

ECON-  
Lee-02  
9-01

- \* Economics is the social science that studies the production, distribution, and consumption of goods and services.
  - \* The invisible-hand refers to the way in which the individual pursuit of self-interest can lead to good results for society as a whole.
- Economics →
- ① Microeconomics → is the branch of economics that studies how people make decisions and how these decisions interact.
  - ② Macroeconomics → is the branch of economics that is concerned with overall ups and downs in the economy.
- \* Recession → is a downturn in the economy.

④ Principles that Underlie the Economics of Individual choice.

① Resources are scarce

② The real cost of something is what you must give up to get it

③ "How much...?" is a decision at the margin

④ People usually exploit opportunities to make themselves better off.

④ Opportunity Cost: The real cost of an item is its opportunity cost, what you must give up in order to get it.

\* Opportunity Cost → Giving up 2<sup>nd</sup> best

↳ Opportunity Lost, alternative

ECON

Lee-03

13-01

- \* There are gains from trade.
  - \* Markets move toward equilibrium.
  - \* Resources should be used as efficiently as possible to achieve society's goals.
  - \* Markets usually lead to efficiency.
  - \* When markets don't achieve efficiency, government intervention can improve society's welfare.
  - ⇒ When goods and services are provided in exchange for other goods and services, it is called trade.
- ⇒ Principles that Underline Economy-wide Interactions
- ① One person's spending is another person's income.
  - ② Overall spending is another person's income
  - ③ Overall spending sometimes gets out of line with the economy's productive capacity.
  - ④ Government policies can change spending.

\*\* Decisions about whether to do a bit more or a bit less an activity are marginal decisions. The study of such decisions is known as marginal analysis.

④ Positive economics → is the branch of economic analysis that describes the way the economy actually works.

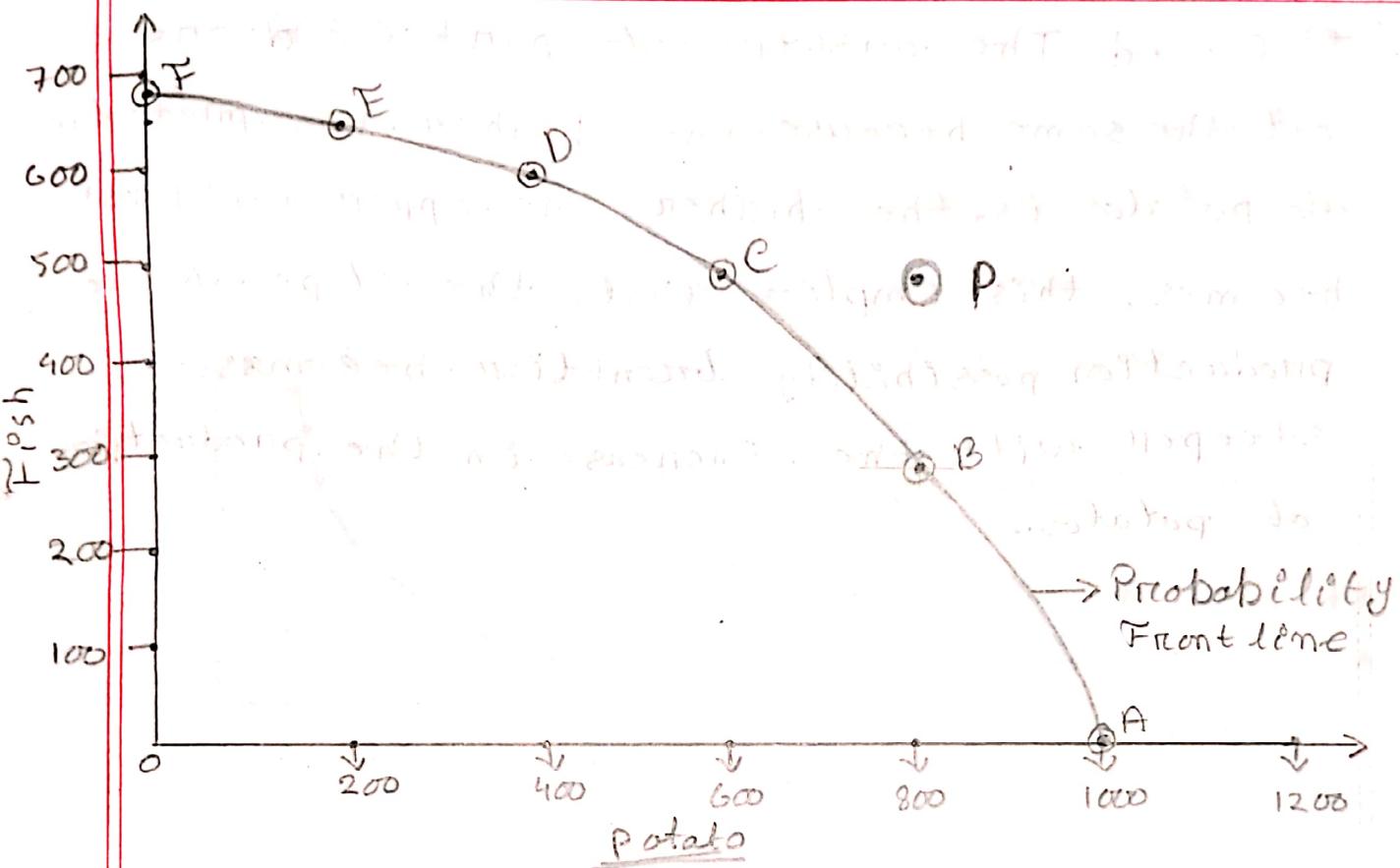
⑤ Normative economics → makes prescriptions about the way the economy should work.

