Introduction to Economics

Demand and Consumer Behavior

Dr. Erinda Imeraj
eimeraj@epoka.edu.al

Epoka University

Assumptions

- A key assumption in the study of household and firm behavior is that all input and output markets are ***perfectly competitive.***

Household Choice in Output Markets

- Every household must make ***three basic decisions:***
  1. How much of each product, or output, to demand.
  2. How much labor to supply.
  3. How much to spend today and how much to save for the future.

Assumptions to understand the consumer behavior

1. The consumer should behave rationally.
2. Consumers' taste and preference should be fixed while studying their behavior.
3. Consumers' income should be limited and mostly spent on goods and services to reach the highest level of satisfaction, which means that consumer, most likely, will not save any of his/her income.
4. A consumer is only *one* buyer which means that s/he doesn’t affect the price or quantity demanded or supplied.

The Determinants of Household Demand

1. The ***price of the product*** in question.
2. The ***income*** available to the household.
3. The household's amount of ***accumulated wealth***.

continue

4. The ***prices of related products*** available to the household.
5. The household's ***tastes and preferences***.
6. The household's ***expectations*** about future income, wealth, and prices.

How could a consumer distribute the limited income in order to satisfy wants?

There are two ways:

First: The Traditional Way (The Marginal Utility Theory)

Second: The Modern Way (The Indifference Curve Theory)

Marginal Utility Theory

In this section we will shed some light on:

- The difference between Marginal and Total utility.
- The balance of consumers using marginal utility theory.
- Deriving the consumer demand curve.

The Difference between Marginal and Total Utility

- *Total Utility (TU)* is the aggregate level of satisfaction or fulfillment that a consumer receives through the consumptions of a specific good or service in a given period of time.

- *Marginal Utility (MU)*, however, is the amount of change in TU which is affected by the increase in consumption of one additional unit. It is also the utility of the last consumed unit.

Mathematically from for the MU

- *Marginal Utility (MU)=*

  Change in total utility of a product /

Change in consumed quantity of the product

- $MU = \Delta TU \; / \Delta Q$

The Basis of Choice: Utility

- ***Utility*** is the satisfaction, or reward, a product yields relative to its alternatives. The basis of choice.
- ***Marginal utility*** is the additional satisfaction gained by the consumption or use of one more unit of something.

Diminishing Marginal Utility

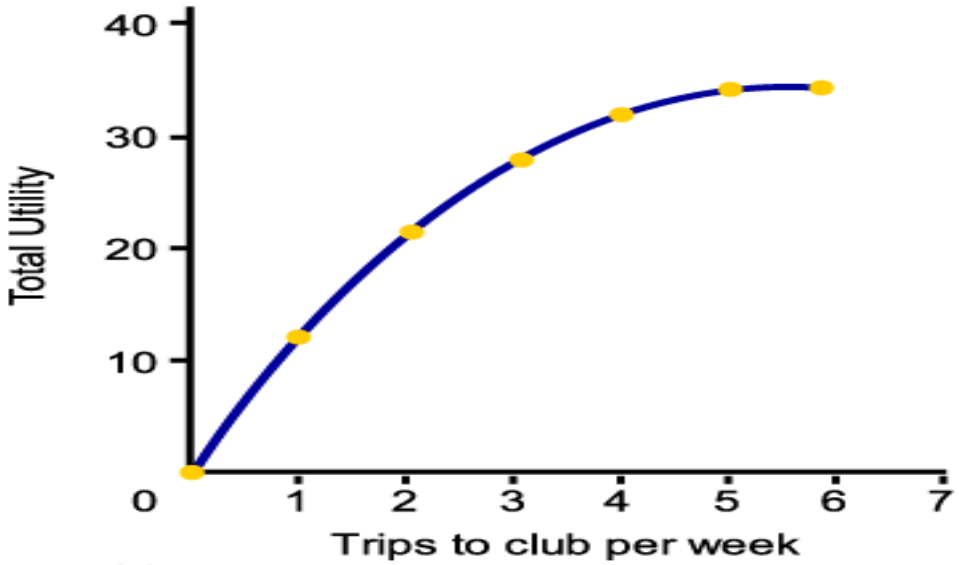
- The ***law of diminishing marginal utility:***

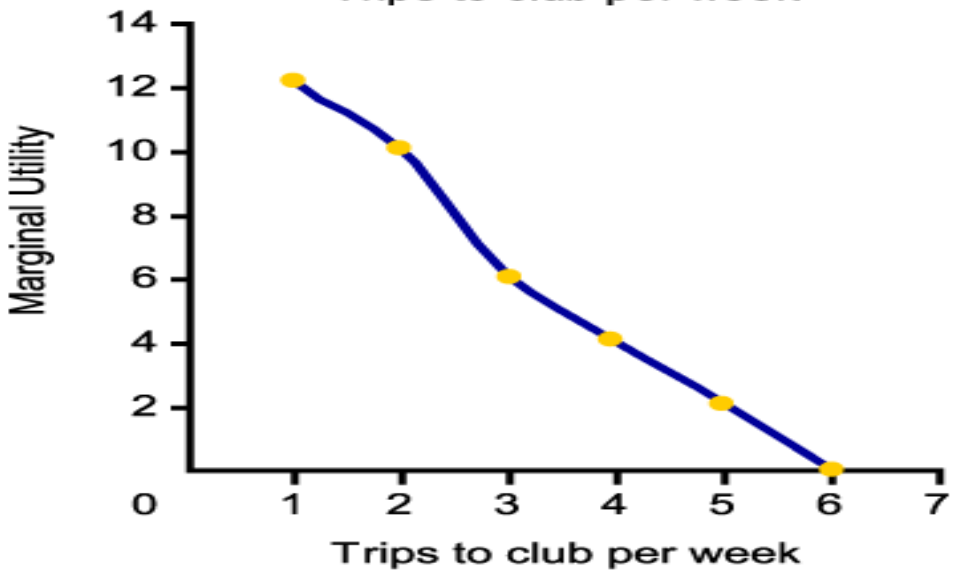
  The more of one good consumed in a given period, the less satisfaction (utility) generated by consuming each additional (marginal) unit of the same good.

