Consumer Choice

Unlimited Wants; Limited
Resources

Main Ideas

- The market demand is the outcome of decisions made by individual consumers about how to allocate income among competing alternatives. For normal goods, demand will slope down.
- Labor supply is outcome of decisions made by individuals about how to allocate time among competing alternatives. Labor supply may be backward bending.

Assumptions

- Consumer maximizes utility
- Utility depends on the quantity consumed of X and Y
- More is better
- Diminishing Marginal Utility
- Consumer is a price taker.
- Consumer income, I, is also predetermined.

Utility

$$U(X,Y)$$

where X = units of Good X

Y = units o f Good Y

Choice is Constrained

$$I = PxX + PyY$$

where I = Consumer' s Income

Px = Price per unit of Good X

Py = Price per unit of Good Y

How Much X and How Much Y?

- Allocate Income Such That the Marginal Benefit of an Additional Dollar Spent on Good X Equals Its Marginal Cost.
- Marginal Cost is the Foregone Benefit of Spending Another Dollar on Y. (Opportunity Cost)
- Operate Within Budget

Optimal Consumption

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

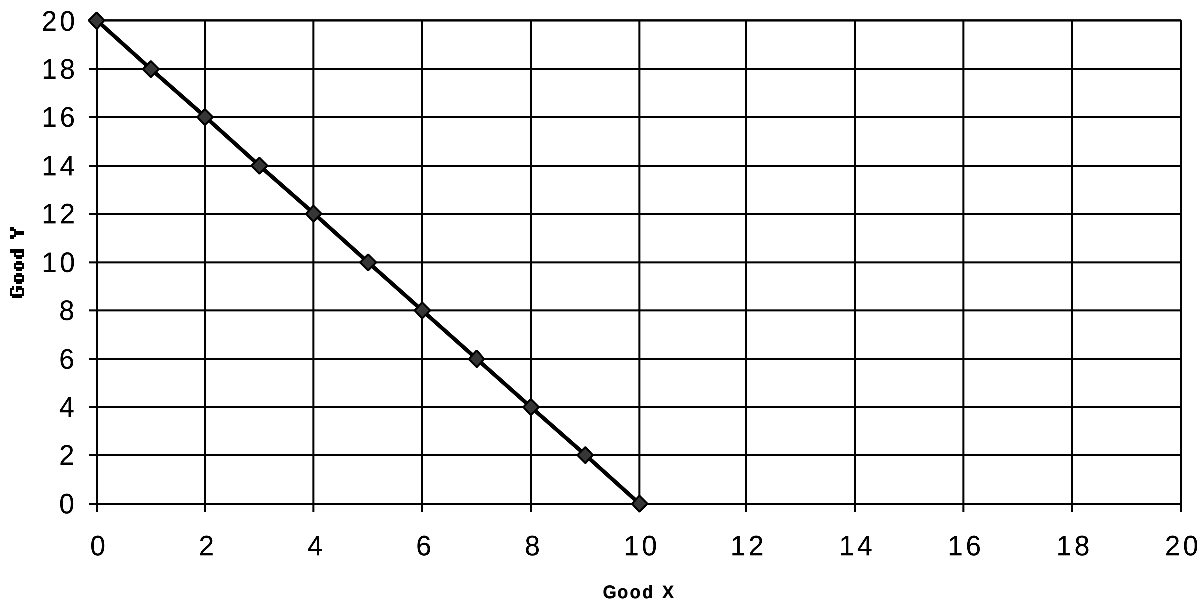
Geometry of Consumers Choice

- Budget Line

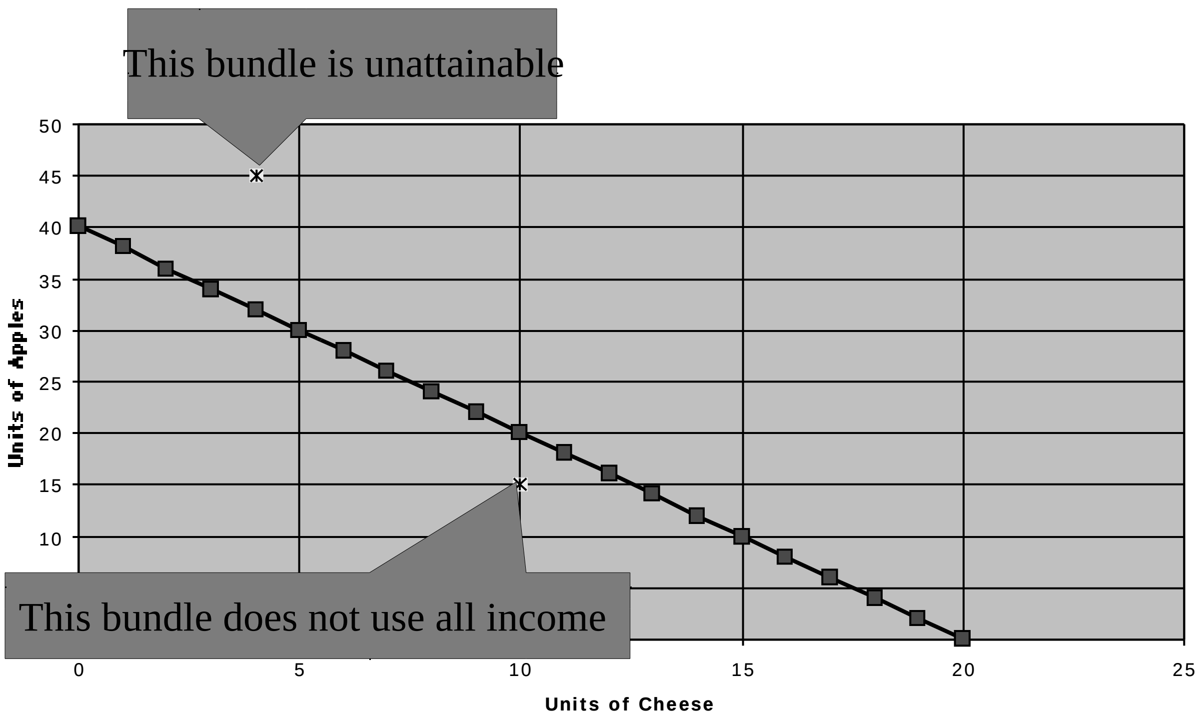
  $I = PxX + PyY$

- Utility
  - Indifference Curves

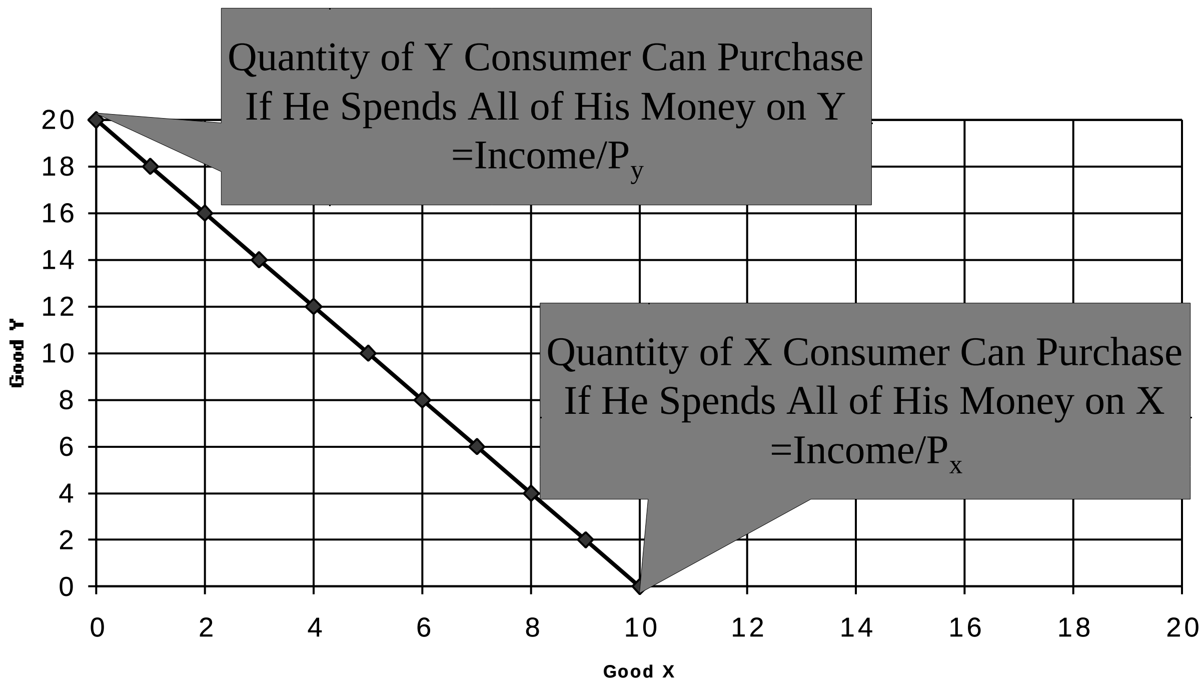
The Budget Line



Budget Line Describes Consumption Opportunities.



INTERCEPTS

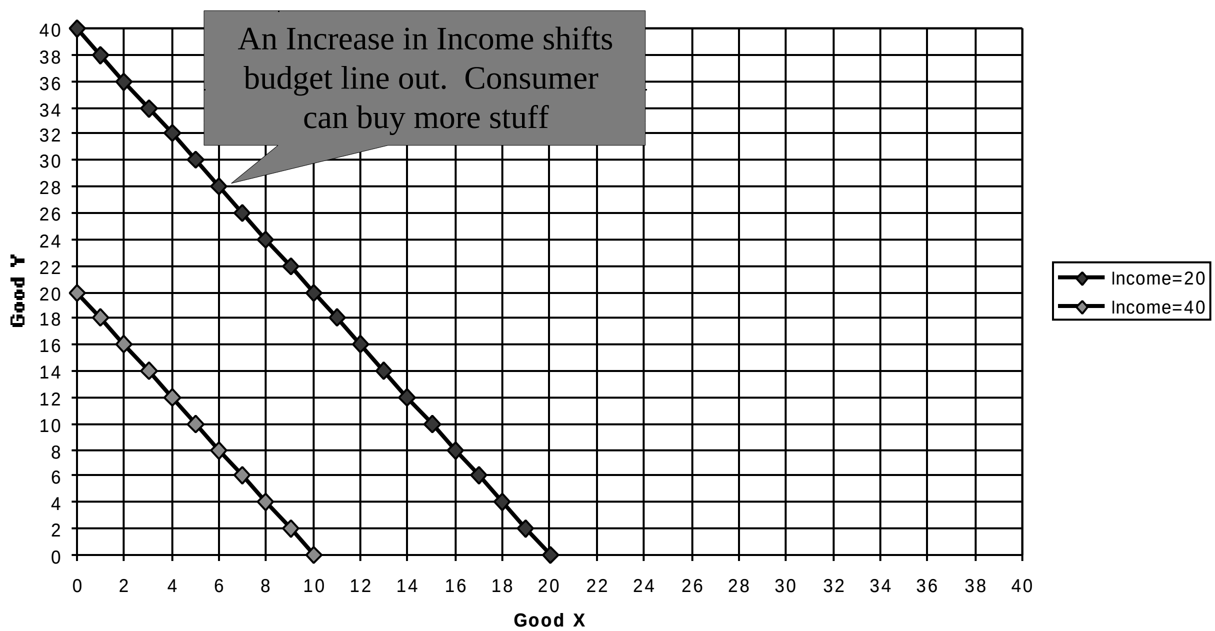


Quantity of Y Consumer Can Purchase
If He Spends All of His Money on Y
=Income/P_y
Quantity of X Consumer Can Purchase
If He Spends All of His Money on X
=Income/P_x
Good Y
Good X
0
2
4
6
8
10
12
14
16
18
20

