

# Poverty Monitoring in Rural China

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## **1. Poverty Monitoring System for rural China**

As a part of the endeavor of poverty reduction of government, National Bureau of Statistics (NBS) of China has paid a great attention on poverty monitoring. Since the middle of 1980s, National Rural Household Survey was used to capture the national poverty incidence. Some regional poverty monitoring systems were set up to reflect poverty information and to evaluate the impacts of some regional anti-poverty programs from 1994, A National Poverty Monitoring System was formally set up in 1997 to collect and disseminate information on the national poverty issue, to evaluate the impacts of the poverty alleviation activities, and to provide full picture of poverty and its change for policy-makers.

The poverty monitoring program was reformed in 2001 so as to reflect multi-dimension poverty issues. The indicator system covers following aspects:

- 1) Household income and expenditure, and poverty incidence measured by income and expenditure, such as poverty headcount rate, poverty gap rate and weighted poverty gap rate;
- 2) Food consumption and nutrition;
- 3) Fixed assets and living facility;
- 4) Education attainment of adults and schooling of children;
- 5) Household capability of accessing market
- 6) Income equality and gender disparity
- 7) Social security
- 8) Coverage, targeting of poverty reduction projects

Since 2000, NBS has published "Poverty monitoring report of rural

China” annually. The report provides a platform to disseminate poverty line, population size of poor, poverty distribution, poverty characteristics and factors. It also introduces the poverty reduction policies, programs and other efforts of various government agency, international organizations and NGOs.

The national poverty monitoring system of China collects poverty information through three main data sources: **(1) Rural Household Survey (RHS)**. The data from RHS are used to estimate national poverty line in term of income/expenditure and poverty distribution; **(2) National Poverty Monitoring Survey (NPMS)**. The data from NPMS are used to compile estimation of multi-dimension poverty of 592 national poor counties and to evaluate the impact of national poverty reduction program; **(3) Special poverty monitoring surveys**.

### **Rural Household Survey (RHS)**

RHS is an integrated social and economic survey and focuses on the income and expenditure of households. Data collected from the survey are used to estimate the national rural poverty line. They cover household characteristics (educational attainment, electricity, distance to public transportation), employment, seasonal labor migration, agricultural production, housing conditions, income (income by source, in-kind income), expenditure (including health and education expenditures), consumption (major food items) , ownership of durable goods and fixed assets, and access to social services. Community-based data such as the availability of roads, electricity, telephone, health facilities and schools are also collected.

A random MPPS(Multi-subjects proportional possibility to size) sampling method is adopted in RHS. The sample frame is updated using the latest census results and according to the changes in household composition in the sample. A rotation sampling scheme is used with a 5-year rotation cycle. According to the above sample method, 68000 households in 857

counties (about one third of the total number of counties of China) were selected from 31 provinces, autonomous region and municipal cities. The samples are the representative on national level as well as provincial level.

RHS collects the household's information through a way called "dairy book + visiting". The sampled households record all the economic activities such as production, purchasing, selling, consumption etc. in a dairy book. Assistant enumerators are engaged in every selected village to prompt the households to keep the dairy book, to help those illiteracies to record, to check and sort up the dairy book periodically. County interviewers often go to villages to supervise the recording, to provide guidance or help, and to collect the dairy books periodically. At the end of each calendar year, visiting interviews are arranged for collecting community information as well as individual information, plus some additional household information like fix assets.

After the records in dairy-books were coded, the data were inputted into computer and checked in the county survey branch by using the data processing programs developed by headquarter of Rural Survey Organization (RSO) of NBS. County survey branches report the raw data through network to provincial organization and then to headquarter in Beijing. Headquarter in Beijing as well as each provincial organization is engaged in data checking, aggregating, tabulation and analysis.

Data were collected and published annually as well as quarterly. Up to now, only aggregated data are published. Part of micro-data is also released for special research purpose. The main aggregated results could be found in:

- Statistical Year Book of China;
- Rural Statistical Year Book of China;
- Yearbook of Household Survey
- Annual/quarterly Statistical analysis report;
- Relevant research papers.

