



REBASING GDP

BPS – Statistics Indonesia

Daejeon, Republic of Korea, September 2015



OUTLINES

- I THE IMPORTANCE OF REBASING GDP**
- II INDONESIA'S SUPPLY AND USE TABLES (SUT) 2010**
- III THE SNA 2008 IMPLEMENTATION**
- IV MAIN RESULT**





I. THE IMPORTANCE OF REBASING GDP

1. Background

2. Benefits

3. Implications

4. Why use 2010 as base year?



1. BACKGROUND

- a. The influence of global economy to national structure of economy over the past decade;
- b. The recommendation from UN to implement System of National Accounts 2008 (SNA2008) to compile GDP by using SUT as the framework;
- c. Maintain consistency over 3 approaches of GDP and minimize the discrepancy between national and regional GDP.



2. BENEFITS

- a. To describe current economic condition:
 - 1) Shifting of economic structure
 - 2) Economic growth.
- b. To improve the quality of GDP;
- c. To improve the international comparability of the GDP.



3. IMPLICATIONS

- a. Increasing the GDP nominal, which will lead to an increase in the income group from low into medium or high income country (GDP percapita);
- b. Changing the macroeconomics indicators such as tax ratios, debt ratios, investment and saving ratios, current account, and economic growth;
- c. Changing the database for modeling and forecasting.



4. WHY USE 2010 AS BASE YEAR?

- a. Indonesia economy relatively stable;
- b. There has been transformation in the economic structure after past decade, especially in the field of information and technology, affecting distribution pattern and emerging new products;
- c. The recommendation of the UN to change GDP base year every 5 (five) or 10 (ten) years¹;

¹ Stated in SNA1993, paragraph 16.76: "constant price series should not be allowed to run for more than five, or at the most, ten years without rebasing"



4. WHY USE 2010 AS BASE YEAR..... (cont.)

- d. The renewal concepts, definition, coverage, and methodology as recommended by SNA 2008;
- e. The availability of new data sources to improve the quality of GDP such as Population Census (SP 2010) and Producer Price Index (PPI);
- f. The availability of SUT as the framework that could be used for GDP benchmarking exercise.



WHAT ARE THE CHANGES?

- ✓ **Use of SUT 2010** as a consistency tool in compiling GDP by 3 approaches and also the Input-Output (I-O) table;
- ✓ **SNA 2008 implementation** in GDP covers: concept and coverage, method, valuation, and classification;
- ✓ **GDP benchmarking pattern** will take place regularly.



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II. SUPPLY AND USE TABLE (SUT)

1. Concept and benefit of SUT

2. SUT Framework



1. CONCEPT AND BENEFIT OF SUT

- a. **SUT** is a framework that describes the balance between the flows of productions and consumptions (goods and services) and the generation of income in production activity. It consists of two main tables namely supply and use table.
- b. **Benefits:**
 - To provide an ideal framework to analyse integrated data through balancing input-output of goods and services mechanism;
 - To describe linkages among industries, products and sectors coherently;
 - To provide a consistent result to the three GDP compilation approaches;
 - To provide source of data as a basis for compiling Input-Output (I-O) table.



2. SUT FRAMEWORK

- a. SUT framework uses the ISIC Rev.4 classification adapted in Indonesia as Klasifikasi Baku Lapangan Usaha Indonesia 2009 (KBLI 2009) and the CPC Ver.2 adapted as Klasifikasi Baku Komoditi Indonesia 2010 (KBKI 2010).
- b. SUT framework has two equations that should be fulfilled:

SUPPLY = USE

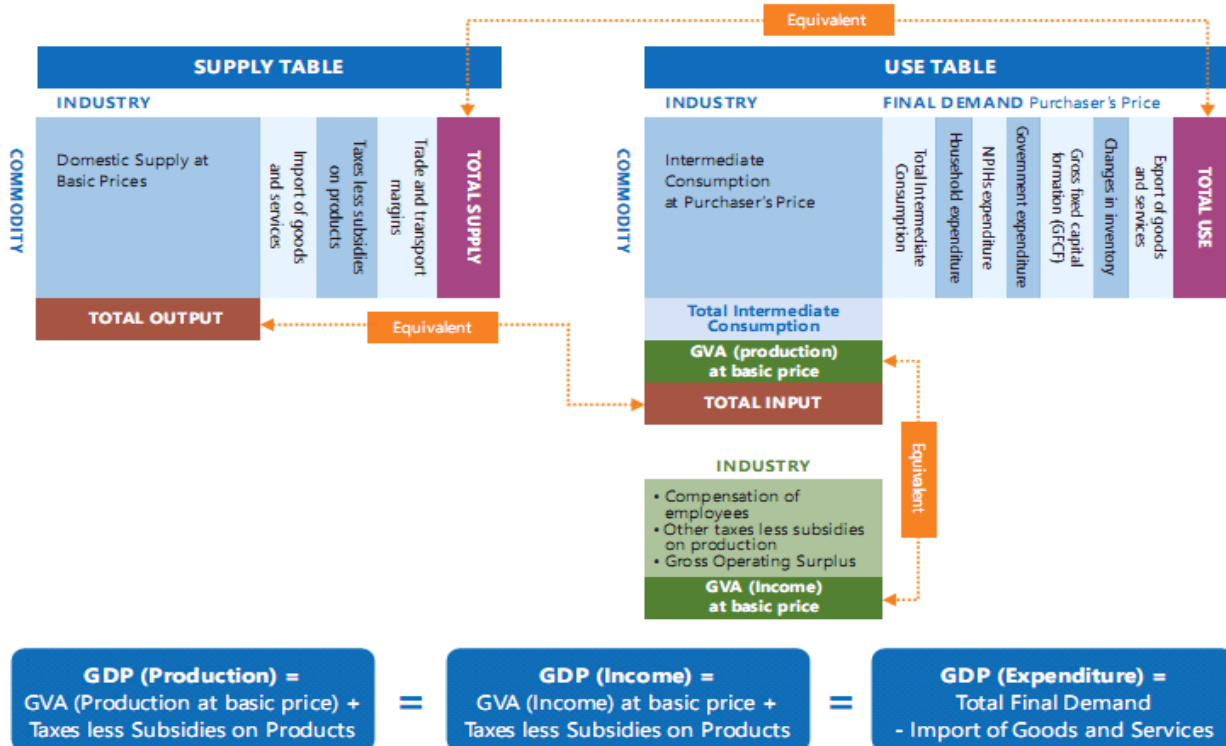
The value of goods and services provided by domestic industries and import should be equal to the value of goods and services used on production process and final consumption.

OUTPUT = INPUT

The value of goods and services produced by domestic industries should be equal to the value of goods and services used on the production process.



2. SUT FRAMEWORK (cont.)



Source: Sanjiv Mahajan, "Development, Compilation and Use of Supply and Use Tables in the United Kingdom National Accounts", 2011



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III. THE SNA 2008 IMPLEMENTATION

1. SNA 2008 Implementation

2. Improvement in GDP Compilation



1. SNA 2008 IMPLEMENTATION IN GDP INDONESIA

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

1. Concepts and Scopes:

Cover **Cultivated Biological Resources (CBR)**, mineral exploration and valuation, artistic original product creation, software and database treatment, and license as GFCF.

2. Methodology:

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

3. Valuation:

Value added of an industry is valued at basic price.

4. Classification:

Based on ISIC Rev.4 (KBLI 2009) and CPC Rev.2 (KBKI 2010).



