

Research on the Identification and Relief of Rural Expenditure-based Families in Need in Central China

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Abstract

China has fully entered a well-off society and the problem of absolute poverty has been eliminated, but the problem of relative poverty such as expenditure-based hardship is still prominent. This paper takes the central rural area as the research object, uses the hierarchical analysis method to construct a quality assessment index system, focuses on the actual ability of households to escape from poverty, and finds that ①the degree of household hardship is not only determined by income, but expenditures such as expenditure level, family level and special care level have an important impact on the actual ability of households to escape from poverty. ② In terms of relief for households in expenditure-based hardship, re-assistance can be implemented for households already covered by the low income insurance, focusing on those who have not escaped from hardship after assistance, while attention should be paid to the central rural areas first. ③In the relief package for rural expenditure-oriented families in central China, specific consideration should be given to the actual ability of families to get out of poverty, and the actual amount of relief should be used to reflect the graded relief for families with different degrees of difficulty for extremely difficult, severely difficult, moderately difficult and mildly expenditure-oriented families, so as to realize the personalized relief for each difficult family. This paper provides a new analytical path for the identification and selection of relief packages for rural expenditure-based hardship families in the central region of China.

Keywords

Expense-based Families in Need; Hierarchical Analysis Method; Quality Assessment Index System.

1. Introduction

In 2021, the first of the "two hundred-year goals" proposed by President Xi, namely the full establishment of a moderately prosperous society, has been fully achieved, marking China's full entry into a moderately prosperous society. As far as poverty is concerned, after decades of poverty alleviation and development and social security system construction, the problem of absolute poverty has been eliminated. To consolidate this social development achievement, how to prevent socially vulnerable groups with poverty vulnerability from returning to poverty remains a social concern (Zheng, Ruiqiang, and Cao, 2016; Fan and Sheng, 2018; Wang, Chuncheng, and Liu, Huanhuan, 2022). The shift of expenditure-based hardship research from an income perspective to an expenditure perspective to examine and define the socially vulnerable groups in poverty vulnerability has led to a shift in research focus from absolute poverty to relative poverty and from ex post governance of poverty to ex ante prevention. This is of great significance to the further consolidation of China's first century goal. Along with the change in the focus of support in the "post-poverty era", the identification and assistance of households in need of expenditure has become an important aspect of the support work. However, there is little direct and in-depth research on this phenomenon in academic circles.

The literature related to the identification and relief of needy families can be categorized into three areas: first, research on the causes of poverty, second, research on expenditure-based poverty, and third, research on relief models.

Studies on the causes of poverty in the field of sociology have been conducted earlier and have produced more results, among which the representative views are mainly: (1) the causes of the socio-economic system. Karl Marx pointed out that the capitalist system is the cause of poverty and unemployment of the proletariat; poverty in South Asian countries is also caused by their social system and social structure (Myrdal, 1967). (2) Lack of rights. Yu Chongsheng (2016) and Brockington et al. (2006) point out that the cause of poverty lies in the lack of rights and in the absence of basic viable capabilities, where the irrational allocation of resources is also an important causal factor for the lack of rights (Xie Yue, 2020). (3) Intergenerational transmission of poverty. Some scholars believe (Gans, 1962; Hill, Ponza, 1983; Lwanga, 2003) that intergenerational transmission of poverty occurs and is passed from the father's generation to the children's generation.

These literatures have increased academic knowledge and understanding of poverty-causing causes, but most of the above studies analyze from a macro perspective, and fewer from a household perspective, nor do they infer the causes of poverty by lacking research and explanations of poverty vulnerability after our society achieves full prosperity, thus failing to clearly reveal the substantive factors of household hardship in a micro perspective.

