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Department of Rural Surveys, National Bureau of Statistics

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Editor's Notes

China Yearbook of Rural Household Survey-2005 is an annual statistical publication and has a very comprehensive data coverage of production, income, consumption, accumulation and social activities of the rural households. The publication includes both the national and provincial aggregates since 1978 with the national aggregates on an annual basis and provincial ones by net income groups for selected years. It also includes statistics grouped by three economic regions and twelve Western provinces.

The data in this book contain four parts: (1) National information of rural households, 1978-2004; (2) Basic condition of rural households by groups, selected years; (3) Income and expenditure by province, selected years; (4) Main information of rural households by province, 2004.

The publication maintains the original grouping structures for historical data with no adjustments made in terms of group intervals and number of groups.

The data of the publication come from the national rural household survey conducted by the National Bureau of Statistics and do not cover Hong Kong Special Administrative Region, Macao Special Administrative Region and Taiwan Province.

Statistical discrepancies due to rounding are not adjusted in the publication.

The notes concerning a whole table are placed at the beginning of the table while those concerning individual indicators are placed at the end.

Notations used in the publication:

“ ”: data not available or less than measurement unit;

“#”: major items;

“*”: see footnotes below .

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Introduction

Rural Household Survey in China

Rural Household Survey in China

PART ONE: Introduction

1.1 Background

The Rural Household Survey (RHS) in China is one of the comprehensive social and economic surveys mainly containing information on the production, distribution, exchange, consumption, accumulation, and social activities of rural residents. The RHS data in China aim at giving a comprehensive picture on the income growth and living standard improvement of rural residents, monitoring the poverty alleviation process in rural areas, providing objective data for all levels of governments to make policies and decisions on rural economic development, and producing data for the compilation of China's national accounts.

China's RHS was initiated in 1954. Unfortunately, it was suspended twice during the period between 1958 and 1977 due to the "Campaign of People's Commune" and "Great Cultural Revolution". Great progress has been achieved since the resumption of the survey in 1977, especially since the establishment of the Rural Survey Organization (RSO) in 1984. Both the survey methodology and concepts have gradually improved in conformity with the international standards. Based on the UN's National Household Survey Capability Programme (NHSCP), an integrated set of survey indicator system is now applied in China's RHS.

1.2 Survey methodology

1.2.1 Coverage

This national survey covers 31 provinces in the Mainland of China. A total number of 68000 households are selected from over 9000 villages of 857 counties. The samples are representative at the national level as well as the provincial level.

1.2.2 Survey concepts

The concepts of the RHS mainly include:

- Village characteristics
- Basic household information
- Production and sales
- Total income, net income and expenditure
- Total cash income and cash expenditure
- Food consumption

1.2.3 Organization of the survey

The questionnaire of the RHS is designed by the National Bureau of Statistics (NBS) and is implemented by provincial and county level branches of the RSO. Around 8000 staffs and 10000 interviewers are employed to carry out the survey.

1.2.4 Sampling

A combination of simple random, stratified, systematic, multi-phase, and multi-stage sampling method is adopted in the RHS. Using per capita net income as index and population as supplement, a sample framework was set up, and then 68000 households were selected. Detailed information can be found in part two.

1.2.5 Data collection

The RHS collects the information from households through diary book and single round survey. The sample households record all the economic activities such as production, purchases, sales and consumption items in a diary book. Assistant interviewers are engaged to prompt the households to keep the diary book, to help the illiteracy to record, to check and sort up the diary book periodically. County interviewers often go to villages to supervise the recording, to provide guidance or help, and to collect the diary books periodically. At the end of the year, visiting interviewers collect community information, individual information and other household information like fixed assets.

1.2.6 Data processing

After the records in diary-books are coded, the data are entered into computer and checked in the county survey branches by using the data processing programs developed by the RSO. The data should be directly sent to the RSO for aggregation and sent back from the RSO to provincial branches. The RSO and its provincial branches are all engaged in data checking, aggregating and tabulating.

1.2.7 Data dissemination

The NBS is responsible for the RHS data dissemination at the national level. The provincial branches of the RSO are in charge of data dissemination at the provincial level after the examination and approval by the NBS to ensure the data consistence.

PART TWO: Scheme of the RHS

2.1 Sample methodology

2.1.1 Target population and survey population

The target population of the RHS covers all the permanent households who live and engage in agricultural or non-agricultural activities in the rural areas of each province.

