



# Utility & Demand Analysis

# What is Utility?

Satisfaction, happiness, benefit

# Cardinal Utility vs. Ordinal Utility

***Cardinal Utility:*** Assigning numerical values to the amount of satisfaction

***Ordinal Utility:*** Not assigning numerical values to the amount of satisfaction but indicating the order of preferences, that is, what is preferred to what

# Util

A unit of measure of utility

# Total Utility

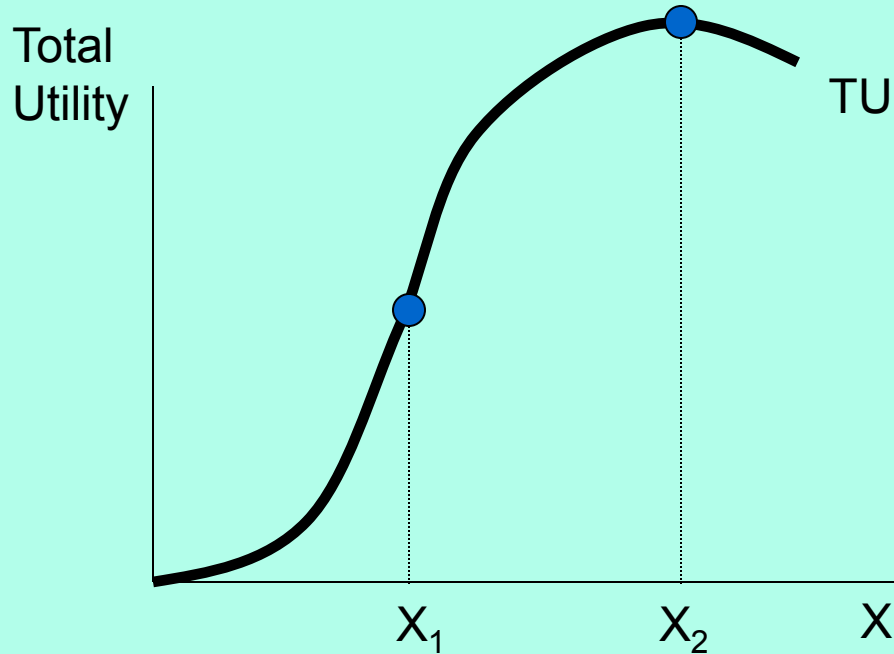
The amount of satisfaction obtained by consuming specified amounts of a product per period of time.

# Marginal Utility

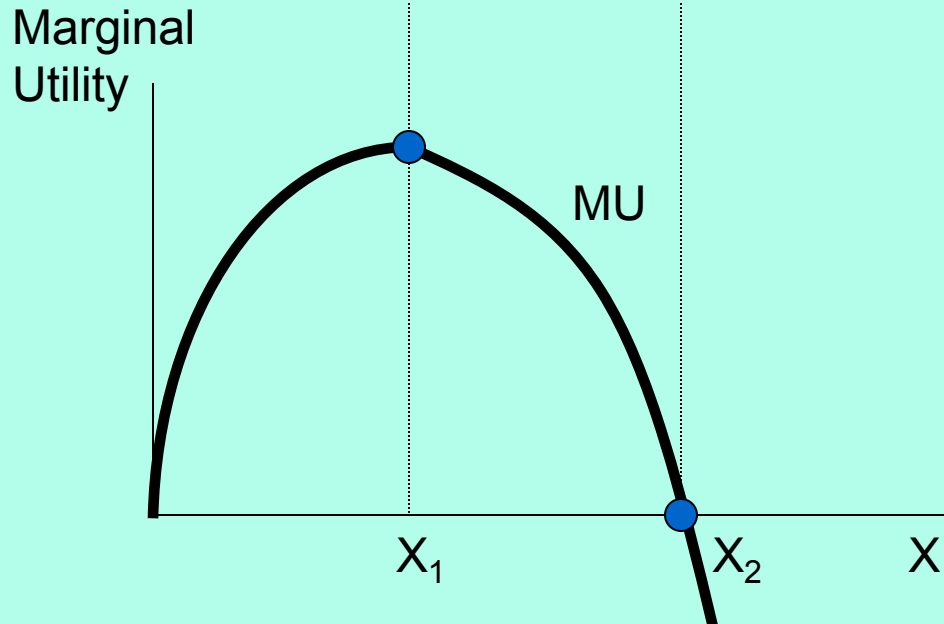
The change in total utility ( $\Delta TU$ ) resulting from a one unit change in consumption ( $\Delta X$ ).

$$MU = \Delta TU / \Delta X$$

# Graphs of Total Utility & Marginal Utility



$X_1$  is where marginal utility reaches its maximum. This is where we encounter diminishing marginal utility. The slope of TU has reached its maximum; TU has an inflection point here.



$X_2$  is where total utility reaches its maximum. MU is zero. This is the saturation point or satiation point. After that point, TU falls and MU is negative.

In our example, we had the following:

Number of units purchased (Q)	Price you are willing to pay (P)	Marginal Utility
0	-	-
1	10	10
2	8	8
3	6	6