Thursday, 6 April 2023 9:16 AM

Chapter: Demand

Effective Demand ---> Express
- Desire
- Ability to pay
- willingness to pay

- Quantity
- Price
- Time

⟹ Factors influencing Demand

a) Price of commodity
→ other things being constant / celeris paribus

Price↑ Demand↓
Price↓ Demand↑ } inverse Relationship

b) Price of Related commodity
other things being constant / celeris paribus

Substitutes / competing goods

eg: Tea$_O$ P	Q	Coffee$_R$ P	Q
10	100	10	100
10	150	15	50
10	50	5	150

Positive / Direct Relationship

complimentary goods

eg: Pen$_R$ P	Q	Ink$_O$ P	Q
10	50	10	100
5	100	10	200
50	10	10	50

Negative / inverse / Indirect Relationship

c) Income of consumer (micro)
Income↑ Demand↑
Income↓ Demand↓

Exception
i. Necessity (eg: medicine, salt)
ii. inferior Good

d) Climatic conditions
Summers → cap, sunglasses, sunscreen
winters → Jackets
Rainy → Gum Boots, umbrella, Raincoat

e) Population
- Size
  - S↑ Demand↑
  - S↓ Demand↓
- composition
  - Age
  - Sex
    - male
    - female

f) credit facility & interest Rates
g) marital status
h) level of Education
i) Habits, Taste & Preferences
1. Demonstration effect / Bandwagon effect
2. snob effect
3. veblen effect

j) level of National income (macro)

Law of Demand

→ Based on Assumptions

" other things being constant "
Price↑ Demand↓
Price↓ Demand↑ } inverse Relationship

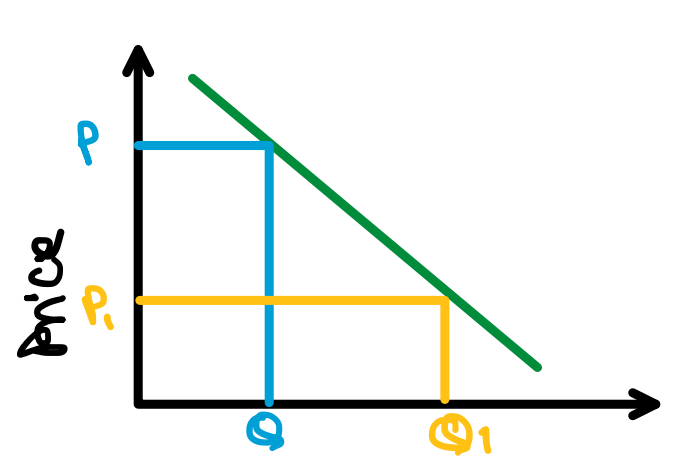
→ Individual Demand schedule

P	Q
100	1
50	4
25	8
10	10

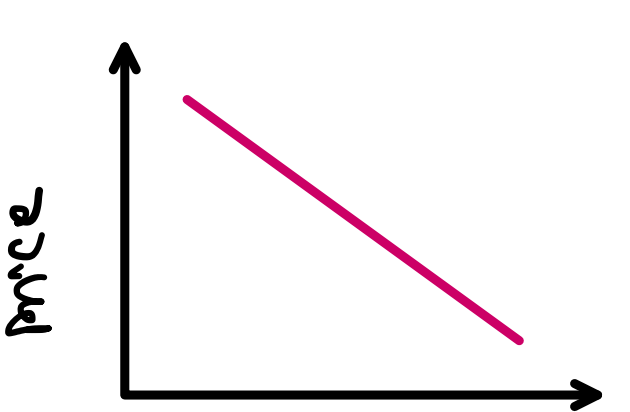
→ Market Demand schedule

P	Q	Q	Q	Q	Total
100	0	1	2	1	4
50	1	2	10	4	17
25	2	3	20	8	33
10	3	4	30	10	47

→ Individual Demand curve



→ Market Demand curve



Downward sloping from left to Right

→ Exceptions of law of demand.

a) conspicious goods: Demanded only by Rich people. eg: LV Bag
b) conspicious Neccessities: due to their constant usage eg: laptop, mobile
c) Neccessities: Essential for living eg: medicine, food
d) Future Price Expectations / speculative goods
e) Absence of knowledge about market conditions
f) Irrational Behaviour / impulsive purchase
g) Giffen Goods
Sir Robert Giffen – scottish economist / statistician

Price↑ inferior Goods↑
when prices are Rising
i. It is still cheaper than superior goods
ii with same amt of money they preferred to buy more of inferior Goods to satisfy their Demand.