→ Land, Labor, Capital, human Capital.

ECN

2-04 + 05

16-01 / 20-01



- ⑥ Atlantis can't produce 500 pounds of fish and 800 pounds of potatoes. Because this point lies outside production possibility frontiers.
- ⑦ If we increase the annual output of potatoes from 600 to 800 pounds, the opportunity cost will be the loss production of fish by 200 pounds.
- ⑧ If we increase the annual output of potatoes from 200 to 400 pounds, the opportunity cost will be less production of fish by 500 pounds.

e) ~~contd~~ The answers at part c & d are not the same because the higher the production of potatoes  $P_s$ , the higher the opportunity cost becomes. This implies that the slope of the production possibility frontier becomes steeper with the increase in the production of potatoes.

Ques 10. In a two country model, do higher oil prices in one country affect the other country's economy? Explain.

## Chapter:03

### Demand and Supply

table → demand schedule

↳ ~~at~~ particular price → product at demand

curve → demand curve → y-axis (price)

x-axis (demand)

price ↑

↓

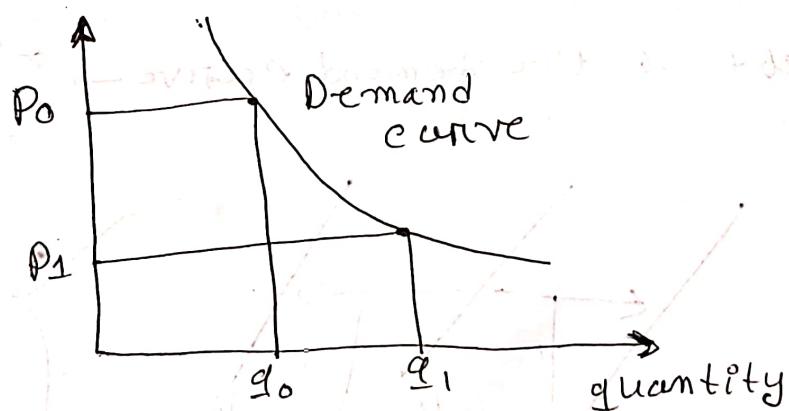
\* as price rises,

the quantity demanded falls.

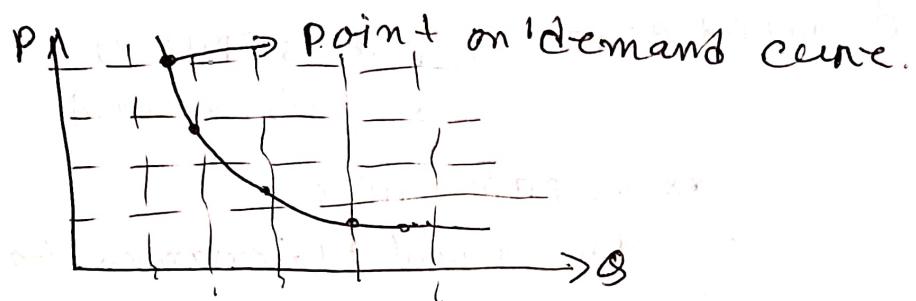


A demand schedule is the table showing how much of a good or service consumers will want to buy at different prices.

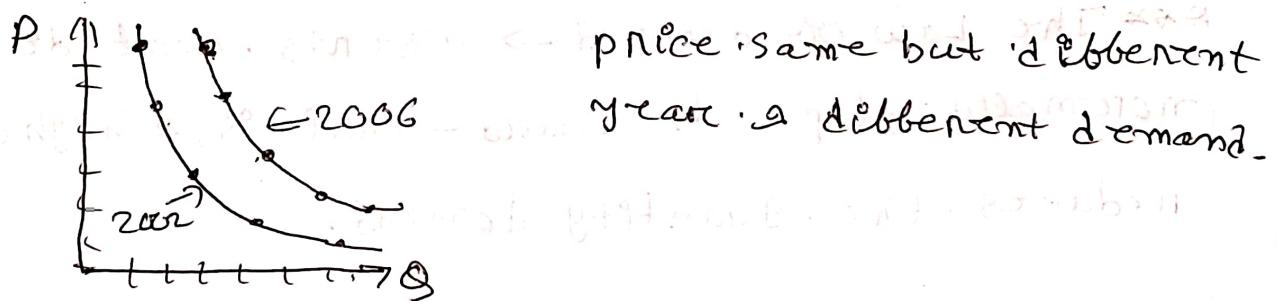
\* The Law of demand → asserts that demand curves normally slope downward - that is, a higher price reduces the quantity demanded.



