Introduction to Economics

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- Have you ever heard anything about Economics?
- What is meant by “economy”?
- What are resources, human needs and efficient allocation mean?
- What does demand and supply mean?
- What does market mean?
- What do we mean by Consumers and Producers?
- What do you understand by Households, Firms and Government?

- How do you understand Economic growth?
- What are Output(Income), Price (Inflation) and Unemployment ?
- What is budget and Budget deficit?
- What do you know about Export, Import and Trade deficit??
- What about Fiscal and Monetary Policy?

- This course will answer those questions and

  - ❖introduce you to the nature of economics (Chapter 1)
  - ❖demand and supply theories (Chapter 2)
  - ❖theories of consumer (Chapter 3)
  - ❖theories of production and cost (Chapter 4)
  - ❖market structure (Chapter 5)
  - ❖Fundamental concepts of macroeconomics (Chapter 6)

General objective and expected outcomes

❑ General objective

- The course will introduce students to the fundamental economic concepts and principles and students are expected to be equipped with the basic concepts of microeconomics and macroeconomics and the Ethiopian economy.

❑ Specific objectives of the course

- This course is aimed at:

- Describing the major economic agents and their respective roles and objectives

- Introducing the concepts of demand and supply and their interactions

- Introducing students to the neoclassical theory of consumer preferences and utility maximization approaches.

- Discuss short- run behaviour of production and the related cost structure,

- Introduce the different market structures and their real world applications, and

- Equipping students with macroeconomic goals, national income accounting, economic problems and policy instruments in light Ethiopian context.

Readings and texts

- ***INTRODUCTION TO ECON-Module***
- N. Gregaory Mankiw.2007, Principles of Economics, 5the edition *
- Hal R. Varian, Intermediate Microeconomics: A Modern Approach, 6th edition.*
- A. Koutsoyiannis, Modern Microeconomics*
- N. Gregory Mankiw, 2007, Macroeconomics, 4th edition.*
- Begg, Fisher &Dornbusch, 2005, Macroeconomics, 8th Ed.*
- R.S. Pindyck& D.L. Rubinfeld, Microeconomics
- Ayele Kuris, Introduction to Economics, 2001.
- D.N.Dwivedi, 1997, Micro Economic Theory, 3rd edition., Vikas Publishing

Chapter One

Nature of Economics

Chapter objectives

- After successful completion of this chapter, you will be able to:

✓ understand the concept and nature of economics;

✓ analyze how resources are efficiently used in producing output;

✓ identify the different methods of economic analysis ;

✓ distinguish and appreciate the different economic systems;

✓ understand the basic economic problems and how they can be solved; and

✓ identify the different decision making units and how they interact with each other

1.1 Definition of Economics

- The word economy comes from the Greek phrase ―one who manages a household.

- The science of economics in its current form is about two hundred years old.

- *Adam Smith* – generally known as the father of economics – brought out his famous book, ―*An Inquiry into the Nature and Causes of Wealth of Nation*, in 1776.

- Though many other writers expressed important economic ideas before Adam Smith, economics as a distinct subject started with his book.

- Economics was called *political economy* at this time.

- There is no universally accepted definition of economics (its definition is controversial) because different economists defined economics from different perspectives:

  a. Wealth definition,
  b. Welfare definition,
  c. Scarcity definition,
  d. Growth definition

- Hence, its definition varies as the nature and scope of the subject grow over time.

- But, the formal and commonly accepted definition is as follow.

- **Economics** is a social science which studies about efficient allocation of scarce resources so as to attain the maximum fulfillment of unlimited human needs.

- As economics is a science of choice-it studies how people choose to use scarce or limited productive resources to produce various commodities.

- The aim (objective) of economics is to study how to satisfy the unlimited human needs up to the maximum possible degree by allocating the resources efficiently.

1.2 The rationales of economics

- There are two fundamental facts that provide the foundation for the field of economics.

  1) Human (society's) material wants are unlimited.
  2) Economic resources are limited (scarce).

- The basic economic problem is about scarcity and choice since there are only limited amount of resources available to produce the unlimited amount of goods and services we desire.

- Thus, economics is the study of how human beings make choices to use scarce resources as they seek to satisfy their unlimited wants.

- Therefore, choice is at the heart of all decision-making.
- As an individual, family, and nation, we confront difficult choices about how to use limited resources to meet our needs and wants.
- Economists study
  - ✓ how these choices are made in various settings;
  - ✓ evaluate the outcomes in terms of criteria such as efficiency, equity, and stability; and
  - ✓ search for alternative forms of economic organization
  - ▪ that might produce higher living standards or a more desirable distribution of material well-being.

1.3 Scope of Economics

- The field and scope of economics is expanding rapidly and has come to include a vast range of topics and issues.

- In the recent past, many new branches of the subject have developed, including development economics, industrial economics, transport economics, welfare economics, environmental economics, and so on.