1. SNA 2008 IMPLEMENTATION.... (cont.)

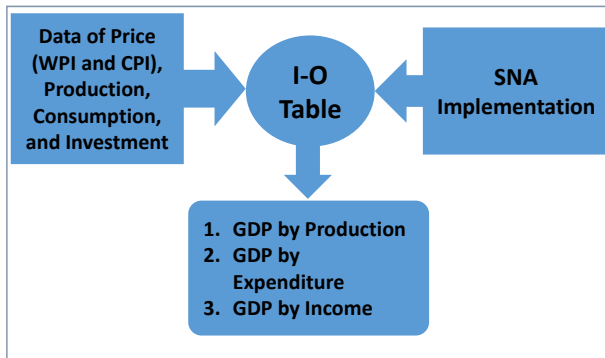
Comparison of SNA Concept and Method

| Variable | Previous Concept | New Concept |
|--|--|---|
| 1. Agriculture output | Only covers harvested output | Harvested output plus value of immature plants and animals |
| 2. Method of commercial bank output classification | Using Imputed Bank Services Charge (IBSC) method. | Using Financial Intermediation Services Indirectly Measured (FISIM) method. |
| 3. Valuation | Value added of industries are measured at producer prices. | Value added of industries are measured at basic prices. |
| 4. Expenditure of mineral exploration and artistic original product creation | Included in intermediate consumption. | Categorized as intermediate consumption and capitalized as GFCF. |

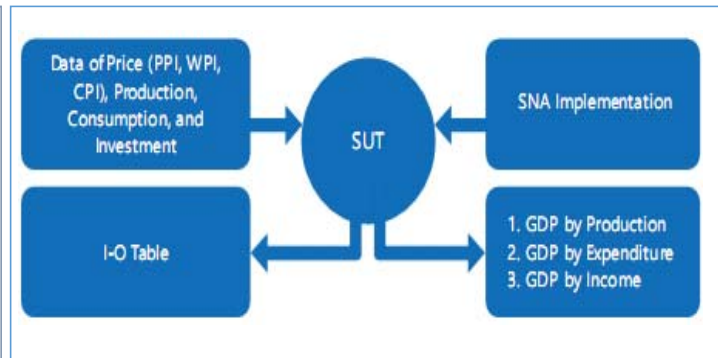


2. IMPROVEMENTS ON GDP COMPILATION

GDP 2000 series:



GDP 2010 series:



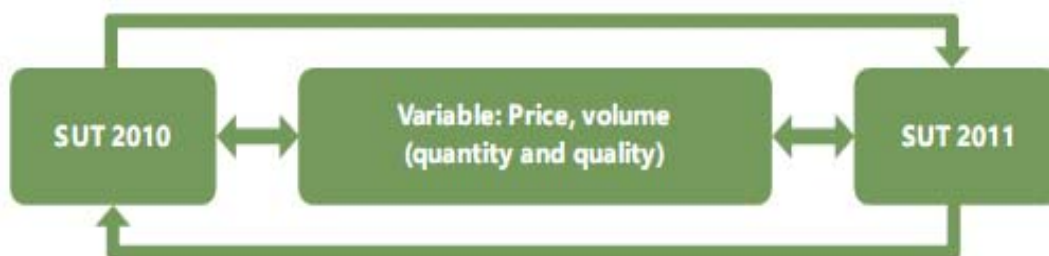
- Consistency checking only in one direction: reconciliation done between supplier industries and users.
- Checking process only done in base year.

- Two way consistency checking: performed not only between supply and uses of goods and services but also between produced and consumed product using SUT regularly.
- Compile SUT annually as a benchmarking tool for 3 approaches GDP figures.

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2. IMPROVEMENTS ON GDP COMPILATION... (cont.)



- ✓ SUT 2010 significantly correlates with SUT 2011 and the compilation are done for both current and constant prices.
- ✓ Price and volume variables (quantity and quality) are bridging (explain changes) from beginning to the next period of SUT.