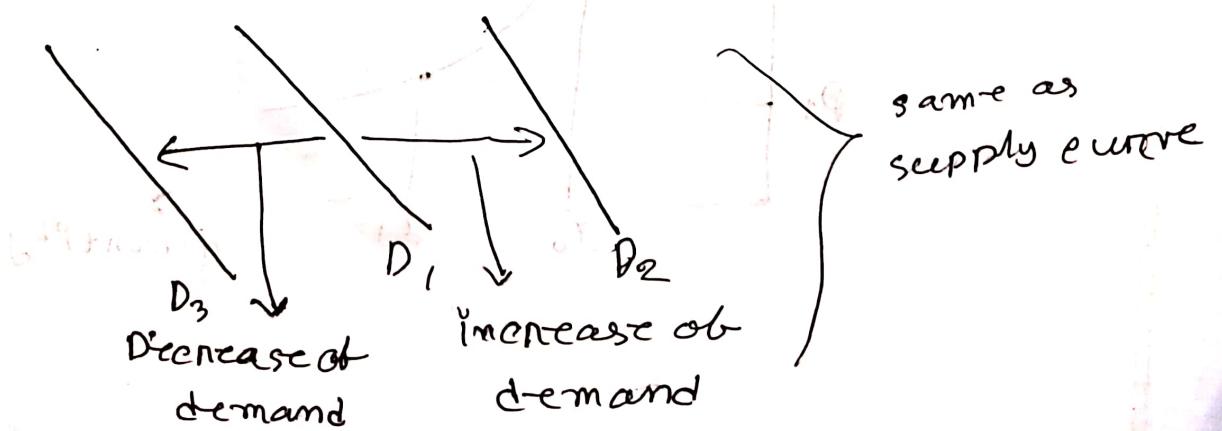
~~\* Movement along the Demand Curve~~ → a change in a good's price results in a change in the quantity demanded of that good.



~~\* Shift of the demand curve~~ → is a change in the quantity demanded at any given price, represented by the change of the original demand curve to a new position.



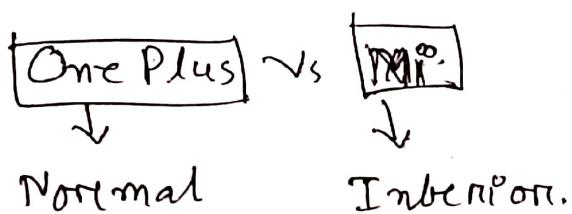
⇒ Shift of the demand curve → Left + Right



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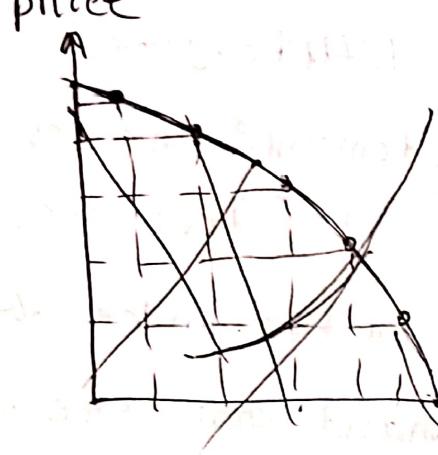
- ① Substitute Goods: If a rise in the price of one of the goods leads to an increase in the demand for the other good, then the goods are called substitute goods.  
A product price increase  $\rightarrow$  B product demand increases  
A " " decrease  $\rightarrow$  B " " decrease.
- ② Complementary Goods: If a rise in the price of one good leads to a decrease in the demand for the other good, then the goods are called complementary goods.  
A product price increase  $\rightarrow$  B product demand decrease  
A product price decrease  $\rightarrow$  B product demand increase.
- ③ Normal Goods: When a rise in income increases the demand for a good - the normal case - it is a normal good.
- ④ Inferior Goods: When a rise in income decreases the demand for a good, it is an inferior good.

Note: 3 and 4 are related to income. Income rises switch to normal goods. Income falls switch to inferior goods.



