3 The variety
4. Govt policies
5 High procured salesmanship & advertising
6 Nature of economic sys.

2. DEMAND ANALYSIS.

Demand is the quantity of goods & services that consumers are willing & able to buy at a given price over a period of time.

Determinants of Demand.

The demand for a commodity can be analysed from two points of view; a) Individual demand
b) Market demand.

Individual demand. - personal.

This can be defined as the amount of a commodity that one person is willing & able to buy at a given price over a period of time. The individual demand of a commodity is influenced by;

Price of the commodity.

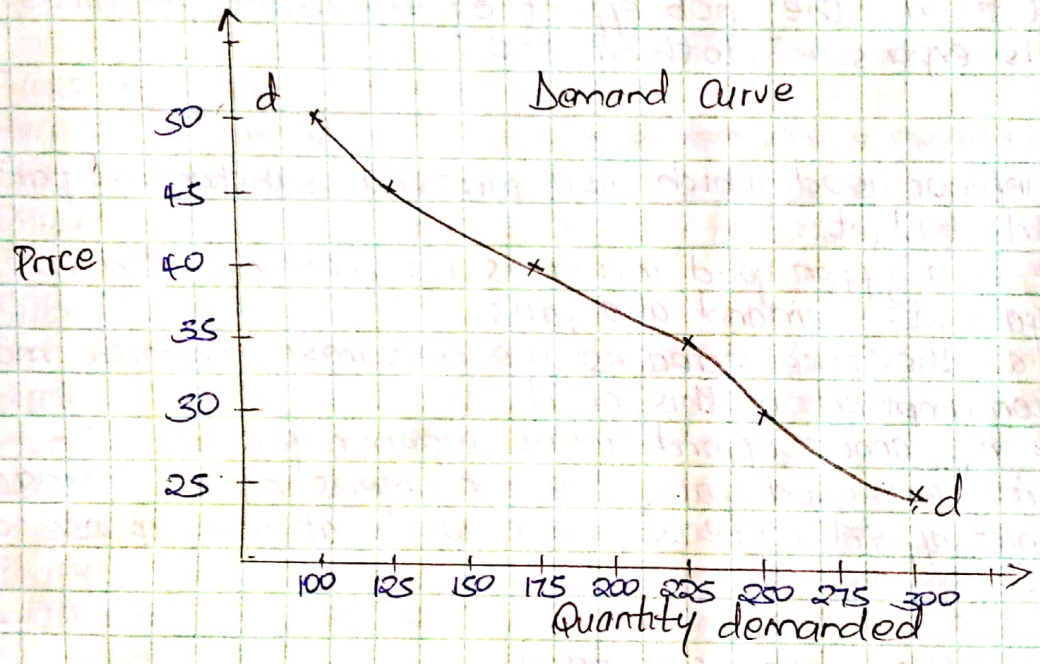
This is the most important determinant of demand.

All the other factors affecting demand other than price of the

product are referred to as conditions for demand.
- While analysing the relationship btwn the price of a commodity & the quantity demanded for it, all other factors affecting demand are assumed to be constant ceteris paribus.
- A demand schedule is a table that shows the quality of a good that would be purchased at various prices. The table shows an individual demand for commodity x.

Demand Schedule.

Price	Quantity demanded.
50	100
45	125
40	175
35	225
30	250
25	300



- A demand curve shows graphically the relationship btwn the quantity demanded by an individual & the price of the commodity.
- A demand curve has a negative slope ie it slopes downward from left to right. This shows that as the price falls the quantity demanded will increase & vice versa.
- This inverse relationship btwn the price of a commodity & the quantity demanded for it is what is referred to as the law of demand which states that "A rise in the price of a commodity leads to a a fall in the total quantity demanded"
- A fall in the price of a commodity leads to an increase in the total quantity demanded ceteris paribus.

Law of demand A price in the rise of a commodity leads to a fall in d

DEC

Assumptions made in formulating the law of demand. 2013 1a

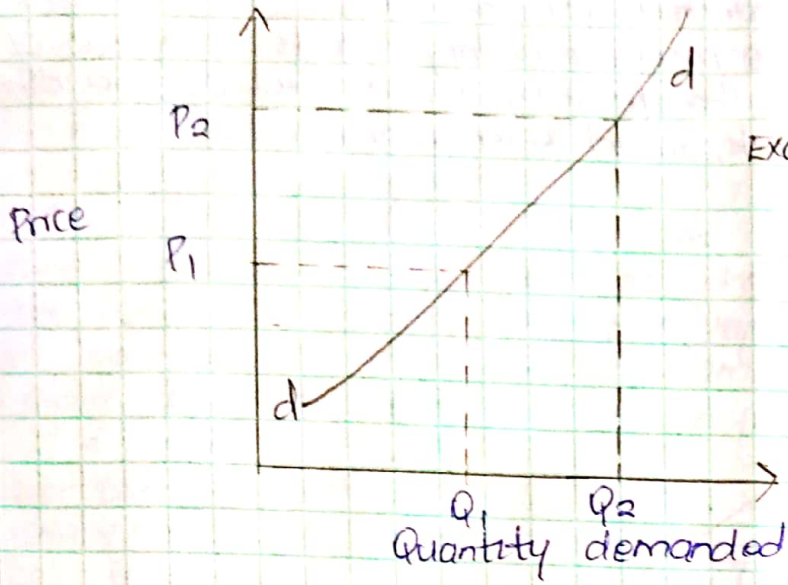
1. Consumer's income is held constant (Ceteris paribus).
2. Prices of related goods are held constant.
3. Advertising is held constant.
4. Government policy is held constant.
5. Season factors are held constant.
6. Taste, fashion & preferences are held constant.

