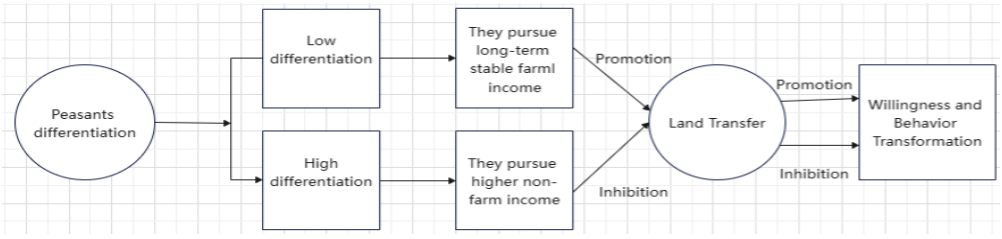

Figure 1. The impact of peasant differentiation on the transformation of willingness and behavior of land transfer.

H1 : *A higher degree of household differentiation has a significant negative impact on the willingness and behavior of land transfer in.*

H2 : *A higher degree of household differentiation has a significant positive effect on the willingness and behavior of land transfer out.*

H3 : *A higher degree of household differentiation has a significant negative effect on the consistency transformation of willingness and behavior of land transfer in.*

H4 : *A higher degree of household differentiation has a significant positive effect on the consistency transformation of willingness and behavior of land transfer out.*

3. Data and Methods

3.1. Data Sources

The data used in this research are mainly from the National Natural Science Foundation of China. The research group conducted a random questionnaire survey on rice peasants in Jiajiang County, Gao County, and Yuechi County in Sichuan Province in July 2021. The survey method was a one-to-one, face-to-face semi-structured interview. The research content mainly involves the basic information of individual households of peasants, the situation of land transfer of peasants, the willingness and behavior of land transfer of peasants, and so on. According to the differences in regional economic development level, topography, and transportation convenience, three villages were selected from each district and county, three villages were selected from each township, and 20 peasants were selected from each village. A total of 540 questionnaires were obtained from 27 villages in 9 towns. As shown in Figure 2.

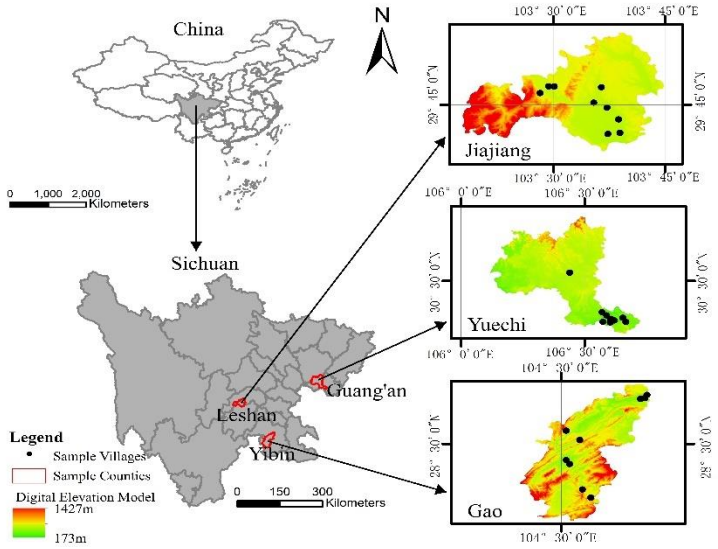

Figure 2. Location map of sample counties and towns.

3.2. Methods

3.2.1. Selection of Model Variables

The explained variable that the research focuses on is peasants' land transfer, which has two main dimensions: (1) willingness of land transfer, that is, whether peasants have the willingness to transfer out and transfer in the land; (2) land transfer behavior, that is, whether peasants have land transfer in and transfer out behavior [10].

The core independent variable is peasant differentiation. Referring to the research of Weng et al. [17] and Yang et al. [25], the value of this study is as follows: those whose non-farm income accounts for less than 10% of the total household income are classified as pure peasants, and the value is 1; those whose non-agricultural income accounted for 10%–50% of the total household income were classified as part-time peasants, and the value was 2. Those whose non-agricultural income accounted for 50%–90% of the total household income were classified as multiple occupations peasants, and the value was 3. Non-farm households whose non-farm income accounts for more than 90% of the total household income are classified as non-agricultural households, and the value is 4.

To further reduce the impact of omitted variables on the research results, referring to studies from Xu et al. [18] and Deng et al. [26], this paper divides the control variables into two categories according to the characteristics of the household head and the household characteristics. The description of variables and descriptive statistics are shown in Table 1.

Table 1. Definition and descriptive statistics of the variables in the model.