Diminishing Marginal Utility

Total Utility and Marginal Utility of chocolate Per Week		
Chocolate Bars	**MARGINAL UTILITY**	**TOTAL UTILITY**
0	0	0
1	70	70
2	9	79
3	5	84
4	2	86
5	0	86
6	-2	84

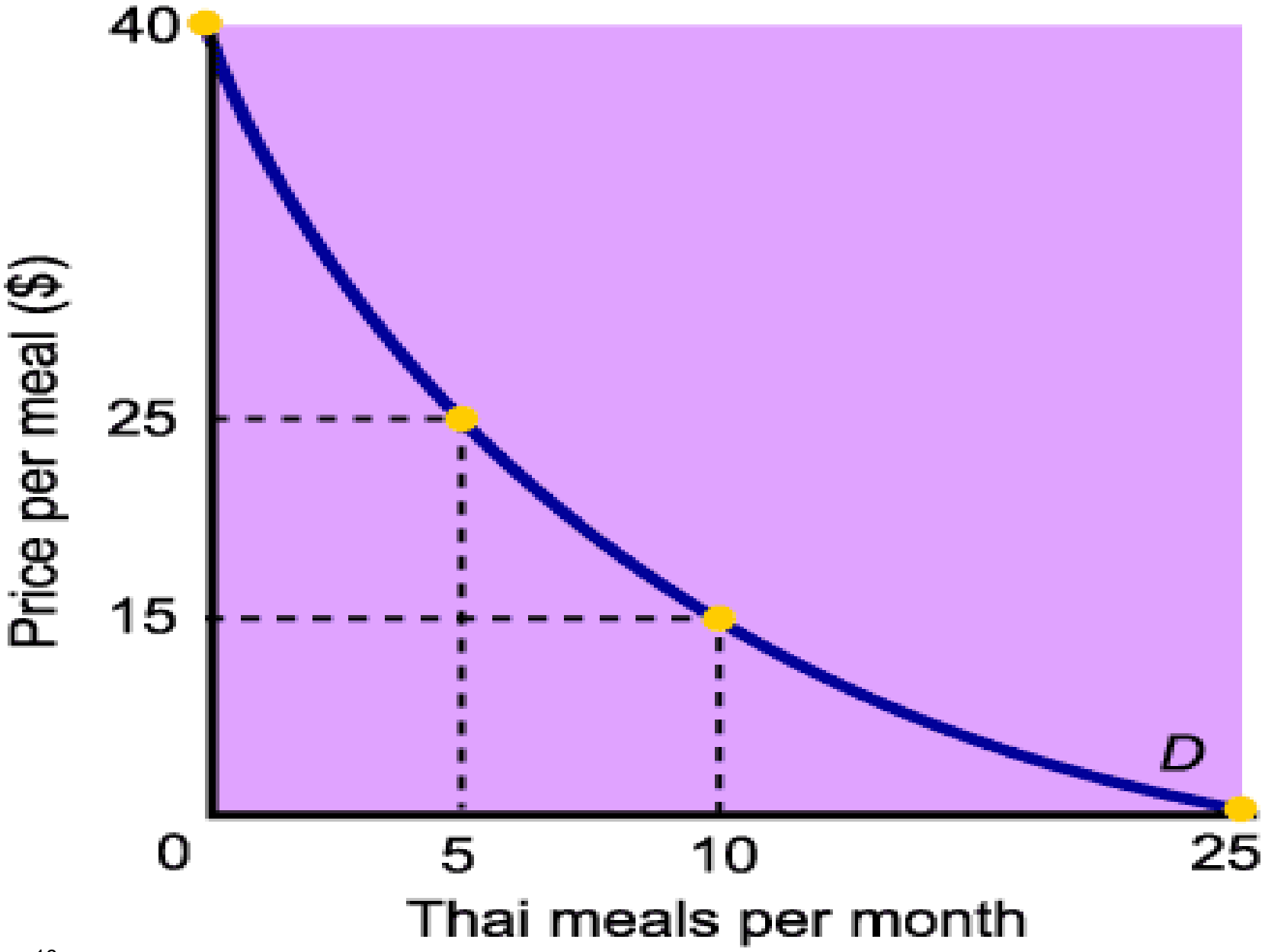
- *Total utility* increases at a decreasing rate, until it is constant. Then it decrease
- while *marginal utility* decreases until equal zero and then it became negative





Diminishing Marginal Utility and Downward-Sloping Demand

- Diminishing marginal utility helps to explain why demand slopes down.
- Marginal utility falls with each additional unit consumed, so people are not willing to pay as much.