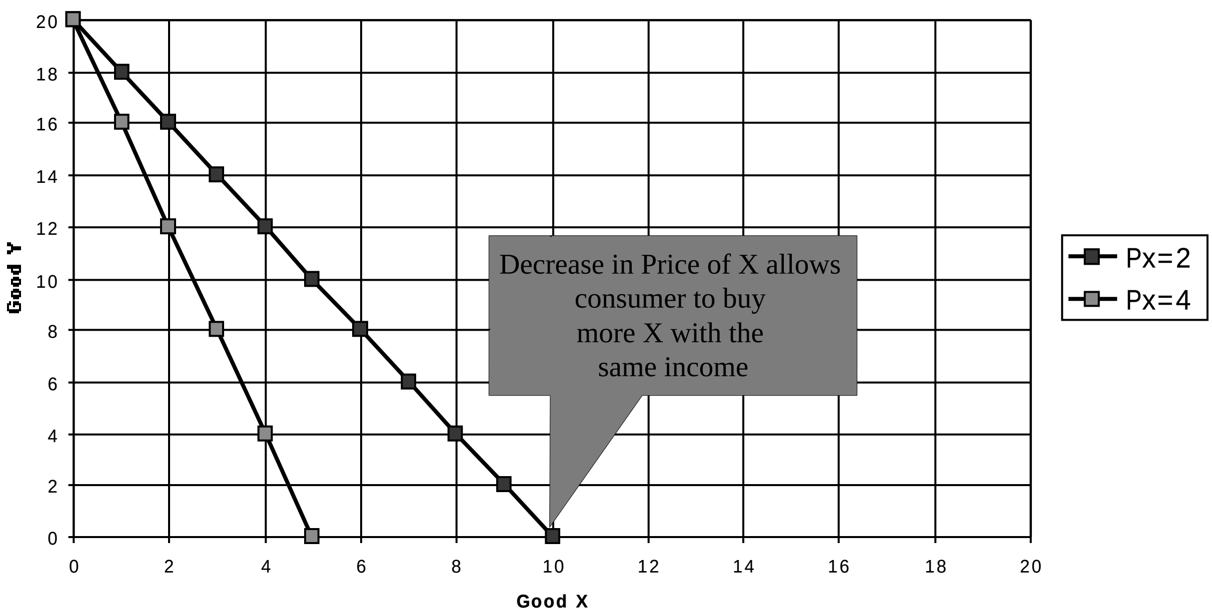
Slope of Budget Line

$$\frac{-Px}{Py}$$

Changes in Income



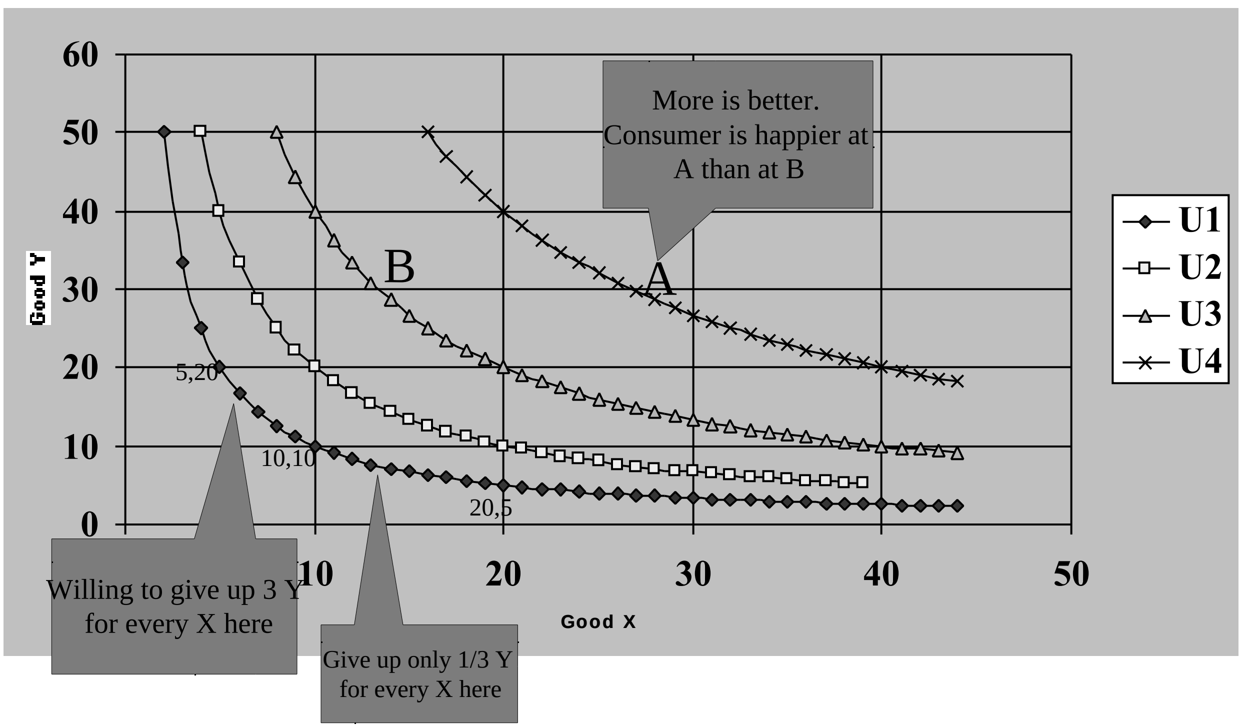
Changes in Prices



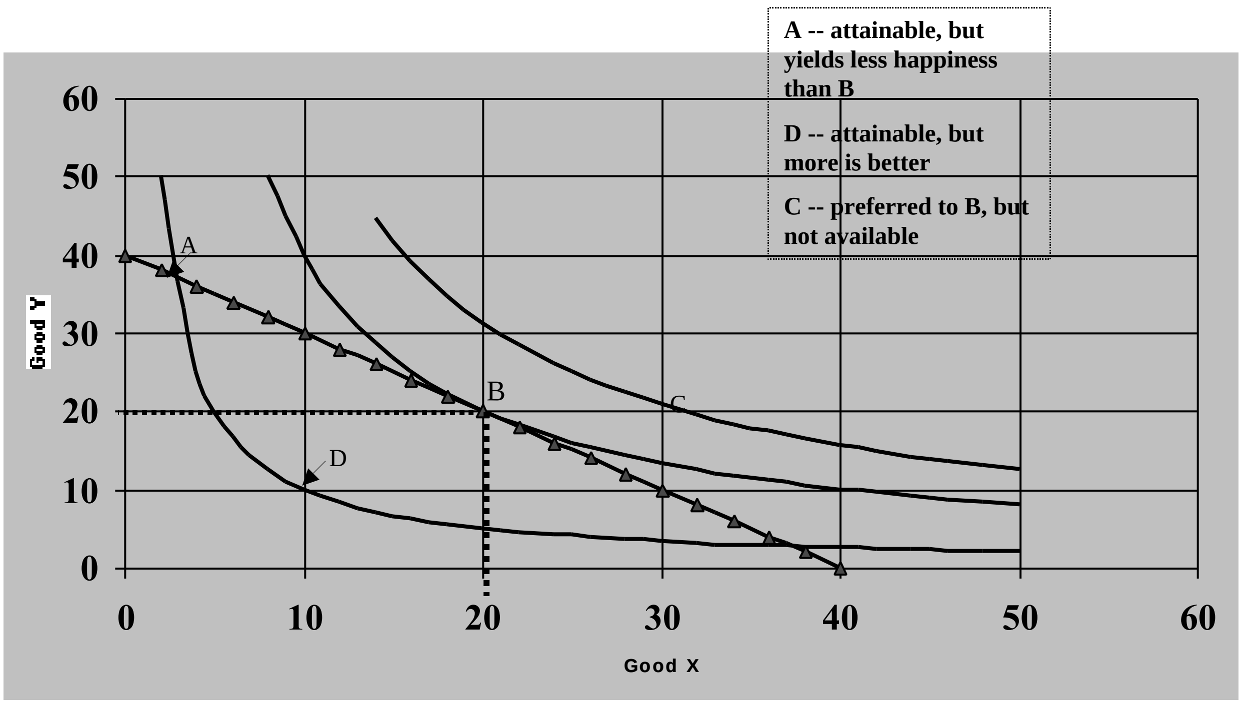
Utility: Indifference Curve

- Describes bundles of X and Y that make the consumer equally happy.
- Each indifference curve represents a level of happiness. The further away from the origin, the greater the happiness
- Slope of indifference curve is the rate of marginal substitution