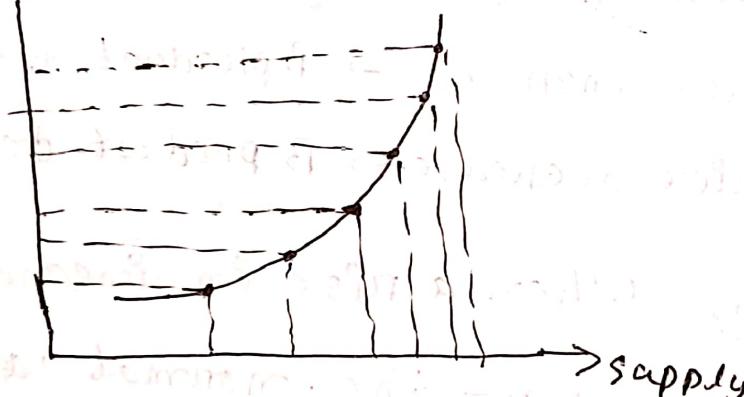
Supply Curve  $\rightarrow$  Y-axis = price

X-axis = supply



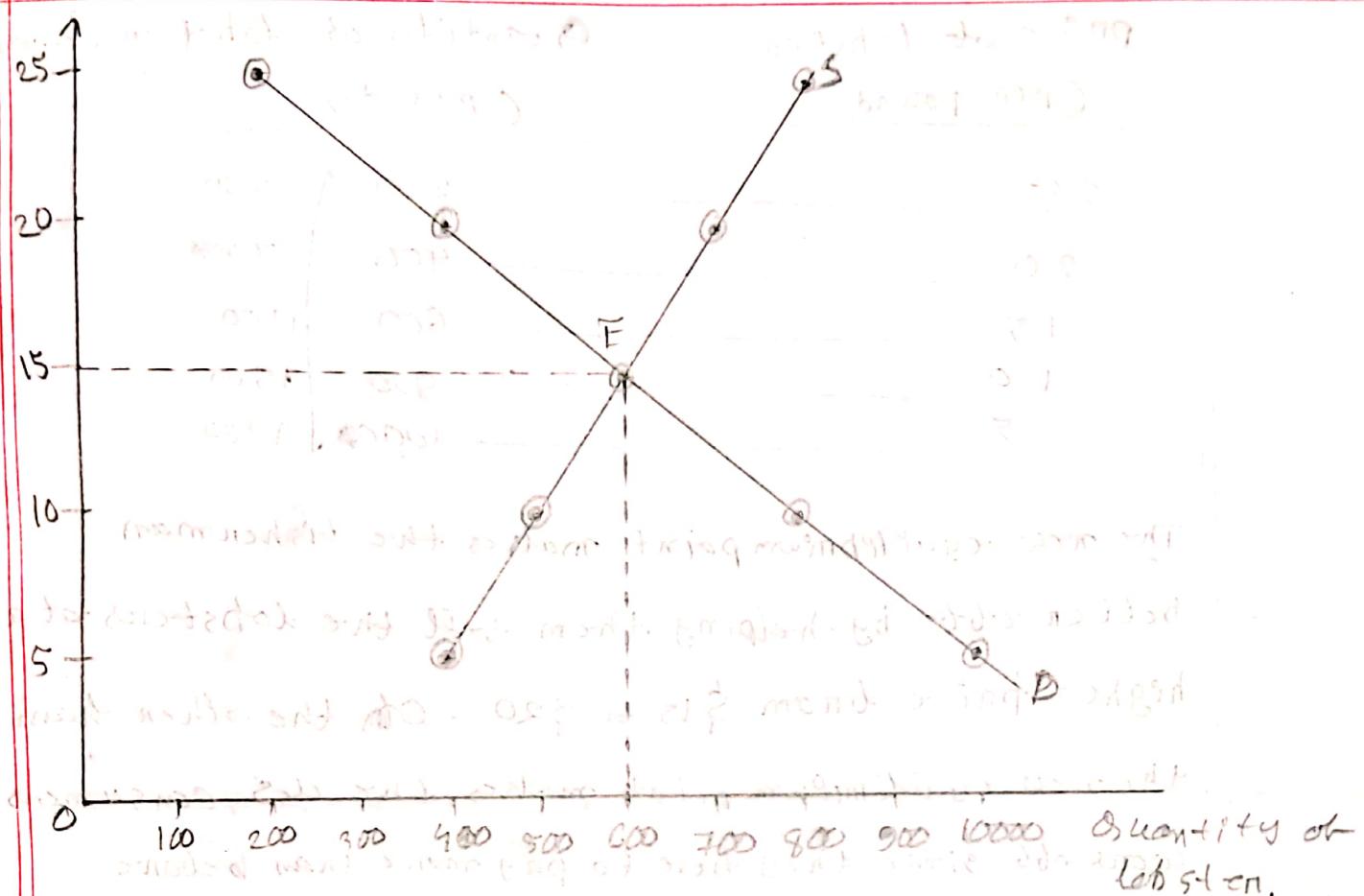
as price rises,  
product supply rises.

