

## National Accounting

- There are 3 approaches in national accounting.

### a. Output Approach

This is the approach that value the output produced within a particular period of time based on monetary value of final goods and services produced within that particular period of time.

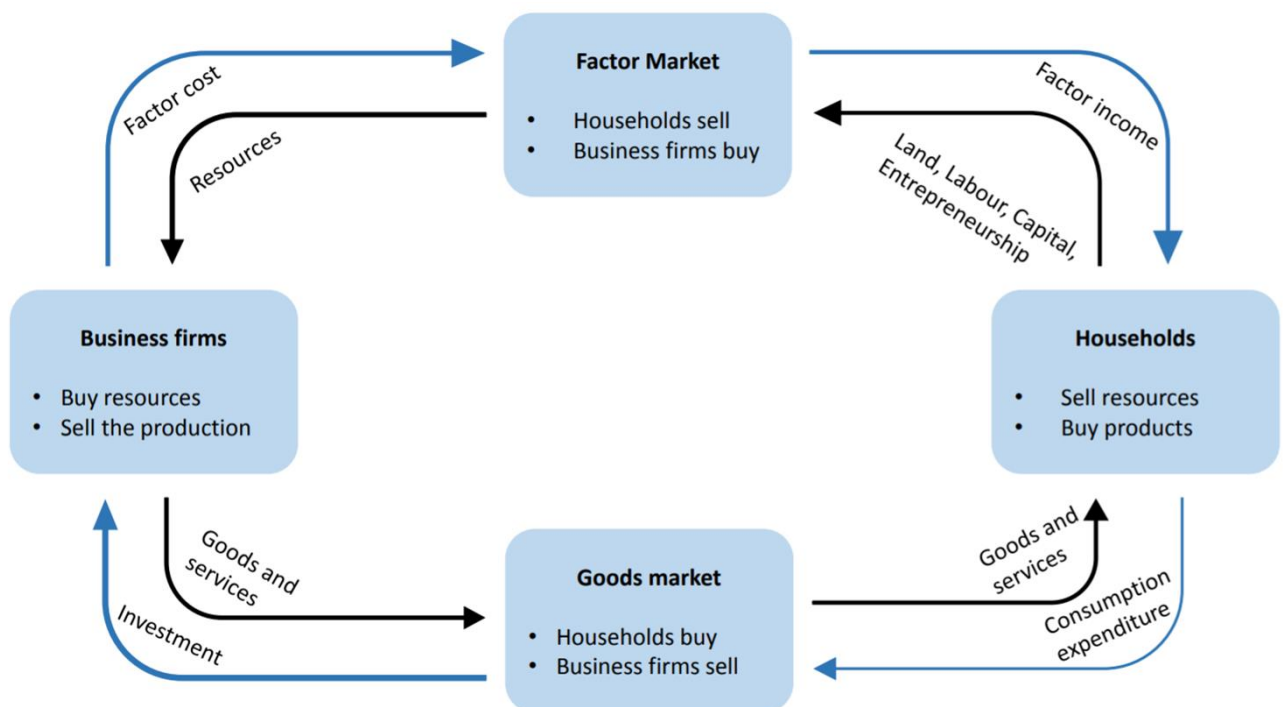
### b. Income Approach

This is the approach that value the output produced within a particular period of time based on monetary value earned by factor owners as factor returns by providing factors of production to produce that particular output.

### c. Expenditure Approach

This is the approach that value the output produced within a particular period of time based on monetary value spent to purchase final goods and services those were produced within the same period of time.

- Therefore when output is calculated all 3 approaches provide the same value since these are 3 different angles that is used to analyses the same output value.



## System of National Accounts (SNA) 2008

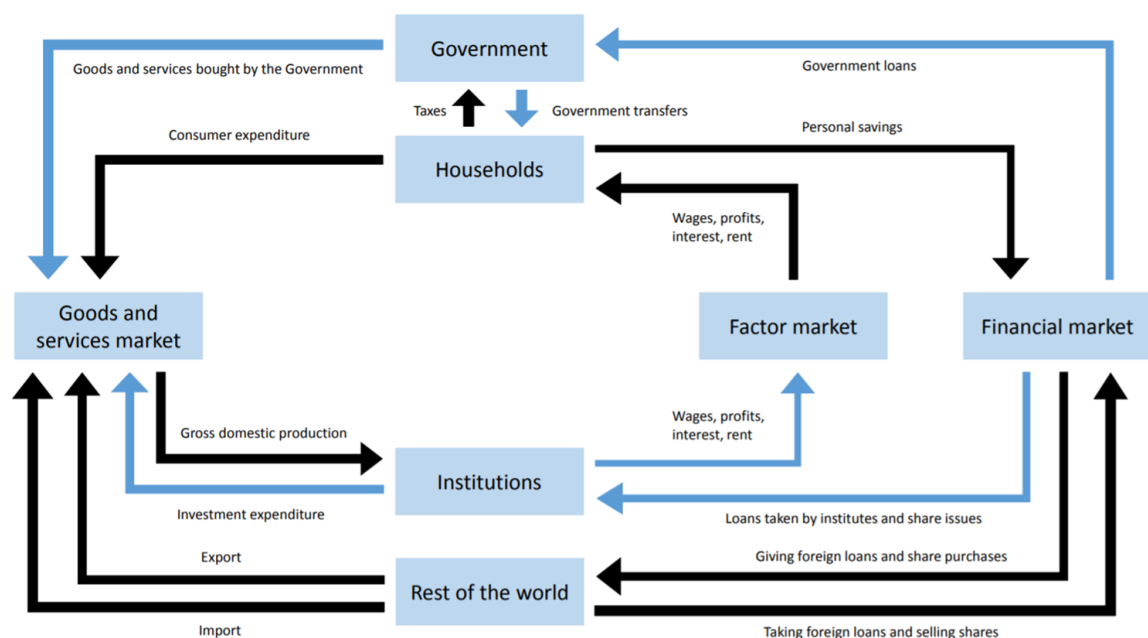
The System of National Accounts (SNA) is the internationally agreed standard set of recommendations on how to compile measures of economic activity in accordance with strict accounting conventions based on economic principles.

- The framework of the SNA provides accounts that are:
  - a. **Comprehensive** - in that all designated activities and the consequences for all agents in an economy are covered.
  - b. **Consistent** - because identical values are used to establish the consequences of a single action on all parties concerned using the same accounting rules;
  - c. **Integrated** - in that all the consequences of a single action by one agent are necessarily reflected in the resulting accounts, including the impact on measurement of wealth captured in balance sheets.

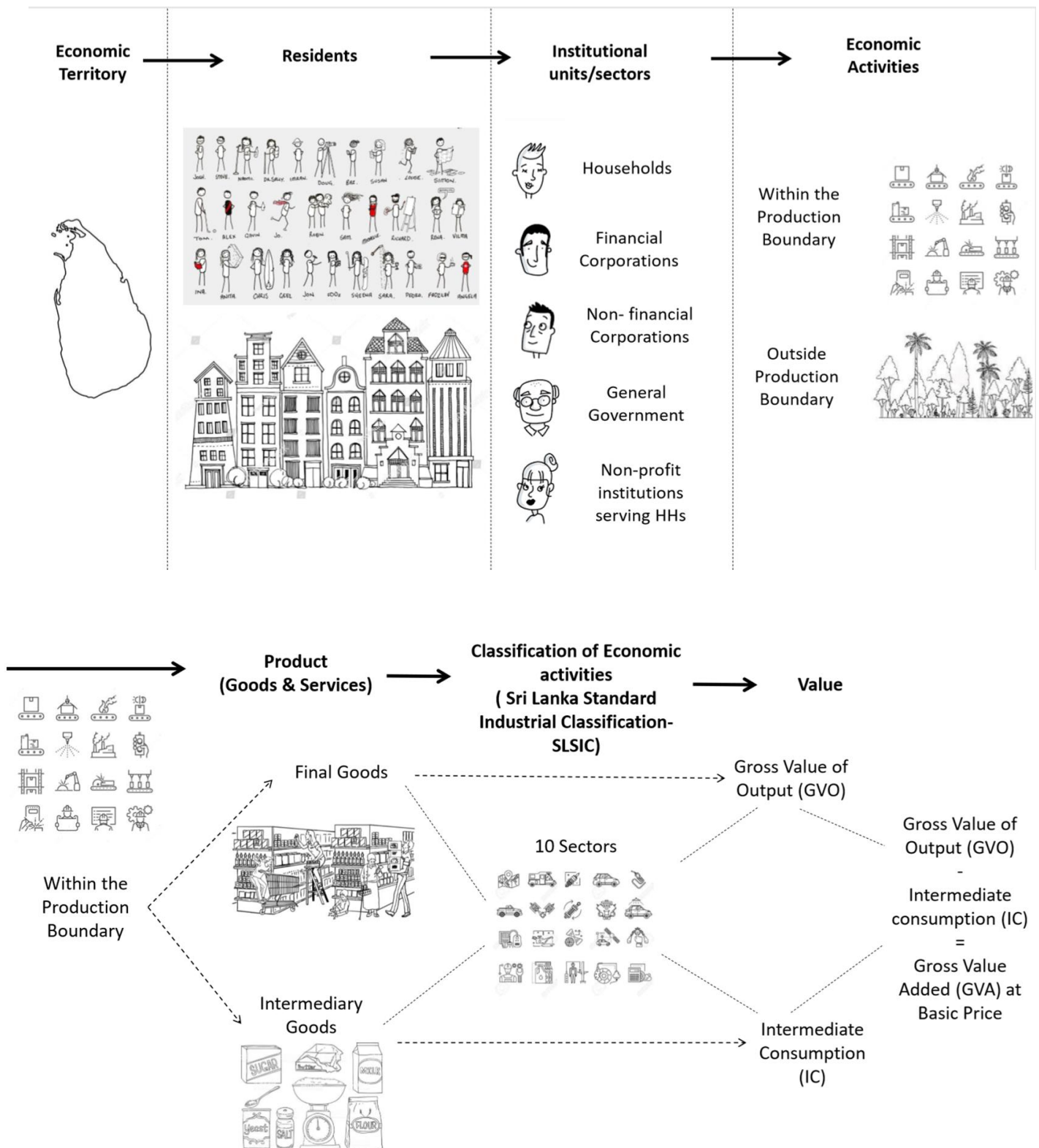
## What is the importance of System of National Accounts (SNA) 2008?

