

# **SUPPLY - USE AND INPUT-OUTPUT TABLES IN TURKEY**

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## **Background**

**The compilation of input-output tables has a long-standing tradition in Turkey.**

**Input-output tables were compiled for the years 1959, 1963, 1967, 1968, 1973, 1979, 1985 and 1990.**

**The first three IOTs were compiled by State Planning Organization (SPO) and the others were compiled by Turkish Statistical Institute (TurkStat) according to the concepts and definitions of SNA and ISIC Rev.2.**

## **Compilation of SUT in the Turkish National Accounts**

**Supply and use tables (SUTs) integrated into the Turkish National Accounts since year 1996.**

**Balanced SUT and input-output tables (IOT) at current prices compiled for the years 1998 and 2002.**

**SUTs for the years 1996 and 1998 compiled by SNA-93 and ISIC Rev.3, by 210 industry and product groups but disseminated by 97.**

## **Compilation of SUT in the Turkish National Accounts**

**SUTs are compiled by Annual Accounts Team in coordination with the experts of National Accounts Group in TurkStat.**

**Supply - use and input-output tables were compiled for the year 2002 by European System of Accounts (ESA-95), by using NACE and CPA Rev.1.1.**

**Supply and use tables were compiled for the years 2003 and 2004 at current and constant prices, will be disseminated in 2009, current price SUTs.**

## Advantages of SUTs

**SUTs are an effective tool to cover basic statistical data systematically in national accounts and to provide consistency in detailed level and to improve the quality of national accounts.**

**SUTs are also an ideal framework to integrate GDP calculation by the production, the expenditure and the income approaches.**

**The final result tables consists of national balance of demand and supply, goods and services account, production accounts and generation of income accounts at current prices.**

## Advantages of SUTs

### Supply and use tables:

- give a compatible framework for trade and transport margins and taxes and subsidies on products which are covered in national accounts,
- is the best framework for the constant prices estimates,
- is the basis for the symmetric input-output tables,
- provide links with satellite accounts, environment accounts, social accounting matrix.

## **Order of compilation**

**Supply table at basic prices**

**Use table at purchasers' prices.**

**Valuation matrices → trade margins**

**transport margins**

**taxes less subsidies on products**

**Use table at basic prices.**

**Use table for imports at cif values**

**Use table for domestic production at basic prices**

## **Supply and use tables and data sources**

**Compilation of SUT is based on the data collected from enterprises, by local kind of activity unit.**

**Data sources of tables: annual business statistics, agriculture statistics, production statistics (PRODCOM), foreign trade statistics, construction survey, government and financial institutions, income statistics, employment statistics, government expenditure and revenues, tax statistics, household budget and labour force survey, balance of payments, etc.**



