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Challenges for the New Revision

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I. New Features of China's National Accounts

The first Economic Census, conducted in 2004, is the most comprehensive census in the history of China in terms of the coverage, which includes all industries except Agriculture, Forestry, Animal Husbandry and Fishing. The 2004 Economic Census covers Industry, Construction and all service industries except service activities for Agriculture, Forestry, Animal Husbandry and Fishing. The Economic Census provides relatively complete data sources for China's National Accounts. After the Economic Census, the NBS has conducted a series action on China's National Accounts.

(I) GDP Estimation

1. GDP Estimation in the Year of Economic Census

Compared with GDP estimation in regular years, there are many origins of revisions of GDP estimation in the year of Economic Census, including revision of coverage, basic classification, data sources, calculation methods, and adjustments for some special treatments, etc. Among these origins, the revision of data sources is the most important one, explaining the bulk of significant changes of the volume, structure, and growth rate of GDP.

(1). Revision on the coverage of GDP estimation

In the year of Economic Census, the coverage of GDP estimation based on data sources from the Economic Census, expanded along the following lines: 1) Inclusion of some very significant business service activities, which were not completely included in regular statistics, based on the financial information of all types of service enterprises provided by the Economic Census; 2) Inclusion of service activities of administrative and institutional units, which were not completely included in regular statistics, based on financial information of administrative and institutional units provided by the Economic Census; 3) Inclusion of production activities of those individual

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businesses, which do not register with the Administration for Industry and Commerce, based on information on individual business operations provided by the Economic Census; 4) Inclusion of economic activity of establishments involved in production differing from the major operations of their parent enterprise based on establishment data provided by the Economic Census.

In addition, GDP coverage in the year of Economic Census expanded, using data from the Household Survey, for the following two aspects: 1) Inclusion of owner occupied dwelling rent services of household; 2) Inclusion of some household services (tutor services and domestic services).

(2) Revision on basic classification

The industrial classification used in the production approach of GDP and the expenditure components classification used in the expenditure approach of GDP were further breakdown in the year of Economic Census. In regular years, the classification of industries is in 16 categories while for the Economic Census year it was possible to further categorize industries into 94 categories, very close to the 2-digital classification in the official *Industrial Classification for National Economic Activities of China*. The revisions on the classification of expenditure components were to breakdown rural and urban households' consumption expenditures based on separate consumption expenditure items from rural and urban household surveys, and to better classify import and export of goods and services based on data from Balance of Payment. Rural household consumption expenditure and urban household consumption expenditure were broken down into 11 and 12 groups respectively, which include consumption of foods, consumption of cloths, consumption of dwelling services, etc. Export of goods in the export of goods and services were further breakdown into export of general goods, export of processing goods and export of other goods; while the export of services were further breakdown into 8 groups that were export of transportation services, export of tourism services, export of communication services, etc. The breakdown of import of goods and services is same as for that export.

(3) Revision on data sources

The main differences of data sources between the first Economic Census and regular statistics are the following:

A. The financial statements data of enterprises. Some of the financial statements data in regular statistics are of good quality, such as those for industrial enterprises above the designated

size, construction enterprises with official qualification and enterprises above the designated size in wholesale, retail trade and restaurants. All of them have complete financial statements. Those data sources are close to the data from the Economic Census. However, regular statistics do not cover the following services enterprises: construction enterprises without official qualification, enterprise below the designated size in wholesale, retail trade and restaurants, renting and business services enterprises, computer services enterprises, enterprises of information transmission services, enterprises of household services, etc. The value-added of those enterprises is estimated mainly by related indicators. The Economic Census included questionnaires on the financial situation or questionnaires on the operation for those enterprises, which were used for deriving value added. (Census Office, 2004)

B. Data sources for administrative and institutional units. The value-added estimation for administrative and institutional units in regular statistics is mainly based on statistics on Compensation of Employees and government financial statements data, which leads to significant underestimation of value-added. In order to offset this gap, the Economic Census included a questionnaire on the financial situation of administrative and institutional units, allowing a comprehensive calculation of value-added. (Census Office, 2004)

C. Data of individual businesses. In a regular year, value-added generated by individual businesses is estimated mainly by records from Administration for Industry and Commerce. However, some of the individual businesses do not register with administrative agencies and are not able to be included in the estimation. The Economic Census included a questionnaire on the operation of individual businesses, providing relatively comprehensive data sources for value-added estimation. (Census Office, 2004)