- However, the core of modern economics is formed by its two major branches: microeconomics and macroeconomics.

- That means economics can be analyzed at micro and macro level.

1. Microeconomics

- concerned with the economic behavior of individual decision making units such as households, firms, markets and industries.

- It deals with how households and firms make decisions and how they interact in specific markets.

- Its main tools are the demand and supply of particular commodities and factors.

- Discusses how the equilibrium of a consumer, a producer or an industry is attained(Partial equilibrium).

- Its central problem is price determination and allocation of resources.

- It helps to solve the central problem of what, how and for whom to produce‘ in an economy so as to maximize profits.

- Examples: Individual income, individual savings, individual prices, an individual firm‘s output, individual consumption, etc.

2. Macroeconomics

- is a branch of economics that deals with the aggregate behaviour of all decision making units in a certain economy.

- It is an aggregative economics that examines the interrelations among various aggregates, their determination and the causes of fluctuations in them.

- It looks at the economy as a whole.

- Its main tools are aggregate demand and aggregate supply of an economy as a whole.

- Its central problem is determination of level of income and employment at aggregate level (General equilibrium).

- Helps to solve the central problem of full employment of resources in the economy.‘

- Examples: national income, national savings, general price level, national output, aggregate consumption, etc.

❑ Note: Both microeconomics and macroeconomics are complementary to each other.

- That is, macroeconomics cannot be studied in isolation from microeconomics.

1.4 Method of analysis in economics

- Economics can be analyzed from two perspectives: positive economics and normative economics.

i) Positive economics

- concerned with analysis of facts and information.
- attempts to describe the world as it is.
- It tries to answer the questions what was; what is; or what will be?
- It does not judge a system as good or bad, better or worse.
- Any disagreement on can be checked by looking in to facts.

- **Example** of positive statements
  - ✓ The current inflation rate in Ethiopia is 12 percent.
  - ✓ Poverty and unemployment are the biggest problems in Ethiopia.
  - ✓ The life expectancy at birth in Ethiopia is rising.

ii) Normative economics

- deals with the questions like, what ought to be? Or what the economy should be?
- evaluates the desirability of alternative outcomes based on one's value judgments about what is good or what is bad.
- is a matter of opinion (subjective in nature) which cannot be proved or rejected with reference to facts.
- Since normative economics is loaded with judgments, what is good for one may not be the case for the other.
- Any disagreement can be solved by voting.

- **Example:**
  - ✓ The poor should pay no taxes.
  - ✓ There is a need for intervention of government in the economy.
  - ✓ Females ought to be given job opportunities.

❑ Inductive and deductive reasoning in economics

- The fundamental objective of economics is the establishment of valid generalizations about certain aspects of human behaviour.

- Those generalizations are known as theories.

- A theory is a simplified picture of reality.

- *Economic theory* provides the basis for *economic analysis* which uses *logical reasoning*.

❖ There are two methods of logical reasoning:

a) Inductive reasoning

- is a logical method of reaching at a correct general statement or theory based on several independent and specific correct statements.

- It is the process of deriving a principle or theory by moving from facts to theories and from particular to general economic analysis.

- steps

  1. Selecting problem for analysis

  2. Collection, classification, and analysis of data

  3. Establishing cause and effect relationship between economic phenomena.

b) Deductive reasoning

- a logical way of arriving at a particular or specific correct statement starting from a correct general statement.
- It deals with conclusions about economic phenomenon from certain fundamental assumptions or truths or axioms through a process of logical arguments.
- The theory may agree or disagree with the real world and we should check the validity of the theory to facts by moving from general to particular.

- Major steps in the deductive approach include:
  1. Problem identification
  2. Specification of the assumptions
  3. Formulating hypotheses
  4. Testing the validity of the hypotheses

1.5 Scarcity, choice, opportunity cost and production possibilities frontier

Scarcity

- refers to the fact that all economic resources that a society needs to produce goods and services are finite or limited in supply.

- The fundamental economic problem that any human society faces.

- But their being limited should be expressed in relation to human wants.

- Thus, the term reflects the imbalance between our wants and the means to satisfy those wants.

- **Resources are classified as**

1) Free resources

- A resource is said to be free if the amount available to a society is greater than the amount people desire at zero price.

  E.g. sunshine

2) Scarce (economic) resources

- A resource is said to be scarce or economic resource when the amount available to a society is less than what people want to have at zero price.

- Have price

- usually classified into four categories.

i) Labour

- the physical as well as mental efforts of human beings in the production and distribution of goods and services.

The reward for labour is called **wage.**

ii) Land

- the natural resources or all the free gifts of nature usable in the production of goods and services.

The reward for the services of land is known as **rent.**

iii) Capital

- all the manufactured inputs that can be used to produce other goods and services. Ex: equipment, machinery, transport and communication facilities, etc.

