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The Change of Livelihood Model in East Star Village under the Background of Tourism Development

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Abstract. Taking East Star Village, a typical rural tourist destination, as an example, this paper studies the changes of livelihood capital and livelihood mode of local farmers from 2003 to 2017 from the perspective of sustainable livelihood. The study found that the total livelihood capital of East Star Village continued to increase, the proportion of various types of livelihood capital changed, financial capital and material capital increased significantly, and natural capital decreased significantly. Rural tourism has changed the original Social-Ecological System of East Star Village, diversified livelihood activities and differentiated livelihood strategies, and finally formed five livelihood models. Different livelihood patterns reflect the way farmers adapt to the external environment.

1. Introduction

At present, China's economy is gradually changing from high-speed development to the new normal state of medium-high-speed development, but the rural development lags far behind the urban development. To realize the rejuvenation of the Chinese nation, rural rejuvenation is a national strategy that must be implemented. As the most important economic activity subject and the most basic decision-making subject in agriculture, farmers' livelihood strategies not only affect rural social and economic development, but also affect the utilization of natural resources and ecological environment protection.

In recent years, farmers' livelihood research has attracted the attention of the government and academia. The existing research results mainly include the following aspects: the composition, assessment, risk, change and spatial characteristics of farmers' livelihood capital; farmers' livelihood vulnerability, adaptability, adaptive behavior; evaluation, framework or model of sustainable livelihood benefits; livelihood strategies, influencing factors, livelihood patterns and optimization; and the driving force of livelihood changes. The relationship between farmers' livelihood and land use of rural settlements is stable.

Based on the theory of sustainable livelihood, this paper systematically analyses the changes of farmers' livelihood mode, livelihood capital and livelihood mode of different types of farmers in East Star Village before and after tourism development. The main purpose is to provide a scientific basis for the healthy development of East Star Village, and to provide a reference for the sustainable development of similar rural tourist destinations.

2. General situation of research area

East Star Village is located in Huilong Town, Dongyuan County, Heyuan City, Guangdong Province, 35 kilometers away from Heyuan City. East Star Village is surrounded by mountains and Lake. It is a



mountain jungle landform. In fact, East Star Village is located in Evergreen Lake area, within the scope of Xinfeng Jiang National Forest Park. It belongs to the subtropical monsoon climate, with an average annual temperature of 20.7 C, an average annual rainfall of 2142.6 mm and a large rainfall.

There are 14 villager groups in East Star village, with 213 families and 823 people. East Star Village is a Hakka community, and all the villagers are Hakkas. The village has 60,000 mu of mountain land, all of which are woodland, of which 56,000 mu of national ecological forest. Therefore, the forest coverage rate of East Star Village is as high as 98%, mainly the subtropical secondary evergreen broad-leaved forest, and the ecological environment is extremely superior. In addition, the village has more than 600 mu of arable land and 600 mu of paddy field.

In 2003, private capital invested in the establishment of Heyuan Evergreen valley Industrial Development Co., Ltd. and planned to invest 800 million yuan in the development of Evergreen valley Leisure Resort. The company requisitioned and leased 33,000 mu of land in East Star Village, including 2,500 mu of lake surface area. The resort was officially opened in December 2007. By 2017, it had received a total of 210,000 tourists, resulting in good social and economic benefits.

3. Research methods and data acquisition

3.1. Data acquisition

This study mainly collects data through two ways. Firstly, the research team collects natural, social and economic data of East Star Village from the government of New Huilong Town and East Star Village Committee. Secondly, the research team selected 31 peasant households from 14 villager groups in East Star Village as the research object, and obtained first-hand information about Peasant Households by field survey method. From May 2018 to October 2018, the research team conducted five surveys and interviews on farmers, including their livelihood capital, livelihood activities and livelihood strategies.

