Empirical Study on Rural Tourism Land Transfer and People's Livelihood
—Taking Sansheng Township, Jinjiang District, Chengdu as an Example

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Abstract—Since the beginning of the 21st century, the tourism industry in China has further developed, and the structure of tourism industry has been further enriched and optimized. Rural tourism is an important part of the tourism industry structure. With the rapid development of rural tourism, land plays an increasingly important and fundamental role as a carrier of tourism resources. In this process, rural land transfer has become a prominent problem in rural tourism development due to the contradiction between the current rural land use in China and the balance of interests between stakeholders. We can promote the development of rural tourism well and quickly only by clarifying the relationship between land transfer and people’s livelihood in rural tourism development and dealing with the land-livelihood interests.

Keywords—rural tourism; land circulation; people’s livelihood

Land, as the carrier of rural tourism resources, is the basis of and dominant resources for rural tourism development. With the rapid development of rural tourism in China, the people's livelihood problems arising from the game between stakeholders are becoming more and more prominent while dealing with contradiction between the dispersion of rural tourism land and the scale operation of tourism through land transfer. How to do a good job in land transfer of rural tourism development and to improve people's livelihood of local residents is a key issue involving rural people's livelihood and the sustainable development of rural tourism.

I. PROPOSAL AND STATUS QUO OF THE STUDY

A. Proposal

Rural tourism is a tourism activity that occurs in non-urban areas with land-related economic activities (essentially agricultural activities) and permanent residents. Land is the basis of the development of rural tourism, which develops rapidly in China in recent years. In 2015, the number of receiving tourists of country's leisure agriculture and rural tourism reached more than 2.2 billion with an income of more than 440 billion yuan and 7.9 million employees, including 6.3 million farmers, benefited 5.5 million farmers. Many contradictions and problems have emerged in rural tourism with its rapid development, including the contradiction between dispersed rural tourism business sites and scale operation of tourism enterprises; the generalized “public interest” that occurred during the process of rural tourism land transfer; the occupied rural tourism land resources; the interests guarantee of farmers losing land and quasi-lost land in rural tourism; the benefit distribution in the process of rural tourism land transfer. Nowadays, there are many such problems in the land increase and decrease linkages as well as “demolition of villages” in urban and rural areas.

Land has always been the core of the settlement of agriculture and farmers problems in China. Nowadays, the rural tourism market has developed rapidly, bringing great economic benefits. Many people use various channels to occupy land in rural areas, especially lands with abundant natural and cultural resources. Due to the nature of land system in China, the law lacks clear regulations on the transfer of rural collective land. The transfer of rural land is a difficult issue, which is at the stage of exploration and is a hot spot of social people's livelihood. The fundamental purpose of land transfer should be to ensure people’s livelihood. What kind of land transfer model should be adopted depends not only on economic benefits, but also on social, ecological and livelihood effects. Farmers in tourism areas should be the main body of land transfer; however, the interests of farmers in tourism areas are often weakened in the game of stakeholders. It is of great significance of how to find the balance of interests of rural tourism land transfer, promoting the enthusiasm of relevant stakeholders and realizing the sound and rapid development of rural tourism.

B. Status Quo of the Study

Based on the land system in China, land transfer cannot be learnt from abroad. At present, the domestic theoretical circles pay more attention to the study on management mode of rural land transfer and people's livelihood in rural tourism. For example, Wang Degang and Tian Yun point out the importance of rural tourism land transfer in their passage named “Empirical Study on Land Transfer Mode of Rural Tourism Development—Analysis and Suggestions on Three Typical Cases in Shandong Province”; putting forward suggestions of rural land transfer through a comparative study on three typical land transfer model of rural tourist villages in Shandong. Guo Ling, Huang Guoqing and Wang Zhizhang propose some problems in the rural land transfer in China in a passage named “Study on Land Transfer in Rural Tourism Development”,

