

PRINCIPLES OF ECONOMICS I

AEM 102/ AGRIC ECONS AND FARM MGT.

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Course Descriptions

Economic Problems (PART B)

- This module talks about:
- Scarcity and Market system
- Production possibility Frontier
- Principle of Increasing Costs

LEARNING OBJECTIVES

At the end of this module, students should be able to:

1. Identify the characteristics of various economic systems and how the economic problems can be solved?
2. Explain Production Possibility Frontier (PPF) and its applications
3. Explain the principle of increasing costs

SCARCITY AND THE MARKET SYSTEM

- Two of the most important economic decisions faced by a society are:
 - (i) deciding what to produce and
 - (ii) how to allocate resources among competing uses

The combination of goods and services to produce can be resolved by government command or through a market system

COMMAND ECONOMY

- In a command economy, a central planning board determines the mix of output
- The experience with central planning has not been very successful as evidenced by economies of Eastern Europe and former USSR

FREE MARKET ECONOMY OR A CAPITALIST MARKET ECONOMY/ LAISSEZ-FAIRE SYSTEM

- Free market is a market with no government interference. Government only provides defense and core services
- Households own resources, allocate resources through the workings of the price mechanism
- Prices resolves the three fundamental economic questions of what, how and for whom to produce
- The only goods and services produced are those which individuals are willing to purchase at a price sufficient to cover the cost of producing them

