

The Present Situation of Thailand's National Accounts

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I. Introduction to Implementation of SNA in Thailand

The first national income accounts of Thailand recognized as basing on a complete standard system and comprehensively compiled were for the year 1951. Since then, the compilation has been continuously carried out. Currently, there are five series of national accounts of Thailand; the 1951-1963; the 1960-1975; the 1970-1990; the 1980-2009; and the 1990-Present. The first four series are similar in terms of components and the international standard systems. The series were based on in the grounds of consistency, definition, coverage, classification and valuation. However, the details are different from one series to another. The differences are mainly due to changes in data coverage and sources, including addition of new items—both goods and services. Importantly, the fifth series or the present series has been known as the major revision which partly follows the 2008 SNA. Users can find outcome from the annual report entitled “National Income of Thailand”. (<http://www.nesdb.go.th>)

The 1990-present Series: this latest series is in compliance with the 1993 SNA and partly follows the 2008 SNA. The key difference from the previous four series is the compilation process that measures real economic growth. The method has changed from using the traditional fixed-weighted volume or fixed base year to the chain volume measures (CVMs) method. Not

only that, the series also incorporates changes in coverage, particularly by adding new economic activities. Moreover, conceptual frameworks are also improved. Details have been described in the current situation below.

The National Income of Thailand has been estimated for all three approaches: production, expenditure, and income. The total value of all final products is Gross Domestic Product: GDP which is categorized into sixteen economic sectors following the ISIC rev.3.1. This can be used to further estimate Gross National Product (GNP) and National Income (NI). In addition we are now on prepare the classification of GDP to ISIC rev.4 which category the 21 economic sectors.

The Expenditure approach bases its estimation on the total consumption expenditure on goods and services and on capital formation made by both private and government sectors. The net exports were included in the total expenditure. The estimates of total expenditure, theoretically, should be equal to GDP. However, in practice there are some technical constraints such as incomplete data and time lags. Thus, it is common to have minor statistical discrepancies.

The third approach, income side, is calculated from returns of the factors of production which are returns to labor, land, capital and entrepreneur in forms of wages and salaries, rent, interest and profit, respectively. Production and expenditure approach are calculated in both nominal and real terms but income approach has been done only nominal terms.

In addition to the annual series of National Income, Thailand has also compiled the Quarterly National Accounts: QNA. Estimations are made for quarterly gross domestic product: QGDP and quarterly gross domestic expenditure: QGDE. The estimation on the income side is not carried out due to a lack of data. The series of Thai QNA start from the first quarter of 1993. The estimation has been done in both nominal and real terms. Moreover, data are also shown in both original and seasonally adjusted figures.

At present, the annual data on National Income is published within ten months after the reference year. The presentation comprises 8 accounts which are Domestic production, Generation of income, Allocation of primary income, Secondary distribution of income, Use of disposable income, Redistribution of income in kind, Use of adjusted disposable income and External income and 53 supporting tables. The quarterly data is released on the third Monday of the second month after the reference quarter. Gross Regional and Provincial Product, Flow of Funds account and Capital Stock are also compiled annually. Input-Output tables are constructed every five years.

II. Current conditions of Thailand's National Accounts

NESDB believes that implementing the 1993 SNA or the 2008 SNA should greatly improve the quality and usage of Thailand's national accounts. By doing so, it will also ensure the international comparability. For these reasons the NESDB has an attempt to develop and improve Thailand's national accounts following the latest international standard. This can be seen in the existing series of the National income of Thailand which recently released to public in line with the 2008 SNA. However it can be shown only for the total economy of the country. For sectoral accounts or for five economic institutes are still under the process of development.