In terms of research on the identification of expenditure-based hardship households, previous literature on expenditure-based hardship households has focused more on research on hardship households in developed coastal areas or cities, such as on Shanghai and Guangzhou. For example, Liang Dekuo and Xu Da-wei (2012) argue that assistance should be provided on a household basis, and various assistance mechanisms and support models should be actively explored through ex ante preventive assistance goals that focus on risk prevention, based on the assistance standards for expenditure-based needy families issued in Shanghai. Further, Liu (2021) argues that households with expenditure difficulties are easily excluded from the existing relief system, resulting in a "cliff effect", and uses a sample of low-income and marginal households in Guangzhou to investigate the causes of poverty for households with expenditure difficulties into five categories, and finds that the causes of old-age care, care for the disabled, and vocational training costs also contribute to poverty. It was found that reasons such as old-age care, care for the disabled and vocational training costs also lead to expenditure-based hardship.

Fewer papers have taken the perspective of rural households with expenditure-based hardship in the central region and actively explored the identification and relief model of rural households with expenditure-based hardship in the central region, which is important for coordinating regional development and promoting common prosperity. A more representative example is Liu Li et al. (2021), based on the 2018 China Health Aging and Tracking Survey (CHARLS) database, which uses the FGT index to statically simulate the poverty reduction effect of medical coverage on rural expenditure-based hardship due to illness in the east, central and western regions, and finds that medical coverage can effectively reduce the medical burden of expenditure-based hardship households.

The assessment criteria of expenditure-based hardship families is an important issue in the study of expenditure-based hardship families (Zhou Li, 2020), and the domestic and foreign literature mainly has the following assessment methods: first, the aggregate threshold determination criteria (Liu Yanyang, Zhong Renyao, 2019; Barrella et al., 2022), i.e., the threshold criteria for expenditure-based hardship assistance, with the specific formula of aggregate hardship determination criteria = (expenditure - income)/income. Second, the quantitative assessment criteria, i.e., setting some negative indicators, i.e., when households violate the negative indicators can be judged as non-expenditure-based hardship households.

However, the above-mentioned studies are not comprehensive to deepen the identification of expenditure-based hardship families, and it is difficult to provide an appropriate analytical idea for this study. First, many papers focus on the identification of expenditure-based hardship families by various factors, but whether it is applicable to the identification of rural expenditure-based hardship families in central China needs further proof. Second, these studies focus on the key role of the government, but less on the characteristics and behavioral logic of households themselves, which makes it difficult to effectively show the effective interaction mechanism between the two sides.

The next natural question is how to provide assistance to expenditure-based hardship families, and how to implement specific assistance models? Since 2007, China has gradually begun to pay attention to expenditure-based hardship families, and after more than a decade of development, several local governments have introduced expenditure-based hardship assistance policies (Anderson, 2018), which generally present the following three policy models. The first is the Shanghai model of "government assistance + citizen help", which has been studied for a relatively long time, and Shanghai has taken the lead in proposing the concept of "expenditure-based hardship families" (Liang, Deguo, and Xu, 2012). The "five, four, three, two, one" help and assistance system in Jing'an District, the "four medical care linkage" basic medical protection model in Changning District, the "four help mechanisms" in Hongkou District, and the "five help mechanisms" in Xuhui District have been explored. and Xuhui District's "Five Can" help and assistance model, which is essentially an extension of the income-based hardship assistance standard (Liu, Y., and Zhong, R., 2017). The second is the Hong Kong model of "government + business + non-profit organizations" (Cheung, Chan, 2000; Zhao, Jiajia, and Han, Guangfu, 2016), which is characterized by the participation of non-profit organizations. In this model, due to the government's support and long history of charity, non-profit organizations have a high social status, advanced ideas and quality services play an increasing role in the field of difficult family governance (Lin, W. J., Lee, Y. L., 2022). However, due to the international situation and historical factors, the "working poor" group in expenditure-based hardship has received attention, and this group is overly dependent on third-party social organizations and highly tied to the welfare system, which is not conducive to encouraging the recipients of assistance to become self-reliant to get out of hardship. The third is the American model of "social welfare + personal development accounts" (Maton, 2008; Sherraden, 2016), which emphasizes individual responsibility in hardship management, expanding employment through economic stimulation, and encouraging lifelong learning and higher levels of education for workers; exploring private funds combined with self-employment personal development account approach to increase individual income, compared to China's expenditure-based hardship relief model of simply distributing relief funds has greater significance.