Variable	Definition and Measure	Mean	SD [b]
(Dependent Variable)			
Land transfer out willingness	Is the family willing to transfer land out? (0 = No, 1 = Yes)	0.52	0.50
Land transfer in willingness	Is the family willing to transfer land in? (0 = No, 1 = Yes)	0.31	0.46
Transfer out behavior	Did your family make a transfer out of the land in 2020? (0 = No, 1 = Yes)	0.22	0.41
Transfer in behavior	Did your family transfer in the land in 2020? (0 = No, 1 = Yes)	0.39	0.49
Transfer out behavior conversion	Willingness to transfer out land and behavior transformation	2.57	1.35
Transfer in behavior conversion	Willingness to transfer in land and behavioral transformation	3.11	1.05
(Independent Variable)			
Peasants' differentiation	Non-farm income as a percentage of total household income	3.22	0.90
(Control Variable)			
Age of householder	Age of head of household	58.93	11.02
Gender of household head	Gender of head of household (0 = Female, 1 = Male)	0.11	0.31
Head of household education	Head of household Education (old)	6.75	3.17
Head of household health	What health condition of the head of household? [a]	3.66	1.13
Soil fertility	Fertility conditions of your farmland? [a]	2.95	1.07
Old-age insurance	Does the family purchase pension insurance? (0 = No, 1 = Yes)	0.74	0.44
Medical Insurance	Does the family purchase health insurance? (0 = No, 1 = Yes)	0.97	0.17
The non-farm labor force ratio	Number of the non-farm employed labor force as a percentage of household size in 2020 (%)	0.26	0.23
Price shock impact	Has your family's agricultural production suffered from agricultural price shocks? (0 = No, 1 = Yes)	0.52	0.50
Land entitlement	Did your family get the land title registration certificate? (0 = No, 1 = Yes)	0.90	0.30
Terrain	Village topography (1 = Plain, 2 = Hilly, 3 = Mountainous areas)	1.85	0.80

Note: [a] The Likert scale was used for all entries, with 1 representing complete disagreement and 5 representing complete agreement; SD [b] = standard deviation.

3.2.2. The Models

Since the dependent variable of the study is a dichotomous variable, and in the case of large samples, the random disturbance term is more asymptotic to the standard normal distribution Zhang et al. [4], this paper adopts the bivariate probit model to study the impact of peasant differentiation on the willingness and behavior of land transfer. The specific expression in this paper is as follows:

$$Y = ln(\frac{P_i}{1-P_i}) = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots\ldots + \beta_n X_n + \varepsilon \quad (1)$$

where P_i is the probability of peasants' willingness or behavior of land transfer; α_0 is a constant term; $X_1 \ldots X_i$ are independent variables, including core independent variables, control variables, and regional dummy variables; $\beta_1 \ldots\ldots \beta_i$ is regression coefficient; and ε is the random interference term.

If peasants' willingness to transfer land and behavior transformation is regarded as a probability event, there are four states in this process, namely, "willingness without behavior" *(Y = 1)*, "willingness with behavior" *(Y = 2)*, "unwillingness with behavior" *(Y = 3)* and "unwillingness without behavior" *(Y = 4)*, which are disordered multi-categorical variables. Therefore, the unordered multi-classification logistic model was selected for research, and the model was constructed as follows:

$$P_i(Y = i/X) = \frac{exp\left(-\alpha_i + \sum_{j=1}^{n} \beta_j X\right)}{1 + exp\left(-\alpha_i + \sum_{j=1}^{n} \beta_j X\right)} \quad (2)$$

Among them, $i = 1, 2, 3, 4$; $P_1 + P_2 + P_3 + P_4 = 1$, $j = 1, 2, \ldots\ldots n$; α is a constant term; β_j is the partial regression coefficient of each variable, $X = (X_1, X_2, \ldots\ldots X_n)$ represents the set of variables affecting peasants' willingness and behavior.

4. Results

4.1. Baseline Regression

Table 2 shows the correlation results of peasant differentiation on land transfer willingness and behavior, which are consistent with hypothesis H1 and Gao et al. [27]. Specifically, compared with pure peasants, part-time peasants, multiple occupations peasants, and non-agricultural households have a significantly negative impact on peasants' willingness to transfer in land, indicating that the higher the degree of non-farm transfer, the weaker the peasants' willingness to transfer in land. Part-time peasants, multiple occupational peasants, and non-agricultural households have a significant negative impact on peasants' land transfer in behavior. The possible reasons are that on the one hand, with the acceleration of industrialization and urbanization [28], the output value of the primary industry and the proportion of the labor force gradually declines, and the wage treatment of migrant workers in eastern China leads the whole country. Therefore, the transfer labor force is usually engaged in non-agricultural work outside the province [29]. Considering the transportation cost and other factors, such personnel will generally work for a long time, thus decoupling from the family agricultural production. The labor force required for agricultural production is insufficient, so peasants often do not choose to transfer in land. On the other hand, excessive application of pesticides and fertilizers on land has resulted in serious degradation of cultivated land quality, frequent extreme disasters, and severe attacks of pests and diseases, which makes it difficult to increase grain production. The results are not consistent with hypothesis H2 and Weng et al. [17]. Compared with the pure peasant, part-time peasant, multiple occupations peasant, and non-agricultural worth of land transfer out will have a positive correlation, but the effect was not significant, the possible reason is that agricultural production costs are rising rapidly, more gains decline significantly, the management risk are mostly lead to peasants do not want to continue to engage in agricultural production activities, the idle land transfer can also receive payment [30–32]. Compared with pure peasants, part-time peasants and non-agricultural households significantly positively impact peasants' land transfer out behavior. The possible reason is that in recent years, the state has innovated land transfer forms and encouraged moderate-scale management. Peasants can not only obtain rent from the land transfer but also participate in agricultural management to earn wages [33]. However, compared with the pure peasant, the willingness to transfer out is positive, but the effect is not significant. The possible reasons are that the land rent is low, the peasants have land love plots, and the non-agricultural work is not stable, some peasants choose to leave the land temporarily idle for later use [20].