- However, there are exceptions to the law of demand.

a) The case of veblen goods (luxurious goods/ostentatious goods). these are highly luxurious goods which are demanded by the consumer because they are expensive ie price is part of the attraction to the commodity ∴ increase in price makes the commodity more attractive.
- This is because of prestige/value ∴ as the price of a veblen good increases, its demand also increases.
- This is referred to as the snob effect eg expensive perfumes, expensive jewels, expensive clothing etc.

b) Giffen goods: in relation to consumers with low levels of income.
- This is a very inferior good which also forms a substansial part of the household budget.
- When the price of a giffen good increases, its demand also rises & if the price falls, its demand also falls.
- This is because as the price increases, the consumer commits more money to the consumption of this good.
- This is because he cannot afford more superior goods.
- If the price of a ~~given~~ giffen good falls, the consumer's income increases thus he can now afford more superior goods at the expense of the giffen goods.

c) Expectations of further changes in price.
- This is a situation where the consumer believes that a change in price is a sign of further changes in prices eg; If the consumer expects prices to fall further he demands less in the current time.
- in the case of the stock exchange market, a fall in the price of a share often leads to a fall in the quantity demanded & vice versa
- This is because the potential buyers expect the trend to continue
- The demand curve for the above expectations will be as follows;



Exceptional/Abnormal demand curve.

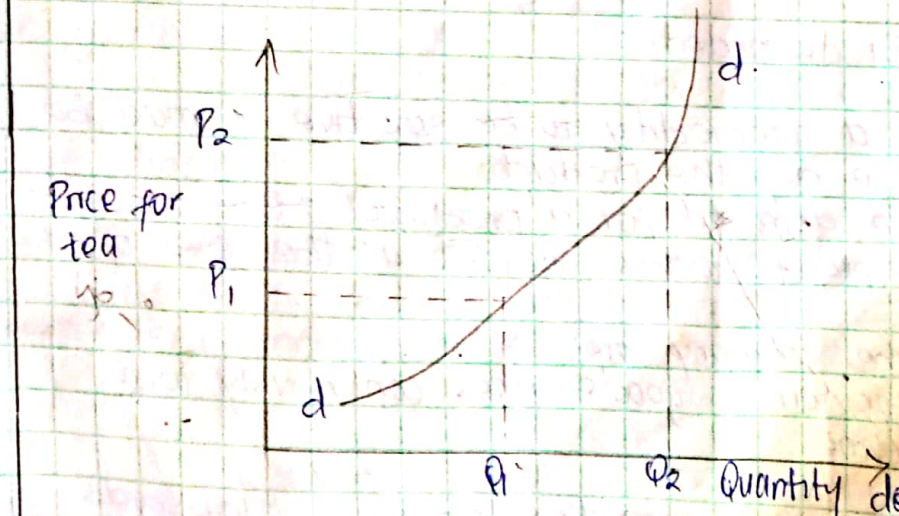
- Smokies - 20
pilau - 60
50 - 55 52
↓ 40

20%
20%

- An increase in the price from P_1 to P_2 leads to an increase in the quantity demanded.

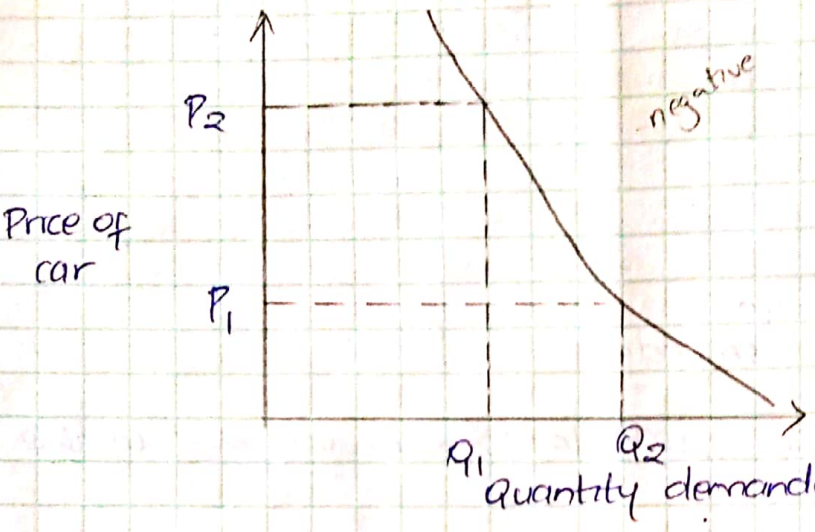
2. Prices of other related goods.
- There are two types of inter-relationship btwn goods;
a) Where the goods are substitutes for one another.
b) Where goods are complementary to one another.

a) Substitutes
- Two goods x & y are said to substitutes if an increase in the price of one commodity x, leads to an increase in the demand for the other commodity y.
- Substitutes :. refer to those commodities that can be used in place of one another eg tea & coffee, chicken & beef.
- If the price of tea increases then the consumers will find coffee relatively cheapor to tea &:. demand for coffee will increase.



