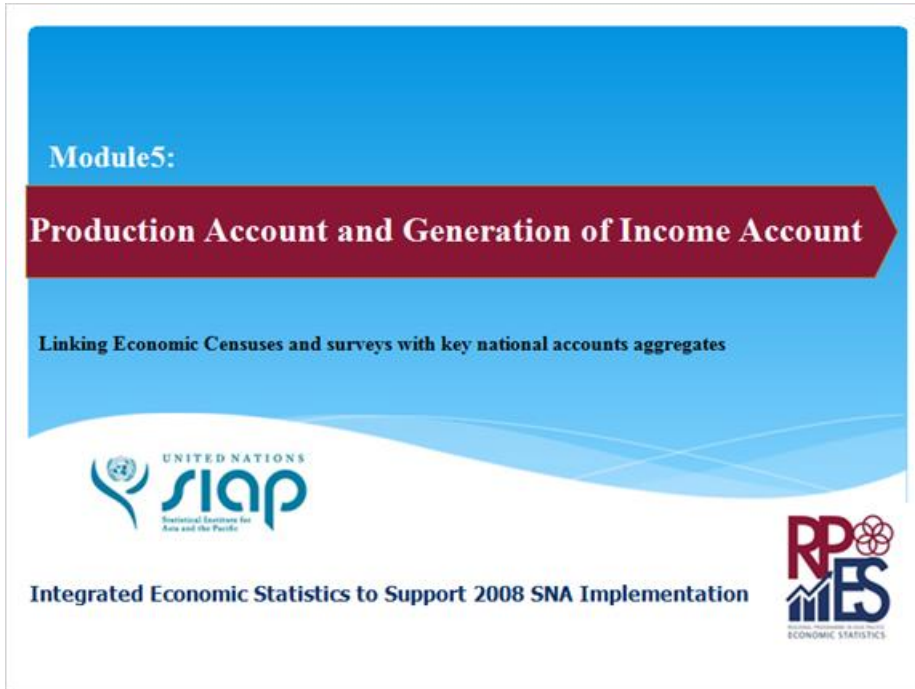


Module5: Production Account and General of Income Accounts

1. Production-Income Generation Accounts

1.1 Session 3.1 to 3.3: Production Account and Generation of Income Account



Notes:

1.2 Contents



The slide features a blue header with the word "Contents" in white. Below the header is a white box with a thin blue border containing a bulleted list of seven items. At the bottom left is the RP/ES logo, and at the bottom right is the SIAP logo.

Contents

- Economic Assets
- Economic Flows
- Transactions
- Production, Primary Income, Property Income
- Valuation of Transactions
- Expenditure – final use
- Main Identities and Sequence of Accounts

1.3 Economic Assets

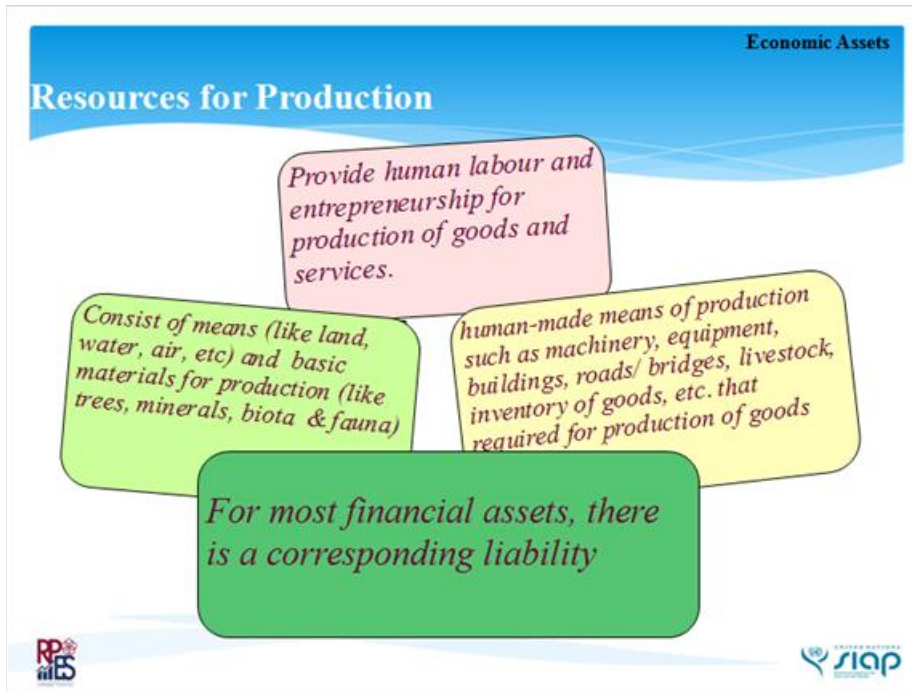


The slide has a blue background with the title "Economic Assets" centered in white. At the bottom left is the United Nations SIAP logo, and at the bottom right is the RP/ES Economic Statistics logo.

