

SNA Basic: Lesson2- Macro-economic Framework

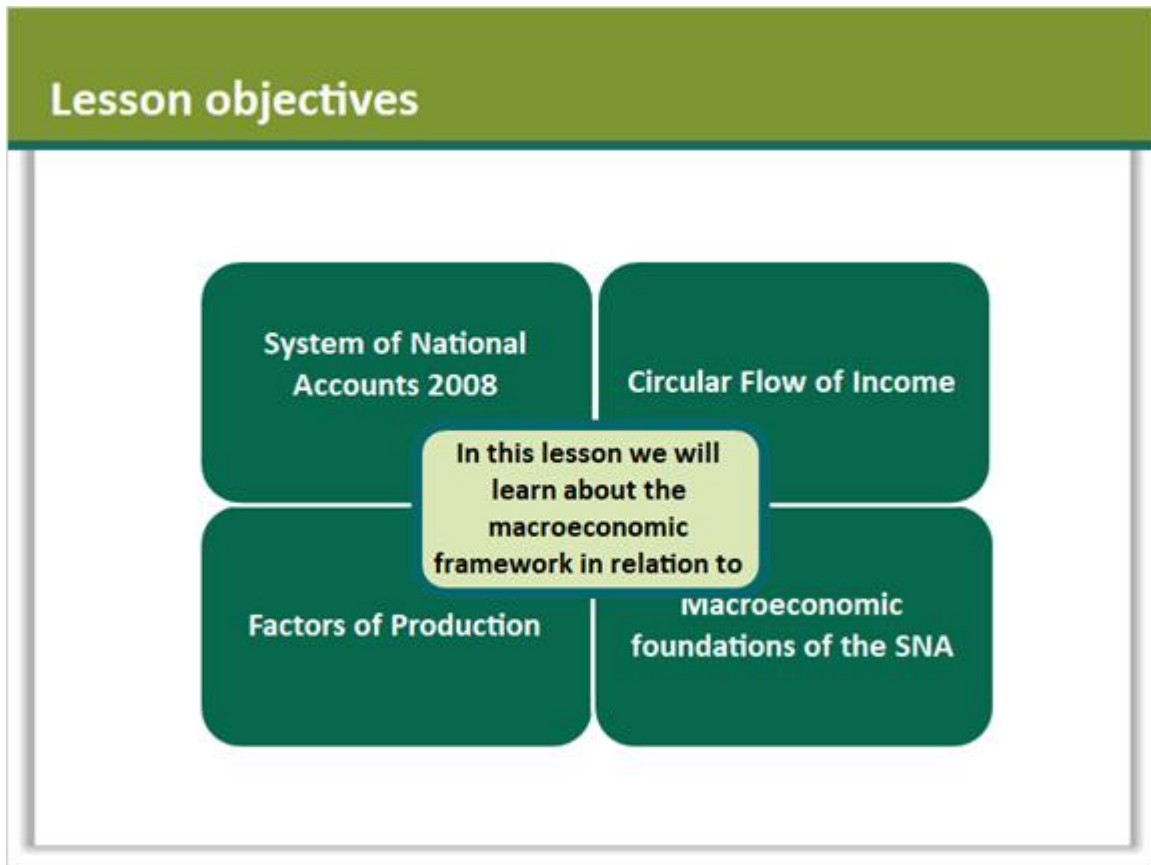
2.1 Macro-economic Framework



Notes:

Welcome to the second lesson of the System of National Accounts Basic Course. This lesson will detail how the System of National Accounts (SNA) is founded on the macro-economic framework.

2.2 Lesson objectives






Notes:

In this lesson, we will learn about SNA and its macroeconomic foundations, circular flow of income and factors of production.