In summary, the existing literature at home and abroad presents the following three features: First, the research on the causes of poverty has been more in-depth, but the risk of returning to poverty or the causes that may make them return to poverty after China has entered a moderately prosperous society still needs to be studied. Secondly, the research on the relief of expenditure-oriented hardship families has a certain theoretical foundation, but the research on the identification of expenditure-oriented hardship families and the specific causes of expenditure-oriented hardship in rural areas of central China needs to be strengthened. Thirdly, there have been a lot of studies on the identification of expenditure-oriented families in need and the choice of relief mode, but there are relatively few studies on rural expenditure-oriented families in central China, which is related to the general lack of the system of relief for expenditure-oriented families in central China.

In view of the above reasons, this project intends to further explore the research on the identification and relief of rural expenditure-oriented households in central China from the following aspects: first, to theoretically interpret the risk of poverty return and the causes of

difficulties faced by the poor and vulnerable groups in the context of a well-off society; second, to scientifically define expenditure-oriented households in difficulty based on the existing literature and the actual situation in central China's rural areas; third, to identify the expenditure-oriented households in difficulty based on the survey data of central China's rural areas. Third, based on the survey data of the central rural areas, we identify the factors covering the vulnerability risk of expenditure-oriented households, so as to propose measures and countermeasures to prevent the emergence of expenditure-oriented households in difficulty.

2. Analysis of the Causes of Expenditure-Oriented Families in Rural Areas in Central China

2.1. Definition of Expenditure-Oriented Families in Difficulty

Since the concept of "expenditure-based poverty" was first introduced in Shanghai, expenditure-based hardship families have received widespread attention from academics. Although most scholars have different but generally not significant differences, they all agree that expenditure-based hardship families are those whose rigid expenditures caused by major diseases, education expenditures, and unexpected events exceed the household load boundary and lead to household hardship (Klasen, 2000; Lu, Jinfei, and Cao, Yanchun, 2011; Shen, Junbin, 2013; Bui et al. (Xu, Yuebin, 2016). The definition mostly defines the degree of household hardship in terms of two dimensions: low income and different types of high expenditure. However, in the actual identification and relief of expenditure-based households in difficulty, only households that "cannot make ends meet" can be screened out, and the rigid consumption expenditure of households is mainly determined by sustainable income, which can be explained by the persistent income hypothesis (Friedman, 1957; Campbell, Mankiw 1990; Zhang, Bangke, and Deng, Shengliang, 2011). Therefore, there are many loopholes in determining expenditure hardship households only through the difference between disposable income and rigid expenditures.

Some scholars have improved the criteria for determining expenditure-based needy families from the perspectives of negative indicators and whether the income is below the minimum guarantee line. First, the criterion of "whether the household income is lower than the local minimum living standard line, the minimum wage or the urban low-income insurance standard" can be added to precisely identify the needy families from the reverse dimension. Second, under the current assistance system, families in need are unable to enjoy the minimum subsistence guarantee due to the real difficulties, which also adds obstacles for families to escape from their difficulties. For the definition of expenditure-based hardship families, we can implement re-assistance for families that have been included in the minimum subsistence guarantee, and focus on groups that have not escaped from hardship even after assistance. China has already entered into an all-round well-off society, but relative poverty still exists and there are many relatively poor people (Chen Zongsheng et al., 2013), which requires that the proportion of people to be rescued should be increased and the number of rescues should be increased under the improvement of the identification system of expenditure-based hardship families. Third, due to the influence of historical development and economic development model, China has formed a dual structure of urban and rural areas, and this structure makes a large number of relatively poor people in China concentrated in rural areas, and for a long time, rural expenditure-based needy families in central areas have not received effective attention from the national help policy. In terms of increasing the assistance for families with expenditure difficulties, we should focus on the central rural areas first.

2.2. Analysis of the Causes of Rural Difficulties in Central China

2.2.1. Unit Cost Growth Analysis based on Powell's Disequilibrium Growth Mode

Powell's unbalanced growth model addresses the mechanisms underlying the resulting household hardship from an expenditure perspective. Powell divides the economy into a progressive sector and a non-progressive sector, which differ significantly in terms of productivity (Oulton, 2001).

