Unit 8

Consumption, Saving and Investment

After completing this unit, you will be able to:

- realize the relationship among consumption, saving, and investment;
- compute average and marginal propensity to consume and save; and
- appreciate the role of investment in economic growth.

8.1 CONSUMPTION

At the end of this section, you will be able to:

- define the concept of consumption; and
- asses the basic determiners of consumption.

❖ **Consumption** may thus be defined as the expenditure by households on final goods and services.

❖ The main elements of household consumption are expenditures on food, housing, clothing, transportation, medical care, etc.

❖ consumption is a part of income and directly depends upon income itself.

Consumption when income is zero – i.e., when a minimum level of consumption must be maintained for survival. This is called **autonomous consumption,** and it is independent of income level.

Consumption when income rises: With an increase in income, consumption also increases, but usually less than the income increased. This part of consumption, which varies with income, is called **induced consumption.**

Determinants of Consumption Expenditure

The major determinants of consumption expenditure at individual and national levels are:

1. **Money Income**: The relationship between money income and consumption expenditure is positive and direct.
2. **Distribution of Income**: Consumption expenditure per unit of income is more for poor people than rich people. Unequal distribution of a nation's income reduces consumption expenditure, and equality in distribution of income increases it.
3. **Level of Direct Taxes**: A higher level of direct taxes leads to a lower level of personal disposable income, and thus to a decrease in consumption expenditure. This principle also acts inversely.
4. **Expectation of the Future**: If prices are expected to rise in the future, present consumption will be more. This principle also acts inversely.
5. **Rate of Interest**: Increases in the rate of interest lead to a reduction of consumption expenditure and an increase in saving. This principle also acts inversely.
6. **Level of Wealth**: A higher wealth level leads to higher consumption expenditure. This principle also acts inversely.

Consumption Function

Consumption function is one of the most important tools in macroeconomics.

- It shows the relationship between level of consumption and level of income.
- The consumption function is also known as propensity to consume.
- The consumption function indicates how consumption responds to

different levels of income.

C = a + bYd, where a is autonomous consumption, b is percentage of income for consumption, and bYd is induced consumption.

Example: Consider a consumer with a consumption function given by C = 110 + 0.75Yd, and disposable income of Birr 4,800. Calculate the consumer's:

a autonomous consumption

b induced consumption

c total consumption

d saving

- **Consumption refers to the amount of income which is spent upon the purchase of goods and services at a given level of income, but consumption function refers to the whole of a schedule that shows consumption expenditure at various levels of income.**

The relationships between consumption and income (propensity to consume) are expressed in the following ways. The next sections describe their numerical expressions.

i Average Propensity to Consume (APC)

ii Marginal Propensity to Consume (MPC)

I **Average Propensity to Consume (APC)**

- APC is the ratio of total consumption expenditure (C) to total income (Yd) at a given level of income in an economy. Symbolically, APC = C/Yd

For example, if at a particular time, the income level in an economy is

Birr 250 million, and consumption is Birr 175 million,

Ⅱ Marginal Propensity to Consume (MPC)

★ The ratio of change in consumption (ΔC) to change in income (ΔYd) is called marginal propensity to consume. Literally, marginal means additional (or incremental) and propensity to consume means desire (or urge) to consume.

MPC = Δ C/Δ Yd

For example if a country's national income increases from Birr 200 million to Birr 250 million, and as a result consumption expenditure goes up from Birr 150 million to Birr 175 million, then

Properties of MPC

The following are the main properties of MPC.

I. MPC is greater than zero but less than one This is because, with an increase in income, consumption expenditure also increases. But the entire increase in income is not spent — part of it is saved. Thus, MPC > 0, but MPC < 1.

II. MPC falls with increase in income As the community becomes richer, it tends to consume a smaller percentage of each increment to its aggregate income.

III. MPC of the poor class is higher than those of other classes: In the case of poor people, most of their basic needs remain unfulfilled. As a result, an additional increment to income leads to greater consumption.

IV. MPC is stable in the short run: This is because it depends upon psychological factors which do not change in the short run.

8.2 SAVING

At the end of this section, you will be able to:

- ✓ explain what saving is; and
- ✓ identify the determinant of saving.

The part of income which is not spent on consumption is called **savings.**
$S = Yd - C$ (8.4)

Note the following points in the context of saving:

Just like consumption, saving depends directly upon income.

- ➢ As income increases, savings also increase, but the rate of increase in savings is more than the rate of increase in income. This means that as income increases, the proportion of income saved increases (and the proportion of income consumed decreases).

  At low income levels, savings is negative.

Determinants of Saving

The major determinants of saving at the individual and national levels are:

I. **Level of Income**: As stated above, as income increases, saving also increases. But the rate of increase in saving is higher than the rate of increase in income. This is because, with an increase in income, consumption increases but by less than the increase in income.

II. **Distribution of Income**: Saving increases when income inequality increases. This is because the tendency to save is greater for rich people than poor people.

III. **Expectation Future for the**: If prices are expected to fall in the future, present consumption is less, and hence saving is more. This

principle also acts inversely. Similarly, an expected future increase in income, reduces present saving, and the inverse.

