

The Evaluation and Improvement of Performance for Precise Poverty Alleviation in Hainan Province

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Abstract. Precise poverty alleviation is the strategic deployment of the new stage of the party and national anti-poverty development in the new period, and the poverty alleviation performance in poverty-stricken areas of Hainan province is related to the impoverished city counties and the whole province. Firstly, this study classified and commented on the current situation of research from the aspects of anti-poverty, performance appraisal index and method, index and method of poverty alleviation performance appraisal. And on this basis, the relevant concepts of this study are defined. The data of the first stage of survey is to describe the corresponding conclusions. SPSS 21.0 statistical software establishes the factor analysis model to extract the main factor of the original data and then calculate the weights by factor load and variance contribution rate and measures the precision poverty alleviation performance score of each typical impoverished village. In order to compensate for the single factor analysis model angle and explore whether there is a club effect between the typical impoverished villages, this study also introduces clustering algorithm for the precision poverty alleviation performance of 10 typical poor villages and obtains empirical results. Based on the field survey and empirical results, this study proposes the improvement of poverty alleviation performance, from the improvement of rural poverty management ability, the formulation of targeted pro-poor policies and the formation of diversified poverty network management system three aspects to improve the precision of poverty alleviation.

1. Background

Precise poverty alleviation is the strategic deployment of the new stage of the party and national anti-poverty development in the new period. After the announcement of the precise poverty alleviation policy by the Party Central Committee, Hainan Province responded positively to the call of it and put forward 10 measures to eliminate poverty precisely according to Hainan's reality so as to speed up the accurate poverty alleviation of the poor.

The theory of the cycle of poverty trap put forward by American economist Nurkse (1953) analyzes the mechanism of poverty from the capital perspective of supply and demand. He believes that the root which causes poverty are mainly the lack of capital^[1-2]. Since then, Nelson (1956) put forward the idea of an average trap by analyzing the relationship among capital per labor, population growth and output growth, pointing out that per capita income growth will eventually be offset by population growth, which ultimately leads to low level balanced poverty trap^[3-5]. Hirschman (1991) systematically discusses the unbalanced growth theory model in "Economic Development Strategy". He believes that the developments of the states or economic growths in the developed countries are caused by the unbalanced development. The unbalanced economic growth theory has had a great impact on anti-poverty in developing countries. Flynn (1997) proposed a project performance appraisal that includes the "4E" principle of economy, efficiency, equity, and effectiveness^[6-8].



According to different factors affecting quality of life, Kang Xiaoguang (1995) believes that poverty mainly includes three types: institutional poverty, regional poverty and class poverty. Among them, the regional poverty is caused by the differences of different regional natural conditions and developments in same institutional backgrounds, while the class poverty is caused by the difference of groups or individuals in the same region and institutional environment. Huang Chengwei (2001) argues that poverty in rural areas is mainly constrained by three types factors: poor development base, low development capacity, insufficient development rights or limited opportunities of development, thus poverty can be divided into environmental constraints, capacity constraints and rights constraints type^[9-10]. Zheng Shiyun and Wu Guoqing (2008) believe that raising the development capacity of the poor is an important way to effectively solve the rural poverty problem. It can increase the social participation of the poor by vigorously promoting the development of education in rural areas and the quality of social security and social services.

Above all, based on the field survey and empirical analysis, this study aims to analyze and discuss the precise performance of poverty alleviation in poverty-stricken areas in Hainan Province and to grasp the law of precise performance of poverty alleviation, providing accurate decision-making basis for the improvement of poverty alleviation performance for Hainan provincial government.

2. Overall survey design

2.1. Survey schedule

The research activities were divided into two phases. The first phase was mainly in Changjiang County (Changhua Shek Village and Wangxia Taiyan Town), and the second phase was mainly in Changshu Li Autonomous County Shilu Town Shufu Village, Baotu Village, Qicha Dazhang Village and other places, while the entire survey was conducted in June-November.

2.2. Overall survey route

The route of first phase was Changhua Shek Village and Wangxia Taiyan Town.

The route of second phase was Changshu Li Autonomous County Shilu Town Shufu Village and Baotu Village Qicha Dazhang Village.