## Balancing of supply and use tables

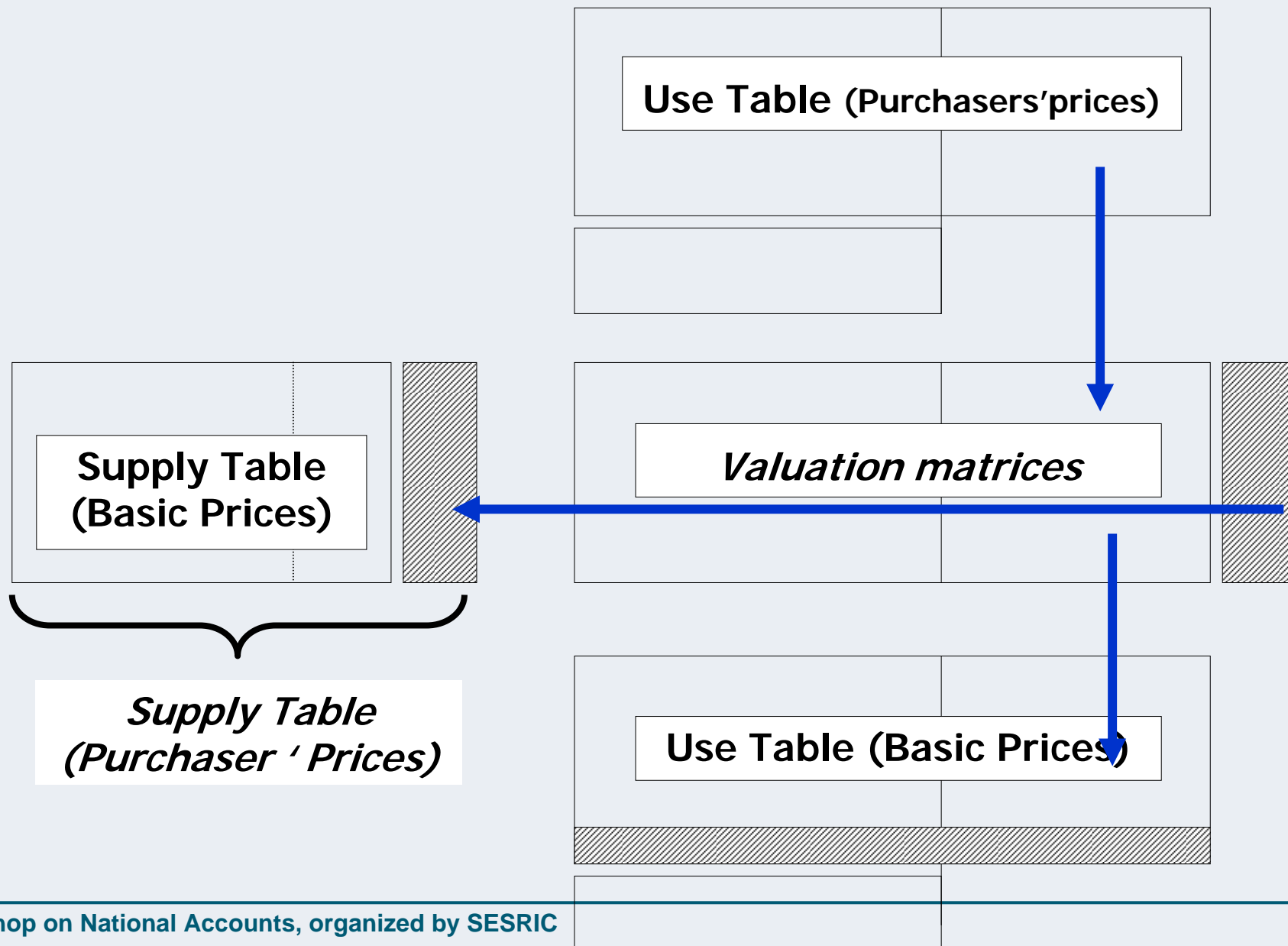
Valuation matrices (taxes less subsidies on products, trade and transport margins) are calculated by products.

Use table at basic prices is derived by subtracting valuation matrices from use table at purchasers' prices.

Manual and automatic balancing of SUT at basic prices

Order of balancing:

- Manual balancing by product.
- Automatic balancing by using Excel application (Vb macro).



