Economics CH 2 Unit 1

Theory of Demand and elasticity of demand

① **Demand** :- Desire + Means to purchase + willingness to use those means for that purchase

Price	Quantity	
₹10	6 units	— Quantity demand
₹5	15 units	— Q.D
₹1	25 units	

→ Demand

② **Factors affecting demand**

(i) Price (P_x)

$P_x \uparrow$ $D \downarrow$

or $P_x \downarrow$ $D \uparrow$

Inverse

(ii) Price of Related Goods (P_R)

a) **Price of Substitute Good**

Coke & Pepsi

Price of pepsi ↑ Demand ↑

Price of pepsi ↓ — Demand of coke ↓

Direct

b) Price of complementary Good

Price of petrol ↑ — Demand of car ↓

Inverse

(iii) Income (Y)

a) Normal Good

Y ↑ D ↑ (+)ve income effect

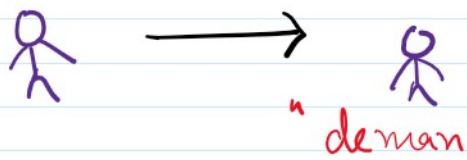
b) Inferior Good

Y ↑ D ↓ (−)ve income effect.

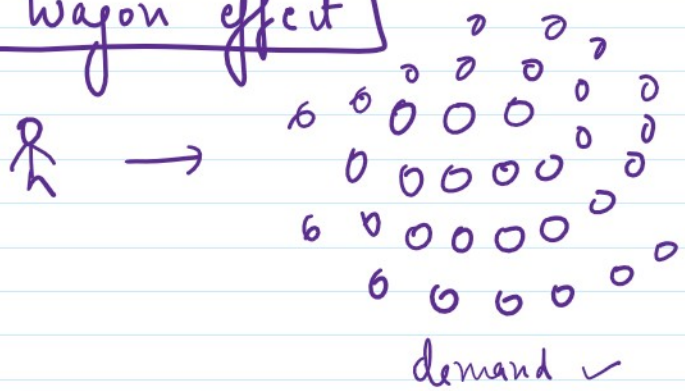
(iv) Taste & preference (T)

favourable Taste → D ↑

* Demonstration effect



* **Band wagon effect**



* **Snob effect**

→ "दूरा" → D ↓

* **Veblen effect**

अहंता

Conspicuous consumption (very expensive) → D ↑

⑤ Other factors (O)

→ fashion → D ↑

③ $Q_x = f(P_x, P_R, Y, T, O)$

Q_x → Quantity

P_x, P_R, Y, T, O → Factors affecting demand

Demand function

Demand function

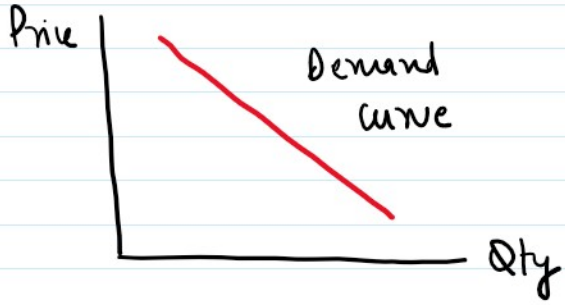
(4) Law of Demand (Alfred Marshall)

$$Q_x = f(P_x, P_R, Y, T, O)$$

Assumption :- these will not change

CETERIS PARIBUS

inverse



Law of Demand is "QUALITATIVE" statement

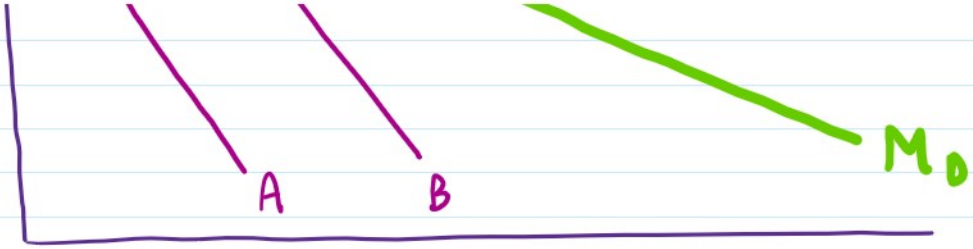
"relation" → P ↑ Q ↓

~~Tendril~~ ?

