COUNTRY REPORT
THE IMPLEMENTATION OF 2008 SNA

Prepared by:
Urip Widiyantoro

Directorate of Production Accounts
BPS – Statistics Indonesia

1. **PREFACE**

Over the last decade, many changes in the local, regional, and global economic activities have shaped Indonesia's economy. In order to capture current economic conditions, BPS-Statistics Indonesia rebased its GDP statistics from the year 2000 to 2010. The rebasing GDP was conducted simultaneously with the calculation of the Gross Regional Domestic Product (GRDP) at provincial level in order to maintain consistency. Following recommendation from the United Nattions, BPS-Statistics Indonesia has implemented the 2008 System of National Accounts (SNA) using the Supply and Use Tables (SUT) as the framework.

The 2008 SNA is the internationally agreed standard set of recommendations on how to compile measures of economic activity in accordance with strict accounting conventions based on economic principles. The recommendations are expressed in term of set of concepts, definitions, classifications, and accounting rules that comprise the internationally agreed standard for measuring indicators such as GDP.

The SNA provides information on how to measure the economic activities in production, consumption, and accumulation of asset. It is designed for purpose of economic analysis, decision, and policy making. Economic phenomena can be explained and understood better by using the SNA framework. The 2008 SNA is the fifth version; the previous versions are the 1947 SNA, 1953 SNA, 1968 SNA, and 1993 SNA.

There are 118 changes in the 2008 SNA as compared to the old system which 44 of them are the main changes. Some changes implemented in GDP 2010 base year are as follows:

- **Concepts and Scopes:**

  The scope of agriculture output is classified as the Cultivated Biological Resources (CBR) meaning the natural asset growth resulting from agricultural cultivation which has noot been harvested, are treated as part of the output of the underlying industries, icluding the value of oil palm or rubber trees, and/or dairy cows that have not been harvested or yielded.

- **Method:**

   The revison of bank's output methodology from Imputed Bank Services Charge (IBSC) to Financial Intermediation Services Indirectly Measured (FISIM).

- **Valuation:**

   The value added of an industry is valued at basic price. The basic price is economic value of product (good and services) received by producer before taxes and subsidies on products.

- **Classification:**

   The classification is based on International Standard Industrial Classification (ISIC Rev.4) and Central Product Classification (CPC rev.2). BPS-Statistics Indonesia adopts those classifications as KBLI 2009 and KBKI 2010.

2. THE IMPLEMENTATION OF SNA 2008 IN INDONESIA (ON THE SPECIFIC TOPICS)

2.1. Estimation of Military Expenditure

Data on military expenditures obtained from the Ministry of Finance (Central Government expenditure by type of goods and services as well as from the statements of State-run Central Government). Data is available on annual basis. In the presentation on GFCF matrix, military expenditures are not aggregated into a separate type of expenditure, but disaggregated according to expenditure group on GFCF. For example, information and telecommunication equipment expenditures, military radar, etc. are grouped into Machineries. For aircraft, submarine ship, war ship, tank, etc. are included in the group of Transport Equipment. While goods from metal like a gun, missile, etc. included in the group of Other Equipment.

Challenges:

- Source of data are not alaways available in detail.
    - Central government capital report is not always in good detail
    - Weapon expenditure from import is not always reported to custom
    - Service life of weapon system goods simply follows its groups.
- Population by region is used to allocate the military expenditure into regions
- Not including livestock as weapon system like dogs and horses.

2.2. *Estimation of Research and Development Expenditure*

In preparing the SUT 2010 as the framework in the compilation of GDP, R&D expenditure has been implemented. Nowadays, indepth study for the expansion of the SNA 2008 implementation is on going process, which is specifically related to R&D expenditure.

2.3. *Estimation of Financial Services*

Data source for Financial Services estimation obtained from Bank of Indonesia (Central Bank) and Financial Supervisory Authorities of Indonesia (OJK).

Some SNA 2008 implementations that already carried out in the Financial Services, among others:

- Calculation of Commercial Bank oututt with FISIM replace IBSC method

    Output = FISIM + ESC + Other revenues

- Calculation of Central Bank output by Cost Basis approach (used IBSC approach previously as implemented in Commercial Bank)

    Output = IC + COE + *(t-s)* on production and import + CFC

Items that still have not been implemented are:

- Holding company

- Calculation of non-bank financial institutions output are still using the old approach: interest received minus by interest paid (not using FISIM approach) because it has no proper interest rate benchmark for non-bank financial institutions sector.

- Output of non-life insurance sector is still using the old approach that is the actual claims (claims that actually accrued). This could have an impact on output fluctuation in this sector, especially in case of a disaster that requires insurance companies paid claims in a very large number to customers. SNA 2008 recommends using the expected claims (claim expectation) by three approaches: expectation approach, accounting approach and cost approach.