Price↓ inferior Good
- same
- less

when Price is Reduced we can buy same qty with lesser money
∴ surplus is used in Buying superior goods

→ Rationale of law of Demand (Reasoning / logic)

a) Law of Diminishing marginal utility. (P)
b) Price Effect
- Substitution effect

Tea$_O$ P	Q	Coffee$_S$ P
10	100	10
15	50	10
5	150	10

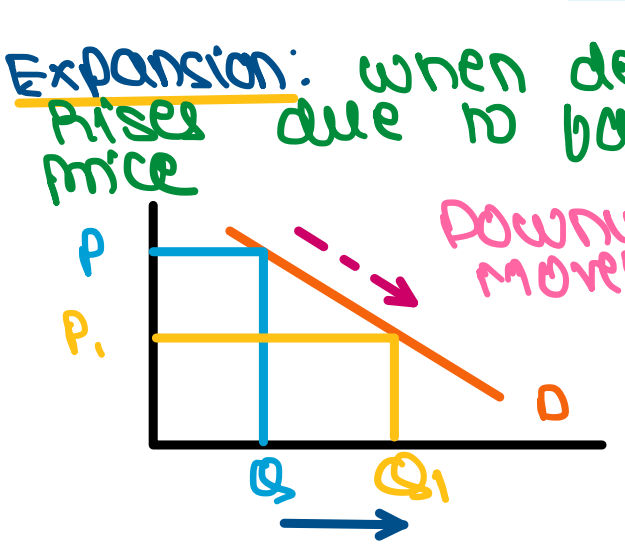
- Income effect
  - Income = ₹100, coffee ₹100, 1 cup coffee, Bal 0
  - Income = ₹100, coffee = ₹50, 1 cup coffee, Bal = ₹50

other thing being constant
c) Arrival of New consumers
d) Multiple / Different uses eg: Milk / Electricity.

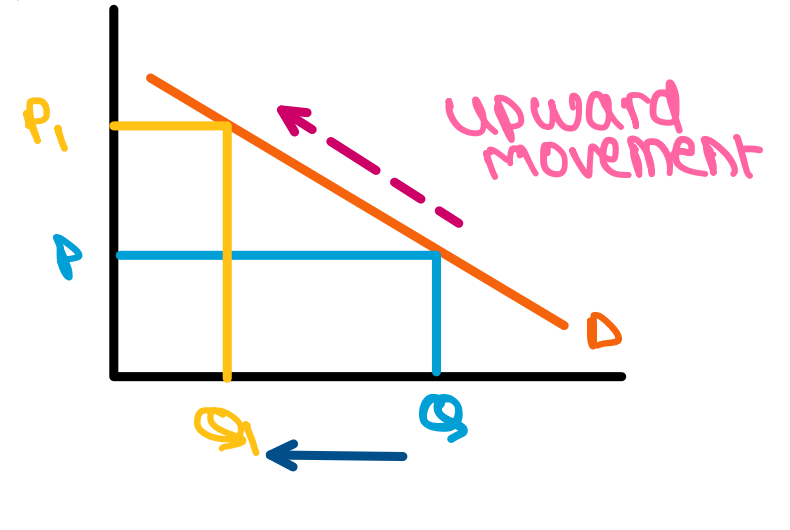
Expansion & contraction of Demand v/s Increase & Decrease of Demand