### **National Poverty Monitoring Survey (NPMS)**

NPMS was established in 1997. Its main aim is to get a deep understanding of poverty distribution and its change of national poor counties, to supply precise and reliable ground for making policies concerning the alleviation of rural poverty, and to monitor the impacts and the processes of the anti-poverty programs for the 592 national poverty counties listed in the "8-7 Plan". Since 2001, NPMS has been relocated to 592 key counties listed in new national poverty reduction program.

NPMS uses a random, multi stage systematic sampling method. About 10 villages were selected from each poor county and 10 households were selected from each selected village. Data collecting method of NPMS is similar to the RHS. Compared with RHS, NPMS includes more indicators in social aspects such as rural infrastructure and basic social service, employment, children schooling, labor migration. NPMS collects the information on personal, household level as well as community level. Hence NPMS could measure the poverty not only the economic poverty but the multi dimension poverty too. NPMS gives out more detailed picture of poverty of national poor counties.

### **Special Poverty Monitoring Surveys**

Beside the national poverty monitoring surveys, there are a series of regional poverty monitoring surveys for special poverty reduction projects. Three of the largest surveys relate to World Bank poverty reduction projects in China: South-West Poverty Monitoring Survey (SWPMS), Qinba Mountain Area Poverty Monitoring Survey (QBPMS), and Inner Mongolia and Gansu Poverty Monitoring Survey (IMGPMS). The surveys were carried out by Rural Survey Organization of NBS to collect statistics from the poorer areas with the support of the World Bank and in cooperation with the Leading Group of Poverty Reduction of the State Council in 1995, 1997 and 1999, respectively, and lasted for 6 years for each project.

Detailed data as well as analyses on poverty head count rate, poverty gap, and poverty decomposition by location, education attainment, ethnic group, and household structure are disseminated through RSO's annual publication, *Poverty Monitoring Report*.

The survey has four components covering community, household, personal and project activities. In the first component, the condition of social service, such as education and health services, rural infrastructure and population, is covered. In the second component, data are collected on expenditure, income, nutrition, social security and housing conditions. The third component includes questions regarding demographic characteristics, employment and schooling of individuals of the household. The last component covers information on access to credit market and subsidies received by households. SWPMS, QMAPMS and IMGPMs sample 35 counties in Guangxi, Guizhou and Yunnan provinces, 26 counties in Sichuan, Shaanxi and Ningxia provinces and 15 counties in Inner Mongolia and Gansu provinces. The survey methodology is similar to that of the Rural Household Survey. Poverty lines are established for all project areas using the same methodology as for the national rural poverty line.

## **2. Poverty Threshold**

Since 1986, National Bureau of Statistics of China estimated the poverty line on the base of Rural Household Survey for the benchmark year such as 1985 and 1990, 1994 and 1997 while consumer price index multiplied by poverty line of previous year was used up to update the poverty line for subsequent years.

NBS estimated the poverty line for 1997 following the method recommended by World Bank:

- a. Selecting the minimum calorie level. 2100 calories per day per person was selected as the minimum nutrition need suggested by nutritionists.

b. Setting up food bundle that can satisfy the minimum calorie level. Data from Rural Household Survey was used to calculate the actual food consumption structure and food quantities (food bundle) that maintain the minimum nutrition of low-income population in poor area.

c. Calculating the minimum food expenditure (food poverty line) with the prices of low-income group from the survey.

d. On the base of knowing food bundle and the food poverty line, regression model was used to estimate the minimum non-food expenditure of the households with income just reaching the food poverty line.

f. Food poverty line plus non-food poverty line equals to poverty line.

From the method, it is clear that the poverty line is a kind of “low poverty line”. It was 640 RMB Yuan annual per capita net income for 1997 and was about 0.75 US\$ (using PPP exchange rate) per day per capita. It was published by Chinese government officially so that government could concentrate the limited resource on the poorest population.

For the poverty line only means basic food and cloth, the households around the line are still weak. Hence Rural Survey Organization of NBS set up a low-income line since 1998, based on the same food bundle for determining poverty line. The unique difference is that the non-food poverty line is estimated according to 60% food share. In 1998, the low income line was 880 Yuan, Which was quite near to 1 dollar a day according to the PPP exchange rate.