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Expounding the relevant laws and regulations on land transfer in rural tourism development. In terms of the livelihood study on rural tourism, Zhu Hua studies the relationship between rural tourism-related stakeholders using the tourism interests subject system in the article "Research on Rural Tourism Interest Subjects", pointing out that the relationship between stakeholders should be balanced. Zou Tongqian proposes to improve the land policy to maintain the healthy development of rural tourism in the article "Study on the Development Model of Rural Tourism in China—Comparative Analysis of Countermeasures between Chengdu Farmhouse and Beijing Folk Village". Xiao Fei interprets the concept of people's livelihood and points out the livelihood characteristics of citizen's tourism destinations in the article "Report on the Livelihood Characteristics in Citizen Tourism". Nevertheless, due to the different research priorities, these studies mostly explore the relationship between rural tourism land transfer, tourism and people's livelihood from the perspective of law and macro qualitative analysis respectively while the impact of rural land transfer on tourism development on local people's livelihood is rarely studied. The studies lack deep understanding and grasp of land transfer, sustainable development of rural tourism and people's livelihood.

II. The Research Object Overview, Data Sources and Research Methods

A. Overview of the research object

Sansheng Township, Jinjiang District, Chengdu is located in the southeast of Chengdu, 7 kilometers away from the urban area. It enjoys a total area of 23.24 square kilometers, having jurisdictions over 5 village committees (including Hongsha Village, Xingfu Village, Fuma Village, Wanfu Village and Jiang Jiayan Village) and 30 villager groups. It boasts a total population of 32,000, a cultivated area of 22,968 mu, a per capita cultivated area of 0.7 mu, a tertiary industry net income of 12,544 yuan, the rural basic old-age insurance participation rate was 98%, and the rural medical insurance participation rate was 100%. Sansheng Township is a flower production base in Chengdu. In 2003, the “Flower Fair” contributed to the development of rural tourism with the flower industry as a carrier and the launching of popular activities such as leisure sightseeing, flower viewing, fruits tasting and farming experience, hence forming five rural tourist villages with their own characteristics. Up to now, Sansheng Township becomes an urban suburb ecological leisure resort with the theme of sightseeing, leisure agriculture and rural tourism, integrating leisure vacation, sightseeing, dining, entertainment and business meetings. It was appraised by the State Tourism Administration in April 2006 as the “national AAAA-level tourist scenic spot”, which is a model for building a new socialist countryside in the nation.

Sansheng Township has adopted the land management model of [(Company plus Base plus Farmers (Shareholders)] multiply Technology”. Land transfer began in 1996 and details were as follows-I. The second round of land contracting was completed in 1991. II. In 1996, the land management rights contracted by some farmers were transferred to the village collectives in the form of contracts, and the village collectives were transferred to large flower growers or companies. III. In 2003, with the help of “Flower Fair”, Sansheng Township basically completed the first transfer of land management rights in the jurisdiction according to the requirements of Chengdu “198” plan, namely all farmers transferred the land management right to the village collective, the village committee set up a new collective economy and found a joint stock company, and farmers would transfer land management rights to acquire shares, and at the same time obtained land rent for transfer. Then, the newly established collective economy, namely the limited liability company, would complete the re-transfer of land management rights in the market. IV. In 2008, Chengdu further strengthened urban and rural planning; Sansheng Township carried out land replacement for the villagers’ homesteads and implemented increase and decrease linkages and comprehensive rectification of the homesteads. The land transfer situation in Sansheng Township was shown in Fig. 1 below.

Fig. 1. The land transfer situation in Sansheng Township
Under the "company plus base plus farmer (stock) multiply technology" land management model, farmers’ incomes are diversified. First, rent. By means of subcontracting, leasing, swapping, transfer and shareholding, the land will be concentrated on large-scale professional enterprises, industrial and commercial owners and business owners with technical expertise, financial strength and operational capabilities, hence forming the scaled and intensive agricultural industry base. The villagers’ land contractual rights were transferred. In 1996, they received 800 yuan of rent. According to an increase of 200 yuan per mu per year by the contract, the rent was more than 1,800 yuan per mu per year by 2010 and the annual rent per mu was more than 3,000 yuan by 2016. Second, the leasing of farmers’ homestead. The annual rent of it reaches 30,000 to 100,000 yuan. The third is salary. Farmers become agricultural workers in agricultural enterprises and companies, or become scenic workers. Every person can earn 1,500 to 2,000 yuan or more per month. If you become a freelancer, every household can obtain thousands of yuan of operating income monthly by going out to work or relying on floral farmhouse to engage in flower arrangement, catering, tea house and other business activities, achieving the separation of the village’s economic status and social identity. The fourth is the share capital. The villagers become shareholders in limited liability companies by the land management right and share the proceeds in the "guarantee plus dividend" model. The fifth is the guarantee. After the farmers reach the social security conditions, they can receive some guarantee incomes, including a monthly income of 364.41 yuan, a low-income pension of 210 yuan and reimbursement of hospitalization fees.