3. Case analysis of the first phase of field survey

3.1. Survey object theoretical analysis and investigation hypothesis

The main targets of the field survey were villagers in impoverished villages in Changjiang County (Changhua Shek Village and Wangxia Taiyan Town). Most of the poor in rural Changjiang County of Hainan Province were producers engaged in the peasant economy. They are attached to their native land and unwilling to leave, and attach more intention to the agriculture than business.

3.2. Survey of accurate poverty alleviation in Changjiang County

The survey was conducted by a questionnaire survey on two impoverished villages in Changjiang County (Changhua Shek Village and Wangxia Taiyan Town), which took about a month. Questionnaire was designed a total of 22 questions, of which the basic situation is 7 questions, understanding of poverty is two topics, the funded understanding of government and others is a question, consumer psychology and emotional condition is two questions, and awareness of the issue of fairness and autonomy is a question. A total of 90 survey questionnaires were issued and 85 were recovered, with a recovery rate of 94.4%, of which 85 were valid, with an effective rate of 100%.

This report uses SPSS 21.0 to describe the statistical analysis.

(1) 62% of the poor think poverty is below the average economic condition; 19% of the poor think poverty means shortage of eating and wearing; 11% of the poor think poverty means poorly eaten and poorly dressed.

(2) 55% are poor due to illness; 29% are poor because they are too old to work; 22% are poor due to non-rich channels.

(3) 69% of families living in poverty are in poor and simple life but basically meet their needs; 16% of families living in poverty are warm and harmonious; 14% of the poor are worried about their livelihoods and their families relationships are indifferent; and 1% of the poor look down on their families and backgrounds.

(4) 45% of the poor people never compare with others; 33% of the poor people are more willing to get a good life on their own; 7% of the poor people are accustomed to compare with others.

(5) 62% of the poor think they are in peace; 14% are uneasy; 9% are unhappy; and 7% are happy.

(6) 66% of the poor people are silent and do not take the initiative to communicate with others; 6% of the poor people have strong feelings of inferiority and are sensitive to envy; and 4% of the poor people are vanquished and dependent.

3.3. Case analysis of second phase on accurate poverty alleviation performance and empirical analysis model

3.3.1. Survey purpose

In order to get an accurate picture of the poverty alleviation performance in Changjiang County, data of poverty villages and their first-hand information were collected to understand the poverty alleviation conditions and the reasons behind.

The research contents are as follows:

Table 1. Survey site statistical tables

Survey region	Poor village	Survey households	Percentage%
Changjiang County	Changhua Shek Village	46	8.7
	Qicha Dazhang Village	55	10.5
	Shilu Town Baotu Village	42	8
	Shilu Town Shuifu Village	33	6.2
Lingao County	Duowen Town Hill Village	37	7

Lincheng Town Meitan Distict Baorui Village	44	8.4
Diaolou Town Meiliang Distict Longdao Village	35	6.7
Lincheng Town Wentan Village	43	8.2
Duowen Town Bolang Viilage	52	10
Bohou Town Meisuo Village	38	7.2

3.3.2. Methods of the survey

Methods of the survey:

- (1) Literature research method; related theoretical experience and data of accurate poverty alleviation and research areas can be obtained from relevant materials such as Internet books.
- (2) Interview method; the targets included poverty alleviation offices of all counties, county governments, poor village committees, and subsistence farmers.
- (3) Sample questionnaire survey method; the main targets were poor village households and some villagers.
- (4) Field research; 13 villages in two counties of Changjiang were visited.

3.4. The questionnaire test

Based on the data collected from field survey, the reliability of the questionnaire was tested. Internal consistent reliability is the most popular reliability evaluation method nowadays, which is a promotion based on half-reliability and reflects the degree of correlation between items. These items should reflect different aspects of the same independent concept. The Cronbach α coefficient was calculated from the Cronbach's formula; the K-R coefficient was calculated from the Kuder-Richard-son formula, which is a special case of the former under the zero and one dichotomous variables. The Cronbach α coefficient is:

$$\alpha = \frac{K}{K-1} \left[1 - \frac{\sum S_i^2}{S^2} \right] \quad (1)$$

In equation (1), K is the number of entries in the entire scale or sub-scale, and S_i^2 is the variance of the entry, S^2 is the variance of the entire scale or sub-scale score. A greater α coefficient indicates better correlation between items, and in general, α which is greater than 0.8 indicates excellent internal consistency. α which is between 0.6 and 0.8 means better, and while is less than 0.6 means less internal consistency.