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IV. MAIN RESULT

1. Macro Indicator of SUT 2010

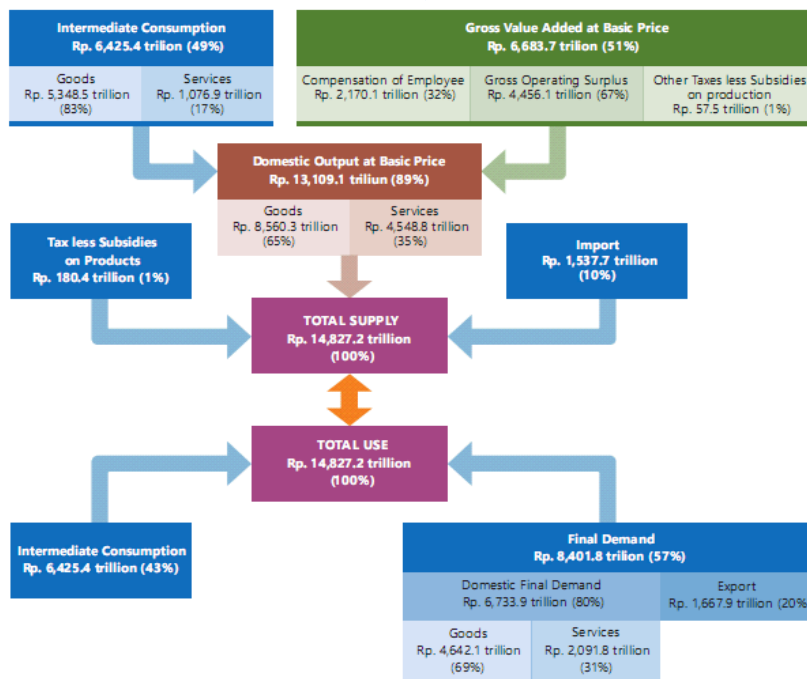
2. GDP Comparison

3. Implication of Rebasing GDP



1. MACRO INDICATOR OF SUT

Flow of goods and services based on SUT 2010 (Trillion Rp)



GDP 2010 (Trillion Rp)

A. GDP by Production

| | |
|----------------------------------|----------------|
| 1. Value Added at Basic Price | 6.683,9 |
| 2. Tax less Subsidies on Product | 180,4 |
| GDP | 6.864,1 |

B. GDP by Expenditure

| | |
|--------------------------|----------------|
| 1. Domestic Final Demand | 6.733,9 |
| 2. Export | 1.667,9 |
| 3. Less Import | (1.537,7) |
| GDP | 6.864,1 |

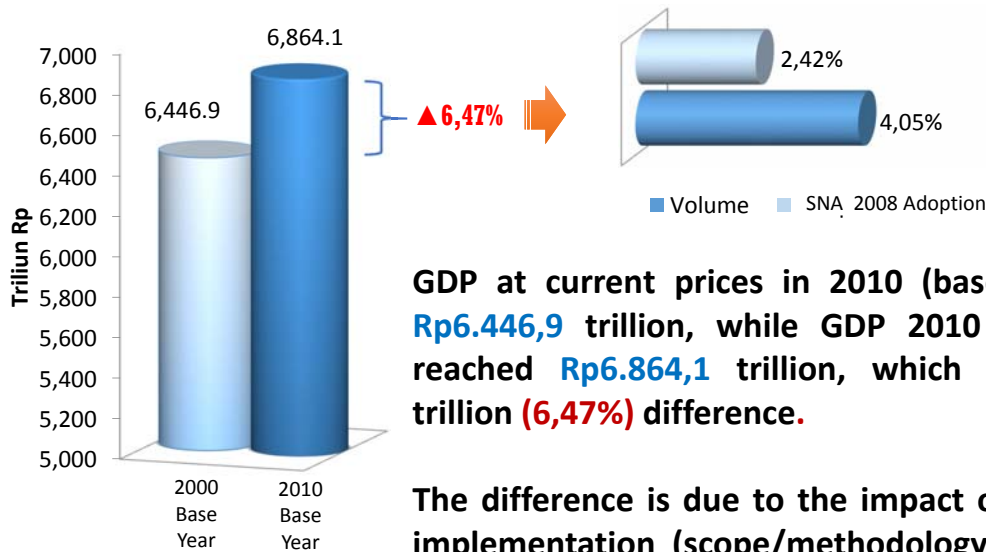
C. GDP by Income

| | |
|---|----------------|
| 1. Compensation of Employee | 2.170,1 |
| 2. Gross Operating Surplus | 4.456,1 |
| 3. Other Tax less Subsidies on Production | 57,5 |
| 4. Tax less Subsidies on Product | 180,4 |
| GDP | 6.864,1 |



1. MACRO INDICATOR OF SUT (cont.)

GDP Indonesia, 2010



GDP at current prices in 2010 (base year 2000) is **Rp6.446,9** trillion, while GDP 2010 based on SUT reached **Rp6.864,1** trillion, which totally **Rp417,2** trillion (**6,47%**) difference.