price



Supply

## Price of Lobster



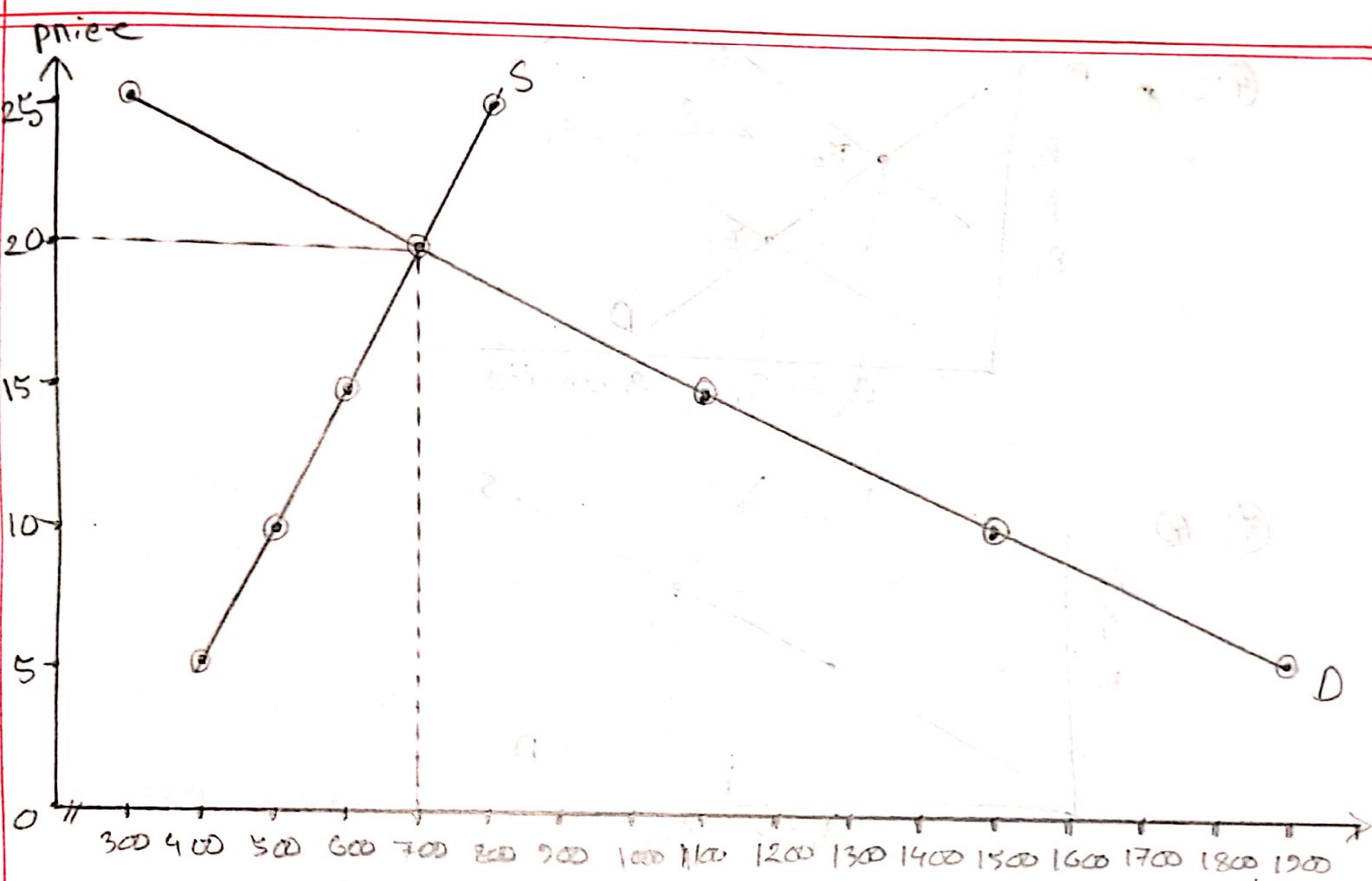
- a) The equilibrium price and quantity of lobsters are 15 \$ and 600 pounds respectively.