D. Data of auxiliary establishment whose activities are different from the main activity of enterprise. For example, an industrial enterprise may include some auxiliary establishments who conduct other activities. Regular statistics provide very limited data on such activity. Therefore, their value-added are often missed. The Economic Census designed a questionnaire allowing to obtain the basic information of establishments useful for a comprehensive value-added estimation. (Census Office, 2004)

(4) Revision on method of GDP estimation

The revision of methods used for GDP estimation in the year of Economic Census included

the following two aspects: 1) Revision of methods due to the change of data sources: GDP estimation in the year of Economic Census was based on direct value-added estimations, replacing the extrapolation method with related indicators for industries that have no complete statistics in regular years, such as enterprises, administrative units, individual businesses and auxiliary establishments etc, in regular years. 2) GDP estimation in the year of Economic Census used the production approach, the income approach and the expenditure approach simultaneously and provided three independent GDP estimations. Although GDP estimation in regular years also uses partially those three approaches, it is not completely possible to calculate value-added both for the production and income approaches for each industry independently. The value-added of Agriculture, Forestry, Animal Husbandry and Fishing, and Industry uses the production approach, and the value-added of other industries uses the income approach. Therefore, the method used in regular years cannot generate GDP estimation at production, income and expenditure approaches independently.

(5) Adjustments for some special treatments

In order to comply with the recommended international standards and increase the comparability of GDP data, some treatments of GDP estimation in the year of Economic Census were revised or clarified as follows: 1) Financial intermediate services. In the regular statistics, the net interest of various industries is treated as intermediate input and the deposit interest of households is treated as value-added of financial industry. In the year of Economic Census, FISIM is calculated and distributed across industries and final users either as intermediate input for corresponding industries or final uses for final users. The deposit interest of households is no longer treated as value-added of financial industry. 2) Clarifying the treatment of computer software. In the year of Economic Census, the acquisition of computer software has been treated as fixed capital formation, which was not the case before. 3) Adjusting the treatment for households' owner-occupied dwellings. First, the stock of owner-occupied dwellings at historical cost was revaluated with construction cost in the accounting period. Second, the depreciation rate used in the imputed calculation of rural households' owner-occupied dwellings was changed from 2% to 3%, and the rate of urban counterpart from 4% to 2%.

(6) Revision on GDP data

Compared with the GDP estimation in regular statistics, the level of GDP in the year of

Economic Census increased by 2.3 trillion Yuan, which is 16.8% more than the pre-revised GDP. Of which, the value-added of tertiary industry increased 2.13 trillion Yuan, 92.6% of the total increase. The ratio of tertiary industry over the whole GDP was changed from 31.9% to 40.7%, an increase of 8.8 percentage points.

2. Revision on Historical GDP Data

The 2004 GDP estimated using the Economic Census data sources and related new methods cannot be compared with the pre-revised GDP results estimated by regular statistics and traditional methods. Therefore, the historical revision for GDP over the past is very necessary and immediately started when the Economic Census-oriented annual GDP for 2004 was finalized. Therefore, after having finished the calculation of GDP in the year of Economic Census, NBS immediately conducted a revision of historical GDP time series. The historical data for GDP estimation using the production approach were revised back to 1993. The reason for this date is that 92.6% of the 2.3 trillion Yuan of additional GDP is coming from tertiary industry, and historical GDP data have be revised from 1978 to 1992 using the first tertiary industry census. Up to now, the historical revision of GDP by expenditure approach is in process yet has not been completed. The revision would cover a period from 1978 to 2003, since no historical revision has ever been done to the expenditure data even when the first tertiary data was available in 1993. The method used for historical GDP data revision is the "trend deviation" method, which is relatively straightforward. The main steps are as following: 1) Calculate the trend value of historical GDP data based on the original GDP data in 1992 (or 1978) and 2004. 2) Calculate the new trend value of historical GDP data based on the original GDP data in 1992 (or 1978) and the new GDP data in 2004. 3) Calculate a coefficient of the trend value of original 1993 to 2003 GDP data over the actual value at the same period. 4) Adjust the new historical GDP data trend value according to the above coefficient to achieve the revision value on new historical GDP data. (NBS, 2006)

Table 1 shows the revised data on GDP, value-added of tertiary industry, growth rate of GDP and the ratio of value-added of tertiary industry over GDP.