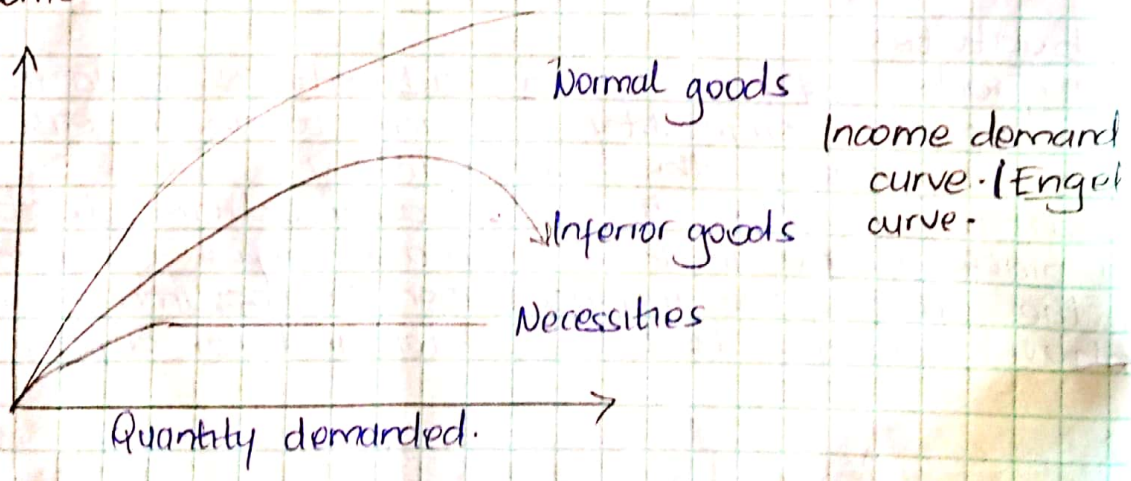
- An increase in the price of tea from P_1 to P_2 leads to an increase in the quantity demanded for coffee from Q_1 to Q_2.

b) Complementary goods / jointly demanded goods.
Two goods x & y are said to be complementary goods if a rise in the price of one good x leads to a fall in the quantity demanded of the other good. eg cars & petrol, pen and ink, bread & margarine etc



- If the price for cars is lowered the demand for petrol increases because more cars are demanded & consequently more petrol.
- A fall in the price of cars from P_2 to P_1 leads to an increase in the quantity of petrol demanded from Q_1 to Q_2.

3) Consumer's income.



- In order for the demand of a commodity to be effective it must be supported by the ability to buy the product.
- The relationship btwn the demand for a product & the consumer's income depends on the type of goods as well as the level of the consumer's income
- The 3 types of goods under the category are;

i) Normal goods - The demand for normal goods rises continously with increase in income.

ii) Inferior goods - This refers to those commodities consumed at low levels of income such that as income increases people will buy other commodities which they consider to be more superior.

Necessities - This refers to those commodities consumed by the consumers in relatively fixed amounts) for necessities such as salt, milk, their income demand curve will trend to remain constant other than at the lowest levels of income.

Pizza 500 → 500 → 500
Burger 300 → 250 → 250
1000 → 300 → 500

Future expectations of further price changes.
If the consumer expects the price of a commodity to go up in the near future they will increase the demand for the commodity now in order to avoid the high prices in future & vice versa.

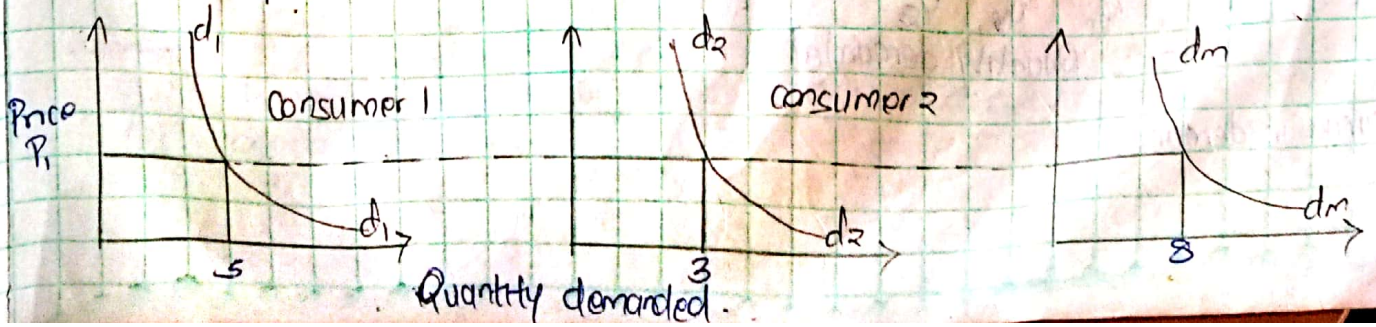
Advertising: competitive
In every successful market a successful advertising campaign is likely to increase the individual demand for a partricular product while at the same time it lowers the demand for the competing product.

Taste, fashion & preferences.
A change in the taste for a particular commodity by the consumers will affect the quantity demanded for it eg a change in taste in favour of a commodity will increase its demand & vice versa.

Seasonal factors.
The demand for many products such as clothing, food etc are influenced by seasons eg during the rainy season the demand for warm clothing is high.

Government policy.
The govt can also influence the demand for various products through its policies such as taxation, subsidies, price controls or any other form of legislation eg through its legislation the govt has prohibited smoking in public places reducing the demand for cigarettes.

Market demand. aggregate
This refers to the horizontal summation of for the demands of the individual consumers in the market ie it refers to the quantity demanded in the market at each price as a result of the summation of individual demands at that price.



Market demand = $Q_1 = 5+3 = 8$.

Factors Influencing Market Demand.

The following factors will not affect the individual demand for a commodity but will affect the market demand;

i) Changes in population - The market demand is influenced by the ... size of the population, the structure of the population in terms of age & sex as well as geographical distribution. demographic factors.

