

A large pile of tangled, multi-colored rubber bands (red, yellow, green, blue, purple) is shown on a light-colored, textured surface. The rubber bands are intertwined and form a dense, chaotic mass. The text is overlaid on the center of the image.

Elasticity of Demand

Chapter 3

Section 3

Elasticity of Demand

- A measure of how consumers react to a change in price
- This talks about how buyers will cut back or increase their demand for a good when the price rises or falls.



Inelastic

- Describes demand that is not very sensitive to a change in price
- Gas can be considered inelastic because no matter the price, people will have to keep buying it.



Elastic

- Describes demand that is very sensitive to a change in price.
- Soda can be considered elastic. If the price goes up, people can easily find an alternative.



Unitary Elastic

- Describes demand whose elasticity is exactly equal to 1
- If the elasticity of demand for a good is less than 1, we describe it as inelastic. If the elasticity is greater than 1, demand is elastic. If elasticity is exactly equal to 1, we describe demand as unitary elastic.

Total Revenue

- The total amount of money a firm receives by selling goods or services
 - It is determined by two factors:
 - The price of the goods
 - The quantity sold

How do you calculate the elasticity of demand?

- To find the elasticity of demand, take the percentage change in demand of a good and divide this number by the percentage change in the price of the good.

$$\text{Elasticity} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

$$\text{Percentage Change} = \frac{\text{Original number} - \text{New number}}{\text{Original number}} \times 100$$

How do you calculate the elasticity of demand?

- The law of demand implies that the result will always be negative. This is because an increase in the price of a good will always decrease the quantity demanded. A decrease in the price of a good will always increase the quantity demanded.
- For the sake of simplicity, economists drop the negative sign.

What are the factors that affect elasticity?

Well.. What is important to you?

- Several different factors can affect a person's elasticity of demand for a specific good.
 - Availability of substitutions – soda
 - Relative importance – shopping habits
 - Necessities vs. Luxuries – toilet paper, milk
 - Change over time – gas, carpool

Why is demand for home heating fuel inelastic in cold weather?

- Because you got to stay WARM!



- Although this is why Mr. Northrup is rich! He keeps his house temperature at 60 degrees!!!!

How do we calculate total revenue?

- Quantity sold x price of good



When the price of a car wash rises from \$10 to \$11, the number of daily customers falls from 60 to 48.

$$\frac{60-48}{60} = \frac{12}{60} \times 100 = 20$$

$$\frac{10 - 11}{10} = \frac{-1}{10} \times 100 = 10$$

↑
*remember to drop the negative sign for simplicity

$$\frac{20}{10} = 2$$

2 > 1 so demand is elastic

A hairstylist with 40 clients cuts her fee for a styling from \$75 to \$60 and attracts 5 new clients.

$$\frac{40-45}{40} = \frac{-5}{40} \times 100 = 12.5$$

$$\frac{75-60}{75} = \frac{15}{75} \times 100 = 20$$



*remember to drop the negative sign for simplicity

$$\frac{12.5}{20} = .625$$

.625 < 1 so demand is inelastic