Analysis of the Factors Influencing the well-being of Ethnic Minority Farmers: a Case Study of Bai Minority in the Wase Town Dali, Yunnan, P.R. China[*]

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Abstract

The objectives of this research are; 1) to analyze the levels of well-being and the factors affecting well-being of the Bai farmers in the Wase town, and 2) to propose suggestions to improve the Bai farmers' well-being. This paper takes the Bai farmers in Wase Town, Dali, China as an example. A quantative methodology is utilized. Questionnaire investigation and regression analysis with 395 farmers were implemented.

The result shows that: the Bai farmers' characteristics, living environment, economic conditions and satisfaction with public policy have a positive impact on wellbeing.

Keywords: Influencing factor; well-being of ethnic minority farmers; Bai minority farmers

1. Introduction

The pursuit of well-being is not only everyone´s right, but also the driving force to realize the high quality life. Continuous improvement of the wellbeing of farmers in China not only helps to promote the harmonious and stable development of rural society, but also is one of the main goals of the government. Therefore, it is very important to study which factors affect farmers' wellbeing and how to improve farmers' wellbeing. With the development of society, the well-being of farmers has been greatly improved. However, the Bai farmers' need for quality of life are also getting higher and higher. What factors

influence the well-being of Bai farmers, and how to improve the happiness of Bai farmers? It is an issue that is worth studying. This study takes the Bai people in Wase town, Dali, as the research sample, to study the influencing factors of Bai people's well-being, and analyze the influencing factors of Bai people's well-being, so as to improve Bai farmers' well-being.

2. Objectives of the Study

1. To analyze the levels of well-being and the factors affecting well-being of the Bai farmers in the Wase town.

2. To propose suggestions to improve the Bai farmers' well-being.

3. Methodology

Considering that the study is to analyze the factors that influence the Bai farmers' well-being, the research design to be applied will be both qualitative research and quantitative methods by using questionnaires. And the goal of quantitative research methods is to collect numerical data from a group of people, then generalize those results to a larger group of people to explain a phenomenon.

Questionnaire survey: Questionnaires are a research instrument that consist a set of questions that aims to collect information from a respondent. These typically are a mix of close-ended questions and open-ended questions. The long form questions offer the ability for the respondent to elaborate on their thoughts.

On the basis of interviews, in this study, the questionnaires are used to investigate the factors that affect the well-being of Bai. The questionnaires include the 6 parts. The first part is the information about the Bai farmers. The second part is the information about the environment that the Bai farmers live in. The third part is the information about the farmers' activities. The fourth part is the information about the Bai farmers' economic. The fifth part is the information about social relationship, the sixth part is the information about the strategies that have existed in the Bai farmers' community. The last part is the information about the attitude that the Bai farmers feel about the well-being.

Population and Sample: In the Wase town, there are Wase administrative village, Haiyin administrative village, Guangyi administrative village, Kanglang administrative village, Dacheng administrative village, Gaoxing administrative village. For the Bai farmer in every village has some original

characteristic, the sample size of every village is same.

The actual total sample size of the respondents was calculated using Taro Yamane formula with 95% confidence level. Yamane (1967) provides a simplify formula to calculate sample size. And 395 farmers are selected.

Data Analysis: According to the research objective and research methods of this study, the key in formation will be gathered from primary data resources by using questionnaires. Some secondary data will obtain from government and the public information release. Based on the data, the influencing factors of farmers' well-being were studied by regression analysis.

Regression analysis method: In this study, for the well-being, it is select the Bai farmers' well-being as dependent variable. Bai farmers characteristics, environment, economic, public infrastructures and services, policy is independent variable. By regression analysis, it analysis the factors of Bai farmers' well-being.

4. Results

1. The level of Bai farmers' well-being. Well-being include subjective well-being, psychological well-being and social well-being (Biglan et al., 2012, pp. 257-271). The subjective well-being is mainly measured by life satisfaction, emotional experience (Calkins & Ngo, 2010, pp. 535-563). And the mean of farmers' subject well-being is 3.75. Psychological well-being is mainly measured by self-acceptance, good relationship with others, environment control, autonomy, life goals, individual growth (Lyons et al,. 2016, pp. 1-10). And the mean of farmers' psychological well-being is 3.50. Social well-being is mainly measured by social integration, social coherence, social acceptance, and social actualization (Keyes, 1998, pp. 121-140) and the means of farmers' social well-being is 3.97. From the mean of subjective well-being, psychological well-being and social well-being we can know that the level of well-being is 3.71, and the level of Bai farmers' well-being is at a high level.