The reward for the services of capital is called **interest.**

iv) Entrepreneurship

- a special type of human talent that helps to organize and manage other factors of production to produce goods and services and takes risk of making loses.

  The reward for entrepreneurship is called **profit**

- Entrepreneurs are individuals who:
  - Organize factors of production to produce goods and services.
  - Make basic business policy decisions.
  - Introduce new inventions and technologies into business practice.
  - Look for new business opportunities.
  - Take risks of making losses.

Note: *Scarcity does not mean shortage.*

- A good is said to be scarce if the amount available is less than the amount people wish to have at zero price.
- But we say that there is shortage of goods and services when people are unable to get the amount they want at the prevailing or on going price.
- Shortage is a specific and short term problem but scarcity is a universal and everlasting problem.

❑ **Scarcity implies choice**

2. Choice

- If resources are scarce, then output will be limited.
- If output is limited, then we cannot satisfy all of our wants.
- Thus, choice must be made.
- Due to the problem of scarcity, individuals, firms and government are forced to choose as to what output to produce, in what quantity, and what output not to produce.
- In short, scarcity implies choice.

- Choice, in turn, implies cost-whenever choice is made, an alternative opportunity is sacrificed.
- This cost is known as opportunity cost.

Scarcity → limited resource → limited output → we might not satisfy all our wants →choice involves costs → opportunity cost

3. Opportunity cost

- In a world of scarcity, a decision to have more of one thing, at the same time, means a decision to have less of another thing.
- The value of the next best alternative that must be sacrificed is, the opportunity cost of the decision.
- Opportunity cost is the amount or value of the next best alternative that must be sacrificed (forgone) in order to obtain one more unit of a product.

Examples

- It is measured in goods & services but not in money costs
- It should be in line with the principle of substitution.
- When opportunity cost of an activity increases people substitute other activities in its place.

4. The Production Possibilities Frontier or Curve (PPF/ PPC)

- is a curve that shows the various possible combinations of goods and services that the society can produce given its resources and technology.

Assumptions.

a. The quantity and quality of economic resource available is fixed.

b. There are two classes of output to be produced over the year.

c. The economy is operating at full employment and is achieving full production (efficiency).

d. Technology does not change during the year.

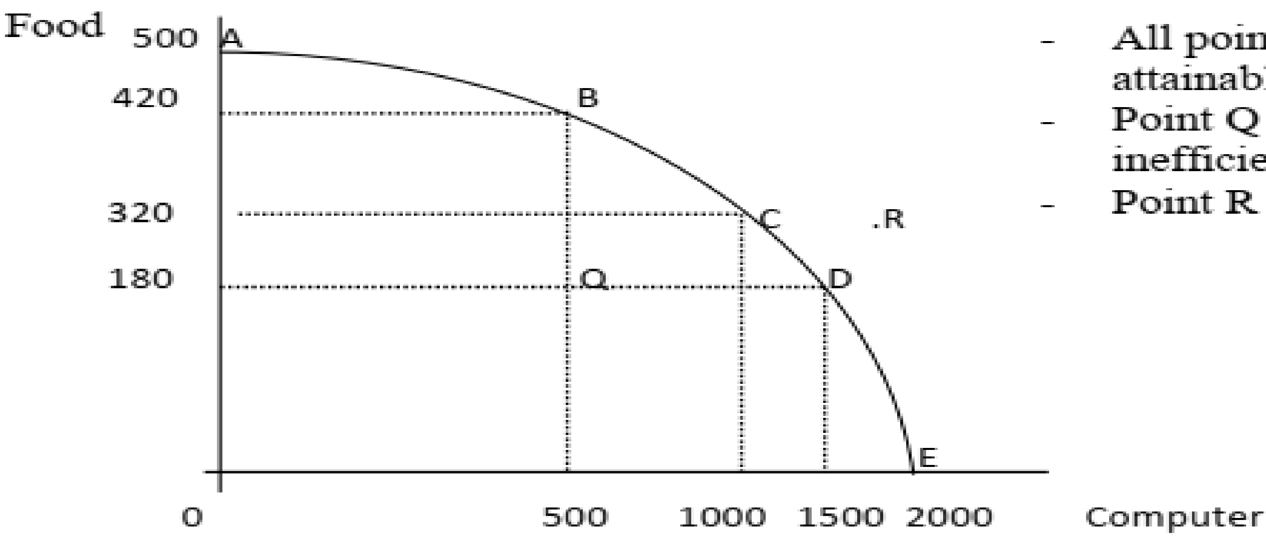
e. Some inputs are better adapted to the production of one good than to the production of the other (specialization).

Suppose a hypothetical economy produces food and computer given its limited resources a
available technology (table 1.1).