3.2. Analysis Method and Data Processing

Sustainable livelihood framework divides livelihood capital into natural capital, material capital, human capital, social capital and financial capital. Based on the framework of sustainable livelihood and the quantitative method of domestic scholars, this paper constructs the index system of livelihood capital in East Star Village. (Table 1) This study uses the method of entropy to measure the five livelihood capitals in the two periods before and after tourism development. See Formula (1):

$$C_i = \sum_{j=1}^m W_j X_{Sij} \quad (1)$$

The weight of W_j as index j in the formula; X_{Sij} is the standardized value of j index of i sample. Considering the different dimensions, this paper uses range standardization method to standardize data without dimension. See formula (2):

$$X_{Sij} = (X_{ij} - X_{j_{min}}) / (X_{j_{max}} - X_{j_{min}}) \quad (2)$$

X_{ij} is the j index value of i sample; $X_{j_{max}}$ is the maximum value of j index; $X_{j_{min}}$ is the minimum value of j index.

4. Results and analysis

4.1. Changes in livelihood capital

According to the index and weight coefficient of livelihood capital, the evaluation results of various livelihood capital of farmers in East Star Village are quantified, and the average value of assets is calculated. For details, see Table2. East Star Village has developed tourism since 2004. After more than ten years of development, tourism has formed a large scale. By 2017, farmers' livelihood capital has increased significantly, financial capital has increased five times, human capital and social capital have increased, and natural capital has decreased significantly.

Table 1. Measure index, value and weighing of the livelihood capital of East Star Village.

	Index system	Variable	Explain
Human capital	<i>Labor capacity</i>	H_1	<i>Age</i>
	<i>Education level</i>	H_2	<i>Education</i>
	<i>Professional skills</i>	H_3	<i>Number of vocational skills</i>
Social capital	<i>Family background</i>	S_1	<i>Local officials among relatives</i>
	<i>Community participation</i>	S_2	<i>Frequency of participation</i>
	<i>Recourse</i>	S_3	<i>The proportion of all types of help-seeking that farmers can choose</i>
	<i>Neighbourhood relations</i>	S_4	<i>Frequent Community Interaction</i>
Physical capital	<i>Housing</i>	P_1	<i>Graded housing area</i>
	<i>Productive capital</i>	P_2	<i>The proportion of types of production assets in all types</i>
	<i>Living assets</i>	P_3	<i>The proportion of types of Living assets in all types</i>
Finacial capital	<i>Operating income</i>	F_1	<i>Annual household income</i>
	<i>Subsidized income</i>	F_2	<i>Subsidized income</i>
	<i>Possible funding</i>	F_3	<i>The proportion of credit types to all credit types</i>
Natural capital	<i>Cultivated land area</i>	N_1	<i>Per capita cultivated land area</i>
	<i>land quality</i>	N_2	<i>Average land quality grade</i>
	<i>Forest land area</i>	N_3	<i>Per capita forestland area</i>

Table 2. Evaluation results of livelihood assets in 2002, 2017

year		<i>human capital</i>	<i>Social capital</i>	<i>physical capital</i>	<i>Finacial capital</i>	<i>Natural capital</i>	<i>Total assets</i>
2002	numerical						
	value	0.0844	0.0415	0.1024	0.0337	0.1205	0.3825
	ratio	22.0700	10.8500	26.7700	8.8100	31.5000	
2017	numerical						
	value	0.1970	0.0952	0.2401	0.2100	0.0759	0.8182
	ratio	24.0772	11.6353	29.3450	25.6660	9.2800	

4.1.1. Human capital. Since the development of tourism, the increase of human capital in East Star Village has been slow. Due to employment opportunities and transportation problems, the number of young and middle-aged people who work in Heyuan or other cities and settle down has increased, and the overall labour force of families is low. The number of people who have mastered vocational skills has increased, and the time of receiving education has prolonged. More farmers have mastered the skills of breeding, cooking, planting, landscaping and tourism services. For example, 47 farmers in East Star Village work in Evergreen Valley Resort. They are engaged in catering, guest rooms, landscaping, security, sales and other work, and have mastered skilled technology.

