

Supply and Use Table

Methodology of
Compilation

THAILAND

Peeranat Dangskul

Head of Production Account

National Accounts Office

Current System of National Accounts

Follows the SNA 2008

Annual data presented in three approaches. **Production**, expenditure, and income approaches with nominal and real values at 2002 chained, Thai Baht
Quarterly data presented in two approaches (**production** and expenditure) with nominal and real at 2002 chained.

The economic activities are compiled based on **Thailand's Standard Industrial Classification (TSIC) conforming to an International Standard Industrial Classification (ISIC Rev 4)**.

Gross output is available only on aggregate level along with taxes and subsidies on products, intermediate consumption, and main components of value added such as compensation of employee and consumption of fixed capital.

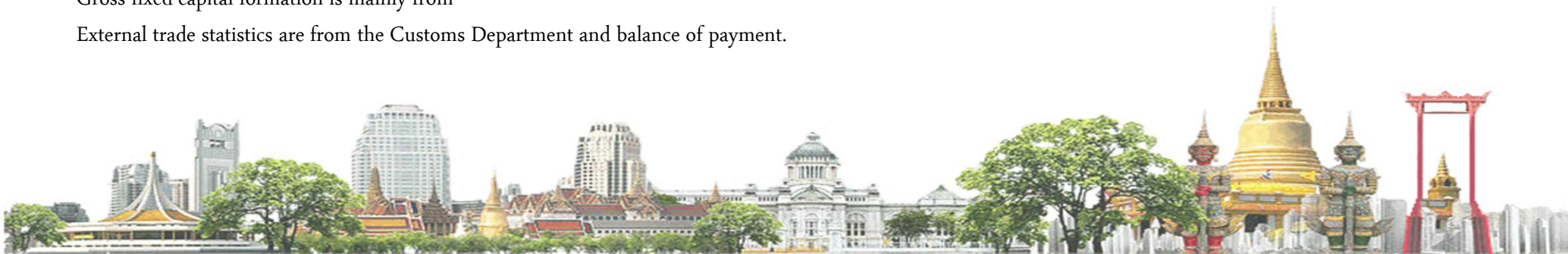
For data sources, data for GDP compilation are from various sources, namely agricultural production survey; mining production report; industrial production survey; mining production report; industrial production census and manufacturing survey; service business survey such as hotel and business; and administrative business survey such as hotel and business; and administrative secondary data.

Household final consumption expenditure is benchmarked from Socio-Economic Survey and sales report.

Government final consumption is mainly from government budgetary report.

Gross fixed capital formation is mainly from

External trade statistics are from the Customs Department and balance of payment.



Supply and Use Tables

Use for balancing GDP and GDE (1988 constant prices to Chain volume measure)

Project with ADB : RETA-6483

307 Commodities (CPC 1.0 and 540 industries (ISIC rev.3)

R-CDTA-8838

353 Commodities (CPC 2.0 and 573 industries (ISIC rev.3)

Objective

- Balance GDP and GDE
- Global Value Chain
- Economic Model
- International cooperation; APEC Tiva, ADB, ASEAN statistic, etc.



Supply Tables

Basic value of output and value added

1 apply structure of value added components from the IOT 2010 to decompose gross value added into 4 components;

i) compensation of employee, ii) operating surplus, iii) indirect tax and subsidy on products, and iv) consumption of fixed capital

2 tax and subsidy on products can be removed from output of each TSIC activity at TCPC product level.

IO Table

Standard size of 180 x 180 of inter-industry linkage and the latest available table is 2010.

Compiles every 5-year benchmark since 1975

Thailand IOT comprises 7 supporting tables covering

1) purchaser price table, 2) wholesale trade margin table, 3) retail trade margin table,

4) transport cost table, 5) producer price table, 6) import value table, and

7) domestic value table.



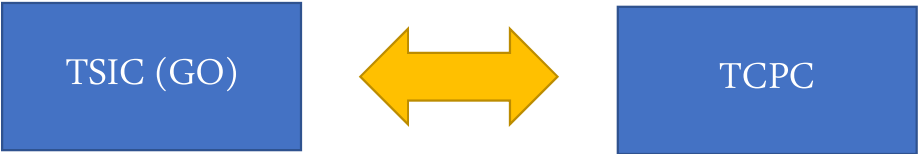
Supply Tables

Mapping

Gross output and gross value added is measured at producer's price with TSIC (Thailand Standard Industrial Classification) which produce industrial activity output for each product (Thailand Central Product Classification; TCPC 2.1).