2.3 Summary

Lesson 2 - summary

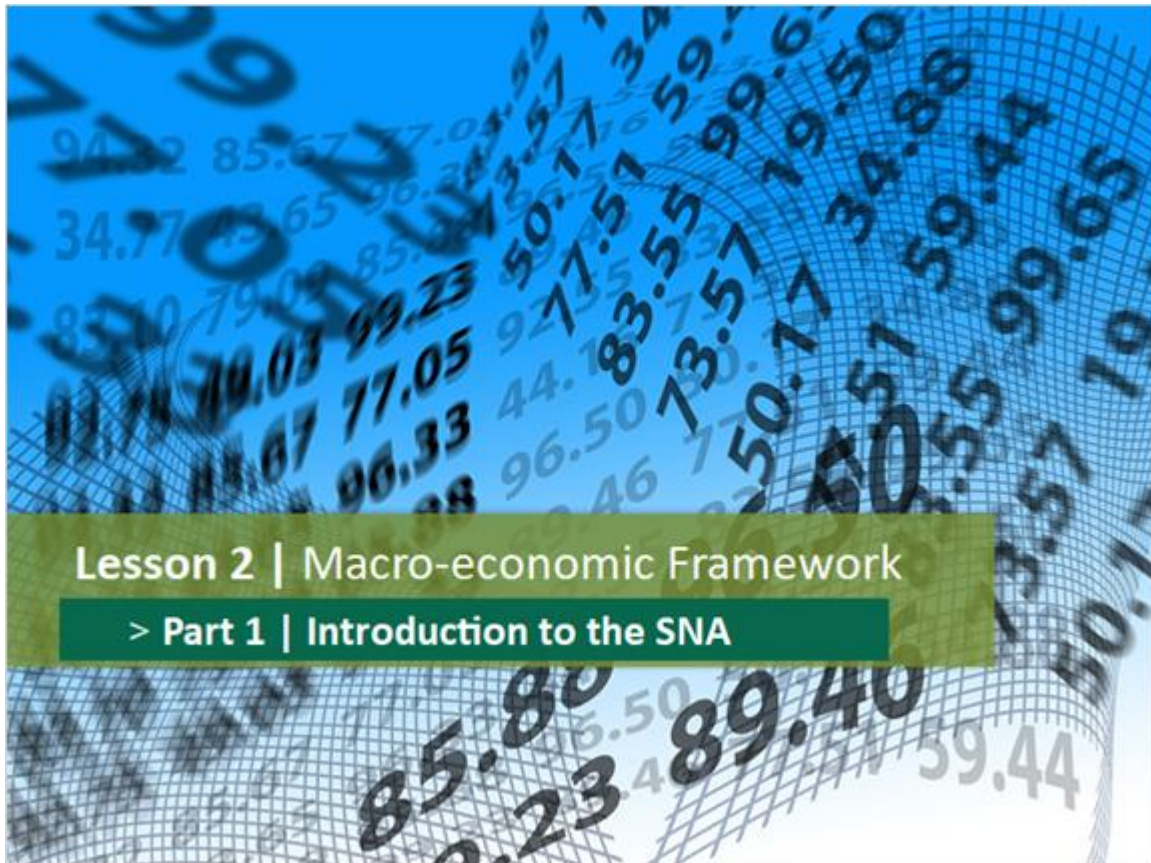
-  **Part 1 – Introduction to the SNA**
-  **Part 2 – Circular Flow of Income**
-  **Part 3 – Factors of Production**

Please click on the box to access the different parts of the lesson

Notes:

This lesson is divided into 3 different parts. You can directly access each section through the provided menu.

2.4 Introduction to the SNA



Notes:

This first section introduces the System of National Accounts (SNA) and its macro-economic foundations.

2.6 SNA Framework


SNA Framework

- The SNA is founded on the **macro-economic framework** that gives a set of **identities** – relationships between different flow and stock variables.
- These identities form the basis of the SNA **sequence of accounts** consisting of measures of economic flows and stocks in monetary values.
- A set of standard procedures of **valuation** is recommended for attributing monetary values to flows and stocks.

Notes:

The estimates of macro-economic aggregates compiled in the framework of SNA are called National Accounts Statistics (NAS). The NAS consists of quantitative estimates (in monetary terms) of aggregates like stock of resources (or economic assets); flows of goods and services-production, consumption, investment, exports & imports; income and other economic instruments that emanates from using these resources or as a consequence of economic flows.

