What Is Elasticity of Demand?

- **Elasticity** is another term in economics that sounds more difficult to understand than it really is. It measures how a price change affects the quantity of a particular good that people want to buy.

- Demand for a good can be elastic, inelastic, or unit-elastic. **Elastic** means that a price change has a **significant** impact on the quantity demanded. **Inelastic** means that there is a **minor** change in quantity demanded when the price changes. And **unit-elastic** means that the impact of a price change is **neutral**—that is, neither major nor minor.
Elasticity of Demand

Percentage change in quantity demanded

\[ \frac{\text{Percentage change in price}}{\text{Percentage change in quantity demanded}} \]

How to calculate percentage change:

\[ \% \Delta = \frac{\text{New} - \text{Old}}{\text{Old}} \times 100 \]

Elastic demand (greater than 1)

or

Inelastic demand (less than 1)

or

Unit-elastic demand (equal to 1)
• How do we find out which type of demand is at work? In all cases, the type of demand has to do with the relationship between the percentage change in quantity demanded and the percentage change in price.

• When we divide the percentage change in quantity demanded by the percentage change in price, we get a number that is greater than 1, less than 1, or exactly 1.

• If the answer to our division problem is greater than 1, the demand is elastic; if the answer is less than 1, the demand is inelastic; if the answer is exactly 1, the demand is unit-elastic.
What Determines Elasticity of Demand?

- Four factors affect the elasticity of demand:
  - *Number of substitutes*. When there are few substitutes for a good, the quantity demanded is unlikely to change much if the price rises. Therefore, the demand for the good is likely to be inelastic. When there are many substitutes for a good, the opposite is true: the demand tends to be elastic.
  - *Luxuries versus necessities*. Demand for necessities tends to be inelastic because people need those goods even if prices rise. Demand for luxuries tends to be elastic because people will often do without those goods if prices rise.
• **Percentage of income spent on the good.** If a good requires a **large** percentage of a person’s income, demand for it tends to be **elastic**. Demand for goods that require a **small** percentage of a person’s income tends to be **inelastic**.

• **Time.** When consumers have little time to **respond** to a price change, demand is usually inelastic. When they have more time to respond, demand is usually elastic.
Relationship Between Elasticity and Revenue

- Elastic demand and an increase in price lead to a decrease in total revenue.
- Elastic demand and a decrease in price lead to an increase in total revenue.
- Inelastic demand and an increase in price lead to an increase in total revenue.
- Inelastic demand and a decrease in price lead to a decrease in total revenue.
Elasticity of Supply

- **Elasticity of supply** is the relationship between the percentage change in quantity supplied and the percentage change in **price**.
  - **Elastic supply** exists when the percentage change in quantity supplied (the numerator) is greater than the percentage change in price (the denominator).
  - **Inelastic supply** exists when the percentage change in quantity supplied is less than the percentage change in price.
  - **Unit-elastic supply** exists when the percentage change in quantity supplied is the same as the percentage change in price.