In contrast to the progressive sector, where substitution effects on labor can occur with the help of technological innovations and economies of scale, the nonprogressive sector emphasizes the importance of labor and argues that changes in the amount of labor can have a shock on the nature of the product (Yang, C.Y., and Zhang, X., 2005). Powell's non-equilibrium growth model provides a theoretical explanation for expenditure growth in the progressive sector by deriving a "prevention of labor reversal wage rate increase opportunity cost increase total cost increase" under the premise that unit costs remain constant over a fixed period of time in the progressive sector. The transmission path of "preventing the increase in opportunity cost of labor reversal". It is assumed that the output X_1 of the nonprogressive sector is produced by the labor factor L_1 only under the premise of constant productivity level, and the labor productivity rate index of the progressive sector is r , i.e., the output X_2 of the progressive sector is also in the exponential growth mode. Specifically, the production functions of the progressive and nonprogressive sectors are

$$X_{1t} = \alpha_1 L_{1t} X_{2t} = (\alpha_2 e^{rt}) L_{2t} \tag{1}$$

$$\frac{X_{1t}}{X_{1t} + X_{2t}} = \frac{\alpha_1 L_{1t}}{\alpha_1 L_{1t} + (\alpha_2 e^{rt}) L_{2t}} \tag{2}$$

where L_{2t} is the sectoral labor force, t is the time index, and α_1 and α_2 are constant terms. Specifically, let $w_0 = w_1 e^{rt}$, the two sectoral wage rates are equal and growth is synchronized with the progressive sector.

Assuming unit costs for the nonprogressive and progressive sectors, respectively, it is obtained that:

$$C_{1t} = \frac{e^{rt} L_{1t} w_0}{\alpha_1 L_{1t}} = \frac{e^{rt} w_0}{\alpha_1} C_{1t} = \frac{e^{rt} L_{2t} w_0}{e^{rt} \alpha_2 L_{2t}} = \frac{w_0}{\alpha_2} \tag{3}$$

Powell treats the production sector as a progressive sector and the service sector as a non-progressive sector. As the productivity of the progressive sector keeps increasing, the unit cost of the service sector in the nonprogressive sector keeps increasing, while, on the contrary, the unit cost of the progressive sector stays in equilibrium. If the output of the nonprogressive sector expands, it brings an inevitable rise in total costs.

2.2.2. Cause Analysis of Expenditure Poverty based on Micro Growth Model of Public Expenditure

Health care and education services, as positive externality products, can be dissected by a public expenditure microgrowth model to determine the underlying mechanism of expenditure increase. To reveal the potential factors that lead to changes in demand for final goods and to test whether there is a linear relationship between demand and supply, a public expenditure microgrowth model can be used to analyze it. Assuming that the expenditure is fully spent on the final product and without considering efficiency losses, the benefit function obtained by the i th individual can be constructed as follows.

$$U^i = U^i(\mathbf{G}, \mathbf{P})$$

where \mathbf{G} and \mathbf{P} denote the final output of the public and private sectors, respectively, and individuals demand a specific level of product under their certain income budget constraint line. Subject to the budgetary income constraint line, the demand condition of individual i for the k th public good is denoted by G_k^i . X_k is the intermediate activity used to produce G_k , L_k is the labor input used to produce G_k , M_k is the specific material resource used to produce G_k , and N is the population size.

$$X_k = X_k(L_k, M_k)G_k = G_k(X_k, N) \quad (4)$$

The micro growth model of public expenditure shows that individuals' expenditures and ability to pay for public goods show an increasing trend. In particular, the production function of the intermediate activity of G_k used to produce public goods depends on labor inputs and material resources.

2.2.3. Analysis of the Causes of Poverty in Expenditure Poor Families

Combined with the above reasoning, four reasons can be identified that lead to the increase of households in expenditure hardship.