2.7 Macro-economic Framework



Macro-economic Framework

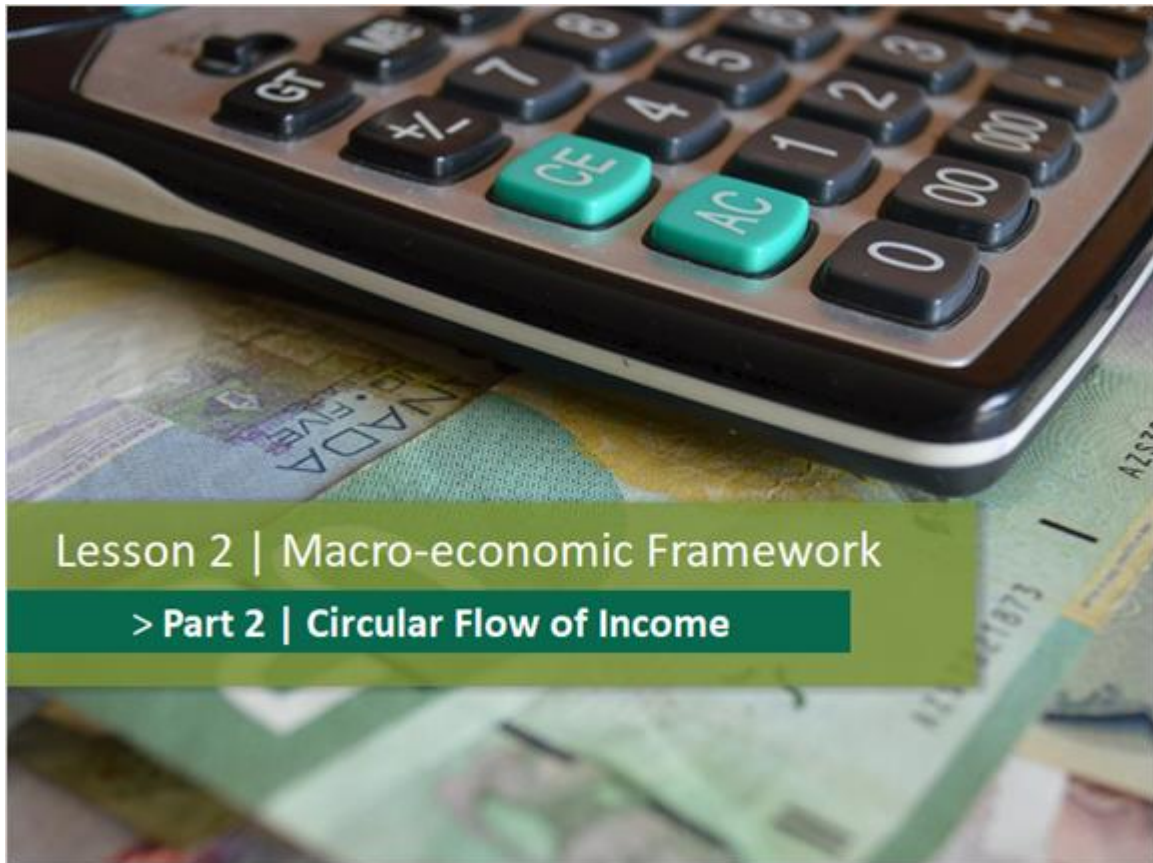
Basis of the Macroeconomic Framework

- All goods and services produced in the domestic economy are put to “use” of one kind or other;
- Circular flow of income and expenditure of the residents and the non-residents participating in transactions of the domestic economy.

Notes:

The framework establishes the equivalence of supply and use of goods & services produced, the value of production of goods and services and income generated in production and expenditure on products and non-produced assets.