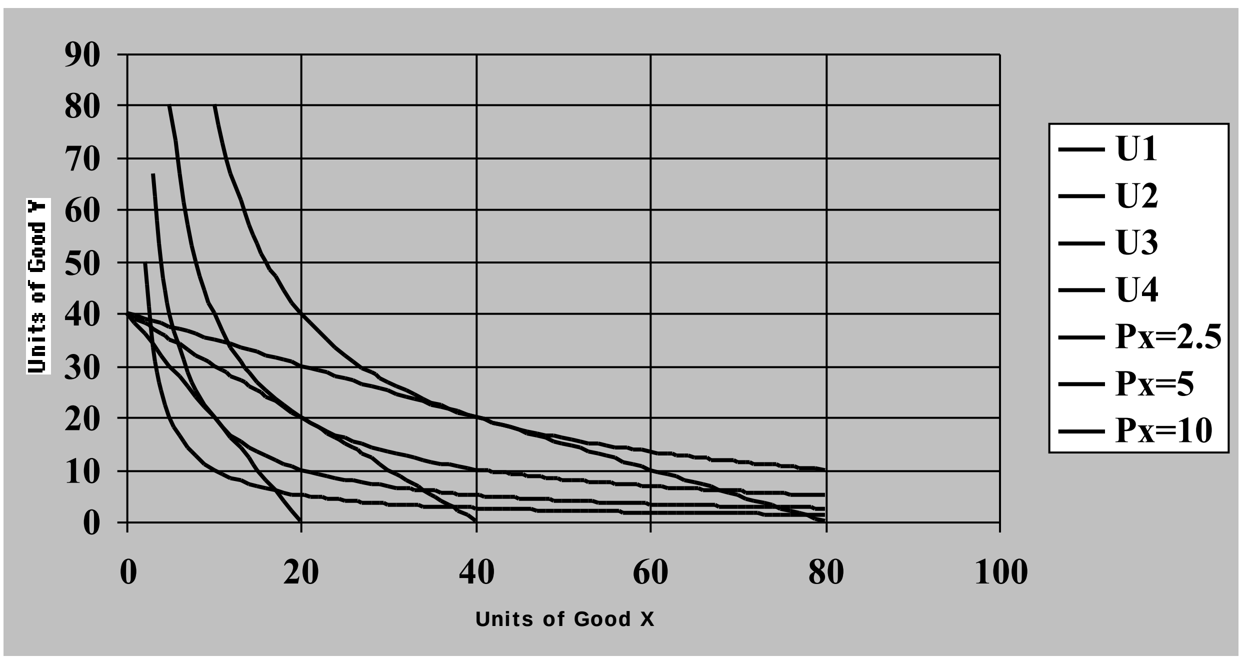
Indifference Curves Describe Tastes of Individual Consumer



Consumer's Optimal Bundle

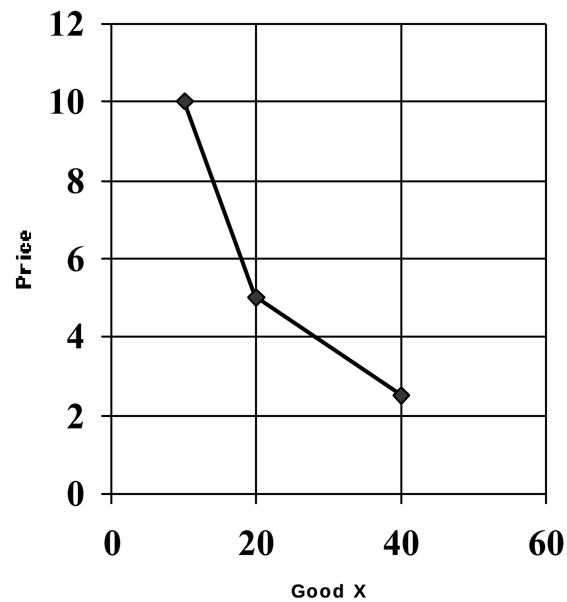


Derivation of Demand



Individual Demand

P	Q
2.5	40
5	20
10	10



Impact of Price Change

- Budget set shrinks showing a decrease in real purchasing power
- Slope of budget line changes showing a change in relative prices. As budget line gets steeper, Good X is more expensive relative to Good Y

Two Effects of Price Change

- Income Effect -- an increase in Price of X reduces purchasing power. (Shrinks budget set.) Consumer buys less of normal goods.
- Substitution Effect -- an Increase In Price of X Means X is More Expensive Relative to Y. (Change in slope) Consumer substitutes away from X towards Y.

Income and Substitution Effects