#### **Poverty line 1978-2003,rural China**

Year	Poverty line (RMB Yuan)	Year	Poverty line (RMB Yuan)	Low income line(RMBYuan)
1978	100	1998	635	880
1985	206	1999	625	865
1990	300	2000	625	865
1994	450	2001	630	872
1997	640	2002	627	869

		2003	637	882
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Supported by World Bank Country Statistical Capacity Building Program, Rural Survey Organization of NBS currently tries to estimate the new poverty line for China again. One cause is the consumption model of low-income group changed a lot in past five years. Some expenditure on primary education, basic health care, housing and durable commodities were regarded as “basic needs” both by the household and government. Another cause is that only the calories intake was considered when setting up food bundle in 1997. The protein and other nutrition factors in such kind of the food bundle were too low to maintain a healthy life. The third cause is the unique poverty line could not satisfy the implementation of poverty reduction for a large country with vast regional and rural-urban economic gaps such as China.

Taking the above issue in consideration, Rural Survey Organization of NBS use the household survey data 2002 to estimate the new poverty line(s). The basic method is similar to that used in 1997, except for following points.

- 1) Sort all the surveyed households by household income. Use the 10-30% households from bottom as the low-income group.
- 2) Set up food bundles for each region of China.
- 3) Use a proportion of 75% calories from grain and the 2100 calories intake daily to control the quality and quantity of the food bundle.
- 4) Use the actual food price from low-income group of the province to calculate the food poverty line for each province.
- 5) Use the low poverty line from first round estimation as regional price scalar to adjust the income of household. Repeat the estimating for several rounds until the poverty lines from two rounds are close enough.

According to the results of current research, the average food poverty line for rural China is 645 RMB Yuan, the average low poverty line is 835

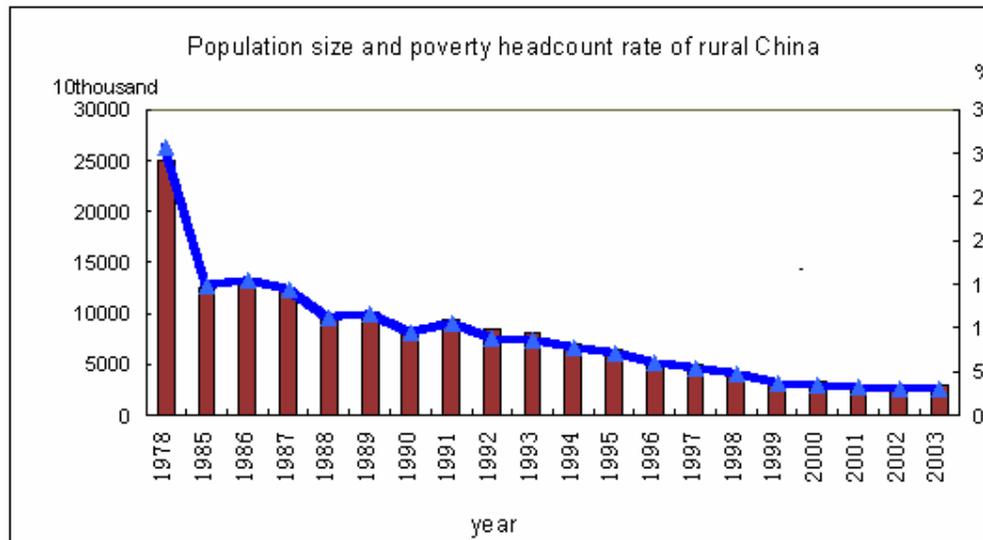
RMB Yuan. The rate of population below the food poverty line is 3.2% . The rate of population below the low poverty line is 8.5%.

### **3. Policy Applications**

Poverty monitoring is closely related to poverty reduction policy-making in China. Following are the main aspects.

#### **Monitoring poverty alleviation progress**

Monitoring results show that the poor population dropped rapidly from about 250 millions in 1978 to 125 millions in 1985, accompanied by the high economic growth in rural areas due to the rural reform. The speed of rural economy growth and the poverty alleviation slowed down after 1986 compared with the previous years. By the end of 1992, the poverty population of rural China reduced to 80 millions and poverty headcount rate was 8.8%. After the strong intervention of government, well known as “ eight-seven” poverty reduction program, the poverty headcount rate dropped fast again. The poor population of rural China reduced significantly to 32 millions, and the poverty head count rate was 3.5% in 2000. Poverty monitoring results also showed it was more and more difficult to reduce the size of left poor population. In 2003, the poor population added 0.8 million in rural China due to the serious natural disasters. The following figure shows the population size of poor and the headcount rate of rural China from 1978-2003.



