

Module7 Basic principles for supply and use tables

1. Supply and Use Tables

1.1 Regional Course on Integrated Economic Statistics to Support 2008

SNA Implementation



Notes:

1.2 Lecture Outline

Lecture Outline

1. Introduction
2. Simplified supply and use tables
3. Valuation of transactions
4. Use tables at basic prices
5. Three measures of GDP



1.3 Lecture Outline (cont.)

Lecture Outline (cont.)

6. **Other issues**
 - Treatment of transport margins
 - Value added taxes
 - Treatment of imports
 - Commodity flow technique



1.4 Introduction

Introduction

- * SUT can be used as a compilation tool because the overall framework facilitates:
 - * data checking/reconciliation.
 - * gap filling.
- * A number of countries treat SUT as central to their compilation process, not just as an irregular add-on needed to derive input-output tables.



1.5 Introduction

Introduction

A Simplified Supply Table

Supplies		Industries	Rest of the World	Total
		(1)	(2)	(3)
Products	(1)	Output by product and industry	Imports by products	Total supply by product
Total	(2)	Total output by industry	Total imports	Total supply





1.6 Introduction

Introduction

A Simplified Use Table



Uses	Industries	Rest of the World	Final Consumption	Gross Capital Formation	Total
	(1)	(2)	(3)	(4)	(5)
Products	(1) Intermediate consumption by product and by industry	Exports by product	Final consumption expenditure by product	Gross capital formation by product	Total use by product
Components of (2) value added	Value added by component and by industry				
Total	(3) Total inputs by industry				



1.7 Introduction

Introduction

- * A detailed basis for analyzing industries and products in the SNA through integration and breakdown of:
 - * The goods and services account
 - * The production account
 - * The generation of income account



1.8 Introduction

Introduction

Two identities hold:

- * The identity by industry
 - * Output by industry = input by industry
- * The identity by product
 - * Total supply by product = total use by product



1.9 Three Measures of GDP

Three Measures of GDP


- * The Goods and Services Account shows:
 - * $GDP(P) = \text{industry value added plus net taxes on products (VAT, import duties)}$
 - * $GDP(E) = \text{sum of expenditure items}$
- * Third measure, $GDP(I)$, comprises the components of value added in the income accounts = compensation of employees + operating surplus + net taxes on production



1.10 Valuation of Transactions

Valuation of Transactions

- * Basic concepts and interrelationships
 - * Basic prices
 - * Producers' prices
 - * Purchasers' prices





1.11 Valuation of Transactions

Valuation of Transactions

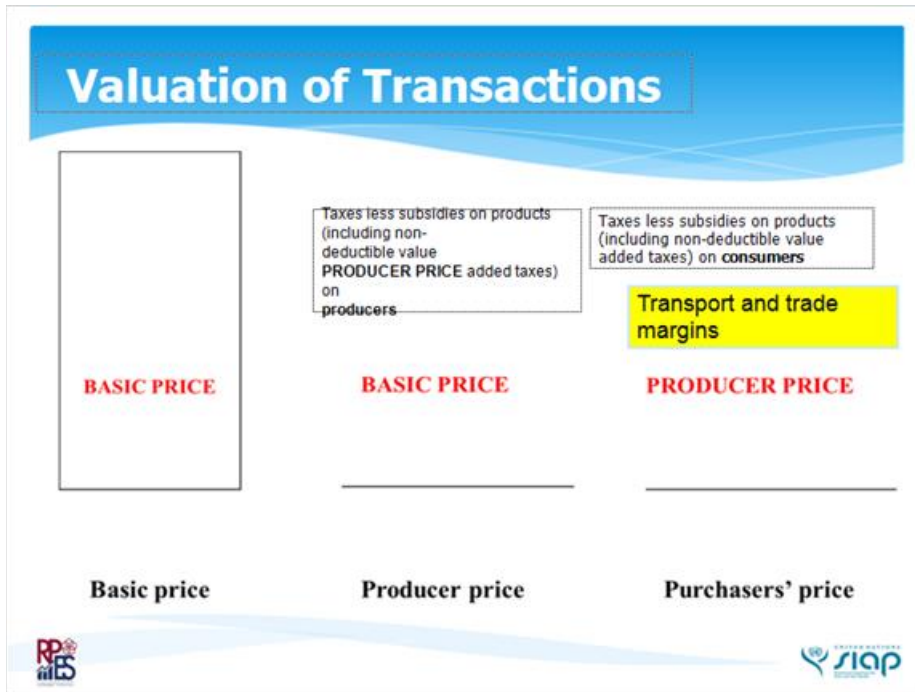
Basic price is the value of a product unit receivable by the producer, including subsidies on the product, but excluding the taxes paid on the product to be transferred to the government