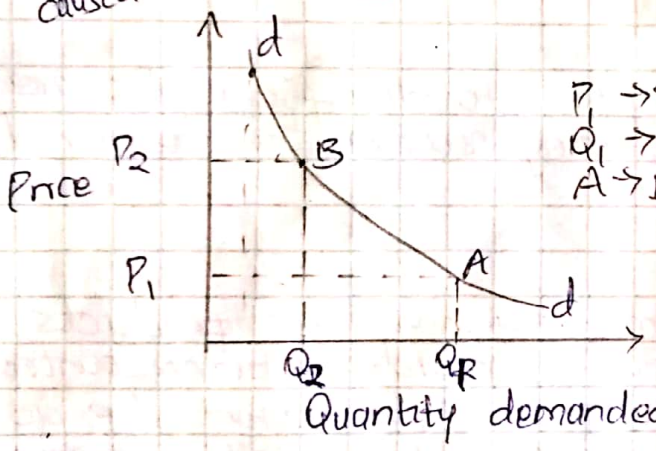
ii) Distribution of income. May 2016 & C

A more fair distribution of income might increase the demand for normal goods while it may lower the demand for luxuries.

iii) Movement along and shifts of the demand curve.

Movement along the demand curve (change in quantity demanded)

- The result of a change in price of a commodity from P_1 to P_2 is shown by a movement from point A to point B along the deman... curve.
- This movement is referred to as a movement along the demand curve & it shows changes in quantity demanded.
- it is ~~cost~~ caused by a change in price.

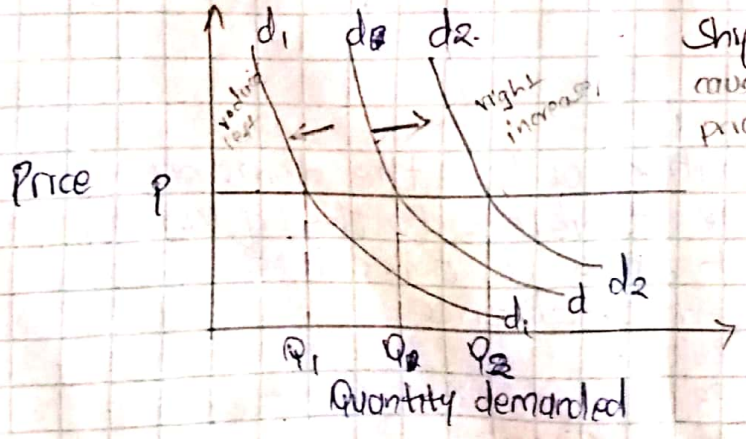


Movement along a demand curve.

$P_1 \rightarrow P_2$ caused by change in price & shows

$Q_1 \rightarrow Q_2$ change in quantity demanded

$A \rightarrow B$.



Shift in demand curve caused by changes in other factors other than price of the commodity.

(Change in demand)

- Changes in any other affecting demand other than the price of the commodity will cause a shift of the price demand curve eg changes in consumers income, changes in seasons e.t.c.
- For this reason, these factors are referred to as the shifting factors.
- A shift to the right ie from dd to d_2d_2 shows an increase in demand.
- A shift to the left ie from dd to d_1d_1 shows a fall in demand.

ELASTICITY OF DEMAND

- Elasticity is a ratio of relative change in a dependent variable to change in an independent variable.
- Elasticity of demand is a measure of responsiveness of quantity demanded of a commodity to changes in the price, income or price of other related goods.

Types of Elasticity of Demand.

1. Price elasticity of demand
2. Income elasticity of demand
3. Cross elasticity of demand.

1. Price elasticity of demand.

- This is a measure of responsivity of quantity demanded of a commodity to changes in its own price (own price elasticity)
- It is abbreviated as follows ~~Ed~~ E_d
- It is calculated using the following formulae

$$E_d = \frac{\text{Proportionate change in quantity demanded}}{\text{Proportionate change in price}} \quad \frac{Q}{P}$$

Δ = change

$$\frac{\Delta Q / Q}{\Delta P / P} \qquad \frac{\Delta Q}{Q} = \frac{\Delta P}{P} \qquad \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$$

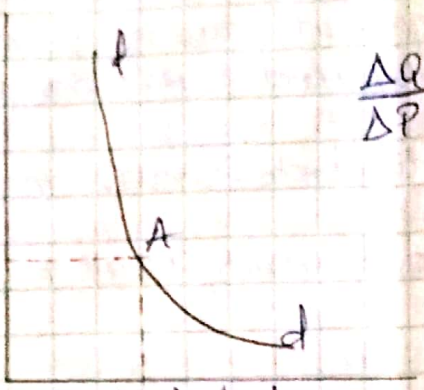
If $E_d > 1$ = Elastic
If $E_d < 1$ = Inelastic
If $E_d = 1$ = Unit elastic

Proportionate change $\frac{\Delta Q}{Q}$ > elastic, < inelastic, = unit elastic

~~Example~~

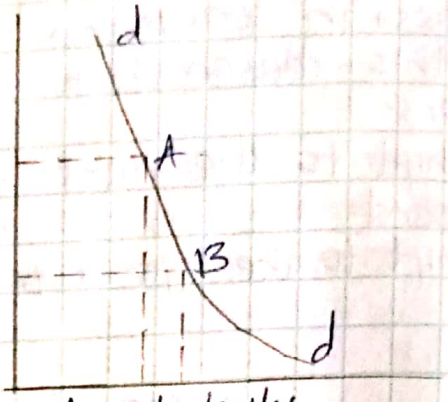
ΔQ = change in quantity
ΔP = change in price
Q = original quantity
P = original price.

Measurement of Price & Elasticity of Demand.



Point elasticity

$\frac{\Delta Q}{\Delta P} \cdot P/Q$



Arc elasticity.