  Output = premiums written – changes in unearned premium + investment income – claims paid – changes in outstanding claims

  SNA 2008 recommends →

  Output = actual premiums earned + expected premiums supplement – expected claims incurred

  Next step for SNA 2008 implementation is counting non-life insurance sector output using the expected claims.

2.4. *Imputed Rent for Owned-Occupied Dwellings (OOD)*

In preparing the SUT 2010 as the framework in the preparation of GDP, imputed rent for owned-occupied dwellings have been implemented. Source of data on the number of residential buildings occupied by the household itself is derived from the Population Census 2010. For subsequent years, the numbers of

residential buildings occupied solely by households are using the data of the National Socioeconomic Survey (Susenas). The estimation rent cost of the house occupied by the owner also obtained annually from Susenas.

2.5. Use of Volume Measures

In the calculation of GDP at constant price (to calculate economic growth), BPS-Statistics Indonesia still use the base year in a given year. Since the first GDP compilation, Indonesia has made 6 (six) times of rebasing and the last was in 2010. In fact, SNA recommends previous year prices and chain-linking instead of fixed base year.

The challenge for Chain Volume Measures (CVM) is a data of Producer Price Index (PPI) is still available for goods industries from 2010. While the PPI in service industries are still under study to do the calculations.

Compilation of the SUT in Indonesia will be conducted annually so that the changes in price and quantity (including quality) can be measured every year. From SUT will emerge the study of implementing CVM method.

3. QUALITY PRACTICES AND ISSUES IN NATIONAL ACCOUNTS

In order to guarantee the quality of statistics in BPS (BPS-QAF), BPS refers to QAF built by UNSD (United Nations of Statistics Division) that includes four components, namely Managing Statistical System, Managing Institutional Environment, Managing Statistical Process and Managing Statistical Outputs. Quality measurement technique on the output side includes 6 dimensions (relevance, accurate, timeliness and punctuality, accessibility, coherence and comparability, and interpretability) and 20 quality indicators. Quality measurement will be applied to all activities including the national accounts statistics. We have already conducted tests measuring the quality

of the SUSENAS activities, and still ongoing process for Survey of Large/Medium Industry, the Consumer Price Survey, Hotel Survey and Statistics of Export.

Regarding to the implementation of quality assurance in the national accounts, BPS has cooperated with ABS (since 2013) to build the Quality Gates (QG), which is implemented in the preparation of Input-Output Table 2010. QG is not undertaken for SUT since the preparation of the SUT only for internal purposes in the National Accounts while I-O table is published for public.
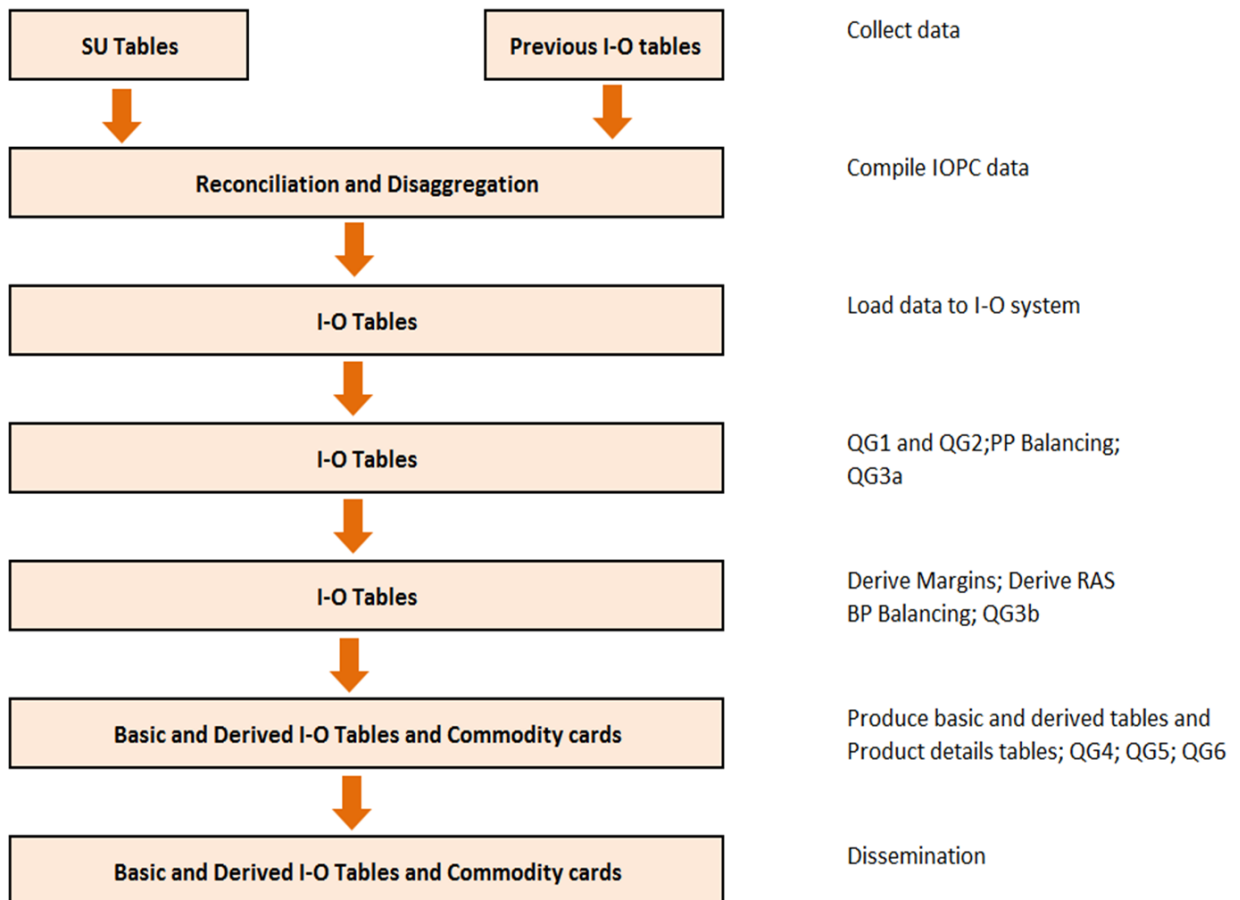
The I-O Processing Cycle is described below:

SU Tables	**Previous I-O tables**	Collect data
↓	↓	
Reconciliation and Disaggregation		Compile IOPC data
↓		
I-O Tables		Load data to I-O system
↓		
I-O Tables		QG1 and QG2;PP Balancing; QG3a
↓		
I-O Tables		Derive Margins; Derive RAS BP Balancing; QG3b
↓		
Basic and Derived I-O Tables and Commodity cards		Produce basic and derived tables and Product details tables; QG4; QG5; QG6
↓		
Basic and Derived I-O Tables and Commodity cards		Dissemination

Figure 1. I-O Processing Cycle

Quality Gates in I-O

Input-Output tables were prepared in an Ms.Excel based system. New system Oracle based and has potential to incorporate QG checks automatically. Input Output tables are large (185 industries) and therefore difficult to edit. Compilation system required manual processes and data entry. Compilation system used data transfers between stages (between final output and internet ready).

Quality Gates support systematic procedures and documentation.

- Quality Gate 1 - Input data

  Basic consistency checks & compliance with National Accounts aggregates in 5204.0

- Quality Gate 2 - Pre-balancing investigations

  Data logic investigations on supply & use categories using an industry view (shows in columns in I-O tables)

- Quality Gate 3 – PP & BP Compilation and balancing

  - IVA maintained, all rows balanced, no unexpected margins values

  - Significant effort has been put into PP balancing which has reduced imbalances in BP balancing and resulted in a better convergence

- Quality Gate 4 - Release of tables

  Consistency check across published tables

- Quality Gate 5 - Release of Alternative view tables

  Ensure negative effects of c.i.f./f.o.b adjustment reversed

- Quality Gate 6 - Release of Product details

  Confidentiality checks, consistency checks

- Quality Gate 7 - Process Review

Quality Measures (What we test for in each quality gate)

QM1 - Are all 3 measures of GDP (P, I, E) equal?

QM2 - Supply Use tables are balanced in both row and column

QM3 - Distribution of Supply, Taxes margins, Intermediate Use and Final Demand are all based on the latest balanced I-O tables.

QM4 - There are no negative values in Supply, Intermediate Use and Final demand (excluding Changes in inventories, 2nd hand GFCF and imports of non-margin transport products).

QM5 - Data matches the data published in the Australian National Accounts publication 5204.0

QM6 - All known issues from previous tables resolved

QM7 - The cif-fob adjustment has been applied

QM8 - Services at IOPC level do not have inventories or margins

QM9 - GST and retail margins are consistent with HFCE data

QM10 - Exports do not exceed Australian production

QM11 - Re-exports do not exceed imports (unless inventories are drawn down)

QM12 - Coverage (product) and specialisation (industry) ratios are plausible

QM13 - Supply and Use are plausible for the top 50 IOPCs

QM14 - COE/IU and GOS/IU are plausible