**Providing poverty distribution for locating poverty reduction fund and other resource.**

The poverty monitoring results of rural China are disseminated to various government agencies, such as Leading Group Office of Poverty Reduction, National Commission of Reform and Development, Ministry of Finance etc. periodically at the beginning of each year. The results are used to locating the government poverty reduction fund every year and to determinate the name list of counties with priority in national poverty reduction program. The poverty distribution also used as important reference for locating poverty reduction projects by various agencies, international organization and NGOs.

**Analyzing poverty characteristics and poverty factors, and providing suggestion for policy-making**

The analysis on characteristics and factors of poverty helps to forming the poverty reduction policies. For example, it was found that the overall economic growth gradually has less and less impact on poverty alleviation in 1986. Chinese government began to intervention the poverty alleviation through organizing a lot of large-scale anti-poverty programs all over China from the middle 1980. At the beginning of 1990s, it was found that the poor

population was more and more concentrated to remote area with inferior national condition. The backward rural infrastructures of those areas are the main obstacle of development. In order to accelerate the poverty alleviation and to attain the aim of eliminating the poverty at the end of 20th century, Chinese government launched the "8-7 Plan" in 1994 to guide the poverty reduction activities. The main content of "8-7 Plan" is to reduce the poverty through the tax favorite policy, financial support and social-economic development program. For the convenience of implementing the "8-7 Plan", 592 poorest counties, selected from more than 2000 counties of China based on the poverty monitoring results, were defined as 'national poor counties'. It was estimated that more than 70% of the 80 million poor concentrated in the 592 counties with very bad natural environments and backward social-economic conditions in 1994.

In 2001, Chinese government started a new poverty alleviation effort to erase extreme poverty and to help the low-income group to improve their development capability. The new program plans to enhance the support in 592 poor county, which are re-selected from middle/western China.

#### **4. Poverty issues in new Century**

The poverty alleviation of rural China slowed down since 2000. According to the monitoring results, the poverty head count rate of 2003 is 3.1%. The poverty of rural China in new century has the following characteristics:

a. It is difficult for the current poor left under the extreme poverty line to get out of poverty through overall development methods. The main cause is that the households in extreme poverty mainly are those without labor, disable, with serious illness of household member, illiterate, and those surfer from disaster and inferior national conditions.

b. The national disasters become the main cause of poverty. According to the poverty monitoring survey, there are 55% households returning to poverty due to the serious national disaster such as drought and flood.

c. The rural infrastructures even in remote area are improved a lot in past years, however a part of the households still are poor to access the facilities.

As the results of long term effort of government, the rate of poor village access to road, electricity, telephone net and TV signal are similar to the non-poor village, however the rate of household using electricity, access to safe drink water are much lower in poor than in non poor.

d. The social development lagged far behind the economy development. The basic social service such as primary education and basic health care are backward in poor area. The labor illiteracy rate of poor household is 16.3%, 10 percentage points higher than non-poor. The enrolment rate of children 7-12-years-old is 88.6% for poor households and 96.2% for other households in poor counties.

e. The income disparity enlarged to a level that may affect the social stability. Since the year 2000, the income gap between rural and urban is 1:3.2, which is larger than before the economic reform. The Gini coefficient of rural residents is 0.368 in 2003 and the Gini-coefficient of whole nation is over 0.4.

Based on the characteristics of poverty in new century, Chinese government pays more attention on social development and household capacity building in its poverty reduction endeavor. Poor area primary education program is to enhance the support of central government on primary education of poor area so as to improve the enrolment rate of children and to eliminate the illiteracy of those areas. "grain for green" projects aim to upgrade the environment of poor area. The social security system of rural China aiming to help those without capability to implementing poverty reduction project is under the way. Relative policies and projects encouraging the migration would reduce the population in inferior environment. The reform of rural credit market is explored.