2. The factors affecting well-being

2.1 The Bai famers ́ characteristics

Age of Respondents. The average age of respondents are 53.35 years old. The minimum is 16 years old and the Maximum is the 81 years old. Among these, 10 people are between 1-18 years old and it accounts for 2.53%; 64 people are

between 19-37 years old and it accounts for 16.26%; 150 people are between 38-46 years old and it accounts for 37.97%, 140 people are between 47-65 years old and it accounts for 35.44%; 31 people are more than 66 years old and it accounts for 7.85%.

Through interviews, we know that local Bai farmers are mainly composed of people over the age of 47-65. It obviously shows that young farmers were reluctant to live in village and to be a farmer. Zhao Liang (2021) believe that due to the weak public infrastructure and industries, many young are unwilling to stay in the countryside.

Gender of the Respondents. There are 202 men and 193 women among the respondents, of which 51.14% are men and 48.86% are women. The proportion of men and women is similar. According to the interview, the village is mainly inhabited by the elderly, women and children. Men generally go out to work during the slack season and return to work during the busy season.

Place of residence. There are 155 people living around the road, accounting for 39.24%; There are 35 people living around the market, accounting for 8.86%. There are 142 people living around the Erhai-lake, accounting for 35.95%. There are 25 people living around the market, accounting for 6.33%. And there still are 38 people living in elsewhere.

Education level. In China, it implements nine years of free compulsory education. Among these farmers, 52 people are under primary school, accounting for 13.16%; 64 people graduated from primary school, accounting for 16.20%; 176 people graduated from middle school, accounting for 44.56%; 88 people graduated from high school, accounting for 22.28%, and 15 people graduated from University, accounting for 3.08%. The table shows that the education level of farmers in the Wase town is mainly nine-year compulsory education. Compared with the cities, Luo Kui et al. (2020, pp. 287-290) believes that the education level in rural areas is relatively low.

Marital status. In the respondent, there are 103 people are single, accounting for 26.08%; And 292 people are married, accounting for 73.92%. Among these single, some are too young, some are too poverty, and some are widowers or widows.

Occupation. Among the Bai farmers surveyed, 152 were engaged in planting, accounting for 38.48%; there are 4 people

engaged in animal husbandry, accounting for 1.01%; 51 people are engaged in business, accounting for 12.91%; there are 44 people engaged in tourism, accounting for 11.14%. By the interview, we found that due to the impact of the epidemic, the number of people engaged in tourism and business decreased significantly. In addition, due to environmental protection, many places prohibit breeding that pollutes the environment. Therefore, fewer and fewer people are engaged in animal husbandry.

Faith. The people in the Wase town are inclusive. There are 135 people who believe in Marxism, 150 people who believe in the local Benzhu, 55 people who believe in Buddhism, 19 people who believe in Christianity and 36 people who believe in other doctrines. By the interview, we know that the younger people in the Wase town mainly believe in Marxism; the older ones are mainly the owners. For the Wase town is near to the Buddhist holy land Jizu Mountain, a large part of them believe in Buddhism.

Health. Among the respondents, most people think they are in good and very good health, 160 and 189 respectively, accounting for 40.51% and47.85%; A small people think they are in poor health and very poor health, 5 and 2 respectively, accounting for 1% and 2%; There are 39 people who think it is average, accounting for 13%.

The member of household. Among the respondents, there are 8 households with a member of less than 3. There are 34 households with a member of 3 and 63 households with a member of 4; 106 households with a member of 5. There are 184 households with a member of more than 5. As can be seen, in rural areas in the Wase town, the member of most families is more than 5, generally grandpa, grandma, husband and wife and two children live together.

Cognitive Characteristic. By Likert scale, this studymeasured the cognitive characteristics of famers from the aspects of whether they are useful to the society, whether they are integrity, whether they are honest, whether they are diligent, whether they are warm person, whether they have a sense of responsibility, whether they can handle family life well, whether they can handle neighborhood relations well, and whether they likes its own work, whether they thinks that life will be better and better. Through measurement, it is found that the mean of cognitive level of

farmers is 3.75, which is at a high level.

2.2 The environment

That Bai live in this studymeasured the farmers' satisfaction with living environment. Satisfaction with the clean and tidy is 79.5%; dissatisfaction is 5.56%, neutral is 14.94%. Satisfaction with safety is 87.59%; dissatisfaction is 2.78%; and neutral is 9.62%. Satisfaction with public cultural activities is 53.7%; dissatisfaction is 16.45%; neural is 32.66%. Satisfaction with industry is 49.87%; dissatisfaction is 22.03%, and neural is 30.92%. Satisfaction with ecology is 61.01%. Dissatisfaction is 15.44%. And neutral is 23.54%. The mean of satisfaction with environment is 3.85 and it is at high level.