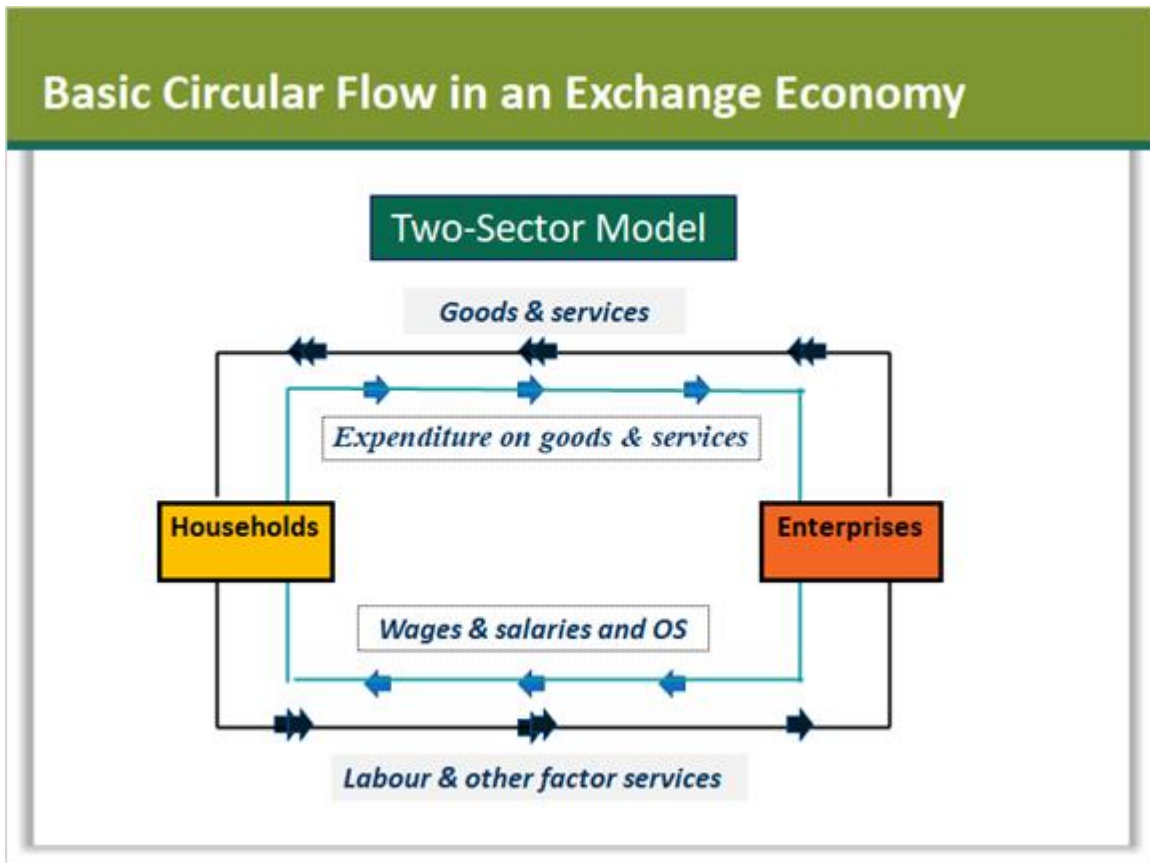
2.8 Circular Flow of Income



Notes:

The second section introduces the circular flow of income.

2.9 Basic Circular Flow in an Exchange Economy




Notes:

This interrelation between income, production and expenditures on consumption and investment is referred to as 'circular flow of income and output'. Production processes require capital assets and persons to work for production of goods and services. In the illustration, both these are provided by the households. The services provided by human labour and the capital assets are called *factor services* - labour, land, capital and entrepreneurship. Households provide factor services to the enterprises; in return the enterprises pay factor compensations to the households, in form of wages & salaries, rent, interest and profit. The enterprises' earnings from the sales of goods and services are distributed to households providing the factor services. The money distributed to the households providing factor services is called *factor compensation* (Refer to boxes 2.1 & 2.2 of the Reading Material).

2.10 *Balanced Circular Flow*

Balanced Circular Flow

- Goods and services are produced in production process
- Income is generated from production and is equal to value of goods and services produced
- Income, thus generated, is spent for purchase of goods and services produced
 - either for final consumption
 - or for use in further production.
- National Accounts provide a quantitative description of all these processes and their inter-linkages.