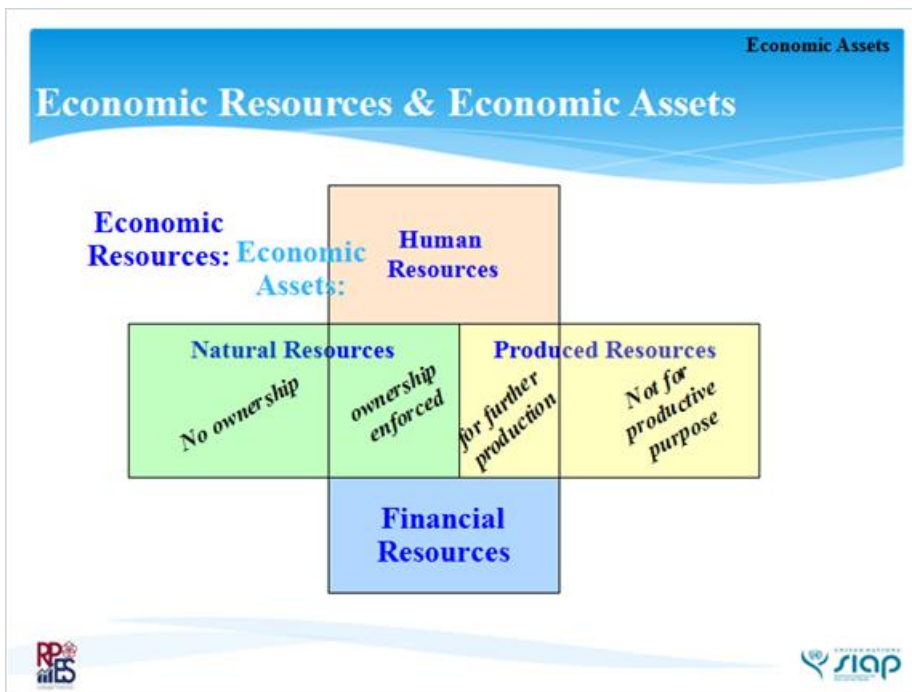
Economic Assets


1.4 Resources for Production



1.5 Economic Resources & Economic Assets



1.6 Some Questions




Economic Assets

Some Questions

Are the following economic assets? If 'yes', what kind of economic assets? If not, why not?

1. Finished goods of a company in its warehouse -
2. Automobiles of households -
3. Refrigerator used by a restaurant -
4. Stock of fish in open sea -
5. Shares of a company held by a household -
6. Milk animals in a dairy farm -
7. Stock of grains held by households for its own consumption -
8. Uncultivated trees in reserved forests -



1.7 Questions & Answer



Economic Assets

Some Questions with Solutions

Are the following economic assets? If 'yes', what kind of economic assets? If not, why not?

1. Finished goods of a company in its warehouse - **Finished goods held in the stock are produced assets. When they are sold in market the company gets economic benefits.**
2. Automobiles of households - **NOT an economic asset. Durable goods held by the households for consumption are not treated as economic assets, since no economic benefit is derived from them.**
3. Refrigerator used by a restaurant - **Produced assets – provides economic benefit to the restaurant.**
4. Stock of fish in open sea - **NOT economic assets –no one owns them.**
5. Shares of a company held by a household - **Financial asset.**
6. Milk animals in a dairy farm - **Produced asset.**
7. Stock of grains held by households for its own consumption - **NOT economic assets –no economic benefit.**
8. Uncultivated trees in reserved forests - **Non-produced natural assets – owned by the government.**





1.8 Economic Assets - Definition

Economic Assets

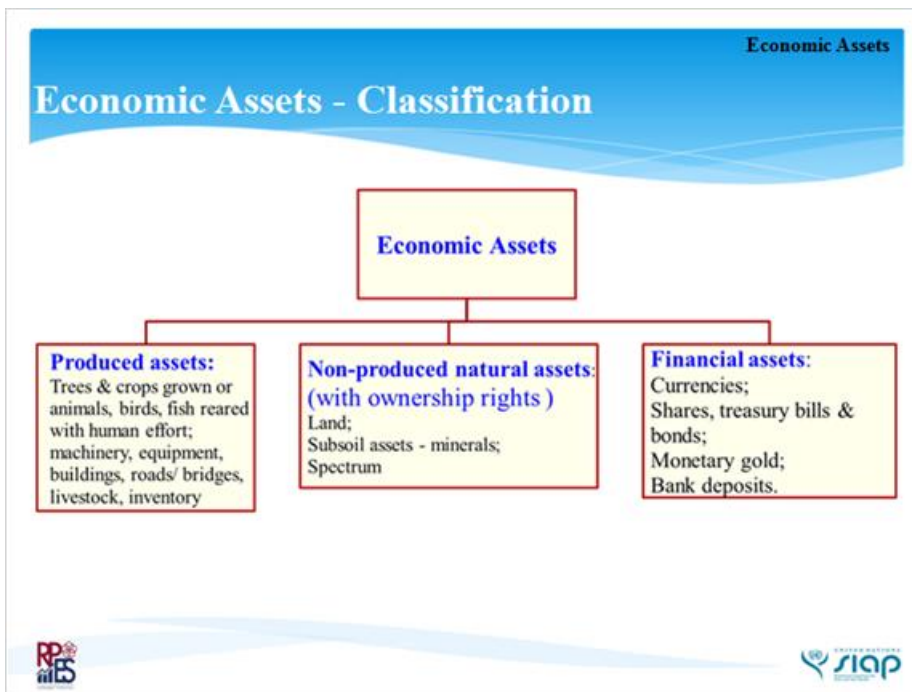
Economic Assets - Definition

Economic assets are store of value
(money value or *exchange* value)

- over which **ownership rights** are enforced, individually or collectively (like by government or community) and
- from which **economic benefits** can be derived by holding it or using it in a production process.



1.9 Economic Assets - Classification



1.10 Household durables - Excluded



Economic Assets

Household durables - Excluded

- Goods held for consumption
 - like stock of food, clothing and
 - household durables » refrigerators, furniture and automobiles

by the households are NOT treated as economic assets in the SNA.

- Well-defined ownership but not used for *productive purposes*.
- Thus, NO *economic benefit* » NOT *economic asset*



1.11 Economic Flows

Economic Flows



1.12 Economic Flows



Economic FlowsEconomic Flows

Economic Flows


All that bring about changes in the volume of economic assets are defined as *economic flows* in the SNA.

Examples:

- sale & purchase of goods & services
- production of goods and services
- payment of taxes
- payments & receipts of transfers
- destruction of economic assets by natural or human-made calamities
- increase in value of an asset caused by holding it over time.




1.13 Questions




Some Questions : Economic Flows

State whether TRUE or FALSE.