2.3 Economy

The annual income of family. Among the respondents, 63 household have an annual income of less than 21000 Yuan. There are 104 households between 21001 - 40000 Yuan; there are 80 households between 40001-60000 Yuan; there are 74 households between 60001-80000 Yuan; there are 74households with more than 80000 Yuan. It can be seen that the income of Bai farmers is mainly between 20001-40000 Yuan, which also shows that the income of most farmers is poor.

The main source of family income. Among these respondents, there are 91 people that the main source of family income is mainly from agriculture, 41 from renting the house to tourist, 120 from going out to work, 36 from tourism and 107 from others. It can be seen that the main income of these farmers is no longer mainly from agriculture, and more people's main income comes from working outside. Due to the impact of the epidemic, tourism, one of the main sources of income in the past, has also declined rapidly.

3. The linear Regression of the factors. Table 1 reflects the results of multiple regression analysis using PSPP, a significant model emerged (F-statistics for R^2, $p < 0.05$) in which significant variables including the t and sig (p) values of the independent variables with the farmers' level of well-being (dependent variable) give a rough indication of the impact of each predictor (independent variable), that is, a big absolute value t and small value p suggests that a predictor variable is having a large impact on the criterion variable (dependent variable).

Table 1 The factors related to well-being

Independent Variable	Non standardized coefficient		Standardized coefficient	t	Sig.
	B	S.E.	Beta		
Constant	0.09	0.27	0.00	0.35	0.724
Bai farmers 'characteristics					
A. Demographic characteristics					
(1) Age	-0.01	0.03	-0.01	-0.19	0.853
(2) Gender	0.04	0.06	0.03	0.71	0.477
(3) The place where the	-0.01	0.02	-0.01	-0.38	0.706
Farmers live in					
(4) Level of education	-0.13	0.07	-0.07	-1.80	0.073
(5) Marriage	0.03	0.02	0.05	1.38	0.167
Cognition Characteristics	0.30	0.05	0.24	5.57	0.000[**]
Living Environment	0.16	0.05	0.24	6.25	0.002[*]
Social Relationship	0.05	0.05	0.05	1.00	0.317
Ability to Access the Public Infrastructure & Service	-0.08	0.04	-0.09	-1.85	0.650
Economy conditions	0.22	0.03	0.24	6.25	0.000[**]
Satisfaction with Public Policy	0.36	0.05	0.39	7.29	0.000[**]
R 0.74 R Squared (R2)	0.55	Adjusted R squared (R^2):	0.54		
F:	38.91	Sig.	000[**]		
[*] = significant at 0.05 level [**] = significant at 0.01 level					

From the regression model, it can be seen that Based on the multiple regression model, the coefficient of determination R^2 and adjusted R^2 which are 0.55 and 0.54 respectively, represent the predictor of the explanatory variables which account that 55 % variance in the dependent variable which indicate very strong relationship among the variables and this implies the appropriateness of the model. Because, the regression coefficient (R) value of 74 % indicates high relationship between dependent variable (farmers' level of self-reliance) and the four predictors of explanatory variables, such as Bai farmers' cognition characteristics, living environment, economic conditions and satisfaction with public policy.

It can be seen from the findings that only 4 of the independent variables such as Bai farmers' Cognition Characteristics, living environment, economic conditions and Satisfaction with public policy in the analysis have significant ($p \leq 0.05$) regression coefficients while the rest are insignificantly related to dependent variable.

5. Discussion

There are many factors affecting villagers' well-being. For Bai farmers, we find the following conclusions:

Bai farmers' cognition characteristics. It can been seen from table 1 that Bai farmers' cognition characteristics is significantly impacting farmers' well-being with standardized regression coefficient of 5.57 significant at $p \leq 0.01$. Bai farmers' cognition characteristics can influence their perception of the world. This implies that when they are optimistic and upward, and they think they are useful, their well-being will increase. In facts, the Bai people emphasize the hard work, friendship and dedication. These excellent traditional cultures have played a guiding role in Bai farmers' well-being (Chen Jing, 2022).

Living environment. Living environment is significantly impacting farmers' well-being with standardized regression coefficient of 6.25 significant at $p \leq 0.05$. Living environment includes natural environment and culture environment. It implies that the good natural environment and culture environment are very important for the Bai farmers' well-being. The good natural environment provides farmers with a clean and safe living place; the rich culture environment provides farmers with a rich culture of Bai and enriches their inner spirit.

Economic conditions. It can been seen from table 1 that economic conditions is significantly impacting farmers' well-being with standardized regression coefficient of 6.25 significant at $p \leq 0.01$. it implies that Increasing the income of family can enhance Bai farmers' well-being. With the development of society, the Bai farmers' demand for material wealth is increasing. Therefore, family income should maintain a certain proportion of growth, so as to meet the needs of Bai farmers.