### Data sources and processing

This paper adopts annual data and selects 1996-2016 as the sample space. The data derives from the Jin Jiang Yearbook (1997-2016) and some annual work reports on Sansheng Township. The land classification method is based on the second level of the National Land Classification (Trial) (Land and Resources Development [2001] No. 255) to divide. Because the per capita net income of farmers is an important indicator to measure the economic development brought about by the rural tourism land transfer, the study adopts the land transfer data of Sansheng Township from 1997 to 2016 and the per capita net income of the villagers to reflect the economic development and changes of the villagers’ livelihood in Sansheng Township. The descriptive statistics of the above variables is listed in Table I.

#### Table I. The Descriptive Statistics of the Variables

<table>
<thead>
<tr>
<th></th>
<th>Land transfer stock</th>
<th>Per capita net income of farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample mean</td>
<td>78284.54</td>
<td>5719.071</td>
</tr>
<tr>
<td>Maximum</td>
<td>148218.0</td>
<td>12544.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>18760.00</td>
<td>2300.00</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>40020.10</td>
<td>3248.071</td>
</tr>
</tbody>
</table>

Since the natural logarithmic transformation of the data can linearize the trend, eliminate the heteroscedasticity in the time series while not changing the original cointegration relationship, we firstly take the natural logarithm of each variable and record the adjusted income of farmers and land transfer data as LN and LZ respectively. The corresponding line graph is shown in Fig. 2.

![Fig. 2. Relationship between the adjusted income of farmers and the land circulation data](image)

### Empirical study

#### 1) Stationarity test

Considering all the time series data used in this paper, we must first test the stability of farmers’ income and land transfer data in order to ensure the accuracy of the regression analysis and avoid the so-called "false return".

In this paper, the ADF unit root test method is used to test the stability of variables. The ADF test is based on the following regression equation:

\[
\Delta y_i = \mu + \beta t + (\rho - 1)y_i + \sum_{j=1}^{p} \lambda_j \Delta y_{i-j} + u_i
\]
In this test method, the sequence of the null hypothesis \( H_0: \rho = 1 \) is not stable; while the sequence of opposite hypothesis \( H_1: \rho < 1 \) is stationary. The acceptance of the null hypothesis means that the time series contains unit roots. Test results are shown in Table II.

### Table II. ADF Test Results of Time Series LN and LZ

<table>
<thead>
<tr>
<th>Variables</th>
<th>Test type (C,TK)</th>
<th>Test value of ADF</th>
<th>Conclusion of the test</th>
</tr>
</thead>
<tbody>
<tr>
<td>LN</td>
<td>(C,0.2)</td>
<td>-0.553</td>
<td>Not stable</td>
</tr>
<tr>
<td>LZ</td>
<td>(C,0.1)</td>
<td>-1.961</td>
<td>Not stable</td>
</tr>
<tr>
<td>Δ LN</td>
<td>(C,0.1)</td>
<td>-4.535***</td>
<td>Stable</td>
</tr>
<tr>
<td>Δ LZ</td>
<td>(C,0.1)</td>
<td>-4.514**</td>
<td>Stable</td>
</tr>
</tbody>
</table>

The results of the unit root ADF test (Table I) show that the time series of LN and LZ are both non-stable and they are stable after the first order difference, so they are the first-order single-sequence I(1).

2) Cointegration Test

The single orders of time series LN and LZ are the same, and there may be a cointegration relationship, namely there is a long-term stable proportional relationship between variables. This paper uses the E-G two-step method to test it. First, we use EViews5.1 to estimate the long-term equilibrium between the two variables, that is, cointegration regression:

\[ LN_t = \alpha + \beta * LZ_t + u_t \]

We save the residual \( e_t \) as an estimate of the equilibrium error \( u_t \). The equalization error must be stable for the two cointegration variables. According to the threshold table of MacKinnon (1996), the ADF test of residuals \( e_t \) can reject the null hypothesis of unit roots below 5% level. It can be seen that there is a long-term equilibrium relationship between farmers' income and the quantity of land transfer. The cointegration regression equation is:

\[ LN_t = -0.809 + 0.157 * LZ_t \]  

(1)

It shows that in the long run, the per capita net income of farmers will increase by 0.157% as the land transfer area increases by 1%. The rural land transfer system of Sansheng Township does improve farmers' lives.