1. Destruction of property by calamity is NOT economic flow.
2. Price appreciation of real estate property is economic flow.
3. Donations to charitable organisations is NOT transaction.
4. Discovery of mineral deposit during exploration is transaction.
5. Addition to stock of finished products is transaction.
6. Purchase of precious stones is transaction of capital nature.
7. Drawing water from river for irrigating land is not a transaction.
8. Values of non-monetary transactions are not observable.




1.14 Questions & Answer



Economic Flows

Some Questions & Answers



1. Destruction of property by calamity is NOT economic flow. Q 1. FALSE
2. Price appreciation of real estate property is economic flow. Q 2. TRUE
3. Donations to charitable organisations is NOT transaction. Q 3. FALSE
4. Discovery of mineral deposit during exploration is transaction. Q 4. FALSE
5. Addition to stock of finished products is transaction. Q 5. TRUE
6. Purchase of precious stones is transaction of capital nature. Q 6. TRUE
7. Drawing water from river for irrigating land is not a transaction. Q 7. FALSE
8. Values of non-monetary transactions are not observable. Q 8. TRUE

1.15 Economic Flows – different forms

Economic Flows – different forms

Economic Flows

all kinds of production activities


all sales and purchases of goods & services as well as financial assets

An economic flow reflects

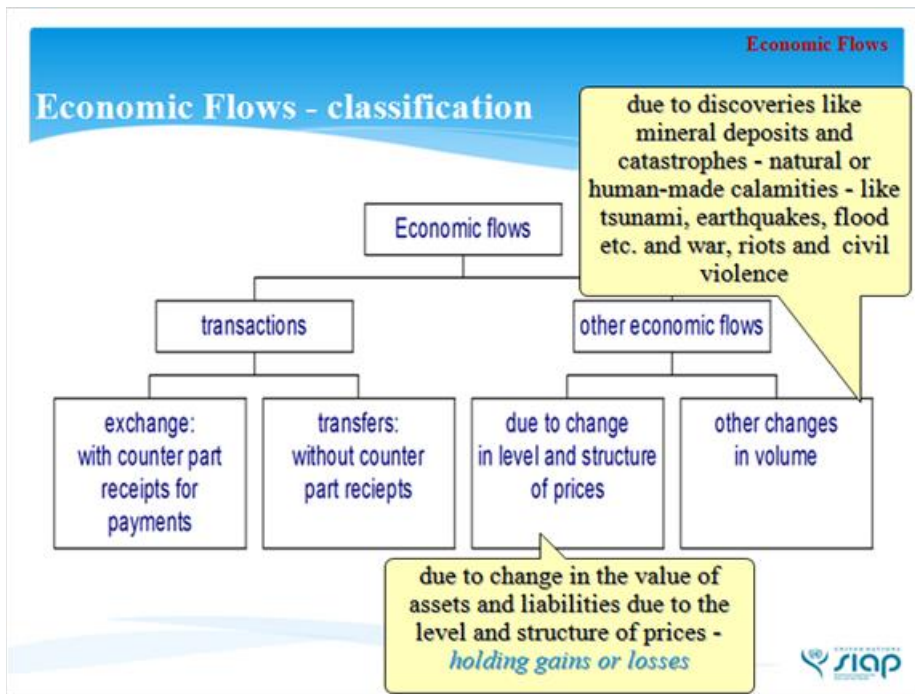
- a) creation, transformation, exchange, transfer or
- b) extinction or emergence of economic value or
- c) change in composition or value of stock of economic assets/liabilities

- The flows in category (a) are called 'transactions';
- those in category (b) 'volume change' and
- those in category (c) are caused by 'changes in level and structure of prices'

Examples:
donations,
contributions,
social benefits,
and income
taxes.



1.16 Economic Flows - classification



1.17 Transactions





1.18 Transactions - Definition

Transactions

Transactions - Definition

- A **transaction** is an economic flow that involves interaction
 - between institutional units by **mutual agreement** or
 - an action within an institutional unit that is analytically useful to treat like a transaction, often because the unit is **operating in two different capacities** (2008 SNA, para 3.7).
- In other words, transactions involve interaction by mutual agreement for exchange of goods & services of economic value and financial assets between institutional units or within institutional unit operating in different capacities.