Table 1.1: Alternative production possibilities of a certain nation

Types of products	Unit	Production alternatives				
		A	B	C	D	E
Food	metric tons	500	420	320	180	0
Computer	number	0	500	1000	1500	2000

We can also display the above information with a graph.



- All points on the PPF are attainable and efficient
- Point Q is attainable but inefficient
- Point R is unattainable

Figure 1.1: Production Possibilities Frontier

- The PPF describes three important concepts:

i) The concepts of scarcity

ii) The concept of choice

iii) The concept of opportunity cost- is reflected by the downward sloping PPF.

- The law of increasing opportunity cost states that as we produce more and more of a product, the opportunity cost per unit of the additional output increases.

- The reason is that economic resources are not completely adaptable to alternative uses (specialization effect).

- This makes the shape of the PPF **concave** to the origin.

Mathematically OC is calculated as

$$\text{Opportunity cost of a good} = \frac{\text{the amount of the next best alternative sacrified}}{\text{the amount of the good gained}}$$

Example

Referring to table 1.1 above what is the opportunity cost of producing one more unit of computer?

- if the economy is initially operating at point A
- if the economy is initially operating at point B
- if the economy is initially operating at point C
- if the economy is initially operating at point D

❑ What do you understand from the results?

Economic Growth and the PPF

Economic growth or an increase in the total output level occurs when one or both of the following conditions occur.

1. Increase in the quantity or/and quality of economic resources.
2. Advances in technology.

Economic growth is represented by outward shift of the PPF.

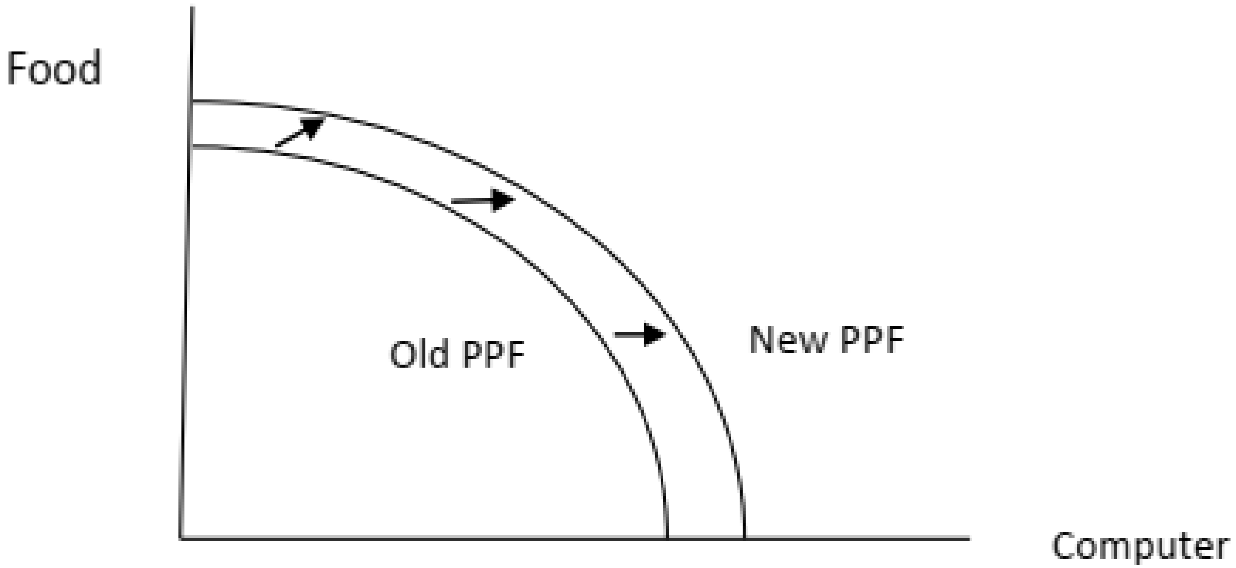


Figure 1.2: Economic growths with a new PPC

- ❖ An economy can grow because of an increase in productivity in one sector of the economy.
- For example, an improvement in technology applied to either food or computer would be illustrated by a shift of the PPF along the Y-axis or X-axis.
- This is called *asymmetric growth* (figure 1.3).