- a. To obtain information on the structure and evolution of a country's economy
- b. For Economic forecasting and analysis
- c. To act as a central statistical framework used as Coordinating framework
- d. To develop countries economic development policy
- e. For international comparisons

## Extended Circular flow of Income used in SNA



## Understanding Output Approach of SNA



### Final goods and intermediate goods

- All productive activities that fall in to production boundary generate two types of goods and services.
  - a. ....
  - b. ....

### Intermediate goods

- ....  
.....  
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- When these goods are used in an eventual production, total value of intermediate goods will be included in the value of final good.
- These goods are sold by one industry to one another where it will be output of former and input of the latter.
- Thereby these intermediate goods become intermediate input to another industry.
- Hence, any input that is purchased from outside to a particular industry can be considered as intermediate input.  
Ex;- fertilizer, raw materials, water, electricity, consultancy services etc.
- When these are used in the production process they are considered as intermediate consumption (IC)

### Final goods

- ....  
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.....
- Therefore final goods can be subdivided in to two main categories;
  - a. ....

b. ....

- These goods are known as final goods since **these goods do not go through any further step in production process.**

Ex:- Cake produced by bakery industry

### **Inputs used in production**

- There are two types of input used in production:

a. ....

b. ....

### **Intermediate input**

- .....  
.....  
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- Further these are already produced input.
- When these inputs are used in to the production, these will get finished within the production itself.  
Ex;- fertilizer, raw materials, water, electricity, consultancy services etc.

### **Primary input**

- .....  
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- Thereby, primary input can be used over and over again in to production.  
Ex;- Land, labour, capital, entrepreneurship
- Primary inputs are the input those create a value addition in the economy.

### Double counting error and eliminating double counting error

- Double counting error in national accounting is a transaction is counted more than once in national account.
- It occurs since both final goods and intermediate goods added together.
- Intermediate goods value is eventually included in the final goods value.
- Thus, when final goods and intermediate goods both are added value of intermediate goods gets double counted.
- Thus, due to double counting error output value of an economy will get overvalued.

### Practical difficulty in identifying final output

- Practically it is really difficulty to identify whether a particular product or a service is a final good or an intermediate good.

Ex;- When electricity, milk, sugar, flour are used by households for their household consumption these goods should be treated as final goods. However when the same products are used by bakery industry they are considered as intermediate goods.

- Therefore, whether a product is a final good or an intermediate good is decided by the purpose to which it is used rather than nature of the product.
- Hence, value addition method is used in calculating the value of total output produced in a particular economy within a specific year.

### Value Addition Method

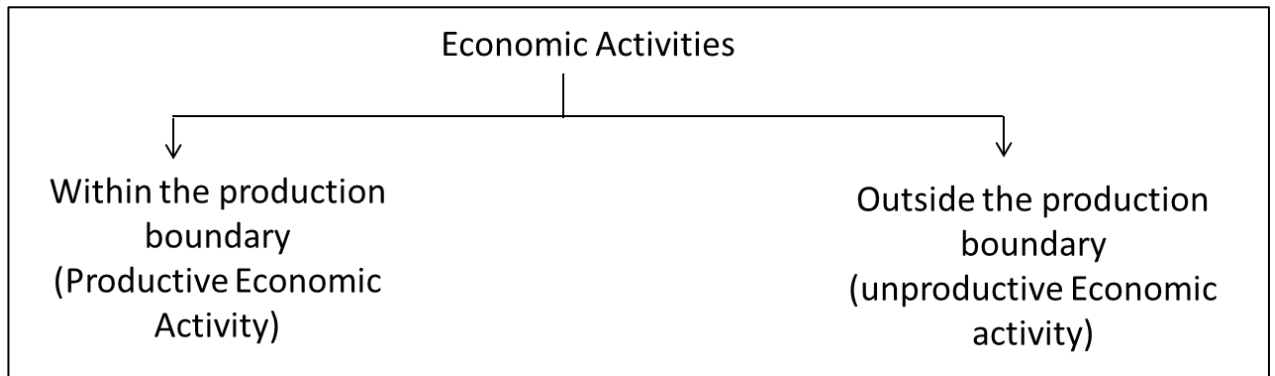
- Value addition is additional value added to the economy from a particular economic activity.
- By deducting input value (intermediate consumption – IC) from the gross value of output (GVO) of a particular economic activity value addition can be obtained.
- In other words in this method value addition is the difference between output value and input value of an economic activity.

<b>Value</b>	<b>Gross Value of Output</b>	-	<b>Intermediate consumption</b>
<b>Addition =</b>	(Price X Quantity)		(Input such as raw materials or any other Intermediate goods and services)

<b>Value</b>	<b>GVO</b>	-	<b>IC</b>
<b>Addition =</b>			

### Production boundary

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- It is important to understand that all economic activities those are taken place in an economy will not get included, when output value of the economy of a particular year is calculated.
- Thereby, some of the economic activities that have taken place in the economy in a particular year will get eliminated, when output value is calculated.
- Thus, based on the concept that whether economic activity is included in to production boundary or not, all economic activities can be categorized as;
  - a. ....  
.....
  - b. ....  
.....



### Economic activities those fall outside production boundary

01. ....

- Production is an activity,
  - a. **carried out** under the responsibility, control and management of **an institutional unit**,
  - b. that **uses inputs** of labour, capital, and goods and services
  - c. to **produce outputs** of goods and services.
- ....
- Thus, **a purely natural process without any human involvement or direction is not considered as production** in an economic sense.

#### Examples :-

- a. The unmanaged growth of fish stocks in international waters is not production, whereas the activity of fish farming is production. (Ex;- Pawn Farms)
- b. Growth of trees in a maiden forest is not production, whereas the activity of agriculture is production.
- c. Free flow of water in a river or a stream is not production, whereas water collected and used for agriculture is production.



## 02. Pure financial transactions

- If an economic activity is a pure financial transaction such as depositing money in savings or fixed deposit, buying government securities, purchasing equity shares etc.
- From these economic activities, a new good or a service will not get generated during the accounting period. Thereby, these transactions will get excluded from output value calculation.

- .....
- .....
- .....

**Example :-**

a. ....

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b. \_\_\_\_\_

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C. \_\_\_\_\_

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\_\_\_\_\_

d. ....

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### 03. Transfer Payments

- Transfer payments are unilateral payments (one-sided payments) made by government (or NPISH) to households.  
Ex;- Pension, Samurdhi, free school uniforms
- When transfer payments are made, it does not create a new good or a service to the economy

but it is only an act of income redistribution from one institutional unit to another. Hence, transfer payments are excluded from national accounts calculations.

- However, if a household has spent the money that they received from the transfer payment on a newly produced goods and services, it is getting captured in output calculation.

**Example :-**

- a. Samurdhi payment will not get captured in output calculation but newly produced goods and services purchased by the Samurdhi holder from Samurdhi income is captured in output calculation.
- b. Pension payment will not get captured in output calculation but when pension holder buy newly produced goods and services using his pension will get captured in output calculation.

**04. Re-sale of a used good ( Second hand goods)**

- Even though all transactions related resale of used goods are not excluded in output calculation, some of the transactions related to resale of used goods (second hand goods) will get excluded considering they do not fall in to production boundary.
- .....
- .....
- Different types of transactions related to sale of second hand goods:
  - a. Sale of second hand good between resident household unit and another resident household unit will get **excluded** from output calculation since it does not create new good or a service.  
Ex;- if Sunimal sells his used vehicle to Aruna for Rs. 500,000 in 2018, this transaction will not get captured in 2018 output.

- b. ....
- .....
- .....
- .....
- .....

Example ;-

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- c. ....
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Example;-

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- d. ....
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Example;-

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- e. If a transaction takes place between resident household and a resident business with regard to recyclable used item such as paper, glass etc. it has to get captured as a negative value of household consumption and as an intermediate good of the business unit.

Ex;- Suppose Kamal bought Rs.10,000 worth of paper for his personal use to write notes for his exam. After the exam he decides to sell his notes to paper recycle business since he no longer wants his notes. Paper recycle business agrees to pay Rs.1000/- to Kamal. Therefore, in output calculation Kamal's final consumption will get captured as 9,000 (10,000 -1000) but not 10,000. Further, for the paper recycle business Rs.1,000 worth of used paper becomes an intermediate good.