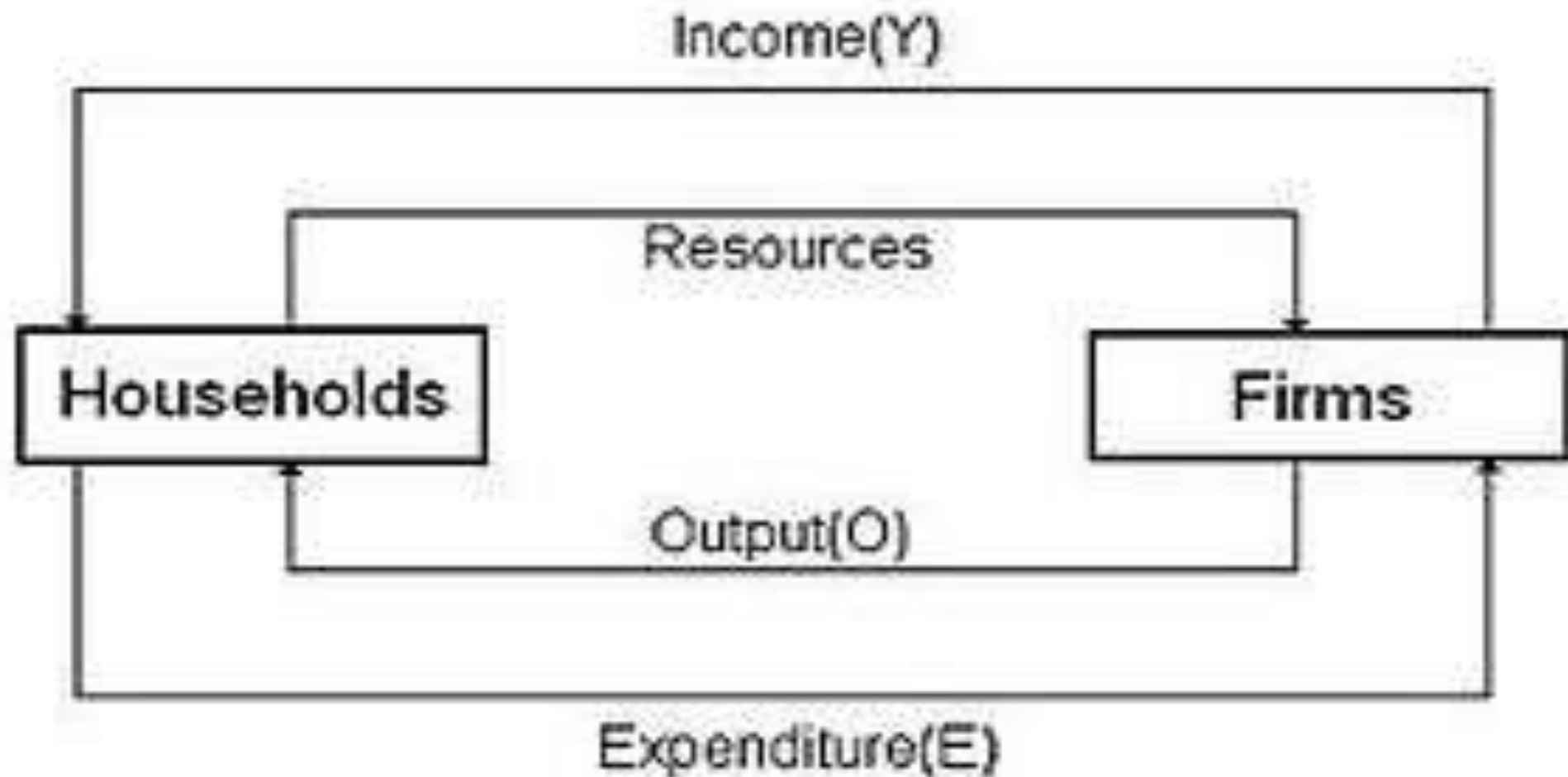
FREE MARKET ECONOMY **Conts**

- Because resources are scarce, goods and services are produced using the technique and resource combination which minimize cost of production
- Goods and services are sold to who are willing and have the money income to pay their prices
- What develops is a circular flow which is directed by the collective wants of the employable individuals in the society

FREE MARKET ECONOMY _ How Economic Questions are Resolved

- In a market economy, economic decisions are decentralized and are made by the collective wisdom of the market place, (that is, prices resolve the three fundamental economic questions of what, how and for whom).
- The only goods and services produced are those which individuals are willing to purchase at a price sufficient to cover the cost of producing them

CIRCULAR FLOW OF RESOURCES, INCOME & SERVICES



Explanation of the Circular flow of income

The circular flow integral to a market system is shown in the above slide

1. Business firms purchase or hire economic resources owned by individuals in order to produce goods and services
2. Business firms make a monetary payment to individuals for the use of their resources
3. Individuals use the income received for the use of their resources to purchase the goods and services produced by business firms
4. Individuals receive the goods and services produced by business firms

How Economics Questions are Resolved

- What goods and services are produced is determined by the **spending preferences of individuals**
- How these goods and services are produced depends upon **relative scarcity of the resources** needed for the production and **the state of technology**
- To whom the output is distributed is determined by the **income received by individuals** in supplying resources to firms

How do we resolved Economic Questions under Mixed Economy System?

- Under this system, government replaces, regulates or modifies the price mechanism
- For instance, in US, government produces some goods itself e.g police protection, roads
- Government finances these expenditures by taxing the incomes of individuals and businesses
- Government also influences what to produce by imposing direct regulations on producers on specific goods and services

THE PRODUCTION POSSIBILITY FRONTIER (PPF)

- **Production Possibility Frontier (PPF)**, is also known as the **production possibility curve (PPC)**, or **production possibility boundary (PPB)**, or **Transformation curve/boundary/frontier**
- It is the **maximum amount of alternative combinations of goods and services that a society can produce at a given time when there is full utilization of economic resources and technology.**
- is a curve which shows various combinations of the amounts of two goods which can be produced within the given resources and technology
- It represents a position of full employment of the economy's resources and full use of its technology