The difference is due to the impact of the SNA 2008 implementation (scope/methodology) by **2,42%** and revised prices and volumes by **4,05%**.



2. GDP COMPARISON

| INDUSTRY | 2010 | |
|---|----------------|---------------|
| | (Trillion Rp) | (%) |
| 1 Agriculture | 985,5 | 15,29 |
| 2 Mining and Quarrying | 719,7 | 11,16 |
| 3 Manufacturing Industry | 1.599,1 | 24,80 |
| 4 Electricity, Gas, and Water Supply | 49,1 | 0,76 |
| 5 Construction | 660,9 | 10,25 |
| 6 Trade, Hotel, and Restaurant | 882,5 | 13,69 |
| 7 Transportation and Communication | 423,2 | 6,56 |
| 8 Financial, Real Estate, and Business Services | 466,5 | 7,24 |
| 9 Other Services | 660,4 | 10,24 |
| Gross Domestic Product | 6.446,9 | 100,00 |

| INDUSTRY | 2010 | |
|--|----------------|---------------|
| | (Trillion Rp) | (%) |
| 1 Agriculture, Forestry, and Fishing | 956,1 | 13,93 |
| 2 Mining and Quarrying | 718,1 | 10,46 |
| 3 Manufacturing | 1.512,8 | 22,04 |
| 4 Electricity and Gas Supply | 72,5 | 1,06 |
| 5 Water Supply, Sewerage, Waste Management and Remediation Activities | 5,9 | 0,09 |
| 6 Construction | 626,9 | 9,13 |
| 7 Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles | 923,9 | 13,46 |
| 8 Transportation and Storage | 245,4 | 3,57 |
| 9 Accommodation and Food Service Activities | 200,3 | 2,92 |
| 10 Information and Communication | 256,1 | 3,73 |
| 11 Financial and Insurance Activities | 239,7 | 3,49 |
| 12 Real Estate Activities | 198,2 | 2,89 |
| 13 Business Services Activities | 99,1 | 1,44 |
| 14 Public Administration and Defense; Compulsory Social Security | 259,6 | 3,78 |
| 15 Education | 201,6 | 2,94 |
| 16 Human Health and Social Work Activities | 66,4 | 0,97 |
| 17 Other Service Activities | 101,1 | 1,47 |
| A. GROSS VALUE ADDED at basic prices | 6.683,7 | 97,37 |
| B. Taxes less subsidies on products | 180,4 | 2,63 |
| C. GROSS DOMESTIC PRODUCT | 6.864,1 | 100,00 |

| | |
|--------------------------|-------|
| Difference (Trillion Rp) | 417,2 |
| Difference (Percent) | 6,47 |



2. GDP COMPARISON (cont.)

| GDP 2010 base year 2000: | | | | GDP 2010 base year 2010: | | | |
|--------------------------|-------------------------------|----------------|---------------|--------------------------|-------------------------------|----------------|---------------|
| COMPONENT OF EXPENDITURE | | 2010 | | COMPONENT OF EXPENDITURE | | 2010 | |
| | | (Trillion Rp) | (%) | | | (Trillion Rp) | (%) |
| 1 | Household Expenditure | 3.643,4 | 56,51 | 1 | Household Consumption | 3.786,1 | 55,16 |
| | | | | 2 | NPISH Consumption | 72,7 | 1,06 |
| 2 | Government Consumption | 587,3 | 9,11 | 3 | Government Consumption | 618,2 | 9,00 |
| 3 | Gross Fixed Capital Formation | 2.065,0 | 32,03 | 4 | Gross Fixed Capital Formation | 2,127,8 | 31,00 |
| 4 | Changes in Inventory | 43,1 | 0,67 | 5 | Changes in Inventory | 129,1 | 1,88 |
| 5 | Export of | 1.584,7 | 24,58 | 6 | Export of | 1,667,9 | 24,30 |
| | A. Goods | 1.447,9 | 22,46 | | A. Goods | 1,520,3 | 22,15 |
| | B. Services | 136,7 | 2,12 | | B. Services | 147,6 | 2,15 |
| 6 | Less Import of: | 1.476,6 | 22,90 | 7 | Less Import of: | 1,537,7 | 22,40 |
| | A. Goods | 1.193,1 | 18,50 | | A. Goods | 1,280,7 | 18,66 |
| | B. Services | 283,6 | 4,40 | | B. Services | 257,0 | 3,74 |
| | GROSS DOMESTIC PRODUCT | 6.446,9 | 100,00 | | GROSS DOMESTIC PRODUCT | 6.864,1 | 100,00 |

| | |
|--------------------------|-------|
| Difference (Trillion Rp) | 417,2 |
| Difference (Percent) | 6,47 |



2. GDP COMPARISON (cont.)

GDP by Industry 2010

| INDUSTRY | Base year 2000 | | Base year 2010 | | |
|----------|---|----------------|----------------|----------------|---------------|
| | (Trillion Rp) | (%) | (Trillion Rp) | (%) | |
| 1 | Agriculture | 985,5 | 15,29 | 956,1 | 13,93 |
| 2 | Mining and Quarrying | 719,7 | 11,16 | 718,1 | 10,46 |
| 3 | Manufacturing Industry | 1,599,1 | 24,80 | 1,512,8 | 22,04 |
| 4 | Electricity, Gas, and Water Supply | 49,1 | 0,76 | 78,3 | 1,14 |
| 5 | Construction | 660,9 | 10,25 | 626,9 | 9,13 |
| 6 | Trade, Hotel, and Restaurant | 882,5 | 13,69 | 1,031,3 | 15,02 |
| 7 | Transportation and Communication | 423,2 | 6,56 | 501,4 | 7,30 |
| 8 | Financial, Real Estate, and Business Services | 466,5 | 7,24 | 537,0 | 7,82 |
| 9 | Other Services | 660,4 | 10,24 | 721,8 | 10,52 |
| | A. GROSS VALUE ADDED at basic prices | - | - | 6.683,7 | 97,37 |
| | B. Taxes less subsidies on products | - | - | 180,4 | 2,63 |
| | C. GROSS DOMESTIC PRODUCT | 6.446,9 | 100,00 | 6.864,1 | 100,00 |