1.19 Types of transactions

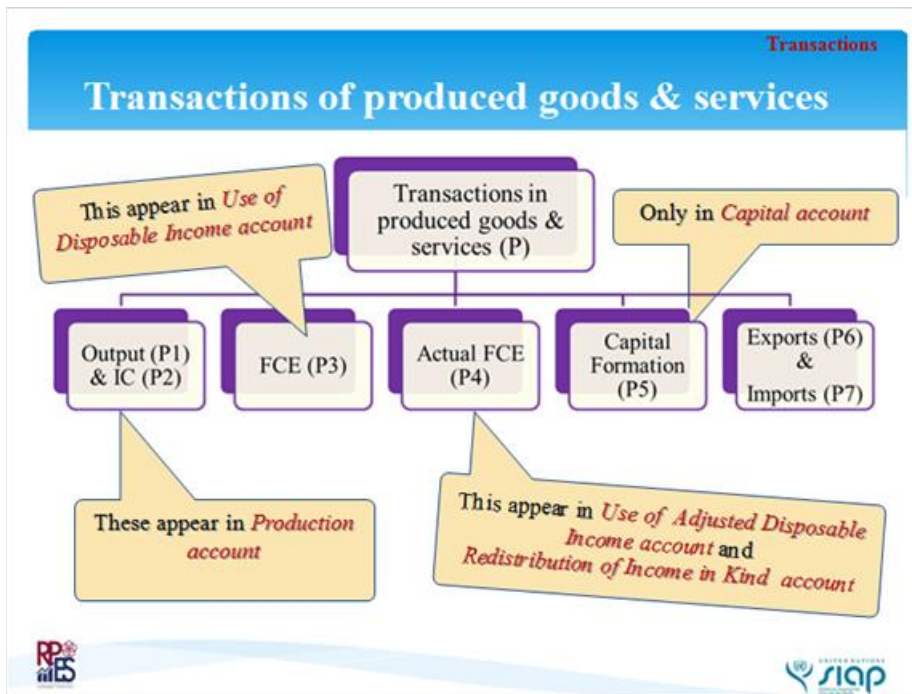
Transactions

Types of transactions

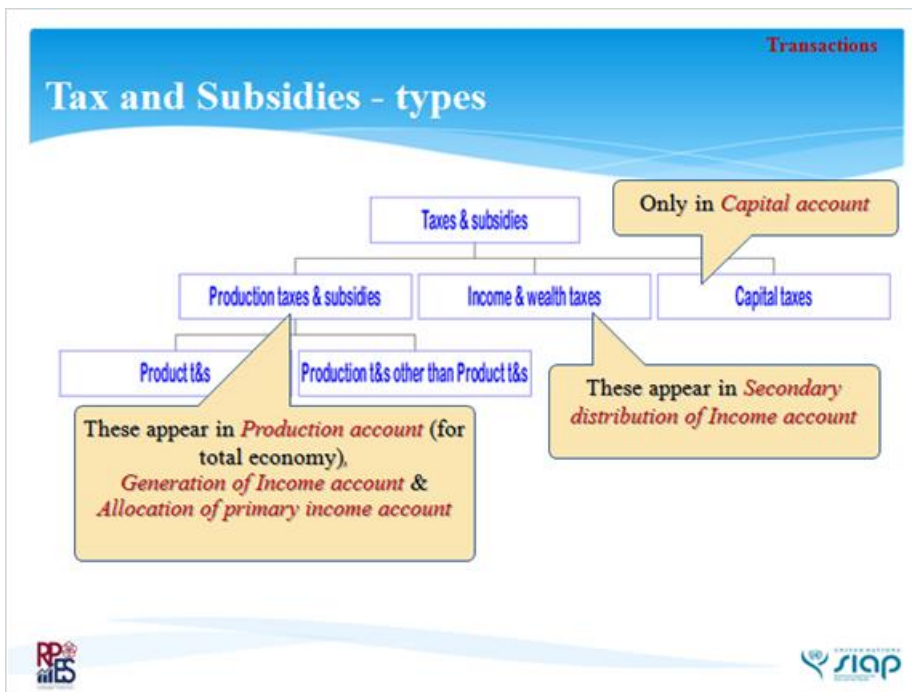
- **Transaction in goods and services:** Transactions in goods and services or products. Two kinds: transactions in
 - Produced goods and services or products [P codes]
 - Non-produced assets [NP codes]
- **Distributive transactions** [D codes]: Two kinds:
 - Distribution of income generated in production of goods & services [D1 – D4 codes]
 - Transfers [D5 – D9 codes]
- **Transactions in financial assets and liabilities** [F codes]: net acquisition of assets and net incurrence of liabilities.



1.20 Transactions of produced goods & services



1.21 Tax and Subsidies - types





1.22 Production Taxes & Subsidies

Transactions


Production Taxes & Subsidies

- **Product taxes & subsidies:** payable / receivable by the enterprises per unit of goods & services produced
 - like excise, sales tax, product subsidies and value added tax (VAT).
- **Other taxes and subsidies on production:** All other taxes / subsidies except those on products that the enterprises pay / receive for engaging in production
 - like payroll taxes / subsidies, taxes on land & building, business licenses, pollution tax and pollution control subsidies.



1.23 Questions



Transactions



A few Questions

**Which of the following are considered as transactions?
If yes, whether transfer or exchange?**

- a) Picking co-passengers pocket
- b) Production of crops
- c) Payment of income tax
- d) Sale of smuggled goods
- e) Entire payment of non-life insurance
- f) Payment made after losing a bet
- g) Hiring services of a professional murderer to kill one's rival



1.24 Production



1.25 Production Boundary of 2008 SNA



Production

Production Boundary of 2008 SNA


includes:

- production of all individual or collective goods or services that are supplied to units or intended to be so supplied
- Own-account production of all goods that are retained by their producers for their own final consumption or capital formation
- Own-account production of the following services by households and corporate sectors:
 - housing services by owner-occupiers (ownership of dwellings)
 - domestic and personal services produced by employing paid domestic staff
 - services that produces intellectual property products for own-account capital formation.

Intellectual property products are results of research & development activities or innovations and artistic endeavours.
Examples:
results of research and development, mineral exploration and evaluation, computer software and databases, and entertainment, literary or artistic originals.



1.26 Questions




Some Questions – Production Boundary


State whether the following are in the production boundary

Note down your answers for each question before proceeding.


1. Free education services provided by government & NPISHs
2. Banking services not explicitly charged for – like FISIM.
3. Activity of picking pocket.
4. Services of owner-occupied dwellings
5. Earning from gambling
6. Smuggling.
7. Teaching ones own children at home.
8. Making dress for the children in the household.



1.27 Questions & Answer



Answers: Production Boundary





1. Free education services provided by government & NPISHs **Q 1. Yes**
2. Banking services not explicitly charged for – like FISIM. **Q 2. Yes**
3. Activity of picking pocket. **Q 3. No, it is NOT a transaction.**
4. Services of owner-occupied dwellings **Q 4. Yes**
5. Earning from gambling **Q 5. No, it is transfer.**
6. Smuggling. **Q 6. Yes, it is illegal trading.**
7. Teaching ones own children at home. **Q 7. No, service within household.**
8. Making dress for the children in the household. **Q 8. Yes, dress making is production of goods.**

1.28 Value Added – the measure of production

Production

Value Added – *the measure of production*

- *Gross Value Added (GVA)* is defined as the *gross value of output (GVO) minus* the value of goods & services used as *intermediate consumption (IC)* to produce the output.
$$GVA = GVO - IC$$
- The value of goods & services produced in an economy is measured as the sum of *GVA*s of **all resident production units** of the economy.
$$GDP = \sum GVA$$
- Value added in net terms, the *Net Value Added (NVA)*, is the measure of production of an enterprise.
$$NVA = GVA - CFC.$$



1.29 Factor Compensation



Production

Factor Compensation

Services provided by these *factors of production* are called *factor services*.