Table 3 shows the estimated results of the transformation of willingness and behavior of land transfer by farm household differentiation analyzed with no willingness and no behavior as a control group, and the results are consistent with the research hypothesis H3 and Zhou et al. [34]. Specifically, compared with those with no intention and no behavior to land transfer in, part-time peasants significantly negatively affected the conversion of willing and no behavior, indicating that part-time peasants inhibited the probability of conversion from willing and no behavior group to willing and no behavior group. The possible reason is that the existing agricultural production activities have been saturated due to the influence of their individual and family characteristics, and they are unable to manage even if they intend to transfer [35]. Compared with no intention and no behavior, part-time peasant, multiple occupations peasant, and non-agricultural households have a significant negative effect on the transformation from a willingness to behavior, indicating that part-time peasants, multiple occupations peasants, and non-agricultural households can inhibit the transformation from a willingness to behavior. The possible reasons are that the profitability of agricultural production is relatively low, the peasants' willingness

to engage in agricultural production activities is relatively weak due to the high invisible costs, coupled with the current cumbersome land transfer procedures, limited information channels, and the time required for land leveling and fertilization after land transfer [10,36]. Even if they have the will to switch to the farm, but face difficulties in the actual action, peasants also make the decision to switch to the farm. The results are consistent with hypothesis H4 and Liu et al. [37]. Specifically, compared with no intention and no behavior, part-time peasants and non-agricultural households have a significantly positive impact on the conversion of willingness and behavior, indicating that part-time peasants and non-agricultural households can promote the conversion of willingness to behavior. The possible reason is that they are willing to transfer out of the land, and they will decisively transfer out of the land when they receive acceptable benefits. Interestingly, part-time peasants, multiple occupations peasants, and non-agricultural households significantly and positively influenced the conversion of unwillingness to have behavior. The possible reason is that on the one hand, due to the unified planning of the village for land transfer; however, the rent does not meet expectations or personal reasons do not want to transfer the land, the peasants actually transfer out the land in order to cooperate with the implementation of the project [38]; on the other hand, due to the traditional farming culture of the Chinese people, so that even if the non-agricultural households transfer leads to the shortage of agricultural labor causing land abandonment, which is not conducive to later land restoration and finishing, so the land is temporarily transferred to friends and relatives to plant, forming an oral agreement [39].

Table 2. Binary probit estimation results of peasants' willingness to transfer land and behavior.

Variables	Willingness to Transfer Land		Land Transfer Behavior	
	Land Transfer in	Land Transfer out	Land Transfer in	Land Transfer out
Part-time peasant [a]	−0.156 ***	0.132	−0.192 ***	0.145 **
	(0.060)	(0.146)	(0.041)	(0.056)
Multiple occupations peasant [a]	−0.143 **	0.080	−0.154 ***	0.018
	(0.065)	(0.095)	(0.039)	(0.076)
Non-agricultural household [a]	−0.204 **	0.178	−0.296 ***	0.221 **
	(0.085)	(0.113)	(0.039)	(0.100)
Age of householder	−0.007 ***	0.004	−0.003 ***	0.002
	(0.003)	(0.005)	(0.001)	(0.002)
Gender of household head	−0.097 *	0.057	−0.123	0.087
	(0.051)	(0.063)	(0.092)	(0.053)
Head of household education	−0.005	0.007	0.003	0.006
	(0.008)	(0.006)	(0.008)	(0.006)
Head of household health	0.006	−0.007	0.000	−0.005
	(0.018)	(0.012)	(0.013)	(0.017)
Soil fertility	−0.011	0.050 *	0.004	0.053 ***
	(0.021)	(0.030)	(0.031)	(0.007)
Old-age insurance	−0.009	0.050	0.016	0.064
	(0.046)	(0.064)	(0.089)	(0.082)
The non-farm labor force ratio	0.031	0.172	−0.105	0.146 *
	(0.107)	(0.121)	(0.082)	(0.075)
Price shock impact	0.045 *	−0.005	0.067 ***	−0.098 ***
	(0.026)	(0.051)	(0.025)	(0.009)
Land entitlement	−0.086	0.088 ***	−0.173 ***	0.018
	(0.115)	(0.025)	(0.046)	(0.031)
Medical Insurance	0.072 ***	0.017	−0.241 ***	0.045
	(0.015)	(0.067)	(0.031)	(0.028)
Plain	−0.014	0.007	−0.176 ***	0.064 ***
	(0.029)	(0.048)	(0.024)	(0.008)
Hilly	0.130 ***	0.130 ***	0.200 ***	−0.069 ***
	(0.040)	(0.025)	(0.014)	(0.010)
Region	yes	yes	yes	yes
Pseudo R2	0.0504	0.0554	0.1359	0.1762
Observations	540	540	540	540

Note: [a] denotes pure peasants as the base group; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3. Estimated results of the transformation of farm household differentiation on the behavior of willingness to transfer land.