elasticity ✓

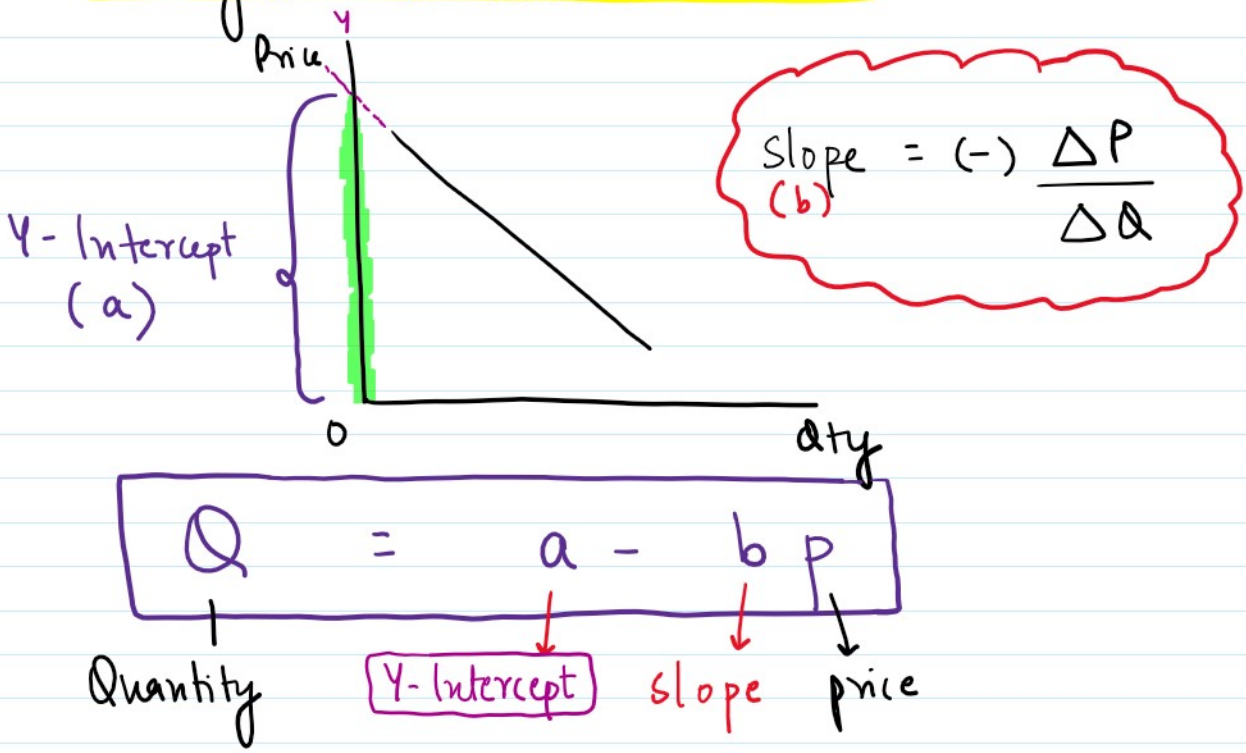
(5) Market demand

P	Q_A	Q_B	Market demand
1	100	90	190
2	90	70	160
3	80	50	130
4	70	30	100



Market demand curve is **Flatter**

(6) **Straight line demand curve**

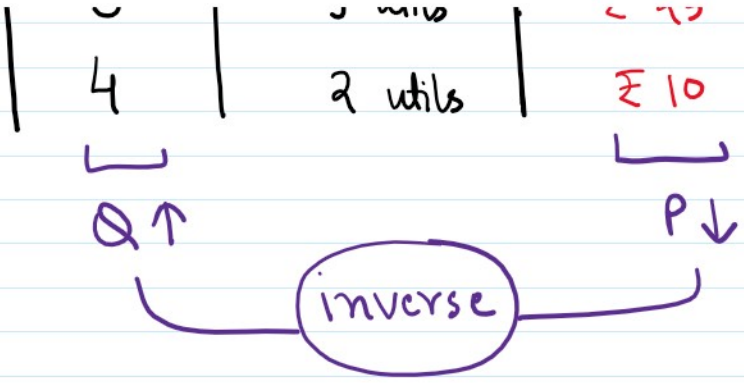


(7) **Why does law of demand Operate ?**

(P ↑ D ↓ or P ↓ D ↑) Why

(i) **Alfred Marshale - Law of DMU**

Unit	MU	Price
1	10 utils	₹50
2	8 utils	₹40
3	5 utils	₹25
4	2 utils	₹10



(ii) **Substitution effect** (J R Hicks)

Price Tea (↓) → coffee HEAT → Demand Tea (↑)

(iii) **Income effect** (J R Hicks)

P_x ↓

~~£20~~ → 1 plate

£10

purchasing power ↑ (Real Income) → D ↑

Normal good ((+)ve income effect)