#### 05. Do-it-yourself activities

- Do-it-yourself activities are the activities carried out ( production of goods and services) by households for their own consumption using their own labour power.
- **Even though all of these do it yourself activities are related to the production of new good or a service, some of these activities are not included in national accounts.**

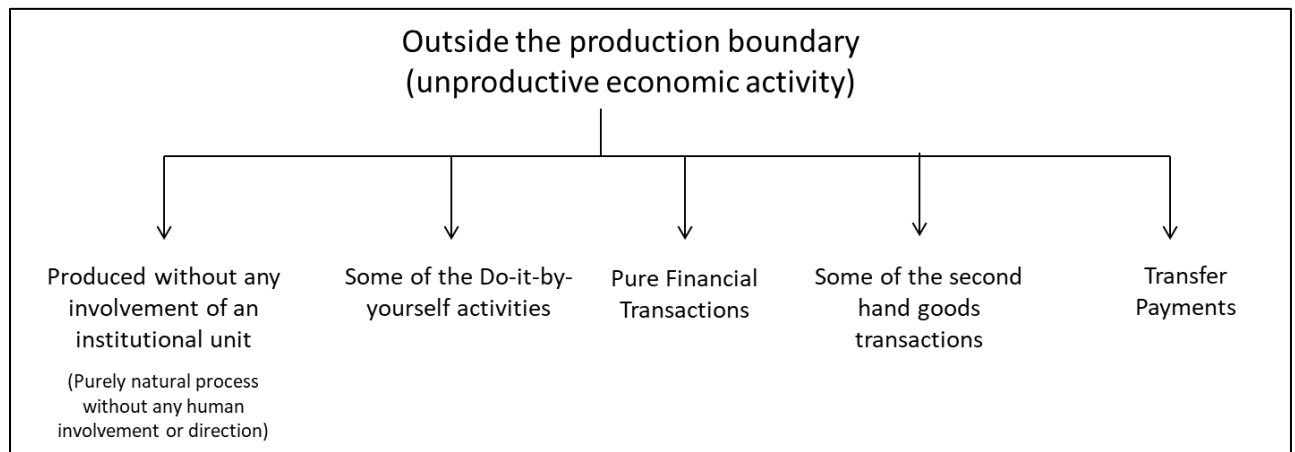
##### a. Self-Services included and excluded in National Accounts

- Some of the self-service activities are excluded from national accounts due to;
  - a. These activities carried out using the labour contribution of HHs will not affect any other economic activities of the economy.
  - b. These are not aimed for market transaction
- Self-service activities those **are excluded** in National Accounts are;
  - a. Household cleaning
  - b. House decorations
  - c. The preparation and serving of meals
  - d. The care, training and instruction of children
  - e. The care of sick, infirm or old people
  - f. Providing transportation to family members

##### b. Self-service activities those are included in National Accounts are;

- a. Farming
- b. Collecting crops from forests
- c. Collecting fire wood from forests
- d. weaving panels

- e. Fishing
- f. Hunting
- g. Preserve fruits, leather, ghee etc.
- h. Other kinds of processing such as weaving cloth; dress making and tailoring; the production of footwear; the production of pottery, utensils or durables; making furniture or furnishings; etc.;
- i. The production of other primary products such as mining salt, cutting peat, etc.;



### **Economic activities those fall in to production boundary**

- a. The production of all goods and services that are supplied to units other than their producers. (or intended to be so supplied, including the production of goods or services used up in the process of producing such goods and services.)
- b. The own- account production of all goods that are retained by their producers for their own final consumption or gross capital formation.
- c. The own account production of knowledge- capturing products (such as consultancy reports, computer programs, music, films etc.) that are retained by their producers for their own final consumption or gross capital formation **but excluding such products produced by households for their own use:**
- d. The own- account production of housing services by owner occupiers
- e. The production of domestic and personal services by employing paid domestic staff.
- f. Either for personal consumption or for sale and thereafter to store the goods that are retained such as agricultural goods, crops those have not cultivated, cutting fire wood, hunting, fishing, weaving cloths, tailoring etc.

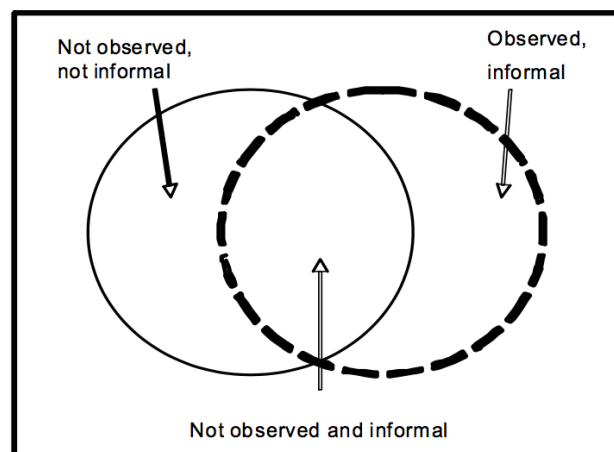
- g. ....
- .....
- .....
- h. ....
- .....
- .....
- i. Natural growth of **cultivated forests**.
- j. ....
- .....
- .....
- k. ....
- .....
- l. Research and development carried out by an entrepreneur.

### **Non-Observed Economic activities (NOE)**

- Non-observed economic activities are activities that (due to one reason or another) **are not captured in regular statistical enquiries**.
- In other words, Non-Observed Economy (NOE) **is a part of the economy that is difficult to measure since they are carried out in an unsystematic manner which makes it difficult to capture by the surveys**.
- Even though they are not captured in the surveys, it is **incorrect to judge** that these economic activities are **not included in national accounting figures**.
- In most of the countries these activities are included in to national accounts through estimations.
- There are 3 types of such activities;
  - a. Informal economic activities
  - b. Producer is anxious to hide a legal activity
  - c. Illegal economic activities ( underground economic activities)

### 01. Informal Economic Activities

- Informal economic activities are the economic activities **those are not taxed, monitored by any form of government or included in any gross domestic product (national accounting).**
- These economic activities are both **legal and productive.**
- Even though there is no universally accepted definition for informal economy several characteristics are used to measure whether it is 'formal' or 'informal' sector.
- They are;
  - a. **Organizational structure** (Informal sector has unorganized organizational structure)
  - b. **Regulations** (Informal sector is not formally registered under regulations)
  - c. **Size** (Informal sector is a very small scale operation)
- Some of the informal economic activities are observed and statistical data is available to include in to national accounting. Ex;- Consider a household that lets rooms to visitors for one or several nights. (The value of this activity may be captured in a survey directed at tourism activities)
- Such informal activities are included in national accounts.
- However, some of the **informal economic activities are 'not observed'** and thereby those are included to in national accounting based on estimations. Ex;- Street traders, taxi-drivers .
- Therefore there is an overlap between non-observed and informal economic activities. Following graph describes that overlap.



## 02. Producer is anxious to hide a legal activity

- Certain activities may clearly **fall within the production boundary** of the SNA and also be **quite legal** but **deliberately hide from public authorities** for the following kinds of reasons:
  - a. To avoid the payment of taxes
  - b. To avoid the payment of social security contributions (EPF/ETF)
  - c. To avoid having to meet certain legal standards such as minimum wages, maximum hours, safety or health standards, etc.;
  - d. To avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms

## 03. Illegal economic activities ( underground economy)

- There are **two** kinds of illegal production:
  - a. The production of goods or services whose sale, distribution or possession is **banned by law**;
  - b. Production activities that are usually legal but become illegal when **carried out by unauthorized producers**; for example, unlicensed medical practitioners.

Examples :-

- a. Commissions & bribes
- b. Smuggling
- c. Illicit liquor
- d. Prostitution and drug dealing

## Institutional Units

- The institutional units identified in the SNA are the economic units that can engage in the
  - a. full range of transactions
  - b. engage in economic transactions by taking economic decisions
  - c. are capable of owning assets and incurring liabilities on their own
- Institutional units are **centers of decision-making** (economic agents) for all aspects of economic behaviour.
- These institutional units can be mainly divided in to two categories;



- a. Households that are comprised of a person or group of people.
- b. Legal and social entities those are accepted by law and social norms which are independent from persons;
  - General government
  - Financial corporations
  - Non- financial corporations
  - Non-profit institutions serving households.