Recommendations of 1993 SNA : Status of Implementation

| Items | 1993 SNA recommendation | Status of implementation in the National Accounts of THAILAND |
|-----------------------------------|--|--|
| Economic assets | Entire expenditure on mineral exploration to be treated as capital formation | Implemented |
| | Expenditure on software | Implemented |
| | Govt. defense expenditure on fixed assets other than weapons and their means of delivery | Implemented |
| | Valuables | Not yet implemented |
| | Entertainment, literary or artistic originals | Not yet implemented |
| Production | Inclusion of illegal activities | Partly implemented |
| | Production of goods within households for own-consumption | Partly implemented |
| | Output and value added to be valued at basic, producer' and purchaser's prices | Implemented |
| | Premium supplements to be included in the output of insurance | Implemented |
| Expenditure | Distribution of FISIM to industry and final users | Implemented |
| | Classification of expenditures into COFOG, COICOP, COPP and COPNI | Implemented |
| Prices and volume measures | Estimates at constant prices for full system of national accounts | Partly implemented |
| | Chain volume measures | Implemented |
| | Charging CFC on Govt. fixed assets including road and bridges | Implemented |

Recommendations of 1993 SNA : Status of Implementation (continued)

| Items | 1993 SNA recommendation | Status of implementation in the National Accounts of THAILAND |
|---|--|--|
| Institutional sector classification and accounts | Sequence of Accounts have to be compiled for 5 broad institutional sectors, namely non-financial, financial corporations, general government, household, non-profit institutional serving household and rest of the world. | Partly implemented |
| | Commodity flow and balances - supply and use table | Implemented |
| | Production account - uses and resources of GDP by institutional/activity | Partly implemented |
| | Income and appropriation account-distribution of national income by institutional and its appropriation | Partly implemented |
| | Accumulation account - capital account, financial account, other changes in volume of assets account, revaluation account. | Partly implemented |
| | Balance sheets - to be compiled as part of integrated set of accounts | Partly implemented |

III. Current Practices and Status Estimation of

(a) Military Expenditure

Thailand's national income 1990-2013 edition – present already record

- data of construction and repair of self-government and investment in construction of ministry of defense as investment from the previous version treat as government consumption expenditure (GCE)
- Record purchase of weapon of various ministries as gross fixed capital formation at public sector from the previous version record as government consumption expenditure

(b) Research and Development Expenditure

Definition of research and development

“Creative work undertaken on a systematic basis to increase the stock of knowledge, and the use of this stock of knowledge for the purposes of discovering or developing new products, including improved versions or qualities of existing products, or discovering or developing new or more efficient processes of production.”

Research and development data has been include in investment item of Thailand national accounts but it is not itemize to show. Such data is only government data and state enterprise data. The government data come from the government budget report and state enterprise data from the questionnaires survey. On the other hand, Thailand's national accounts still lack of private research and development data.

(c) Financial Services

Thailand added the items of National Credit Bureau and non-bank financial institutions and also adopted FISIM (Financial Intermediation Service Indirectly Measure: FISIM) in order to be compliance with 1993SNA and 2008SNA concept and to replace imputed service charges method. In addition, the item of reinsurance is separated from life insurance item.

The results of Thailand's FISIM

Financial services with FISIM method in case of Thailand showed the difference between the old (ISC) and new version (FISIM). They showed both the trend of upward and downward during 2000 – 2009 as the table 1. The outcome was caused from the reference rate, and more deliberate compilation which weighted the service charge for loans and deposits.

Table 1 Comparison of financial services, indirect calculation of net interest income (ISC) and FISIM

Unit: Billions of Baht

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ISC | 111.2 | 121.7 | 139.3 | 159.0 | 195.5 | 230.1 | 241.8 | 266.7 | 321.9 | 322.7 |
| FISIM | 99.0 | 127.6 | 150.3 | 162.6 | 196.3 | 228.2 | 259.3 | 288.4 | 314.8 | 309.8 |
| (FISIM – ISC) | -12.2 | 5.9 | 11.0 | 3.5 | 0.8 | -2.0 | 17.5 | 21.7 | -7.1 | -13.0 |

Basic information Such as loan amount Deposits, interest income, interest expense and interest rates. Bank of Thailand and calculate FISIM and ISC by NESDB.

IV. Estimation of imputed rent for owner-occupied dwellings

The way of estimation of actual and imputed rent for owner-occupied dwelling is estimated based on Socio-Economic Survey (SES) data.