Price elasticity of demand can be measured in two ways;

i) Point elasticity
ii) Arc of elasticity.

Point Elasticity.

- This measures the elasticity of demand at particular points along the demand curve.
- It is usually calculated by the following formulas;

Example 1.

Calculate the point elasticity of demand given that

$Qd = 4p + 2p^3 - 3$

where $p = 1$

Formulae

$Qd = 4p + 2p^3 - 3$

$p = 1$

$Qd = 4p^{1-1} + 2p^{3-1} - 3p^{0-1}$

$Qd = 4 + 6(1^2) - 0$

$Qd = 4 + 6 = 10.$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$4(1) = 4(1) + 2(1)^3 - 3$

$4 + 2 - 3$

$Qd = 3$

$Qd \quad 4p + 2p^3 - 3$

$4 \times 1p^{1-1} + 2 \times 3p^{3-2} - 3 \times 0p$

$4 + 6p^2$

$4 + 6(1)^2$

$4 + 6 = 10$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$10 \times \frac{1}{3} = 3.33$ Elastic.

May 2014 Q 1b

$Q = 100 - 5P$

Q = level of input

P = unit price = sh 10.

$100p^0 - 5p^{1-0}$

$0 + 5(10)$

$Q = 100 - 5(10)$

$Q = 50$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$Qd = 100 - 5P$

$\frac{dQ}{dP} Qd = 100 \times 0 - 5 \times 1p^{1-1}$

$Qd = 0 - 5$

$Qd = -5$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$-5 \times \frac{10}{50} = -1$

Example 2.

Calculate the point of elasticity of demand given that $Qd = \frac{1}{p} + p^2 + 1$ where $p = 2$

$Qd = p^{-1} + p^2 + 1$

$Qd = p^{-2} + 2p + 0$

$Qd = p^{-2} + 2p$

$Qd = \frac{1}{p^2} + 2p$

$Qd = \frac{1}{2^2} + 2(2)$

$Qd = \frac{1}{4} + 4$

$Qd = 4.75$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$ $\quad Q = \frac{1}{2} + 2^2 + 1 = \frac{1}{2} + 4 + 1$

$Q = 5.5$ ✓

$Qd = p^{-1} + p^2 + 1$

$Qd = 1x-1\,p^{-1-1} + 2x1\,p^{2-1} + 1x0$

$Qd = -1p^{-2} + 2p + 0$

$Qd = \frac{-1}{p^2} + 2p$

$Qd = \frac{-1}{2^2} + 2(2)$ $\quad 3.75 \times \frac{2}{5.5}$

$Qd = \frac{-1}{4} + 4$ $\quad = 1.36$

$Qd = -0.375 + 4$

Example 3

Calculate the point of elasticity of demand given that $Qd = \frac{3}{p^3} + p^4 + 5$ where $p = 2$

$Qd = 3p^{-3} + p^4 + 5$

$Qd = 3p^{-4} + p^3 + 5p^0$

$Qd = -9p^{-4} + 4p^3 + 0$

~~$Qd = -9(2^{-4}) + 4(2^3)$~~

$Qd = \frac{-9}{p^4} + 4p^3$

$Qd = \frac{-9}{2^4} + 4(2^3)$

$Qd = \frac{-9}{16} + 24$

$Qd = -0.5625 + 24$

$Qd = 23.4375$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$Q = \frac{3}{2^3} + 2^4 + 5 = \frac{3}{8} + 16 + 5$

$Q = 21.375$

$Qd = 3p^{-3} + p^4 + 5$

$Qd = -3x3p^{-3-1} + 4xp^{4-1} + 5x0$

$Qd = -9p^{-4} + 4p^3 + 0$

$Qd = \frac{-9}{p^4} + 4p^3$

$Qd = \frac{-9}{2^4} + 4(2)^3$

$Qd = \frac{-9}{16} + 32$

$Qd = 31.4375$

$31.4375 \times \frac{2}{21.375}$

$= 2.941$ ✓

Example 4

Calculate the point of elasticity of demand given that $P = Q - Q^2 + 3$ where $Q = 1$

~~$Qd = Q$~~ $\quad P = 1 - 1^2 + 3$

$P = 1 - 1 + 3$

$P = 3$

$P = Q - Q^2 + 3$

$P = Q^{(1-1)} - Q^{(2-1)} + 3Q^0$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$P = 1 - 1^2 + 3$

$P = 3$

$P = 2$

$P = Q^0 - 2Q^1 + 0$

$P = 1 + 2Q$

$P = 1 + 2(1)$

$P =$

$P_d = 9 - Q^2 + 3$

$P_d = P(0 - 2 \times Q^{2-1} +$

$P_d = 1 \times 1Q^{1-0} - 2 \times 1 Q^{2-1} + 3 \times 0$

$P_d = 1 - 2Q + 0$

$P_d = 1 - 2Q$

$P_d = 1 - 2(1)$

$P_d = 1 - 2$

$= -1$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$

$\frac{\Delta P}{\Delta Q} = -1 \quad -1 \times \frac{1}{3} = \frac{-1}{3}$

-0.333 Inelastic.

Arc Elasticity.

It measures elasticity or sensitivity of demand btwn two points.

$\frac{\Delta Q}{\Delta P} = \frac{\frac{P_1 + P_2}{2}}{\frac{Q_1 + Q_2}{2}}$ $\quad \frac{\Delta Q}{\Delta P} = \frac{P_1 + P_2}{Q_1 + Q_2}$

- This measures the average elasticity btwn 2 points of a demand curve.
- The arc elasticity of demand is calculated using the following formulae.