when there is change in Demand due to Price

Expansion: when demand Rises due to fall in price

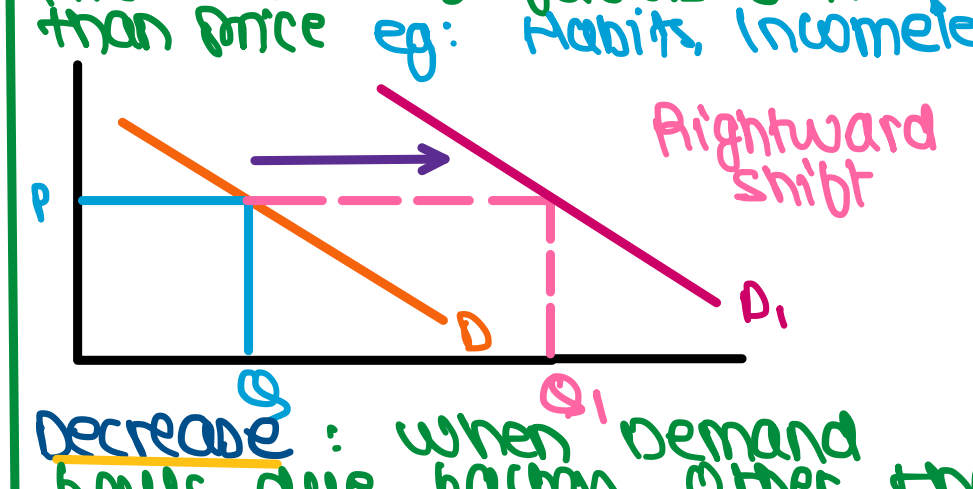


contraction when demand falls due to Rise in price

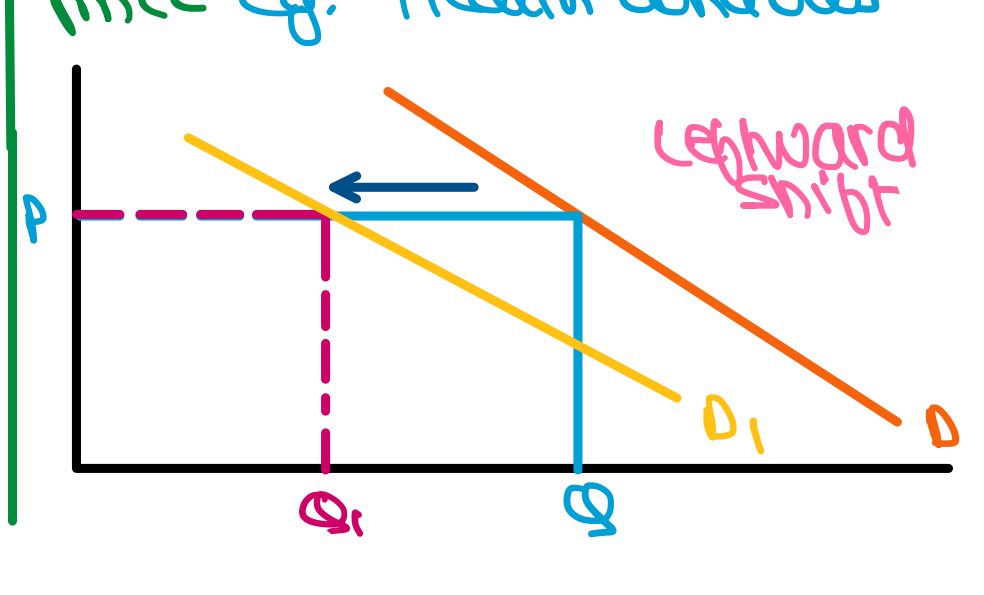


when there is change in Demand due to factors other than Price

Increase: when demand Rises due to factors other than price eg: Habits, Income etc



Decrease: when demand falls due to factors other than price eg: Health concious



Elasticity of Demand

Elasticity of Demand: Sensitivity / Responsiveness to change in demand due to change in factors affecting demand.

- Price → Price Elasticity
- Price of Related commodity → cross Elasticity
- Income of consumer → Income elasticity
- Advertisement → Adv exp elasticity.
- Mid-point Elasticity
- Total outlay method

⟹ Price Elasticity:

Logic: • Price k wajeh se demand affect hoti hai
• Price is the Basis affecting Demand

Formula: $\frac{D}{P} \dashrightarrow \frac{\Delta D}{\Delta P} \dashrightarrow \boxed{\frac{\% \Delta D}{\% \Delta P}}$

$$\boxed{\dfrac{\dfrac{New D - Old D}{Old D} \times 100}{\dfrac{New P - Old P}{Old P} \times 100}}$$

Example:

P	Q
10	20
20	5

$$Pe = \frac{\frac{5-20}{20}}{\frac{20-10}{10}} = \frac{\frac{-15}{20}}{\frac{10}{10}} = \boxed{-0.75} = \boxed{0.75}$$

