# UNIT 4
# CONSUMPTION, SAVING AND INVESTMENT

## Introduction to Consumption, Saving, and Investment

### Overview

Adam Smith once said, "Consumption is the sole end and purpose of all production." This reflects the crucial role of consumption in an economy. In this unit, we explore how consumption, saving, and investment interact, impacting economic performance.

## Key Concepts

- **Disposable Income**: Income available after taxes.
- **Consumption**: Spending on goods and services.
- **Saving**: Income not spent on consumption.
- **Marginal Propensity to Consume (MPC)**: The change in consumption due to a change in disposable income.
- **Marginal Propensity to Save (MPS)**: The change in saving due to a change in disposable income.
- **Average Propensity to Consume (APC)**: The ratio of total consumption to total income.
- **Average Propensity to Save (APS)**: The ratio of total saving to total income.
- **Investment**: Expenditure on capital goods to increase future production.
- **Determinants of Investment**: Factors influencing the level of investment.

## 4.1 Consumption

### Definition

Consumption refers to the use of income to buy goods and services. It is a major component of aggregate demand and plays a key role in economic fluctuations.

### Properties of the Consumption Function

The consumption function illustrates how consumption varies with disposable income. It is typically represented as: $C=C0+cYd$ where:

- C is total consumption,
- C0 is autonomous consumption (consumption when income is zero),
- c is the marginal propensity to consume (MPC),
- Yd is disposable income.

**Autonomous Consumption**: Even when income is zero, consumption does not drop to zero. This basic consumption is funded by savings or borrowing.

**Induced Consumption**: This is the part of consumption that depends on disposable income and increases with rising income.

**Average Propensity to Consume (APC)**

APC measures the proportion of disposable income spent on consumption:
$APC=C/Yd$

For instance, if a household earns 4000 ETB and spends 3000 ETB on consumption:
$APC=3000/4000=0.75$

**Note**: APC may exceed 1 when consumption surpasses income, often due to borrowing.

**Marginal Propensity to Consume (MPC)**

MPC indicates how consumption changes with an additional unit of income:

$MPC=\Delta C/\Delta Yd$

For example, if income increases from 1000 ETB to 2000 ETB and consumption rises from 800 ETB to 1400 ETB: $MPC=600/1000=0.6$

This means the household spends 60% of additional income on consumption.

**Note**: MPC values lie between 0 and 1. A higher MPC means a larger portion of additional income is spent.

**Determinants of Consumption Expenditure**

1. **Income Level**: Higher income generally increases consumption.
2. **Distribution of Income**: Poorer individuals tend to consume a larger fraction of their income.
3. **Direct Taxes**: Higher taxes reduce disposable income and consumption.
4. **Future Expectations**: Anticipated increases in income or prices can boost current consumption.

5. **Interest Rates**: Higher interest rates may reduce consumption by making saving more attractive.
6. **Wealth Level**: Greater wealth often leads to higher consumption.

## 4.2 Saving

### Definition

Saving is the portion of disposable income not used for consumption: $S=Yd-CS$

### Average Propensity to Save (APS)

APS measures the proportion of disposable income saved: $APS=S/Yd=1-APC$

For example, if a household saves 500 ETB out of 2000 ETB disposable income: $APS=500/2000=0.25$

### Marginal Propensity to Save (MPS)

MPS is the ratio of the change in saving to the change in disposable income: $MPS=1-MPC$

**Note**: MPS values also range between 0 and 1. Higher MPS indicates greater saving from additional income.

### Determinants of Saving

1. **Income Level**: Higher income usually results in increased saving.
2. **Distribution of Income**: Richer individuals tend to save more.
3. **Future Expectations**: Anticipated changes in prices or income can affect saving behavior.
4. **Interest Rates**: Higher rates encourage saving.
5. **Wealth Level**: Lower wealth typically leads to lower saving.
6. **Direct Taxes**: Increased taxes lower disposable income and saving.

## Conclusion

Understanding the dynamics between consumption, saving, and investment helps in analyzing economic behavior and policy impacts. Consumption drives demand, saving influences capital accumulation, and investment fuels economic growth.