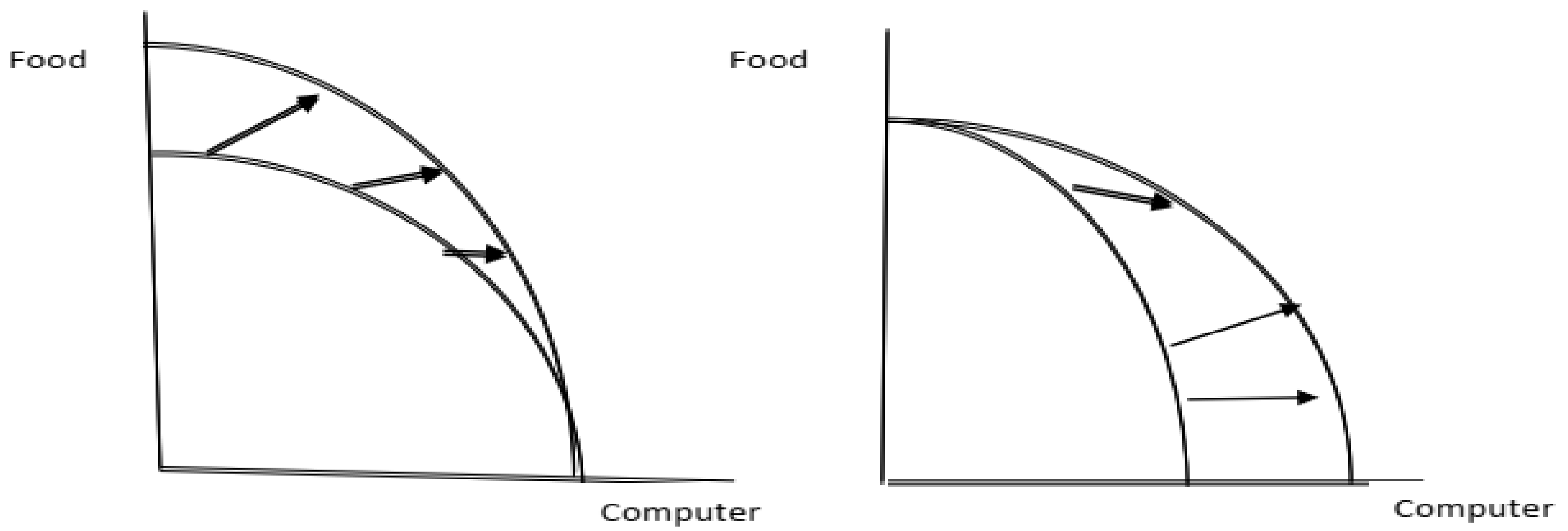


Figure 1.3: improvements in technology and quantity and/or quality of resources on national output

1.6 Basic economic questions

- Economic problems faced by an economic system due to scarcity of resources are known as basic economic problems-central problems of an economy
- are common to all economic systems.
- Therefore, any human society should answer the following three basic questions.

i) What to Produce?

- the *problem of allocation of resources*.
- implies that every economy must decide which goods and in what quantities are to be produced.
- The economy must make choices such as consumption goods versus capital goods, civil goods versus military goods, and necessity goods versus luxury goods.

- As economic resources are limited we must reduce the production of one type of good if we want more of another type.

- Generally, the final choice of any economy is a combination of the various types of goods but the exact nature of the combination depends upon the specific circumstances and objectives of the economy.

ii) How to Produce?

- the *problem of choice of technique*.
- the economy must decide how to produce the types of goods to be produced
- choosing between alternative methods or techniques of production.

- Broadly speaking, the various techniques of production can be classified into two groups:

i) A *labour-intensive technique* involves the use of more labour relative to capital, per unit of output.

ii) A capital-intensive technique involves the use of more capital relative to labour, per unit of output.

- The choice between different techniques depends on the available supplies of different factors of production and their relative prices.

- Making good choices is essential for making the best possible use of limited resources to produce maximum amounts of goods and services.

iii) For Whom to Produce?

- the *problem of distribution of national product*.
- how a product is to be distributed among the members of a society.
- For example, whether to produce for the benefit of the few rich people or for the large number of poor people.
- An economy that wants to benefit the maximum number of persons would first try to produce the necessities of the whole population and then to proceed to the production of luxury goods.

❖ All these and other fundamental economic problems center around human needs and wants.

❖ Many human efforts in society are directed towards the production of goods and services to satisfy human needs and wants.

❖ These human efforts result in economic activities that occur within the framework of an *economic system*.

1.7 Economic systems

- An **economic system** is a set of organizational and institutional arrangements established to answer the basic economic questions.
- Customarily, we can identify three types of economic system.
    - capitalism, command and mixed economy

1 Capitalist economy

- *Capitalism, free market economy* or *market system* or *laissez faire*
- is the oldest formal economic system in the world.
- It became widespread in the middle of the 19th century.
- all means of production are privately owned, and production takes place at the initiative of individual private entrepreneurs who work mainly for private profit.
- Government intervention in the economy is minimal.

Features of Capitalistic Economy

- ✓ **The right to private property**
- economic or productive factors such as land, factories, machinery, mines etc. are under private ownership.

- ✓ **Freedom of choice by consumers**
- Principle of consumer sovereignty
- Consumers can buy the goods and services that suit their tastes and preferences.
- Producers produce goods in accordance with the wishes of the consumers.

- ✓ **Profit motive:**
- Entrepreneurs are guided by the motive of profit-making.

- ✓ **Competition**

- Competition exists among sellers or producers ; among buyers; among workers; among employers.

