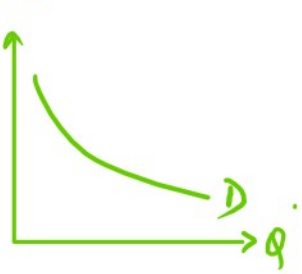
18 July 2023

Demand → ① Law of demand. (-ve inverse relation b/w P and Q.)

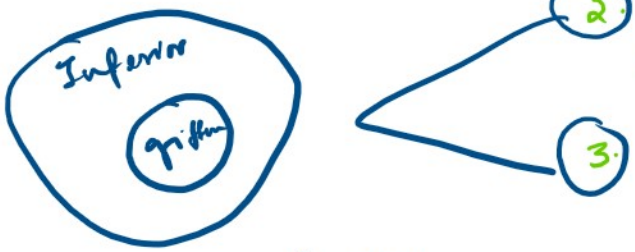


② Types of Goods.

1. Normal goods → (+ve) relation b/w income and demand.

2. Inferior Goods → (-ve) relation b/w income & demand. (Non-luxury).

3. Giffen Goods → (+ve) relation b/w P and Q (exception to law of demand)
Non-luxurious goods → bread, rice, wheat.



* All giffen goods are inferior goods but vice-versa is not true.

4. Substitute Goods → replace with (substitute) cheaper good.
Ex: tea/coffee.

↑ X → Y

↓ P_x → P_y const

5. Complimentary Goods → these goods are consumed together
Ex: car/Petrol.

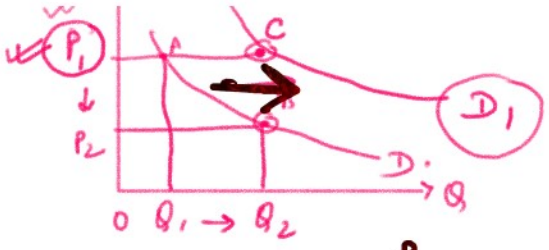
↑ X → Y ↑

↓ P_x → P_y ans

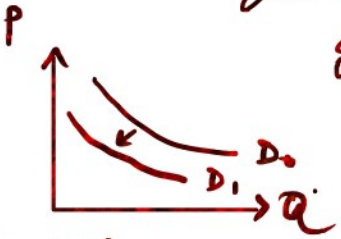
If (Price changes) (other factors like M, P^c, P^s, T, w, ... const) → No shift in demand curve (move along same demand curve)

But if (price is const) along with other factors such as P^c, P^s, T, Rs, ... and say (income (M)) of consumer has ↑ed, then demand curve will shift to the right.

(↑se in demand, demand curve will shift to right)

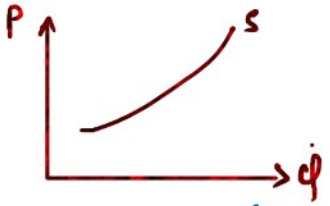


demand curve will shift to right if ↑ in demand, demand curve will shift to left).



* Law of supply

① (+ve relation between P and Q)



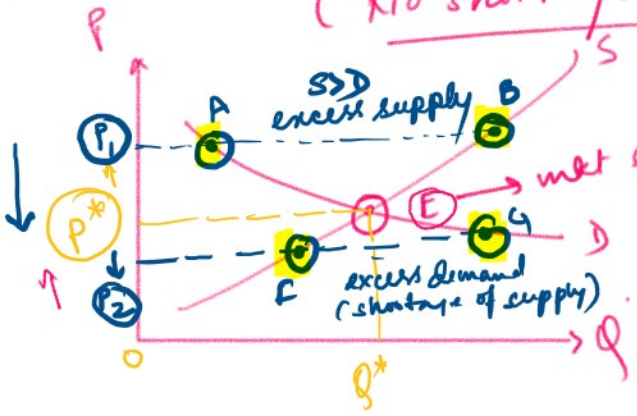
② factors that shift supply curve

a) Technology (improvement ↑ the S will shift right)
b) Innovations
c) Climatic change
d) Availability of inputs
e) Cost of inputs.