Producer price is the price the producer charges at the time when it leaves the production unit (which includes taxes but less subsidies on the product)

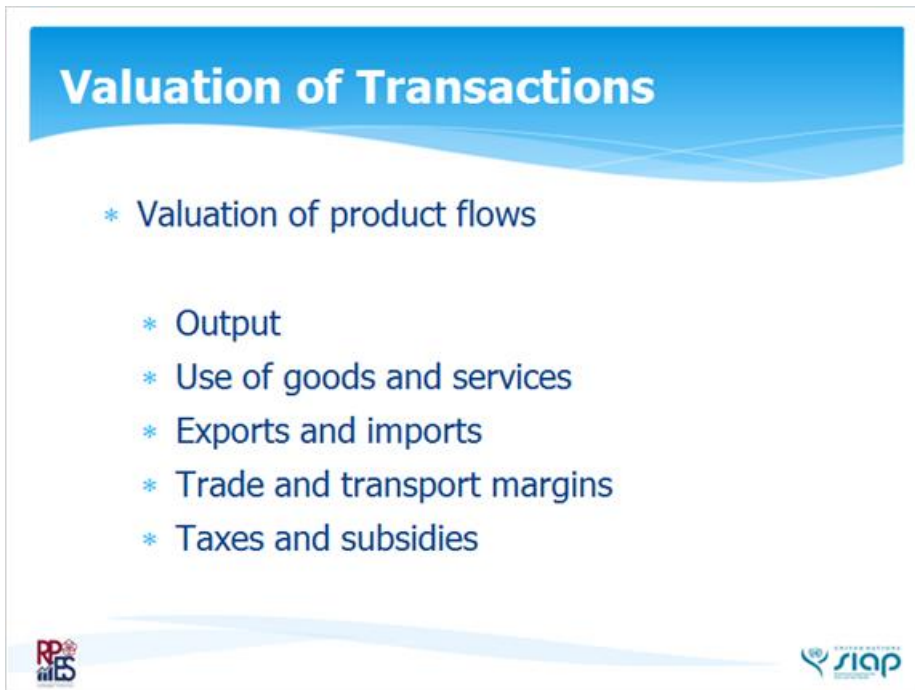
Purchasers' price is the amount paid by the buyer for a unit of output less any taxes invoiced by the seller but deductible by the purchase



1.12 Untitled Slide



1.13 Valuation of Transactions



1.14 Valuation of Transactions

Valuation of Transactions

Equality of supply and use

- * Supply at basic prices

Plus

- * Taxes less subsidies on products (Including non-deductible VAT)

Plus


- * Trade and transport margins

Equals

- * Supply at purchasers' prices

Equals



- * Use at purchasers' prices



1.15 Valuation of Transactions

Valuation of Transactions

- Transition.....
- Supply table: from basic prices to purchasers' prices
- Use table: from purchasers' prices to basic prices



1.16 Example 1

Example 1

A simple numerical example:

Farmer produces coffee beans	1,000
Farmer uses imported chemicals	600
Manufacturer roasts coffee beans	1,800
Uses coffee beans	1,000

Value added for farmer and manufacturer?



1.17 Retail industry

Retail industry

Retailer sells roasted coffee	1,600
Sales tax on sales to household	100
Purchases for resale	1,300

Total output for retailer?

Retail margin ?

Intermediate consumption	0
Value added for retailer?	



1.18 Final Use and GDP

Final Use and GDP

HFCE of roasted coffee	1,600
Exports of roasted coffee	500



Total Final use?
GDP E?
How does it compare with GDP P?



1.19 Simplified Supply and Use Table

Simplified Supply and Use Table

- * Refer to Handout 1, showing the Goods and Services account and the Production account for these transactions.



1.20 Simplified Supply and Use Table

Simplified Supply and Use Table


- * Refer to Handout 2, showing the Supply Table.



1.21 Simplified Supply and Use Table



Simplified Supply and Use Table

- * Refer to Handout 3, showing the Use Table at purchasers' prices.





1.22 Primary Income

	Farmer	Manuf.	Retailer	Total
Compensation of employees	275	625	130	1,030
Gross operating surplus	100	150	60	310
Other net taxes on production	25	25	10	60
<i>Value added</i>	<i>400</i>	<i>800</i>	<i>200</i>	<i>1,400</i>



1.23 Use Table and income

Use Table and income	
* Intermediate consumption	
= Purchases	
- Change in inventories (materials)	
* Value added	
= Output	
- Intermediate consumption	
* Operating surplus	
= Value added	
- Compensation of employees	
- Taxes less subsidies on production	
- Consumption of fixed capital	



1.24 Market and non-market output

Market and non-market output



- * Market output
 - = Sales
 - + Change in inventories (finished goods and WIP)
- * Non-market output (= Cost of production)
 - = Intermediate consumption
 - + Compensation of employees
 - + Other Taxes less subsidies on production
 - + Consumption of fixed capital



1.25 Example 2


Example 2

- * More complex economy comprising mining, manufacturing, public administration, and wholesale/retail trade;
- * Introduction of inventories.