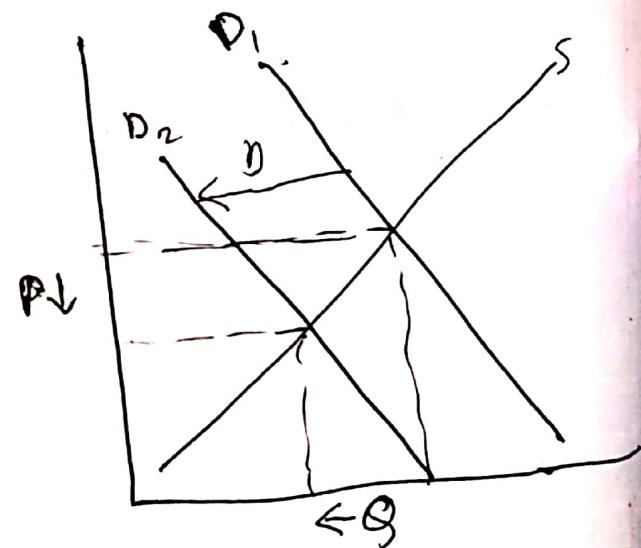
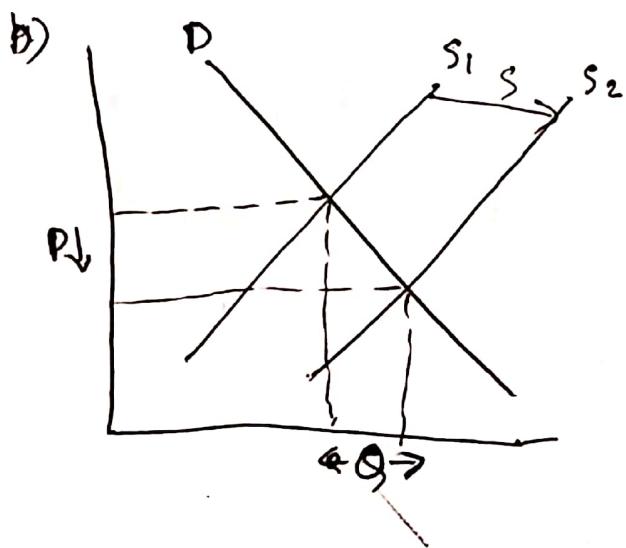
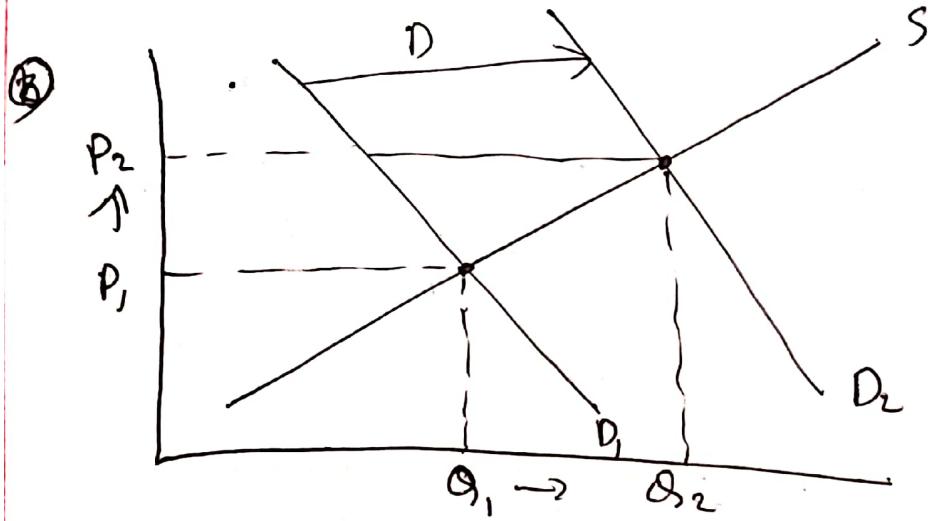
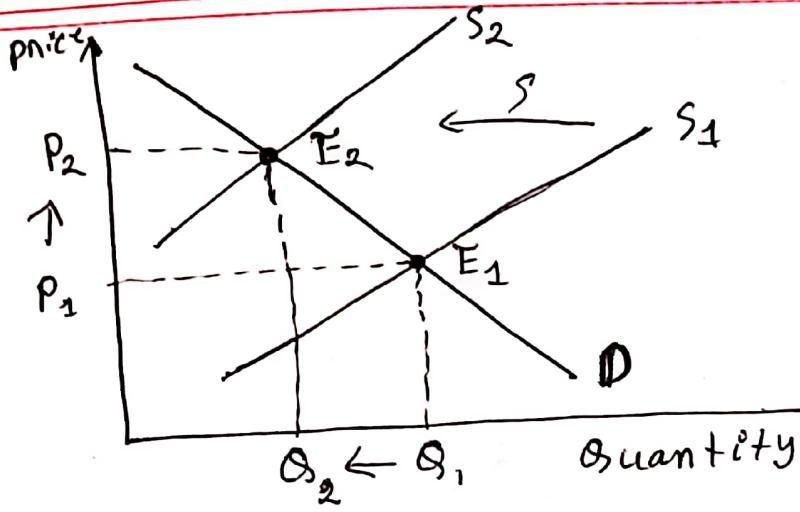
price of lobster  
(per pound)

Quantity of lobster demand  
(pounds)

25	200	300
20	400	7000
15	600	1100
10	800	1500
5	1000	1900

The new equilibrium point makes the fisherman better off by helping them sell the lobsters at a higher price from \$15 to \$20. On the other hand the new equilibrium point makes the U.S. consumers worse off since they have to pay more than before. As a result, the consumptions of U.S. consumers will decrease from 600 to 400 pounds.





