

An abstract graphic on the left side of the slide. It features a series of curved, overlapping lines that create a sense of depth and movement. The colors transition from a dark blue at the top to a bright yellow-green at the bottom, resembling a rainbow or a spectrum. A thin, light blue line arches over the top of the graphic. The background is a solid dark teal color.

Ordinal Utility Theory

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Problems of Cardinal measurement

- A utility function is simply a way to represent or summarize a preference ordering
- The numerical magnitudes of utility levels have no intrinsic meaning
- It is difficult to quantify someone's satisfaction level

Problems of Cardinal measurement

- Classical economists never described how we were to measure utility
- How are we supposed to quantify the amount of utility associated with different choices?
- Is one person's utility the same as another's?
- Does the concept of utility have any independent meaning?



Consumer Preferences

Preferences

- Preferences were defined in terms of utility
- Suppose individual A has two options- Apple & Orange
- What happens in case of **Cardinal Utility theory**?
 - Utility derived from the consumption of apple
 - Utility derived from the consumption of Orange

Preferences

- A bundle (X_1, X_2) was preferred to a bundle (Y_1, Y_2) – X bundle has a higher utility than the Y bundle
- The consumer can rank them as to their desirability
- Either the consumer **strictly preferred** ($>$) or **weakly preferred** (\geq)
- **Indifferent** (\sim)

Assumptions

- Complete (Any two bundles can be compared)
- Reflexive (Any bundle is at least as good as itself)
- Transitive (If $X = Y$ and $Y = Z$ then $X = Z$)



Indifference Curve



Numerical Example

Good X	Good Y	
1	10	100
2	7	100
3	5	100
4	4	100