

The Study of Poverty and its Influencing Factors

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Abstract. Poverty is a dynamic phenomenon, already out of poverty family may be poor due to external shocks, the poor families in the future may also be poor by some risks, therefore, addressing poverty not only solves the existing problem of poverty, more from the perspective of proactive preventive measures, enhance the ability of family to resist risk, fundamentally reduce the possibility of poverty. This paper sorts out the relevant research on poverty in China and the West, aiming to summarize the concepts of poverty as well as the influencing factors on the impoverished population. On this basis, puts forward the limitations of such research and points out the direction for further breakthrough.

Keywords: Poverty; Public policy; Family characteristics; Influencing factors; Improper consumption behavior

1 Introduction

1.1 Definition of poverty

Poverty is a worldwide problem. Since the current situation of poverty in different countries and regions, there has been no unified definition of poverty. Poverty, as defined by UNHCR, is a human situation of persistent deprivation or chronic exploitation of a decent standard of living and necessary resources, capacity, choice, security, and power, a state without daily necessities, often associated to the needs, difficulties and lack of resources in various situations.^[1]

Absolute poverty was described in the 1995 Copenhagen Declaration as "a form of severe deprivation": the inability to meet fundamental needs such as adequate nutrition, clean drinking-water, basic sanitation, healthcare, housing, training and education, and access to information. On the other hand, the World Bank (WB) defines people living below \$1 in daily expenditure as 'extreme poverty', while 'poverty' is defined as living below \$2 in daily expenditure. By this measure, 21 % of people worldwide lived in abject poverty in 2001, and more than half of people worldwide lived in poverty.^[2]

The Asian Development Bank calls poverty "deprived of basic assets and opportunities that everyone is entitled to". According to WB, "Poverty is an apparent deprivation of happiness, it includes many aspects: low income and inability to obtain adequate life-sustaining basic goods or services, it also includes low levels of healthcare and quality education, limited availability

of safe and clean drinking water and sanitation, inadequate personal security, lack of voice, capacity and opportunities for improving the quality of life".^[3]

Sometimes poverty can also be seen as the collective condition of a poor group, and in this way the country as a whole can be seen as a poor group. To avoid stigma, these countries are often referred to as developing countries, not as weak nations. While financial poverty and lack of income are a standard feature of most definitions of poverty, they alone do not account for the broader aspects of social, political and cultural dimensions of poverty. Poverty is a violation of human dignity, not just a deprivation of financial or physical resources. Noteworthy in this regard is a statement by the Secretary-General of the United Nations, Kofi Annan: "We defend human rights wherever we lift a person out of poverty. We trample on human rights whenever we do not fulfil this task."^[1]

In conclusion, despite poverty, poverty is mostly considered to be the basic need of normal human survival and the lack of happiness, including health, housing, education level, food and personal safety. Poverty is not only for individuals, but also can be used to describe a group or country. It involves depriving people not just of financial or physical resources, but is fundamentally discriminatory.

1.2 Classification of poverty

1.2.1 Absolute poverty and relative poverty

A distinction can be made between absolute poverty and relative poverty. Absolute poverty means the lack of minimum resources for individuals or families to maintain the minimum living needs, or even to survive. Relative poverty refers to the resources owned by an individual or family that, although able to meet their basic living needs, are not sufficient to meet the average standard of living of a society, and usually can only be maintained far below the average Status of living standards. Absolute poverty is typically measured in terms of dietary needs and other basic necessities. In the case of relative poverty, the bottom quintile of the population is compared with the top quintile, usually in terms of one-fifth or one-tenth of income.^[4]

The trends in both relative and absolute poverty may be in reverse directions. For instance, when the difference between top and bottom segments of a society narrows as a consequence of a decline in the well-being of the former, resulting in more households living under the absolute poverty line, relative poverty may decrease but absolute poverty will increase.^[4] The absolute and relative aspects of poverty are also affected by environmental changes. If prices tend to climb at a faster rate than earnings, then the well-being of certain households considered to be in relative poverty may fall to the same level as absolute poverty, without any corresponding change in status and thus in the living standards of the absolute poor. A similar situation occurs if values of culture and status are shifting in time.^[5]

1.2.2 Extreme poverty, middle poverty, vulnerable, middle, and high-income groups

According to the depth of the poverty, Analyzing poverty by average daily income per person, Lo'pez-Calva and OrtizJua' divide the population into five categories: extreme poverty population with incomes of less than \$2.50 a day; The middle poor population groups earning from \$2.50 to \$4 a day; the vulnerable group earning from \$4 to \$10 a day; the middle group earning from \$10 to \$50 a day; and the high-income group earning more than \$50 a day.^[6]