D ↓

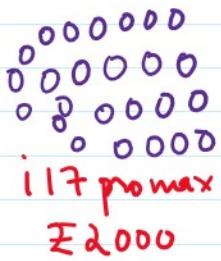
Inferior good ((-)ve income effect)

* Price effect = S.E + I.E

* Price effect = S.E + I.E

(iv) Arrival of "new" consumers

P (↓)



D ↑

(8) Exceptions of Law of Demand

P ↑ D ↓ X
P ↓ D ↑ X

→ Necessity Goods

→ Emergency goods

→ Conspicuous good / Snob / Veblen goods

P ↑ D ↑

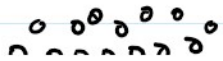
→ Giffen Goods

Sir Robert Giffen

Meat ₹5000

Bread ₹10 ↑ ₹15 ₹20

P ↑ D ↑



P ↑ D ↑

₹15
₹20

* All Giffen Goods are Inferior goods.
but all inferior goods are not giffen

→ Conspicuous necessities

AC, Mobile, TV

→ Irrational behavior

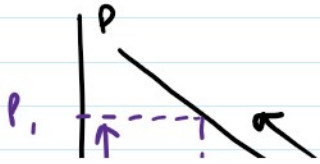
unsound

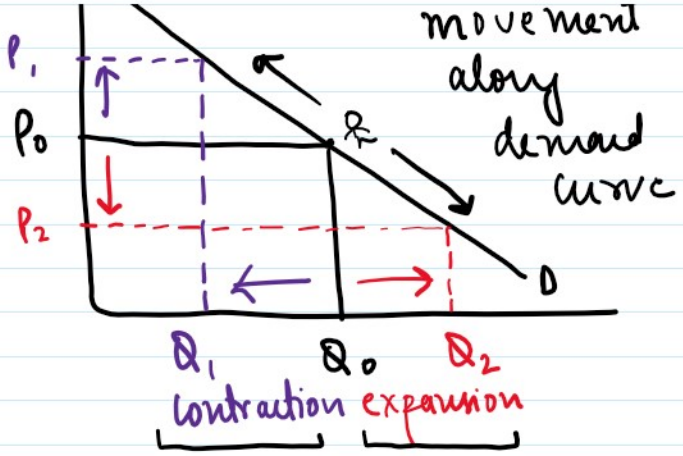
P ↑ D ↑

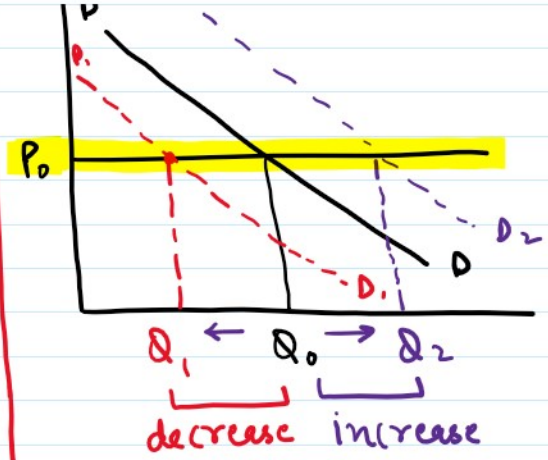
→ Speculative goods

P ↑ D ↑

(9) Change in Quantity demanded VS change in demand

$Q = f(P_x)$	$Q = f(P_R, Y, T, O)$
expansion contraction	Increase Decrease
 movement along	





Price of SG (↑) :- Increase in demand

Coke (↑) : Pepsi (↑)

(Rightward shift)

Price of CG (↑) :- Decrease in demand

petrol (↑) Car (↓)

(leftward shift)

Price of Car (↓) Car (↑)

Expansion

Elasticity of Demand

Q_x change

- P_x → Price elasticity
- P_R → Cross elasticity
- Y → Income elasticity
- Advertisement expenditure → Advertisement

elasticity (V. Imp) ✓ elasticity ✓ elasticity ✓ Advertisement elasticity ✓

$$E = \frac{\%\ \text{change in Quantity}}{\%\ \text{change in } P_x / P_R / Y / A}$$

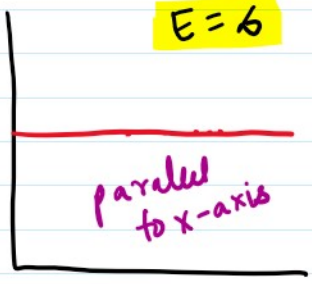
$$\%\ \text{change} = \frac{\text{New} - \text{old}}{\text{old}} \times 100$$