Satisfaction with Public Policy. Satisfaction with Public Policy significantly impacting farmers' well-being with standardized regression coefficient of 7.29 significant at $p \leq 0.01$. This also implies that appropriate policies need to be formulated to enhance the well-being of Bai farmers. For the Bai farmers, these policies include economics, health care policies, education, employment, housing, land, tax, religion, and other policies.

6. Suggestion

From the above, my recommendations to each key actor are as follows:

For the farmers, in order to improve their well-being, first of all, they should form a positive and optimistic attitude. It is very important to cultivate a positive and optimistic cognitive characteristic through learning and training for Bai farmers' well-being. Secondly, farmers should work with others to create a good living environment.

The good natural environment make them feel comfortable and the cultural environment can meet the demand of their culture. Secondly, farmers should work hard to improve their income. The increase in income is directly related to well-being. The income of Bai farmers is relatively low overall, and it is very implant to increase income for well-being; Finally, Farmers should actively participate in the formulation of policies.

For the administrative village committee. In order to improve the Bai farmers' well-being, firstly, the administrative village committee should encourage the farmers to participate in the decision-making. In the process of participation, respect their initiative and creativity, pay attention to the fairness and justice, and meet the demand of farmers. Secondly, they should formulate the appropriate employment strategies, industrial development strategies, compulsory education strategies and public infrastructure construction strategies. The village committee should

invite experts, villagers, enterprises and other relevant personnel to work together to formulate a scientific, reasonable and feasible rural development strategy. The village committee should promote the construction of the village environment. They should not only continue to improve the natural environment, but also strengthen the construction of the cultural environment, especially the construction of the Bai culture.

For the policymakers. In order to better improve the Bai farmers' wellbeing, policymakers should formulate policies from the aspects of industry, income improvement, infrastructure, cultural construction, etc. according to local actual conditions. As the Wase town is a tourism town around the lake, it faces serious problems such as environmental protection, inheritance of Bai farming culture, and economic development. Therefore, formulating appropriate policies is a key issue for local development.

Author Contributions: Zhang Xian is responsible for the field survey, manuscript writing; Bongkochmas EK-Iem is responsible for the research methodology and research questions formulation.

7. Knowledge of Research

The well-being was mainly consists by subjective well-being, physical well-being, and social well-being. And the level of Bai farmers' well-being in Wase town was measured by Likert scale. According to the analysis results, Bai farmers in Wase town had a higher level of well-being.

Among the factors, Bai farmers' cognition characteristics, living environment, economic conditions and satisfaction with public policy had significant positive effects on the Bai farmers' well-being. Therefore, cultivating Bai farmers' positive cognition characteristics, improving the natural environment and culture environment around the Bai farmers, increasing the income of family and formulating the appropriate policies were very important to improve the Bai farmers' well-being.
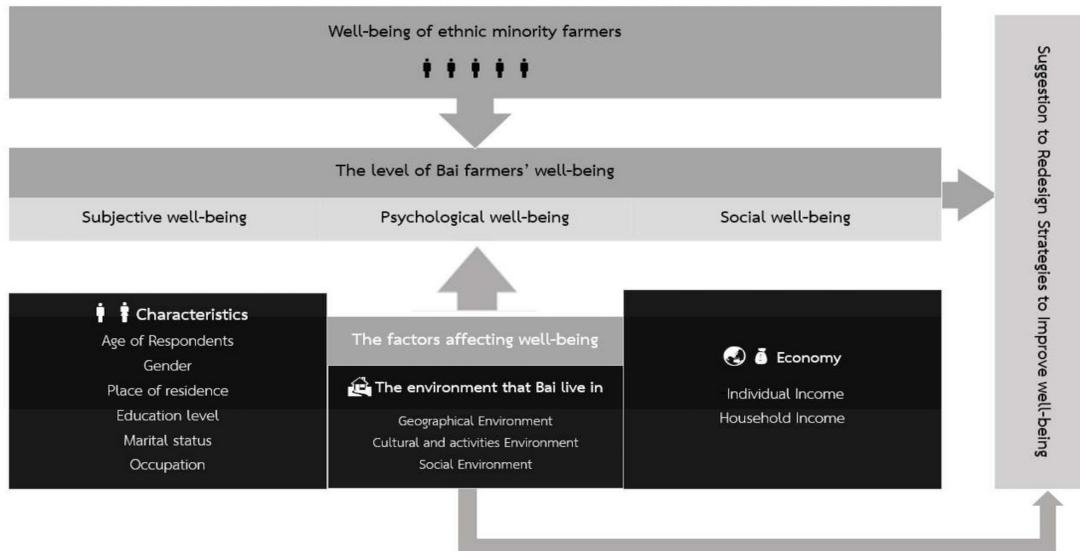
Figure 1 Knowledge of Research

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