* increase in supply (right shift)
* decrease in supply (left shift).

③ Market Equilibrium

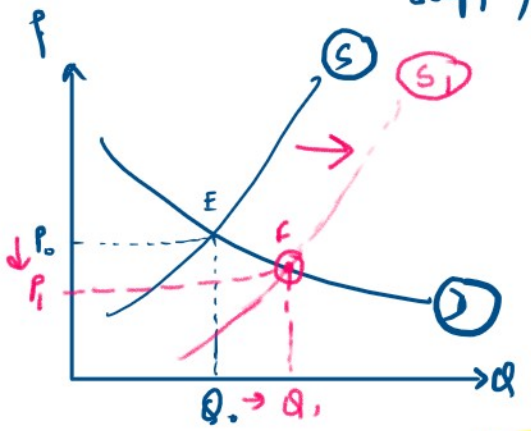
↳ pt where market clears, i.e., D = S.
(No shortage or No excess supply)



④ Change in market equilibrium (ie change in equilibrium price / equilibrium quantity).

a) if demand is const, but supply increases. (suppose new technology is used by a firm)

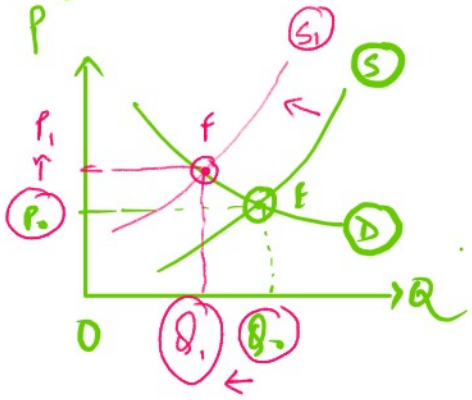
↓ supply curve will shift right.



(decrease in equil P and rise in equil Q)

Ex: suppose the crop production is destroyed due to heavy rain. what will be the new equil price & equil quantity?

(fall in supply → leftward shift of supply curve).

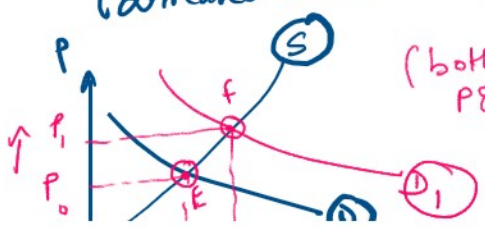


(increase in equil price and decrease in equil Q.).

Conclusion: D is same, only S changes → equil P and equil Q moves in opp direction.

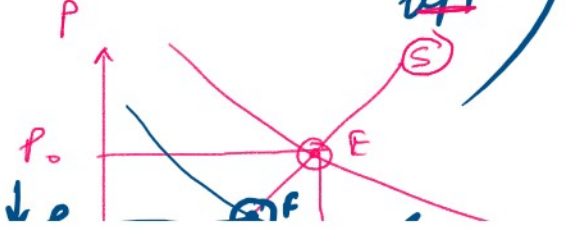
b) Supply is constant, but demand changes.

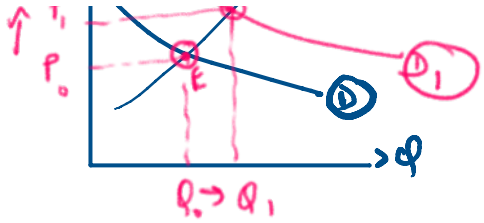
(i) demand ↑ (demand curve shifts right)

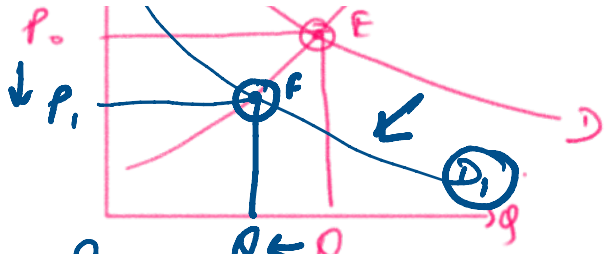


(both ↑ses) P & Q

(ii) demand ↓ (curve shifts left)

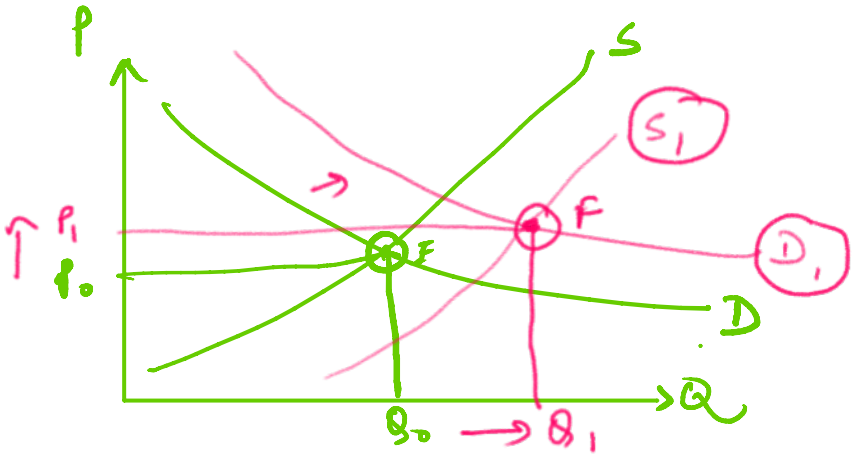






(*) Both equil P and equil Q moves in same direction.

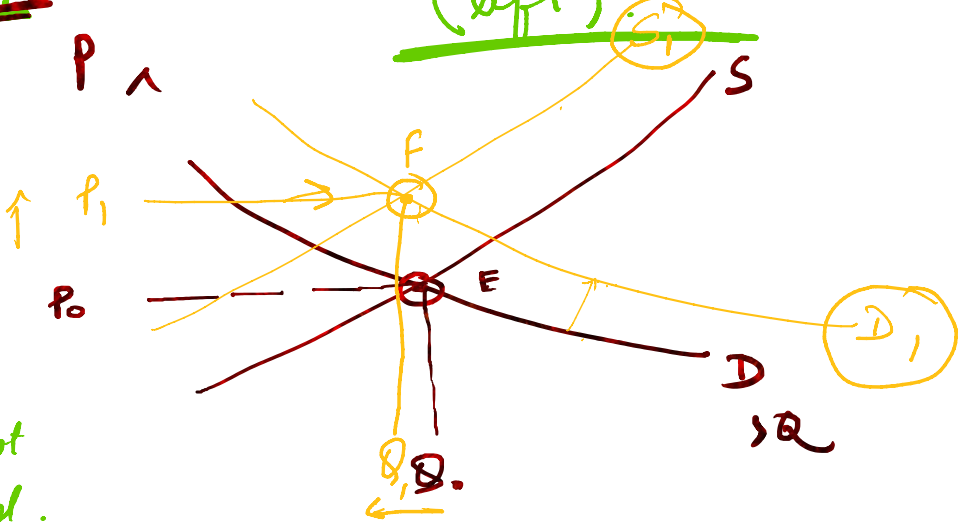
⇒ both demand (right) and supply increases (right).



equil price can be determined (either it will rise or it will fall)

but equil quantity is indetermined.

⇒ if demand rises (right) and supply decreases (left)



(+) equilibrium price can be determined but equilibrium quantity cannot be determined.

— * —

Topic 2: Consumer Behaviour.

Let us say we have two commodities x and y

① The level of satisfaction after consuming x and y is called total utility (TU).

② marginal utility (MU_x) from consuming x commodity.

[ie, change in total utility (TU) due to change in consumption of commodity 'x' by one unit. ie, $MU_x = \frac{\Delta TU}{\Delta x}$ or $\frac{d(TU)}{dx}$.]

Introduction to Cardinal and Ordinal Utility

Cardinal → giving (numbers) quantitative to satisfaction.

Ordinal (Ranking)

1. Cardinal (CU) utility → determines satisfaction level with a numeric value.

v/s Ordinal (OU) Utility → ranks in order of preference but cannot evaluate numerically.

2. CU → measured in 'utils'

v/s OU → measured in 'ranks'.

3. CU → measures goods 'subjectively'
v/s OU → measures goods 'objectively'.

4.) CU → this approach is based on Marginal utility evaluation.
v/s OU → " " " indiffurence curve analysis.

Budget line :

only 2 commodities X and Y

Total income is M

M = 100.
60, 70, 80 ... 100

P_x = 5
P_y = 2

x units
y units

TE ≤ 100
≤ M

$TE = x \cdot P_x + y \cdot P_y$

$5x + 2y \leq M$

$P_x \cdot x + P_y \cdot y \leq M$

ie, $M \geq x P_x + y P_y$ budget constraint.

What is budget line?

locus of different combination of purchasing two commodities X and y. such that TE = income
ie, $M = P_x \cdot x + P_y \cdot y$

budget equation is $M = P_x \cdot x + P_y \cdot y$

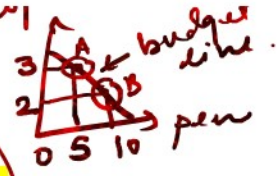
Pen

COPY

copies
3
budget line.

$M = 100$

	Pen	Copy
	₹5	₹25
pt A ⊙	₹50 (10 pens)	(₹50, 2 copies)
pt B ⊙	₹25 (5 pens)	(₹75, 3 copies)



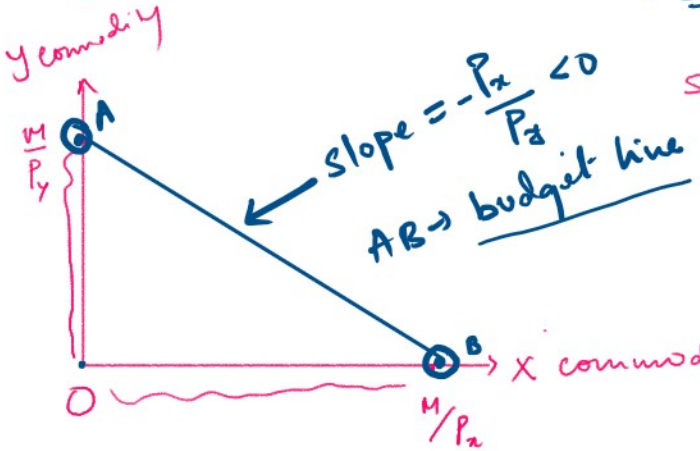
$$\boxed{x \cdot P_x} + \boxed{y \cdot P_y} = M \quad \text{budget line.}$$

$$x \cdot P_x + y \cdot P_y = M \quad \text{(eqn A)}$$

if $x = 0$ then $y = M/P_y$ (= OA)

if $y = 0$ then $x = M/P_x$ (= OB)

} intercept of y-axis and x-axis.



rate of change $\Rightarrow \frac{dy}{dx}$

slope of budget line:

$\Rightarrow M = P_x \cdot x + P_y \cdot y$ ✓

Let us differentiate w.r.t x

$\Rightarrow \frac{dM}{dx} = P_x + P_y \cdot \frac{dy}{dx}$

M is const

$\therefore \frac{dM}{dx} = 0$

$\Rightarrow 0 = P_x + P_y \cdot \frac{dy}{dx}$

$\Rightarrow \frac{dy}{dx} = -\frac{P_x}{P_y}$

ie, slope of budget line $= -\frac{P_x}{P_y} < 0$ ①

1. Definition of budget line.
2. Equation of budget line.
3. Diagram of budget line (Remember the value of ①)

3. Diagram of budget line
(Remember the value of intercept (like OA and OB) and slope $= -P_x/P_y$)

} ie, slope of Budget line $= -\frac{P_x}{P_y} < 0$ (1)

∴ budget line is -vely sloped straight line.

Topics:
1. shifts in budget line.
2. Indifference curve
3. Consumer's equilibrium point.