Where \$2.50, already used in regional research, corresponds to the official median extreme

poverty line for countries in Latin America. It is equivalent to the average official extreme poverty line in the world's 15 poorest countries.^[7] The \$4 poverty line has similar considerations, with Lopez-Calva and Ortiz-Jua' defining the vulnerable as those with incomes ranging from \$4 to \$10 per person per day, implying a probability of living in poverty of more than 10%.^[6]

1.2.3 Long-term poverty, temporary poverty, future poverty and never poverty

Depending on poverty duration, residents could be divided into four categories: Chronically poor residents: in first year of survey (extreme or medium), in the following decade, living in poverty for five years or longer; Temporary poverty population: Poverty in the first year of the analysis, Over the next decade, the poor are four years or less; Future poverty population: In the first year of the analysis, These people are either vulnerable groups, Or the middle class, Or the high-income earners, But for the next ten years, They have experienced poverty for at least a year; People who never poverty population: They are consistently living over \$4 in the poverty line.^[8]

Temporary and chronic poverty were defined as poverty in the first year of the analysis, and aggregate of moderate and extreme poverty is equal to aggregate of temporary and chronic poverty. This means that there is no change in the occurrence of poverty, either in terms of depth or duration.^[8] So is all extreme poverty equal to chronic poverty? As pointed out by Radhakrishna et al, since the case of the poor also reflects chronic poverty below the poverty line, so the two poverty concepts are used interchangeably, albeit to different degrees.^[9]

1.2.4 Primary poverty and secondary poverty

Primary poverty means that a person or family does not receive enough income to satisfy their essential material needs and is in a state of 'making ends meet'. Sub-poverty is relative to primary poverty, in which a person or family has resources that could have saved them from poverty but spends too much on non-necessities. Primary poverty focuses on defining poverty in terms of income, while secondary poverty focuses on poverty in terms of consumption. Sub-poverty is defined as poverty due to "improper consumption behavior" (for example, consumers are affected by the information conveyed by the merchants, leading to consumers' shopping impulse) and judging what is improper consumption behavior involves the difference in values of the poor and the rich.^[5]

In conclusion, there are different ways in which poverty can be classified. The categories are not independent of each other, and there is a certain link between them. In general, the poor are defined as people lacking the basic requirements for human subsistence, while other types of poverty are defined in terms of the extent to which this threshold is exceeded. However, the criteria for defining the same category of poverty vary from region to region. For example, families that do not have access to enough food to survive are considered to be absolutely poor. But for family groups in different countries and regions, the cost and composition of these enough foods may vary greatly.

1.3 Poverty line

Poverty is strongly linked to poverty lines. The World Bank defines the poverty line as the lowest amount needed to provide food to meet minimum calorie intakes and to cover essential items other than food. The poverty line is often used to distinguish poverty from poverty. Households whose income is insufficient or whose consumption is higher than the national

threshold are generally referred to as poor households. Those families whose income and consumption are higher than that of the national minimum income threshold are called non-poverty families.

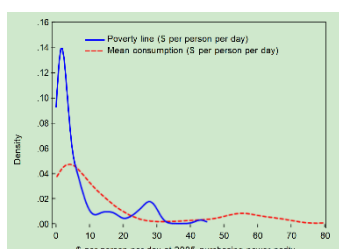


Figure 1 Density of poverty lines worldwide

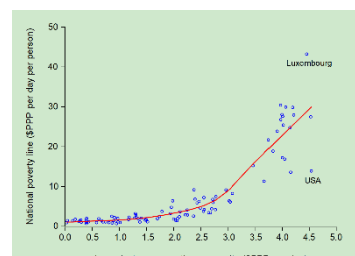


Figure 2 Global poverty lines (n=95)

Reference: Ravallion et al. (2009) (for developing countries), extended by the authors to cover OECD countries for the purposes of this study (Eurostat lines and official lines for countries including Australia, Canada, Finland and the United States). Indeed, different poverty lines are often used in different countries (Figure 1). But generally speaking, comparing different countries and regional levels of economic well-being, it is more common to use only one poverty line.^[10] The global standard poverty line (Figure 2) set by the World Bank for East Asian nations is US\$1 a day per person, typically determined by measuring the consumption of both food and other items. Food poverty lines are based on the lowest prices in a food basket. This provides a nutritional allowance of 2100 calories per day.^[11]