- ✓ **Price mechanism**

- All basic economic problems are solved through the price mechanism.

- ✓ **Minor role of government**

- The government does not interfere in day-to-day economic activities and confines itself to defense and maintenance of law and order.

- ✓ **Self-interest**

- Each individual is guided by self-interest and motivated by the desire for economic gain.

Advantages of Capitalistic Economy

- ✓ **Flexibility or adaptability** to changing environments.
- ✓ **Decentralization of economic power**
- • Market mechanisms work as a decentralizing force against the concentration of economic power.
- ✓ **Increase in per-capita income and standard of living**
- ✓ **New types of consumer goods**
- ✓ **Growth of entrepreneurship**
- • Profit motive creates and supports new entrepreneurial skills and approaches.
- ✓ **Optimum utilization of productive resources:** due to innovations and technological progress.
- ✓ **High rate of capital formation**

Disadvantages of Capitalistic Economy

- ✓ ***Inequality of income and Unbalanced economic activity***
- as there is no check on the economic system, the economy can develop in an unbalanced way and promotes economic inequalities and creates social imbalance, in terms of poor and rich; geographic regions and different sections of society.

- ✓ ***Exploitation of labour*: by paying low wages.**

- ✓ ***Negative externalities***
- where profit maximization is the main objective, decision of firms may result in negative externalities against another firm or society in general.

❖ A negative externality is the harm, cost, or inconvenience suffered by a third party because of actions by others.

2. Command economy (socialistic economy)

- the economic institutions that are engaged in production and distribution are owned and controlled by the state.
- In the recent past, socialism has lost its popularity and most of the socialist countries are trying free market economies.

Main Features

✓ **Collective ownership**

- All means of production are owned by the society as a whole
- there is no right to private property.

✓ **Central economic planning**

- Planning for resource allocation is performed by the controlling authority according to given socio-economic goals.

✓ **Strong government role**

- Government has complete control over all economic activities.

- ✓ **Maximum social welfare**
- maximizing social welfare and does not allow the exploitation of labour.
- ✓ **Relative equality of incomes**
- Private property does not exist , the profit motive is absent, and there are no opportunities for accumulation of wealth lead which leads to to greater equality in income distribution, in comparison with capitalism.

Advantages of Command Economy

- ✓ **Absence of wasteful competition**
- There is no place for wasteful use of productive resources through unhealthy competition.
- ✓ **Balanced economic growth**
- regions and different sectors grow in balanced way through centralized planning and allocation of resources.

- ✓ **Elimination of private monopolies and inequalities**
- Command economies avoid the major evils of capitalism such as inequality of income and wealth, private monopolies, and concentration of economic, political and social power.

Disadvantages of Command Economy

- ✓ ***Absence of automatic price determination***
- since all economic activities are controlled by the government.
- ✓ ***Absence of incentives for hard work and efficiency***
- The entire system depends on bureaucrats who are considered inefficient in running businesses.
- The economy grows at a relatively slow rate.
- ✓ ***Lack of economic freedom*** for consumers, producers, investors, and employers.
- ✓ ***Red-tapism*** because all decisions are made by government officials.

3. Mixed economy

- is an attempt to combine the advantages of both the capitalistic economy and the command economy.
- It incorporates some of the features of both and allows private and public sectors to co-exist.

Main Features of Mixed Economy

✓ **Co-existence of public and private sectors**

- Their respective roles and aims are well-defined.
- Industries of national and strategic importance, such as heavy and basic industry, defense production, power generation, etc. are set up in the public sector,
- whereas consumer-goods industry and small-scale industry are developed through the private sector.

- ✓ **Economic welfare**

- The public sector tries to remove regional imbalances, provides large employment opportunities and seeks economic welfare through its price policy.
- Government control over the private sector leads to economic welfare of society at large.

- ✓ **Economic planning**
- ✓ The government uses instruments of economic planning to achieve co-ordinated rapid economic development, making use of both the private and the public sector.

- ✓ **Price mechanism**

- operates for goods produced in the private sector, but not for essential commodities and goods produced in the public sector.
- Those prices are defined and regulated by the government.

✓ **Economic equality**

- Private property is allowed, but rules exist to prevent concentration of wealth.
- Limits are fixed for owning land and property.
- Progressive taxation, concessions and subsides are implemented to achieve economic equality.

Advantages of Mixed Economy

✓ **Private property, profit motive and price mechanism**

- All the advantages of a capitalistic economy exist but at the same time, government control ensures that they do not lead to exploitation.

✓ **Adequate freedom** to different economic units such as consumers, employees, producers, and investors.

- ✓ **Rapid and planned economic development**
- because resources are properly and efficiently utilized, and the private and public sector complement each other.

- ✓ **Social welfare and fewer economic inequalities:**
- The government‘s restricted control over economic activities helps in achieving social welfare and economic equality.