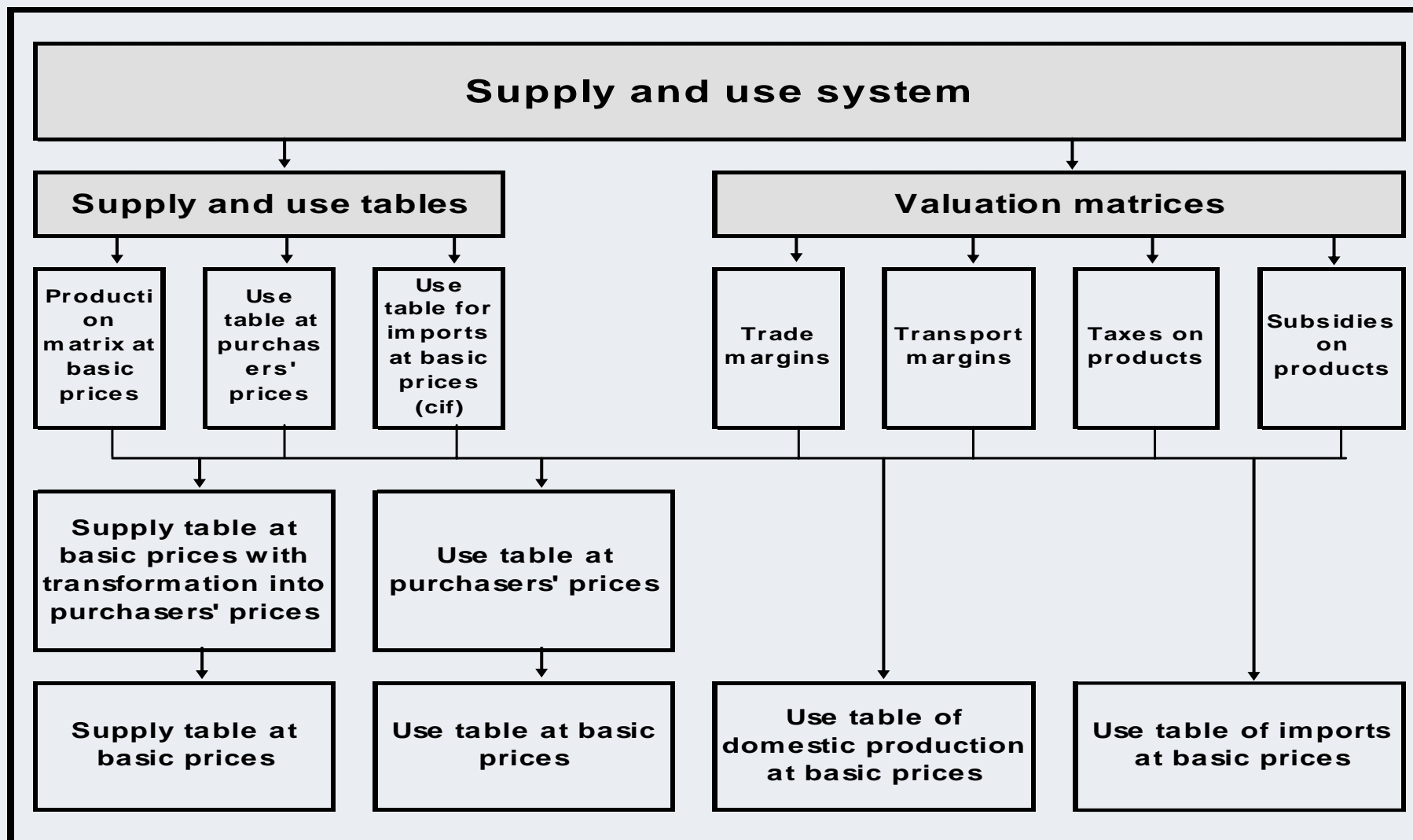
## Balancing of supply and use tables

The use table for domestic production is derived by subtracting the use table of imports from the total use table at basic prices.

It identifies the input requirements of industries in terms of domestic intermediates; imported intermediates and primary inputs (value added components).

The use table for imports includes information on the use of imported products for intermediate consumption and final uses.

## Supply and Use System



## **Compilation of the input-output table**

**Supply and use tables at basic prices are transformed into symmetric IOTs (industry by industry or product by product) by using industry technology and fixed product sales structure assumptions.**