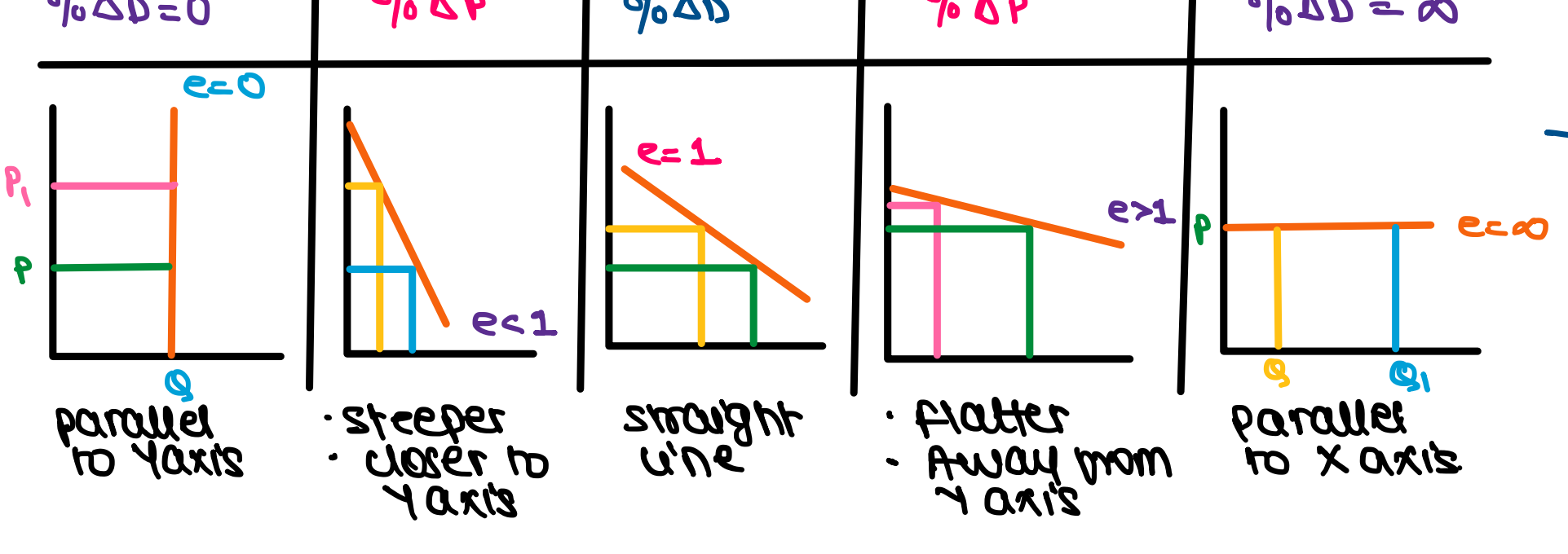
P	Q
10	20
5	100

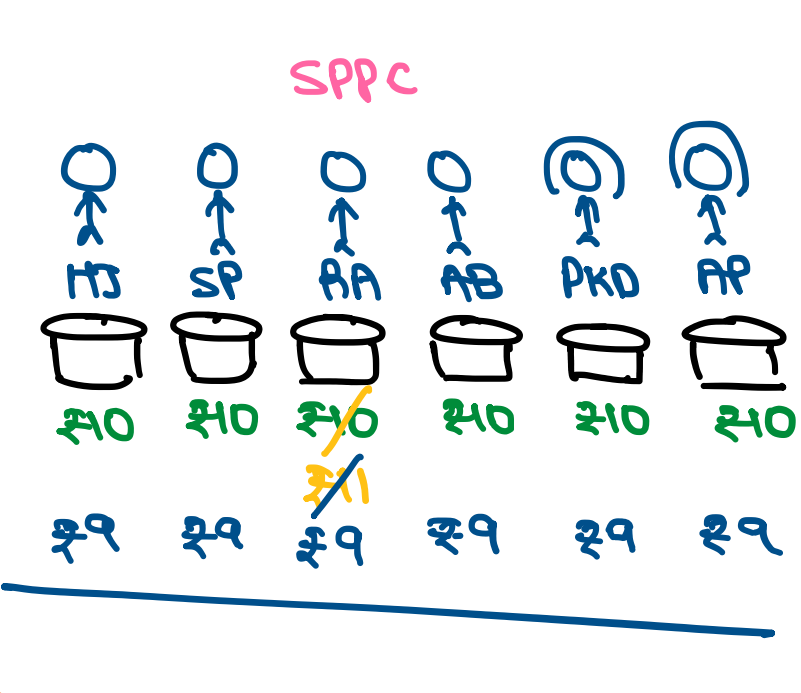
$$Pe = \frac{\frac{100-20}{20}}{\frac{5-10}{10}} = \frac{\frac{80}{20}}{\frac{-5}{10}} \boxed{= -8} = \boxed{8}$$