1.26 Mining

Mining		
* 1. Mining		
* Sales of gold		370
* Sales of gas		250
* Purchases of gas		40
* Purchase of electricity		2
* Compensation of employees		250
* Payroll tax		3
* Consumption of fixed capital		145
Inventories:	Beginning	End
* Finished goods (gold)	35	44
* Finished goods (gas)	25	15
* Fuel (gas)	24	27



1.27 Manufacturing



Manufacturing		
* 2. Manufacturing		
* Sales of motor vehicles		990
* (of which Sales tax)		100
* Sales of electricity		272
* Purchase of imported materials		230
* Purchase of electricity		100
* Purchase of gas		80
* Purchase of statistical publication		10
* Compensation of employees		470
* Payroll tax		5
* Consumption of fixed capital		70
Inventories:	Beginning	End
* Finished goods (motor vehicles)	60	70
* Materials	53	66
* gas	10	8



1.28 Public administration

Public administration

- * 3. Public administration (non-market)
 - * Sale of government publications 10
 - * Purchase of electricity 60
 - * Compensation of employees 193
 - * There are no inventories.



1.29 Wholesale/retail trade


Wholesale/retail trade

- * 4. Wholesale/retail trade
 - * Sales of gold 320
 - * Sales of gas 250
 - * Sales of motor vehicles 1,100
 - * Purchases for resale:
 - * Gold 300
 - * Gas 220
 - * Motor vehicles 1,000
 - * Purchases of electricity 50
 - * Compensation of employees 60
 - * There are no inventories





1.30 International trade and final use

International trade and final use	
* 5. Other data	
. Exports of:	
* Gas	130
* Gold	390
* Total	520
* Imports of:	
* Motor vehicles	240
* Materials	230
* Total	470
b. Household consumption	
* gas	30
* Electricity	60
* Motor vehicles	800
c. Fixed capital formation	
* Motor vehicles	530

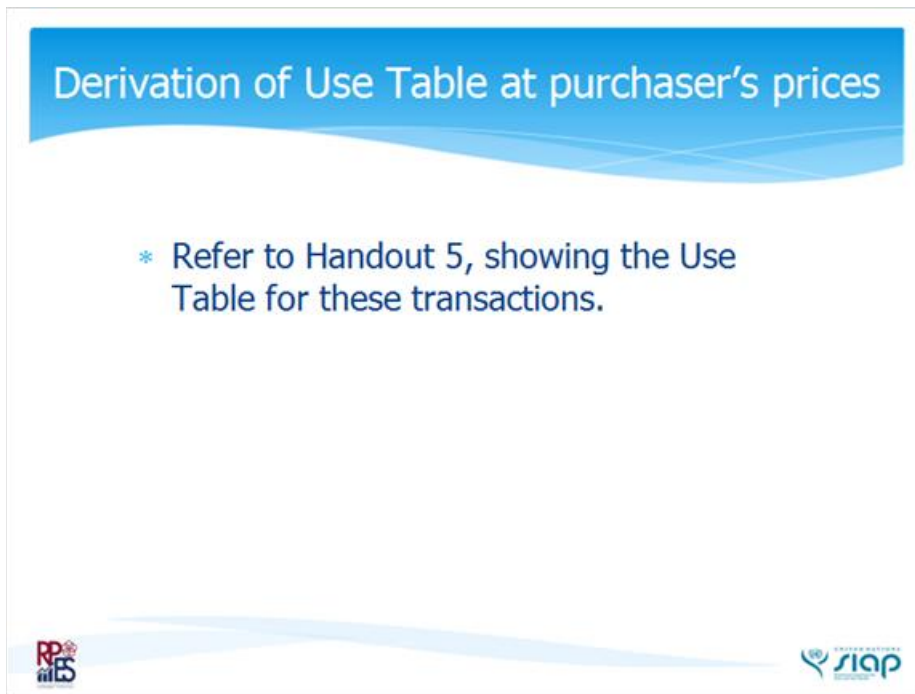


1.31 Derivation of Supply Table at basic/purchaser's prices

Derivation of Use Table at purchaser's prices	
* Refer to Handout 4, showing the Supply Table for these transactions.	