### Institutional Sectors

- The institutional units are grouped together to form institutional sectors, on the basis of their principal functions, behaviour and objectives:

Institutional units/ sectors	Definition	Example
1. Households	<ul style="list-style-type: none"> <li>• <i>Households are institutional units consisting of one <b><u>individual or a group of individuals</u></b>.</i></li> <li>• <i>All physical persons in the economy must belong to one and <b><u>only one household</u></b>.</i></li> <li>• <i>The principal functions of households are to <b><u>supply labour, and, act as entrepreneurs</u></b>.</i></li> <li>• <i>The entrepreneurial activities of a household consist of <b><u>unincorporated enterprises that remain within the household</u></b>.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Families and individual</li> <li>• Clergy</li> <li>• Prisoners</li> <li>• Home based self-employments</li> <li>• People who live in elderly homes</li> </ul>
2. Non-financial corporations	<ul style="list-style-type: none"> <li>• <i>Non-financial corporations are institutional units that are principally <b><u>engaged in the production of market goods and non-financial services</u></b>.</i></li> <li>• <i>This includes both private and public sector NFCs.</i></li> </ul>	<ul style="list-style-type: none"> <li>• DSI</li> <li>• Telecom</li> <li>• Dialog</li> <li>• Odel</li> <li>• DCSL</li> <li>• SLBC/SLRC</li> </ul>
3. Financial corporations	<ul style="list-style-type: none"> <li>• <i>Financial corporations are institutional units that are principally engaged in <b><u>financial services including financial intermediation</u></b>.</i></li> <li>• <i>This includes both private and public sector FCs.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Commercial bank</li> <li>• Sampath bank</li> <li>• Peoples' bank</li> <li>• BOC</li> <li>• Seylan bank</li> <li>• NSB</li> </ul>

4. Government units (including social security funds )	<ul style="list-style-type: none"> <li>General government consists of institutional units that, <u>perform the role of economic regulation, produce services (and possibly goods) for individual or collective consumption mainly on a non-market basis and redistribute income and wealth.</u></li> </ul>	<ul style="list-style-type: none"> <li>Sri Lanka Army</li> <li>Sri Lanka Police</li> <li>Environmental Authority</li> <li>Department of Agriculture</li> <li>Department of Fisheries</li> <li>Department of Education</li> </ul>
5. Non-profit institutions serving households (NPISHs)	<ul style="list-style-type: none"> <li>Non-profit institutions serving households (NPISHs) are legal entities that are principally engaged in <u>the production of non-market services for households or the community at large and whose main resources are voluntary contributions.</u></li> </ul>	<ul style="list-style-type: none"> <li>Red cross</li> <li>Helpage</li> <li>Sumithrayo</li> <li>Save the children</li> <li>Sarvodaya</li> <li>Welfare societies</li> <li>Employee Unions</li> </ul>

### Special Note :-

- Non-resident units (Households and Corporations) those engage in transactions with resident units can be considered as the 6<sup>th</sup> Institutional unit; 'Rest of the World' (ROW)

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- .....
- .....
- .....
- .....

### Residents

- The concept of residence in the SNA is not based on nationality or legal criteria.
- In other words in new classification 'residents' does not refer to the 'citizens'.
- In SNA 2008 residents refers to institutional unit of a country:
  - When it has a primary economic interest in the economic territory of that country; and
  - When it engages for an extended period (one year or more) in economic activities on this territory.

- Economic territory is comprised of resident institutional units. If there are any institutional unit that does not belong to the a particular economic territory is considered as non-residents or rest of the world (ROW)
- Thereby, if there is any party such as tourists, temporary traders, and emigrant workers **who engaged in economy activities with in a country less than a year will not be considered as residents.**
- In deciding residents, legal criteria are not relevant. Even if a person has registered in a country if they are not engaged in economic activities less than a year they are not considered as residents.
- Thereby, it is important to understand following parties are also considered as residents even if they might not physically present in the country during the survey period.

- a. ....  
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- b. ....  
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- c. ....  
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- d. ....  
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- e. ....  
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- f. ....  
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## **Economic Territory**

- In national accounting '**total economy**' is the entity that consists of **all the institutional units, which are resident in the economic territory of a country.**
- The '**economic territory**' of a country is **essentially defined based on a definite geographical area under the effective economic control of a single government.**

Ex;- Sri Lankan economic territory is confined to geographical area controlled by Sri Lankan Government.

- An economic territory includes ;
  - a. the land area including islands,
  - b. airspace,
  - c. territorial waters and
  - d. Territorial enclaves in the rest of the world (such as embassies, consulates, military bases, scientific stations, information or immigration offices, that have immunity from the laws of the host territory) physically located in other territories.

## **National Accounting Concepts**

### **01. Domestic Production**

- Domestic production is the **sum of gross value added of all resident producer units of an economic territory** in a **specific time period (generally in a year).**
- In other words, domestic production is the **monetary value** of all **finished goods and services** produced by residents of **an economic territory** in a **specific time period (generally in a year).**
- There are two concepts of domestic production;
  - a. Gross Domestic Production
  - b. Net Domestic Production

### **02. Gross domestic production Vs. Net domestic production (GDP Vs. NDP)**

- The difference between GDP and NDP is '**consumption of fixed capital**' (Depreciation).
- 'Consumption of fixed capital' (Depreciation) is the **reduction in the value of previously created fixed assets when they are used up in the production process.**

- GDP **includes** the value of 'consumption of fixed capital' (Depreciation) and NDP **excludes** the value of 'consumption of fixed capital' (Depreciation).
- **In principle**, the concept of value added should **exclude** the allowance for consumption of fixed capital. It is because, in effect, **is not newly created value**, but a reduction in the value of previously created fixed assets when they are used up in the production process.
- . Thus, **theoretically, value added is a net concept**.
- However, The depreciation of fixed assets as calculated in business accounting does not generally meet the requirements of the SNA and different countries use different methodologies in calculating 'consumption of fixed assets'.
- Therefore, more widely used concept is 'GDP' rather than 'NDP'.

$$\begin{array}{r} \text{Gross Domestic Production} \\ - \\ \text{Consumption of fixed capital} \\ \hline \text{Net Domestic Production} \end{array}$$

$$\begin{array}{r} \text{Net Domestic Production} \\ + \\ \text{Consumption of fixed capital} \\ \hline \text{Gross Domestic Production} \end{array}$$

$$\text{GDP} - \text{NDP} = \text{Consumption of fixed capital}$$

### 03. Calculation of GDP

- Gross Domestic Production is calculated at Market price (Purchases' Price).
- However, when resident producer units report the sum of gross value added, it is reported at basic price, which is commonly identified as Gross Value Added (GVA).
- Therefore, GDP is the sum of gross value added of all resident producer units plus taxes on products less subsidies on products.
- Thus, the difference between GVA and GDP is the net indirect tax on product.

Value addition of Agriculture, Forestry and Fishing	XXX
Value addition of Industries	XXX
Value addition of Services	XXX
Gross Value Added (GVA) at Basic Price	XXX
Taxes less subsidies on products	XX
Gross Domestic Product (GDP) at Market Price	XXX

$$\text{GDP} = \sum \text{GVA} + \text{Net Indirect Taxes on product}$$

$$\text{GDP} = \sum \text{GVA} + \text{Indirect Taxes on product} - \text{Subsidies on product}$$

$$\text{GDP} - \text{GVA} = \text{Net Indirect Taxes on product}$$

#### 04. Net Domestic Production Vs. Net Value Added (NDP Vs. NVA)

- The difference between any gross value and net value is the consumption of fixed capital (depreciation)
- Therefore from the gross value consumption of fixed capital (depreciation) is deducted net value can be obtained.
- Thus, NDP is the value obtained by deducting 'consumption of fixed capital' (depreciation) from GDP. Therefore, it is calculated at market price.
- However, NVA is the value obtained by deducting 'consumption of fixed capital' (depreciation) from GVA. Therefore, it is calculated at basic price.
- Therefore, the difference between NDP and NVA is net indirect tax on product.

$$\text{NVA} = \text{GVA} - \text{Consumption of Fixed Capital}$$

(Calculated at Basic price)

$$\text{NDP} = \text{GDP} - \text{Consumption of Fixed Capital}$$

(Calculated at Market price)

$$\text{NDP} = \text{NVA} + \text{Net indirect tax on product}$$

$$\text{NDP} - \text{NVA} = \text{Net indirect tax on product}$$

#### 05. Gross National income (GNI)

- GNI equals to GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units.
- Primary incomes are incomes that accrue to institutional units as a consequence of their involvement in processes of production or ownership of assets that may be needed for purposes of production.

Example :- Consumption of employees , Rent

- Primary incomes generated in the production activity of resident producer units are distributed mostly to other resident institutional units.
- However, part of them may go to non-resident units. Further some primary incomes generated in the rest of the world may come from resident units.

Example; -

- Local company invested in a foreign company shares and receiving dividends (primary incomes generated in the rest of the world come from resident units)
  - Local company pays interest to a foreign loan obtained from a foreign bank (primary incomes goes to non-resident units)
- Thus, when net primary income from non-resident units (net value of receivable and payable) adjusted to GDP, GNI can be obtained.
  - In other words, difference between GDP and GNI is net primary income from non-resident units.
  - Net primary income from non-resident units can be obtained from BOP 'primary account balance'

$$\text{GNI} = \text{GDP} + \text{Primary income receivable from ROW} - \text{Primary income payable from ROW}$$

$$\text{GNI} = \text{GDP} + \text{Net Primary income receivable from ROW}$$


$$\text{GNI} = \text{GDP} + \text{BOP Primary income account balance}$$

$$\text{GNI} - \text{GDP} = \text{Net Primary income receivable from ROW}$$

$$\text{GNI} - \text{GDP} = \text{BOP Primary income account balance}$$



## 06. Net National income (NNI)

- By deducting the consumption of fixed capital from GNI, net national income (NNI) is obtained. 

$$\text{NNI} = \text{GNI} - \text{Consumption of fixed capital}$$

$$\text{GNI} - \text{NNI} = \text{Consumption of fixed capital}$$

## 07. Gross National disposable income (GNDI)

- Gross national disposable income is equal to GNI less current transfers payable to non-resident units, plus the corresponding transfers receivable by resident units from the rest of the world.
- Gross national disposable income measures the income available to the total economy (all resident institutional units) for final consumption and gross saving.
- Current transfers payable and receivable from/to rest of the world is known as secondary income payable and receivable.
- Part of primary income received by resident institutional units may be used to make transfers to non-resident units. They are known as secondary income payable.