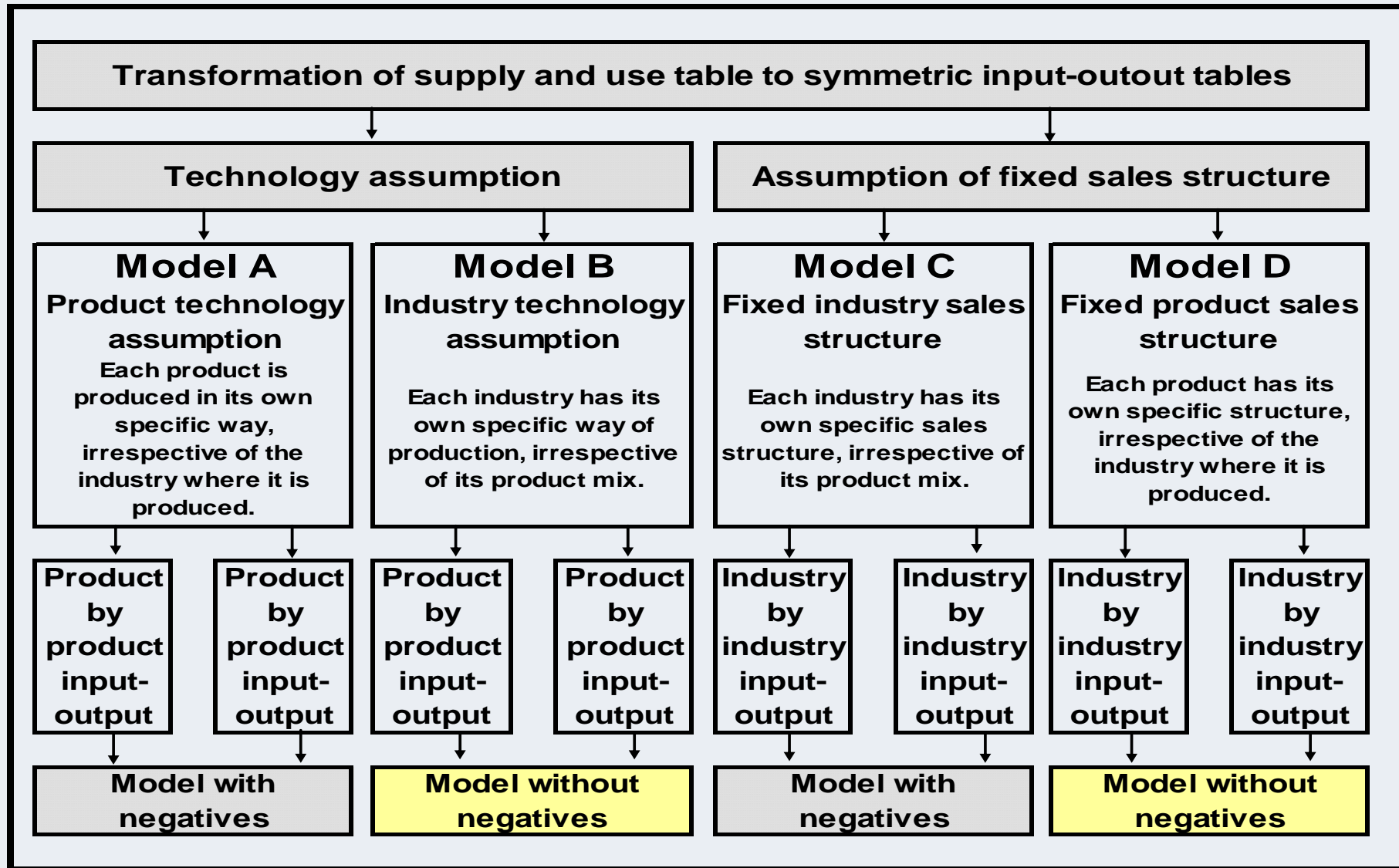
**Symmetric IOTs are:**

- **input-output table at basic prices**
- **input-output table for domestic output at basic prices**
- **input-output table for imports**

## **Compilation of the input-output table**

**Product by product input-output tables were compiled by using industry technology assumption.**

**Industry by industry input-output tables were compiled by using fixed product sales structure assumption.**



## **Publication of SUT and IOT**

**SUT and IOT are published at the level of 59 industries and 59 products.**

**SUT and IOT are balanced by using Excel Application (Vb macro).**

**SUT and IOT are published in TurkStat's website.**

**For full set of tables:**

**[http://www.turkstat.gov.tr/National Accounts/Input-Output Tables](http://www.turkstat.gov.tr/National%20Accounts/Input-Output%20Tables)**



**SIMPLIFIED OVERVIEW  
OF  
SUPPLY AND USE TABLES  
AND  
INPUT-OUTPUT TABLES**

## Simplified overview of a supply table

INDUSTRIES (NACE) PRODUCTS (CPA)		OUTPUT OF INDUSTRIES						Total domestic output at basic prices	IMPORTS	Total supply at basic prices	VALUATION		Total supply at purchasers' prices
		Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services		Imports, cif		Trade and transport margins	Taxes less subsidies on products	
		1	2	3	4	5	6	7	8	9	10	11	12
1	Products of agriculture	Output by product and by industry (V)						Domestic output	Imports, cif by product	Total supply, at b.p.	Valuation items		Total supply, at p.p. (Q)
2	Products of industry												
3	Construction work												
4	Trade, hotel, transport services												
5	Other services												
6	Government services												
7	<b>Total</b>								Imports, cif		Total		
8	Cif/fob adjustments on imports												
9	Direct purchases abroad by residents												
10	<b>Output at basic prices</b>	Output by industry (g)							Imports, fob		Total		
11	- Market output												
12	- Output for own final use												
13	- Other non-market output												

## Simplified overview of a Use Table

	INDUSTRIES (NACE)  PRODUCTS (CPA)	INPUT OF INDUSTRIES						Total	FINAL USES							Total final use	Total use at basic prices
		Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services		Final consumption expenditure by households	Final consumption expenditure by non-profit organizations	Final consumption expenditure by government	Changes in valuations	Changes in inventories	Exports, fob			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	Products of agriculture	Intermediate consumption by product and by industry (U)							Final uses by product and by category (Y)								(q)
2	Products of industry																
3	Construction work																
4	Trade, hotel, transport services																
5	Other services																
6	Government services																
7	<b>Total</b>																
8	Taxes less subsidies on products	Value added by component and by industry (W)							Adjustment items								
9	Cif/fob adjustments on imports																
10	Direct purchases abroad by residents																
11	Domestic purchases by non-residents																
12	<b>Total</b>																
13	Compensation of employees	Value added by component and by industry (W)							Adjustment items								(w)
14	Other net taxes on production																
15	Consumption of fixed capital																
16	Operating surplus, net																
17	<b>Gross value added at basic prices</b>																
18	<b>Output at basic prices</b>	(g)							(y)								