The payments made for use of factor services by the enterprises are called *factor payment* or *factor compensations*.

Factor of production	Factor payment / compensation
Labour	Compensation of employees (CE)
Land & natural resources	Rent
Capital	Interest
entrepreneurship	Profit
Mixed Income	(CE + profit + interest + rent) for the (own-account) household enterprises.



1.30 Rent and Rentals



Production

Rent and Rentals

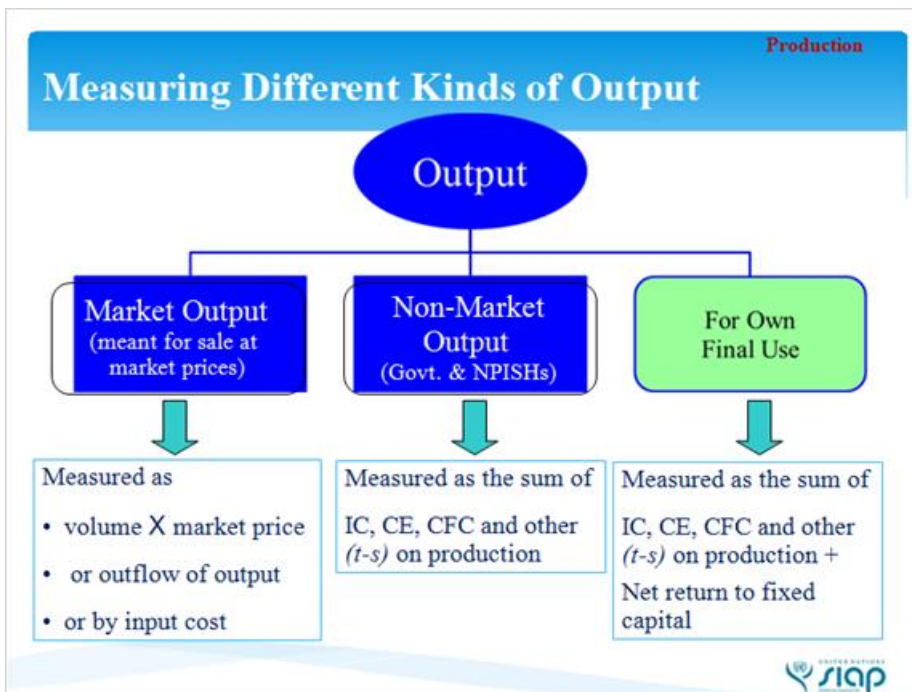
Both are payment for getting users rights on non-financial assets:

Rent for use of non-produced non-financial assets
Examples: rent on land and other natural resources, payment made to the government by a mobile phone company for spectrum rights etc.


Rental for use of produced non-financial assets.
Examples: rental for building, machinery, transport equipment, artistic originals, patents, etc.

1.31 Measuring Different Kinds of Output




1.32 Questions



Production Boundary

Two more questions





Question 1:
Other things remaining the same, when a bachelor marries his lady cook, GDP (increases / decreases / remains the same)

Answer to Question 1: decreases [because services provided by a hired cook is in the production boundary, while services provided by household members are not]

Question 2:
Other things remaining the same, when a spinster living in a rented dwelling marries the landlord, GDP (increases / decreases / remains the same)

Answer to Question 2: remains the same [because housing services provided by dwelling units – whether owned or rented - are always included in the production boundary]





1.33 Recording of Output

Measuring Output

Recording of Output

Output is recorded if the goods and services being produced

- are **provided** (sold or given free) to other institutional units
- are used for **capital formation** of the same establishment;
- enter **inventories**
 - even if eventually are withdrawn from inventories for use as intermediate consumption in the same establishment in a later period;





1.34 Recording of Output (contd.)

Measuring Output

Recording of Output (contd.)

Output is recorded if the goods and services being produced

- by a household unincorporated enterprise (growing maize, for example) are used for the **household's own consumption**
- remain unfinished (**work-in-progress**) at the end of the accounting period - recorded as being produced and entering inventories.





1.35 Disposal of Output

Measuring Output

Disposal of Output

Output of an enterprise is disposed of in the following three ways:

- **Sales** - Sale of goods and services for cash, credit, or barter
- **Change in inventory (CII)** - addition/reduction to inventory of finished goods, goods in process, or goods for resale
($CII = \text{closing inventory} - \text{opening inventory}$)
- **Own final use** - goods and services used for own final consumption and own capital formation



1.36 Measuring



1.37 Intermediate Consumption (IC)

The slide has a blue header with the text "Measuring IC" in red and "Intermediate Consumption (IC)" in white. Below the header, there are three bullet points:

- **IC** is recorded when it is actually used in the process of production.
- Thus, the entire purchase of raw materials is not always included in **IC**.
- **IC** of raw materials is measured as:
purchases *less* **CII** of raw materials.

At the bottom of the slide, there are two logos: the RPO logo on the left and the UN SIAP logo on the right.


1.38 IC in Goods for Processing

Measuring IC

IC in Goods for Processing

When goods are sent for processing from a unit *A* to unit *B*

- **IC** of *B* does NOT include ‘goods received for processing’,
- but, **IC** of *A* includes ‘goods sent for processing’.