40
25
15
0
5
10
25
D
Price per meal ($)
Thai meals per month

Consumer Equilibrium

- *We reach Consumer equilibrium condition as following:*
- ***First condition:***
- *marginal utility of good X / price of good X*

= marginal utility of good Y/ price of good Y

= Marginal utility for money

- *Marginal utility for money = MU Y /P Y*

= MU X / P X

*****Equimarginal Principle**

Second condition:

- Consumers should spend all their income on two products and the formula is as follows:
- Income=

  (quantity of X * price of product X) + (quantity of Y * price of product Y)

- $I = Qx * Px + Qy * Py$

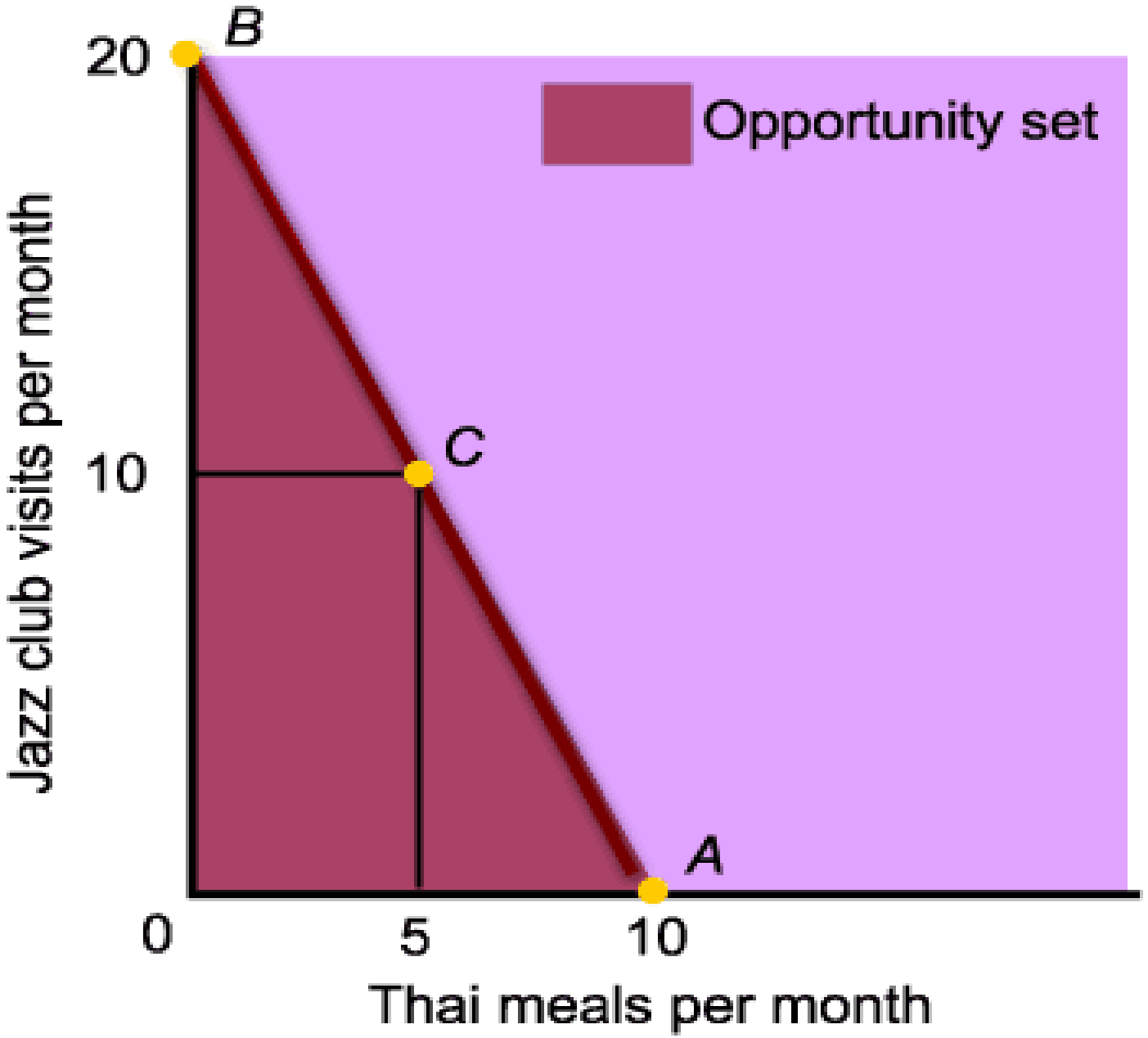
The Budget Constraint

- The ***budget constraint*** refers to the limits imposed on household choices by income, wealth, and product prices.
- A ***choice set*** or ***opportunity set*** is the set of options that is defined by a budget constraint.