Points to be Noted
a) co-efficient of Pe will always be $\boxed{-ve}$
b) For the sake convinience we ignore negative sign

Interpretation

0	<1	1	>1	∞
Perfectly inelastic %ΔP = ✓ %ΔD = 0	Relatively inelastic %ΔD < %ΔP	Unit Elastic %ΔP = %ΔD	Relatively Elastic % ΔD > % ΔP	Perfectly elastic %ΔP = slight %ΔD = ∞





→ Determinants of Price Elasticity of Demand

a) Availability of substitutes
- Yes
  - Perfect substitute → Perfectly elastic
  - closer substitute → Relatively elastic
- No – Relatively inelastic

∘ If two Goods are unrelated then elasticity between the two (ie, cross elasticity) = Perfectly inelastic

b) Position of commodity in consumers Budget

Pocket Money ₹10,000

Relatively Elastic →
₹500 Mobile Bill
₹2000 Petrol
₹3000 Party
₹2500 shopping
₹500 snacks
₹200 Haircut

Relatively Inelastic →
₹300 spray
₹200 Hair wax
₹800 Protein

c) Nature of the Need that commodity satisfies
Neccessity → Relatively inelastic
comfort, luxury → Relatively elastic

d) No. of uses to which commodity can be put
- Single use – Relatively inelastic
- multiple use – Relatively elastic

e) consumer Habits
- Habitual – Relatively inelastic
- Habitual ✗ – Relatively elastic

f) Time Period
- Short Run – Relatively inelastic
- Long Run – Relatively elastic

g) Tied Demand (Goods which are used together) Relatively inelastic
Autonomus Goods (which are independently used) Relatively elastic

h) Price Range
- cheap – Relatively inelastic
- Medium – Relatively elastic
- Expensive – Relatively inelastic

⟹ Income Elasticity

Logic: Income k wajeh se demand affect hoti hai
Income is the Basis affecting demand

Formula:
$$\boxed{\dfrac{\dfrac{New D - Old D}{Old D} \times 100}{\dfrac{New I - Old I}{Old I} \times 100}}$$

⟹ Advertisement Exp Elasticity

Formula:
$$\boxed{\dfrac{\dfrac{New D - Old D}{Old D} \times 100}{\dfrac{New AE - Old AE}{Old AE} \times 100}}$$

⟹ Cross Elasticity

Logic: Price of Related commodity k wajeh se Demand of original commodity affect hoti hai
Price of Related commodity is the Basis affecting demand of org commodity.

Formula:
$$\boxed{\dfrac{\dfrac{New D_O - Old D_O}{Old D_O} \times 100}{\dfrac{New P_R - Old P_R}{Old P_R} \times 100}}$$

- Substitutes Goods
- complimentary Goods

⟹ Mid-Point Elasticity

Ice-cream

P	Q
10	20
20	5

$$Pe = \frac{\frac{5-20}{20}}{\frac{20-10}{10}} = \frac{\frac{-15}{20}}{\frac{10}{10}}$$

Pe = 0.75 Relatively inelastic

Ice-cream

P	Q
20	5
10	20

$$Pe = \frac{\frac{20-5}{5}}{\frac{10-20}{20}} = \frac{\frac{15}{5}}{\frac{-10}{20}}$$

