

# 【*Xu Xianchun*】 Accounting of China's GDP

## (abstract)

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Gross domestic product (GDP) is the core indicator for the accounting of China's economy. It is widely used in economic analysis and management. This paper reviews the origin and development of GDP accounting in China, looks at major statistical reform of the accounting, introduces basic accounting methods and explains the prevailing category, sources of main statistics and calculation methods for the annual GDP accounting.

Since the founding of the People's Republic of China, the core indicators for the accounting of China's national economy have undergone several changes. Before 1954, total agricultural and industrial outputs and total social output used to be the core indicator in succession. From 1954 on, national income in the material products system had been adopted as the core indicator. After the introduction of the reform and opening-up policy, non-material service sector has been playing an increasingly important role in national economic development. The economic administrator need to know situations in this regard so that it is capable of making sound policies for the service sector and promotes the coordinated development of the three economic sectors. Approved by the State Council, the National

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Administration of Statistics started to do accounting of the GDP in line with the UN System of National Accounts in 1985. Beginning in 1992, GDP was measured on a quarterly basis. In 2015, reform of the quarterly accounting was carried out, changing the accumulative approach to measurement by separate quarters.

Since the beginning of this century, the Chinese government has launched a raft of major reform measures, which greatly push China's GDP accounting. They include the establishment of an economic census system, the direct reporting system for businesses, the reform of the service sector census system and the integration of rural and urban household surveys.

In 2003, the State Council decided to establish an economic census system, which would be conducted twice every 10 years on years ending with three and eight respectively. The census mobilizes large amount of manpower and resources and collects more solid fundamental data and information, improving the quality of GDP accounting results. The National Bureau of Statistics (NBS) takes the census as a chance to implement new group standards and reform of accounting methods, which has improved the system of GDP accounting.

Since 2012, the NBS has rolled out reform of census on businesses, requiring them to report business data via a online system with one single sheet. In this way, businesses are able to report their statistics on one survey form, unifying the indicators setups and definitions, terms and grouping methods. Second, the application of the Internet improves efficiency and significantly alleviates the workloads of governments at the primary level. Third, it avoids interference of the intermediate links and lowers the error rate, improving the quality of data and information collected at the primary level. The establishment of a direct reporting

system for businesses plays an important role for coordinating the measures for added values of each industry and improving the data quality for GDP accounting.

The reform of the service sector census is made up by four parts. First, an economic census system focusing on service sector was established. Second, the direct reporting system was applied to wholesalers and retailers above designated size, enterprises of the hospitality industry above designated size, real estate developer and operators, and service providers above designated size. Third, a sampling survey system for micro- and small-sized businesses in the service sector was launched. Fourth, a financial accounting system for service providers of each industry was set up. The reform plays an important role in improving the data source, measure methods and data quality for calculating the added value of the service sector.

The integration of rural and urban household surveys aims at solving the following four problems. The first is to unify standards of household surveys in rural and urban areas, and align them with corresponding indicators for calculating the GDP. The second is to solve the problem of classifying migrant workers in household surveys to unify the classification with population census. The third is to collect more representative samples from households. The fourth is to unify the sampling method and survey methods. The reform improves the ability and standard of conducting household surveys as well as the quality of collected data. It also helps optimize the household expenditure approach for calculating GDP, and raise the quality of such data.

China's GDP accounting adopts classification methods by trade, three-sector approach and item of expenditure.

At the moment, the classification by trade is determined based on the standard national economic classification, the source of information and the needs for economic management. It adopts a secondary classification approach. At the primary level, a national economy is divided into 19 industries following the standard national economic classification. At the secondary level, the entire economy is divided into 95 trades, corresponding mainly to the broad groups of the standard national economic classification. The three-sector approach directly employs the Guidelines for Three-Sector Classification introduced by the NBS in 2012. The primary sector includes farming, forestry and fishing, excluding services for farming, forestry, husbandry and fishing. The secondary sector includes mining (excluding supporting services for mining), manufacturing (excluding metal products, machinery and equipment maintenance), power, heating, natural gas and water supplies, and building. The tertiary sector is service sector and refers to all other industries other than the primary and secondary sectors. The items of expenditure in the GDP accounting are final consumption expenditure, gross capital formation and net exports of goods and services. The final consumption expenditure is divided into household consumption expenditure and government consumption expenditure. Household consumption expenditure is subdivided into two categories for rural and urban households. Both cover 10 items of expenditure: food, cigarettes and alcohols, clothing, housing, life supplies and services, transportation and communications, education, culture and entertainment, medical care, financial services, insurance and miscellaneous goods. The gross capital formation is divided into the gross fixed capital formation and inventory variance. The net export of goods and services is classified into export of goods and services and import of goods and services.