Variables	Land Transfer out			Land Transfer in		
	Willingness without Behavior	Willingness and Behavior	No Willingness to Behave	Willingness without Behavior	Willingness and Behavior	No Willingness to Behave
Part-time peasant	0.427	1.219 **	13.964 ***	−1.935 *	−1.089 ***	−1.370
	(0.864)	(0.573)	(0.827)	(1.052)	(0.296)	(0.882)
multiple occupations peasant	0.366	0.359	12.264 ***	−1.250	−1.041 **	−0.981
	(0.601)	(0.468)	(1.127)	(1.119)	(0.524)	(0.877)
non-agricultural household	0.649	1.777 **	15.235 ***	−0.567	−2.041 ***	−1.203
	(0.764)	(0.777)	(0.894)	(0.638)	(0.645)	(0.753)
Age of householder	0.014	0.022	0.015	−0.032 ***	−0.040 ***	−0.001
	(0.022)	(0.020)	(0.024)	(0.010)	(0.013)	(0.010)
Gender of household head	−0.047	0.666	0.200	−0.318	−0.929	−0.439
	(0.242)	(0.532)	(0.561)	(0.424)	(0.621)	(0.470)
Head of household education	0.033	0.050	0.092	−0.015	−0.013	0.039
	(0.037)	(0.043)	(0.100)	(0.057)	(0.054)	(0.036)
Head of household health	−0.057	−0.031	−0.154 ***	0.002	0.023	−0.012
	(0.132)	(0.087)	(0.049)	(0.152)	(0.107)	(0.080)
Soil fertility	0.146	0.464 ***	0.312 **	0.032	−0.060	0.103
	(0.107)	(0.124)	(0.136)	(0.040)	(0.213)	(0.111)
Old-age insurance	0.244 **	0.491	1.475	−0.358	0.073	−0.027
	(0.111)	(0.695)	(1.214)	(0.357)	(0.583)	(0.445)
The non-farm labor force ratio	0.287	1.541 **	−0.060	0.401	−0.160	−0.786 **
	(0.345)	(0.780)	(0.901)	(0.682)	(0.890)	(0.305)
Price shock impact	0.148	−0.588 ***	−0.741	0.253 *	0.384 **	0.423 ***
	(0.356)	(0.146)	(0.760)	(0.151)	(0.166)	(0.137)
Land entitlement	0.254 **	0.455	−0.487 *	−0.400 **	−0.977 *	−0.999 **
	(0.107)	(0.334)	(0.281)	(0.190)	(0.516)	(0.448)
Medical Insurance	−0.143	0.419 ***	−0.193	13.259 ***	−0.820 ***	−1.252 ***
	(0.679)	(0.014)	(0.733)	(1.023)	(0.180)	(0.119)
Plain	−0.141	0.402 ***	0.184	0.246 ***	−0.682 ***	−1.085 ***
	(0.286)	(0.097)	(0.151)	(0.039)	(0.155)	(0.177)
Hilly	0.733 ***	−0.101	−0.610 ***	0.612 ***	1.195 ***	0.994 ***
	(0.144)	(0.080)	(0.211)	(0.089)	(0.231)	(0.176)
Constant	−2.566	−6.638 ***	−18.899 ***	−12.073 ***	4.365 ***	1.740 ***
	(1.949)	(0.813)	(1.694)	(1.779)	(1.304)	(0.192)
Region	yes	yes	yes	yes	yes	yes
Observations	540	540	540	540	540	540

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

4.2. Robustness Tests

To test the robustness of the regression results, this paper uses the model substitution method and the variable substitution method to replace the probit model with the Logit model for estimation. The measure of non-farm income as a proportion of total household income was replaced with the measure of household land scale operation as "small-scale land operation, small-scale land operation, medium-scale land operation, and large-scale land operation", regression analysis was conducted again. The results of the robustness tests are detailed in Tables 4 and 5. Except for minor differences in the magnitude of the correlation coefficients, the results of the alternative model are consistent with the results of the original model in terms of trend, which shows that the results obtained in this study are robust and credible.

Table 4. Robustness tests for a model replacement method.

Variables	Willingness to Transfer Land		Land Transfer Behavior	
	Land Transfer in	Land Transfer out	Land Transfer in	Land Transfer out
Part-time peasant	−0.149 **	0.128	−0.186 ***	0.174 **
	(0.062)	(0.150)	(0.037)	(0.070)
multiple occupations peasant	−0.140 **	0.077	−0.152 ***	0.051
	(0.065)	(0.103)	(0.043)	(0.084)
non-agricultural household	−0.204 **	0.175	−0.295 ***	0.256 **
	(0.084)	(0.118)	(0.044)	(0.103)
Control variables	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes
Pseudo R2	0.0507	0.0555	0.1359	0.1783
Observations	540	540	540	540

Note: *** $p < 0.01$, ** $p < 0.05$.

Table 5. Robustness tests for the variable substitution method.

Variables	Willingness to Transfer Land		Land Transfer Behavior	
	Land Transfer in	Land Transfer out	Land transfer in	Land Transfer out
Medium-scale land management [a]	−0.151 ***	0.078 ***	−0.306 ***	0.112 *
	(0.043)	(0.018)	(0.058)	(0.059)
Small-scale land management [a]	−0.194 ***	0.128 ***	−0.417 ***	0.253 ***
	(0.055)	(0.024)	(0.022)	(0.024)
Small and micro-scale land operations [a]	−0.300 ***	0.299 ***	−0.581 ***	0.499 ***
	(0.101)	(0.073)	(0.036)	(0.035)
Control variables	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes
Pseudo R2	0.0733	0.0676	0.2591	0.3354
Observations	540	540	540	540

Note: [a] indicates large-scale operations as a benchmark group; *** $p < 0.01$, * $p < 0.1$.

4.3. Endogeneity Analysis

There is bidirectional causal relationship between farmer differentiation and land transfer may create endogeneity problems, leading to biased model results and unreliable conclusions. Therefore, this study further adopts the instrumental variable method for estimation. The average proportion of non-farm income of other villagers in the sample villages was used as an instrumental variable and regressed using the IV-probit two-stage model. To ensure the validity of the instrumental variables, a weak instrumental variables test is required: the Kleibergen–Paap rk LM statistic p-value at the 1% level rejects the original hypothesis that the weak instrumental variables are underidentified, indicating

that the instrumental variables work well and have good explanatory strength for the endogenous variables (Table 6).

Table 6. Results of Endogeneity Analysis: IV-probit models.