IV. **Rate of Interest**: A higher rate of interest induces greater saving. This principle also acts inversely.

V. **Level of Wealth**: A lower wealth level leads to a lower saving level. This principle also acts inversely.

VI. **Level of Direct Taxes**: A higher level of direct taxes produces a lower level of personal disposable income and hence reduced savings. This principle also acts inversely.

VII. **Individual Nature**: Saving is directly related to the nature of the individual. For example, a miser saves more than a spendthrift.

Saving Function

- The functional relationship between saving and income is called saving function (or propensity to save). he saving function shows the tendency of households to save at given levels of income.

i Average Propensity to Save (APS)

ii Marginal Propensity to Save (MPS)

I Average Propensity to Save (APS)

Average propensity to save is the ratio of total savings (S) to total income (Y). It is the part of total income which is saved. Symbolically:

APS = S/ Yd

For example, if income (Yd) is Birr 250 million and saving(s) is Birr 75 million,

II Marginal Propensity to Save (MPS)

It is the ratio of the change in saving (S) to the change in income (Yd).

Symbolically: **APS = ΔS/Δ Yd**

For example, if a country's national income increases from Birr 200 million to Birr 250 million, and saving increases from Birr 50 million to Birr 75 million, then

Properties of MPS

The main properties of MPS are:

I. Value of MPS lies between 0 and 1. In other words, 0 < MPS < 1.

II. MPS increases with increase in income.

III. The MPS of the poor is lower than that of the rich.

8.3 RELATIONSHIP BETWEEN CONSUMPTION AND SAVING

At the end of this section, you will be able to:

- ✓ show the relationship between consumption and saving.

Relationship between APC and APS

We know Yd = C + S, dividing both sides by Yd,

we get Yd/Yd = C/Yd + S/Yd

1 = APC + APS

or APC = 1 – APS, and APS = 1 – APC

The sum of APC and APS is always equal to unity (1). This is because income is either consumed or saved.

Relationship between MPC and MPS

We know Yd = C + S

$\Rightarrow$ Yd = C + S

Dividing both sides by Yd, we get

Yd/ΔYd = C/ΔYd + S/ΔYd

1 = MPC + MPS or MPC = 1 – MPS, ad MPS = 1 – MPC

We may conclude: the sum of MPC and MPS is always equal to unity (1). The following list shows this inter-relationship:

APC + APS = 1

APS = 1 – APC

APC = 1 – APS

MPC + MPS = 1

MPS = 1 – MPC

MPC = 1 – MPS

8.4 INVESTMENT

At the end of this section, you will be able to:

- ✓ define investment;
- ✓ state the determinants of investment; and
- ✓ appreciate about the impact of investment on economic growth.

In economics, **investment** means an addition, during a predefined 'current period to national resources such as:

- ➢ existing stock of physical (or real) assets for example, the building of new factories, new machines or equipment;

- existing stock of finished goods or raw materials.

Induced Investment

- Induced investment is investment which is made with the motive of earning a profit as in the private sector.
- Induced investment depends directly upon profit expectations.
- It is income-elastic.
- If national income goes up, induced investment also goes up – an increase in income induces investment. This occurs because an increase in national income leads to an increase in the demand for goods and services, which increases investor interest in meeting that demand, and therefore leads to investment.

Autonomous Investment

- Autonomous investment refers to investment which is made irrespective of income level.
- This approach is generally taken in the government sector.
- Autonomous investment is income inelastic – it is not affected by changes in income level.
- The volume of autonomous investment is the same at all levels of income. That is why the autonomous investment curve is a straight line.

Determinants of Investment

Profit Expectation: Business investment depends upon the expectations of the business firms involved. If the business people feel confident that opportunities for making profits in the future exist, they will be prepared

to undertake investment expenditure. On the other hand, if they do not expect to make profits, they will not invest.

Corporate Tax: Taxes are imposed by governments on corporations. A corporation uses part of its revenues to pay these taxes. The higher the tax rate is, the more that paying taxes reduces revenues and, in turn, reduces profits. Therefore, we can say that a decrease in the rate of corporate tax induces investment. This principle also acts inversely.

Level of National Income: If national income goes up, induced investment also goes up. The reason is that an increase in national income leads to an increase in the demand for goods and services and in investors' interest in supplying them, which leads to increased investment. Therefore, we can say that a higher level of national output induces investment. This principle also acts inversely.

Role of Investment in Economic Growth

Economic growth refers to an increase in the total output of a nation over time. Investment plays a crucial role in the economic growth of a nation.

Role of Private Investment in Economic Growth

- Investment made by the private sector in the form of new machinery and equipment, the building of new factories, increases in inventories, etc., increases the productive capacity of the economy and hence increases output and income.
- Note that, whenever investment is increased in a country, income and output increase many times more than the increase in investment. Therefore, we can say that an increase in the level of investment brings rapid economic growth to a country.

Role of Public Investment in Economic Growth

★ Public investment plays an active role in promoting economic growth, especially in developing countries.

★ Public investment promotes economic growth directly by developing social overhead and infrastructure, by establishing capital-good industries, basic and key industries, etc.

★ Public investment can stimulate economic growth indirectly by providing education, training, and research facilities. Public investment in education and training and in public health and social security schemes increases peoples' efficiency and skills, and thereby contributes to economic growth.

★ Public investment reduces disparities in income and wealth as well as regional disparities. Thus public investment promotes the achievement of economic growth with social justice.