

Economics 8100

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Part I

Budget

1 Consumption Set X

X : Consumption Set (Universe of Choice Objects).

The consumption set is the set of *bundles* $x \in X$.

Assumptions:

1. $\emptyset \neq X \subseteq \mathbb{R}_+^n$.
2. X is closed.
3. X is convex.

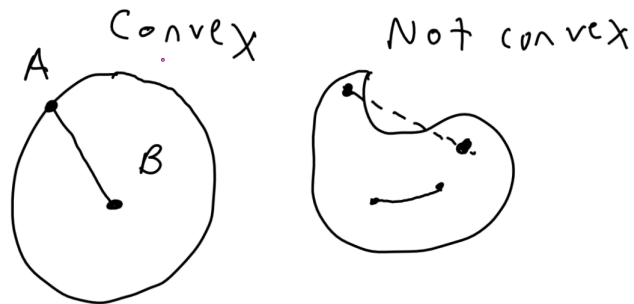


Figure 1: Examples of a Convex/Non-Convex Set.

4. $0 \in X$.

2 Budget Set B

$$B \subseteq X$$

X – “what can I imagine?”

B – “What can I have?”

2.1 Example

X is the set of ice cream bowls that have Vanilla, Chocolate, Strawberry.

$$X = \mathbb{R}_+^3$$

Budget B is the set of bowls with no more than one scoop of ice cream.

Some things in B :

$(1, 0, 0) \in B$. (On the boundary.)

$(0.5, 0.5, 0) \in B$. (On the boundary.)

$(0.25, 0.25, 0.25) \in B$. (In the interior.)

$(2, 0, 0) \notin B$