The survey population covers all households living in the dwellings within the rural areas of each province, including households who have lived here for more than one year consecutively, no matter whether they are registered local residents or not.

Comparing with target population, the survey population does not cover those who live in military camps, welfare houses, temples, prisons, boats and camps.

2.1.2 Sample frames

China's First Agricultural Census in 1997 collected detailed data of dwellings and households, which helped create a fairly ideal list frame for the household survey. The agricultural census recorded persons of all permanent households residing there over a year. The RHS covered the permanent households whose members were engaged in agricultural or non-agricultural activities in rural areas, including immigrated households who moved in from other administration areas at least a year ago. The survey did not include the people who stayed at military camps, welfare houses, temples, prisons, boats and camps.

- Sampling frame of administrative villages: In each province, a name list of all administrative villages is prepared on the basis of the agricultural census with the help of computer programs.
- Sampling frame of households within administrative villages: A list of households in each village was then prepared and followed by field visits to check and adjust the household list. Finally, a complete list of households in a village was worked out.

2.1.3 Sampling methodology

The PPS (Probability Proportional to Size) with two-stage sampling method is used for selecting households. At the first stage, counties are drawn from each province, followed by selecting villages from those counties. At the second stage, households are selected by using multi-stage, multi-phase, stratified, systematic sampling methods.

The survey selects 10 or more than 10 households from each village, where one assistant interviewer is normally hired to check and help the sample households complete diary books and to transfer the data to spreadsheets.

2.2 Response rate

The RHS has a relatively high response rate due to the good cooperation of the rural households with the interviewers.

2.3 Sampling error and sampling rotation

It is required that the sampling error should not exceed $\pm 0.3\%$, with confidence of probability as 95%. In order to ensure the accuracy of the data, two accounts are designed for the respondent households by the RSO: the cash account and the account on goods in kind. Nearly 10 thousand assistant interviewers have been invited to help the households to keep goods accounts and check and tabulate the data of the survey.

In order to reduce the response burden and include fresh households to better represent and reflect the rural social and economic situation, a rotation sampling scheme is implemented on a 5-year basis.

2.4 Calculation of mean and sampling error

A. Estimation and calculation of the population mean and sampling error

① Estimation of the population mean

$$\bar{y} = \frac{1}{mn} \sum_{i=1}^n \sum_{j=1}^m y_{ij}$$

Where

n is the number of sample units of the first stage;

m is the number of sample units of the second stage;

y_{ij} is the number for sampled j from the units of the i .

② Calculation of the sample variance and sampling error

The first is to calculate the strata variance (using the number of sample in each stratum), sample mean variance and sampling error in the frame of survey sampling.

The formula of using each stratum for calculating variance is:

$$S_h^2 = \frac{\sum_{i=1}^{N_h} (y_{hi} - \bar{Y}_h)^2 f_{hi}}{\sum_{i=1}^{N_h} f_{hi}}$$

The formula of calculating the sampling variance is:

$$\bar{S}^2 = \frac{\sum S_h^2}{n}$$

The formula of calculating the sampling error is:

$$\mu = \pm \sqrt{\frac{\bar{S}^2}{n} \left(1 - \frac{n}{N}\right)}$$

The second is to estimate the variance of population mean and sampling error using the sample variance.

The formula of calculating the sample variance is:

$$s^2 = \frac{N-n}{2n(n-1)N} \sum_{i=1}^{n-1} (y_{i+1} - y_i)^2$$

Where

y_i is the number from the units of the i .

The formula of calculating the sampling error is: $\mu = \pm \sqrt{s^2}$

The third is to calculate the population sampling error in the two stages. The formula is:

$$\mu^2 = \mu_1^2 + \frac{1}{n} \mu_2^2$$

Where

μ_1 is the sampling error in the first stage.

μ_2 is the sampling error in the second stage.

The fourth is to calculate the sampling error coefficient. The formula is:

$$\text{Sampling error coefficient} = \frac{\Delta}{\bar{Y}}$$

Where

$\Delta = \pm t\mu$, t is the probability measure. In general $t=2$.

The error coefficient should be controlled within $\pm 3\%$.

B. Estimation of population mean and variance from sample data when using two-phase sampling

① Estimation of the average

$$\bar{y} = \frac{1}{U} \sum_{i=1}^k U_i \bar{y}_i = \sum_{i=1}^k \pi'_i \bar{y}_i$$

Where