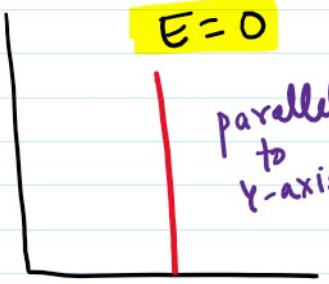
Elasticity has (5) degrees

$$E = \frac{N}{D} = \frac{\%\ \text{change in Qty}}{\%\ \text{change in Price}}$$

- $N > D$ Ans > 1
- $N < D$ Ans < 1
- $N = D$ Ans $= 1$
- $N = 0$ Ans $= 0$
- $D = 0$ Ans $= \infty$

- $E = \infty$ Perfectly elastic
- $E = 0$ Perfectly Inelastic
- $E > 1$ More than elastic
- $E < 1$ Less than elastic (Inelastic)
- $E = 1$ Unit elastic





* Price elasticity

(1) Point Method

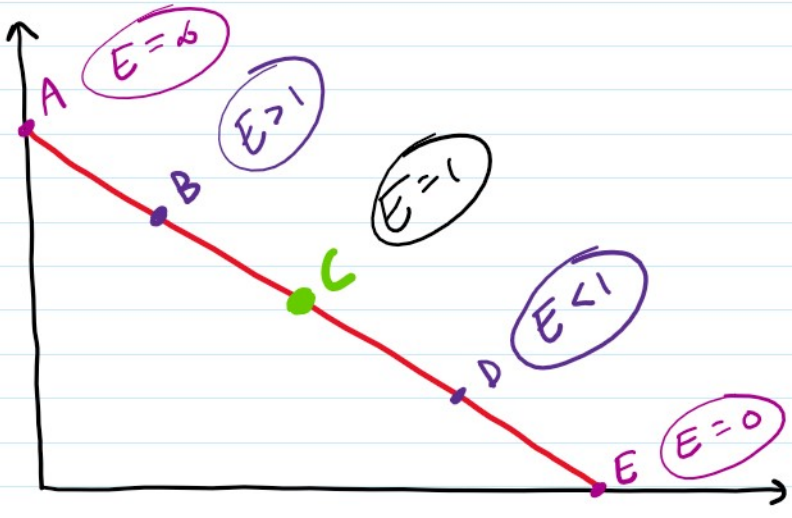
$$E = \frac{\% \text{ change in Quantity}}{\% \text{ change in Price}}$$

$$E = \frac{Q_1 - Q_0}{P_1 - P_0} \times \frac{P_0}{Q_0}$$

P_0, Q_0 = old price, old Qty

P_1, Q_1 = New price, New Qty

(2) Geometric Method



$$E = \frac{\text{Lower Segment}}{\text{Upper Segment}}$$

$$E = \frac{\text{Lower Segment}}{\text{Upper Segment}}$$

100%.

③ Arc Method

$$E = \frac{Q_1 - Q_0}{Q_1 + Q_0} \times \frac{P_1 + P_0}{P_1 - P_0}$$

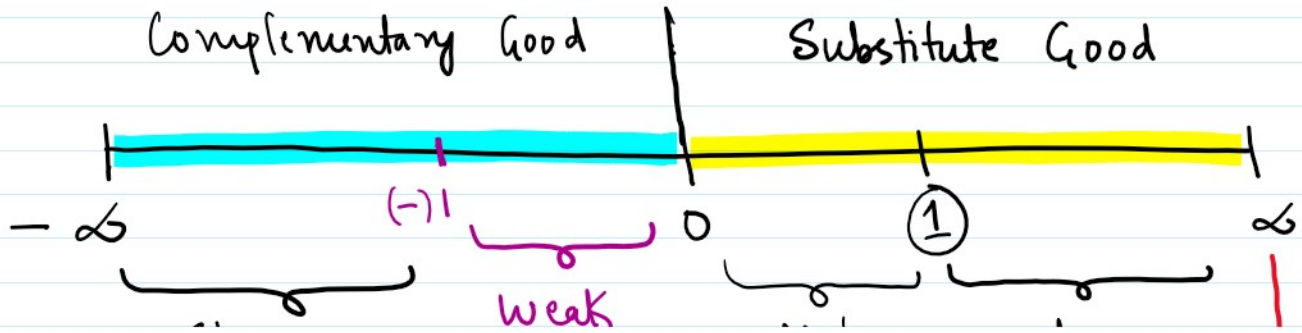
100%.