1.39 R&D and Mineral Exploration

Measuring IC

R&D and Mineral Exploration

- The output of mineral exploration and R&D activities are capitalised, i.e. treated as capital formation.
- The output of such activities are mostly valued at cost.
- Thus, expenditures on goods & non-factor services for own-account capital formation, such as
 - mineral exploration,
 - R&D and
 - constructions for own useare included in **IC**, **GVO** and **GFCF**.





1.40 Military Inventories

Measuring *IC*

Military Inventories

- Military weapon systems are classified as fixed assets.
- Single-use items, such as ammunition, missiles, rockets, bombs, etc., are treated as military inventories
- These form part of *IC* when put to use.





1.41 FISIM in Production Account

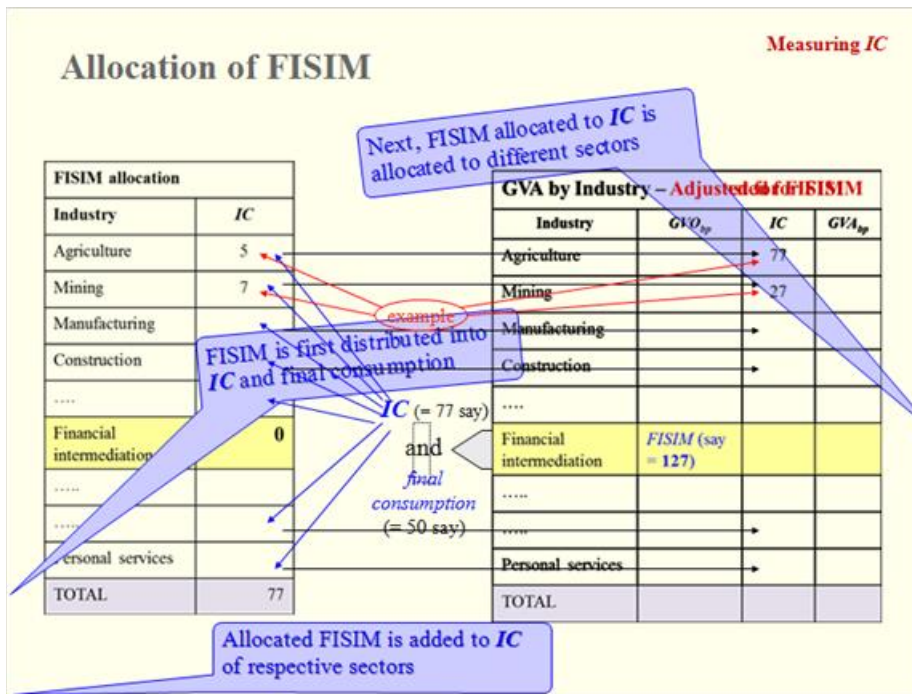
Measuring *IC*

FISIM in Production Account

- *FISIM* is the output of financial intermediation activities of financial institutions.
- The *FISIM* produced by the financial institutions is consumed by non-financial institutional units
 - either as *IC*
 - or as final consumption.
- The use of *FISIM* is not observable – no survey data can give an estimate of this.
- *FISIM* is first estimated as output of the financial institutions and allocated to households and enterprises as their use as *IC* and final use.



1.42 Allocation of FISIM



1.43 Rearranged Transaction in SNA

Measuring IC


Rearranged Transaction in SNA

- In the SNA, often a single monetary transaction taking place between institutional units is decomposed to more than one transactions.
- The values of certain transactions in business accounts are thus rearranged.
- Three kinds of rearrangements of transactions
 - partitioning,
 - rerouting and
 - reallocating

often involve a component of IC.

These re-arrangements help in presenting the values of transactions according to the SNA framework and affect the channels through which the transactions are seen as taking place, the number of transactions that are seen as taking place, or the units that are seen as being involved.

1.44 Questions




Some Questions


State whether TRUE of FALSE

Note down your answers for each question before proceeding.

1. Expenditure on user rights of non-produced resources is not included in *IC*.
2. Military expenditures on purchase of weapons systems is included in *IC*.
3. Expenditures on mineral exploration, *R&D* and all other own-account capital formation valued at cost are included in *IC*, *GVO* and *GFCF*.
4. For an enterprise, the SNA interest is included in property income payment and FISIM in *IC*.
5. Employers' social contributions are included in *IC*.
6. Employees' stock option is included in *CE*.