Disadvantages of Mixed Economy

- ✓ **Ineffectiveness and inefficiency**
- A mixed economy might not actually have the usual advantages of either the public sector or the private sector.
- The public sector might be inefficient due to lack of incentive and responsibility, and the private sector might be made ineffective by government regulation and control

.

- ✓ **Economic fluctuations:**
- If the private sector is not properly controlled by the government, economic fluctuations and unemployment can occur.

- ✓ **Corruption and black markets:**
- if government policies, rules and directives are not effectively implemented, the economy can be vulnerable to increased corruption and black market activities.

1.8 Decision making units and the circular flow model

- There are three decision making units in a closed economy.

i) Household

- A household can be one person or more who live under one roof and make joint financial decisions.
- Households make two decisions.
  - a) Selling of their resources, and
  - b) Buying of goods and services.

ii) **Firm**

- A firm is a production unit that uses economic resources to produce goods and services.
- Firms also make two decisions:
  - a) Buying of economic resources
  - b) Selling of their products.

iii) Government:

- is an organization that has legal and political power to control or influence households, firms and markets.
- Government also provides some types of goods and services known as **public goods and services** for the society.
- In order to undertake these and other activities, government collects tax both from households and firms.

❑ The three economic agents interact in two markets:

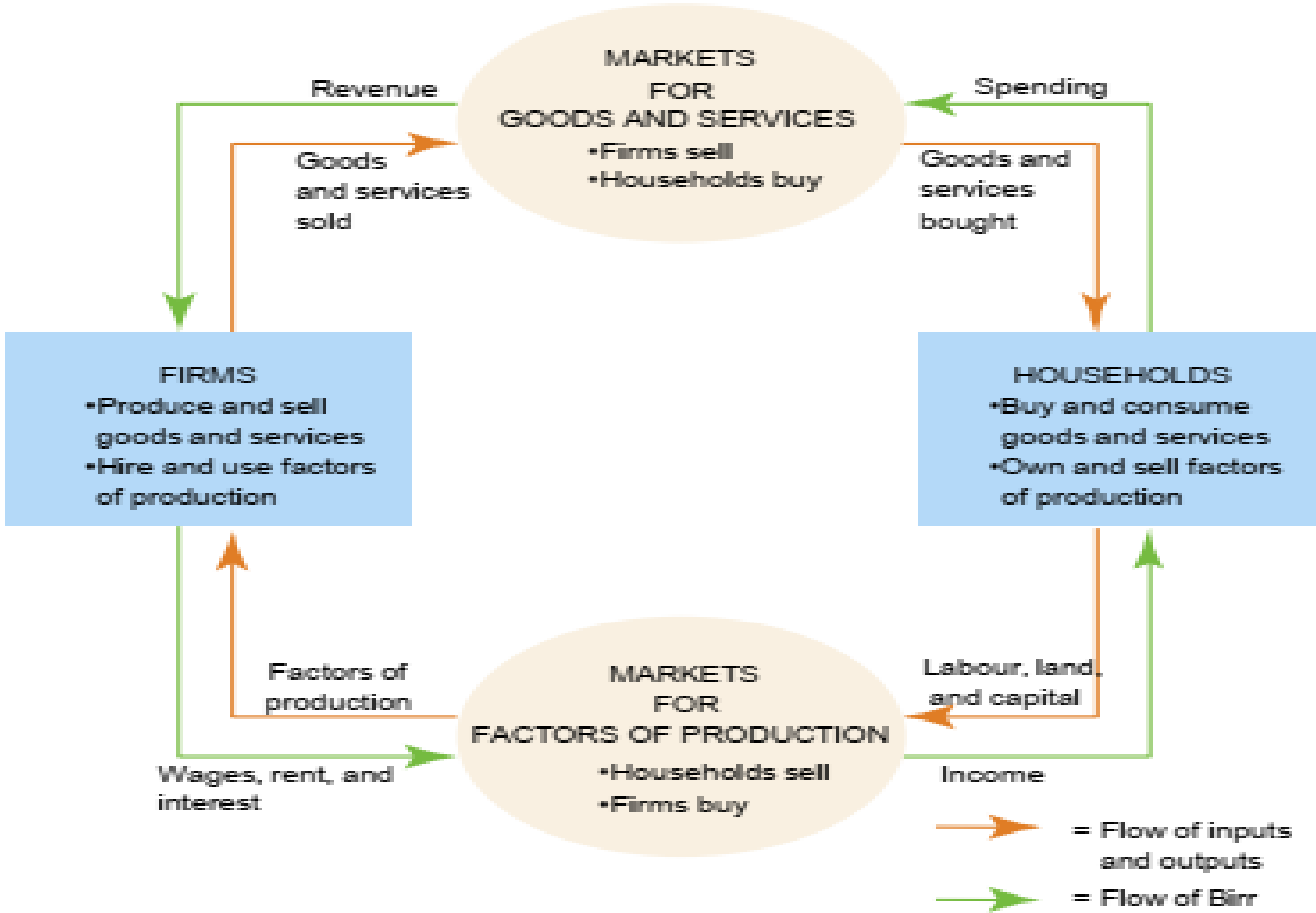
a) **Product market:** is a market where goods and services are transacted/ exchanged.

b) **Factor market (input market):** it is a market where economic units transact/exchange factors of production (inputs).