Notes:

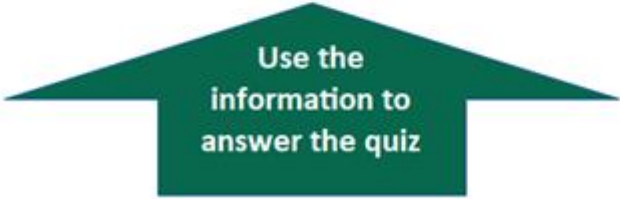
The circular flow of income illustrates how production is undertaken using capital and labour. Incomes are generated from this production process in form of wages and profits and paid back to owners of capital and labour. This income is either spent on consumption or investment and the balance is saved.

2.11 Circular Flow in Practice

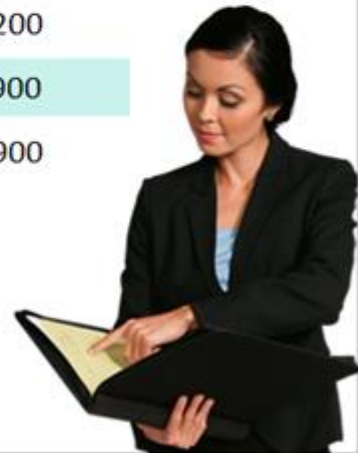
Circular Flow In Practice

In 2005, the accounts (in the local currency 'cowries') of the enterprise showed that

Value of goods and services sold:	15,000
Rent paid:	1,200
Interest paid:	900
Wages and salaries paid:	8,900



Use the
information to
answer the quiz



2.12 Quiz

Quiz

- What was the value of production
 - A. 15,000
 - B. 890
 - C. 8,900
- What was the income of the owners of the enterprise?
 - A. 4,000
 - B. 1,500
 - C. 1,200
- What was the total income of its residents?
 - A. 11,000
 - B. 10,000
 - C. 15,000
- What was the total expenditure on purchase of goods & services of its residents?
 - A. 15,000
 - B. 10,000
 - C. 11,000



2.13 Solution to Quiz

Solution to Quiz

- The *value of production (Y)* was clearly **15,000** cowries – the value of goods & services produced and sold by the enterprise
- The partners earned a profit of **4,000** cowries
[= 15,000 – 1,200 – 900 – 8,900].
- The income of the other households was 11,000 cowries
[the sum of rent (1,200), interest (900) and wages & salaries (8,900)].
- Again, the total expenditure of the households was also 15,000 cowries.
- Thus

Production	≡	Income	≡	Expenditure
15,000		15,000		15,000




Notes:

The quiz illustrates the concept of circular flow of income that links production, income and expenditure. Total production is 15,000, total income is 15,000 (profit plus income of households) and total expenditure is 15,000. Households spend their income on purchase of all goods and services produced by enterprises - the expenditure of the economy. Economy's expenditure in turn has to be equal to the value of goods & services produced and sold in the economy.

This establishes the equivalence of the value of *production* of goods and services, *income generated* in production and *expenditure* on products and non-produced assets.

