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Impact of Relationship Governance and Third-Party Intervention on Farmland Transfer Rents—Empirical Evidence from Rural China

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Abstract: The marketization of transfer rent is an important symbol of the development of the farmland factor market. At present, the price formation mechanism of rent in China's farmland market is not perfect. Based on the theoretical analysis starting with the post transaction cost of leasers, this paper uses 1648 farmland transfer samples collected by the China Land Economic Survey (CLES) in 2020, and employs OLS, 2SLS and CMP methods to empirically test the impact of relationship governance on transfer rent and the role of third-party (including county and township governments and village committees) intervention on the change in relationship governance pattern and rent decisions. The results show that the close relationship between the two sides of transfer represents the strong relationship governance functioned by the constraints of the trust and reputation mechanism, which can reduce the post transaction cost. Additionally, the two sides play a game on this part of the transaction cost, making the transfer rent lower than the market price. Furthermore, the involvement of third parties such as county and township governments and village committees in the transfer has replaced the role of relationship governance in reducing transaction cost, and changed the relationship governance pattern of acquaintance society, which makes the transfer rent close to the market price.

Keywords: farmland transfer; transaction cost; relationship governance; third-party intervention; rent



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1. Introduction

In the process of rural structural transformation in China and many other developing countries, the land transfer market plays an important role in avoiding land fragmentation and improving the agricultural productivity of rural society [1,2].

Taking China as an example, Chinese farmland transfer has gone through a process from being banned to being permitted, and eventually to being promoted. In China, farmland is owned by rural collectives, and the contract management rights (the right to use land by contract) are distributed to farmers under the Household Responsibility System. Before the 1980s, the Chinese government strictly prohibited the redistribution of land through the market. However, in 1984, the Chinese government relaxed the policy to allow farmers to transfer land after obtaining permission from village cadres. The relaxation of policy drove the revision of law on farmland transfer. The Rural Land Contract Law, enacted in 2002, spelt out the transferability of farmers' land use rights, allowing transfer to village or non-village residents. Later, in 2007, a new Property Law defined farmers' land use rights as usufructuary rights that are transactable.

More importantly, the Chinese government's policy has evolved from allowing land to be transferred through the transfer market to actively promoting. In 2008, the Chinese government enacted the "Three Rights Separation Policy", which further separates land

management rights from land contracted management right. The three rights—land ownership right, land contract rights and land management right—are split. Therefore, the farmland transfer market has developed rapidly with legal permission and government policy encouragement [3]. According to the “Chinese Rural Management Statistics”, the farmland transfer rate in China reached 39.5% by the end of 2020.

However, high turnover rate does not mean the improvement of marketization. The transfer where price mechanism functions can guide the allocation of farmland resources to the subjects with the highest evaluation of its value [4], otherwise, it may imply the market failure of the mismatch between the transfer rent and the use value of farmland. Therefore, the marketization of transfer rent is an important symbol of the development of the farmland factor market.

As has been emphasized in the literature, the high degree of market segmentation is an important feature of the land leasing market in underdeveloped countries. For example, Huy et al. (2016) argued that due to the imperfect transfer markets, rents in Vietnam’s farmland rental market were not entirely determined by supply and demand of farmland [5]. Muraoka et al. (2018) also found in Kenya that farmers cannot achieve the optimal land management scale through the price mechanism [6]. Ricker-Gilbert et al. (2019) held that most land leasing transactions in Malawi occurred in closed communities or races [7]. Like these countries, China also has similar problems. The survey data of the China Household Finance Survey (CHFS) in 2017 show that the proportion of free farmland transfer is about 38.9%. Although the essence of zero-rent or low-rent transfer is economic exchange [8], the level of rent is not the basis for selecting transferees because the transferor no longer simply pursues monetary or physical rent but selects specific transferees to obtain other benefits by human relationship [9]. At this time, the selected transferee may not be a more efficient choice at the production level. For the transferee, the transfer rent is also a signal and stimulus for them to make effective use of farmland [10]. The cost constraints and information transmission embodied in the rent arrangement may have an impact on their production behavior [11]. It can be seen that from the perspective of effective utilization of farmland resources, the price formation mechanism of rent in farmland markets of underdeveloped countries including China is not perfect in reality.

Existing studies have explored the real causes of non-market pricing mechanisms in farmland transfer from the perspectives of human reciprocity [12,13], property security [14] or control preference [15]. In general, the transfer of non-market pricing has the characteristics of acquaintance trading, and the transactions in economic society are governed by contracts [16]. From the perspective of reducing transaction costs, relationship governance based on the trust and reputation mechanism is a very common governance mechanism in acquaintance transactions [17]. Some scholars have discussed the application of relational governance in farmland transfer from the dimensions of transaction object selection, transfer period and contract form. Macours (2014) found in Guatemala that the higher the degree of trust between the two sides, the more likely they were to sign oral contracts and not agree on the deadlines, and there was a phenomenon of differential order according to the strength of the relationship [18]. Hong (2018) investigated the households in the GuiZhou Province of China and further verified the impact of the trust and reputation mechanism on the choice of contract form [19]. From the basic logic of market operation, price is the most important dimension of a contract and the expression of competition and scarcity [20]. Therefore, from the perspective of transaction costs, we intend to capture the influence of the relationship governance based on the trust and reputation mechanism on the transfer rent arrangement in acquaintance society. The answer to it helps to deepen the understanding of the transaction characteristics of China’s farmland transfer market at the present stage, as well as other developing countries’ markets.