First, productivity affects the cost of services and shows a positive correlation. With the continuous economic and social development, the level of medical services in education services is increasing, and the proportion of investment in medical and education services, as quasi-public goods, is also expanding, which in turn leads to increasing costs. In this context, families blindly seek high-quality education and medical resources in order to maximize their benefits, which exceeds the ability of some families to pay, resulting in the formation of expenditure-oriented difficult families.

Second, the reform of institutional mechanisms has caused an increase in payment pressure. As a result of macroeconomic policies, traditional education and medical resources, which are public goods, are no longer able to meet the growing demand for services, leading to an imbalance between supply and demand, and more households turn to the profit-making private sector, which leads to an increase in burden and the formation of expenditure-oriented families in need.

Third, unexpected events cause a surge in the cost of living. Sudden events, such as natural disasters and security incidents, can cause shocks to household consumption in a very short period of time, far exceeding the household's burden, thus forming expenditure-based hardship households.

3. The Model Design of Identification and Assistance of Families in Difficulty based on Expenditure Method

3.1. Evaluation Index System and its Accounting

3.1.1. Selection and Accounting of Quantitative Evaluation Index System

Effectively identifying the rigid expenditures of rural expenditure-oriented households in need in the central region is important for the maximum use of relief resources (Guo Wei, 2016). Among them, the quantitative assessment index system includes rigid expenditure indicators and additional expenditure indicators. Combined with the household income, the household hardship coefficient is derived, and the specific formula is.

$$\text{Family hardship coefficient} = \frac{\text{Apply for three years of rigid household expenses} + \text{additional expenses} - \text{Actually family income three years before the date of application}}{\text{Actually family income three years before the date of application}} \quad (5)$$

In formula (5), the extra expenditure i specifically includes health care, education, emergencies, housing and other special expenses, and the value of i is between 0 and 5. When I is 0, showed

no extra spending family, is more of a rigid expenditure, therefore can be considered as the basic difficult family, when $I > 1$, will require difficult reason, according to the family as a medical treatment, education, family emergencies, housing and other special difficulties, and in view of the family characteristics and family difficulties degree coefficient (see table 1), Select the corresponding rescue mode and package.

Table 1. Classification of families with expenditure difficulties

Difficulty level	index
Mild difficult	$0 \leq X < 0.5$
Moderate difficulty	$0.5 \leq X < 0.8$
Serious difficulties	$0.8 \leq X < 1$
Extremely difficult	$X \geq 1$

3.1.2. Selection, Assignment and Weight Design of Quality Evaluation Index System

Table 2. Index name, calculation method and weight of quality evaluation

Index properties	Target classification	The index name	Calculation method	weight
Quantitative indicators	Income level	Per capita household income	(Expenditure - income)/Income	0.94
		Of household income	Using household income	0.88
	Level of spending	uncertainty	Intra-group variance measure	0.81
		A rigid	Rigid expenditure/annual income	0.83
		Living expenses	Medical expenses account for expenditure/annual income	0.85
		A serious illness	Chronic disease expenditure/annual income	0.81
		Expenditure on medical expenses	Education expenditure/annual income	0.88
		Monthly expenditure on chronic diseases	Emergency expenditure/annual income	0.82
		Children every month	Housing expenses/annual income	0.67
	The family level	Education spending	Other expenses/annual income	0.57
		Expenditure for emergencies	Number of people in the labor force/total number of households	0.48
Qualitative indicators Index properties Quantitative indicators	Special care Target classification	Monthly housing expenditure	Children to old people	0.77
		Other every month	Scale of economic expenditure	0.76
		Additional spending	If yes, it is 1. If no, it is 0	0.78
	Income level Level of spending	Family labor force	If yes, it is 1. If no, it is 0	0.66
		Supply situation	If yes, it is 1. If no, it is 0	0.53
		Intergenerational support for children	If yes, it is 1. If no, it is 0	0.41

The design of the quality evaluation index system for rural families with expenditure difficulties in the central region of China is a comprehensive system involving multiple factors, disciplines

and levels. In order to avoid the repetition and omission of specific indicators and ensure the science and rationality of the model determination, Nguyen (2022) is used for reference. The quality evaluation index system based on analytic hierarchy process can examine the ability of poverty alleviation through quality indicators. Under the same degree of difficulty, the strength of poverty alleviation ability reflects the size of relief efforts. In this paper, the data are defined as qualitative and quantitative indicators from the income and expenditure level, the family level and the special care level. For quantitative indicators, the proportion of various types of expenses in income is more used. The larger the value, the greater the family economic pressure, and conversely, the smaller the family economic pressure, the stronger the ability to get rid of poverty. For qualitative indicators, "yes" and "no" are mainly used to measure. Specific index names and calculation methods are shown in Table 2.