In almost all countries there are citizens in poverty, and the poverty line is a measure of these people and can be used to consider socio-economic reforms (e.g., welfare and unemployment insurance) to reduce poverty. The poverty line is usually determined by calculating the total cost of all the basic resources that an adult consumes in a year. This approach is necessary because it assesses the minimum expenditure required to maintain a tolerable life span.^[5] A poverty line of US\$1, US\$1.25 or US\$2 per person per day is used in most of the available literature.^[12]

In conclusion, the at-risk-of-poverty threshold is the lowest level of income at which a person is defined as poor and has no discretionary income. The poverty line is also different for different national conditions. Currently, the poverty line standard of US\$1, US\$1.25 or US\$2 a day per person is generally adopted. The definition of the poverty line is chosen according to national conditions.

2 Method

2.1 Poverty measurement

Several common measures of poverty are summarized below, and they list their uses and advantages and disadvantages.

2.1.1 Incidence of poverty

The incidence or rate of poverty, which is normally reported as the share of people with expenditure (or earnings) under the poverty threshold. The indicator captures the portion of the population that is unable to afford a basic commodity basket. When analysed at the level of the

individuals, the rate of poverty is also termed the poverty indicator, since it represents the relation between the total population and the number of poor people. In mathematics, the incidence of poverty can be expressed as follows : P_0 , see equation (1) for an example.

$$P_0 = \frac{1}{N} \sum_{i=1}^N I(y_i < z) = \frac{1}{N} \sum_{i=1}^q 1 = \frac{N_p}{N} \quad (1)$$

Where N indicates the total population; I represents that if the expression in parenthesis is true, the indicator function value is 1 (poor), otherwise 0 (non poor). y_i represents a welfare index such as per person consumption; z represents the poverty line; the amount of people included in total population N_p .

The poverty incidence indicator has the advantage of being simple and easy to understand as an appropriate measure of general anti-poverty progress. Nevertheless, there are some limitations to the poverty rate. Firstly, it ignores the variation in well-being among different poor families and assumes that the poor are all in the same situation. The second is that the index is insensitive towards variations in individuals' well-being providing they continue to stay under of the poor lines. The third limitation is that the index fails to capture the magnitude of poverty. ^[5]

2.1.2 Poverty gap index

Another poverty measurement tool is the gap index, which is expressed as. This is the average of the gap between the standard of living for poor people and the poverty line, also known as the depth index. The mathematical definition of the poverty gap index can be found in equation (2).

$$P_1 = \frac{1}{N} \sum_{i=1}^N \left(\frac{z - y_i}{z} \right) I(z - y_i) = \frac{1}{N} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right) \quad (2)$$

The definition of the variable is the same as in the incidence of poverty equation. The gap index of poverty is calculated as the difference between the average earnings among the poor and the defined depth of poverty. The advantage of the index lies in the fact that it mirrors the poor's average deprivation, allowing for a deeper understanding of the depth of poverty. Another advantage is that it shows how much needs to be taken away from the poor to bring their expenditure up to the poverty line, so the index makes it straightforward to work out the cost of postponing poverty reduction. However, the main limitation is that it does not reflect the difference in poverty severity among the poor, and it ignores the difference between the poor inequality. ^[5]

2.1.3 Poverty gap square index

The squared poverty gap index is the third indicator of poverty; This is the average square of the relative poverty gap. The definition of is similar to the poverty gap index, except that the poverty gap is squared and therefore has the highest weight on the largest poverty gap. This indicator, also known as the poverty gap square index, reflects differences in the income levels of the poor, can be defined as equation (3).

$$P_2 = \frac{1}{N} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^2 \quad (3)$$

It also takes into account inequalities between the poor. In particular, the demand for may not adequately capture some of the changes in the distribution of poverty in the population. If there were, for instance, policies to transfer cash from households falling under the poverty line to those at the poorest end of the scale, then the square of the poverty gap index could be used to capture these changes. The most important constraint on the index is the difficulty of comprehension, as it is not easy to explain and is not widely used. [5]

2.1.4 Foster-Greer-Thorbeck poverty index

The poverty incidence indices, the poverty gap indicators and the poverty gap squared indicators are part of a group of measures of poverty collectively termed the Foster-Greer-Thorbeck (FGT) indices. If the poverty measure of a group represents a balanced weighting of the individual poverty indices of a group, the poverty measure becomes decomposable. The standard formula of the FGT poverty index is equation (4).

$$P_\alpha = \frac{1}{N} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^\alpha \quad (4)$$

Where the protein is α 0. The parameter α reflects the poverty aversion. The greater the α value, the greater the impact on the poverty gap among the poorest people. By setting $\alpha=0$, the equation can be reduced to a poverty incidence index. If $\alpha=1$, then the equation becomes the poverty gap index, adding the corresponding poverty gap and expressed as the average of the entire population.

