Econ 301 - Microeconomic Theory 2 **Winter 2018**

Lecture 2: January 8, 2018

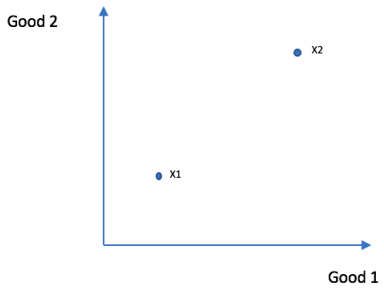
Lecturer: Jean Guillaume Forand *Notes By: Harsh Mistry*

2.1 Consumer Choice Continued

2.1.1 Feasible choices for consumers

In-Class Numbering : 1.1.2

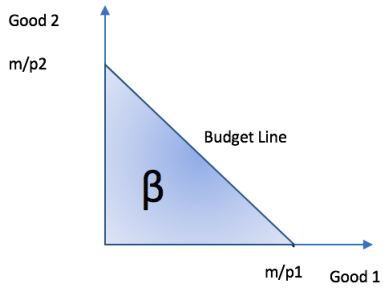
- A consumption bundle is a vector $x = (x_1, x_2) \in \mathbb{R}^2$ (i.e $x_1, x_2 \geq 0$)



- Assume two goods for simplicity
- Assumes goods are only consumed in non-negative quantities
- Assumes units are arbitrarily divisible and any small quantity of good can be added to any bundle. Not essential, but allows for use of calculus methods.
- Not all consumptions bundles are feasible for the consumers, as the consumer purchases goods in markets
  - Market Prices for two goods is a vector $p = (p_1, p_2) \in \mathbb{R}^2$
  - Income of consumers is $m > 0$

Definition 2.1 *Given prices p and income m, consumers budget set is*

$$\beta = \{(x_1, x_2) \in \mathbb{R}^2 \mid p_1 x_1 + p_2 x_2 \leq m\}$$



- Consumers need no find it optimal to exhaust his/her budget (i.e choose a consumption bundle on the budget line)
- Consumer is a price-taker : Prices the consumer faces are independent of the consumption bundle purchases
- Appropriate assumptions for modelling large markets which no participants have significant market power
- Slope of budget line $\frac{-p_1}{p_2}$ is markets marginal rate of exchange : rate at which market provides goods 2 against units of good 1
- Fix bundle x_1^*, Let m^* be associated expenditure.

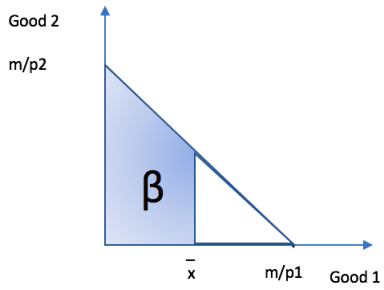
Question : If a consumer wants to finance additional units of good 1 without increasing his expenditures, how much of goods 2 must she supply to the market?

- Have $p_1 x_1^* + p_2 x_2^* = m^*$
- Total derivatives of identity with respect to x_1

$$p_1 \frac{dx_1^*}{dx_1^*} + p_2 \frac{dx_2^*}{dx_1^*} = \frac{dm^*}{dx_1^*}$$
$$\frac{dx_2^*}{dx_1^*} = \frac{-p_1}{p_2}$$

- Price taking assumptions : market rate of exchange independent of (x_1, x_2)

Example 2.2 *Rationing of good 1 there exists $\bar{x_1}$, such that only bundles with $x_1 \leq \bar{x_1}$ can be purchased*



2.1.2 Consumer Preferences

In-Class Numbering : 1.1.3

- The consumer has goals or aspirations represented by a preference relation $\succeq$ over set of consumptions bundles $\mathbb{R}^2_*$
- if $x, y \in \mathbb{R}^2_*$ are such that $x \succeq y$, we say that "x is weakly preferred to y"
- $\succeq$ is our primitive information about consumer which consists of pairwise comparisons of consumption bundles
- In principle, we can elicit prederence by asking questions like "are you at least as well off with x as with y ?"
- Do we prefer questions like :
  - Do you outright prefer x to y?
  - Are you indifferent between x and y?