Having established the nature, classification, names and specific calculation methods of the indicators, the next natural question is, how important are the indicators to each other? Drawing on the views of Linstone (1975), Xu Aiting (2006) and Yuan Qinjian et al. (2011), Delphi method was adopted to determine the weight of each indicator. The "1-9 scoring method" designed by each expert based on Satty (see Table 3) was used to reflect the relative importance of indicators from the perspective of comparative analysis.

Specifically, 30 experts are invited to score the quality assessment indicators through the judgment matrix. The specific judgment matrix scale is shown in Table 3. In order to effectively avoid excessive subjective judgment of experts, it is necessary to carry out consistency test on the scoring results, so as to reduce experimental errors. The specific steps are as follows:

Firstly, the weight vectors of qualitative and quantitative indexes are obtained by the sum product method.

Second, based on $A \times W = \lambda_{max} \times W$, λ_{max} is obtained, where A is the original matrix, W is the weight vector;

Thirdly, based on the formula $CR = \frac{\lambda_{max}-n}{(n-1)RI}$, CR is the consistency index and RI is the consistency test index.

The results show that the consistency test index value is 0.0035 (<0.1), indicating that the consistency evaluation index is high, and the experimental results have credibility. Input the rating opinions of 30 experts into the analysis software SPSSPRO, and the weight of each quality evaluation index can be obtained.

Table 3. Judgment scale and interpretation

Determine scale	explain
1	A1 is just as important as A2
3	A1 is slightly more important than A2
5	A1 is more important than A2
7	A1 is important compared to A2
9	A1 is extremely important compared to A2
2; 4; 6; 8	Between adjacent levels

3.2. Rescue Package Selection

Through the construction of the quality evaluation index system above, we have basically identified the degree of family difficulties and the actual ability to get rid of poverty. Naturally, how to help the rural families with expenditure difficulties in the central region? How to accurately identify the degree of family hardship and the effective combination of relief packages?

Based on the standard line of minimum living allowance in the central rural areas of China and combining with the actual poverty alleviation ability of families, this paper constructs a reasonable relief package for needy families with expenditure. Specifically, according to the degree of family hardship identified in Table 1, the amount of assistance for families with extreme expenditure difficulty is 95% of the standard amount, and for families with strong ability to get rid of poverty is 90%. According to the three grades of poor, average and strong poverty alleviation ability, the assistance intensity is 85%, 80% and 75% of the standard amount in turn. Similarly, according to the three grades of weak, general and strong poverty alleviation ability, the assistance intensity of moderate expenditure poor families is 70%, 65% and 60% of the standard amount in turn. The poor families with light expenditure can also receive 55%, 50% and 45% of the standard amount in turn according to the actual poverty alleviation ability from strong to weak. The actual amount of assistance can reflect the hierarchical assistance to families with different levels of difficulty, so as to realize personalized assistance to each poor family, so as to avoid the phenomenon of "one-size-fits-all". See Table 4 for the specific rescue package and amount.