Table 1: Revised GDP data after the Economic Census

Year	GDP				Value-added of Tertiary Industry				
	After Revision	Before Revision	Level Changed	Ratio	After Revision	Before Revision	Level Changed	Ratio	Level Change over revised GDP（%）
1993	35334	34634	700	2.0	11992	11324	668	5.9	95.6
1994	48198	46759	1438	3.1	16281	14930	1351	9.1	93.9
1995	60794	58478	2316	4.0	20094	17947	2147	12.0	92.7
1996	71177	67885	3292	4.9	23456	20428	3028	14.8	92.0
1997	78973	74463	4510	6.1	27165	23029	4137	18.0	91.7
1998	84402	78345	6057	7.7	30780	25174	5607	22.3	92.6
1999	89677	82067	7610	9.3	34095	27038	7058	26.1	92.8
2000	99215	89468	9746	10.9	38942	29905	9038	30.2	92.7
2001	109655	97315	12340	12.7	44627	33153	11474	34.6	93.0
2002	120333	105172	15160	14.4	50197	36075	14122	39.2	93.2
2003	135823	117390	18433	15.7	56318	39188	17130	43.7	92.9
2004	159878	136876	23002	16.8	65018	43721	21298	48.7	92.6

Table 1: Revised GDP data after the Economic Census (Continued)

Year	Growth Rate of GDP （%）			Value-added of Tertiary Industry over GDP （%）		
	After Revision	Before Revision	Difference	After Revision	Before Revision	Difference
1993	14.0	13.5	0.5	33.9	32.7	1.2
1994	13.1	12.6	0.4	33.7	31.9	1.8
1995	10.9	10.5	0.4	33.0	30.7	2.3
1996	10.0	9.6	0.4	33.0	30.1	2.9
1997	9.3	8.8	0.5	34.4	30.9	3.5
1998	7.8	7.8	0.0	36.5	32.1	4.4
1999	7.6	7.1	0.5	38.0	32.9	5.1
2000	8.4	8.0	0.5	39.3	33.4	5.9
2001	8.3	7.5	0.8	40.7	34.1	6.6
2002	9.1	8.3	0.7	41.7	34.3	7.4
2003	10.0	9.5	0.5	41.5	33.4	8.1
2004	10.1	9.5	0.6	40.7	31.9	8.8

3. GDP Estimation in Regular Years

In order to make good GDP estimation in regular year, improve the accuracy and completeness of GDP estimation through improving the scentificalness and standardization of GDP estimation in regular years and maintain comparability of GDP estimation between regular

year and the year of Economic Census, NBS formulated *Methodology of GDP Estimation in Regular Year*, which standardizes the coverage, classifications of industries and expenditure components, data sources and calculation method for GDP estimation in regular year.

(II) Institutional Sector Accounts

Although the reporting form and methodology for institutional sector accounts are now relatively standard after more than 10 years practice, there are still some shortcomings left: 1) The classification of institutional units and sectors is too broad, and cannot reflect some important economic activities between institutional sectors at detail level. For example, it cannot reflect economic activities of central and local governments and economic relationships between them. 2) The transaction items are not detailed enough. For example, taxes on production and import are not further breakdown, therefore the transactions between institutional sectors and the government sector cannot be reflected on taxes on value-added, taxes on imports, taxes on exports and other production taxes. 3) There are large gaps in data sources, and extrapolation methods based on relevant indicators have to be used frequently.

The first Economic Census did not only provide rich and detailed data sources for GDP estimation but also supplied good data sources for institutional sectors. By making full use of the data from this census and other relevant data, including government final financial statements, a number of other financial statements from either government agencies or industries, such as tax authority, bank, security and insurance institutions, rural and urban households surveys, etc.，better data sources enable NBS to further breakdown the institutional sector classification an improved method of compilation. In regard to the classification, non-financial corporation sector down into two sub-institutional sectors: industrial enterprises and other non-financial corporations; financial institutions sector down into four sub-institutional sectors: banks, security, insurance and other financial institutional sectors; government sector down into two sub-institutional sectors: central government and local government; households sector down into two sub-institutional sectors: rural households and urban households. In regard to the compilation, a new manual based on the census data sources and detailed institutional sectors has been compiled.