2.14 Use of Produced Goods and Services



Use of Produced Goods and Services

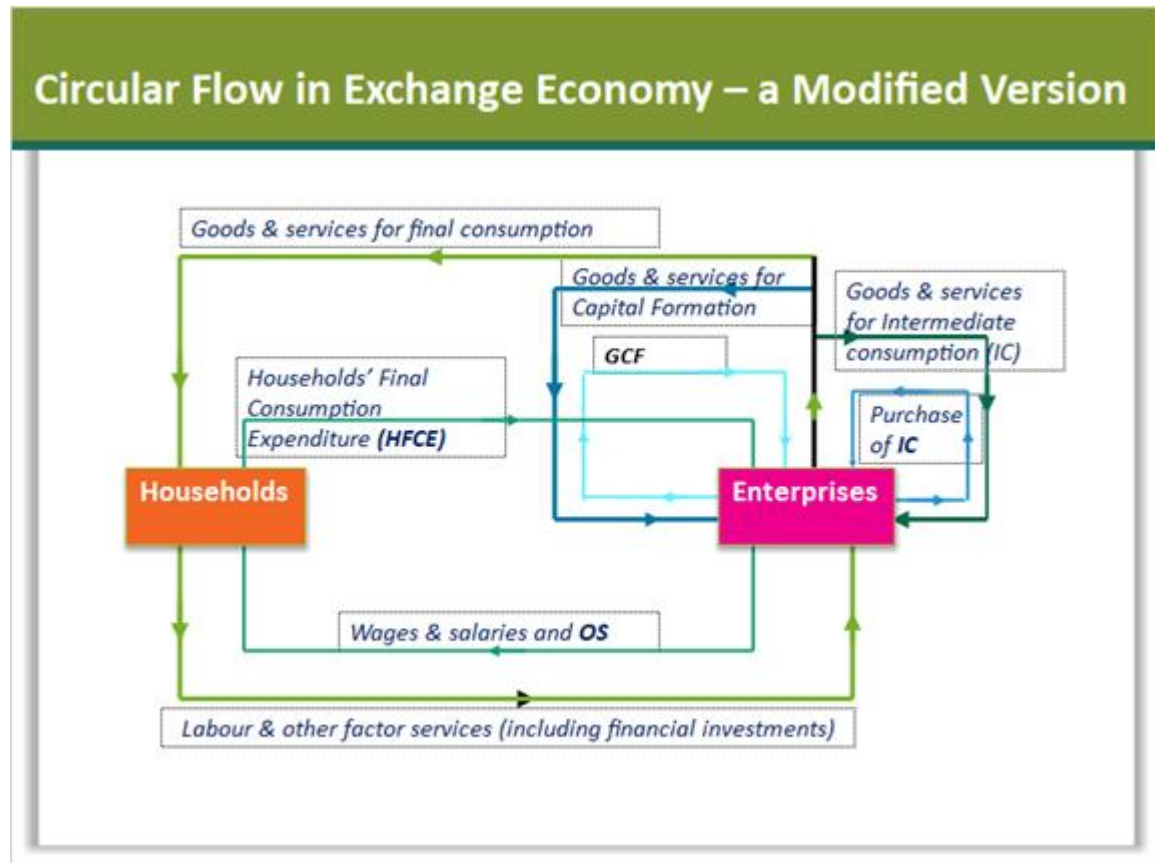
- The circular flow presented so far is too simplistic
- Other considerations include
 - Intermediate Products
 - Machinery

Notes:

The circular flow presented so far is oversimplified, as it ignores a very basic notion in economics: the use of intermediate products in the production process. An enterprise uses output (goods and services) of other enterprises or of itself in its production process. These include intermediate products (raw materials, semi-processed materials and services); and Machinery, equipment, building & construction and capital services (financed by investments made by households).

This leads to a modified representation of circular flow.

2.15 Circular Flow in Exchange Economy



Notes:

This representation of circular flow redefines the production in the economy. Of the goods and services produced by the enterprises, a part flows back to enterprises, in form of Intermediate Consumption (IC) - raw materials, semi-processed materials and services and Capital goods & services. Please refer to the reading material example on Chapter II, pp 22-23.

2.16 Modified Circular flow

Modified Circular flow

- The way “production” of an economy is defined, the *intermediate consumption* gets eliminated and what remains are:
 - Goods & services for *final consumption* and
 - Capital goods & services for investment
- In our illustration,

production	=	15,000
household consumption	=	14,000
(gross) Investment	=	1,000
- This leads to the basic macro-economic relationship:

$$\begin{aligned} \text{value of production (Y)} &\equiv \text{Consumption (C)} + \text{Investment (I)} \\ &\equiv \text{final demand aggregate.} \end{aligned}$$

Notes:

Using the example in the reading material, the *value of production (Y)* of the economy in 2005 was clearly 15,000 cowries - the value of goods & services produced and sold by the enterprise, which was the only production unit in the economy. The partners earned a profit of 4,000 cowries (= 15,000 - 1,200 - 900 - 8,900). The income of the other households was 11,000 cowries (the sum of rent, interest and wages & salaries received from the enterprise for the land, loans and labour provided to the enterprise). Thus, the *national income*, i.e. the total income of all the residents of Monojima, during 2005 was also 15,000 cowries - same as the *value of production (Y)*. Since all the goods & services - those for consumption and the capital goods - produced in the economy were sold during the period, the total expenditure of the households - *final demand aggregate* - was also 15,000 cowries. Capital goods purchased by the partner households for running the enterprise represents investment (*I*) and the purchase of the rest represents consumption (*C*) of all the resident households.