③ ① In equilibrium, we know that, Quantity demanded = Quantity supplied

$$\text{or, } Q^d = Q^s$$

$$1600 - 300P = 1400 + 700P$$

$$\Rightarrow 700P + 300P = 1600 - 1400$$

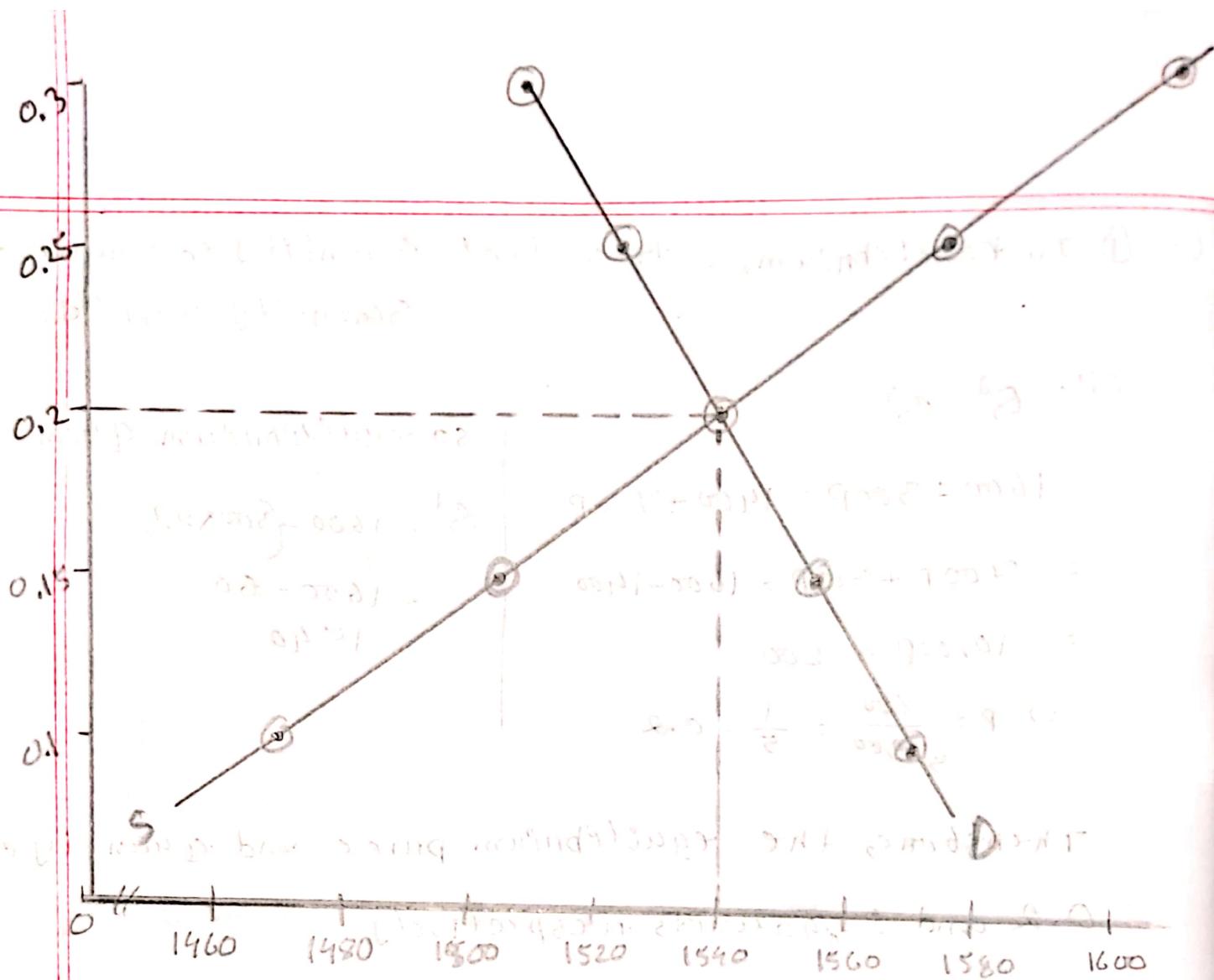
$$\Rightarrow 10,00P = 200$$

$$\Rightarrow P = \frac{200}{10,00} = \frac{1}{5} = 0.2$$

so equilibrium quantity,

$$\begin{aligned} Q^d &= 1600 - (300 \times 0.2) \\ &= 1600 - 60 \\ &= 1540 \end{aligned}$$

Therefore, the equilibrium price and quantity are 0.2 and 1540 units respectively.



Quantity of chocolate

## Chapter-04

⇒ Willingness to pay and the Demand Curve.

Individual consumer surplus = Willingness to pay - price paid.

- ⑧ a) At \$4 will buy 4 servings of pasta

Quantity of pasta (servings)	Willingness to pay (\$)	Price paid (\$)	Individual consumer surplus
1	10	4	6
2	8	4	4
3	6	4	2
4	4	4	0
5	2	-	-
6	0	-	-
Total consumer surplus			12

b)

1	10	6	4	1
2	8	6	2	
3	6	6	0	
4	4	-	-	
5	2	-	-	
6	0	-	-	
Total consumer surplus			6	

so, the total consumer surplus will decrease by \$6 ( $\$12 - \$6$ )

c) Ani will eat 6 servings of pasta.

Now Ani receives consumer surplus of \$5 (\$30 - \$25). Hence the total willingness to pay for Ani is \$30 ( $\$10 + 8 + 6 + 4 + 2 + 0$ )

d) Since all the other customers are like Ani, we can charge \$30 as the highest price for the "all-you-eat" special and still attract customers.