Imports of goods and services, trade and transport margins, and taxes less subsidies on products are also classified by TCP

SUT working team has performed mapping and converting TCPC along with mapping to IOT sector. Converting TSIC to TCPC seems comfortable for the case of one TSIC to one TCPC and many TISC to one TCPC. For the case of one TSIC to many TCPC, the SUT team need to break down one TSIC into many sub-codes



Supply Tables

Tax on product and subsidy on product

Summed into the correspondent columns and then control total from NI is used for updating value and finalising columns of tax on product and subsidy on product. Apply IOT ratio to TCPC

Trade and Transport Margin

Apply trade and transport margin (TTM) vector from the IOT 2010 for calculating TTM columns in the SUTs and we apply control total from trade and transport output service from TSIC activities

Imports

Imported goods, from customs department, are tabulated by converting HS 2012 into TCPC 353 products.

Imported services, from balance of payment with 10 main items, apply imported services column from the IOT to decompose into TCPC 353 service products.



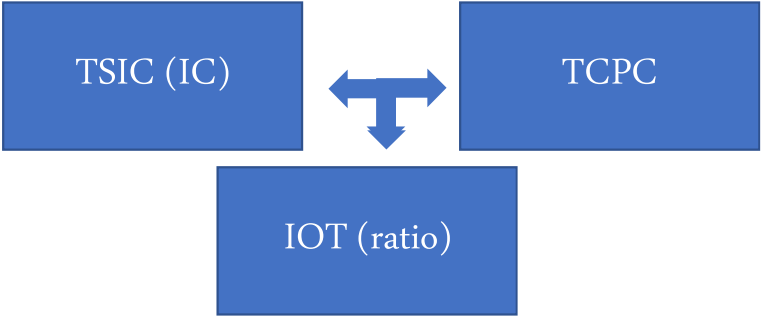
Use Tables

Do not distinguish Intermediate Use to Domestic and Import Use table. Because of limited data source.

Intermediate Use

Calculated by applying the IOT structure to its correspondent control totals.

However, each component of value added after removing taxes and subsidies on products namely compensation of employee, operating surplus, and consumption of fixed capital **is not controlled by each TSIC activity level but controlled at the total activity level**



Use Tables

Private Consumption

Available at most detail by COICOP and can be converted into TCPC.

Also available for sub column vectors; i) household final consumption expenditure (HFCE), ii) household consumption on imported goods, iii) direct purchase abroad by resident, iv) direct purchase by non-resident in the domestic market, and v) final consumption of non-profit institution serving household (NPISH).

Government Consumption

Government sector produce non-market outputs

“measure output of government sector from cost side method by summing total cost which must be equal to government consumption.”

3 dimensions for GFCE available in the TNA; i) types of expenditure; ii) by COFOG; and iii) by individual and collective

In the SUT 2012, we independently make balance of the government sector before setting up the SUTs. Therefore, the government sector can present distinctively in the most detail version of the SUT 2012



Use Tables

Capital Formation

Construction needs to be consistent to output of construction (public and private construction) in supply table.
It is insufficient to match to TCPC.

SUT working team has requested more detail on construction (5 types of assets) from the capital formation compiler which leads to expanding TSIC code

Equipment apply structure of gross fixed capital formation from the IOT 2010 and the same for change in inventory

Exports

Exported goods, from customs department, are tabulated by converting HS 2012 into TCPC 353 products.
Exported services, from balance of payment with 10 main items, apply exported services column from the IOT to decompose into TCPC 353 service products.