2.17 Basic Macroeconomic Relationship

Basic Macroeconomic Relationship

Thus, from the production side, $Y \equiv C + I_g$

The value of production, 15,000 cowries, is also the income of the households.

But, households spent only 14,000 cowries for consumption,

Thus, *savings* (S) of the households, $Y - C$, was 1,000 cowries, since $Y \equiv C + S$

This leads to another basic macro-economic relationship:

$$\text{(gross) Investment } (I_g) \equiv \text{Savings } (S)$$

$$\text{Production} \equiv \text{Income} \equiv \text{Expenditure}$$

Notes:

This relationship reflects the fact that investment is equal to savings. In other words all expenses on investment are financed by savings. **What if goods and services that are produced but not sold in the marketplace?**

Will the value of *production* still be equal to *expenditure*?. Note that the unsold goods goes into inventory. The *change in inventories* (CI) of finished products is included in the value of production and since, the unsold goods are treated as economic assets, the CI is considered a part of *investment*. Thus, the basic relations would still hold good.

2.18 Factors of Production



Notes:

The third section introduces the factors of production.

2.19 Factors of Production

Factors of Production

- Factors of production are the resources employed in production processes that
 - facilitate production
 - but do not become part of the product or
 - become significantly transformed by the production process.



The diagram illustrates the four factors of production contributing to a central 'PRODUCTION' process. Each factor is represented by a circular image with a label: 'Entrepreneur' (a person at a laptop), 'Labour' (a person working in a field), 'Land' (a green landscape), and 'Capital' (a stock market chart). Arrows from each of these four circles point towards the central 'PRODUCTION' box.

Notes:

Factors of production are the resources employed in production processes that facilitate production but do not become part of the product or become significantly transformed by the production process. In macroeconomics, **land** (natural resources), **labour**, **capital** (finance) and **entrepreneurship** are treated as factors of production, which are directly or indirectly owned by the households. Services provided by these factors in production process are called *factor services*.

2.20 Factors of Compensation

Factors of Compensation

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

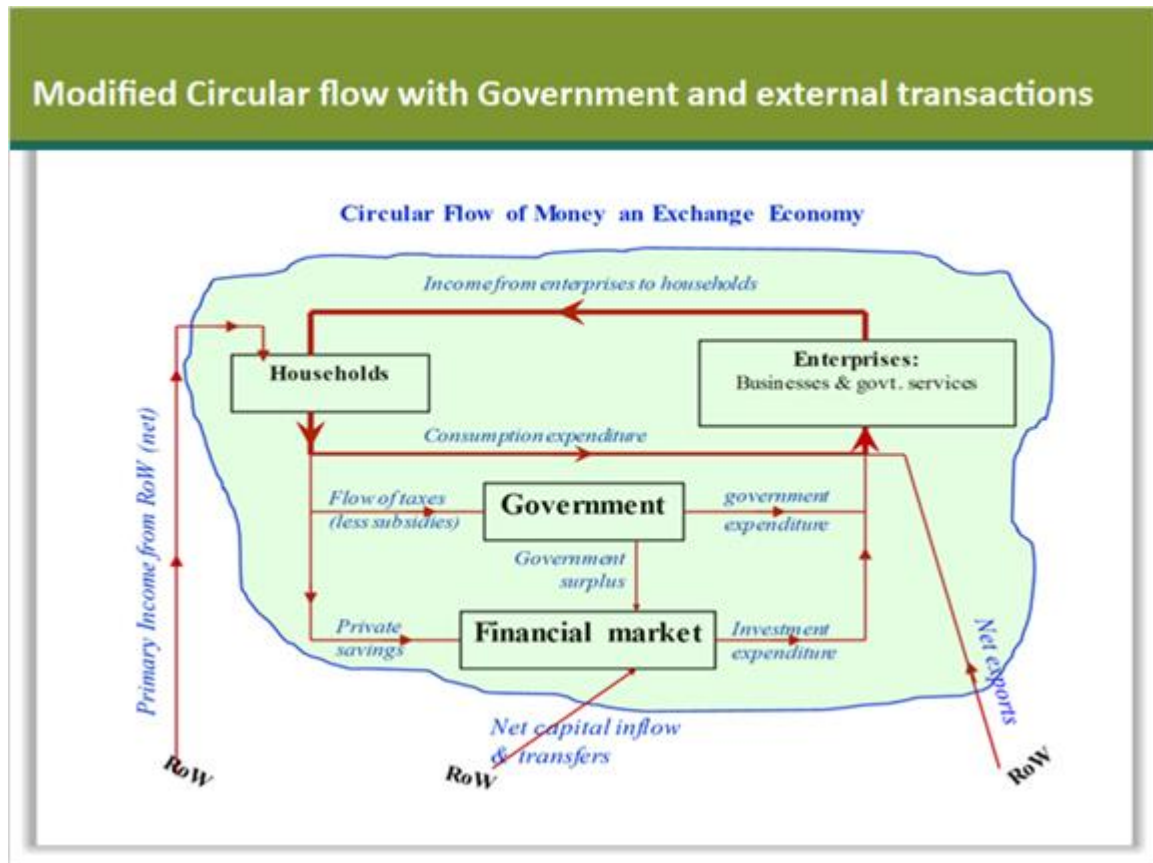
The payments made for use of factor services by the enterprises are called *factor payment* or *factor compensations*.