Further, the transaction between acquaintances is inevitably accompanied by the personalization of rent. Thereby, how to promote the relationship governance in acquaintance transfer to a wider range of market governance, so as to realize the marketization of rent price, is the proper meaning of perfecting the farmland factor market. North (1990) be-

lieved that the third-party implementation can provide stable expectations for both parties and help reduce transaction costs through rule making [21]. The government is the most important third-party implementation subject, which is always emphasized by scholars as the “tangible hand” to promote the transformation of the transfer market. In practice, third parties, such as county and township governments and village committees, often intervene in transfer in various ways [22,23]. Thus, we want to excavate the influence mechanism of third parties such as the government and village committee on farmland transfer rent from the perspective of transaction costs, the answer to which may provide experience reference for solving the personalized farmland transaction and improving the efficiency of resource allocation.

The existing literature provides a wealth of reference for this paper, but there are three-fold aspects that need to be considered, which may be the contributions of this paper. First, the essence of non-market pricing of farmland transfer rent can be further explored. Transfer is a process in which both parties seek to maximize their interests under the established constraints. The transaction costs generated in this process may be the key to the game on rent among trading objects with different relational intensities. Second, when exploring the impact of third-party intervention on rent, most of the existing literature regards it as a direct intervention in transfer pricing, which fails to open the black box of its internal influence mechanism on rent determination. Third, the existing literature mostly uses the data at the farmer level to explore the decision of rent, while the transfer of farmland is generally based on land plots, and rent is also directly related to the scale and fertility of land plots. Therefore, the data matched to the land plot can be better used for empirical tests. In summary, this paper combs the theoretical analysis clues of “transaction cost-relational governance-third party intervention-farmland transfer rent”, and uses 1648 farmland transfer samples collected by the China Land Economic Survey (CLES) in Jiangsu Province in 2020 for the empirical test.

2. Theoretical Analysis

When a transaction cost is zero, the price mechanism can realize an efficient right transaction [24]. In the farmland transfer, both sides of the transaction have to pay the transaction costs in three stages: before, during and after the transaction [25]. Among them, the transferor is mainly faced with transaction costs caused by ex post moral hazard such as the transferee’s failure to return farmland in sufficient quantity on time and the destruction of farmland quality [26]. They not only need to search for the transferee with the intention of transfer, but also hope that the searched transferee has good credit to avoid the above risks. Therefore, transaction costs are particularly important for the formation of transaction prices.

The degree of intimacy and communication distance are closely related to the intensity of relationship between trading objects [27]. Under the strong relationship, the relationship governance with the trust and reputation mechanism can effectively avoid the post risk of transfer [17]. Firstly, the higher the degree of trust, the stronger the predictability of the trading object’s behavior, which can form a stable expectation to avoid the opportunism behavior of the transferee. Secondly, the closer the social relationship between the two sides, the better the reputation mechanism can restrain the uncertainty behavior of the transferee.

Theoretically, the transferor wants to obtain higher rent regardless of the strength of the relationship between the two sides. However, the transferor is willing to sacrifice part of the rent to further strengthen the relationship between the two parties, which constitutes the invisible cost of the transfer, because the relationship governance based on the trust and reputation mechanism is conducive to reducing the transaction cost of risk aversion afterwards, and the transferor does not need to find another “reliable” transferee [23]. For the transferee, these invisible costs also enable them to have stronger price game ability. Only when this part of the invisible cost is added to the transferor’s rent the transaction between the two parties can be reached, so that the invisible cost is actually converted into

a “hidden rent”. This is a preliminary explanation for the fact that the rent is lower than the transfer price in the transfer of relational governance.

To further demonstrate the above analysis, this paper explains it with a simple logical deduction. In order to simplify the analysis, it is assumed that there are both local transferee *A* and external transferee *B* in the rural land transfer market, who correspond to different relationship strengths with the transferor. The market price of farmland transfer and the ex post transaction cost of the transferor are represented by *r* and *m*, respectively. The transferee is willing to provide higher rent but may take various opportunistic behaviors, while the transferor needs to balance the rent that can be obtained in the transfer and the post transaction costs.

After introducing ex post transaction costs, the model used to explore how transferors select transferees is designed as follows:

$$\text{Max (U)} = \text{U} (r, m) \quad (1)$$

If the transferor chooses to transfer farmland to the familiar transferee *A*, and the trust and reputation mechanism constraints form an effective post performance guarantee, the post transaction cost of the transferor to the familiar transferee *A* will decrease accordingly, and the stronger the trust and reputation mechanism constraints are, the lower the transaction cost *m* will be. The according model is developed as follows:

$$\frac{\partial m}{\partial t_A} < 0 \quad (2)$$

The transferor may also choose to deal with the unfamiliar transferee *B*, but there is no correlation between the two parties, indicating that the opportunistic behavior of the transferee *B* cannot be expected and punished jointly and severally. Thereby, another option for the transferor to reduce the post transaction cost is to invest the time cost in the early stage to screen the reliability of the transferee. In other words, the ex post transaction cost *m* faced by the transferor can be a function of trust between both parties, reputation mechanism constraint *T* and the transferor’s early cost *S* of searching for or screening a reliable transferee, and the two are substitutes for each other, as shown in model (3):

$$\text{Max (U)} = \text{U} (r, m (T, S)) \quad (3)$$

The higher search cost can generally increase the possibility of finding suitable transferees, which is presented as follows:

$$\frac{\partial m}{\partial S_B} < 0 \quad (4)$$

The transferor’s choice of the transferee is determined by weighing the rental income *r* and the subsequent transaction cost *m* (*T*, *S*). Considering the trust and reputation mechanism *t* and the search cost *n*, the transferor can choose to trade with the familiar transferee *A* or re-search for the unfamiliar transferee *B*, the principle of which is to maximize the return, that is, the rent can be higher after considering the post transaction cost:

$$[R_A = r - (T_A + S_A)] \geq [R_B = r - (T_B + S_B)] \quad (5)$$

where if the transferor chooses the local transferee *A*, $T_A > 0$ due to the strong constraints of the reputation mechanism. Additionally, the search cost is zero, so $S_A = 0$. As for the potential unfamiliar transferee *B* outside the village, the reputation mechanism $T_B = 0$, and the search cost is higher, that is, $S_B > 0$.

Therefore, model (5) can be further simplified to model (6):

$$[R_A = r - T_A] \geq [R_B = r - S_B] \quad (6)$$

For the transferee, the rent to be paid is a function of the market rent minus the post transaction cost. If $S_B > T_A$, the transferor is more likely to choose familiar transferee A with strong trust and reputation mechanism constraints. In the case of an imperfect land transfer market, the cost S_B is very high for the transferor to search for an appropriate transferee outside the acquaintance society [28]. As a result, the familiar transferee only needs to pay the rent below market price. Accordingly, Hypothesis 1 is proposed:

Hypothesis 1. *The closer the relationship between the two sides of transfer is, the stronger the relationship governance with trust and reputation mechanism constraints can reduce the post transaction cost. The game between the two sides on this part of the transaction cost will make the transfer rent lower than the market price.*

From the perspective of farmland utilization efficiency, farmland transfer needs to shift from acquaintance society to market-oriented transactions. The involvement of third parties such as county and township governments and village committees in the substitution of relationship governance also helps to reduce transaction costs in farmland transfer. Firstly, third parties can collect and aggregate supply and demand information more effectively and drive the formation of an open market network to reduce the dependence of transferors on acquaintance networks. Secondly, compared with the trust and reputation mechanism within acquaintance society, the authority and credibility of third parties also have unique advantages in supervising the post execution of contracts.

For the transferor, since third-party involvement reduces the information cost of searching the trading object in a wider range, and under the guarantee mechanism of the third party, the post transaction cost of the transfer can be saved whether trading with a familiar or unfamiliar transferee. Therefore, the transferor does not need to reduce the rent to strengthen the relationship with the transferee, and the familiar transferee cannot conduct a price game on the transfer. Moreover, the third-party intervention can drive the formation of a more open transfer market. Compared with the closed acquaintance market, the transferee screened under the market rules may have a stronger production capacity and profit-making motivation, while the motivation to maintain social relations is weak. They can and are willing to pay higher rents to obtain stable management rights. At this time, the two sides can reach an agreement at a higher price, and the deviation between rent and market price is reduced.

This paper still takes the post transaction cost as an example to demonstrate the impact of third-party interventions on rent decisions. As shown in model (6) above, the rent difference of different trading objects is formed by the game between the two sides on the post transaction cost.

$$[R_A = r - T_A] = [R_B = r - S_B] \quad (7)$$

where after the government or village committee intervene in the transfer as a third party, on the one hand, the third party has the responsibility to guarantee after the contract. The credibility and binding force established by the government and village committee relying on authority and credit can effectively restrict the transferee's failure to return farmland on time or restrict destroying land productivity. On the other hand, efficient information transmission of the third party can reduce the time cost of finding a reliable transferee outside acquaintance society. That is, the involvement of a third party replaces the trust and reputation mechanism within the acquaintance society to restrict T_A and reduces the search cost S_B of the transferor to the external transferee. Thus, the transfer rent will be close to the market price r . Accordingly, Hypothesis 2 is presented:

Hypothesis 2. *The involvement of third parties such as county and township governments and village committees has replaced the role of relational governance in reducing transaction costs and changed the relational governance pattern of acquaintance society, which makes the transfer rent close to the market price.*

3. Materials and Methods

3.1. Data and Variables

The data sources used for analysis are the China Land Economic Survey (CLES) conducted by the Department of Humanities and Social Sciences of Nanjing Agricultural University and the Jin Shanbao Institute of Modern Agricultural in Jiangsu Province in 2020. The survey covers information of the interviewed farmers about the composition of the family members, employment, land resources, land use and land transfer, etc. The sampling method of Probability Proportional to Size (PPS) was adopted in the survey [29]. Twenty-six counties were selected from thirteen prefecture-level cities of Jiangsu Province. Two sample townships were chosen from each county, and one administrative village was selected from each township. Finally, the researchers randomly selected fifty households in every village. The database contained 52 villages and 2628 households.

Considering that the transfer of farmland is generally based on the land parcel as the basic unit, the decision of rent is also directly related to the quality and location of farmland [12]. Thereby, in the empirical analysis, this paper matches each plot with variables at other levels of the interviewed farmers to eliminate the impact of plot heterogeneity on rent as much as possible. The plot information of the surveyed farmers was collected in CLES, including basic information such as land area, fertility, slope, distance from the hardened road, as well as information related to rent, transaction object and transaction approach, which can well meet the needs of this study. After data processing and screening, samples of 1134 transferors and 514 transferees were finally retained in this paper. In view of the purpose of this paper, our empirical estimations require measures of the transfer rent, the object of farmland transfer and other explanatory variables.