Ex;-

- Sri Lankan parents send tuition fees to their children who live abroad for more than a year.  
(Private transfer)
  - Sri Lankan government send dry rations to Bangladesh when they face a severe flood situation (official transfer)
- Further, resident institutional units may receive transfers originating out of primary incomes in the rest of the world. They are known as secondary income receivable.

Ex;-

- Sri Lankan dependents receive money from their parents who work abroad for more than a

year. (Private Transfer – Foreign Remittance)

- b. Sri Lankan government receive pharmaceutical aid from USA when it experience H1N1 influenza outbreak (official transfer)
- Thus, when net secondary income from non-resident units (net value of receivable and payable) adjusted to GNI, GNDI can be obtained.
  - In other words, difference between GNI and GNDI is net secondary income from non-resident units.
  - Net secondary income from non-resident units can be obtained from BOP 'secondary account balance'

$$\text{GNDI} = \text{GNI} + \text{Secondary income receivable from ROW} \\ - \text{Secondary income payable from ROW}$$

$$\text{GNDI} = \text{GNI} + \text{Net Secondary income receivable from ROW}$$

$$\text{GNDI} = \text{GNI} + \text{BOP Secondary income account balance}$$

$$\text{GNDI} - \text{GNI} = \text{Net Secondary income receivable from ROW}$$

$$\text{GNDI} - \text{GNI} = \text{BOP Secondary income account balance}$$

$$\text{GNDI} = \text{Final Consumption} + \text{Gross National Savings}$$

## 08. Net National Domestic income (NNDI)

- By deducting the consumption of fixed capital from GNDI, net national disposable income (NNDI) is obtained.  $\begin{bmatrix} L \\ SEP \end{bmatrix}$

$$\text{NNDI} = \text{GNDI} - \text{Consumption of fixed capital}$$

$$\text{GNDI} - \text{NNDI} = \text{Consumption of fixed capital}$$

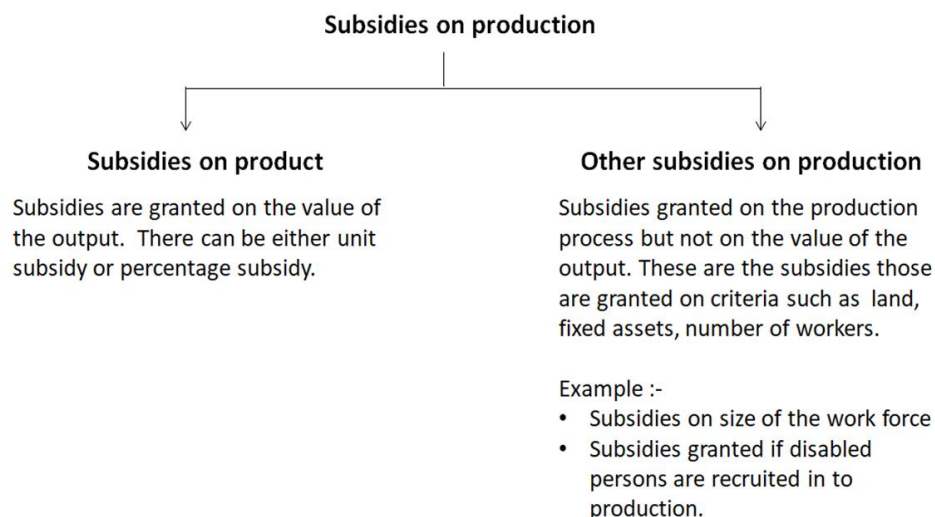
GVO – IC	Value addition of Agriculture, Forestry and Fishing	xxx		
	Value addition of Industries	xxx		
	Value addition of Services	xxx		
	<hr/>		(less)	
	Gross Value Added (GVA) at Basic Price	xxx	Consumption of Fixed Capital	= NVA
	<hr/>			
	Taxes less subsidies on products	(xx)		
	<hr/>		(less)	
	Gross Domestic Product (GDP) at Market Price	xxx	Consumption of Fixed Capital	= NDP
	<hr/>			
	Net Primary income from rest of the world	xxx		
	<hr/>		(less)	
	Gross National Income (GNI) at Market Price	xxx	Consumption of Fixed Capital	= NNI
	<hr/>			
	Net Secondary income from rest of the world			
	<hr/>		(less)	
	Gross National Disposable Income (GNDI) at Market Price	xxx	Consumption of Fixed Capital	= NNDI

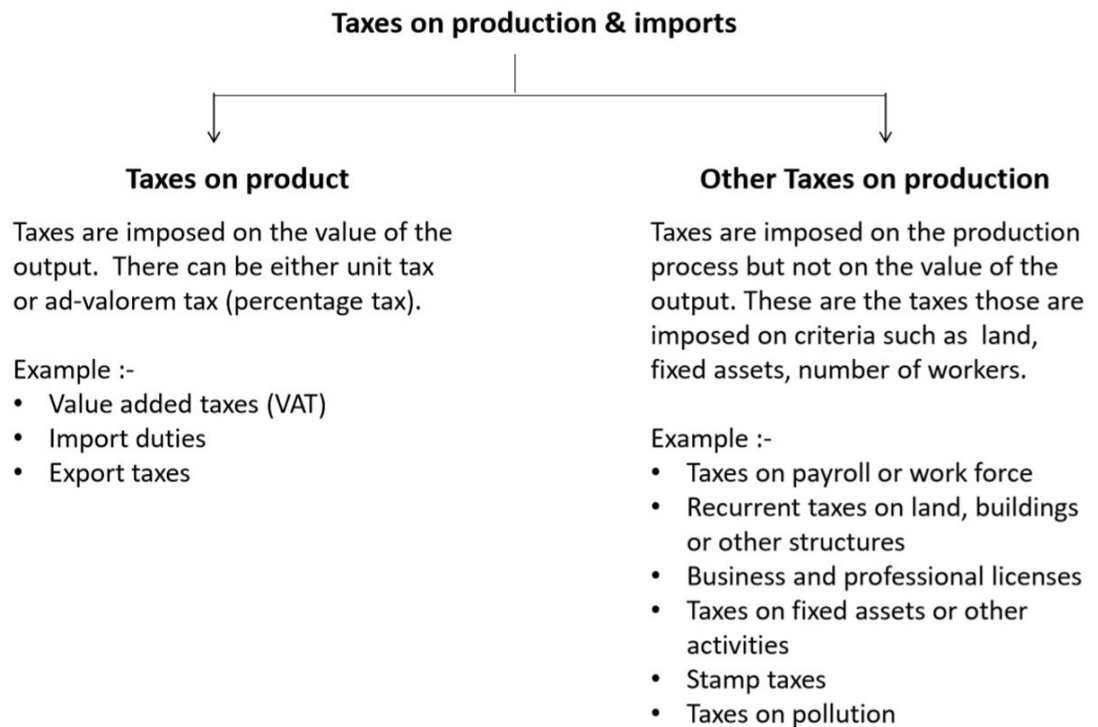
## Prices used in SNA

- There are 3 types of prices used in SNA. They are,
  - a. Basic Price
  - b. Producers' Price
  - c. Purchases' Price (market price)

### 01. Basic Price

- The basic price is the absolute amount receivable by the producer from the purchaser for a unit of a good or service.
- Therefore, The basic price measures the amount retained by the producer and is, therefore, the price most relevant for the producer's decision-taking.
- Thus, it is important to understand that basic price is not the actual amount that is paid by the purchaser but the amount retained (pocketed) by the producer.
- Hence, in order to obtain the basic price, from the price buyers pay, production taxes should be deducted whereas if there are any subsidies on production they should be added.
- Taxes on production (also known as taxes on production and imports) & subsidies on production are complex to understand. Thereby, it is important to recognize two categories of taxes & subsidies those are included in 'taxes on production' and 'subsidies on production'.
  - a. Taxes on product & subsidies on product
  - b. Other taxes on production & other subsidies on production



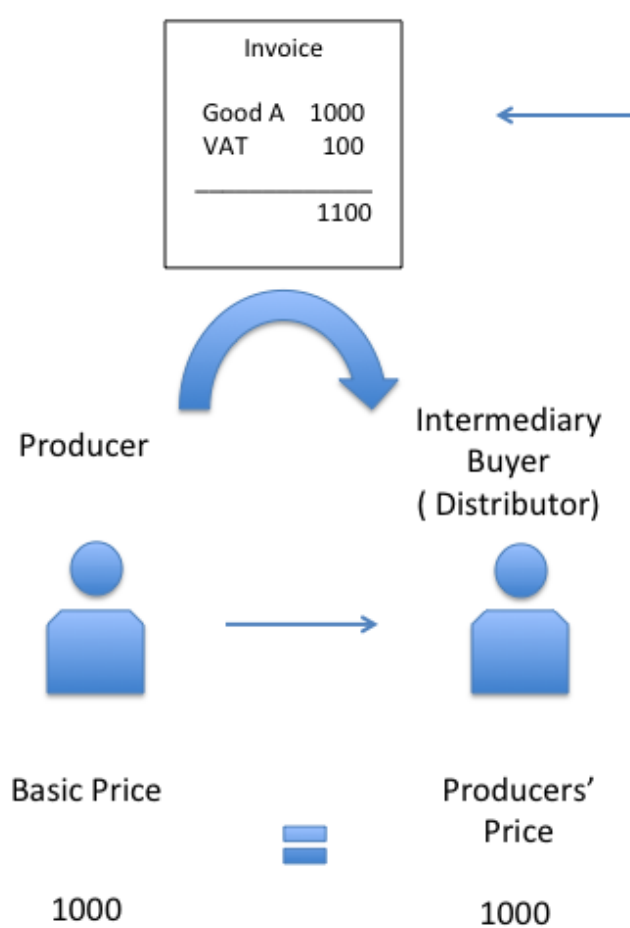


## 02. Producers' Price

- The producer's price is the **amount receivable by the producer from the purchaser** for a unit of a good or service produced as **output value minus any VAT** (or similar deductible tax) invoiced to the purchaser.
- In other words this is the price that is charged by the producer when products are dispatched to traders from the factory or production location.
- This price **does not include any deductible tax** (deductible VAT) but **includes non – deductible taxes**