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Data for GDP accounting are mainly from the following four sources. The first is the data collected from surveys and censuses by the NBS system. They include statistics on farming, forestry, husbandry and fishing, manufacturing, building, wholesales and retails, hospitality, real estate development and operation, services, fixed assets investment, labor payments, households and prices among others. The second source contributes statistics collected by different government departments. They are statistics on the service sector gathered by administrative departments in line with statistical system jointly established by them and the NBS. The third source gives statistics from the final accounting statements of the China Banking and Insurance Regulatory Commission and China Securities Regulatory Commission. The fourth source is from the administrative records, mainly including the final accounting information of the Ministry of Finance, and taxation records by trades kept by the State Taxation Administration.

The production approach to GDP accounting can be made in nominal terms and in real terms. The approach in nominal terms combines the direct method and indirect method. With direct method for calculation, the added values of industries in nominal terms are calculated in the production approach or income approach. Indirect methods mainly include calculation based on proportion, added value rates and concerning indicators. For example, the industrial added value is calculated in line with 41 main categories of industries. The added value of each industry comprises of that of industrial enterprises above designated size and

below designated size and that of industrial self-employed households. Among them, the added value of industrial enterprises above the designated size is calculated by multiplying the total outputs of industrial enterprises above designated size in each industry by the added income rate of each industry measured based on survey results of enterprises' cost expenditure. The added value of industrial enterprises below the designated size employs the income approach for calculation based on sampling survey results of those enterprises. The added value of industrial self-employed households is calculated based on the statistics from sampling surveys on industrial self-employed households and the ratios of their added income, measured in the income approach, to total outputs. Measure of GDP in real terms use downsizing and extrapolation methods to calculate the added value of each industry in real terms. For example, the added value of agriculture in real terms is calculated by dividing its added value in nominal terms by the production price index of agricultural produce. To get the added value of the forestry, we divide its added value in nominal terms by the production price index of forestry products. To get the added value of husbandry in real terms, we divide its added value in nominal terms by the production price index of husbandry products. To get the added value of fishing in real terms, we divide its added value in nominal terms by the production price index of aquatic products. To get the added value of services sector for farming, forestry, husbandry and fishing in real terms, we divide the added value in nominal terms by the price index of services for agricultural production in the price indexes of materials for agricultural production.

The consuming approach for calculating China's GDP is also made in nominal terms and in real terms. To calculate it in nominal terms, an expenditure approach

is adopted to measure all comprising items of GDP, which are household consumption expenditure, government consumption expenditure, gross fixed capital formation, inventory variance, and the net export of goods and services. The value in real terms is obtained by calculating the values of above-mentioned items in real terms. Among them, the household consumption expenditure in nominal terms is based on statistics of household consumption expenditure collected from household surveys, but many categories use different sources of statistics. For example, the expenditure of transportation and communication is made up by household expenditures on vehicle purchases, telecommunication services and transportation and other communications. Statistics of expenditure on vehicle purchases come from the sales figures of domestically produced cars released by the China Association of Automobile Manufacturers and the import figures of foreign cars, the export of homegrown ones and the proportion of individual-purchased cars through major crackdown campaigns offered by the General Administration of Customs. The expenditure on telecommunication services is calculated based on statistics including the revenue of the telecommunication industry, and the proportion of household expenditure on telecommunication services released by the Ministry of Industry and Information Technology. The expenditure approach for GDP accounting in real terms uses downsizing and extrapolation methods to calculate the component items of expenditure in GDP accounting. For example, the urban residents' consumption expenditure in real terms is calculated in 10 respective category, which are food, cigarettes and drinks, clothing, housing, life supplies and services, transportation and communications, education, culture and entertainment services, medical services, financial services, insurance services, and miscellaneous goods. Among

them, the value of expenditure on food, cigarettes and drinks in real terms is calculated in respective values of food, cigarettes and drinks, and the catering services. To get the figure of food in real terms, we divide the food expenditure in nominal terms by price index for food in the urban residents' consumer price index. To get the figure of cigarettes and drinks in real terms, we divide the cigarettes and drinks expenditure in nominal terms by price index for cigarettes and drink products in the urban residents' consumer price index. To get the expenditure on catering services in real terms, we divide the value in nominal terms by the index for catering services in the urban residents' consumer price index. To get the expenditure on education, culture and entertainment services in real terms, we divide the value in nominal terms by the index for such services in the urban residents' consumer price index.