continue

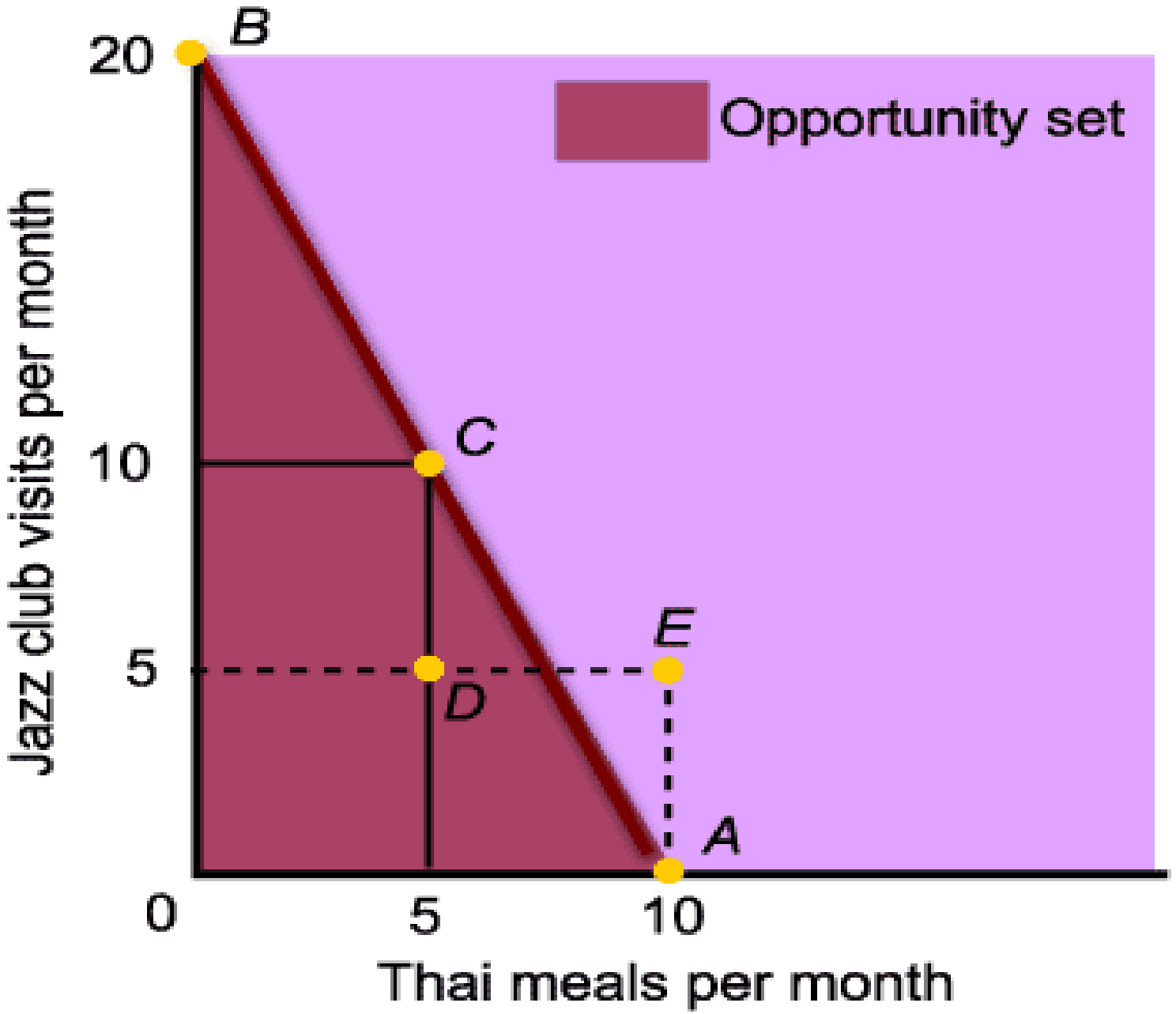
- A ***budget constraint*** separates those combinations of goods and services that are available, given limited income, from those that are not.
- The available combinations make up the ***opportunity set***.

- The following is the budget constraint when income equals $200 dollars per month, the price of jazz club visits is $10 each, and the price of a Thai meal is $20.
- One of the possible combinations is 5 Thai meals and 10 Jazz club visits per month.


B
20
Opportunity set
Jazz club visits per month
C
10
A
0
5
10
Thai meals per month

continue

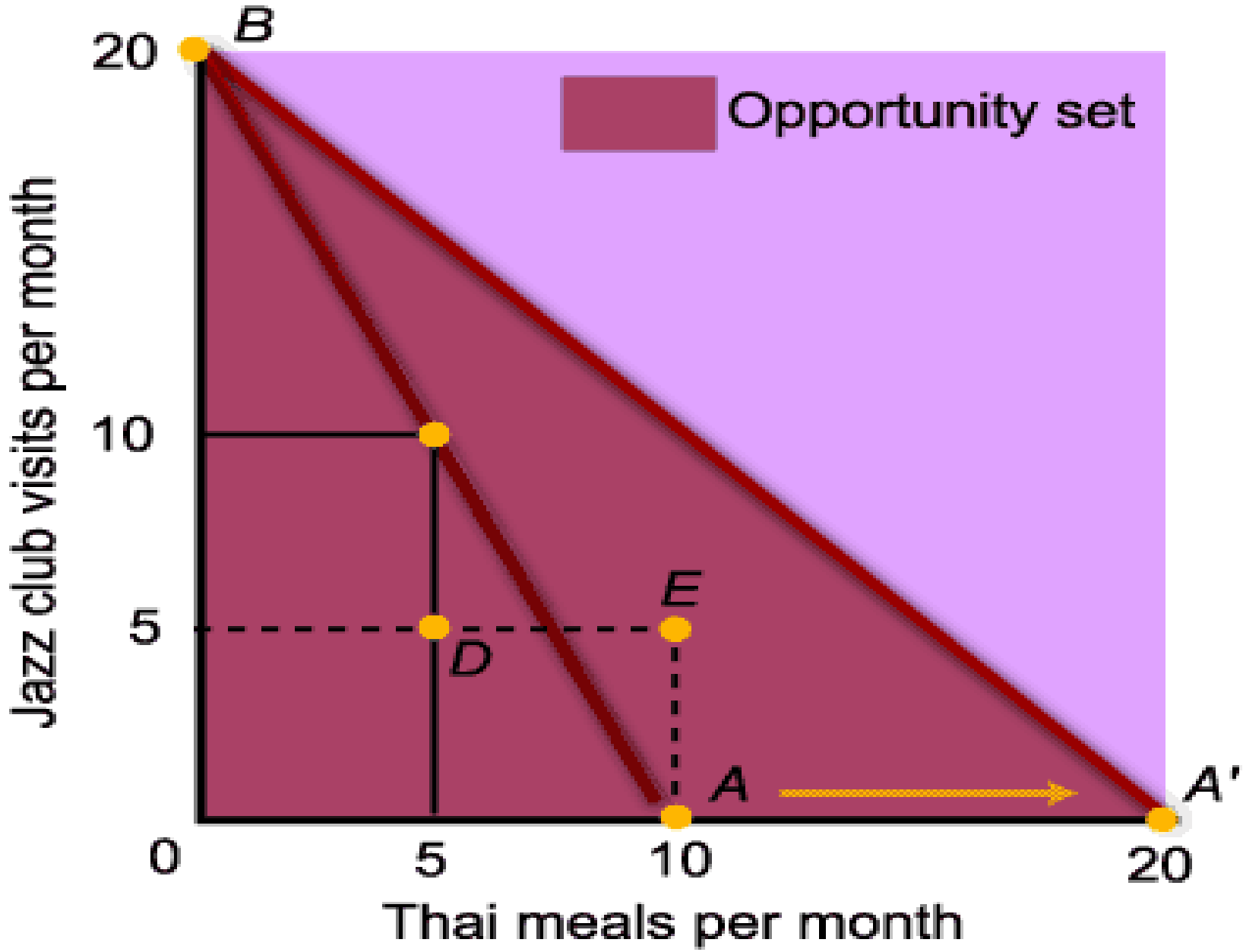
- Point *E* in the next graph is unattainable given the current income prices.
- Point *D* does not exhaust the entire income available.