In order to ensure the reliability and stability of the questionnaire of the two phase, the Cronbach α value is used to test the reliability of the questionnaire in the first phase, the test results of which show that the Cronbach value of each of the main variables is 0.73 of the minimum and 0.91 of the maximum, with an average of 0.82, indicating that the internal consistency of the questionnaire is better. The second phase questionnaire reliability test uses the Cronbach α value, the test results show that the Cronbach value of each of the major variables is 0.75 of the minimum, and 0.87 of the maximum, with an average of 0.81, indicating that the internal consistency of the questionnaire is also better.

4. Basic conclusions and recommendations

Only with guaranteed infrastructure construction, education can be developed and poverty alleviation can be fundamentally solved and society can be able to achieve sustainable development. For this the corresponding suggestions for improvement are put forward.

1. Set up tourism cooperatives to develop tourism in line with local conditions

Many unique villages are very close to the popular scenic spots, and have an advantage of geography development. The radiation effects of major scenic spots can be used to transform impoverished and backward mountain villages with simple folkways and strong development willing into tourist attractions, with repairing old buildings, preserving the ancient appearance of rural houses

and combining farming and tourism. Infrastructure can be reformed to make houses clean, elegant, unified and orderly. Further a tourism cooperative can be established and professionals can be employed to manage it. Under the guidance of the government, farmers are attracted to become a shareholder, and the government organizes tourism activities to attract tourists to consumption, and at the same time, developing rural tourism and selling agricultural products are combined to create more specialty products into tourist products.

2. Armed with the first knowledge of the brain, and then their brain can be inspired to get rich

All villages and towns should fully investigate the technical shortcomings in their villages and invite or hire professional to obtain professional skills training through the government's unified coordination. At the same time, rural tourism poverty alleviation can also be included in the special intensive training, focusing on critical village leaders to help them understand the accurate poverty alleviation spirit and policy guidelines of central and provincial party committee, as well as learn the knowledge about rural tourism planning, developing, promoting and investing, etc. The successful poverty alleviation experience of Shihan village by supporting the development of featured accommodation, catering and production of tourism products is learned to help understanding the reason that the extremely poor villages can develop into an original ecological leisure agriculture tourism village, industrial integration model village and the most beautiful village in China. The present situation, characteristics and trends of poverty alleviation tourism in the province is learned to lay a solid foundation and contribution for better serving the province's precise poverty alleviation work.

3. Investment of the construction of schools in poor areas can be increased and a full range of student loans and tuition subsidy policy can be improved

The key to achieve poverty alleviation in poverty-stricken villages is to pay attention to the development of education and strive to improve the basic quality of villagers in order to raise the level and the techniques of working productivity. The basic education is promoted to achieve balance development, raising the education level of children from poor families in rural areas, promoting fair education, and reducing generational transmission of poverty, which can raise the basic quality of the poor effectively. The government should increase investment of the construction of schools in poor areas and provide a full range of student loans and tuition subsidies, so that all school-age children are accessible to learn, and through formal and informal education programs new values, attitudes, knowledge and skills can be passed on to enable them to cope with the development of society. More opportunities can be got, including social, economic, political, cultural and living opportunities, through improved individual absorptive capacity and improved other social services, to broaden their overall horizons and pay attention to the quality of compulsory education and vocational and technical training. The implementation of agricultural science and education are combined to improve the cultural quality of the poor.

4. The rural cooperative medical care and serious illness relief system can be combined and subsidies for poor households' medical expenses can be increased

The medical security system is an important part of the social security system and relates to the improvement of people's health and the quality of the entire people. The development of a new system of rural medical cooperation and serious illness relief system by helping each other jointly to fight diseases, which can not only reduce the burden on farmers' medical costs, but also protect the health of farmers. It has positive meaning for solving the problem of poverty and returning to poverty due to illness in the majority of rural poor areas. A multi-level rural medical security system can be established, strengthening the publicity and guidance of rural cooperative medical services, and improving the multi-channel fund-raising mechanism. Improving the supervision and subsidies for the rural medical and health service system can be helpful to protect of the rural labor force and improve farmers' health, so that farmers can cure illness with no worries.

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