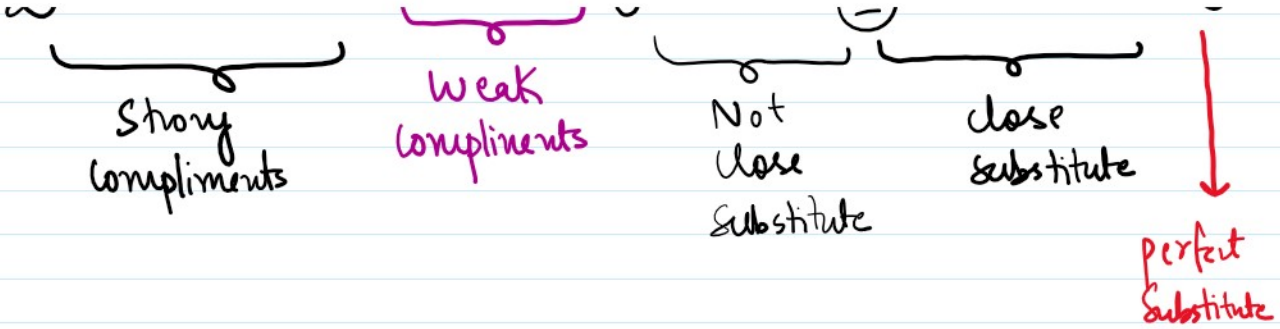
④ Total Outlay / Expenditure (Revenue) method

$$T.E = P \times Q$$

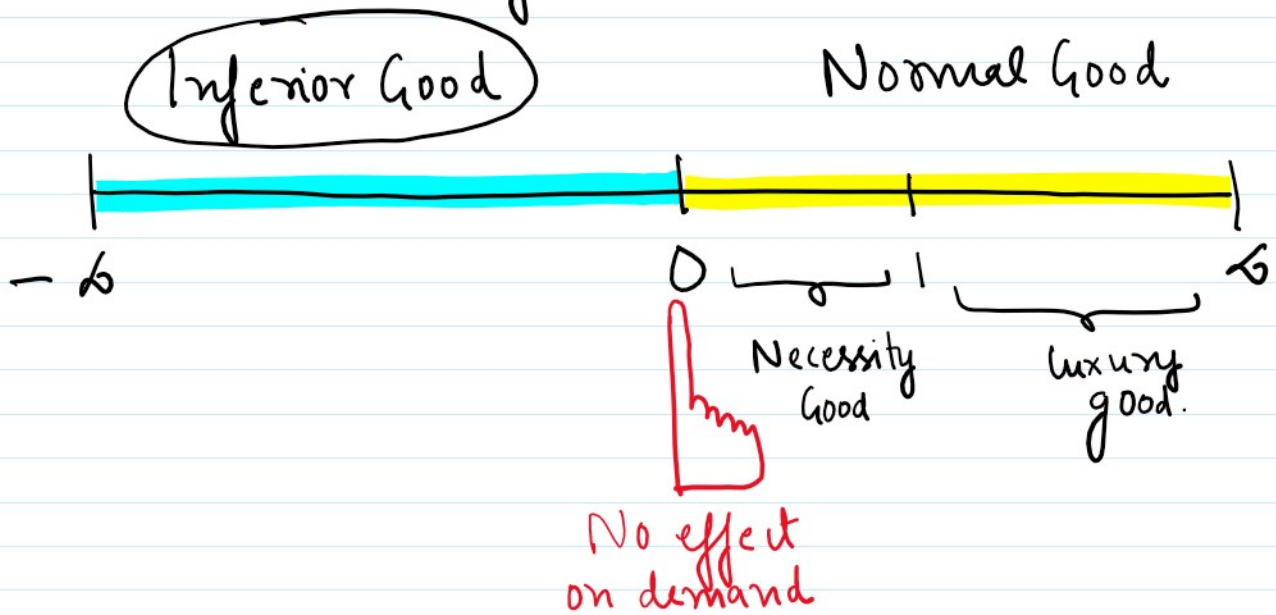
$E > 1$	$E < 1$	$E = 1$
P ↑ TE ↓	P ↑ TE ↑	P ↑ or ↓ TE do not change
P ↓ TE ↑	P ↓ TE ↓	

* Cross elasticity





* **Income elasticity**



eg :-

$Q_0 = 100$

$Q_1 = 130$

$P_0 = 50$

$P_1 = 45$

Find E

$$\% \text{ C in } Q = \frac{130 - 100}{100} \times 100 = 30\%$$

$$\% \text{ C in } P = \frac{45 - 50}{50} \times 100 = (-)10\%$$

$$E = \frac{30\%}{\quad} = (-)3$$

$$E = \frac{30\%}{(-)10\%} = (-)3$$