The dependent variable in this paper is the rent level of farmland transfer, which is measured by the average transfer price per mu (1 mu equals about 0.667 hectares) of farmland. Considering that some samples adopt the method of physical rent calculation, this paper converts the physical rent into monetary rent according to the crop purchase price in Jiangsu Province in 2019 for the consistency of analysis.

The key explanatory variable is the object of farmland transfer. Referring to the division of social connections by Fei (2005) and Huang (2010) [30,31], this paper adopts “the object of farmland transfer” to measure the relational governance. The strength of the relationship between different trading objects is different. Blood relationship and kinship constitute the most stable social relationship. As the circle of the transaction moves outward, the strength of the relationship between the two parties gradually weakens. In the CLES questionnaire, the problem of “Is the transaction object of land transfer a close relative within three generations?” is designed. The close relatives within three generations and ordinary transaction objects correspond to different degrees of association, which reflects the difference between typical strong relational governance and general relational governance paradigm.

At the same time, this paper also needs to test the impact of the intervention of third parties such as county and township governments and village committees on rent decisions. Two questions were set up in CLES questionnaire: “whether the transfer is through the land trading platform” and “whether the village committee or village cadres come forward to organize and coordinate during the transfer”. If the surveyed farmers chose at least one of them, that is, there is a third-party intervention, a value of 1 was assigned, otherwise the value equals 0. It should be noted that these two types represent exogenous and endogenous intervention, respectively, which is further distinguished in the mechanism analysis of this paper.

As for other explanatory variables, this paper also introduces the characteristics of household head level, family level, plot and village, as well as regional fixed effect to reduce the estimation error [32]. The characteristics at the household head level include age, educational level and the householder’s agricultural production experience. In family-level characteristics, family social capital and physical capital are factors that may affect the transaction scope and rent at the same time. Social organization is an important variable to

characterize social capital. This paper introduces whether there is a party member in the family to represent family social capital and family non-agricultural income to measure physical capital. Plot characteristic is another important control variable in this paper, and the heterogeneity of different plots in location and fertility is crucial to the decision of rent [12]. In addition, whether the contract is signed, and the transfer period are also important factors affecting rent [33]. These are further summarized and shown in Table 1.

Table 1. The definitions and descriptive statistics of the survey data.

Variable	Definition	Transferor Samples			Transferee Samples		
		N	Mean	SD	N	Mean	SD
Transfer rent	Yuan/mu	1134	822.0	354.4	514	566.7	480.5
Relational governance	The trading object is a close relative within three generations = 1; otherwise = 0	1134	0.1	0.3	514	0.1	0.3
Third-party involvement	Transfer through village cadres or trading platform = 1; otherwise = 0	1134	0.8	0.4	514	0.4	0.5
Age of household head	Actual age	1134	62.1	12.2	514	56.0	9.0
Education of household head	Years of education	1133	7.1	4.0	514	7.3	3.5
Agricultural production experience	Having performed farm work before the age of 16 = 1; otherwise = 0	1134	0.8	0.4	514	0.8	0.4
Whether there is a party member	Yes = 1; No = 0	1134	0.3	0.5	514	0.3	0.4
Household's agricultural population	Number of households engaged in agricultural work	1132	1.0	1.0	514	1.9	0.9
Household nonfarm income	Ln (nonfarm income) (yuan)	1134	9.0	4.6	514	8.5	4.7
Plot area	The actual area of the plot transferred (mu)	1134	2.6	3.7	514	24.2	45.3
Distance from plot to hardened road	Distance from the plot to the nearest hardened cement road (km)	1134	0.2	0.9	514	0.3	1.3
Can the plot be irrigated?	Yes = 1; No = 0	1134	0.9	0.3	514	0.8	0.4
Plot fertility	Poor = 1; Medium = 2; Good = 3	1134	2.5	0.6	514	2.3	0.6
Is the written contract signed?	Yes = 1; No = 0	1134	0.8	0.4	514	0.5	0.5
Transfer period	Transfer years	1134	7.0	6.0	514	7.5	46.7
Is village close to expressway?	Yes = 1; No = 0	1134	0.1	0.3	514	0.1	0.4

3.2. Model Specification and Estimation Methods

This paper attempts to analyze the relationship between relational governance and farmland transfer rent, which first needs to test whether there are significant differences in farmland transfer rents among different transfer objects. Moreover, the key explanatory variable in this paper is a continuous variable, so OLS is a more appropriate measurement method. At the same time, considering the endogenous problems that may exist in the model, we further use the 2SLS model and CMP method for empirical test.

(1) The benchmark regression model: OLS.

In order to capture the influence of relational governance on transfer rent, we develop the following model:

$$\ln(\text{Transfer rent}) = \alpha_1 \text{Ri} + \eta_1 X_i + \mu_i \quad (8)$$

where the logarithm of the transfer rent is denoted by $\ln(\text{Transfer rent})$, and the relational governance is denoted by Ri . The control variables are denoted by X_i , respectively, including the characteristics of household head, family, plot and village, etc. The parameters to be estimated are denoted by α_1 and η_1 , and the residual term is represented by μ_i .

(2) Endogenous discussion: 2SLS and CMP method.