Data source

Household Socio-Economic Survey produced by National Statistical Office (NSO)

The formula

Gross Output (GO) = Number of households x The average rent per HH

Value Added = GO – (IC)

Gross Output (GO) : Income from rental housing

Intermediate Cost (IC) : Expense for maintenance housing

Table 2 Gross Domestic Product at current prices

(Millions of Baht)

| TSIC | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------|--|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
| GDP | Gross Domestic Product | 7,614,413 | 8,400,647 | 9,076,303 | 9,706,928 | 9,654,022 | 10,802,388 | 11,300,497 | 12,354,665 | 12,910,032 |
| K | Real estate, renting and business activities | 563,549 | 620,818 | 642,703 | 667,114 | 627,851 | 688,098 | 741,399 | 841,579 | 888,118 |
| 70101.01 | Actual rent | 50,278 | 42,216 | 42,295 | 44,719 | 44,980 | 45,846 | 46,240 | 47,812 | 49,244 |
| 70101.02 | Imputed rent | 181,633 | 210,317 | 211,076 | 215,141 | 208,915 | 214,979 | 219,054 | 223,945 | 235,226 |

Table 3 Structure of GDP at current prices

(%)

| TSIC | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GDP | Gross Domestic Product | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| K | Real estate, renting and business activities | 7.4 | 7.4 | 7.1 | 6.9 | 6.5 | 6.4 | 6.6 | 6.8 | 6.9 |
| 70101.01 | Actual rent | 0.7 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 |
| 70101.02 | Imputed rent | 2.4 | 2.5 | 2.3 | 2.2 | 2.2 | 2.0 | 1.9 | 1.8 | 1.8 |

Table 4 Structure of Real estate, renting and business activities at current prices

(%)

| TSIC | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|----------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K | Real estate, renting and business activities | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 70101.01 | Actual rent | 8.9 | 6.8 | 6.6 | 6.7 | 7.2 | 6.7 | 6.2 | 5.7 | 5.5 |
| 70101.02 | Imputed rent | 32.2 | 33.9 | 32.8 | 32.2 | 33.3 | 31.2 | 29.5 | 26.6 | 26.5 |

V. Coverage Non-observed Economy

Non-observed Economy refers to all productive activities that may not be captured in the basic data sources used for national accounts compilation. The following activities are included: underground, informal (including those undertaken by households for their own final use), illegal, and other activities omitted due to deficiencies in the basic data collection program. The term ‘non-observed economy’ encompasses all of these activities and the related statistical estimation problems. Non-observed economy are classified to five categories as follow:

Underground production: production activities that are legal but deliberately concealed from public authorities in order to avoid paying tax (e.g. VAT or income tax) or social security contributions; meeting statutory standards; or complying with official procedures and regulations such as the completion of administrative forms or statistical questionnaires. As well as “underground”, which is the term most commonly employed, some countries also employ the terms “concealed activities”, “hidden economy” or “black economy” to denote this type of activity.

Informal activities: legal production activities which are characterized by a low level of organization, with little or no division between labor and capital as a factor of production. The informal sector typically functions on a system of unofficial relationships and does not rely on official agreements. It is broadly characterized as consisting of units engaged in small-scale production of goods and services with the primary objective of generating employment and incomes for persons concerned. The definition of the informal sector corresponds with that of household unincorporated enterprises.

Illegal activities: productive activities which are forbidden by law or which become illegal when carried out by unauthorized persons. The following types of illegal activities are considered in the inventory: production/import/sale of drugs; prostitution; sale of stolen goods and smuggling of goods.

Household Production for Own Final Use productive activities that result in goods or services consumed or capitalized by the households that produced them.

Statistical underground: defined as all productive activities that should be accounted for in basic data collection programs but are missed due to deficiencies in the statistical system.

Thailand’s national accounts have estimated some informal activities as can see in Table 8. NESDB using informal data from various sources such as Labor force survey, informal labor survey, SES, the registration of motorcycle taxi, taxi, van in Thailand etc.

