

LECTURE 2: Consumer Preferences and the Consumer Choice

- 1. Consumer Preferences
- 2. Budget Constraints
- 3. Consumer Choice
- 4. Revealed Preference
- 5. Marginal Utility and Consumer Choice
- 6. Cost-of-Living Indexes

- **Theory of consumer behavior**
- Description of how consumers allocate incomes among different goods and services to maximize their well-being. Consumer behavior is best understood in three distinct steps:
 1. Consumer preferences 소비자 선호 (선호)
 2. Budget constraints 예산 제약
 3. Consumer choices 소비자 선택

Basic Assumptions about Preferences

□ Preferences 선호 (도)

1. Completeness: Preferences are assumed to be *complete*. In other words, consumers can compare and rank all possible baskets. Thus, for any two market baskets A and B , a consumer will prefer A to B , will prefer B to A , or will be indifferent between the two. By *indifferent* we mean that a person will be equally satisfied with either basket.

** Note that these preferences ignore costs. A consumer might prefer steak to hamburger but buy hamburger because it is cheaper.*

Basic Assumptions about Preferences

2. Transitivity:

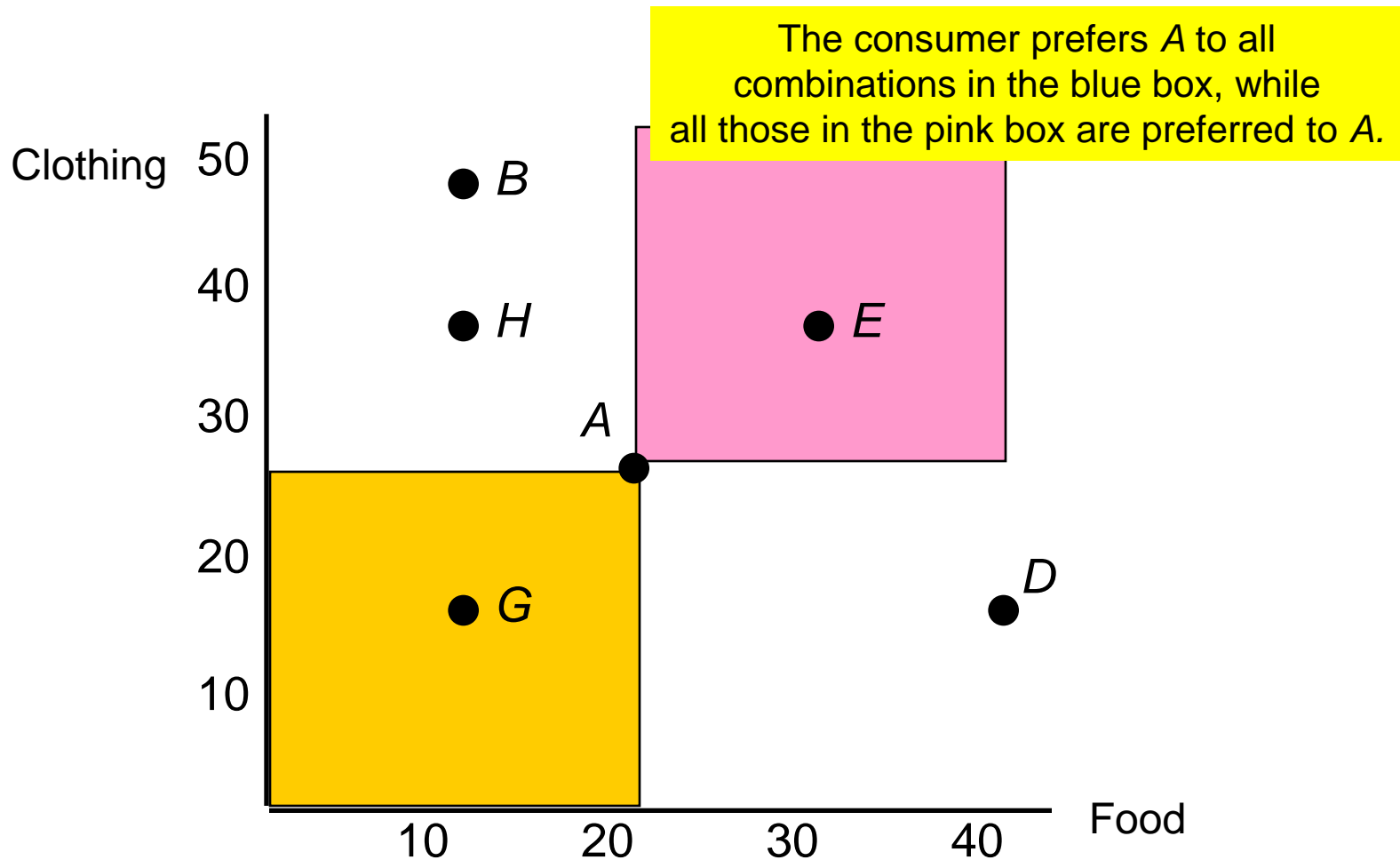
- Preferences are *transitive*. Transitivity means that if a consumer prefers basket *A* to basket *B* and basket *B* to basket *C*, then the consumer also prefers *A* to *C*. Transitivity is normally regarded as necessary for consumer consistency.