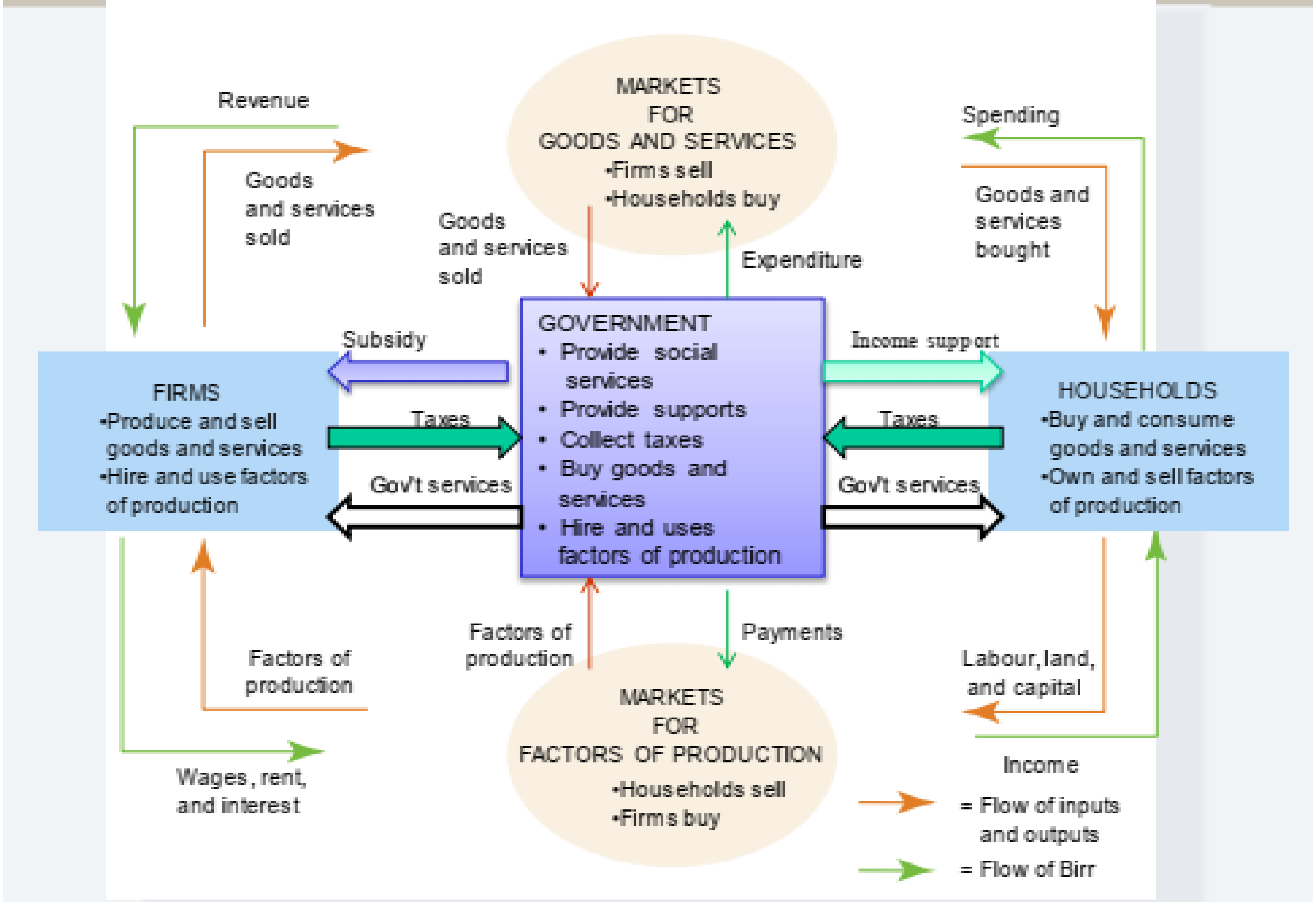
- **The circular-flow diagram** is a visual model of the economy that shows how money (Birr), economic resources and goods and services flows through markets among the decision making units.

- For simplicity, let's first see a two sector model where we have only households and business firms. (Fig 1.4)

- Then we have also a three sector model in which the government is involved in the economic activities. (Fig 1.5)



• Fig 1.4 A two sector Model



• Fig 1.5 A Three sector Model

End of Chapter One