B
20
Opportunity set
C
10
E
5
D
A
0
5
10
Jazz club visits per month
Thai meals per month

cont.

- A decrease in the price of Thai meals shifts the budget line outward along the horizontal axis.

  The decrease in the price of one good expands the consumer's opportunity set.


B
20
Opportunity set
Jazz club visits per month
10
E
5
D
A
A'
0
5
10
20
Thai meals per month

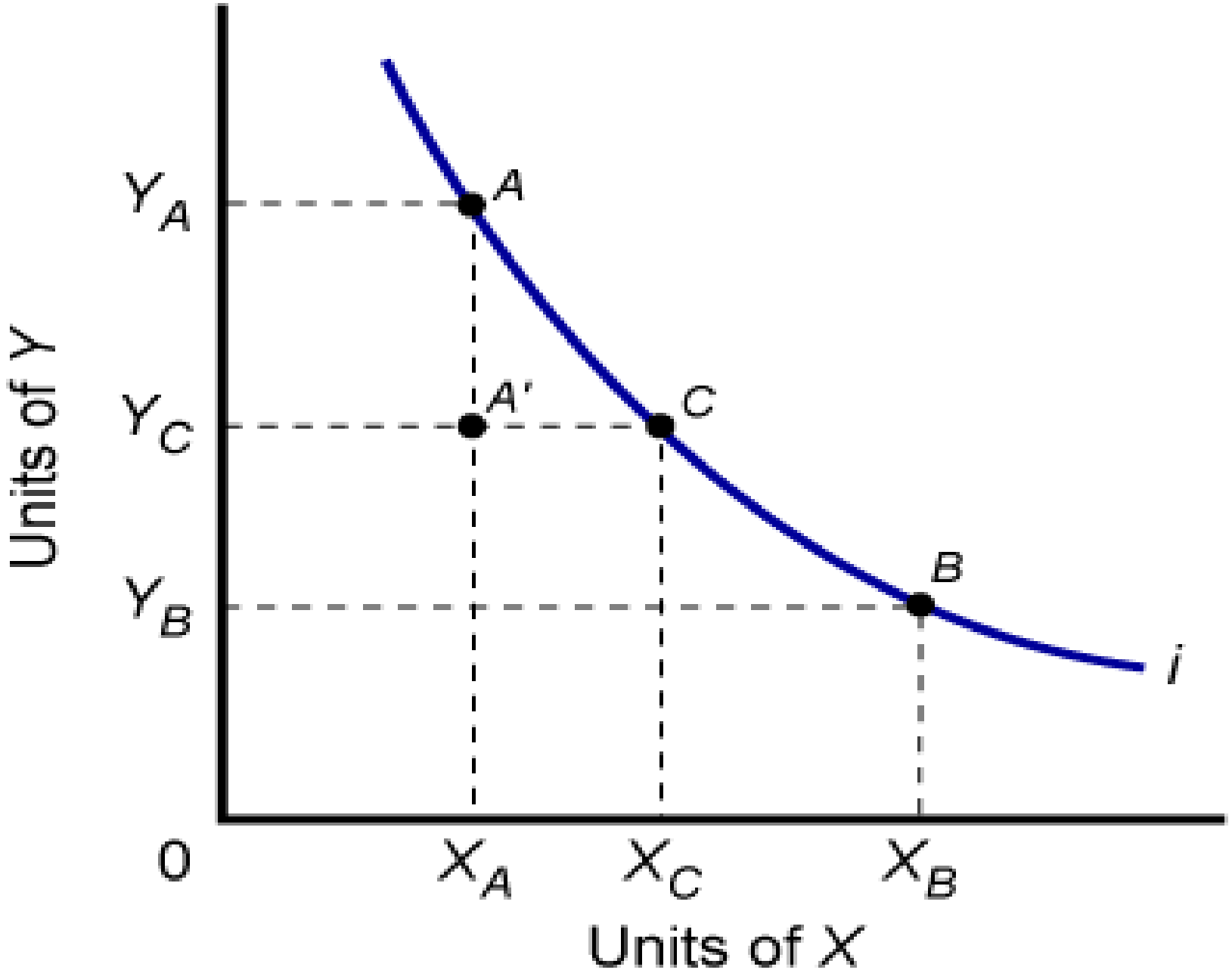
Indifference Curves

- An ***indifference curve*** is a set of points , each point representing a combination of goods *X* and *Y*, all of which (combination) yields the same total utility.