Example 1

Calculate the arc elasticity of demand given that;

$Q_d = 24 - P^2$

where $P_1 = 2 \quad P_2 = 3$

$\frac{\Delta Q}{\Delta P} = \frac{P_1 + P_2}{Q_1 + Q_2}$

$Q_1 = 24 - 2^2$

$Q_1 = 24 - 4$

$Q_1 = 20$

$Q_2 = 24 - 3^2$

$Q_2 = 24 - 9$

$Q_2 = 15$

$Q_d = 24 - P^2$

$Q_d = 24 \times 0 - 2P^{2-1}$

$Q_d = 0 - 2P$

$Q_d = -2P$

$Q_{dII} =$

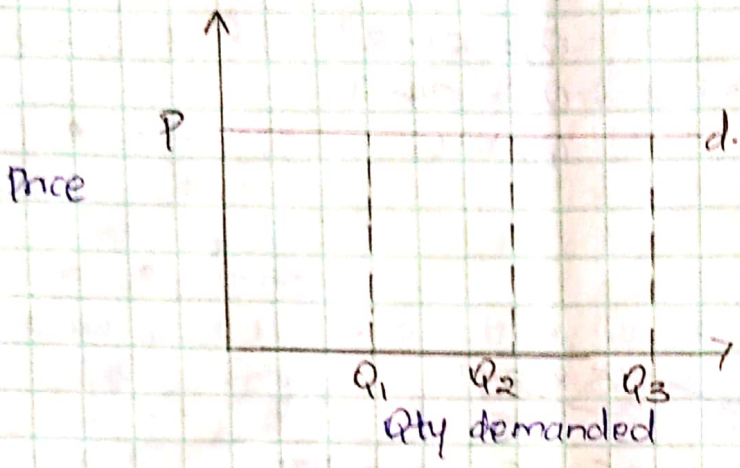
$\frac{\Delta Q}{\Delta P} = \frac{15 - 20}{3 - 2} \cdot \frac{2 + 3}{20 + 15}$ $\quad \frac{-1}{\frac{5}{1}} \times \frac{5}{\frac{35}{7}} = \frac{-5}{7} = -0.71$ Inelastic.

Types of Price Elasticity Demand.

Perfectly Elastic Demand.

Demand is said to be perfectly elastic when the consumers are willing to buy any amount of a commodity at a given price & none at a slightly higher price ie an increase in price will lead to a loss of all the customers.

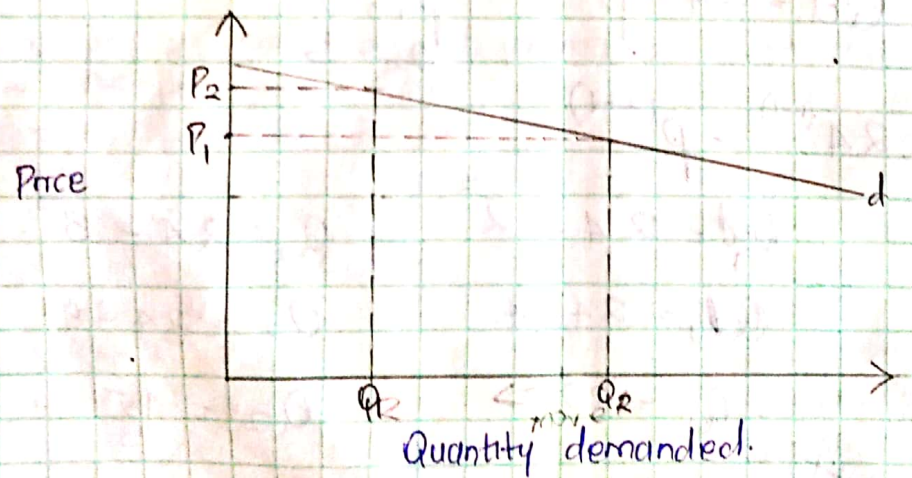
- The demand curve will be a horizontal straight line.



luxuries

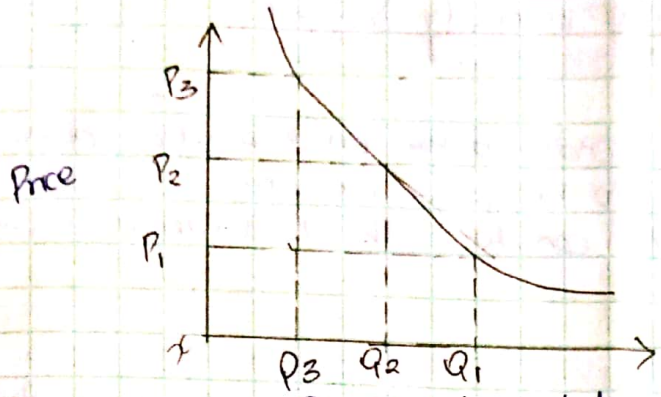
2. Elastic demand.

- Demand is said to be price elastic if changes in price cause more than proportionate changes in Qty demanded ie if price increases, the Qd falls in greater proportions & if the price falls the Qd increases in greater proportions.
- This is the case of a commodity which is a luxury. The consumers do without it.