If R_i is exogenous, Ordinary Least Square (OLS) regression can be regarded as unbiased estimation. However, the key explanatory variable “relational governance” in this paper is measured by the indicator “trading object”, and the selection of different trading objects is a latent variable, which is determined by multiple factors rather than random selection. For example, risk-averse families are more likely to trade with relatives to reduce the risk of failing to recover farmland on time, and other unobserved factors may also affect the rent decision. Thus, relational governance may be an endogenous variable, which will lead to a bias of estimation results of model (8). Therefore, this paper introduces an instrumental variable to solve this endogenous problem.

In model estimation, Two-Stage Least Squares (2SLS) and Conditional Mixed Estimation (CMP) are used, respectively. The basic idea of 2SLS estimation is to firstly regress the instrumental variable with the endogenous explanatory variable “relational governance” to obtain the fitting value. Secondly, the explained variable “transfer rent” is used to regress the fitting value obtained in the first step. If the endogenous test results of explanatory variables significantly reject the null hypothesis, the estimation results of 2SLS are better than those of OLS. The basic idea of CMP estimation is to first evaluate the correlation between endogenous explanatory variable “relational governance” and instrumental variable, and then replace instrumental variable into model regression to determine whether the key explanatory variable is endogenous according to the endogenous test parameter atanhrh_{12} . If the endogenous test parameter atanhrho_{12} is significantly different from zero, the estimation result of the CMP method is more credible. This paper uses the above two methods to estimate the model and judges the robustness of the empirical results accordingly.

4. Results

4.1. Descriptive Analysis

Before the quantitative analysis, this paper first makes a descriptive analysis of the data. Contract form, term and rent are the basic dimensions of the transfer contract. It can be seen from Table 2 that in the samples of transferors and transferees, under the governance situation of strong relationship, the proportion of signing written contracts, transfer period and rent all reflect the characteristics of weak marketization. With the weakening of the relationship between the parties of the transaction, the proportion of signing a written contract increases, the transfer period extends and the rent increases, showing a general relationship governance with market characteristics. Among the two types of samples, the average rent under general relational governance is about twice that under strong relational governance. This observation of the data initially verifies the Hypothesis 1.

Table 2. Relationship governance and transfer contract.

	Governance Context	Number of Transfer	Proportion of Signing Written Contracts (%)	Mean Period of Transfer (Year)	Mean Rent (Yuan/Mu)
Transferor samples	Close relative within three generations (strong relationship)	76	46.052	4.250	439.41
	Ordinary transaction object (universal relationship)	1058	82.136	7.221	849.44
Transferee samples	Close relative within three generations (strong relationship)	54	11.11	2.556	307.378
	Ordinary transaction object (universal relationship)	460	54.57	8.111	597.006

Table 3 shows the impact of third-party intervention on the relationship governance pattern. In terms of the transferor samples, the proportion of farmland transferred to close relatives within three generations without third-party intervention is 19.73%, while the proportion drops to 3.52% with third-party intervention. Correspondingly, the proportion of transferring to ordinary trading objects increases from 80.27% without third-party intervention to 96.48% with third-party intervention. To a certain extent, this reflects the change in relationship governance pattern in farmland transfer caused by third-party intervention, which verifies the influence mechanism of Hypothesis 2.

Table 3. Descriptive evidence of the impact of third-party intervention on relationship governance. Unit: %.

	Transferor Samples		Transferee Samples	
	Transfer to Close Relative within Three Generations	Transfer to Ordinary Transaction Object	Transfer from Close Relative within Three Generations	Transfer from Ordinary Transaction Object
Third-party intervention	3.52	96.48	1.77	98.23
No intervention	19.73	80.27	17.36	82.64

Table 4 illustrates the impact of third-party intervention on rent decision when the transaction object is given. It can be seen that rent with third-party involvement is higher than that without the involvement of a third party in both transferor and transferee samples. Taking the transferor sample as an example, when farmland is transferred to ordinary trading objects, the impact of third-party intervention on rent is not obvious, indicating that general relationship governance itself has reflected certain market characteristics. When farmland is transferred to close relatives within three generations, the average rent with third-party intervention increases significantly, demonstrating that the involvement of a third party can also promote the transformation of rent to market in acquaintances' social relations. This observation preliminarily verifies Hypothesis 2.

Table 4. Descriptive evidence of third-party intervention influencing rent.

Transferor Samples			Transferee Samples		
Trading Object		Mean Rent (Yuan/Mu)	Trading Object		Mean Rent (Yuan/Mu)
Close relative within three generations	Third-party intervention	570.81	Close relative within three generations	Third-party intervention	537.500
	No intervention	386.92		No intervention	290.048
Ordinary trading object	Third-party intervention	835.98	Ordinary trading object	Third-party intervention	820.023
	No intervention	817.92		No intervention	388.050

4.2. Impact of Relationship Governance on Transfer Rent: Results of OLS

Before the OLS regression of the model, the multi-collinearity of each variable was tested. The results show that the maximum Variance Inflation Factor (VIF) of each variable is only 1.63, which is less than 5, indicating that there is no multi-collinearity problem and variables can be directly introduced into the model. In order to avoid possible heteroscedasticity, this paper adopts robust standard error. In addition, the regional fixed effect is also controlled to alleviate the endogenous problems caused by regional differences. Column (1) and Column (3) of Table 5 are the regression results when the control variables are not introduced in the transferor and transferee samples, respectively. The results show that the strong relationship governance dealing with close relatives within three generations significantly reduces the transfer rent. Columns (2) and (4) of Table 5 show that after adding control variables and controlling the regional fixed effect, strong relationship governance still has a significantly negative effect on the transfer rent in transferor and transferee samples at the level of 1% and 10%, respectively, and the transfer rent is significantly lower when trading with close relatives within three generations. It should be noted that the

logical starting point of the theoretical analysis in this paper is the ex post transaction cost of the transferor, which is the reason for the rent difference in different governance situations. Thereby, this paper focuses on the transferor sample in the analysis.