Shape of PPF

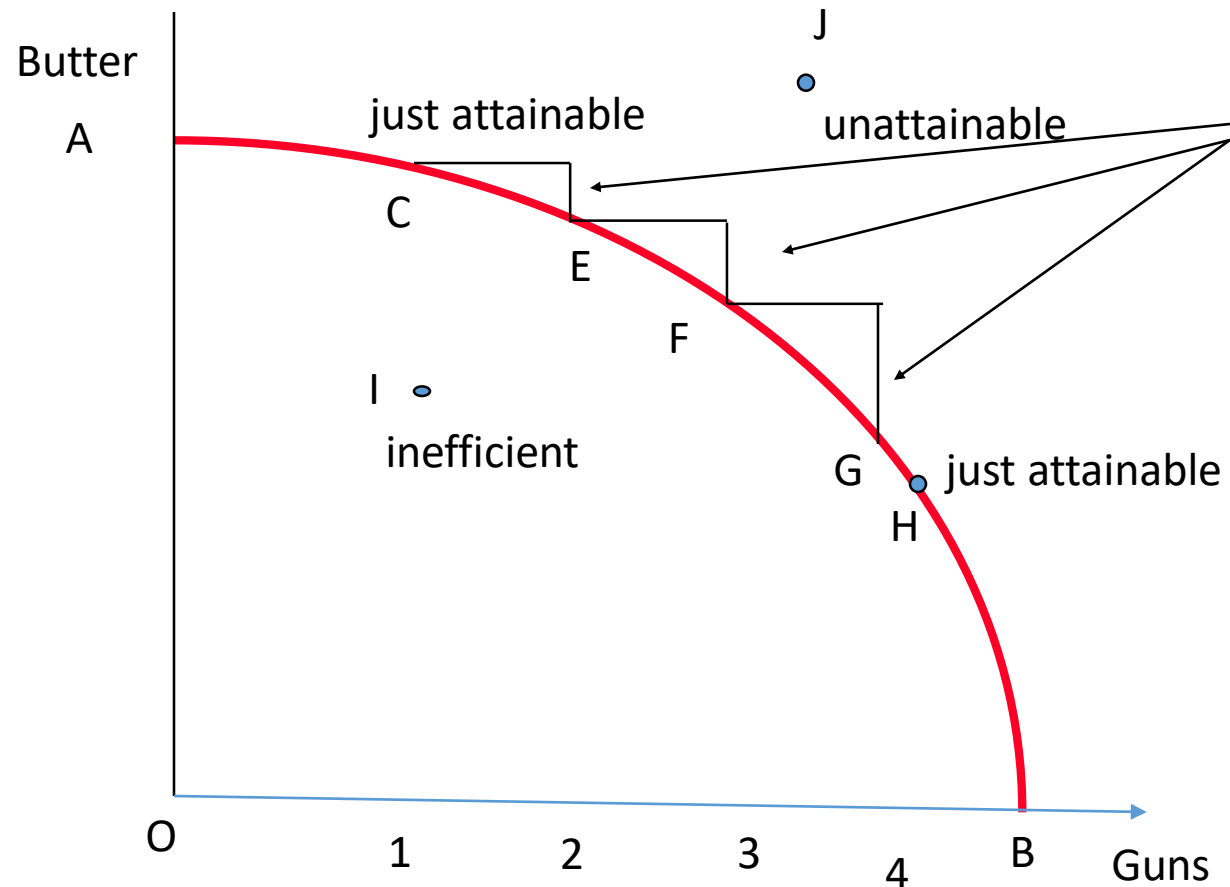
- PPFs are normally drawn as bulging upwards or outwards from the origin ("concave" when viewed from the origin),

PRODUCTION POSSIBILITIES FRONTIER (PPF)

Conts

- The opportunity cost of an activity is the value of the resources used in that activity when they are measured by what they would have produced when used in their **next best** alternative.
- The PPC depicts not only limited productive capability and therefore the problem of scarcity, but also the concept of opportunity cost.
- When a country is on the PPC, to move from one point on the PPC to another point involves sacrifice

A TYPICAL PPF PICTURE



The marginal opportunity cost of guns in terms of butter is increasing as we move down the PPF!

The PPF is typically bowed-out or linear.

It is not bowed-in

POINTS TO NOTE ON PPF

- The PPF curve divides production space into 3 distinct areas:
 - points on the PPF curve, which are the **efficient points**
 - points outside the curve are the **unattainable points**
 - points on the inside of the curve are the **inefficient points**
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- the PPF curve also illustrates scarcity by dividing production space into attainable and unattainable levels of production

Explaining Points in PPF

- The **efficient points** are so because all available resources are utilized and there is full use of existing technology
- Positions outside PPF are **unattainable** because the PPF defines the maximum amount that can be produced at a given time.
- Positions within PPF are **inefficient** because some resources are either unemployed or under employed

THE SLOPE OF PRODUCTION POSSIBILITY FRONTIER(PPF)

- The slope of the PPF at any given point is called the **marginal rate of transformation**(of one product into another since a fixed level of resource is used) **or** marginal opportunity cost. That is, the opportunity cost of good **X** in terms of good **Y** at the margin
- A person with the lower marginal opportunity cost of an activity has the **comparative advantage at that activity**.
- That is, a person with the comparative advantage can produce the activity by giving up the smallest amount of the alternative activity.

ABSOLUTE VERSUS COMPARATIVE ADVANTAGE AS APPLIED TO TRADE

- **Absolute advantage exists** if your country uses fewer resources to produce a given unit of output than the other country.
- **Comparative advantage exists** if your country can produce the output at a lower marginal cost in terms of other goods foregone than the other country.
- Every country (or person, or economy) has a comparative advantage at some activity.
- Absolute advantage is not important and may not always happen. Sometimes people or countries have the absolute advantage in nothing, yet trade possibilities still exist.

Assume all the resources of an economy can be used to produce guns and butter.