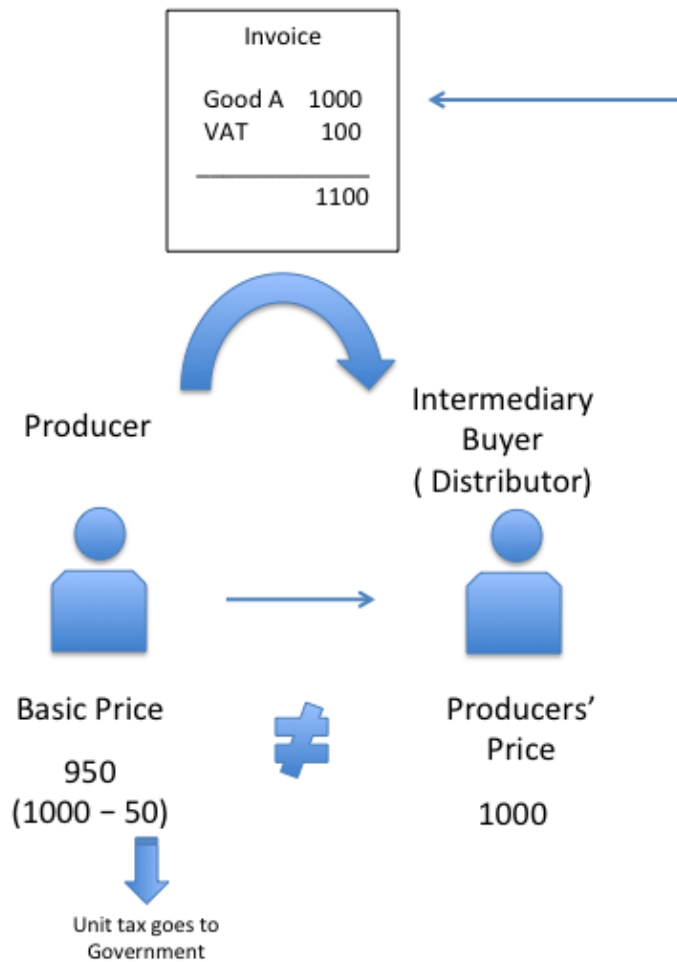
## 03. Purchasers' Price

- This is the **actual price** paid by the consumer in obtaining the product.
- The purchaser's price is the amount paid by the purchaser (end customer), in order to **take delivery of a unit of a good or service at the time and place required by the purchaser.**
- The purchaser's price of a good **includes any transport charges** paid separately by the purchaser to take delivery at the required time and place.
- Further it includes, margins of the whole-salers and retailers ( distributor margins)



If there is no taxes or subsidies payable or receivable per unit of the product

Ex;- No taxes or subsidies on Good A



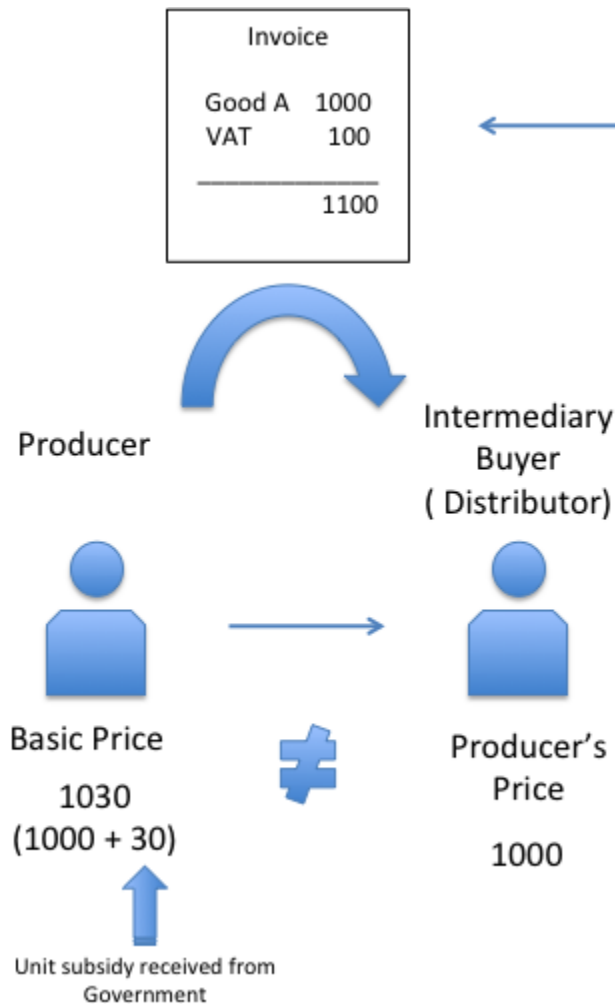
If there are taxes payable per unit of the product

Ex;- There is a specific tax on Good A, Rs 50.

( If there are taxes on product that is already been added to the invoice price)

$$\begin{array}{c}
 \text{Basic Price} \\
 + \\
 \text{Taxes on product} \\
 \text{(excluding VAT)} \\
 \hline
 \text{Producers' Price}
 \end{array}$$

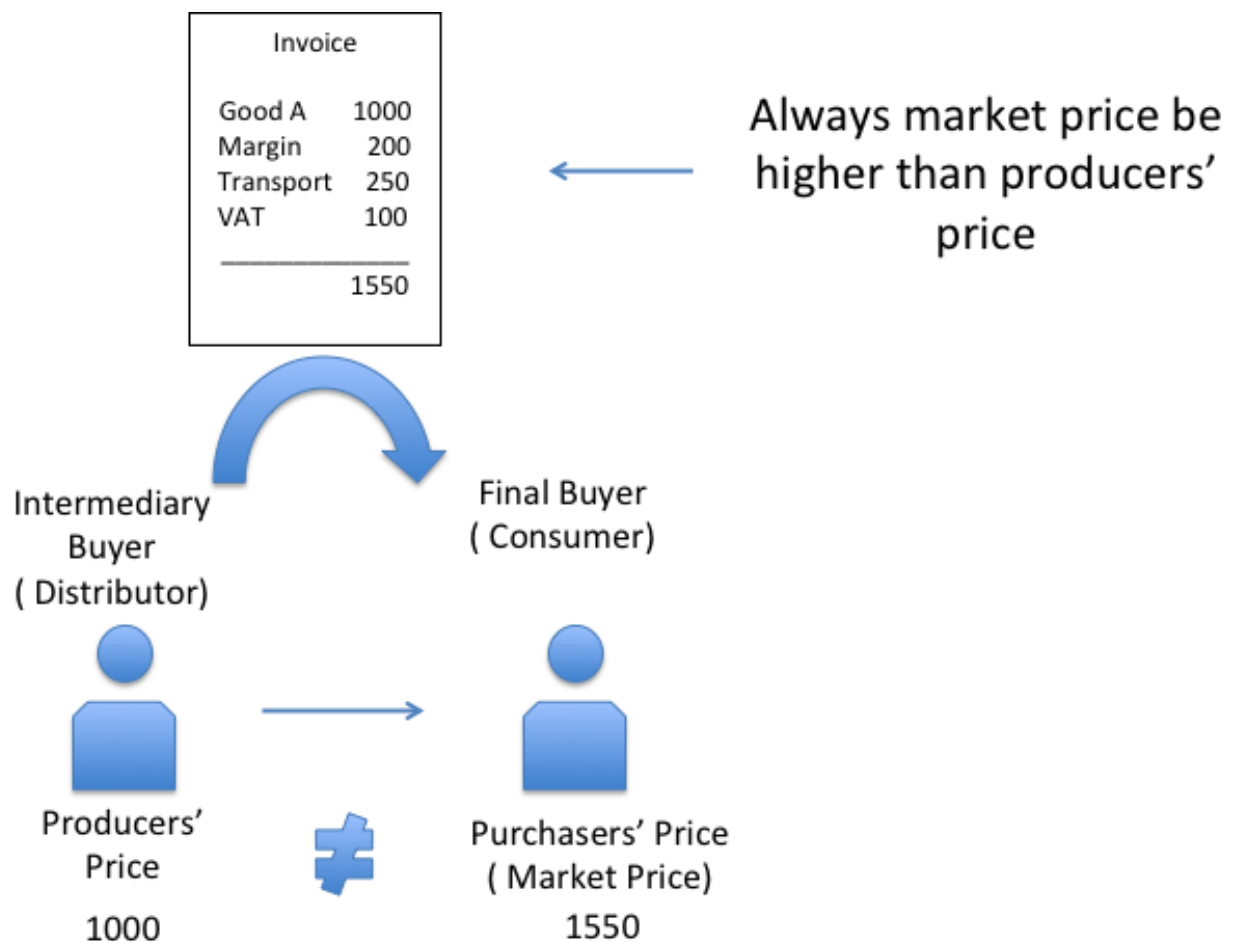
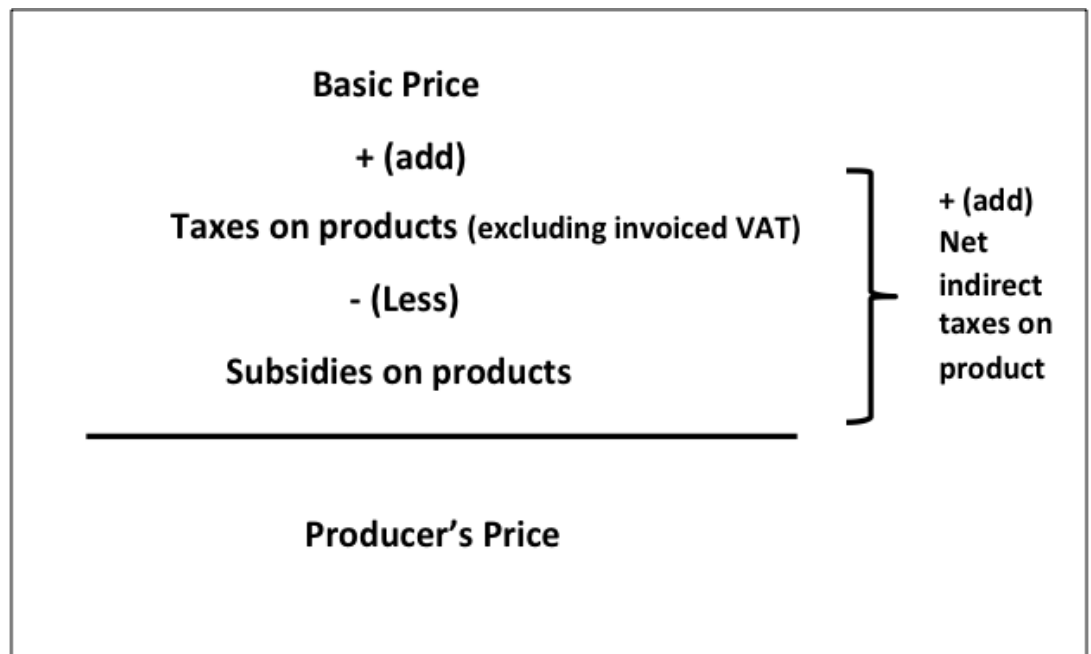