3 Unit elastic demand.

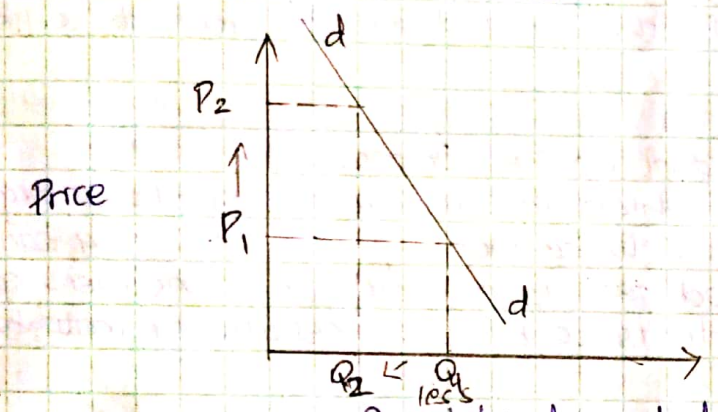
- Demand is said to be unit elastic if changes in price cause proportionate changes in Qd ie when price increases the Qd falls in the same proportion.
- This is the cause of a commodity which lies btwn a luxury & a necessity.



Inelastic demand.

Demand is said to be inelastic if changes in price cause less than proportionate changes in Q_d ie if price increases the Q_d falls in less proportions.

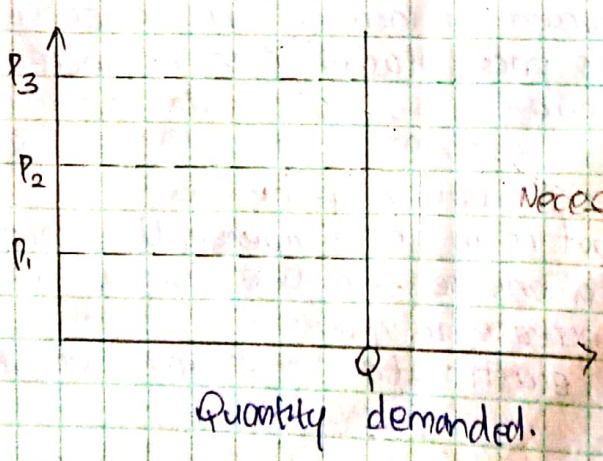
This is the case of a commodity which is a necessity ie a commodity which consumers can't do without.



5. Perfectly inelastic demand.

Demand is said to be perfectly inelastic if changes in price have no effect on the Q_d ie the change in the $Q_d = 0$

This is the case of a commodity which is an absolute necessity ie a ~~commodity~~ consumer can't do without and has to consume in relatively fixed amounts.



Factors Affecting Price Elasticity Demand

1. The Nature of the commodity.
ie luxuries vs necessities.
- The demand for luxury items tends to be price elastic while th
- demand for necessities tends to be price inelastic
- This is because the consumers can do without luxurious item
not without the necessity.

2. Time period
- The demand for many goods & services will tend to be more elast
the long run period as compared to the short run period
- This is because it takes time for the consumers to respond to
changes in price.

3. Availability of substitute.
- If a perfect substitute exists the demand for the product is likely
to be highly price elastic.
- If no substitutes are available, the demand for the product is lik
to be price inelastic.

4. The proportion of the income spent on the commodity
- The demand for goods upon which the consumer spends a larg
proportion of the income tends to be more price elastic eg a car
- The demand for those commodities upon which the consumers sp
little proportion of the income tends to be price inelastic eg matchb

5. Number of uses for the commodity
The higher the number of uses of the commodity, the higher the
elasticity.

Implementation of the Application of the Price Elasticity of Demand.

1. Determination of the Sales Revenue / Pricing Decisions.
- If the demand for a product is price inelastic then increases in price
may help the business person to increase his sales revenue.
- However, if the demand is price elastic then an increase in price
result to a loss of revenue.

price elastic - increase in price will lead to incr
price inelastic - increase in price will lead
of sales revenue

2. Elasticity of Demand & the Tax policy of the Govt.
- If the objective of the govt is to raise revenue, the targeted product
should be price inelastic to ensure that the consumers continue to
buy the product despite increase in prices
- If the commodity is price elastic, taxing it will not bring much
revenue.

3. Devaluation & policy. cheapening of currency.
- Devaluation refers to the deliberate effort by a country to lower the values of its currency.
- This in turn will make exports cheaper & the imports more expensive.
- For this policy to work, the exports & imports must be price inelastic

4. Tax shifting. - Govt inelastic
- This refers to the transfer of a tax burden from a producer to a consumer.
- For elastic commodities, the tax burden cannot be shifted but for inelastic commodity the tax burden can be easily shifted.

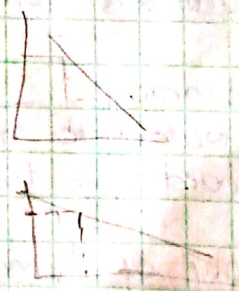
5. Resource allocation.
- The govt can allocate resources to different sectors by either taxing or providing subsidies to a sector. lowering cost of productions
- If a sector is taxed heavily, it will be expensive to operate in that sector hence less resources will go into that sector.

2. Income Elasticity of Demand (E_y) (Q income)
- This is a measure of responsiveness of the qty demanded of a commodity to changes in the consumers income.

$$E_y = \frac{\text{Proportionate change in Quantity Demanded}}{\text{Proportionate change in Income}}$$

Point Elasticity.

$$E_y = \frac{\Delta Q}{Q} \Big/ \frac{\Delta Y}{Y} = \frac{\Delta Q}{Q} \div \frac{\Delta Y}{Y} = \frac{\Delta Q \cdot Y}{Q \cdot \Delta Y} = \frac{\Delta Q}{\Delta Y} \cdot \frac{Y}{Q}$$



Arc Elasticity.

$$E_y = \frac{\Delta Q}{\Delta Y} \cdot \frac{Y_1 + Y_2}{Q_1 + Q_2}$$

If E_y is positive = Normal good.
E_y is negative = Inferior good.

