Brief Introduction and Challenges of Household Surveys in China

Wang Ran, NBS
Nov 2, 2022
Contents

01 Brief introduction of Household Surveys in China
02 Main Data Display
03 Major Challenges
Brief introduction of Household Surveys in China
## NBS Household Survey Programs

<table>
<thead>
<tr>
<th>Survey Program</th>
<th>Sample Size</th>
<th>Main Indicators</th>
<th>Data Release</th>
<th>Start Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household survey on income, expenditure and living conditions</td>
<td>160,000</td>
<td>Disposable income, consumption, income distribution, living conditions, poverty(before 2020)</td>
<td>Quarterly &amp; annual</td>
<td>1955</td>
</tr>
<tr>
<td>Monitoring survey on rural households in poverty-relief counties</td>
<td>60,000</td>
<td>Disposable income, consumption and living conditions of rural households in poverty-relief counties</td>
<td>Quarterly &amp; annual</td>
<td>1997</td>
</tr>
<tr>
<td>Monitoring survey on rural migrant workers</td>
<td>90,000</td>
<td>Number of rural migrant workers, and monthly income</td>
<td>Quarterly &amp; annual</td>
<td>2009</td>
</tr>
<tr>
<td>Monitoring survey on the citizenization of rural migrant workers</td>
<td>40,000</td>
<td>Living conditions and access to basic public services of rural migrant workers in cities</td>
<td>Annual</td>
<td>2015</td>
</tr>
<tr>
<td>Survey on the fixed asset investment of rural households</td>
<td>90,000</td>
<td>Fixed asset investment of rural households</td>
<td>Annual</td>
<td>1981</td>
</tr>
</tbody>
</table>
Household Survey on Income, Expenditure and Living Conditions

- Integrated Reform
- Data Collection Method
- Survey Organization
- Quality Control
- Data Release
Reform of Integration

Since 2013, the NBS of China has established integrated household survey

1. Unified concepts
   - Disposable income and main income categories: mainly based on 2011 Household Income Statistics Canberra Handbook
   - Consumption and main categories: mainly based on COICOP standard

2. Unified sampling
   - Population census as sampling frame
   - Stratified, multi-stage, PPS and systematic sampling method

3. Unified data processing
   - Unified data processing flow
   - Unified data processing system
   - Unified weighted calibration method

4. Unified data release
   - NBS releases data of national and provincial level
   - Quarterly data release includes major data on income and expenditure, more data including living conditions will be released annually
# Data Collection Method

**Diary keeping + questionnaire interview**

<table>
<thead>
<tr>
<th>collection method</th>
<th>information collected</th>
<th>frequency</th>
<th>electronic collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diary</td>
<td>income and expenditure, in cash and in kind</td>
<td>Daily</td>
<td>above 80%</td>
</tr>
<tr>
<td>Questionnaire</td>
<td>Basic demographic information, employment status, housing, durable goods owned, community infrastructure and basic public services</td>
<td>quarterly &amp; annual</td>
<td>above 80%</td>
</tr>
</tbody>
</table>

The electronic collection has improved efficiency and reduced workload. Under the Covid-19 pandemic, it has ensured the normal operation of household surveys.
Survey organization

- **Survey offices directly subordinate to NBS**
  - NBS Department of Household Surveys: mainly responsible for scheme design, data processing and dissemination
  - Provincial survey offices directly subordinate to NBS: mainly organize survey implementation
  - The municipal or county-level survey teams directly subordinate to NBS: cover all prefecture-level cities and 40% counties, and collect basic data concretely

- **Stable and professional surveyor team**
  - Full-time surveyors are strictly trained and skilled
  - Assistant surveyors (1 person per small enumeration area): responsible for mobilizing and guiding the respondents to keep diary
Data Quality Control

Prior
- Standardize survey design
- Scientific sampling
- Strict training
- Process management
- Strengthen supervision and inspection

In-process
- The representativeness of survey sample is evaluated and calibrated regularly
- Review and analyze raw data
- Strengthening supervision and inspection of survey process

Post
- About 6000 households were randomly selected to conduct telephone interview every quarter
- The quantitative assessment of household survey work all over the country

About 6000 households were randomly selected to conduct telephone interview every quarter.
Data Release

Release Content

- Disposable income and growth rate, and income composition consumption expenditure and growth rate, and expenditure composition Engel coefficient, the proportion of service consumption
- Consumption quantity of major foods: grain, edible oil and fats, vegetable and edible mushroom, meat and products, poultry, aquatic products, eggs, milk and etc.
- Automobile, motorcycle, refrigerator, washing machine, water heater, air conditioner, color TV set, camera, computer, mobile phone and etc.
- Per capita housing area, drinking water condition, sanitary latrine condition, cooking energy. Community infrastructure, such as road, electricity, telephone, broadband, garbage centralized treatment, clinic, the convenience of primary school, and etc.
- Income quintile, median, Gini coefficient
Data Release

2. News Release Conference
3. Public Consultation
4. Year books on Statistics
Main Data Display
In 2021, the per capita disposable income of residents was 35,128 yuan, up 9.1 percent year-on-year in nominal terms and 8.1 percent in real terms.
Income Composition, Urban and Rural Income Ratio

Composition of Nationwide Per Capita Disposable Income 2021 (yuan)

- **55.9%** Income from Wages and Salaries
- **16.8%** Net Business Income
- **18.6%** Net Income from Transfer
- **8.8%** Net Income from Property