Table 5. Impact of relationship governance on transfer rent: OLS.

Variables	Transferor Samples		Transferee Samples	
	(1)	(2)	(3)	(4)
Relational governance	−1.958 *** (0.302)	−1.848 *** (0.279)	−0.804 ** (0.422)	−0.775 * (0.426)
Age of household head	—	−0.003 (0.002)	—	−0.001 (0.015)
Education of household head	—	−0.189 *** (0.007)	—	0.013 (0.043)
Agricultural production experience	—	−0.128 ** (0.055)	—	0.243 (0.265)
Whether there is a party member	—	−0.437 (0.053)	—	−0.122 (0.243)
Household's agricultural population	—	0.039 * (0.020)	—	0.115 (0.121)
Household nonfarm income	—	0.003 (0.005)	—	−0.047 (0.023)
Plot area	—	0.001 (0.004)	—	−0.002 (0.002)
Distance from plot to hardened road	—	−0.186 (0.018)	—	0.064 (0.101)
Can the plot be irrigated?	—	0.016 (0.132)	—	0.410 (0.286)
Plot fertility	—	0.001 (0.045)	—	−0.101 (0.185)
Is the written contract signed?	—	0.284 *** (0.068)	—	4.029 *** (0.233)
Transfer period	—	0.008 *** (0.003)	—	0.001 (0.001)
Is village close to expressway?	—	0.132 *** (0.078)	—	−0.446 (0.274)
Regional fixed effect	YES	YES	YES	YES
Constant	6.684 *** (0.011)	6.737 *** (0.248)	4.659 *** (0.144)	2.543 * (1.102)
R ²	0.294	0.328	0.007	0.403
N	1134	1134	514	514

Note: ***, **, and * denote significant at 1%, 5% and 10% level, respectively; robust standard errors are presented in parentheses.

The estimated results of control variables are also basically in line with expectations. Taking the transferor sample as an example, the higher the education level of the household head, the lower the transfer rent. The probable explanation is that the higher education level of the household head means the increase in non-agricultural employment opportunities and income, and the corresponding opportunity cost of farming is larger, so they may be more willing to reduce the rent price. The household's agricultural population significantly increases the rent at the level of 1%. This is because the larger agricultural population represents the stronger agricultural production capacity of the family. Even if a farmer does not transfer farmland, they can also operate by themselves, resulting in a farmer's initiative in inquiry to require higher rents when they transfer. The signing of written contracts and long transfer periods significantly increase the rent, which is consistent with the theoretical analysis of this paper. The marketization trend of signing written contracts and long transfer periods and rent is often the same, which also accords with the views of the mainstream literature [33]. The high-speed road near the village also increases the transfer rent. Being close to the high-speed road means that the transportation is more

convenient, and the processing, storage and transportation of agricultural products are more convenient, which verifies the discussion on the influence of location conditions on rent in the classical rent theory.

4.3. Impact of Relationship Governance on Transfer Rent: Endogeneity Treatment

The above results preliminarily show that strong relationship governance has a significantly negative impact on transfer rent. In order to avoid the potential endogeneity problem, the 2SLS and CMP methods are employed in this paper. Firstly, we need to find an effective instrumental variable, which should be related to relationship governance, and not related to transfer rent and other unobservable factors. This paper selects “the number of mobile phone contacts” of the surveyed farmers as the instrumental variable of relationship governance. The number of mobile phone contacts can reflect the social capital of farmers. Farmers with stronger social capital are more likely to expand the scope of transfer transactions beyond the acquaintance society, which is related to relationship governance. However, the number of mobile phone contacts does not directly affect the rent level of specific plots, so it is a more appropriate instrumental variable.

Before regression, the validity of the instrumental variable was first tested. The weak instrumental variable test and the under-identification test show that the instrumental variable does not have the problem of weak instrumental variable and has good exogeneity. As shown in Table 6, this paper takes the transferor samples as an example for analysis. The two-stage regression results of the 2SLS show that after controlling the possible endogeneity of the core explanatory variables by using the instrumental variable method, strong relational governance has a significant negative impact on the transfer rent at the level of 1%. Compared with the general relational governance, the transfer rent in transactions with strong relational governance decreases by 2.671 times. At the same time, the CMP method is also employed to verify the reliability of the 2SLS regression results. The direction of the estimation results of the CPM method is consistent with that of 2SLS, and the estimation coefficient is also close. However, the endogeneity test parameter $atanrho_{12}$ obtained by the CMP method fails to significantly reject the original hypothesis that the core explanatory variable “relationship governance” is an exogenous variable. Therefore, this paper takes the regression results of 2SLS as the standard. The above analysis indicates that taking into account the possible endogenous problems of relational governance, after using the instrumental variable method to correct potential endogenous errors, the coefficient direction of the core explanatory variable remains unchanged and the estimated value increases. In other words, the conclusion that strong relationship governance in farmland transfer significantly reduces rent is reliable. Hypothesis 1 is further verified.

Table 6. Impact of relationship governance on transfer rent: endogeneity treatment.