1.45 Questions & Answers

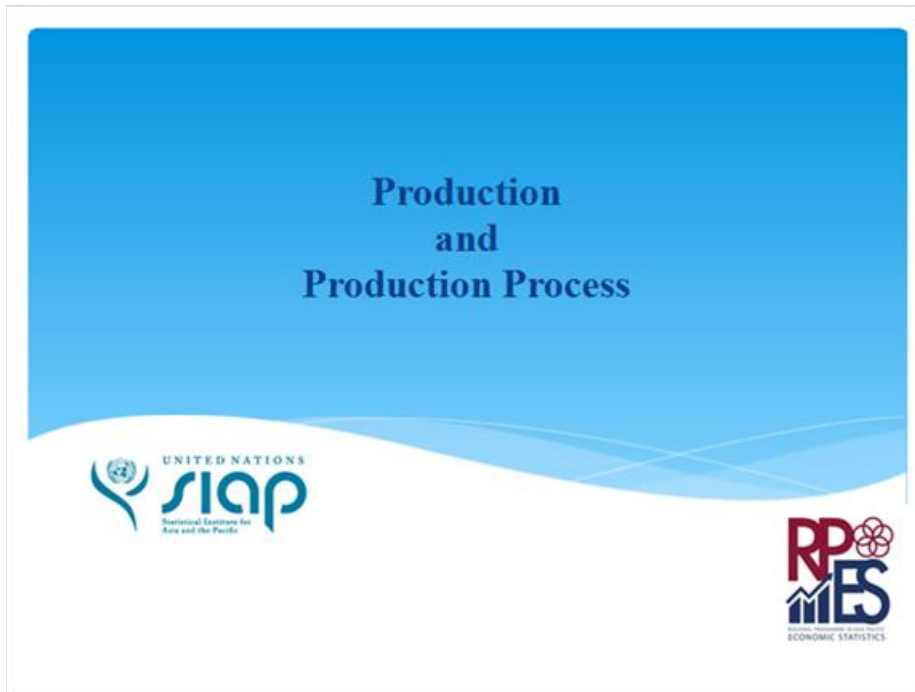


Some Questions & Answers

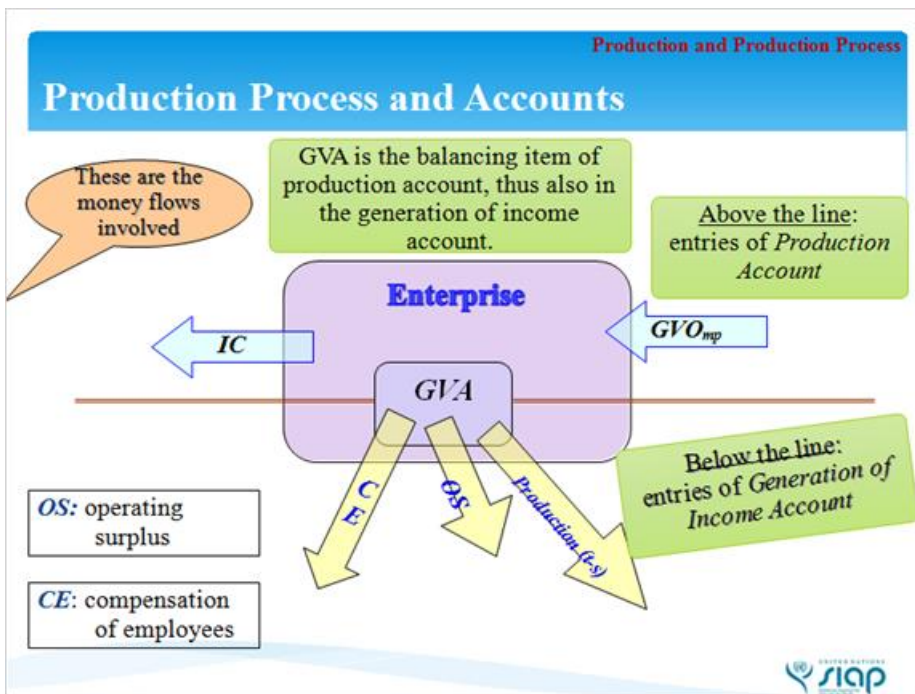
State whether TRUE of FALSE.

1. Expenditure on user rights of non-produced resources is not included in *IC*. **Q 1. TRUE**
2. Military expenditures on purchase of weapons systems is included in *IC*. **Q 2. FALSE**
3. Expenditures on mineral exploration, *R&D* and all other own-account capital formation valued at cost are included in *IC*, *GVO* and *GFCF*. **Q 3. TRUE**
4. For an enterprise, the SNA interest is included in property income payment and FISIM in *IC*. **Q 4. TRUE**
5. Employers' social contributions are included in *IC*. **Q 5. FALSE**
6. Employees' stock option is included in *CE*. **Q 6. TRUE**

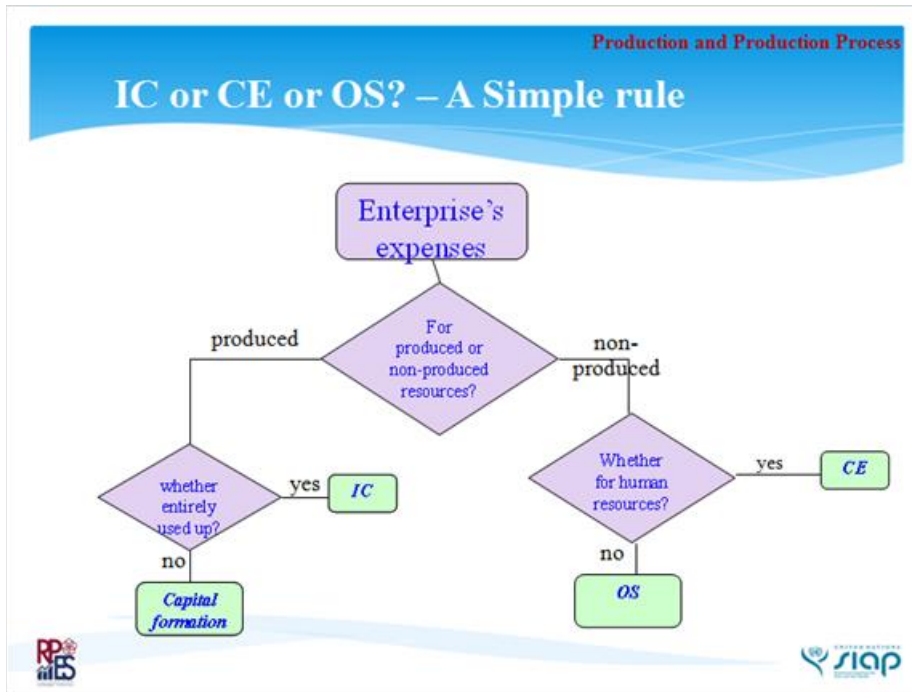
1.46 Production



1.47 Production Process and Accounts




1.48 IC or CE or OS? – A Simple rule



1.49 Questions


Production and Production Process




State whether *IC* or *OS* or *CE* or tax

Note down your answers for each question before proceeding.

- A company's expenses for security guards
 - on the company's employment role
 - provided by another company
 - employed through an agent
- Company expenses for hired office space.
- Company's payment to government for land lease.
- A liquor shop's payment to government for annual permit.
- Payment to a worker for meeting business travel expenses.
- Payment made for distribution rights for a period of time by film distributor to the producer of the film.