2. GDP COMPARISON (cont.)

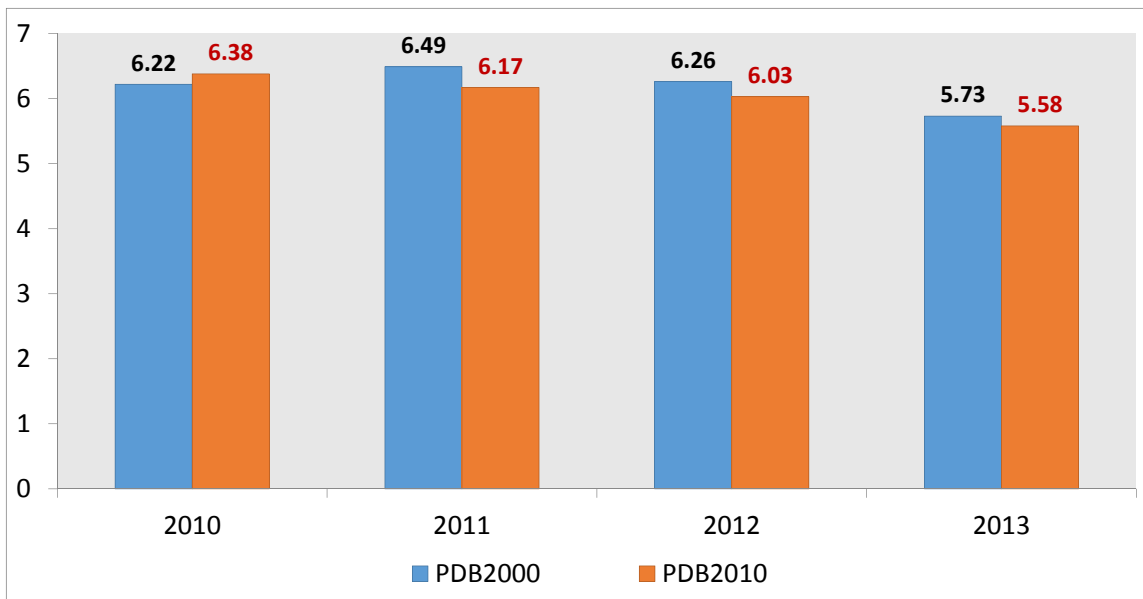
GDP by Expenditure 2010

| Component of Expenditure | | Base year 2000 | | Base year 2010 | |
|-------------------------------|-------------------------------|----------------|---------------|----------------|---------------|
| | | (Trillion Rp) | (%) | (Trillion Rp) | (%) |
| 1 | Household Expenditure | 3.643,4 | 56,51 | 3.858,8 | 56,22 |
| 2 | Government Consumption | 587,3 | 9,11 | 618,2 | 9,00 |
| 3 | Gross Fixed Capital Formation | 2.065,0 | 32,03 | 2.127,8 | 31,00 |
| 4 | Changes in Inventory | 43,1 | 0,67 | 129,1 | 1,88 |
| 5 | Export of | 1.584,7 | 24,58 | 1.667,9 | 24,30 |
| | A. Goods | 1.447,9 | 22,46 | 1.520,3 | 22,15 |
| | B. Services | 136,7 | 2,12 | 147,6 | 2,15 |
| 6 | Less Import of: | 1.476,6 | 22,90 | 1.537,7 | 22,40 |
| | A. Goods | 1.193,1 | 18,50 | 1.280,7 | 18,66 |
| | B. Services | 283,6 | 4,40 | 257,0 | 3,74 |
| GROSS DOMESTIC PRODUCT | | 6.446,9 | 100,00 | 6.864,1 | 100,00 |



2. GDP COMPARISON (cont.)

GDP Growth, 2010-2013(%)





3.A. IMPLICATION OF THE SNA 2008 IMPLEMENTATION TO THE NEW REBASED GDP 2010

| Type of Revision | Implication to GDP Indonesia |
|--|------------------------------|
| 1. Output of Agriculture (WIP and CBR) | Increase GDP: 1,90% |
| 2. Expenditure on mineral exploration and evaluation | Increase GDP: 0,34% |
| 3. Expenditure on entertainment and artistic original products | Increase GDP: 0,10% |
| 4. Expenditure on software and databases production | Increase GDP: 0,05% |
| 5. Expenditure on license (<i>copy right</i>) | Increase GDP: 0,25% |
| 6. Changes in the method of calculating bank output from IBSC to FISIM | Decrease GDP : -0,29% |
| 7. Allocation of central bank output to final consumption | Increase GDP: 0,07% |
| TOTAL | Increase GDP: 2,42% |

WIP: work in Progress; CBR: Cultivated Biological Resources; IBSC: Imputed Bank Service Charge; FISIM: Financial Intermediation Services Indirectly Measured.



CHALLENGES IN GDP IMPROVEMENT

Rebasing GDP Indonesia is an ongoing process. The GDP 2010 is the best effort conducted by the Statistics Indonesia to improve the quality of GDP.

Some of the challenges that have been identified in order to continue the improvement of GDP Indonesia:

1. Broadening the coverage of SNA implementation;
2. Strengthening the linkage among stakeholders (data supplier and data user) of national account generally and GDP particularly;



CHALLENGES IN GDP IMPROVEMENT....(cont.)

3. Extending the adoption of raw data from the 2013 Census of Agriculture and the 2016 Census of Economy;
4. Compiling I-O Table which is derived from the SUT 2010;
5. Developing SUT regularly.



TERIMA KASIH