Balancing

Recheck Supply & Demand Sides

Manual Balancing



to reduce discrepancies < 1%



Generalized Least Square (GLS) Technic

Results and Findings

Supply table

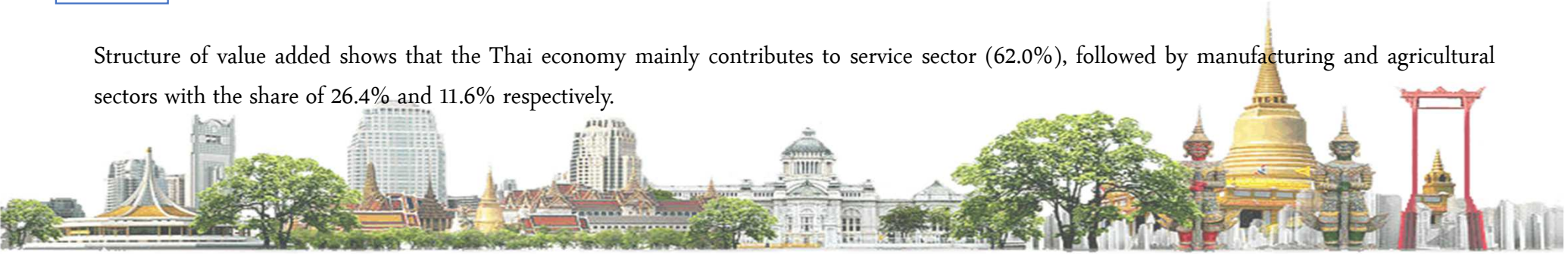
total gross output at basic price in 2012 values at 30,423 billion Baht

Structure of gross domestic output for agricultural, manufacturing, and service products in the supply table is 6.1%, 46.6%, and 47.3% respectively

Use table

gross value added at basic price in the SUT 2012 posts the value of 10,888 billion Baht

Structure of value added shows that the Thai economy mainly contributes to service sector (62.0%), followed by manufacturing and agricultural sectors with the share of 26.4% and 11.6% respectively.



Results and Findings

Compared to National Income 2012

Table 1 Gross output at basic price (Billion) and Share (%)

	SUTs		Published TNA	
	Value	%	Value	%
Agricultural product	1,846	6.1	1,883	6.3
Manufacturing product	14,184	46.6	14,306	47.7
Service product	14,393	47.3	13,804	46.0
Total	30,423	100.0	29,993	100.0

Source: NESDB

which increases by 1.43% in comparison to 29,993 billion Baht published in the National Income of Thailand

Structure of gross domestic output for agricultural, manufacturing, and service products in the supply table is slightly different from published version (TNA) which is 6.3%, 47.7%, and 46.0% respectively.

Table 2 Value Added Comparison b.t SUTs and Published TNA (Billion Baht)

	SUTs		Value Added Published TNA			
	Basic Price	%	Basic Price	%	Producer Price	%
Agriculture	1,262	11.6	1,255	11.3	1,593	12.9
Manufacture	2,876	26.4	3,106	27.9	3,766	30.5
Service	6,750	62.0	6,763	60.8	6,990	56.6
Total	10,888	100.0	11,124	100.0	12,349	100.0

Source: NESDB

which is lower than 11,124 billion Baht published in TNA and 12,349 billion Baht for producer’s price value

In comparison to published TNA, gross domestic product at producer price in service sector is 56.6% of total GDP, followed by manufacturing sector (30.5%) and agricultural sector (12.9%). It has been seen that after removing taxes on products from value added (GDP) as shown in the supply and use

tables, the share of service sector becomes higher than in published TNA. Principally, if other factors are constant, higher share means higher per unit value generation thus implying higher efficiency. In this case, service is more efficiency in terms of GDP generation compared to other sectors. At least in terms of GDP generation, we may postulate that taxes on product policy implemented in Thailand trends to be in flavour of agricultural and manufacturing sector but harms to service sector.



Challenge and Strategy Implemented

Problems

Lack of detailed data especially in service sector such as non-resident consumption on goods and services at the detail level

Revision policy

Solving

applied previous study as a structural base for detail decomposition. However, we would suggest updating structure regularly by conducting more recent surveys and use new survey results for SUTs compilation

SUTs compilation faces decision making for cutting point on data release from stage holders, thus making delayed SUTs timeline

In compiling SUTs period, many data sources have revised back its statistic especially for the balance of payment revision which is the most important part in the SUTs. Not only appeared in supply table as an import item, the balance of payment must reconcile to domestic production on transport service and direct consumption of goods and services for non-resident. Therefore, decision making in whether availability selection or data completion is important for SUTs compilation



Way Forward

Plans to compile the SUTs annual series starting from 2008 to 2011 and 2013 to 2016

Use ISIC rev. 4 with CPC 2.1 Classification (on going)

Make a program to support SUT and reconcile (on going)

