

Consumer Surplus

I. Motivation

Goal: To evaluate consumer's gain/loss when there is some change to the market environment.

e.g. - Introduction of a new tax
- Monopoly instead of perfect competition

Ideal: Use utility function and budget constraint—Compensating Variation (CV) and Equivalent Variation (EV)

CV – Highest amount of income the consumer is willing to give up trading for a lower price

EV – Lowest amount of income the consumer is willing to accept trading for a higher price

CV = EV if there is no income effect.

Problem: We do not know what people's utility functions are in the real world
What would be a good approximation?

II. Consumer Surplus (CS)

Area beneath the demand curve and above the price paid by consumers.

III. Producer Surplus (PS)

Area above marginal cost and below the price received by sellers.

$$\text{Total Surplus (TS)} = \text{CS} + \text{PS}$$

Example: Tax versus Perfect Competition