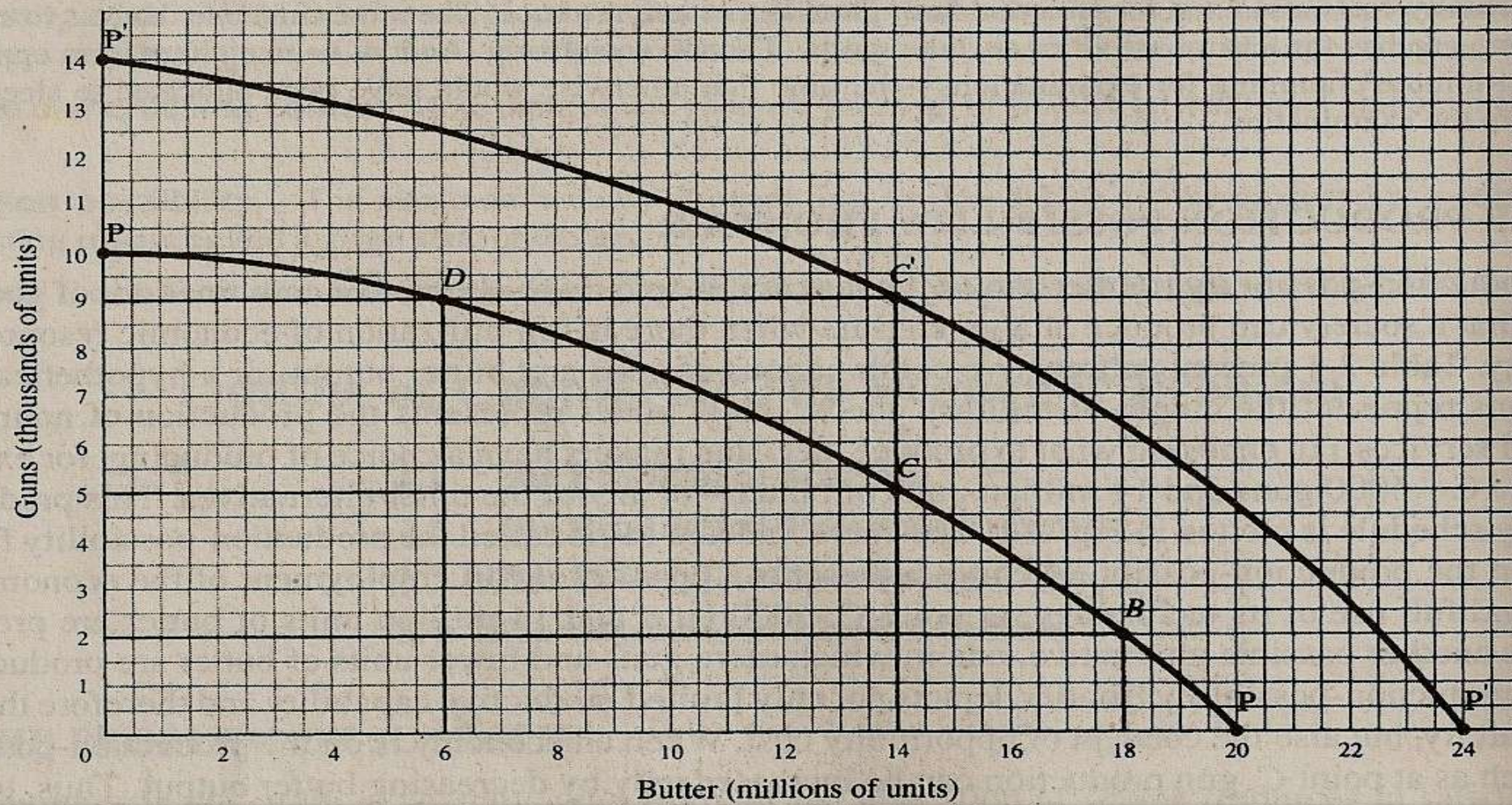
- If all the resources are used to produce only gun, OB guns are produced
- If all the resources are used to produce only butter, OA butter are produced.
- AB represents the maximum that can be produced
- To produce a combination of guns and butter, you must make a sacrifice between the products

OUTWARD SHIFT OF PPF

The PPF can shift outwards over time as more resources become available and or technology is improved

Growth in the economy's productive capability is depicted by the outward shift of the PPF from PP to P'P'

SHIFTING PPF Curve



PRINCIPLES OF INCREASING OPPORTUNITY COSTS

- Increasing opportunity cost of production of the first commodity illustrates the principle of increasing costs
- The law of increasing opportunity costs states that as production of a product increases, the cost to produce an additional unit of that product increases as well.