1.50 Questions & Answers



Production and Production Process



State whether *IC* or *OS* or *CE* or tax: Answers

1. A company's expenses for security guards
 - a. on the company's employment role Q 1a. *CE*
 - b. provided by another company Q 1b. *IC*
 - c. employed through an agent Q 1c. *CE*
2. Company expenses for hired office space. Q 2. *IC*
3. Company's payment to government for land lease. Q 3. *OS*
4. A liquor shop's payment to government for annual permit. Q 4. *tax*
5. Payment to a worker for meeting business travel expenses. Q 5. *IC*
6. Payment made for distribution rights for a period of time by film distributor to the producer of the film. Q 6. *IC*



1.51 Production Account

Production Account and Generation of Income Account



1.52 Applicability

Production and Income Generation Accounts



Applicability

Production account: records all the production-related flows, other than income generated.

Generation of Income account: records the flows like payment of compensation of employees, operating surplus and mixed income.

These two accounts can be compiled for

- individual production units like individual establishments
- or a group of establishments
- as well as institutional sectors and the total economy.



1.53 Underlying Identities

Production and Income Generation Accounts



Underlying Identities

For total economy

Production account:

$$GDP_{mp} \equiv GVO_{bp} - IC + \text{product } (t-s) + (t-s) \text{ on imports.}$$

Generation of Income account:

$$GDP_{mp} \equiv (CE + OS \& MI) \text{ generated in resident enterprises} \\ + \text{production } (t-s) + (t-s) \text{ on imports.}$$


1.54 Accounts Structure

Production and Income Generation Accounts	
Accounts Structure	
Uses	Resources
Production Account	
Intermediate consumption	GVO_{gp}
	Market output (at basic price)
	For own use
	Non-market
	(<i>t-s</i>) on products & import duties
B.1g GDP	
CFC	
B.n1 NDP	
Generation of Income Account	
	B.1g GDP
	B.1n NDP
Compensation of employees	
Product & import (<i>t-s</i>)	
Other Production (<i>t-s</i>)	
B.2g & B.3g OS+MI (gross)	
B.2n & B.3n OS+MI (net)	

Usually, product & import taxes less subsidies are shown only in the accounts of the total economy.

These are usually not included in the accounts for any segment of the economy.

Thus, product & import taxes less subsidies are shown here only for the total economy.

These are not included in the accounts for any segment of the economy.

1.55 For Household & Corporate Sectors

Production and Income Generation Accounts	
For Household & Corporate Sectors	
Uses	Resources
Production Account	
Intermediate consumption	GVO_{gp}
Expenses on materials for production for own use are included in both these	Market output (at basic price)
	For own use
	Non-market
	(<i>t-s</i>) on products & import duties
B.1g GDP	
CFC	
B.n1 NDP	
Generation of Income Account	
	B.1g GDP
	B.1n NDP
Compensation of employees	
Product & import (<i>t-s</i>)	
Other Production (<i>t-s</i>)	
B.2g & B.3g OS+MI (gross)	
B.2n & B.3n OS+MI (net)	

This is by definition zero.

Only OS for corporate sector

Usually not presented

MI for household enterprises & only OS for ownership of dwellings

1.56 For General Government & NPISHs Sectors


Production and Income Generation Accounts

For General Government & NPISHs Sectors

Uses		Resources	
Production Account			
	Intermediate consumption	GVO_{2p}	
		Market output (at basic price)	0
		For own use	
		Non-market	
		(<i>t-s</i>) on products & import duties	
	B.1g GDP		
	CFC		
	B.n1 NDP		
Generation of Income Account			
		B.1g GDP	
		B.1n NDP	
	Compensation of employees		
	Product & import (<i>t-s</i>)		
	Other Production (<i>t-s</i>)		
	B.2g OS (gross)		
0	B.2n OS (net)		

This is by definition zero

This is by definition zero.
The revenue earned by the government or NPISHs from sale of goods & services at nominal prices is NOT included.



1.57 Why is OS (net) zero for general government and NPISHs?

Production and Income Generation Accounts

Why is OS (net) zero for general government and NPISHs?

General government and NPISHs do NOT carry out market production.

Both non-market output and output 'for own use' for general government and NPISHs are valued at cost as follows:



$$GVO = IC + CE + CFC + \text{other production } (t-s).$$

Thus, the resources-side of generation of income account is


$$GVA = CE + CFC + \text{other production } (t-s)$$

and uses-side consists of CE and other production (*t-s*)

As a result, the balancing item (in net terms) – OS (net) – is zero.

1.58 Questions




Production and Income Generation Accounts: **Some Questions**


Note down your answers for each question before proceeding.

State whether TRUE or FALSE.

1. Usually, product & import taxes less subsidies are shown ONLY in the accounts of the total economy.
2. Production account for a segment of the economy provide GVA at basic prices
3. Cost of raw materials for market production is included in one of the entries of the generation of income account.
4. *CE* is recorded in production account.
5. Cost of materials for R&D activities (for own use) are included in both the resources and uses sides of production account.
6. Production and generation of income account can be compiled for industrial sectors (by ISIC).




1.59 Questions and Answers




Production and Income Generation Accounts

Answers for Quiz



1. Usually, product & import taxes less subsidies are shown ONLY in the accounts of the total economy. **Q 1. TRUE**
2. Production account for a segment of the economy provide GVA at basic prices **Q 2. TRUE**
3. Cost of raw materials for market production is included in one of the entries of the generation of income account. **Q 3. FALSE**
4. *CE* is recorded in production account. **Q 4. FALSE**
5. Cost of materials for R&D activities (for own use) are included in both the resources and uses sides of production account. **Q 5. TRUE**
6. Production and generation of income account can be compiled for industrial sectors (by ISIC). **Q 6. TRUE**



1.60 Thanks