Variables	Land Transfer out Willingness and Behavior Transformation		Land Transfer in Willingness and Behavior Transformation	
	First-Stage	Second-Stage	First-Stage	Second-Stage
Instrumental variable	0.538 ***		0.538 ***	
	(0.104)		(0.104)	
X		−0.661 *		0.439
		(0.360)		(0.286)
Control variables	Yes	Yes	Yes	Yes
Constant	1.530 ***	5.9778 ***	1.530 ***	0.745
	(0.473)	(1.263)	(0.473)	(0.972)
Wald test of exogeneity(chi2)	27.84 ***		36.64 ***	
AR test	26.37 ***		29.53 ***	
Wald test	23.27 ***		25.64 ***	

Note: * $p < 0.1$, *** $p < 0.01$. The number of samples is 540.

4.4. Heterogeneity Analysis

At present, the aging trend of China's population is deepening, and the aging of the farming population is more prominent in rural areas [40], so this study divides the age of household heads into "age of household head under 60 years old" and "age of household head 60 years old and above". The results are shown in Table 7, in terms of land transfer out, part-time peasants, multiple occupations peasants, and non-agricultural households with a head age 60 years and above significantly and positively influenced land transfer out behavior compared to pure peasants. However, there was no significant relationship on willingness to transfer out of the land. Possible reasons for this are, on the one hand, that as they get older, the amount of labor they can put into agricultural activities decreases, which in turn leads to lower food production and lower yields year-on-year [41]; on the other hand, because they have lived in rural areas for many years and have been involved in agricultural activities for a long time, they have a deeper attachment to the land, which in turn discourages land transfer out [42]. Regarding land transfer in, the willingness and behavior of land transfer were significantly negatively influenced by part-time peasants and non-farming households with a household head under 60 years of age compared to pure peasants. The possible reason lies in the fact that peasants think they have strong labor ability at their age and are willing to obtain higher returns by going out for work under the psychological influence of "seeking benefits and avoiding disadvantages." For part-time peasants, although they are not willing to transfer land, they do not reject the transfer of land if there is a suitable land transfer [43]. Compared with the pure peasant, the non-agricultural households whose head age is 60 and above significantly negatively affect land transfer in behavior. The possible reason is that non-peasant households have adapted to the urban lifestyle through migrant work, accumulated certain savings, and have a guaranteed life, so they have the idea of "retirement" and old-age care and no longer engage in agricultural production [18].

The results are shown in Table 8. In terms of land transfer out, compared with pure peasants, non-agricultural households, whose labor force accounts for less than 50% of households have a significantly positive impact on the intention and behavior of land transfer out. In terms of land transfer in, compared with pure peasants, multiple occupations peasants and non-agricultural households whose labor force accounts for less than 50% of households have a significantly negative impact on the intention and behavior of land transfer in. Non-peasant households with a labor force of 50% or more of the household significantly affect land transfer behavior. The possible reason is that even

though the labor force accounts for more than 50% of non-peasant households, the labor force is mainly transferred to the secondary and tertiary industries, and they do not want to engage in agricultural production by further transferring to land in rural areas [44–47].

Table 7. Regression results of willingness and behavior of land transfer with different ages of household heads.

Variables	Land Transfer out				Land Transfer in			
	Head of Household under 60 Years Old		Head of Household 60 Years Old and above		Head of Household under 60 Years Old		Head of Household 60 Years Old and above	
	Willingness	Behavior	Willingness	Behavior	Willingness	Behavior	Willingness	Behavior
Part-time peasant	−0.064	−0.585	0.585	5.053 ***	−0.747 *	−0.337	−0.273	−0.779
	(0.383)	(0.588)	(0.459)	(0.535)	(0.397)	(0.379)	(0.462)	(0.483)
multiple occupations peasant	0.080	−0.602	0.363	4.484 ***	−0.401	−0.299	−0.477	−0.649
	(0.328)	(0.519)	(0.439)	(0.490)	(0.316)	(0.325)	(0.447)	(0.462)
non-agricultural household	0.414	0.436	0.445	5.196 ***	−0.599 *	−0.924 ***	−0.623	−0.863 *
	(0.326)	(0.515)	(0.430)	(0.443)	(0.321)	(0.329)	(0.452)	(0.459)
Control variables	yes	yes	yes	yes	yes	yes	yes	yes
Chi-square	34.135 ***	80.097 ***	20.498	630.655 ***	31.081 **	50.438 ***	16.935	47.132 ***
Number of samples	283	283	257	257	283	283	252	257

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 8. Regression results of land transfer intention and behavior of different labor forces in the total household population.

Variables	Land Transfer out				Land Transfer in			
	Less Than 50% of the Workforce		50% of the Workforce and above		Less Than 50% of the Workforce		50% of the Workforce and above	
	Willingness	Behavior	Willingness	Behavior	Willingness	Behavior	Willingness	Behavior
Part-time peasant a	0.671	0.807	−0.042	0.016	−0.700 *	−0.667	−0.294	−0.525
	(0.426)	(0.585)	(0.402)	(0.661)	(0.390)	(0.436)	(0.403)	(0.415)
multiple occupations peasant a	0.429	0.351	0.051	−0.359	−0.754 **	−0.717 *	−0.046	−0.230
	(0.410)	(0.558)	(0.334)	(0.550)	(0.372)	(0.406)	(0.328)	(0.351)
non-agricultural household a	0.683 *	1.030 *	0.318	0.827	−1.035 ***	−1.028 **	−0.188	−0.836 **
	(0.406)	(0.542)	(0.340)	(0.552)	(0.381)	(0.402)	(0.339)	(0.357)
Control variables	yes	yes	yes	yes	yes	yes	yes	yes
Chi-square	31.519 *	45.538 ***	21.717	68.273 ***	24.196 *	43.140 ***	26.719 *	58.482 ***
Number of samples	247	247	293	293	243	247	293	293

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The results are shown in Table 9. In terms of land transfer out, compared with pure peasants, part-time peasants, multiple occupations peasants, and non-agricultural households in sloping land significantly positively affect the intention of land transfer out, and there is no significant correlation with the transfer out behavior. Possible reasons

are that, on the one hand, sloping land requires more production costs in agricultural production and poor soil fertility, leading to low yields and low profitability in agricultural production and a preference for transferring land out [48,49]. On the other hand, the slope of the land makes agricultural production individuals or enterprises reluctant to transfer in, so even if peasants want to transfer out of the land, there is no tenant [50,51]. Non-agricultural households on flat land significantly and positively influence land transfer behavior compared to pure peasants. In terms of land transfer in, multiple occupations peasants and non-agricultural households on sloping land compared to pure peasants significantly and negatively influenced the willingness and behavior of land transfer. The possible reasons are that peasants are reluctant to switch to sloping land compared to flat land because of its slope, severe soil erosion, thin soil layer, low yield, and the inability to make better use of agricultural machinery, which requires more labor input [52,53].

Table 9. Regression results of willingness and behavior of land transfer for different arable land topography.

Variables	Land Transfer out				Land Transfer in			
	Sloping Land		Plain		Sloping Land		Plain	
	Willingness	Behavior	Willingness	Behavior	Willingness	Behavior	Willingness	Behavior
Part-time peasant	1.276 ***	0.612	−0.623	0.618	−0.545	−0.713 *	−0.435	−0.539
	(0.409)	(0.501)	(0.431)	(0.660)	(0.366)	(0.373)	(0.415)	(0.432)
multiple occupations peasant	0.860 **	−0.024	−0.369	0.402	−0.644 **	−0.629 *	−0.176	−0.202
	(0.372)	(0.486)	(0.399)	(0.595)	(0.328)	(0.338)	(0.367)	(0.403)
non-agricultural household	1.131 ***	0.634	−0.168	1.385 **	−0.723 **	−1.025 ***	−0.620	−0.792 *
	(0.379)	(0.477)	(0.397)	(0.587)	(0.338)	(0.347)	(0.380)	(0.405)
Control variables	yes	yes	yes	yes	yes	yes	yes	yes
Chi-square	38.890 ***	31.588 **	895.034 ***	869.244 ***	19.857	65.302 ***	24.904 *	33.869 ***
Number of samples	322	322	218	218	322	322	218	218

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5. Conclusions and Policy Implications

Based on survey data conducted in three districts and counties in Sichuan Province, this paper investigates and analyzes the characteristics of farm household differentiation and willingness and behavior of land transfer and constructs an ordered probit regression model to explore the interrelationship and mechanism of action between them. In addition, a disordered multi-categorical logistic regression model was constructed to explore the behavioral transformation of farm household differentiation on willingness to transfer land. The main findings were obtained as follows. (1) Part-time peasants, multiple occupational peasants, and non-agricultural households all had negative and significant correlations between willingness to transfer in and behavior. (2) Both part-time peasants and non-agricultural households promoted the conversion of willingness and behavior of land transfer out; part-time peasants, multiple occupations peasants, and non-agricultural households promoted the conversion of willingness and behavior of land transfer in. (3) The results of heterogeneity analysis showed that the age of different household heads, the proportion of labor force to total household size, and the topography of cultivated land all had significant effects on peasants' willingness and behavior of land transfer.

Summing up the above results, the following policy insights and suggestions can be obtained: (1) According to the different needs of peasants' land use, classifying and encouraging peasants to choose land transfer is conducive to promoting the conversion

efficiency of land transfer willingness and behavior, making the service more refined and the policy more precise. (2) The government should fully understand the problems encountered by peasants in land transfer and reach out to peasants' households to publicize the significance of the land transfer policy and the implementation plan. (3) Coordinate and promote the equalization of basic public services in urban and rural areas, improve the treatment of rural residents' old-age security and medical security, change the traditional concept of peasants' land retirement, and solve the worries of peasants' land transfer.

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References

1. Qiu, T.; He, Q.; Luo, B. Does land renting-out increase farmers' subjective well-being? Evidence from rural China. *Appl. Econ.* **2020**, *53*, 2080–2092. [CrossRef]
2. Xu, D.; Deng, X.; Guo, S.; Liu, S. Labor migration and farmland abandonment in rural China: Empirical results and policy implications. *J. Environ. Manag.* **2018**, *232*, 738–750. [CrossRef] [PubMed]
3. CNSB (China National Statistical Bureau). *2021 Survey and Monitoring Report on Migrant Workers*; China Statistical Press: Beijing, China, 2021. (In Chinese)
4. Zhang, F.; Bao, X.; Deng, X.; Xu, D. Rural Land Transfer in the Information Age: Can Internet Use Affect Farmers' Land Transfer-In? *Land* **2022**, *11*, 1761. [CrossRef]
5. Wang, W.; Luo, X.; Zhang, C.; Song, J.; Xu, D. Can Land Transfer Alleviate the Poverty of the Elderly? Evidence from Rural China. *Int. J. Environ. Res. Public Health* **2021**, *18*, 11288. [CrossRef]
6. 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]
7. 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]
8. Toomey, E. Reverberations in the Torrens system: A new Land Transfer Act in New Zealand. *J. Prop. Plan. Environ. Law* **2019**, *11*, 87–107. [CrossRef]
9. Zhang, Y.; Liu, G.; Ma, Z.; Deng, X.; Song, J.; Xu, D. The Influence of Land Attachment on Land Abandonment from the Perspective of Generational Difference: Evidence from Sichuan Province, China. *Int. J. Environ. Res. Public Health* **2022**, *19*, 11651. [CrossRef]
10. 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]
11. Wang, Y.; Bilsborrow, R.E.; Zhang, Q.; Li, J.; Song, C. Effects of payment for ecosystem services and agricultural subsidy programs on rural household land use decisions in China: Synergy or trade-off? *Land Use Policy* **2018**, *81*, 785–801. [CrossRef]
12. Abab, S.A.; Wakjira, F.S.; Negash, T.T. Factors Influencing the Formalization of Rural Land Transactions in Ethiopia: A Theory of Planned Behavior Approach. *Land* **2022**, *11*, 633. [CrossRef]
13. Liu, L.; Hao, J.; Jing, D. Peasant's willingness to adopt soil and water conservation tillage technology and intergenerational differences-based on the empirical evidence of 6 counties in Loess Plateau. *J. Arid Land Res. Environ.* **2020**, *34*, 51–57. (In Chinese)
14. 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]
15. Gao, J.; Zhao, R.; Lyu, X. Is There Herd Effect in Farmers' Land Transfer Behavior? *Land* **2022**, *11*, 2191. [CrossRef]
16. Botticini, F.; Auzins, A. Land Use Efficiency and Value Capture. *Encyclopedia* **2022**, *2*, 1943–1958. [CrossRef]
17. Weng, C.; Cui, Q.; Wu, J. Peasant household differentiation, farmland circulation and scale management. *Rural. Eco.* **2017**, *2*, 32–37. (In Chinese)

18. Xu, D.; Ma, Z.; Deng, X.; Liu, Y.; Huang, K.; Zhou, W.; Yong, Z. Relationships between Land Management Scale and Livelihood Strategy Selection of Rural Households in China from the Perspective of Family Life Cycle. *Land* **2020**, *9*, 11. [CrossRef]
19. Huang, K.; Deng, X.; Liu, Y.; Yong, Z.; Xu, D. Does off-Farm Migration of Female Laborers Inhibit Land Transfer? Evidence from Sichuan Province, China. *Land* **2020**, *9*, 14. [CrossRef]
20. Liu, G.; Yang, L.; Guo, S.; Deng, X.; Song, J.; Xu, D. Land Attachment, Intergenerational Differences and Land Transfer: Evidence from Sichuan Province, China. *Land* **2022**, *11*, 695. [CrossRef]
21. Qing, Y.; Chen, M.; Sheng, Y.; Huang, J. Mechanization services, farm productivity and institutional innovation in China. *China Agric. Econ. Rev.* **2019**, *11*, 536–554. [CrossRef]
22. Yang, Z. Aging, social networks and peasants' green production technology adoption behavior: Validation from peasant household data in six provinces in the yangtze river basin. *China Rural Observ.* **2018**, *4*, 44–58. (In Chinese)
23. Wang, Y.; Chen, L.; Long, K. Farmers' identity, property rights cognition and perception of rural residential land distributive justice in China: Findings from Nanjing, Jiangsu Province. *Habitat Int.* **2018**, *79*, 99–108. [CrossRef]
24. Lu, X.; Zang, T.; Zhang, Q. Influencing mechanism of the willingness and behavior of farmland scale management: Evidence from Shandong province, China. *J. Nat. Res.* **2020**, *35*, 1147–1159. (In Chinese)
25. Yang, H.; Huang, K.; Deng, X.; Xu, D. Livelihood Capital and Land Transfer of Different Types of Farmers: Evidence from Panel Data in Sichuan Province, China. *Land* **2021**, *10*, 532. [CrossRef]
26. Deng, X.; Zeng, M.; Xu, D.; Qi, Y. Does Social Capital Help to Reduce Farmland Abandonment? Evidence from Big Survey Data in Rural China. *Land* **2020**, *9*, 360. [CrossRef]
27. Gao, J.; Song, G.; Sun, X. Does labor migration affect rural land transfer? Evidence from China. *Land Use Policy* **2020**, *99*, 105096. [CrossRef]
28. Zhang, L.; Luo, B. Economies of Scale or Division of Labor Economy? Evidence from Household Operation Performance in Agriculture. *J. Agrotechnical. Eco.* **2021**, *2*, 4–17. (In Chinese)
29. Zhao, L.; Liu, S.; Zhang, W. New Trends in Internal Migration in China: Profiles of the New-generation Migrants. *China World Econ.* **2018**, *26*, 18–41. [CrossRef]
30. Zhang, Z.; Zhang, Y.; Zhang, Y. Influencing Mechanism of Peasants" Cognition on Land Transfer Behavior Based on the Theory of Planned Behavior. *China Land Sci.* **2021**, *35*, 53–62. (In Chinese)
31. Li, H.; Zhang, X.; Li, H. Has peasant welfare improved after rural residential land circulation? *J. Rural Stud.* **2019**, *10*, 36. [CrossRef]
32. Zheng, B.; Gu, Y.; Zhu, H. Land tenure arrangements and rural-to-urban migration: Evidence from implementation of China's rural land contracting law. *J. Chin. Gov.* **2019**, *5*, 322–344. [CrossRef]
33. Huang, Y.; Li, F.; Xie, H. A Scientometrics Review on Farmland Abandonment Research. *Land* **2020**, *9*, 263. [CrossRef]
34. Zhou, X.; Ding, D. Factors Influencing Farmers' Willingness and Behaviors in Organic Agriculture Development: An Empirical Analysis Based on Survey Data of Farmers in Anhui Province. *Sustainability* **2022**, *14*, 14945. [CrossRef]
35. Zhao, D.; Zhou, H.; Gao, F. Differentiation of peasants, technical constraints and the differences of cultivated land protection technology selection: A theoretical analysis framework of peasant households' technological adoption based on different constraints. *J. Nat. Res.* **2020**, *35*, 2956–2967. (In Chinese)
36. Wang, Z.; Yang, M.; Zhang, Z.; Li, Y.; Wen, C. The Impact of Land Transfer on Vulnerability as Expected Poverty in the Perspective of Farm Household Heterogeneity: An Empirical Study Based on 4608 Farm Households in China. *Land* **2022**, *11*, 1995. [CrossRef]
37. Liu, R.; Yu, C.; Jiang, J.; Huang, Z.; Jiang, Y. Farmer differentiation, generational differences and farmers' behaviors to withdraw from rural homesteads: Evidence from chengdu, China. *Habitat Int.* **2020**, *103*, 102231. [CrossRef]
38. Carolan, M. Lands changing hands: Experiences of succession and farm (knowledge) acquisition among first-generation, multigenerational, and aspiring farmers. *Land Use Policy* **2018**, *79*, 179–189. [CrossRef]
39. Milone, P.; Ventura, F. New generation farmers: Rediscovering the peasantry. *J. Rural. Stud.* **2018**, *65*, 43–52. [CrossRef]
40. Lyu, X.; Peng, W.; Niu, S.; Qu, Y.; Xin, Z. Evaluation of sustainable intensification of cultivated land use according to farming households' livelihood types. *Ecol. Indic.* **2022**, *1*, 138. [CrossRef]
41. Xie, D.; Bai, C.; Yan, H.; Song, W. Legal land transfer rights, labor migration and urban–rural income disparity: Evidence from the implementation of China's Rural Land Contracting Law in 2003. *Growth Chang.* **2022**, *53*, 1457–1482. [CrossRef]
42. Chang, X.; Liu, L. Characterizing Rural Household Differentiation from the Perspective of Farmland Transfer in Eastern China Using an Agent Based Model. *Hum. Ecol.* **2018**, *46*, 875–886. [CrossRef]
43. Ma, J.; Zhou, W.; Guo, S.; Deng, X.; Song, J.; Xu, D. Effects of Conformity Tendencies on Farmers' Willingness to Take Measures to Respond to Climate Change: Evidence from Sichuan Province, China. *Int. J. Environ. Res. Public Health* **2022**, *19*, 11246. [CrossRef] [PubMed]
44. Lawry, S.; Samii, C.; Hall, R.; Leopold, A.; Hornby, D.; Mtero, F. The Impact of Land Property Rights Interventions on Investment and Agricultural Productivity in Developing Countries: A Systematic Review. *Campbell Syst. Rev.* **2014**, *10*, 1–104. [CrossRef]
45. Liu, Y.; Wang, F.; Song, D. Household differentiation, generational differences and acceptance of rural housing mortgage. *Chinese Rural Econ.* **2016**, *9*, 16–29.
46. Xie, F.; Liu, S.; Xu, D. Gender difference in time-use of off-farm employment in rural Sichuan, China. *J. Rural. Stud.* **2019**, *93*, 487–495. [CrossRef]