Trade margins															
INDUSTRIES (NACE)	INPUT OF INDUSTRIES						Total	FINAL USES						Total final use	Total use
	Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services		Final consumption exp. by households	Final consumption expenditure by NPISH	Final consumption exp. by government	Changes in valuables	Changes in inventories	Exports, fob		
PRODUCTS (CPA)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Products of agriculture	Trade margins for intermediate consumption by industries					Total	Trade margins for final demand categories						Total final use	Total use
2	Products of industry														
3	Construction work														
4	Trade, hotel, transport services														
5	Other services	Intermediate consumption by industry					Total	Final uses by category						Total final use	Total use
6	Government services														
7	Total	Intermediate consumption by industry					Total	Final uses by category						Total final use	Total use

## Transport Margins

INDUSTRIES (NACE)  PRODUCTS (CPA)		INPUT OF INDUSTRIES						FINAL USES										
		Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services	Total	Final consumption exp. by households	Final consumption exp. By NPISH	Final consumption exp. by government	Changes in valuables	Changes in inventories	Exports, fob	Total final use	Total use		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	Products of agriculture	Transport margins for intermediate consumption by industries							Transport margins for final demand categories									
2	Products of industry																	
3	Construction work																	
4	Trade, hotel, transport services																	
5	Other services																	
6	Government services																	
7	Total	Intermediate consumption by industry							Final uses by category									

## Taxes on Products

		INDUSTRIES (NACE)							FINAL USES								
		INPUT OF INDUSTRIES															
PRODUCTS (CPA)		Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services	Total	Final consumption exp. by households	Final consumption exp. by NPISH	Final consumption exp. by government	Changes in valuables	Changes in inventories	Exports, fob	Total final use	Total use	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	Products of agriculture	Taxes on products for intermediate consumption by industry							Taxes on products for final uses by type								
2	Products of industry																
3	Construction work																
4	Trade, hotel, transport services																
5	Other services																
6	Government services	Intermediate consumption by industry							Final uses by category								
7	Total																

## Subsidies on Products

INDUSTRIES (NACE)  PRODUCTS (CPA)		INPUT OF INDUSTRIES						FINAL USES									
		Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services	Total	Final consumption exp. by households	Final consumption exp. by NPISH	Final consumption exp. by government	Changes in valuables	Changes in inventories	Exports, fob	Total final use	Total use	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	Products of agriculture	Subsidies on products for intermediate consumption by industry							Subsidies on products for final uses by type								
2	Products of industry																
3	Construction work																
4	Trade, hotel, transport services																
5	Other services																
6	Government services	Intermediate consumption by industry							Final uses by category								
7	Total																

## Simplified overview of a SIOE for domestic production

	HOMOGENEOUS BRANCHES	HOMOGENEOUS BRANCHES						Total	FINAL USES							Total final use	Total use at basic prices
		Agriculture	Industry	Construction	Trade, hotel, transport	Other services	Government services		Final consumption expenditure by households	Final consumption expenditure by non-profit organizations	Final consumption expenditure by government	Changes in valubles	Changes in inventories	Exports, fob			
PRODUCTS (CPA)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1 2 3 4 5 6	Products of agriculture Products of industry Construction work Trade, hotel, transport services Other services Government services	Domestic products for intermediate consumption at basic prices (B)							Domestic products for final uses at basic prices (F)								(g)
7	Total								Final uses at basic prices								
8	Use of imported products, CIF	Imported products for intermediates							Imported products for final uses								
9	Taxes less subsidies on products	Net taxes on products for intermediate consumption							Net taxes on products for final uses								
10	Total								Final uses at purchasers' prices								
11 12 13 14	Compensation of employees Other net taxes on production Consumption of fixed capital Operating surplus, net	Components of value added (W)															(w)
15	Gross value added at basic prices																
16	Output at basic prices																(y)



**THANK YOU FOR YOUR ATTENTION!**