Table 4. Rescue package and rescue amount

Category of Rescue Package	Amount of salvage F_i
Basic living assistance	$F_1 = \text{basic living expenses} - \text{total household income}$
Medical aid	$F_2 = \text{out-of-pocket medical expenditure plus assistance} +$
Education aid	$\text{Out-of-pocket medical expenditures} - \text{total household income}$
Rescue in emergency	$F_3 = \text{Education expenditure} - \text{total household income}$
Housing assistance	$F_4 = \text{emergency expenditure and assistance} - \text{total household income}$
Other assistance	$F_5 = \text{Expenditure on rental housing (low-rent housing, affordable housing)}$

The specific calculation formula is:

$$A(i) = B(i) + C(i) = k(D + F_i) \tag{6}$$

Among them, $A(i)$ is the relief standard, $B(i)$ is the relief amount, $C(i)$ is the total household income, and k is the adjustment coefficient, which is defined according to the financial capacity of the local government and the support of the central government. D is the amount of assistance for basic living, F_i is the amount of assistance for five different types of needy families, which are medical assistance, education assistance, emergency assistance, housing assistance and other assistance.

4. Conclusion and Suggestions

4.1. Conclusion

How to effectively identify and rescue the rural expenditure poor families in central China is the focus of academic circles and government departments. In particular, after decades of poverty alleviation and social security system construction, the absolute poverty problem has been eliminated in China. In reality, how to identify and assist the rural families with expenditure difficulties in the central areas needs to be answered urgently.

This paper takes the central rural area as the research object and uses the quality evaluation index system of hierarchical method to measure the actual poverty alleviation ability of families effectively. The data are divided into qualitative and quantitative indicators from the income

and expenditure level, the family level and the special care level. The empirical results of this paper show that the level of household hardship is not only determined by income, but also that expenditure level, household level and special care level have an important impact on the actual ability of households to get rid of poverty. In terms of assistance to families with expenditure difficulties, we can provide further assistance to families that have been included in the subsistence allowance scheme, focusing on the groups that have not gotten out of difficulties after assistance, and focusing on the central rural areas. In the relief package for rural families with expenditure difficulties in central China, specific consideration is given to the actual ability of the family to get out of poverty, and the difference in actual amount of aid for families with extreme, severe, moderate and mild expenditure difficulties reflects the personalized assistance for families with different levels of hardship.

4.2. Suggestions

The findings of this paper imply that, in order to effectively exert policy effects on the identification of rural families with expenditure difficulties in the central region of China and the selection of relief packages, the government not only bases on the short-term and adopts differentiated relief models according to the characteristics of different families in the central region, but also focuses on the long-term and constantly consolidating the achievements of social development. We will effectively prevent the vulnerable social groups with poverty vulnerability from returning to poverty, constantly deepen reform, and create a good institutional environment for the relief of rural expenditure difficulties in the central region.

(1) In the short term, the government should not make and implement relief policies "one size fits all", but should adopt differentiated strategies according to the actual ability of different families to get rid of poverty. To be specific, the beneficiaries can be relaxed in an orderly manner, gradually including marginalized groups and non-registered members of the city into the scope of assistance. At the same time, due to the uneven distribution of public goods, but with the long-term characteristics of rigid expenditure, it is easy to exceed income, so the scope of assistance can be expanded in an orderly manner.

(2) In the long run, the government should play an important role in the assistance of rural families with expenditure difficulties in the central region, effectively identify and accurately help them, and strive to achieve the "Pareto optimal" state. At the same time, we should pay attention to improving the ability of families to resist risks and strengthen the construction of family assets.

On the one hand, we will do a good job in social protection, and appropriately raise the level of social insurance payments and expand reimbursement rates in an orderly manner. Strengthen the publicity of social insurance, improve the ability of families to resist risks; Based on the local economic development level and the financial pressure of the government, the basic pension of the old-age insurance for urban employees and urban and rural residents should be appropriately increased. Increase the amount of assistance for serious diseases in the family, and maximize the possibility of preventing the family from becoming an expenditure poor family due to illness; We will promote commercial anti-poverty insurance such as anti-poverty insurance, and focus on solving the relative poverty problem of rural households with financial difficulties and marginalized populations in the central region.

On the other hand, focus on improving the family's own ability to resist risks. The current relief system is still purely material relief. In order to fundamentally solve the relative poverty problems such as expenditure difficulties, it is necessary to start from the family's own ability, help the poor first, and transform from "other people's help" to "self-help". Diversified relief methods such as spiritual relief, right and ability relief can be adopted.

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