- The consumer is worse of at *A'* than at *A*. because *A'* includes lower amount of Y and the same amount of X compare with A.

continue

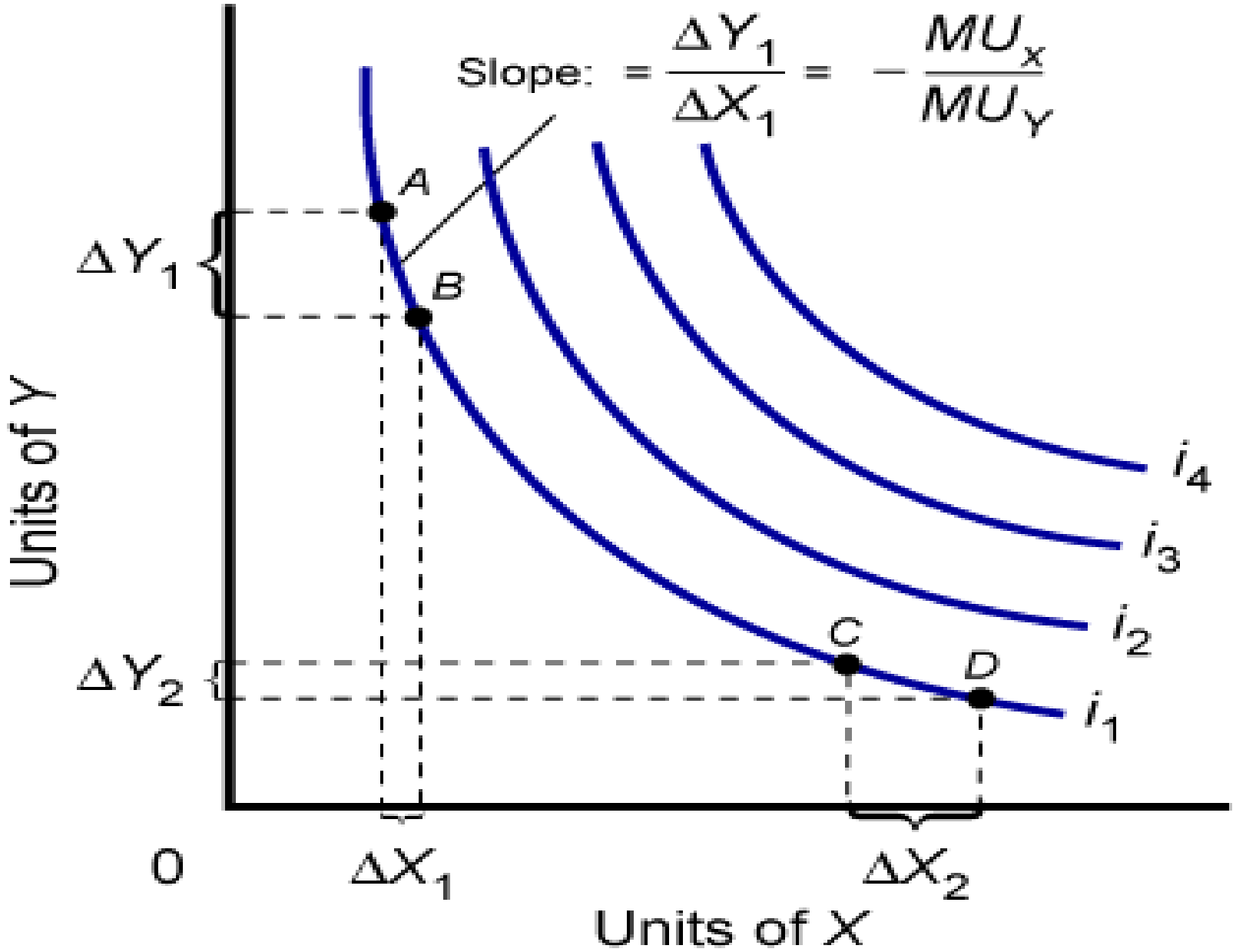
- ***Any point on the indifference curve*** yields the same total utility.
- Any point to the left of the ***indifference curve*** yields lower total utility.
- Any point to the right of the ***indifference curve*** yields higher total utility.
- ***the indifference curve includes infinity points (Combination).***


Units of Y
Y_A
Y_C
Y_B
A
A'
C
B
i
0
X_A
X_C
X_B
Units of X

Indifference Curves

- A ***preference map*** is a whole set of indifference curves.
- A ***preference map includes infinity number of indifference curves***
- ***when indifference curves shift to the left, it indicate lower utility***
- ***And when it shift to the right it indicate higher utility.***

- **Each consumer has a unique preference map.**
- **As we move downward along an indifference curve, the *marginal rate of substitution* (MRS) declines.**

