Welfare Analysis

Consumer and Producer Surplus

Welfare Analysis

To determine the impact on trade policies, we must determine how the participants in the economy are affected

- Participants include:
  - Consumers (Households)
  - Producers (Firms)
  - Government

Consumer Surplus

- Consumer Surplus (CS) is a method to determine the net benefit of consumption

- Definition: “extra amount consumers are willing to pay for an item compared to what they have to pay”

  - Graphically, this is the area under the demand curve
Consumer Surplus II

• Area under demand curve is the total value of consumption
• At $10, value to consumer is \((a+b+c)\), but consumer must pay \((b+c)\)
• So CS = a

Consumer Surplus III

• If the price falls to $5, then the total value of consumption is \((a+b+c+d+e)\)
• Consumer must pay \((c+e)\)
• So, CS = \(a+b+d\)

Producer Surplus (PS)

• “Extra benefit” to producers
• “What producers can charge” – “What producers willing to charge”
• Graphically: Area between market price and supply curve
Producer Surplus II

• Suppose the market price is $5
• Firm is willing to sell unit 8 at $5, but for units 1-7, the firm is willing to sell each at a price less than $8
• PS = x

Producer Surplus III

• If the market price rises to $10, the firm is willing to sell at most 15 units.
• For units 1-14, the firm is willing to sell at a price lower than $10
• PS = (x+y+z)

Market Equilibrium

• A nation’s welfare can then be determined by the sum of consumer surplus (CS) and producer surplus (PS) (plus any government revenue)

Welfare = CS + PS + GR

• Note that an increase in market price decreases CS yet increases PS
• So an increase in market price does not necessarily have a negative impact on the economy.