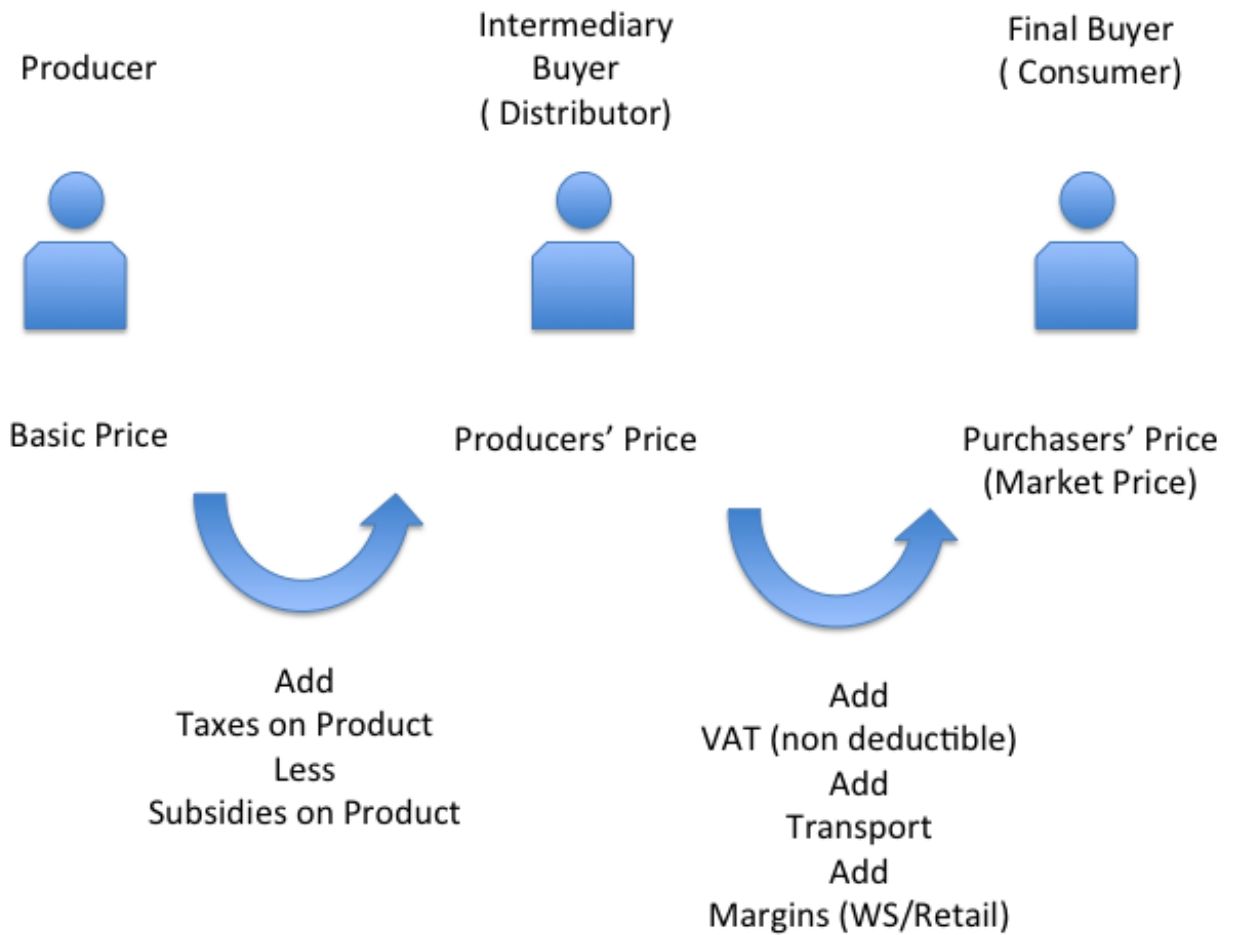
If there are subsidies receivable per unit of the product

Ex;- There is a specific subsidy on Good A, Rs 30.  
( After the producer sell the product, he can claim the subsidy from the government. Therefore, unit subsidy is not included in the invoice)

Basic Price
-
Subsidies on product
<hr/>
Producers' Price



$$\begin{array}{c} \text{Producers' Price} \\ + \\ \text{VAT (not deductible)} \\ + \\ \text{Transport charges} \\ + \\ \text{Wholesalers' and retailers' margins} \\ \hline \text{Purchasers' prices} \\ \text{(Market Price)} \end{array}$$



Basic prices  
+  
Taxes on products (excluding invoiced VAT)  
-  
Subsidies on products

---

Producers' prices  
+  
VAT (not deductible)  
+  
Transport charges  
+  
Wholesalers' and retailers' margins

---

Purchasers' prices (Market Price)

## Relationship between National Accounts and Balance of Payment

- Balance of payment is an account that summarizes and records all the transaction that an economy carryout with rest of the world within a particular period of time
- In balance of payment (BOPM 6 structure) there are two main accounts.
  - a. Current & Capital account
  - b. Financial account
- **For national accounts, BOP current account is the account, which is important.**
- Current account has main 4 sub-accounts.
  - a. Trade Account
  - b. Services Account
  - c. Primary Income Account
  - d. Secondary Income Account
- BOP current account balance is also known as, “net foreign savings” or net foreign investment”.

## Structure of BOP Current A/C

<b>01. Trade Account</b>	Exports	XXX	XXXX
	Imports	XXX	
	Trade Balance		
<b>02. Services Account</b>	Receipts	XXX	XXXX
	Payments	XXX	
	Services Balance		
<b>03. Primary Income Account</b>	Receipts	XXX	XXXX
	Payments	XXX	
	Income Balance		
<b>04. Secondary Income Account</b>	Private Transfers (net)	XXX	XXXX
	Official Transfers (net)	XXX	
	Balance of current transfers		
<b>05. Balance of Current Account</b>			XXXX

**Exercise 01**

- Identify what are the primary input and intermediate input. Explain your answer.
  - Milk used in the yogurt production
  - Labour power used in plastic industry
  - Machinery used rubber factory
  - Electricity used in biscuit manufacturing
  - Fertilizer used in tea plantation
  - Effort of the owner in his business
  - Water used soft drink industry.
  - Fruits used in fruit juice production

**Exercise 02**

Suppose in a particular economy there are only 3 industries milk, butter and cake. Further imagine Total milk output becomes input to butter industry and total butter output becomes input to cake industry. Calculate Gross Value Added of this economy.