The Informal activities in Thailand National Accounts

Table 5 Estimation of the informal economy in Thailand's National Account

(%)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| % to GDP | 45.95 | 44.61 | 45.44 | 46.36 | 42.96 | 43.88 | 44.46 | 41.99 | 39.14 |
| Agriculture | 5.94 | 6.81 | 7.50 | 8.81 | 8.43 | 10.36 | 12.01 | 13.16 | 13.58 |
| Non agriculture | 40.00 | 37.79 | 37.94 | 37.55 | 34.53 | 33.52 | 32.45 | 28.83 | 25.56 |

Office of the National Economic and Social Board

Coverage of Formal and Informal labor in Thailand

1. Population living in private households and households group.
2. Formal worker means employed person who been protected by labor law or social security such as official government, state enterprise staffs, employees are protected by labor law, employed person insured under the Act social security.
3. Informal labor mean employed person who are not protected or no social security.

Table 6 Formal and Informal labor in Thai economy

(%)

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Informal labor | 62.1 | 61.5 | 62.7 | 63.7 | 63.4 | 62.4 | 62.5 | 62.7 | 64.3 |
| Agriculture | 38.0 | 34.3 | 37.9 | 38.6 | 37.5 | 36.8 | 38.3 | 39.2 | 39.4 |
| Non - agriculture | 24.1 | 27.2 | 24.8 | 25.1 | 25.9 | 25.6 | 24.2 | 23.5 | 24.9 |
| Formal labor | 37.9 | 38.5 | 37.3 | 36.3 | 36.6 | 37.6 | 37.5 | 37.3 | 35.7 |
| Agriculture | 3.4 | 3.0 | 2.7 | 2.7 | 2.9 | 3.1 | 2.7 | 3.0 | 2.5 |
| Non - agriculture | 35.1 | 35.5 | 34.6 | 33.6 | 33.8 | 34.6 | 34.8 | 34.4 | 33.3 |
| Total labor | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Agriculture | 41.3 | 37.3 | 40.6 | 41.3 | 40.3 | 39.8 | 41.0 | 42.1 | 41.9 |
| Non - agriculture | 58.7 | 62.7 | 59.4 | 58.7 | 59.7 | 60.2 | 59.0 | 57.9 | 58.1 |

Informal Labor Survey: National Statistics Office

VI. Use of volume measures

The annual national income to chained volumes, NESDB has first publicized the series of 1990-2010 in February 2012. We have continued to publish national income in chained values, with the latest one in 2013 (National Income of Thailand 2013, Chain Volume Measures). Annual using CVM is complied as follow:

- (1) Compiling Laspeyres fixed-weight volume index derived from the primary constant price index in which the previous prices are applied in each pair of consecutive period as direct index, and
- (2) Linking the series by accumulating period-to-period growth beginning with chain index so as to connect the non-consecutive periods as a unique linked series, making it comparable.

QGDP using CVM is complied under the framework by International Monetary Fund (Quarterly National Accounts Manual: concepts, Data Source, and Compilation IMG, 2001). The technique used to link quarterly data between years is annual overlaps technique. The procedure is as follows:

- (1) Calculate values at current prices both for quarter
- (2) Calculate average weighted prices of each year in order to find values of output at average current prices and previous year prices in the next step

- (3) Calculate values of each quarter and year of the current year using previous year weighted prices.
 - (4) Use the annual overlaps technique to calculate average quarterly output value of the previous year using average weight prices of that year.
 - (5) Calculate the direct index which is the ratio of the value calculated in step 3) to the value calculated in step 4) using annual overlaps. The direct index is the ratio of a given quarter value of the current year to the average value of the previous year per quarter.
 - (6) Create the chain index from direct index by using year 2002 as a reference year, for Thailand. That is setting the index of year 2000 equal to 100.
 - (7) Calculate values in chain volume measures for each quarter and year by using chain index and the values of GDP at current prices of year 2002 as the reference year.
 - (8) Calculate seasonally adjusted QGDP by using X-12 program.
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