

Indifference Curves and Budget Constraint

I. Indifference Curves

Indifference Curves (IC) tell us what the individual *prefers to consume*

Derivation of IC: Preferences \rightarrow Utility function \rightarrow IC

- Preferences are just binary relationships that tells whether a bundle (of goods) x is *at least as good as* a bundle y
- Utility function is a single-valued real function that represent more preferred bundle with a higher number. With our assumptions on preferences (remember what they are?) there exists a utility function that can represent the preferences; the proof of this and how we get from preferences to utility function is out of the scope of this course
- IC's are drawn by restricting the utility function to a particular value. More on this below

II. Drawing Indifference Curves

In general you will not be asked to graph indifference curves except for some special cases. This is due to the obvious difficulty in accurately graphing curves by hand. Just remember that indifference curves are graphed by setting the utility from a constant value. For example,

$$U(x,y) = \ln(x) + \ln(y)$$

Set $U = 1/2$ we get on curve, setting $U = 1$ gives another, etc.

More likely you are going to be asked to come up with IC (but not the underlying utility functions) that makes an individual prefers one bundle to another.

Special cases:

Perfect Substitutes

Utility function: $U(x,y) = ax + by$

Perfect Complements

Utility function: $U(x,y) = \min\{ax, by\}$

Which assumption on preferences do perfect complements violate?