∴ Pe = 6 Relatively Elastic

Formula:
$$\boxed{\dfrac{\dfrac{New D - Old D}{\frac{New D + Old D}{2}}}{\dfrac{New P - Old P}{\frac{New P + Old P}{2}}}}$$

$$= \frac{\frac{5-20}{\frac{5+20}{2}}}{\frac{20-10}{\frac{20+10}{2}}} = \frac{\frac{-15}{12.5}}{\frac{10}{15}}$$

$$= \frac{-1.2}{0.66} = -1.8$$

∴ Pe = 1.8

$$= \frac{\frac{20-5}{\frac{20+5}{2}}}{\frac{10-20}{\frac{10+20}{2}}} = \frac{\frac{15}{12.5}}{\frac{-10}{15}}$$

$$= \frac{1.2}{-0.66} = -1.8$$

Pe = 1.8

⟹ Point Elasticity

$$Point Elasticity = \boxed{\dfrac{\dfrac{New D - Old D}{Old D} \times 100}{\dfrac{New P - Old P}{Old P} \times 100}}$$

It is used when the change in Price / demand is too small

Imp Point: unless & until otherwise mentioned we will calculate Price elasticity only.

⟹ Total outlay method / Total Expenditure method

By Alfred Marshall:
a) No Formula
b) Based on Analysis
c) No co-efficient

Example

Situation	Price	Qty	Total outlay	Elasticity.
A	5 4	20 30	100 120	e>1 Relatively elastic
B	5 4	20 25	100 100	e = 1 unitary elastic
C	5 4	20 22	100 88	e<1 Relatively inelastic

Example:

Situation	Price	Qty	Total outlay	Elasticity.
A	1 2	6 5	6 10	e<1 Relatively inelastic
B	3 4	4 3	12 12	e=1 unitary elastic
C	5 6	2 1	10 6	e>1 Relatively elastic

P↑ TE↓
P↓ TE↑ } e>1

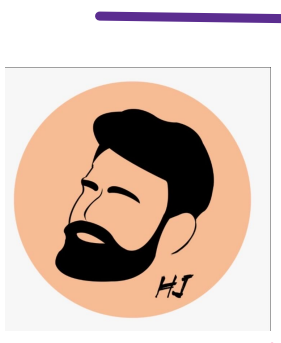
P↓ P↑ → TE = same e=1

P↑ TE↑
P↓ TE↓ } e<1

Demand Forecasting

∘ Methods

a) Survey of Buyers Intention
i. complete Enumeration Method
ii. sample survey method
iii. End user method



Harshad

Printer

Papers

Supplier

Books = } No. of
Pages = } Pages

b) collective opinion method / Grass Root approach / Sales force opinion method

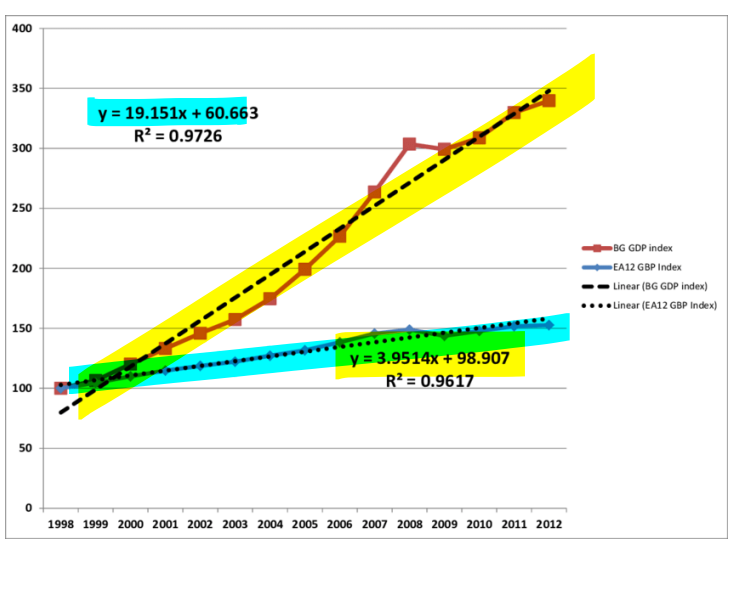
?
Boss
500+
1000+
4000+
Sales Team

c) Expert opinion method

THE EXPERTS

→ opinion

d) Statistical method
i. Trend projection method
ii. Graphical method. → Linear Equation



e) Regression Analysis: Relationship between Demand & " Factors influencing Demand
eg: Income → Demand
f) controlled experiment method
g) Barometeric method

Demand Distinctions

a) Producers Goods & Consumer Goods
b) Durable Goods & Non-Durable Goods
c) Derived Demand (Dependent) & Autonomus demand (independent)
d) Industry Demand & company Demand
e) Short Run & Long Run