3. More is better than less:

Goods are assumed to be desirable—i.e., to be *good*. Consequently, *consumers always prefer more of any good to less*. In addition, consumers are never satisfied or satiated; *more is always better, even if just a little better*. This assumption is made for pedagogic reasons; namely, it simplifies the graphical analysis. Of course, some goods, such as air pollution, may be undesirable, and consumers will always prefer less. We ignore these “bads” in the context of our immediate discussion.

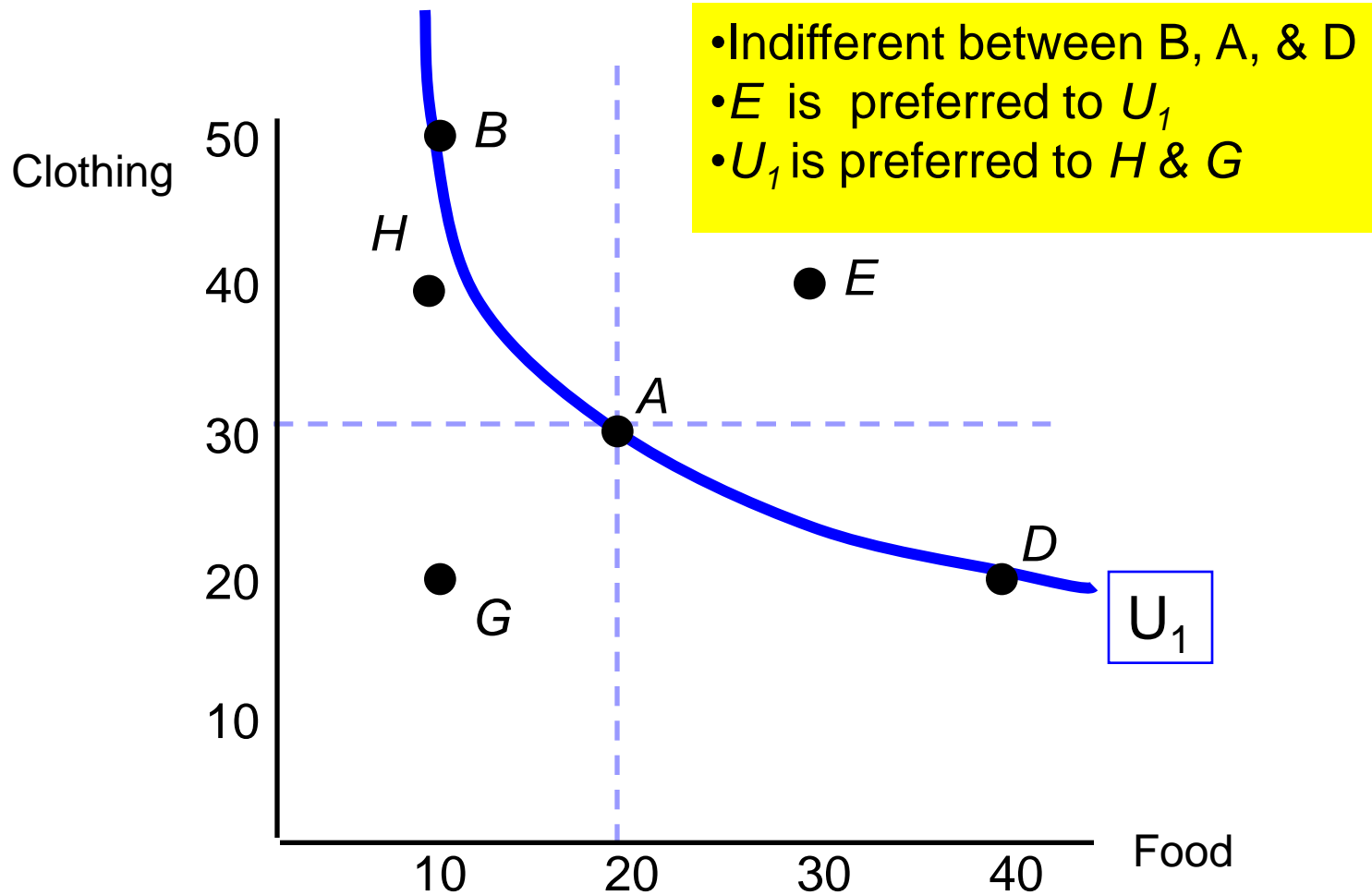
Indifference Curves: An Example

5



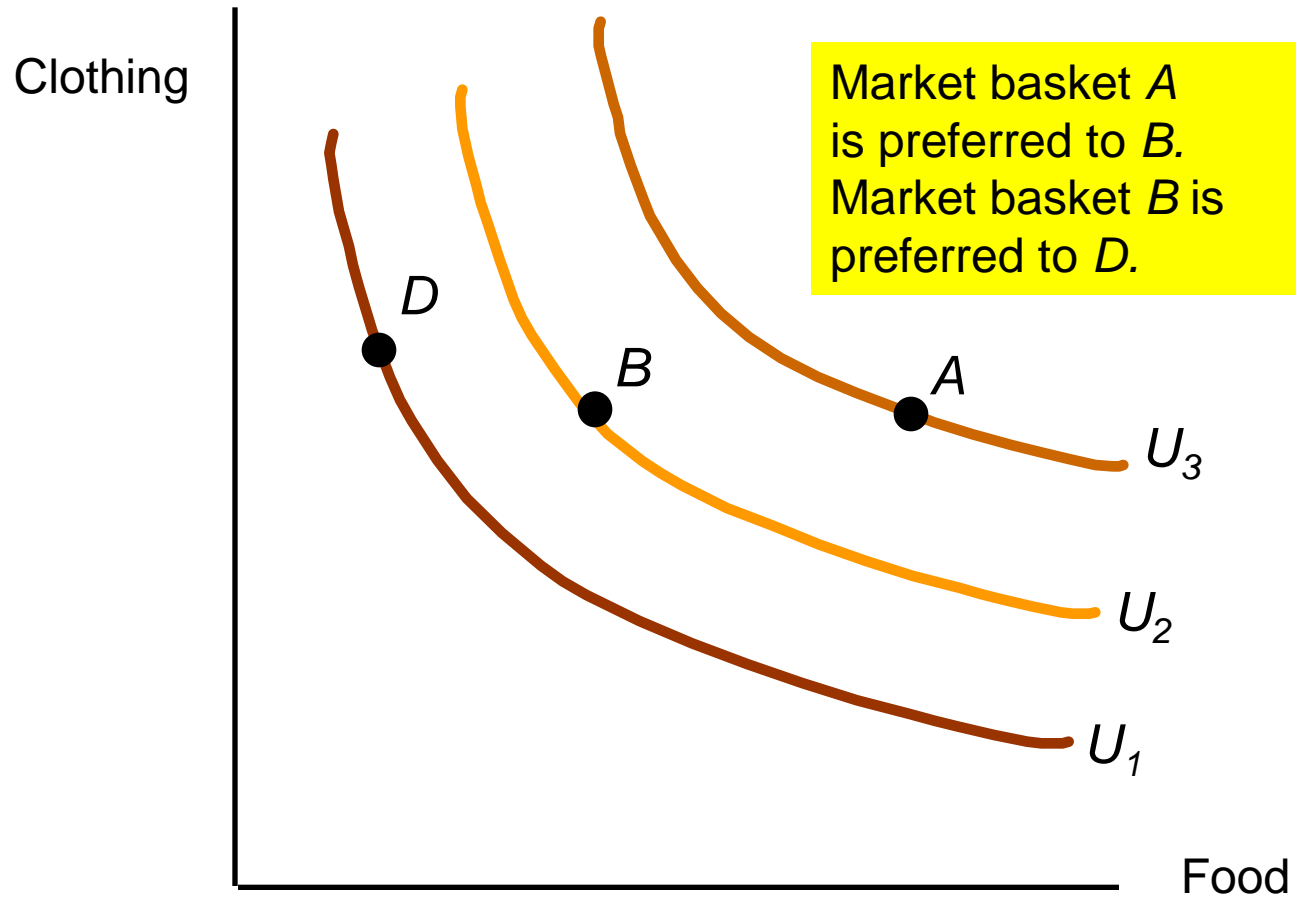
Indifference Curves: An Example

6



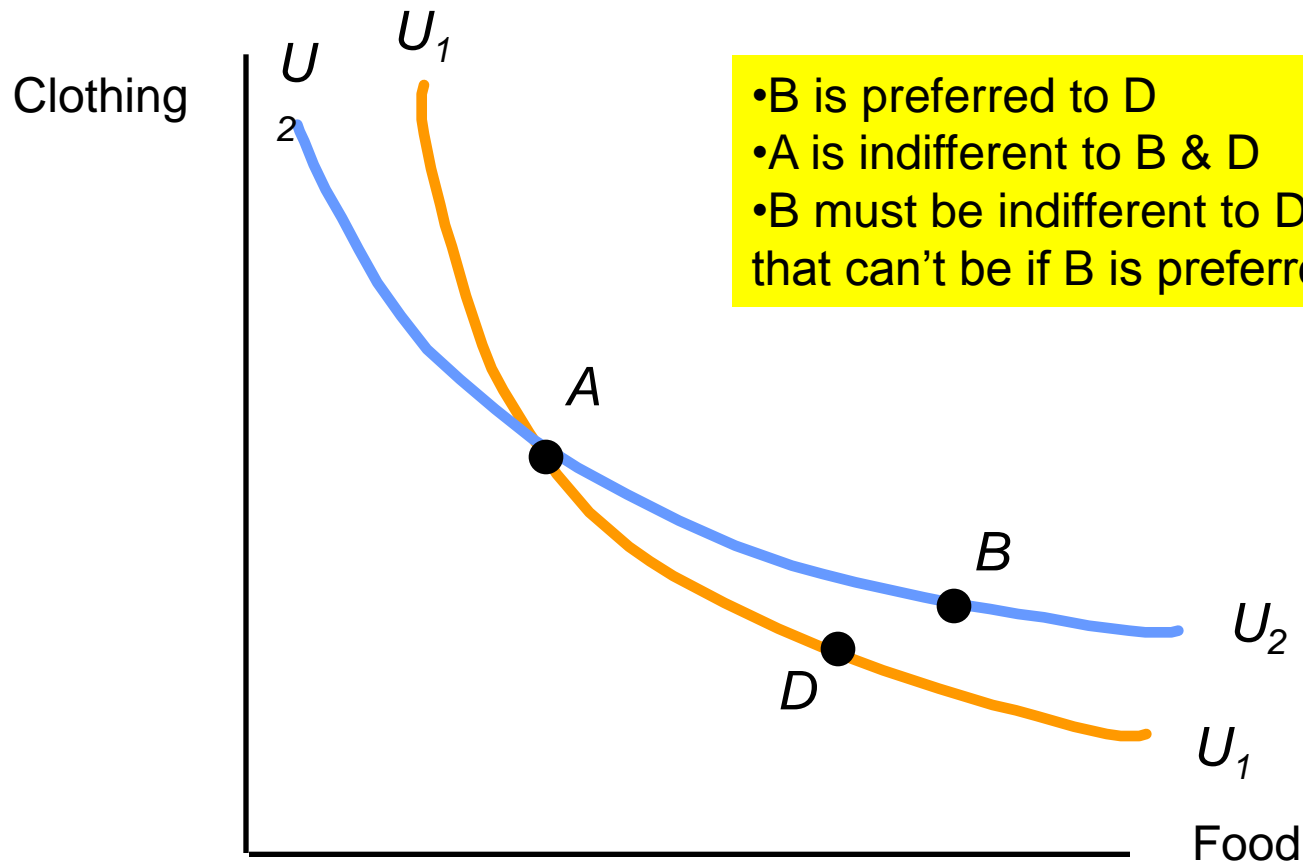
Indifference Map

7



Indifference Maps

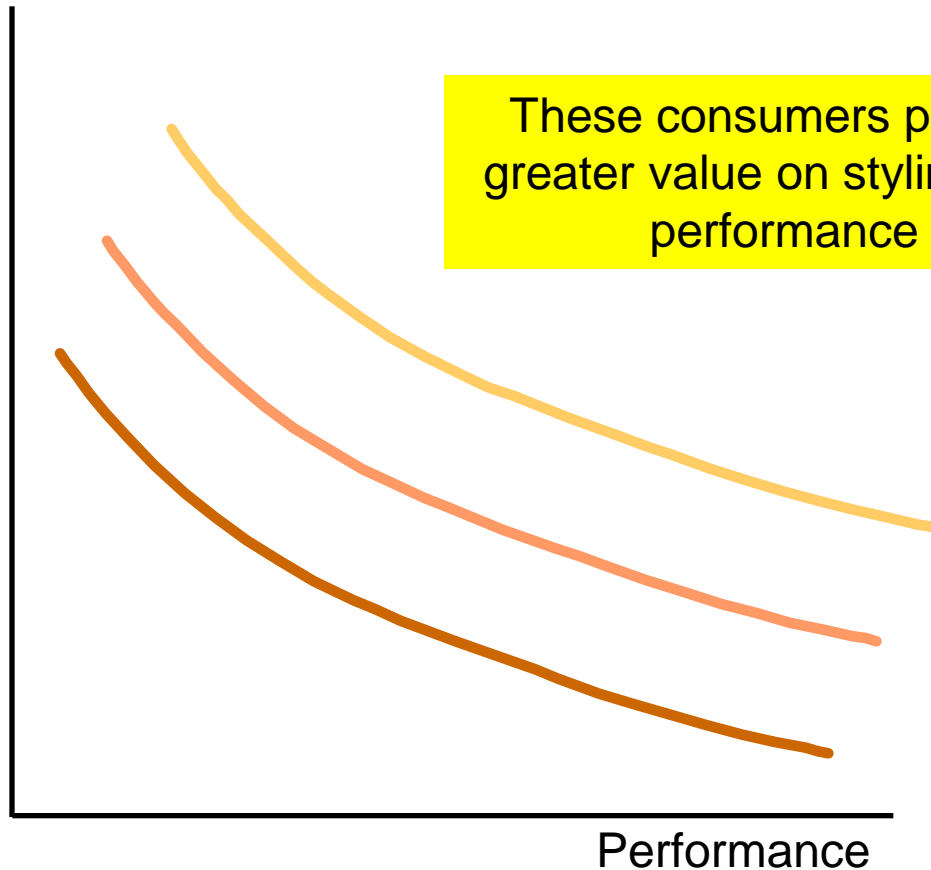
8



Consumer Preferences: An Application

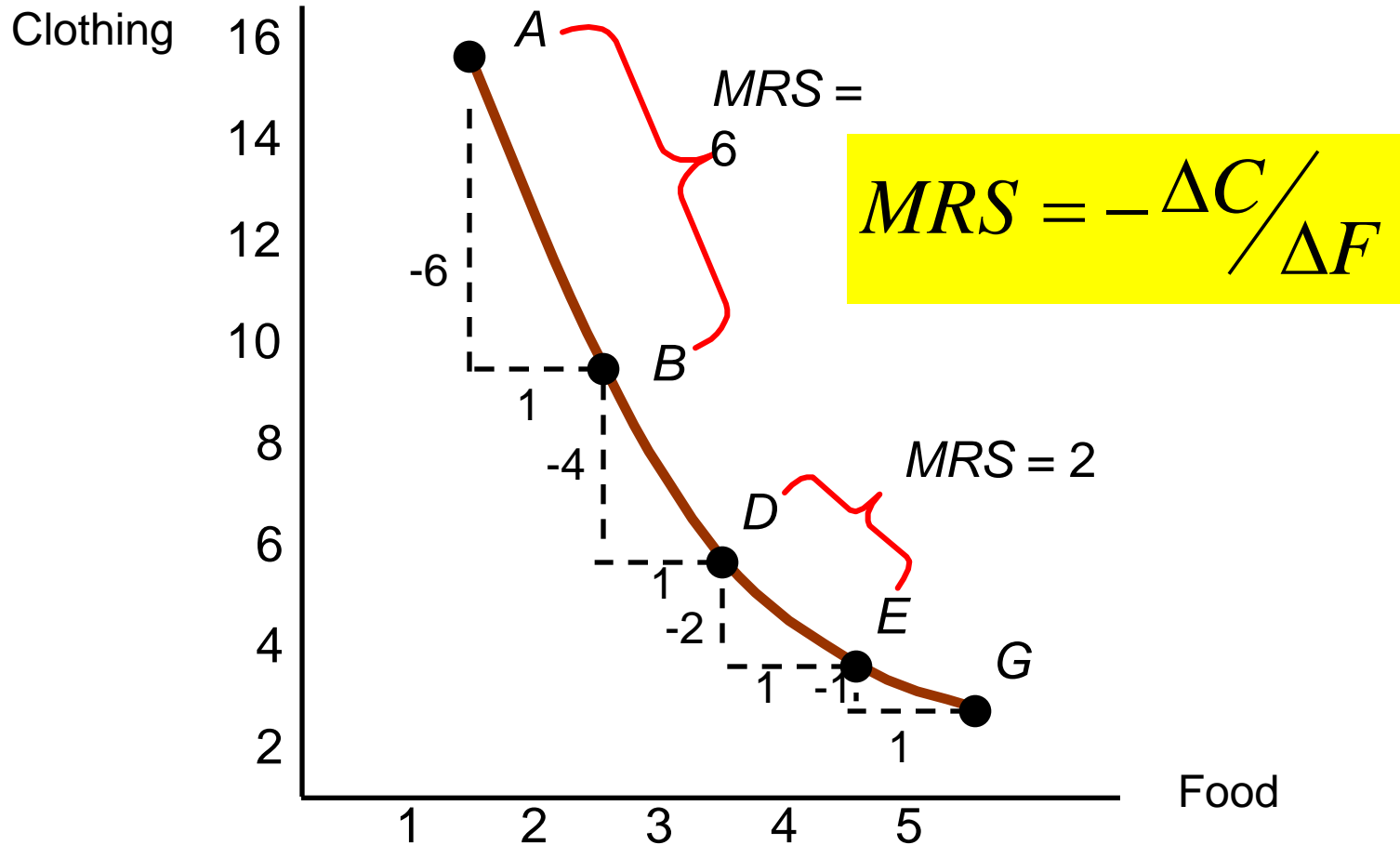
9

Styling



Marginal Rate of Substitution

10



Utility 효용 and Utility Functions 효용함수

- • The three assumptions about preferences allow us to represent preferences with a **utility function**.
- **Utility function** 효용함수
- – a function that measures the level of satisfaction a consumer receives from any basket of goods and services.
- – assigns a number to each basket so that more preferred baskets get a higher number than less preferred baskets.
- – $U = u(y)$

The Utility Function: Implications

- An ordinal concept: the precise magnitude of the number that the function assigns has no significance.
- Utility not comparable across individuals.
- Any transformation of a utility function that preserves the original ranking of bundles is an equally good representation of preferences. e.g. $U =$ vs. $U = + 2$ represent the same preferences.

Marginal Utility (MU) 한계효용

- Marginal Utility of a good y
 - additional utility that the consumer gets from consuming a little more of y
 - i.e. the rate at which total utility changes as the level of consumption of good y rises
 - $MU_y = \Delta U / \Delta y$
 - slope of the utility function with respect to y

Perfect Substitutes and Perfect Complements

perfect substitutes Two goods for which the marginal rate of substitution of one for the other is a constant.

perfect complements Two goods for which the MRS is zero or infinite; the indifference curves are shaped as right angles.