## chapter-6

### Elasticity

Cross Price elasticity  
of demand

- Elasticity can be of 3 types:
- ① Price elasticity of demand
  - ② Income elasticity of demand
  - ③ Price elasticity of supply

① Price Elasticity of Demand =  $\frac{\frac{Q_2 - Q_1}{(Q_2 + Q_1)/2} \times 100}{\% \text{ change in Price}} \times 100$

$$\frac{P_2 - P_1}{(P_2 + P_1)/2} \times 100$$

P.E.S.  
 $\frac{P.E.D > 1}{100} \rightarrow$  Price-elastic Demand / Supply

P.E.S.  
 $\frac{P.E.D < 1}{100} \rightarrow$  Price-inelastic Demand / Supply

P.E.S.  
 $\frac{P.E.D}{100} = -1 \rightarrow$  Unit-elastic Demand / Supply

$\rightarrow$  % change in Q.D.  $\div$  % change in price  $\rightarrow$  Perfectly

Inelastic Demand  $\frac{\text{Supply}}$

$\rightarrow P.E.D = 0,$  perfectly inelastic demand and supply

P.E.S.

$\& \% \text{ change in Q.D.} \div \% \text{ change in price} \rightarrow$  Perfectly

elastic Demand  $\frac{\text{Supply}}$

$\rightarrow \infty$

⑥

Price changes cause two effects:

- ① Price effects
- ② Quantity effect.

Q = f(P)

\* The price elasticity of demand tends to be high,

- ① The good is luxury  
tea/coffee.
- ② The good has substitute products available in the market,
- ③ Consumers have more time to adjust to the price change,
- ④ Spending on the good requires a significant portion of the consumer's income.

Cross-price Elasticity of Demand:

price elasticity of demand =  $\frac{\% \text{ change in demand for Good B}}{\% \text{ change in price of Good A}}$

$$= \frac{\% \text{ change in quantity demanded}}{\% \text{ change in income}}$$

price elasticity of supply

$$\rightarrow \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

Factor Determining Price Elasticity of Supply

- ① Producers have more time to respond to a price change.
- ② Inputs are readily available and can be shifted into production at a relatively low cost.

Qs:3 a) The percentage change in quantity demanded  
of wheat:

$$\frac{Q_2 - Q_1}{(Q_1 + Q_2)/2} \times 100$$
$$= \frac{1.9 - 1.74}{(1.74 + 1.9)/2} \times 100$$
$$= 8.79\%$$

$Q_2 = 1.9 \text{ billion}$   
 $Q_1 = 1.74 \text{ billion}$

The percentage change in price of wheat.

$$\frac{P_2 - P_1}{(P_2 + P_1)/2} \times 100$$
$$= \frac{2.72 - 3.70}{(3.70 + 2.72)/2} \times 100$$
$$= -30.53\%$$

$P_2 = 2.72 \$$   
 $P_1 = 3.70 \$$

Dropping the minus sign, the price elasticity of demand is 30.53%

so, price inelastic demand =  $\frac{\% \text{ change in demand}}{\% \text{ change in price}}$

$$= \frac{8.79\%}{30.53\%}$$
$$= 0.29\%.$$

$$\begin{array}{r} 2.34 \\ \times 1.42 \\ \hline \end{array}$$

b) The revenue for 1998 is  $= (\$3.70 * 1.74)$  billion  
 $= 6.438$  billion.

The revenue for 1999 is  $= (\$2.72 * 1.9)$  billion  
 $= 5.168$  billion.

c) The bumper harvest decreased the total revenue of American wheat farmers.

We could have predicted this decrease in revenue.

From part "a" since the price elasticity of demand is 0.29 (price inelastic demand) where the price effect is higher than the quantity effect.

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a) The percentage change in quantity demanded of wheat:-

$$\frac{1600 - 2400}{(2400 + 1600)/2} \times 100 = -40\%$$

The percentage change in price of t-shirt:-

$$\frac{\$6 - \$5}{(5 + 6)/2} \times 100 = 18.18\%$$

Dropping the minus sign, the price elasticity of demand is:-  $\frac{40\%}{18.18\%} = 2.20$

b) The percentage change in quantity demanded of t-shirt

$$\frac{50,000 - 30,000}{(30,000 + 50,000)/2} \times 100 = 50\%$$

The percentage change in income of t-shirt:

$$\frac{30,000 - 20,000}{(20,000 + 30,000)/2} \times 100 = 40\%$$

The income elasticity of demand is  $\frac{50}{40} = 1.25$

## Chapter 10

### Utility and Consumption

utility = satisfaction

- \* The utility of a consumer is a measure of the satisfaction the consumer derives from consumption of goods and services.
- \* An individual's consumption bundle is the collection of all the goods and services consumed by that individual.
- \* An individual's utility function gives the total utility generated by his or her consumption bundle.
- \* A util is a unit of utility.