1.32 Derivation of Use Table at purchaser's prices

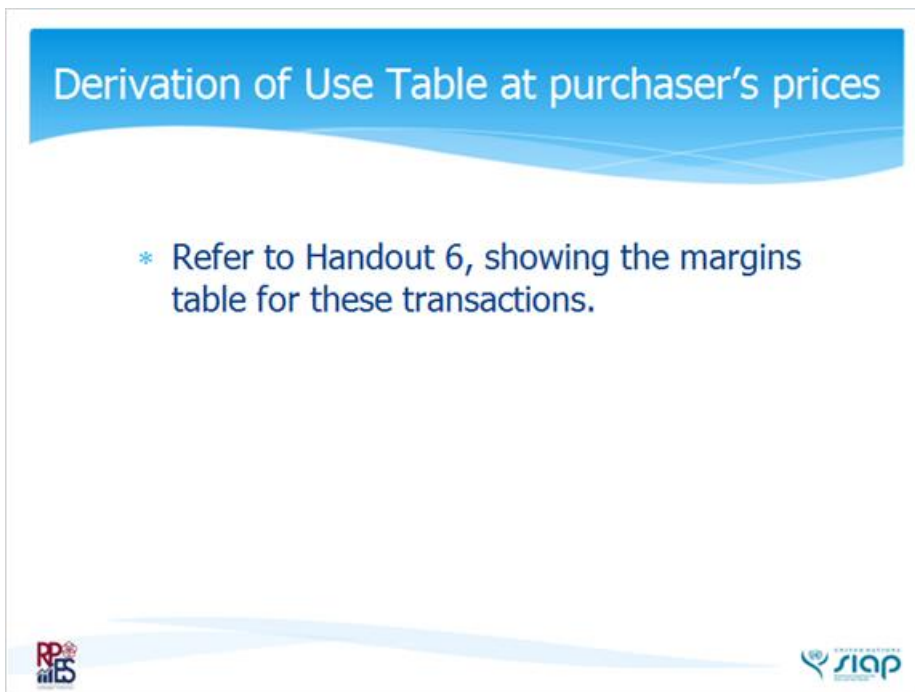


Derivation of Use Table at purchaser's prices

- * Refer to Handout 5, showing the Use Table for these transactions.



 

1.33 Derivation of Supply Table at basic/purchaser's prices



Derivation of Use Table at purchaser's prices


- * Refer to Handout 6, showing the margins table for these transactions.

1.34 Derivation of Supply Table at basic/purchaser's prices

Derivation of Use Table at purchaser's prices

- * Refer to Handout 7, showing the product taxes table for these transactions.




The slide features a blue header with the title 'Derivation of Use Table at purchaser's prices'. Below the header, there is a single bullet point: '* Refer to Handout 7, showing the product taxes table for these transactions.' At the bottom left, there is a logo for RRB (Rural Reconstruction Bank) and at the bottom right, there is a logo for SIAP (State Investment Agency for Agriculture and Fisheries).

1.35 Derivation of Supply Table at basic/purchaser's prices

Derivation of Use Table at purchaser's prices

- * Refer to Handout 8, showing the Use Table in basic prices for these transactions.




The slide features a blue header with the title 'Derivation of Use Table at purchaser's prices'. Below the header, there is a single bullet point: '* Refer to Handout 8, showing the Use Table in basic prices for these transactions.' At the bottom left, there is a logo for RRB (Rural Reconstruction Bank) and at the bottom right, there is a logo for SIAP (State Investment Agency for Agriculture and Fisheries).

1.36 Deriving GDP from SUT presentation

Deriving GDP from SUT presentation



- * **1. Production approach**
Sum of value added and taxes less subsidies on products
- * **Value added:**
 - * Mining = 580
 - * Manufacture = 763
 - * Public admin = 193
 - * Trade = 100
 - * Sales tax: = 100
 - * => GDP = 1,736



1.37 Deriving GDP from SUT presentation

Deriving GDP from SUT presentation



- * **2. Expenditure approach**
 - * Consumption - household 890
 - * Consumption - government 243
 - * Gross fixed capital formation 530
 - * Change in inventories 23
 - * Exports of goods and services 520
 - * less Imports of G & S 470
 - * => GDP = 1,736



1.38 Deriving GDP from SUT presentation

Deriving GDP from SUT presentation

- * **3. Income approach**
 - * Compensation of employees **973**
 - * Taxes less subsidies on production **108**
 - * Consumption of fixed capital **215**
 - * Operating surplus **440**
 - * => GDP **= 1,736**





1.39 Deriving GDP from SUT presentation

Deriving GDP from SUT presentation

The three approaches are identical, when complete information is available.

- Supply and use tables are a powerful tool for compilation of GDP and reconciliation of different estimates of GDP.
- The broad supply-use (or commodity flow) approach can be used to undertake studies of particularly important commodities.



1.40 Thank You



Notes:
