Chapter 2
Unit 2 : Theory of consumer Behaviour

Human wants : Unlimited } ∴ Not all human wants can be satisfied
Resources : Limited }

Consumer will buy only those goods & services which has the want satisfying power

Utility.

≠ satisfaction ≠ usefulness ≠ pleasure

Concept of utility & value

Theories

Marginal utility analysis
Based on cardinal
- Cardinal Approach

Indifference curve analysis
Based on ordinal
- Ordinal Approach

Marginal utility Analysis

Assumptions.

a) Consumer is rational : Maximize his satisfaction
b) Utility can be measured : Cardinal approach
c) money is used as a measuring rod.
d) Continuity of marginal utility (mu) of money.
e) Independent Hypothesis of utility.

qty	utility TU	MU
1	80	80
2	160	80
3	240	80
4	280	40
5	270	-10
6	240	-30

MU = Extra benefit derived by consumption of 1 extra unit

Marginal utility (i) $TU_n - TU_{n-1}$

Eg Find mu of 3 → $TU_3 - TU_{3-1}$
$\rightarrow TU_3 - TU_2 = 110 - 90 = 20$

(ii) $\frac{\Delta TU}{\Delta Q}$

eg: units TU
1 60
3 80
Find MU $\frac{20}{2} = 10$

Total utility = ΣMU

Law of Diminishing Marginal utility.

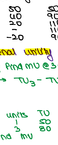
Assumptions

i) Continuous consumption
ii) Homogenous units
iii) Reasonable size
iv) No change in taste & preference

Exceptions

i) Addict : Education
ii) Miser : Money
iii) Dancer : Dance
iv) H : Hobbies
v) M : Music
vi) M : Miser
vii) Prestigious goods

Diagram



Relationship between TU & MU
i) TU is rising MU is falling
ii) If TU is Maximum MU is zero
iii) If TU is decline MU is -ve

Q: Marginal Symbol for Diagram? CS=0 MU=0

Consumers Surplus

What the consumer is willing to pay (>) What the consumer actually pays

MU > MP

Qty	MP	MU	
1	40	100	60 → Consumers Surplus
2	40	80	40 → Consumers Equilibrium
3	40	60	20
4	40	40	0
5	40	20	-20

Consumers Equilibrium → Maximum satisfaction

Market Price = Marginal utility.

∴ When Consumer Surplus = 0 Consumer has reached its equilibrium point.

Illustration

Qty	MU	MP	MP
1	100	50	100 → 10
2	75	50	100 → 10
3	50	50	100 → 10
4	25	50	100 → 10
5	10	50	100 → 10

MP ↑ Qty ↓
MP ↓ Qty ↑

∴ Law of DMU terms the basis for demand.

Practical applications of consumers surplus

a) Large Surplus - Reasonable Purchase.
b) Price discrimination
c) Large scale investment decisions
d) Planning product prices.
e) Finance ministers

Limitations of consumers surplus

a) It cannot be measured precisely cardinally
b) Necessities → Consumers Surplus → Infinite
c) Consumers Surplus is affected by cardinality of substitutes

	Tea	Coffee
MP	15	10
CS	5	15

d) MU of money is assumed to be constant: Unrealistic Assumption
e) At scale, in case of breakeven goods or Giffen Paradox breakdown
f) Utility is measured in terms of money: Not possible.

Indifference Curve Analysis (Price & Mind)

Ranking: III I II

Ordinal Approach

Assumptions:

i. Consumer is Rational
ii Consumer has knowledge about market conditions
iii Consumer is capable of ranking different combinations
iv. Consistent consumption pattern

A > B B > C

∴ A > C

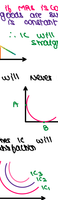
v. Combination which has higher no of units will give greater satisfaction.

eg: Comb Food clothing
A 1 12
B 2 12
C 3 12

Indifference curve

a) It is curve
b) Combinations yielded same level of satisfaction
c) Two goods

combination	Food (x)	clothing (y)	Marginal Rate of Substitution
A	1	12	
B	2	6	6
C	3	4	2
D	4	3	1



Properties of indifference curve

a) Slope of IC is downward sloping from left to right.
Reason: As to gain one extra unit of x we need to substitute for y

b) Curve of IC is convex to origin
Reason: Because of decreasing MRS

* What if MRS is constant when goods are substitutes MRS is constant ∴ IC will be straight line.

* What will IC be when both goods are perfect complements ∴ IC will be L shaped.

c) IC will never touch either of axes
Reason: combination is of 2 goods

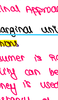
d) Higher IC will give higher level of satisfaction
Reason: Higher IC has more no. of units in its combination ∴ it results into higher level of satisfaction.

e) Two IC will never intersect with each other
Reason: Consistent consumption pattern

B ≥ C IC1 IC2
A ≤ C

A ≠ B

Indifference curve map : Consumer equilibrium



Budget line / Price line

Income = ₹10000
Per period expense ₹10000

Q: Find price of Food & clothing
Food = ₹200 → 10000/40 = ₹200
clothing = ₹250 → 10000/20 = ₹400

Consumers Equilibrium

When Budget line meet-IC @ tangency

Law of Equi-marginal utility

	Burger	Vadapav	Samosa
Utility	100	50	25
Market price	50	25	10

Equilibrium @

$\frac{MU_B}{P_B} = \frac{MU_V}{P_V} \neq \frac{MU_S}{P_S}$

$\frac{100}{50} = \frac{50}{25}$

Chapter 2
Unit : 5 : Theory of supply

Unplanned
1
Factory
2
Production
Godown
3
Stock / Inventory
Producer / Seller
4
Market
5
Available for Sale
Buyer
Sale
Supply

Important points to be noted
i. sale is not a criteria to define supply
ii whether is supplied may or may not be sold.
iii a) stock is a part of supply
OR
b) supply is a part of stock.

☞ Determinants of supply
a) Price of Supply (Commodity Concerned) Price↑ supply↑
Other things being constant Price↓ supply↓
b) Price of Related Goods
Wheat ↑ Price ↑ supply↓ supply↑
Rice ↓ Price ↓ supply↑ supply↓
c) Prices of Factors of Production/ cost of production
Land (rent) Labour (wages) Capital (interest) Raw (price)
cost of production
cost ↑ supply↓
cost ↓ supply↑
d) State of Technology
i. Latest Tech supply↑
Outdated Tech supply↓
ii Technology ↑ cost ↓ supply↑
iii Spare capacity ↑ supply↑
e) Government Policies
Restrictions ↑ S↓ ↓ S↑
Taxes ↑ S↓ ↓ S↑
Subsidy ↑ S↑ ↓ S↓
f) Nature of competition & Size of industry
competition ↑ supply↑
Monopoly supply↓
No. of Sellers
Sellers ↑ supply↑
Sellers ↓ supply↓
g) Expectations about prices
Future Conditions Current Conditions
Pf ↑ Supply today ↓ supply future↑
Pf ↓ supply today ↑ supply future↓
h) Other Factors
i. Industrial Policies : Licensing.
Soft supply↑
Hard supply↓
ii Foreign Policy : Export Import
Domestic Market supply↓ supply↑
iii Targets/ Goals of Firm T↑ S↑ T↓ S↓
iv. Infrastructural Facilities
v. Natural Factors Weather
Favourable supply↑
Unfavourable supply↓
vi. Man-made Factors Strikes

☞ Law of Supply
Other things being constant
Concerned Positively
Price↑ supply↑
Price↓ supply↓
Exceptions
i Supply of Labour
ii Perishable products
iii Perishable Goods
iv. Handicraft Goods
v. Need for cash

Supply schedule

P	Q
1	10
2	20
3	30
4	40
5	50

Supply curve
Price
Upward sloping curve from left to right. (Positive slope)
Qty

☞ Expansion & contraction of Supply vs Increase & decrease of supply.
When there is change in supply due to price
Other things remain constant
Increase: when supply rises due to rise in price
Expansion: when supply rises due to fall in price
Upward movement
Decrease: when supply falls due to rise in price
Contraction: when supply falls due to fall in price
Downward movement
When there is change in supply due to factors other than price
Increase: when supply rises due to factors other than price eg: improved tech
Rightward shift
Decrease: when supply falls due to factors other than price eg: unfavourable climate
Leftward shift

⟹ Elasticity of supply : sensitivity/ responsiveness/ reaction
in supply due to factors affecting supply.
Price Elasticity → Price & wages are supply affect mainly.
Price is the basis affecting supply
Formula: $\frac{\Delta S}{\Delta P} \rightarrow \frac{\Delta S}{\Delta P} \rightarrow \frac{\% \Delta S}{\% \Delta P}$

$$\text{New S} - \text{OldS} \times 100 \over \text{OldS}$$
$$\text{New P} - \text{OldP} \times 100 \over \text{OldP}$$

$e=0$	$e<1$	$e=1$	$e>1$	$e=\infty$
Perfectly Inelastic $\% \Delta S = 0$ $\% \Delta P \neq 0$	Relatively Inelastic $\% \Delta S < \% \Delta P$ $e<1$	Unit Elastic $\% \Delta S = \% \Delta P$	Relatively Elastic $\% \Delta S > \% \Delta P$	Perfectly Elastic $\% \Delta S \neq 0$ $\% \Delta P =$ Slight
Parallel to Y axis	closer to Y axis	Straight line Equation to X & Y axis.	away from X axis	Parallel to X axis.

☞ Arc Elasticity / Mid-point elasticity : when time we price change is large & when use mid point elasticity.
eg:
Situation 1

P	Q
10	30
20	50

$Pe = \frac{50-30}{\frac{30+50}{2}} \div \frac{20-10}{\frac{10+20}{2}} = \frac{20}{40} \times \frac{30}{10} = \frac{20}{40} = 0.67$

Situation 2

P	Q
10	50
20	80

$Pe = \frac{80-50}{\frac{50+80}{2}} \div \frac{20-10}{\frac{10+20}{2}} = \frac{30}{65} \times \frac{15}{10} = \frac{30}{65} = 0.80$

$\text{New S} - \text{OldS} \over \frac{\text{New S} + \text{OldS}}{2}$
$\text{New P} - \text{OldP} \over \frac{\text{New P} + \text{OldP}}{2}$

$\frac{50-30}{\frac{50+30}{2}} \div \frac{30-20}{\frac{30+20}{2}} = \frac{20}{40} \times \frac{25}{10} = \frac{20}{16} = 1.25$
$Pe = 0.75$

$\frac{80-50}{\frac{80+50}{2}} \div \frac{30-20}{\frac{30+20}{2}} = \frac{30}{65} \times \frac{25}{10} = \frac{30}{26} = 1.15$
$Pe = 0.85$

☞ Determinants of Price Elasticity
a) Cost of Production
Price Rises → Cost of production rises proportionately → $e<1$
Price Rises → Cost of production rises slightly/ not rises → $e>1$
b) Process of Production & Time Taken → For Production
Simple, less → $e>1$
complex, more → $e<1$
c) Time Period
Short Run $e<1$
Long Run $e>1$
Time to produce
less time $e>1$
more time $e<1$
d) Large no. of sellers
High competition
Fewer Barriers
$e>1$
e) Spare Capacity
$e>1$
$e<1$
f) Key Raw Material
easily Available, cheap → $e>1$
Difficult, Expensive → $e<1$
g) Perishable Goods (Nature)
Available → $e>1$
Unavailable → $e<1$
w/o loosing value → $e>1$
loosing value → $e<1$
h) Factor substitution → Short supply: longer period → $e<1$; Abundant supply: shorter period → $e>1$
Easy, less training, low skill → $e>1$
Difficult, more training, High skill → $e<1$
i) Capital/ Labour
Mobile $e>1$
Immobile $e<1$
j) Price Expectations
High → current supply $e<1$
Low → current supply $e>1$

☞ Determinants of Equilibrium Price
Buyer: Pf Qbd
Seller: Pf Qst
Consumer Pf ↓ Qbd
Seller Pf ↓ Qst
Ep
Eq
0