4.1.2. Social capital. The change of peasant household's social capital is small. From 2002 to 2017, social capital increased by 7.24%. Due to low income, more people with ability go out to work or engage in business in rural areas. At the same time, the influence of village and town cadres has weakened, and fewer people are willing to serve as cadres.

4.1.3. Physical capital. Material capital mainly includes housing, production capital and living capital. Because of the continuous migration of population, the housing area of peasant households has not

increased significantly, but the migrating peasant households have not abandoned their houses in East Star Village, but will rebuild, or renovate, and improve the quality of housing. Because most farmers abandoned traditional agriculture, their productive capital decreased significantly, while the productive capital of farmers engaged in tourism increased. Farmers' life capital types and quality have increased. Families basically own modern household appliances, and 27.1% of them own cars.

4.1.4. Financial capital. The results show that the financial capital of farmers in East Star Village has increased fivefold. Operational capital increased significantly. Farmers managed one resort, 14 farmhouse entertainment, 5 houses, 2 pitaya fruit farms and 2 specialty stores independently. Subsidized income mainly includes ecological forest subsidy, collective management subsidy, farmland subsidy, forest land and wasteland rental subsidy. Although the standard of subsidy is constantly improving and the types of subsidy are increasing, the proportion of total subsidy funds to total household funds is relatively low. The disposable income of peasant households has increased significantly, and the ways of raising funds have increased.

4.1.5. Natural capital. Natural capital was originally an important asset of farmers in East Star Village. In 2002, the proportion of natural capital in total capital of East Star Village was 31.5%. However, with the development of rural tourism, forests and lakes in East Star Village have been leased, other forests have been classified as ecological protection zones, and forests have been strictly protected, so they can't be felled, cultured and carried out other business activities. Therefore, for farmers, the use value of forest land and lakes has been reduced. By 2017, the proportion of natural capital of farmers in East Star Village is only 9.28%.

4.2. Changes in livelihood strategies

4.2.1. Changes in livelihood activities. Before the development of tourism, the main way of life of democracy in East Star Village is wood cutting, hunting, fishing, working and crop planting. The ecological environment of East Star Village has been damaged by excessive logging and fishing. In 2004, with the development of tourism, the government strengthened the protection of natural resources, banning deforestation and hunting successively, and banning fish farming in Evergreen Lake. Farmers' forests and lakes have been expropriated or leased, and their livelihoods have changed passively. Farmers' income sources mainly include working outside, working in tourist areas, operating farm restaurants, residential quarters, selling specialty products, planting fruits, raising livestock and so on. Farmers' livelihoods are diversified and their livelihood patterns have changed significantly.

4.2.2. Changes in livelihood strategies. It is found that the livelihood strategies of farmers in East Star Village have been transformed from natural resources-based and agricultural livelihood strategies to diversified livelihood strategies, and five different livelihood models have been formed. The new mode of livelihood mainly includes working outside, working half-farming, tourism management, tourism part-time and agriculture. By 2017, the three main livelihood modes were working out, part-time tourism and tourism management, accounting for 86.9%. There were 163 peasant households working outside East Star Village, accounting for 76.5% of the total number of households. With the expansion of tourism scale, the proportion of tourism-oriented and tourism-oriented part-time livelihood models has been increasing, but they are not the dominant livelihood models yet. Traditional agricultural livelihood mode is very few, and modern agricultural projects are gradually increasing. Thus, the development of tourism makes the livelihood strategies of farmers in East Star Village rapidly differentiate and combine, and forms a new livelihood model.

5. Conclusion

With the development of rural tourism, farmers' livelihood activities in East Star Village are diversified, livelihood strategies are differentiated, and the types of livelihood strategies are transformed from pure agriculture to other combinations of various types.

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