

# Chapter 5

Thursday, October 13, 2016 11:46 AM

## THE ELASTICITY OF DEMAND

Elasticity : a measure of the responsiveness of quantity demand or quantity supplied to one of its variables. ( how much consumers respond to changes in these variables. ( how much it will go up in down in yo

### The price elasticity of demand and its determinants ( GIVES% USE THE

The law demand : fall in price = good raise the quantity demand

Price elasticity of demand : measures how much the quantity demanded responds to a change in price. change in quantity demand divided by the percentage change in price.

% change quantity

\_\_\_\_\_ = Formula elasticity

%change price

Elastic : demand for a good , if the quantity demand changes in the price.

Inelastic : quantity demanded responds only slightly to change in the price ( price goes down) (

Price elasticity : demand for any good measures how willing consumers are to buy less of the good ( DEMAND CURVE: reflects on economic, social and psychological .

### Influence the price elasticity of the demand

- **Availability of close substitutes**

more **elastic** demand because its is easier for consumers to switch from that good to others .

- **Necessities vs luxuries**

Necessities tend have **inelastic** demand ( dentist : price goes up= less ppl but its necessities)

Luxuries have a elastic demand ( boat : price goes up=less ppl not a necessity "nice to have")

HOW EVER.... DEPENDS ON THE BUYER

...s determinants. ( how  
...ur demand)

**S EQUATION)**

... in price. Percentage

... no substitute)

...ood as its price rises.

EX : butter to margarine

Sailor needs more sailboat so it's a necessity with inelastic demand and dentist luxury with elastic demand

- **Definition of the market**

Depends on how we draw the boundaries of the market.

Narrow = market tends to have more elastic demand ( easy to find substitutes for a narrowly defined market)

EX: food = inelastic demand because no good substitute for food other than food.

Ice cream = More narrow : elastic demand because its easy to substitute other deserts then ice cream

Vanilla ice cream = narrow category : other flavours

- **Time horizon**

Good tend have more **elastic** demand over longer time.

Ex : gas goes up= less ppl will buy----- eventually the over years quantity of gas demanded falls

Computing the price elasticity of demand

% change in Q demand (- decrease)

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$$\frac{\text{change in Q demand}}{\text{change in price}} = \text{Price elasticity of demand}$$

% change in in price (+) increase

EX : 10% increase price of ice cream cone cuz the amount of ice cream you buy fall by 20 %

Elastic demand :  $20/10 = 2$

Elasticity is 2 : change in the quantity demand is proportionate twice large as the price

The midpoint method : a better way to calculate % change and elasticities ( )

USE THIS EQUATION)

Point : (A,B) OR (B,A) = PRICE AND QUANTITY

Midpoint menthods : a : 4\$ b : 6\$ = midpoint : PRICE :  $\frac{6+4}{2} = 5$  QUANTITY :  $\frac{80+100}{2} = 90$

A to B = price rise :40% quantity false 40%

B TO A = price false 40% and quantity rise 40%

so 40 % (  $\frac{6-4}{5} \times 100 = 40\%$  )

stic demand.

efined goods)

cream.

substantially

**ONLY GIVES U POINTS**

----120= 100

Price elasticity demand =  $(Q_2 - Q_1) / [(Q_2 + Q_1) / 2]$

$(P_2 - P_1) / [(P_2 + P_1) / 2]$

### THE VARIETY OF DEMAND CURVES 5.1

- ? **Demand is elastic** = elasticity is bigger than 1 ( quantity moves more than the price) - less demand
  - ? **Demand inelastic** = elasticity is less than 1 ( quantity moves less than the price) - more demand
- IF same moves of price and quantity = unit elasticity

VERTICAL CURVE: price increase, leaves the quantity the same at 100 always ( A )

**Inelastic** demand: elasticity is less than 1: 22% price increase - 11% decrease quantity ( B )

Unit elastic demand: elasticity equals 1: 22% increase price - 22% decrease demand ( C )

**Elastic demand**: elasticity bigger than 1: demand increase 67% more than price - price increase

Perfectly elastic demand

: horizontal any price above 4\$ is demand is 0 or lower than 4\$ is 0

### TOTAL REVENUE AND THE PRICE ELASTICITY OF DEMAND

Study changes in supply or demand in the market we want to study the TOTAL REVENUE.

Total revenue ( the box ) : amount paid by the buyer and received by sellers of the good .

In a market : total revenue - P ( price of good times ) x Q ( quantity of good solds )

CHANGE IN TOTAL REVENUE?

...depends on the price elasticity of demand

Inelastic : increase in price cause increase in total revenue. ( price less than 1 = 1 price and revenue )

Elastic: increase in price cause decrease in revenue ( price is greater than 1 = 1 price and revenue )

5.3

and  
d



e less 22%



venue move the same way)  
ue move opposite sides)

Elasticity of linear demand curve : use midpoint method fill out the demand schedule table (5.4)

## THE INCOME ELASTICITY OF DEMAND

How the quantity demanded changes as consumers income changes as consumer income changes

Income elasticity of demand =  $\frac{\text{percentage change in quantity demanded}}{\text{Percentage change in income}}$

Percentage change in income

Normal goods : higher income , higher demand

Inferior goods : higher income lower the quantity demand

Cross price elasticity of demand : measures how the quantity demanded of one good changes as the price of another good changes

=  $\frac{\% \text{ change in quantity demanded of good 1}}{\% \text{ change in price good 2}}$

% change in price good 2

## THE ELASTICITY OF SUPPLY

PRICE ELASTICITY OF SUPPLY =  $\frac{\% \text{ change in quantity supplied}}{\% \text{ change in price}}$

Mid point =

$$\frac{(S_2 - S_1) / [(S_2 + S_1) / 2]}{(P_2 - P_1) / [(P_2 + P_1) / 2]}$$

$$(P_2 - P_1) / [(P_2 + P_1) / 2]$$

Elastic : if the quantity supplied responds substantially to changes in the price

Inelastic : if the quantity supplied responds only slightly to a change in the price.

Key determinant price elasticity of supply : consider the time period

THREE APPLICATIONS OF SUPPLY, DEMAND AND ELASTICITY

( THE MARKET DEMAND AND SUPPLY)

1. Can good news for farming be bad news for farmers? 5.7 p112

4)

ges.

as the price of another  
ges.

Demand is inelastic , an increase in supply, price goes down quantity increase  
40% down the price  
9.5 % up quantity

Total revenue : 300\$ ----- 220\$ now.

2. Why did OPEC FAIL TO KEEP THE PRICE OF OIL HIGH? P.113-114
3. DOES DRUGS INTERDICTION INCREASE OR DECREASE DRUG RELATED CRIME P.11

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