II. Challenges for China's national accounts from the revision of SNA

China's national accounts started in 1950s, which is not only relatively late but

also hampered by the Cultural Revolution. During the period of the Cultural Revolution, statisticians were forced to be farmers in the rural area, which resulted in the standstill of China's national economic accounting. Whereafter, China's national accounts experienced the transition from MPS to SNA. Therefore, to the present, the foundation of China's national accounts is still unsubstantial and many challenges would arise from the implementation of the revised SNA. Challenges for the treatment of the output of central bank, informal sector, and transactions between the government and the public corporations (earnings and funding) are to be explained briefly.

（Ⅰ）The output of central banks

The 1993 SNA recommends that the output of central banks should be measured on the basis of receipt from fees, commissions, and financial intermediation services indirectly measured (FISIM). Revision of the 1993 SNA on the output of central banks mainly focuses on two points. (1) The activities of central banks should be distinguished as market output and non-market output. Market output should be measured in the same way as other market financial institutions, and non-market output should be valued at cost. (2) The interest rates set by central banks may be very high or low for currency policy reason, and that will cause distortions of interest paid and received, which should be removed from the market output of central banks. For the users of market output of central banks, the distortions will bring them gains or losses, which is caused by policy reason, and should be recorded as taxes or subsidies.

Currently, the treatment of the output of People's Bank of China is similar to that of the government institution, which is valued at cost. While the central bank engages considerable market activities, the cost method is incomplete to reflect all the production activities of the central bank. Therefore, theoretically, it is reasonable to distinguish the activities of the central bank as market and non-market output, which are measured differently. In practice, it is very difficult to implement the recommendation since market activities and non-market activities are usually integrated closely. Second, it is difficult to judge how much of the distortion of the interest of central bank is caused by policy reason, so it is also difficult to judge how

much be removed from the output.

(II) Informal sector

While the 1993 SNA does not define the informal sector clearly, the revised SNA prepares to use one whole chapter to discuss the definition of the informal sector, informal production, and informal employment to direct the estimation of the informal sector. As the scale of China's informal sector is relatively large, it is very important to estimate the informal sector correctly.

The informal sector of China mainly consists of individual business operators. In the regular estimation of GDP, only individual business operators who registered in administrations for industry and commerce were included. However, the 2004 Economic Census showed that considerable individual business operators, account for almost 40.1% of the total number of individual business operators, did not register in the administrations for industry and commerce. With the data from the Economic Census, the value added of informal sector was estimated, which became one of the important factors to lead GDP upward.

China's economy is developing fast, especially the development of individual business operators. However, in years other than economic census, information on individual business operators is not available. Although the relevant ratio from the economic census can be applied in non-economic census years, the quality of the estimation may not be satisfied and far from the reality due to the rapid change in numbers and scales of the individual business operators. In other words, the applied ratio may change significantly from year to year. Therefore, the most difficult issue of informal sector estimation lines in the unavailability of source data in the regular years.

(III) Government transactions with public corporations: earnings from equity investment and capital injections

The 1993 SNA recorded exceptional payment from public corporations to government as dividends; By contrast, the same exceptional payment from public quasi-corporations to government was recorded as withdrawals from the equity. The revision recommended change the current treatment for public corporations to be

consistent with that for public quasi-corporations, that is both are recorded as withdrawals from the equity.

The 1993 SNA recorded exceptional payment by government to public corporations as capital transfers, which differed from the treatment for exceptional payment by government to public quasi-corporations recorded as addition to the equity. The revision recommends use an identical treatment for the same exceptional payments by government to either public corporations or public quasi-corporations. When the payments intended simply to offset accumulated losses, it should be recorded as capital transfers for both public corporations and public quasi-corporations.   When the payments in a commercial context, receiving shares or other equity in exchange, the payments should be recorded for both types of corporation as additions to the equity.

The share of public corporations and quasi-corporations in the economy of China is considerable large, therefore, the consistent record of exceptional payments either from public corporations/quasi-corporations to government or vise versa has important implications. The challenges in practice is that China's government finance statistics can not provide detailed information as current payments from public corporations/quasi-corporations to government, or exceptional from public corporations/quasi-corporations to government. Meanwhile, regarding the payments from the government to public corporations/quasi-corporations, it is also impossible to distinguish loss-cover injection from commercial injections base on the current government finance statistics in China.

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