## 4.3 The Relationship between Saving and Consumption

**Overview:**

This section explores how saving and consumption are related, focusing on the concepts of Marginal Propensity to Save (MPS) and Marginal Propensity to Consume (MPC), and their graphical representation.

**1. Marginal Propensity to Save (MPS) and Marginal Propensity to Consume (MPC):**

- **MPS:** The proportion of additional income that is saved rather than spent. For example, if MPS = 0.6, it means 60% of any extra income will be saved.
- **MPC:** The proportion of additional income that is consumed. If MPS = 0.6, then MPC = 1 - 0.6 = 0.4. This indicates that 40% of any extra income will be spent on consumption.

**Key Relationship:**

- **MPC + MPS = 1**
  This equation shows that any change in disposable income can be allocated either to consumption or saving, and the total allocation must add up to the entire additional income.

**2. Average Propensity to Save (APS) and Average Propensity to Consume (APC):**

- **APS:** The ratio of total savings to total income.
- **APC:** The ratio of total consumption to total income.
- **Relationship:**
  **APC + APS = 1**
  This relationship is derived from the equation for total disposable income:
  $Yd=C+S$
  Dividing through by income (Y) yields:
  $Yd/Y=CY+SY$
  Thus,
  $1=APC+APS$

**3. Graphical Representation:**

- **45° Reference Line:**
  A 45° line on a graph where both the x-axis (income) and y-axis (total expenditure) are measured shows points where income equals total expenditure (consumption + saving). This line helps visualize whether consumption is equal to, greater than, or less than income.
- **Consumption Function and 45° Line:**

- When the consumption function curve intersects the x-axis, consumption equals income, and saving is zero.
- When income is above a certain point (Yd*), consumption is less than income, indicating positive saving.
- When income is below Yd*, consumption exceeds income, leading to dissaving.

**Case Study: Iqub**

- **Iqub** is a traditional saving practice in Ethiopia where members contribute a fixed amount periodically, and the collected money is given to one member at a time, often decided by lottery. This informal system helps those without access to formal financial institutions and supports community members facing financial challenges.

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## 4.4 Investment

**1. Definition of Investment:**

- **Investment** refers to the purchase of goods or assets that are not consumed immediately but are used to generate income or wealth in the future. This includes expenditures on capital goods like machinery and buildings.

**2. Types of Investment:**

- **Gross Investment:** Total spending on new capital before accounting for depreciation.
- **Net Investment:** Gross investment minus depreciation. Positive net investment indicates an increase in productive capacity.
- **Autonomous Investment:** Expenditure on capital formation not influenced by income changes. Typically seen in government investment.
- **Induced Investment:** Investment driven by changes in profit expectations and income levels. Higher income leads to more investment due to increased demand.
- **Private vs. Public Investment:**
  - **Private Investment:** Made by the private sector, such as new machinery or building factories.
  - **Public Investment:** Made by the government, including infrastructure and public services.

**3. Determinants of Investment:**

- **Interest Rates:** Higher rates increase the cost of investment, reducing investment levels.
- **Expectations:** Positive future sales expectations lead to higher investment.
- **Business Taxes:** Higher taxes reduce expected profits and investment.

**4. Role of Investment in Economic Growth:**

- Investment increases the capital stock, which enhances productivity and drives economic growth. Capital investments improve production facilities and operational efficiency.

**5. Accelerator Theory:**

- This theory posits that an increase in demand for consumer goods leads to a proportionally larger increase in investment in capital goods. The relationship is:
  It=aΔY
  where a\alphaa is the accelerator coefficient, showing that investment is influenced by changes in output or GDP.

**Unit Summary:**

- **MPC and MPS:** Reflect how additional income is split between consumption and saving.
- **APC and APS:** Show average spending and saving behavior relative to income.
- **Investment:** Impacts economic growth by increasing the capital stock and productivity, influenced by factors like interest rates and business expectations.

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This summary covers key concepts about the relationship between saving and consumption, as well as the nature and impact of investment on economic growth.