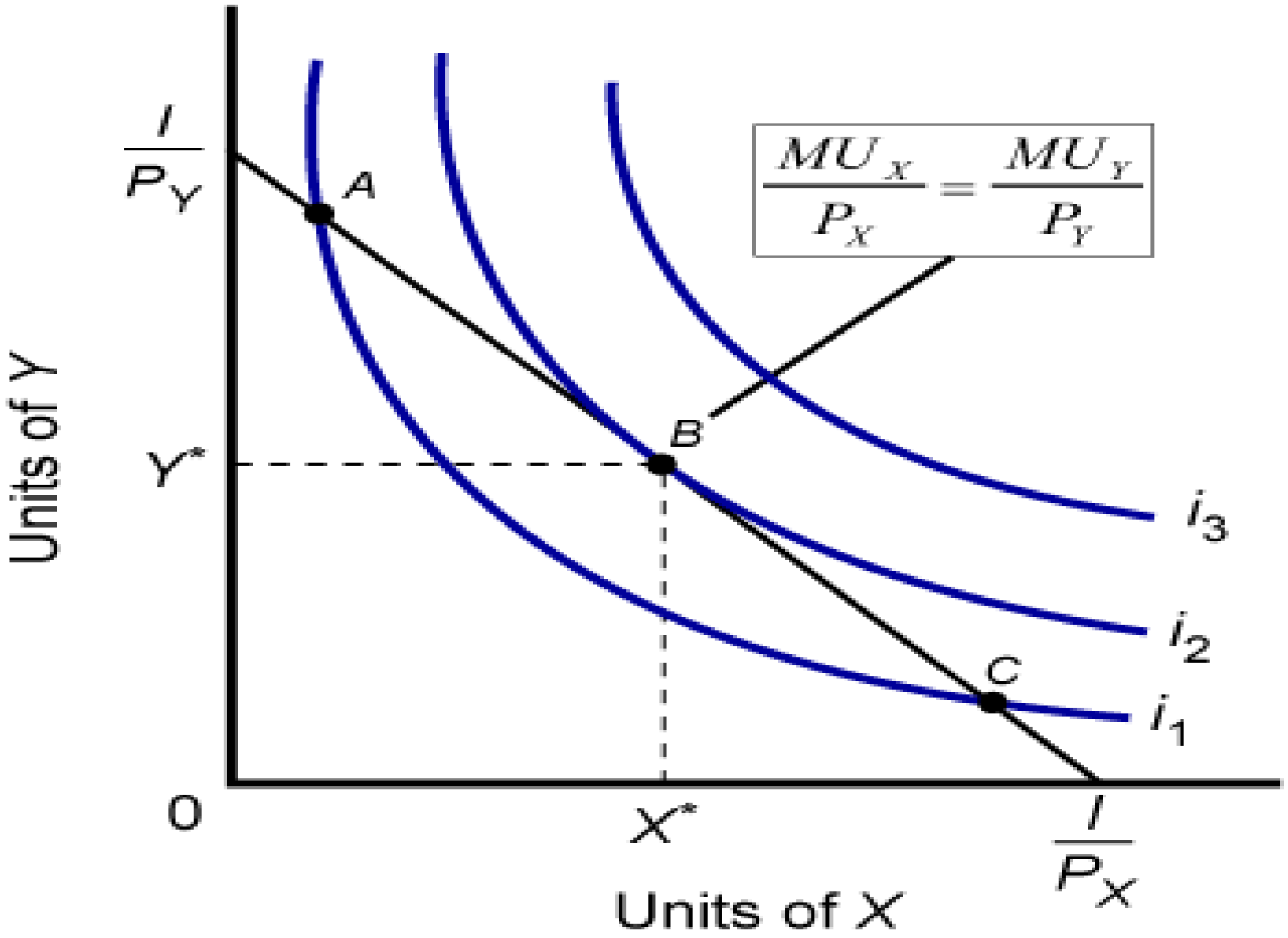

Slope: $= \frac{\Delta Y_1}{\Delta X_1} = -\frac{MU_x}{MU_Y}$
A
B
C
D
ΔY_1
ΔY_2
i_4
i_3
i_2
i_1
Units of Y
0
ΔX_1
ΔX_2
Units of X

Indifference Curves

- Consumers will choose the combination of X and Y that maximizes total utility.
- Graphically, the consumer will move along the budget constraint until the highest possible indifference curve is reached.

The consumer equilibrium

- The equilibrium will happen when the budget line touch the highest indifference curve in the indifferent map.
- The two slopes are equals


$\frac{I}{P_Y}$
A
$\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y}$
B
Y^*
i_3
i_2
C
i_1
Units of Y
0
X^*
$\frac{I}{P_X}$
Units of X

The effect of increasing income

- When income increase the budget line will move to the right.
- When income decrease the budget line will move to the left.

The effect of changing prices

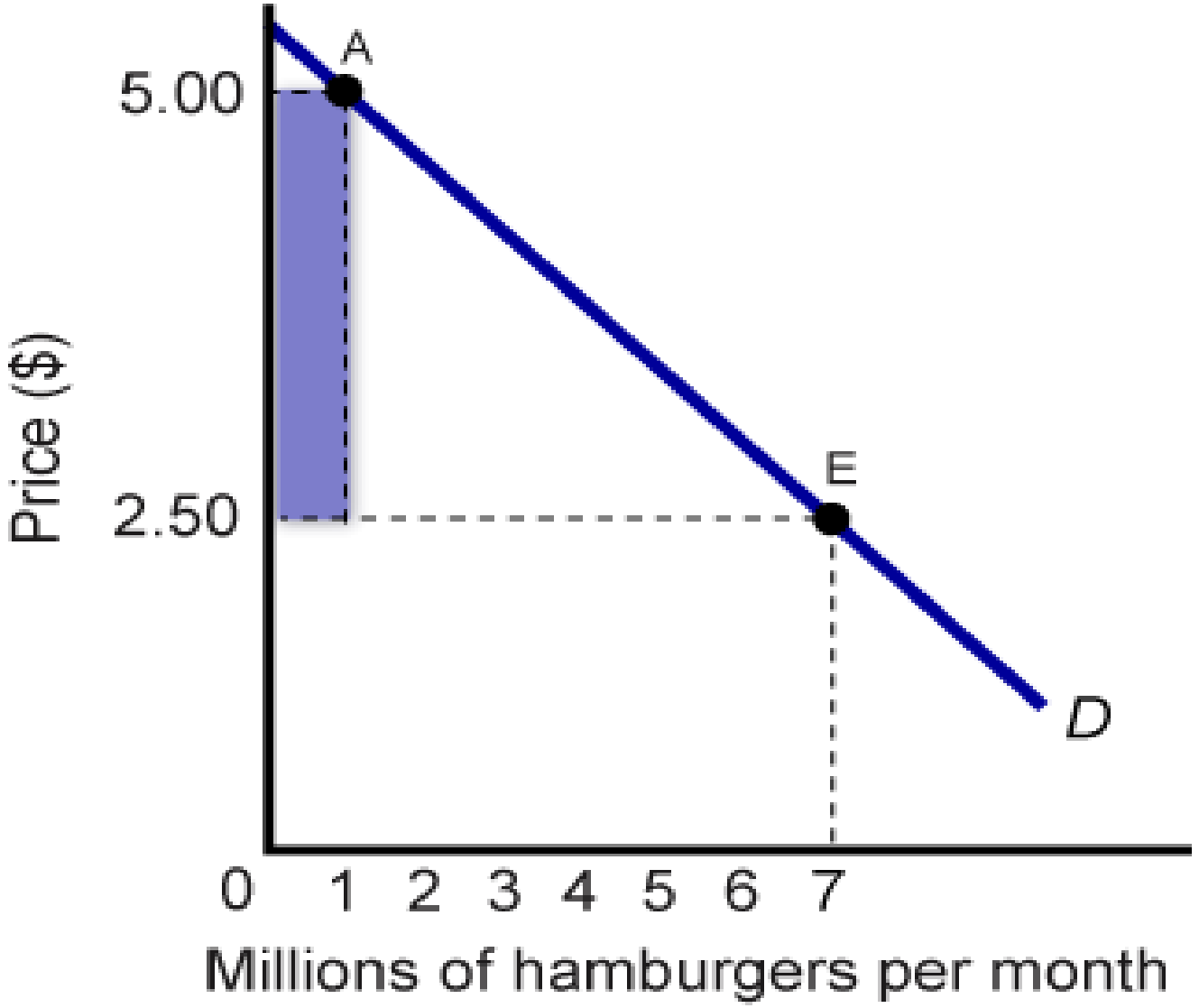
- The budget line will turn from one side only depending on the change in price.