47. Qian, L.; Lu, H.; Gao, Q.; Lu, H. Household-owned farm machinery vs. outsourced machinery services: The impact of agricultural mechanization on the land leasing behavior of relatively large-scale farmers in China. *Land Use Policy* **2022**, *115*, 106008. [CrossRef]
48. Niu, S.; Lyu, X.; Gu, G.; Zhou, X.; Peng, W. Sustainable Intensification of Cultivated Land Use and Its Influencing Factors at the Farming Household Scale: A Case Study of Shandong Province, China. *Chin. Geogr. Sci.* **2021**, *31*, 109–125. [CrossRef]
49. Xu, D.; Yong, Z.; Deng, X.; Zhuang, L.; Qing, C. Rural-Urban Migration and its Effect on Land Transfer in Rural China. *Land* **2020**, *9*, 81. [CrossRef]
50. Wei, X.; Ruan, J. Influences of Government Policies and Farmers' Cognition on Farmers' Participation Willingness and Behaviors in E-Commerce Interest Linkage Mechanisms during Farmer–Enterprise Games. *Agriculture* **2022**, *12*, 1625. [CrossRef]
51. Shui, Y.; Xu, D.; Liu, Y.; Liu, S. The Influence of Human Capital and Social Capital on the Gendered Division of Labor in Peasant Family in Sichuan, China. *Soc. Indic. Res.* **2021**, *155*, 505–522. [CrossRef]
52. Xu, D.; Guo, S.; Xie, F.; Liu, S.; Cao, S. The impact of rural laborer migration and household structure on household land use arrangements in mountainous areas of Sichuan Province, China. *Habitat Int.* **2017**, *70*, 72–80. [CrossRef]
53. Ju, Q.; Ni, J.; Ni, D.; Wu, Y. Land Acquisition, Labor Allocation, and Income Growth of Farm Households. *Emerg. Mark. Finance Trade* **2016**, *52*, 1744–1761. [CrossRef]

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