	Transferor Samples		Transferee Samples	
	(1)	(2)	(3)	(4)
	2SLS	CMP	2SLS	CMP
Relationship governance	−2.671 *** (0.934)	−2.912 *** (0.128)	−0.019 (2.855)	−0.917 (0.802)
Control variables	YES	YES	YES	YES
Regional fixed effect	YES	YES	YES	YES
Atanrho_12	—	−0.007 (0.042)	—	0.506 (0.503)
Weak instrumental variable test	10.703 **	—	11.051 ***	—
Hausman test	0.761	—	0.071	—
Under-identification test	15.824 ***	—	12.315 **	—
N	1134	1134	514	514

Note: *** and ** denote significant at 1% and 5% level, respectively; robust standard errors are presented in parentheses; the control variables are the same as the benchmark regression; limited to space, the regression results of the control variables are not reported.

4.4. Relationship Governance, Third-Party Intervention and Transfer Rent

This paper further analyzes the influence of third-party intervention on transfer rent. Firstly, relationship governance and third-party intervention were put into the model. The results show that third-party involvement significantly increases the transfer rent at the level of 1%. Furthermore, relationship governance, third-party intervention and their interaction items were put into the model. Taking into account the endogenous problem of “relationship governance” in the interaction term, this paper uses the exogenous instrumental variable of relational governance, “number of phone contacts”, to form a new interaction term with third-party intervention as the exogenous instrumental variable of the original interaction term, and employs 2SLS for regression.

This paper takes the transferor sample as an example for analysis. Through the influence of the interaction term “relationship governance \times third-party intervention” on rent in Table 7, it can be seen that even if the transaction objects and governance situations have been given, when there is third-party intervention, the influence of relational governance on transfer rent is no longer obvious. Obviously, from the perspective of rent, the third-party intervention has changed the pattern of relationship governance. Thereby, the intervention of township governments and village committees has promoted the transformation of rent from the personality characteristics in acquaintance society to the characteristics of marketization, which verifies Hypothesis 2 to some extent.

Table 7. Relationship governance, third-party intervention and transfer rent.

	Transferor Samples			Transferee Samples		
	(1)	(2)	(3)	(4)	(5)	(6)
Relationship governance	−2.671 *** (0.934)	—	−3.879 * 1.611	−0.019 (2.855)	—	−4.859 (11.392)
Third-party intervention	—	0.336 *** (0.093)	0.191 (0.228)	—	1.866 *** (0.253)	0.243 (0.255)
Relationship governance \times third-party intervention	—	—	2.231 (1.801)	—	—	4.186 (27.139)
Control variables	YES	YES	YES	YES	YES	YES
Regional fixed effect	YES	YES	YES	YES	YES	YES
N	1134	1134	1134	514	514	514

Note: *** and * denotes significant at 1% and 10% level, respectively; robust standard errors are presented in parentheses; limited to space, the regression results of the control variables are not reported.

4.5. Robustness Test: Excluding Cash Crop Samples

The key explanatory variable in this paper is the transfer rent. In the process of data processing, the full sample retains the sample of plots used for planting grain and cash crops. However, there is a possibility that the change in planting structure causes the change in expected income of farmland management by both sides, and the expected income is an important factor affecting the rent decision [34]. If this inference holds, the estimation results may be biased. Taking into account the relatively small fluctuation between the profit and expected income of grain planting, this paper excludes the transfer-out samples of cash crops planted on the plots, and only retains the transfer-out samples of grain crops on the plots for regression. The regression results show that the above series of regression results are still robust after excluding the samples of cash crops, which are not reported here, limited by space.

5. Discussion

5.1. Mechanism of Trust and Reputation

As mentioned in the previous theoretical analysis, the role of relationship governance is based on the constraints of the trust and reputation mechanism, which indicates that the strong constraints of the trust and reputation mechanism can stimulate the weakening effect of strong relationship governance on rent. Relationship governance is embodied in

two dimensions of the trust and reputation mechanism [35]. The stronger the respondent's trust in relatives, the more trust can play a role in relationship governance in acquaintance society. In this paper, "degree of trust in relatives" of farmers surveyed is used to measure trust. The role of the reputation mechanism depends on the incentive and punishment effect of reputation spread in a certain network [36], which is a valuable asset. This paper selects "the economic status of respondents in the village" to measure reputation. The respondents with higher economic status are more worried about the loss of their reputation, and less likely to default. If the transaction object defaults, the respondents with higher economic status may cause greater loss of reputation to the other party.

This paper introduced "relationship governance \times trust" and "relationship governance \times reputation" as two interaction terms into the model, respectively. Considering the endogenous problem of "relationship governance" in the interaction term, this paper uses the exogenous instrumental variable of "relationship governance", "number of mobile phone contacts", to interact with "trust" and "reputation", respectively, as the exogenous instrumental variable of the original two interaction terms and uses 2SLS for regression. Column (1) of Table 8 shows that the interaction term of "relationship governance \times trust" negatively affects the transfer rent at the significance level of 1%. That is, the stronger the transferor's trust in relatives, the lower the rent charged when transferring farmland to close relatives within three generations. This further verifies the validity of Hypothesis 1. However, the interaction term "relationship governance \times reputation" has no significant impact on rent, and the influence mechanism of reputation has not been tested. The possible reason is that due to the limitation of problem settings in the database, there is a deviation in the measurement of reputation in this paper, which needs to be further considered in the future.