If $E_y > 1$ elastic = Luxury
$E_y < 1$ inelastic = necessity.

Example
Compute the income elasticity of demand; $Q_d = y^2 + 2y + 20$ where $y = 1$

$Q = 1^2 + 2(1) + 20$
$Q = 1 + 2 + 20$
$Q = 23$

step 1 substitute
step 2 Differentiate
step 3 Apply formula

$Q = Q_d = y^2 + 2y + 20$

$Q_d = 2y + 2$

$Q_d = 2(1) + 2$

$Q_d = 2 + 2$

$Q_d = 4$

$\frac{\Delta Q}{\Delta Y} \cdot \frac{Y}{Q}$ - E1

$4 \cdot \frac{1}{23} = \frac{4}{23}$

$4 \times \frac{1}{23} = \frac{4}{23}$ $= 0.1739 < 1$ → Necessity

Determinants of Income Elasticity of Demand

1. Time period: long run - elastic
Consumers take time to respond to changes in the income ∴ the income elasticity will be more elastic in the long run than in the short run.

2. The nature of the need that the commodity covers:
It has been observed that for certain commodities, the proportion of income spent on them declines as income increases eg food.

3. Initial level of income of the country.
Luxuries & necessities entirely depend on the level of development of a country eg a tv set is a luxury in Kenya but a necessity in the UK.

Importance of Income Elasticity Demand.

1. Economic growth.
- Rapid economic growth will cause an expansion in the demand for luxuries which have a high income elasticity.
- For this reason, there will be more investments in industries producing luxurious items & less industries producing necessities.

2. Economic planning:
Rapid economic growth will force the govt to review its policies accordingly to meet the changing wants of its people.

3. Cross Elasticity of Demand (ECD) (XED)
- This is a measure of responsiveness of quantity demanded of one commodity (c) to changes in price of another commodity (D)
- It is calculated as follows;

$ECD = \frac{\text{Proportionate change of quantity demanded of commodity C}}{\text{Proportionate change in price of commodity D}}$

$ECD = \frac{\Delta Q_c}{\Delta P_d} \cdot \frac{P_d}{Q_c}$

May 2012 7d

Calculate the cross elasticity of demand as the price of X changes from sh 18 to sh 24

$ECD = \frac{\Delta Q_1}{\Delta P_1} \cdot \frac{P}{Q}$

$\frac{C - D}{O}$ $\frac{18-24}{18}$

$ED = \frac{\Delta Q_x}{\Delta P_y} \cdot \frac{P_y}{Q_x}$ 20-25

ED = Proportionate change of Q_d for commodity x / Proportionate change in price for commodity x.

$\frac{150-120}{120}$ / $\frac{24-18}{18} = \frac{6}{18}$ = $\frac{30}{120}$ / $\frac{6}{18}$ = $\frac{0.25}{0.333}$ = 0.75

price inelastic

Elasticity measure of responsiveness of Qd to changes in Price Ed. Consumer's Income EY. Price of related good ECD.

Dec 2014 7d 2b

$Q_1 = 8 - P_2^2$ at $P_2 = sh\ 2$

where Q_1 is the quantity demanded for good 1, P_2 is the price of good 2.

$E = \frac{\Delta Q_1}{\Delta P} \cdot \frac{P}{Q}$

$Q_1 = 8 - P_2^2$
$Q = 8 - 2^2$
$Q = 8 - 4$
$Q = 4$

1. Substitute
2. Differentiate
3. Apply formula $\frac{\Delta Q_1}{\Delta P_2} = \frac{P_1}{Q_2}$

$Q_d = 8 - P_2^2$
$Q_d = -2P$
$Q_d = -2 \times 2$
$Q_d = -4$

$\frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q}$
$-4 \cdot \frac{2}{4} = -2$

$Q_1 = P_2^{3/4}$ at $P_2 = sh\ 5$

where Q_1 is the quantity demanded for good 1, P_2 is the price of good 2.

$Q_1 = 5^{3/4}$
$Q_1 = 3.34$

$Q_d = P^{3/4 - 1}$
$Q_d = 3/4\ P^{-1/4}$

$\frac{\Delta Q_1}{\Delta P} \cdot \frac{P}{Q_1}$

$15 \times \frac{5}{3.34}$ = 3.75

$Q_d = 3P$
$Q_d = 3 \times 5 = 15$

- The sign of the cross elasticity of demand is a positive if the two goods are substitutes & negative if the two goods are complimentary goods
- The higher the absolute value of the cross elasticity of demand, the stronger will be the degree of sustainability or complimentarity.

Determinants of Cross Elasticity of Demand

1. The nature of the commodities relative to their uses
ie if the two commodities can satisfy equally well for the same need, the higher will be the cross elasticity of demand & vice versa

2. Time
- In the short run, it will be inelastic while in the long run it will be elastic.
- This is because it takes time for the consumer to respond to changes in prices.

3 The initial level of price of the commodity.

Importance of Cross Elasticity of Demand.

1. Protection of the local industries.
- If the govt imposes a tax on a commodity with the intention of protecting a local industry, then the local product & the ~~important~~ imported product must be close substitutes for the govt to achieve its objectives.
- If the imported product is of a higher quality, the consumers will still buy it even if it is taxed.

2. If a firm is in a competitive industry, there will be a high positive cross elasticity of demand btwn its products & those of other firms. For such a firm, it will not be in its interest to increase the price for its products as those may result to a more than proportionate reduction in sales.

3 For products with a high degree of complimentality, a fall in price of one product (X) due to an increase in supply will benefit the producers of the other products (Y) due to increase in sales eg assume X is cars & Y is petrol.