Factor of production	Factor payment / compensation
Labour	Compensation of employees
Land & natural resources	Rent
Capital	Interest
Entrepreneurship	Profit

Notes:

The payments made for use of factor services by the enterprises are called *factor payment* or *factor compensations*. The total value of these payments is described as *factor incomes* generated by production, which is the *factor cost*, i.e. the cost incurred for acquiring factor services for production. However, the concept of factor cost is no longer used in valuation of production in the system of national accounts since 2008 SNA.

2.21 Modified Circular flow with Government and external transactions



Notes:

The simplified modified circular flow reflects the role of the government, of financial markets, and of international trade and investment. But, the core idea of a balanced circular flow of purchasing power still holds. In this version of circular flow, all goods and services for *final use* (as against goods & services for intermediary use as inputs) are not bought by households alone. Some are bought by the government, which taxes the households (all taxes on business may be seen as though passed on to the ultimate consumers) to raise resources to finance itself. Some are bought by businesses seeking to invest, which raise the needed resources by issuing stock, issuing bonds, and borrowing - all of which take place in financial markets. This version also include the transaction with the world outside the domestic economy - Rest of the World (RoW).

Note that in this diagram, 'government' excludes its production activities which are included in "Enterprises".

2.22 Quiz

Quiz

1. All goods and services produced in the domestic economy are put to "use" of one kind or other

True False


2. Basic circular flow consists of two sectors: households and government

True False

3. Aggregate demand is the sum of consumption and investment

True False

Please state whether these statements are True or False.



Notes:

1. All goods and services produced in the domestic economy are put to "use" of one kind or other > **True**
2. Basic circular flow consists of two sectors: households and government > **False**
3. Aggregate demand is the sum of consumption and investment > **True**

2.23 Quiz

Quiz

4. The four factors of production are land, labour, capital and entrepreneurship

True False


5. Consumption expenditure is a factor payment

True False

6. Rent, wages & salaries, interest and profit are part of factor compensations

True False


Please state whether these statements are True or False.



Notes:

4. The four factors of production are land, labour, capital and entrepreneurship
> **True**
5. Consumption expenditure is a factor payment > **False**
6. Rent, wages & salaries, interest and profit are part of factor compensations > **True**

2.24 End of Lesson



Congratulations!

You have successfully completed the interactive lecture of the Lesson:

Macro-economic Framework

You can now answer the **"Lesson Completion Test"** to finalize the lesson.