PRINCIPLE OF INCREASING COST

Table 2-2

Alternative or Point	Units of Food (millions)	Units of Clothing (thousands)	Cost of Additional Units of Food
<i>A</i>	0	10	
<i>B</i>	1	9	1
<i>C</i>	2	7	2
<i>D</i>	3	4	3
<i>E</i>	4	0	4

The PPC of Data from Table 2.2

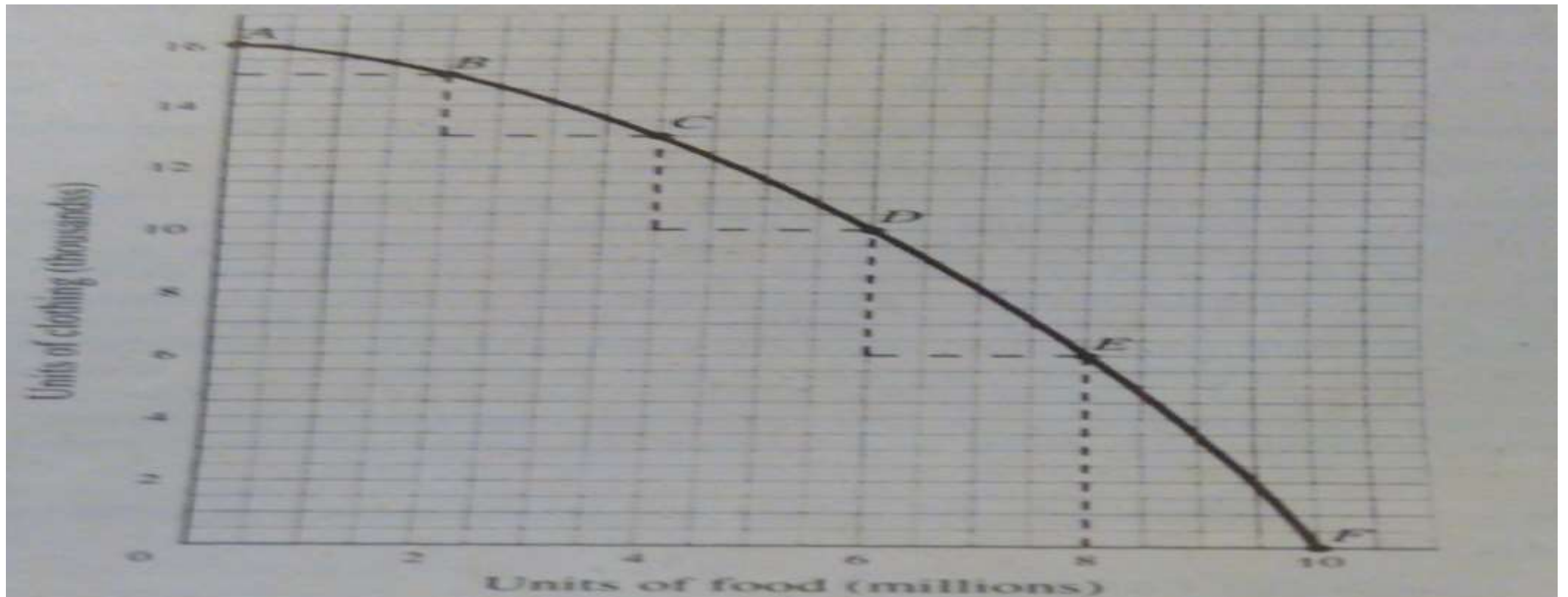


Fig. 2-6

THE APPLICATIONS OF PPF

- The Production Possibilities Frontier is a basic workhorse in economics.
- It is important for understanding some basic issues in economics.
- Great application is with international trade theory.
- Helps one to understand and distinguish between comparative advantage and absolute advantage.

ASSIGNMENT 1

- (a). Use the data from Table 1 to draw a PPF. Plot clothing production on the vertical axis and food production on the horizontal axis. Label the production alternatives A,B, C, D,E and F on the curve
- (b) On the same figure, label as point U the production of 3 thousand units of clothing and a 3 million units of food and as point H the production of 6 thousand units of clothing and 3.5 million units of food. What do points U and H indicate?
- (c) What is the difference between unemployed and underemployed economic resources?
- (d) When is the production efficient?

TABLE 1: PRODUCTION POSSIBILITY FRONTIER(PPF

Alternatives or point	Units of food (millions)	Units of clothing (thousands)	Cost of additional units of food
A	0	8.0	0.5 1.0 1.5 2.0 3.0
B	1	7.5	
C	2	6.5	
D	3	5.0	
E	4	3.0	
F	5	0.0	