Table 8. Impact of trust and reputation on transfer rent.

	Transferor Samples		Transferee Samples	
	(1)	(2)	(3)	(4)
Relationship governance \times trust	-0.634 *** (0.249)		0.172 * (0.099)	
Relationship governance \times reputation		-1.116 *** (1.394)		0.263 ** (0.129)
Control variables	YES	YES	YES	YES
Regional fixed effect	YES	YES	YES	YES
N	1134	1134	514	514

Note: ***, **, and * denote significant at 1%, 5% and 10% level, respectively; robust standard errors are presented in parentheses.

5.2. Third-Party Intervention and Transfer Object Selection

In Hypothesis 2, this paper argues that third-party intervention may affect transfer rent by guiding transactions outside the acquaintance society. In order to prove the rationality of this transmission mechanism, this paper specifically analyzes the impact of third-party intervention on the selection of transfer objects. At the same time, it should be noted that the government trading platform and the village committee's organization coordination may represent exogenous and endogenous intervention modes, respectively, [8], which are further distinguished in this paper.

Since the explanatory variable and the explained variable in this part of the test are binary variables, Probit regression is adopted here, and the marginal effects of the regression results are reported in Table 9. Considering that the characteristics of plot have little effect on the choice of transaction objects, the control variables at the plot level are deleted from the model. Taking the transferor sample as an example for analysis, it can be seen from Column (1) in Table 9 that the decrease in the third-party intervention reduces the probability of the transferor transferring farmland to close relatives within three generations by 10.7%, at the significant level of 1%. This demonstrates that from

the perspective of the trading object, the third-party intervention has changed the trading pattern of acquaintance society to some extent, and Hypothesis 2 is further verified. The test of different intervention methods presents that the influence of the transfer organized and coordinated by village committee on the choice of transaction objects is in line with theoretical expectations. However, the intermediary effect of the government trading platform is not significant, which may be caused by two reasons. First, from the perspective of data, the government's platform trading may be no different from the organization of the village committee for farmers, which may cause the deviation of the trading sample through the government platform, resulting in estimation errors. Second, from a realistic perspective, the current development of the government's trading platform is not perfect. The trading platforms in many regions are not well known and fail to really play the role of third-party intermediaries in information transmission and contract guarantee, which is also the direction of policy improvement concerned in this paper.

Table 9. Impact of third-party intervention on transfer object selection.

	Transferor Samples			Transferee Samples		
	(1)	(2)	(3)	(4)	(5)	(6)
Third-party intervention	−0.107 *** (0.015)			−0.175 *** (0.035)		
Village committee's organization coordination		−0.105 *** (0.015)			−0.171 *** (0.036)	
government trading platform			−0.017 (0.022)			−0.124 * (0.174)
Control variables	YES	YES	YES	YES	YES	YES
Regional fixed effect	YES	YES	YES	YES	YES	YES
N	1134	1134	1134	514	514	514

Note: ***, and * denotes significant at 1% and 10% level, respectively; robust standard errors are presented in parentheses.

6. Conclusions and Policy Implications

According to the general principle of market allocation of resources, theoretically, farmland can flow to the more efficient transferee through the price signal of rent, so the marketization of rent is an important representation of the development of the farmland factor market. Based on the theoretical analysis, using 1134 farmland transferor samples and 514 farmland transferee samples collected by the China Land Economic Survey (CLES) in 2020, this paper analyzes the impact of relationship governance on transfer rent, and the role of the intervention of third parties such as county and township governments and village committees on relational governance patterns and rent decisions. The research conclusions are as follows. First, the strong relationship governance with constraints of the trust and reputation mechanism can reduce the post transaction costs. The game between the two sides on this part of transaction costs will make the transfer rent lower than the market price. Second, the involvement of third parties such as county and township governments and village committees replaces the role of relationship governance in reducing transaction costs, and changes the relationship governance pattern of acquaintance society, finally causing transfer rent close to the market price.

The enlightenment of the first conclusion of this paper is that, from the perspective of the transferor's consideration of post transaction costs, the low rent when the transferor deals with relatives, friends and acquaintances can be regarded as a tacit exchange between the two parties or a helpless move under the imperfect circulation market, which still has its reasonable logic at this stage. However, from the perspective of the allocation of farmland resources, this means that the price signal of rent is not clear. If rent cannot play the signal transmission function of price, not only some farmers who have the willingness to transfer out cannot realize the transfer, but more importantly, the farmland demand of transferees with stronger production and management capabilities cannot be met. It has always been

an important goal of the rural policy in many developing countries to allocate farmland resources according to the principle of efficiency and concentration of farmland to more efficient business entities. Therefore, shaping a price-oriented farmland transfer market plays a vital role in improving the allocation efficiency of farmland in China. However, it is undeniable that at this stage, a large number of transfers still occur between relatives and friends in China and other developing countries [5,23]. In this context, one of the possible policy implications of the second conclusion of this paper is that acquaintance trading also has the possibility of marketization. The key lies in the need to establish and improve the rural land transfer service intermediary organizations with villages as the network nodes and low cost, and regularly release relevant information on land transfer by playing the role of county, township governments and village committees. On the one hand, the third-party intervention can “deconstruct” the original acquaintance transaction in the farmland transfer; on the other hand, it can also reduce a farmer’s cost of searching and screening for a potential external transferee, promoting the formation of a price-centered trading pattern and ultimately promoting the transformation of farmland transfer markets.

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