

# E101 - 4.1 - Utility (Consumer Choice)

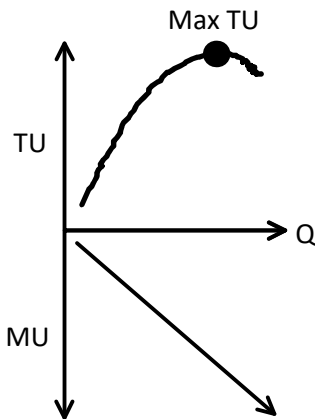
Utility - Total satisfaction or pleasure derived from consumption a product. Objective: Maximize Total Utility

Marginal Utility - Utility of one more unit.

$$\text{Marginal Utility (MU)} = \frac{\text{Total } \Delta \text{ Utility}}{\text{Quantity}} \quad \text{Total Utility}_{3 \text{ units}} = MU_1 + MU_2 + MU_3$$

Diminishing Marginal Utility - Marginal Utility decreases. More may be better, but additional units do not give the same degree of pleasure.

Law of Diminishing Marginal Utility - The amount of additional utility decreases at successive units of a product are consumed.



The objective of the consumer, it is assumed, is to maximize the pleasure derived from consumption that is, to maximize total utility.

Marginal utility theory applies when the consumer is behaving rationally the consumer's objective is to maximize satisfaction purchases and consumption take place over a short period the units purchased may sometimes be sets of items.

We should buy and consume products to the point at which the marginal utility per dollar spent on each product is more or less equal for all products.

$$\text{MU per \$ spent} = \frac{MU}{\text{price}}$$

$$\frac{MU_A}{P_A} > \frac{MU_B}{P_B}$$

Consume more A

$$\frac{MU_A}{P_A} < \frac{MU_B}{P_B}$$

Consume more B

$$\frac{MU_A}{P_A} = \frac{MU_B}{P_B}$$

Optimal consumption of A and B

Consumer Surplus - The difference between what a consumer is willing to pay and the actual price of the product.

$$\text{Marginal Consumer Surplus (MCS)} = \$MU - \text{Price}$$

$$\text{Total Consumer Surplus} = MCS_1 + MCS_2 + MCS_3 + \dots$$

Price Discrimination - The selling of an identical product at a different price to different customers for reasons other than differences in the cost of production.