	Input Value	Output Value	Value addition
Milk	0	5000	.....
Butter	.....	12000	.....
Cake	.....	20000	.....
Gross Value Added			.....

**Exercise 03**

- Following information is with regard to a production process of furniture manufacturing.

Category	Gross Value of Output	Intermediate consumption (Input Value)	Value Addition
Wood	15000	0	_____
Timber	25000	_____	_____
Unpolished Furniture	40000	_____	_____
Ready for sale Furniture	50000	_____	_____
Gross domestic production based on value addition method			_____

**Exercise 04**

Following figures have been extracted from a hypothetical economy. Answer following questions based on the figures provided.

		( All figures are in Rs. Millions)	
	<b>Economic Activity</b>	Input Value	Output Value
<b>A</b>	Agriculture, Forestry and Fishing	200	700
<b>B</b>	Mining and quarrying	650	930
<b>C</b>	Manufacturing	350	580
<b>D</b>	Electricity, gas, steam and air conditioning supply	100	360
<b>E</b>	Water collection, treatment and supply	470	820
<b>F</b>	Sewerage, waste treatment and disposal activities	520	920
<b>G</b>	Construction	700	1100
<b>H</b>	Wholesale and retail trade, transportation and storage, and accommodation and food service activities	200	600
<b>I</b>	Information and communication	420	710
<b>J</b>	Financial, insurance and real estate activities including ownership of dwellings	650	850
<b>K</b>	Professional services and other personal service activities	340	740
<b>L</b>	Public administration, defense, education, human health and social work activities	280	570

- Calculate gross output value of the economy.
- Calculate the intermediate consumption of the economy
- Calculate gross value added of the economy.
- Calculate Gross value added of the agricultural sector
- Calculate gross value added of the industrial sector
- Calculate gross value added of the services sector.

**Exercise 05**

Following data has been extracted from a hypothetical economy. (all figures are in millions)

	Value of Final Good	Value of Intermediary Goods
Agriculture	1200	600
Industry	4000	2100
Services	6000	1200



Other taxes on production	600
Other subsidies on production	200
Trade margins and transport cost	350
Import tax	250
Taxes on output	300
Subsidies on output	100
Primary income receivable from abroad (net)	-440
Secondary income receivable from abroad (net)	340
Consumption of Fixed Capital	500

Find:

- Gross value of output (GVO)
- Intermediate consumption (IC)
- Gross value added (GVA)
- GDP
- NDP
- NVA

### Exercise 06

Following data has been extracted from a hypothetical economy. (All figures are in millions)

	Value of Final Good	Value of Intermediary Goods
Agriculture	2400	600
Industry	5000	2100
Services	4500	1200

Taxes on production imposed on producers	600
Subsidies on production provided to producer	200
Trade margins and transport cost	350
Import tax	250
Private consumption	500
Taxes on product	300
Subsidies on product	100
Public consumption	300
Primary income receivable from ROW	200
Secondary income receivable from ROW	500
Primary income payable from ROW	350
Secondary income payable from ROW	400
Net Exports	600
Consumption of Fixed Capital	500

Find:

- a. Gross value of output (GVO)
- b. Intermediate consumption (IC)
- c. Gross value added (GVA) at basic price
- d. Gross Domestic product (GDP)
- e. Gross National Income (GNI)
- f. Net National Income (NNI)
- g. Net Domestic product (NDP)
- h. Net Value Added (NVA)
- i. Gross National Disposable Income (GNDI)
- j. BOP Current Account Balance
- k. Domestic Savings
- l. National Savings
- m. Gross Capital Formation

### **Exercise 07**

Following data has been extracted from a hypothetical economy. (All figures are in millions)

Disposable gross national income	6000
BOP Trade and Service A/C Balance	500
BOP current account balance	2500
Consumption of Fixed Capital	250
Net indirect taxes on product	400
Net taxes on production	300
Intermediate consumption	1500
Public consumption	300
BOP primary income account balance	1250
Import tax	150
Private consumption	200

- a. Gross Domestic product (GDP)
- b. Gross value added (GVA) at basic price
- c. Gross value of output (GVO)
- d. Gross National Income (GNI)
- e. Net National Income (NNI)
- f. Net Domestic product (NDP)
- g. Net Value Added (NVA)
- h. Domestic Savings
- i. National Savings
- j. Gross Capital Formation

**Exercise 08**

Following data has been extracted from a hypothetical economy. (All figures are in millions)

Gross national income	8000
National Savings	2500
Domestic Savings	1250
Consumption of Fixed Capital	300
Gross Capital Formation	1750
Intermediate consumption	3000
Gross Value of output	12000
Subsidies on Product	2000
BOP primary income account balance	700
Import tax	150

- a. Gross value added (GVA) at basic price
- b. Gross Domestic product (GDP)
- c. Net National Income (NNI)
- d. Net Domestic product (NDP)
- e. Net Value Added (NVA)
- f. Net indirect taxes
- g. Taxes on product
- h. Net exports
- i. BOP Current A/C Balance
- j. Disposable Gross National Income (DGNI)

**Exercise 09**

Suppose a hypothetical industry only contains 3 industries, milk industry, butter industry and cake industry. (All figures are in millions)

Further following information has also been provided. (All figures are in millions)

	Milk	Butter	Cake
Input Value	1000	3500	5000
Output Value	3000	5000	10000

Gross national income	10000
Gross National disposable income	12000
Domestic Savings	2800
Consumption of Fixed Capital	300
Gross Capital Formation	1750
BOP Current A/C balance	6000
Import tax	150
Specific Taxes on product	1000
Other taxes on production	800
Subsidies on product	700
Other subsidies on production	500

- Gross Value of output (GVO)
- Gross value added (GVA) at basic price
- Gross Domestic product (GDP)
- BOP Primary income A/C balance
- BOP secondary income A/C balance
- Domestic consumption
- Net exports
- Gross Capital formation
- National Savings

### **Exercise 10**

- Suppose there is a 15% VAT on all products sold in a market place.
- There is a product that is sold at Rs. 3000/- that uses Rs.200/- of intermediate goods.
- Calculate total VAT, deductible VAT and non-deductible VAT of this product.

### **Exercise 11**

Following are some of the economic activities of an economy. Explain whether these are included in to GDP.

- A housewife grows vegetables in her home garden during the current year and the entire harvest is used for home consumption.
- A retired worker receives a pension payment from the government.
- A motor vehicle dealer earns a commission for selling a second –hand car.
- A mother helps her daughter to learn a lesson in mathematics at home.
- A tourist hotel purchases Rs. 10 million worth of foreign made canned food.
- A soft drink manufacturing company builds a new bottling plant in the capital city.
- An investor buys Rs. 30 million worth of shares of a major commercial bank.

**Exercise 12**

Following are some of the economic activities of an economy. Explain whether these are included in to GDP.

- a. Illicit liquor production
- b. Profit earned by a vehicle importer by selling imported recondition vehicles
- c. Increase of the fish stock in the ocean near Sri Lanka
- d. Interest charged for a loan obtained by a person from a bank
- e. Selling a used motor vehicle to a friend by an individual
- f. Production of a street vendor
- g. Crop retained by a farmer for his personal use without releasing to market.
- h. Interest received by a person by depositing his money in a fixed deposits

**Exercise 13**

Following are some of the economic activities of an economy. Explain whether these are included in to GDP.

- a. Buying Rs. 100,000 worth of treasury bills.
- b. Gain capital gain of Rs. 10,000 by selling equity shares of John Keells Holdings.
- c. Without hiring a domestic servant mother is preparing meals for her family.
- d. Coping music by an individual in a CD for his personal use.
- e. Value generated by personally owned house.

**Exercise 14**

Following are some of the economic activities of an economy. Explain whether these are included in to GDP.

- a. Prawn growth in a prawn farm
- b. Not paying Rs. 10,000/- worth income taxes by a person that needs to paid.
- c. Obtaining the copy rights from marvel movies and print T-shirts worth Rs. 50,000
- d. Using Rs. 15,000 worth of raw materials and make Rs.25,000 worth cabinet
- e. Selling a used car for 200,000 to government by a company.
- f. Soft drink manufacturing company spends Rs.1 million to develop new formula.

**Exercise 15**

Explain whether following parties belong to residents of Sri Lanka. Explain your answer.

- 1. Sri Lankan workers work in Dubai on a work contract for 2 years
- 2. A foreigner who stay in Sri Lanka on work permit for 3 years.
- 3. A Sri Lankan graduate goes for studies to Australia for 4 years

4. A Sri Lankan ship captain travels to Brazil for 6 months in the ship that he commands
5. Sri Lankan artist performs in world tour for 9 months around the world.
6. A foreign musician who works in Sri Lankan film for 3 months.
7. A Sri Lankan worker gets a foreign job and leaves the country on permanent basis.
8. A Sri Lankan who goes for a Europe trip on leisure for 3 months.
9. A Sri Lankan who has dual citizenship works in a local company.
10. A foreign film crew shoots their new film in Sri Lanka for 8 months.
11. A Sri Lankan works in Australian high commission.
12. A Sri Lankan who works in Sri Lankan embassy in UK for 3 years.
13. A Sri Lankan Army person who has been sent to UN military mission in Iraq for 4 months.
14. A Sri Lankan worker works for a multinational company, Nestlé
15. An Italian Ambassador who works in Italian embassy for 2 years.