There is a balanced relationship between land transfer and income growth in the long run, but it is not balanced in the short term. In order to prevent the deviation of long-term relationship from expanding in scale or quantity, there is a short-term error adjustment mechanism that enables the long-term stable equilibrium relationship to be maintained under the constant adjustment of short-term dynamic process. We use an error correction model (ECM) to reflect this short-term adjustment behavior.

Since there is a cointegration relationship between the income of farmers and the quantity of land transfer, we can directly use equation (1) to obtain the residual \( e_t \). Estimation equation is as follows:

\[ \Delta LN_t = \alpha + \sum_{i=0}^{l} \beta_i \Delta LZ_{t-i} + \sum_{j=0}^{l} \gamma_j \Delta LN_{t-j-1} + \delta e_{t-1} + \nu_t \]

For the lag term of every variable, we adopt the method of testing from general to the special, and eliminating the insignificant lag term gradually to find the best form:

\[ \Delta LN_t = 0.114 + 0.096 \Delta LZ_{t-1} - 0.078 e_{t-1} \]  

(2)

The results show that the short-term changes in land transfer is positively correlated with farmers' net income. In addition, 7.8% (0.078) of the deviation between the actual net income of farmers and their long-term equilibrium value is revised owing to the significant role short-term adjustment factor \( \delta \) plays.

3) Causal test of Granger

There is a cointegration relationship between the variables LN and LZ, so there is at least one direction of Granger causal relationship. We perform Granger causal tests with lags 2 to 4 for the variables LZ and LN respectively. The results are shown in Table III

### Table III. Results of Granger Causal Tests

<table>
<thead>
<tr>
<th>Lag 2</th>
<th>Null hypothesis</th>
<th>F value</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>LZ,non LN Granger cause</td>
<td>1.13743</td>
<td>0.37348</td>
<td>Accept</td>
<td></td>
</tr>
<tr>
<td>LN,non LZ Granger cause</td>
<td>0.46978</td>
<td>0.64351</td>
<td>Accept</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lag 3</th>
<th>Null hypothesis</th>
<th>F value</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>LZ,non LN Granger cause</td>
<td>5.21469</td>
<td>0.07225</td>
<td>Accept</td>
<td></td>
</tr>
<tr>
<td>LN,non LZ Granger cause</td>
<td>1.20531</td>
<td>0.41512</td>
<td>Accept</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lag 4</th>
<th>Null hypothesis</th>
<th>F value</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>LZ,non LN Granger cause</td>
<td>32377.9</td>
<td>0.00417</td>
<td>Reject</td>
<td></td>
</tr>
<tr>
<td>LN,non LZ Granger cause</td>
<td>0.62731</td>
<td>0.72467</td>
<td>Accept</td>
<td></td>
</tr>
</tbody>
</table>

Note: Test at a significant level of 5%

In view of this, we can see that in the case of a short lag period (less than 3), LZ is not the Granger cause of LN and LN is not the Granger cause of LZ; while in the lag 4, LN is not the Granger cause of LZ and LZ is the Granger cause of LN. The
results of this test show that in a relatively short period of time, there is no significant influence between the rural land transfer and the increase of the per capita income of farmers; while in the perspective of a relatively long period of time, the rural land transfer has a prominent impact on the per capita income of farmers.

