Ch 5. Elasticity and Its Application

- **Elasticity :** Measure of the responsiveness of ***Qd*** or ***Qs*** to a change in one of its determinants

- **Price elasticity of demand :** How much the quantity demanded of a good responds to a change in the price of that good
- Formula = (Percentage change in Qd) / (Percentage change in P)
- To calculate percentage change, use 'end value' and 'start value'
- Price elasticity has different values according to the direction!!

- **Determinants of price elasticity of demand**
- Example 1: Breakfast cereal vs. Sunscreen → Price elasticity is higher when **close substitutes** are available
- Example 2: Blue jeans vs. Clothing → Price elasticity is higher for **narrowly defined goods** than for broadly defined ones
- Example 3: Insulin vs. Yachts → Price elasticity is higher for **luxuries** than for necessities
- Example 4: Gasoline in the short run vs. Gasoline in the long run → Price elasticity is higher in **the long run**

- Variety of demand curves
- **Perfectly inelastic demand: D curve vertical,** consumers price sensitivity 0, Elasticity 0
- **Inelastic demand: D curve relatively steep,** consumers price sensitivity relatively low, Elasticity less than 1
- **Unit elastic demand: D curve intermediate slope,** consumers price sensitivity intermediate, Elasticity = 1
- **Elastic demand: D curve relatively flat,** consumers price sensitivity relatively high, Elasticity greater than 1

- **Perfectly elastic demand: D curve horizontal,** consumers price sensitivity extreme, Elasticity infinity

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- **Elasticity and Total revenue:** A price increase has 2 effects on revenue. Higher revenue because of higher P, Also Lower revenue because you sell fewer units. For a price increase…
- If demand is elastic, TR decreases: the fall in revenue from lower Q > the increase in revenue from higher P
- If demand is inelastic, TR increases: the fall in revenue from lower Q < the increase in revenue from higher P

- **Price elasticity of Supply :** How much the quantity supplied of a good responds to a change in the price of that good
- Formula = (Percentage change in Qs) / (Percentage change in P)
- Sellers' price sensitivity

- **Variety of supply curves**
- Perfectly inelastic supply: S curve vertical, Elasticity 0
- Inelastic supply: S curve relatively steep, Elasticity < 1
- Unit elastic supply: Intermediate slope, Elasticity = 1
- Elastic supply: Relatively flat, , Elasticity > 1
- Perfectly Elastic supply: Horizontal, Elasticity infinity

- Determinants of supply elasticity
- Sellers' production ability
- Length of time: Greater in the long run than in the short run

- **Other elasticities of demand**
- **Income elasticity of demand:** How much the quantity demanded of a good responds to a change in consumers' income
- **Normal goods: income elasticity > 0**
- **Inferior goods: income elasticity < 0**

- **Cross-price elasticity of demand:** How much the Qd of one good responds to a change in the price of another good
- **Substitutes: cross-price elasticity > 0**
- **Complements: cross-price elasticity < 0**