Consumer Surplus

- ***Consumer surplus*** is the difference between the maximum amount a person is willing to pay for a good and its current market price.

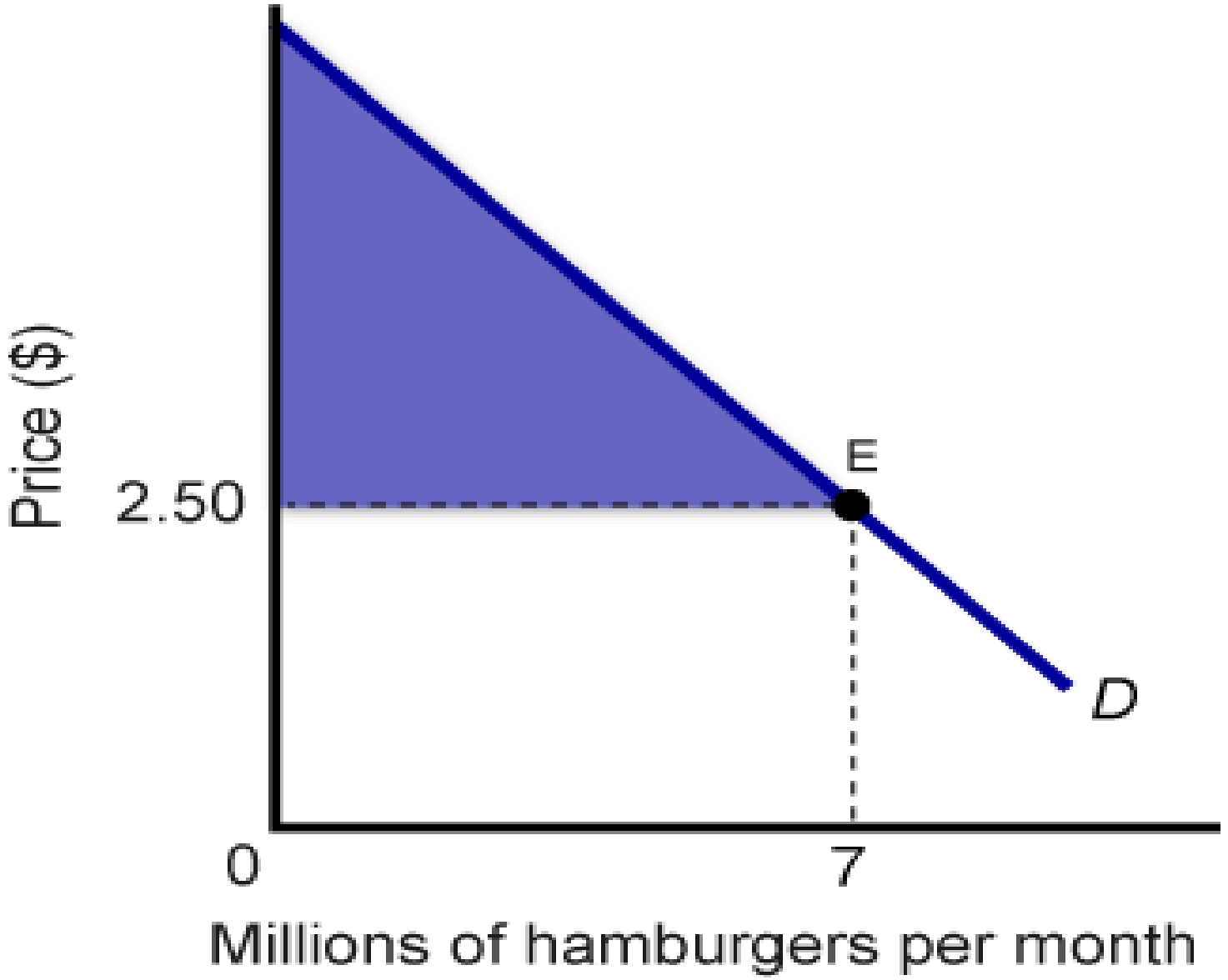
Consumer Surplus

- Some consumers are willing to pay as much as $5 each for hamburgers.
- Since the price is only $2.50, they receive a consumer surplus of $2.50.


A
5.00
E
2.50
D
Price ($)
0 1 2 3 4 5 6 7
Millions of hamburgers per month

Consumer Surplus

- Others are willing to pay something less than $5.00 but more than $2.50.
- Consumer surplus is the area below the demand curve and above the price level


Price ($)
2.50
E
D
0
7
Millions of hamburgers per month