III. CONCLUSIONS AND SUGGESTIONS

The rural tourism land transfer is closely related to the rural tourism and people's livelihood. The research results enable the two to predict and confirm each other, which has important guiding significance for further promoting urban and rural planning, improving people's livelihood and realizing the sustainable development of rural tourism. We can obtain the following conclusions through the study on the rural land transfer and the livelihood of Sansheng Township:

I. In the areas where tourism is developed, land transfer realizes the optimization and integration of land resources as well as the scaled operation of land resources, having a positive impact on the livelihood of local residents. From the empirical study on urban and rural planning in Sansheng Township, we can see that in a relatively long period of time, land transfer is the Granger cause of the increase of the per capita income of local residents, and the regression coefficient is positive (0.157). The rural land transfer enjoys a positive impact on the improvement of per capita income level. The reasons may be as follows: (1) Land transfer can realize the scaled operation of land resources, which is conducive to the realization and increase of the value of land resources, thereby increasing the income of distributable land, leading to the increase of income of local residents directly; (2) The rural collective economy has strengthened the collective economy through the development of the joint-stock economy and industrialization, realizing and improving the welfare and livelihood security of local residents; (3) The cooperative mode of becoming shareholders by land use rights acquires local residents to obtain capital income; (4) Let rural residents liberate themselves from the traditional scattered small-scale agriculture economic model, becoming free labor and transforming into local residents and they obtain labor income through employment in enterprises; (5) Local residents can also earn economic income through operating or renting their own houses to engage in tourism-related economic activities.

II. Through the empirical study on Sansheng Township, we find that the positive impact of land transfer on local residents is not significant. The per capita net income of farmers increases by 0.157% only as the land transfer area increases by 1%. The main reasons out of our analysis may be: (1) The design of the distribution system is unreasonable. In the distribution system of Sansheng Township, it relies too much emphasis on the collective interests while the income distribution of local residents is too small. (2) Governments at all levels and self-governing institutions in villages have excessively intervened in collective-stock companies. The managers of many joint-stock enterprises and the leaders of village self-governing organizations are “two brands and one team”. The democratic mechanism of collective economy plays a minor role and the role of democratic supervision of village self-governing organizations is not obvious. (3) There is a relatively large difference between local households and individuals, such as the skills of individual residents, the number of family laborers, the physical condition of individual residents, the location of individual residences and so on, hence resulting in a large income difference.

Therefore, combined with the above analysis, we believe that: (1) we should insist on promoting land transfer in rural tourism areas. At present, most rural land in China adopts the business system of household contracting as the main body. In the market economy context, household land contract management does improve the people's livelihood in rural tourism. However, in the rapid development of rural tourism, scattered land management rights are hardly to produce scaled operational benefits; the scattered land and rural farmers make it hard to integrate resources of the rural collectives and lead to the low efficiency of the land use. All these are not conducive to the sustainable development of rural tourism and people's livelihood. The empirical study on land transfer in Sansheng Township proves that the scaled operation effect after land transfer has greatly improved the utilization rate and the efficiency of input and output of rural tourism land resources. It not only strengthens the economic strength of rural collectives, but also improves the livelihood of residents in rural tourism areas. (2) We must improve the land transfer system. First, we should do a good job in the distribution system of land transfer destinations, properly handle the interests of the state, collectives and residents, appropriately tilt toward the residents, mobilize the enthusiasm of the residents, and achieve win-win among multi-stakeholders. Second, governments at all levels and village self-governing organizations have adopted various methods to strengthen vocational skills training for residents to adapt to the industrialization requirements after land transfer. Third, we must strengthen information construction and provide employment information and channels for residents. Fourth, we should give full play to the democratic supervision role of the self-governing organizations of the village committee, in this way local residents have more rights to participate in, manage and know community issues, realizing communication and coordination between industrial managers, operators and residents through multiple channels.

Since the beginning of rural tourism in the 1980s, there have been 30 years of rural tourism craze. According to the life cycle theory of tourism destinations by Butler, many rural tourism products have been aging and the products needed upgrading, transforming and replacing. Coupled with the dispersion of current rural tourism operations, rural tourism is hardly possible to achieve a new round of rapid and healthy development. Therefore, we should pay more attention to the two major factors in rural tourism, namely land and people's livelihood. The benign interaction between the two will be the basic motivation for the development of rural tourism in the future. At present, the study on tourism and people's livelihood is still in its infancy. The net income of rural tourism residents is an important indicator, but it cannot fully reflect the people's livelihood. It requires to be further improved in the future study on methods to quantify the psychological factors of rural residents and the development of living environment and incorporate them into the research system as well as to study...
the relationship between land transfer and people's livelihood more reasonably.

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