2.1.5 Human Poverty Index

The Human Poverty Index (HPI) provides a benchmark of poverty that is widely accepted by the UNDP in its Human Development Report. It is related to the Human Development Index (HDI) by measuring three fundamental dimensions that are reflected in HDI: poverty, inequality and deprivation. The first is the use of healthy longevity and the associated deprivation in the HPI, which is the vulnerability to death at a relatively young age, captured by the likelihood of not reaching life expectancy at age 40. Second, from the perspective of the HDI, lack of knowledge, represented by the illiteracy rate of adults, is excluded from the literate and communicative world. Third, a decent standard of living is measured by calculating the simple averages of two measures: the share of the population unable to sustainably upgrade safe water supplies, and the share of the children in the population who are underweight. The human poverty index is calculated as equation (5) . Where, is the probability of being less than forty years old after birth, expressed as Human illiteracy rate, representing the unweighted average population and age of underweight children with no sustainable access to animal water, $\alpha = 3$.

$$HPI = \left[\frac{1}{3} (P_1^\alpha + P_2^\alpha + P_3^\alpha) \right]^{\frac{1}{\alpha}} \quad (5)$$

3 Discussion

The influencing factors of poverty have always been the focus and focus of such research, which involves a wide range. Let's start here with the public policy aspect. Public policies mainly include tax system, fiscal expenditure, rural social endowment insurance, etc.

3.1 Tax system

Research by Wang and Piesse et al. showed that the tax system has greatly exacerbated the inequality between urban and rural areas in China in the past 20 years. The highly regressive tax system will not only create a huge urban-rural gap, but also increase the degree of rural poverty and vulnerability. Wang et al. speculate that the welfare of families will be improved since the abolition of agricultural tax in 2006, but in fact there are still many problems, such as rural class differentiation.^[13]

3.2 Fiscal expenditure

Most literatures have proved that in the long run, all kinds of financial expenditure can effectively raise the per person income level of residents and improve the income poverty. The poverty vulnerability theory points out that the main cause of family vulnerability is disease. Poverty due to illness and return to poverty as a result of illness are consistently the leading causes of poverty, coming top of a long list of poverty causes. Therefore, the increase in financial health care expenditure can, in a way, provide medical and health insurance for residents and increase the capacity of residents to cope with the risk of disease. It can be seen that tax spending is associated with a significantly adverse effect on the poverty vulnerability of residents, i.e. fiscal spending may contribute to reducing the vulnerability of residents to poverty.

3.3 Rural social endowment insurance

Most rural people rely on rainwater to support their agriculture because of the limited use of improved agricultural techniques, which will not help them from poverty. A study by Janvry and Sadoulet shows that the adoption of agricultural technology directly or indirectly affects poverty vulnerability: the direct effect is reducing farmers' poverty vulnerability by increasing household consumption and surplus marketable food by increasing agricultural productivity; an indirect effect can be achieved by lowering food prices for food buyers.^[14] Wubneshe et al. found that the probability of a household staying in poverty or vulnerability also fell with adopting multiple agricultural technologies. Consequently, there are significant dynamic benefits to adopting a variety of complimentary techniques that can enhance the well-being of smallholder farmers.^[15]

In conclusion, an improper tax system will strengthen the poverty vulnerability of the residents, while the fiscal expenditure and the use of multiple agricultural techniques can help to reduce the poverty vulnerability. Therefore, the introduction of corresponding public policies is conducive to poverty alleviation, and with poverty reduction as a goal, public policies should not only highlight poverty alleviation intervention and support those who are identified as poor, but also highlight the "prevention" intervention in poverty alleviation to prevent those who are vulnerable to impact from falling into poverty.

4 Conclusions

Urban poverty is increasing due to the increasing number of urban and rural migrants, and both the urban and rural areas are two different worlds, and the related factors are very different. But so far, many policies and the focus of research is still on rural poverty, many development practitioners often think that poverty is long-term and rural, and modest levels of poverty are temporary and urban, they are inclined to predict whether vulnerable groups are at risk to poverty, and think that the moderate poor have come to a secure position and do not need a welfare net any more. But in fact, the problem of urban poverty cannot be ignored, which is also the product of social and economic development.

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