Urban and Rural Income Ratio Since 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2.88</td>
</tr>
<tr>
<td>2013</td>
<td>2.81</td>
</tr>
<tr>
<td>2014</td>
<td>2.75</td>
</tr>
<tr>
<td>2015</td>
<td>2.73</td>
</tr>
<tr>
<td>2016</td>
<td>2.72</td>
</tr>
<tr>
<td>2017</td>
<td>2.71</td>
</tr>
<tr>
<td>2018</td>
<td>2.69</td>
</tr>
<tr>
<td>2019</td>
<td>2.64</td>
</tr>
<tr>
<td>2020</td>
<td>2.56</td>
</tr>
<tr>
<td>2021</td>
<td>2.50</td>
</tr>
</tbody>
</table>
Data on Consumption Expenditure

In 2021, per capita consumption expenditure was 24,100 yuan, up 13.6 percent year-on-year in nominal terms and 12.6 percent in real terms.

Nationwide Per Capita Consumption Expenditure and Growth Rate (1978-2021)
Composition of Consumption Expenditure, and proportion of service expenditure

Composition of Consumption Expenditure in 2012 and 2021

Proportion of Consumption Expenditure on Services of 2013-2021
Automobiles, washing machines, refrigerators, air conditioners and mobile phones are becoming increasingly popular in households.

The Engel coefficient of national households decreased by 34.1 percentage points from 1978 to 2021.
Disposable Income of Households by Income Quintile, and Gini Coefficient

Per Capita Disposable Income of Households by Income Quintile (2021)

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Bottom</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nationwide Gini Coefficient (2003-2021)

- 2003: 0.495
- 2004: 0.485
- 2005: 0.475
- 2006: 0.465
- 2007: 0.455
- 2008: 0.445
- 2009: 0.435
- 2010: 0.425
- 2011: 0.415
- 2012: 0.405
- 2013: 0.395
- 2014: 0.385
- 2015: 0.375
- 2016: 0.365
- 2017: 0.355
- 2018: 0.345
- 2019: 0.335
- 2020: 0.325
- 2021: 0.315

Income level: All, Bottom, 2nd, 3rd, 4th, Top
Growth Rate: 9.1, 5.9, 12.2, 10.7, 9.2, 6.9

yuan

%
Quarterly Release of Per Capita Disposable Income and Consumption Expenditure

Nationwide Per Capita Disposable Income

<table>
<thead>
<tr>
<th>Year</th>
<th>q1</th>
<th>q2</th>
<th>q3</th>
<th>q4</th>
<th>q1</th>
<th>q2</th>
<th>q3</th>
<th>q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>13.7</td>
<td>12.0</td>
<td>9.7</td>
<td>8.1</td>
<td>5.1</td>
<td>3.0</td>
<td>3.2</td>
<td>2.0</td>
</tr>
<tr>
<td>2020</td>
<td>17.6</td>
<td>17.4</td>
<td>15.1</td>
<td>12.6</td>
<td>5.7</td>
<td>0.8</td>
<td>1.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Real Growth Rate: 17.6%
Nominal Growth Rate: 20.0%

Nationwide Per Capita Consumption Expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>q1</th>
<th>q2</th>
<th>q3</th>
<th>q4</th>
<th>q1</th>
<th>q2</th>
<th>q3</th>
<th>q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>9.7</td>
<td>8.1</td>
<td>5.1</td>
<td>3.0</td>
<td>3.2</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>2020</td>
<td>17.6</td>
<td>17.4</td>
<td>15.1</td>
<td>12.6</td>
<td>5.7</td>
<td>0.8</td>
<td>1.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Real Growth Rate: -15.0%
Nominal Growth Rate: -10.0%
China has won the largest battle against poverty in human history by 2020. 98.99 million poor rural residents have been lifted out of poverty.

The NBS conducted National Poverty Relief Census in 22 central and western provinces from 2020 to the beginning of 2021.
Number of Migrant Workers and Average Monthly Income

Nationwide Total Number and Growth Rate of Rural Migrant Workers (2012-2021)

Average Monthly Income and Growth Rate of Rural Migrant Workers (2012-2021)
Major Challenges
Major challenges

- **Increased data demand**
  - The government's scientific decision-making needs more detailed and multi-dimension statistical data
  - The change of policy objectives brings about the adjustment of data demand direction. Not only income growth and low-income group, but also income distribution and common prosperity
  - Data gap meeting SDG monitoring still exists

- **The weakness of traditional data collection method**
  - Increased awareness of privacy protection, and response rate especially of high-income group
  - Measurement errors of part indicators
  - Under COVID-19 epidemic, off-line data collection becomes more difficult
Measures that we are taking

**NBS is devoted to improve household surveys**

- Explore to establish a statistical monitoring system for common prosperity
- Improve data collection method combining diary-keeping and questionnaire interview, continuously promote electronic data collection, build efficient data collection and processing system, enhance on-line training and data quality control
- Explore the application of administrative record data such as tax data and medical insurance data in the household survey, for evaluating and calibrating survey data
We are eager to learn

- **Monitoring method of common prosperity**
  - How to build the indicator system of common prosperity? The calculating method of relevant indicators?
  - The issues related to social transfer in kind, imputed rent of owner-occupied dwellings, and the gap between macro and micro income statistics?

- **Application of big data in household survey**
  - Practical experience in the application of administrative record data such as tax, social security and other big data, including data acquisition, data confidentiality and legal aspects, integration method, etc.
THANK YOU