Perfect Substitutes and Perfect Complements

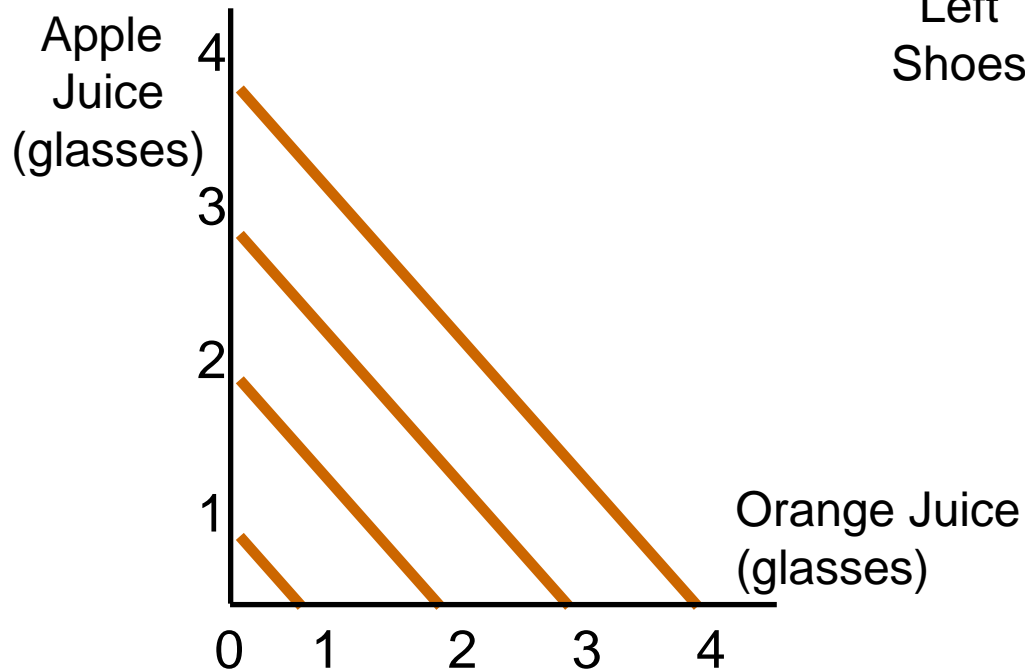
- **perfect substitutes** 완전대체재
 - ▣ Two goods for which the marginal rate of substitution of one for the other is a constant.
- **perfect complements** 완전보완재
 - ▣ Two goods for which the MRS is zero or infinite; the indifference curves are shaped as right angles.

Bads 비재화

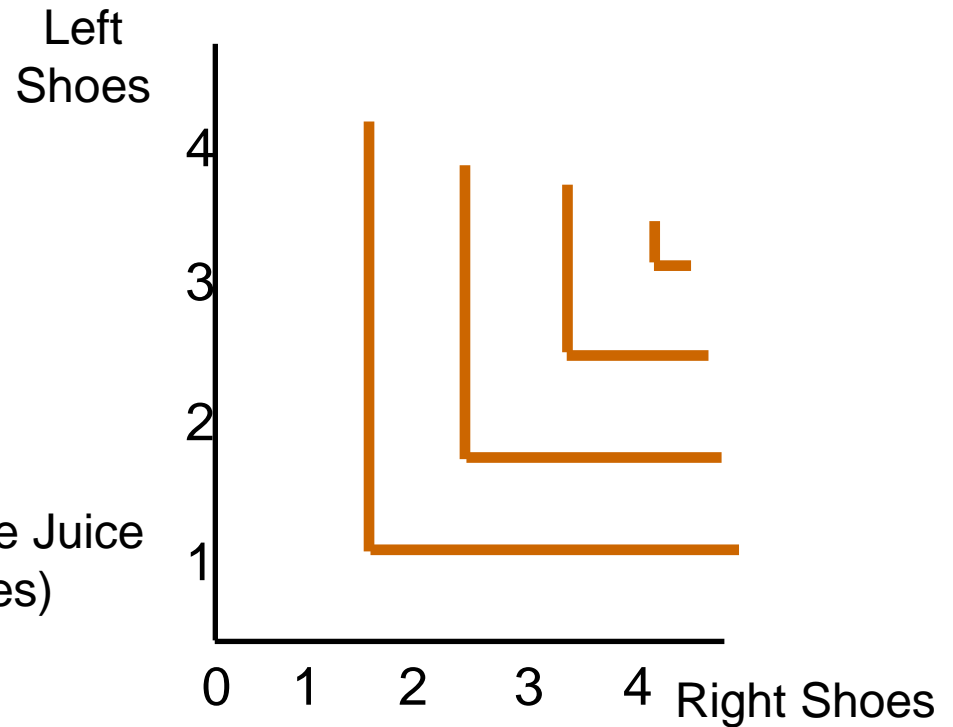
Good for which less is preferred rather than more.

Perfect Substitutes and Perfect Complements

Perfect Substitutes



Perfect Complements

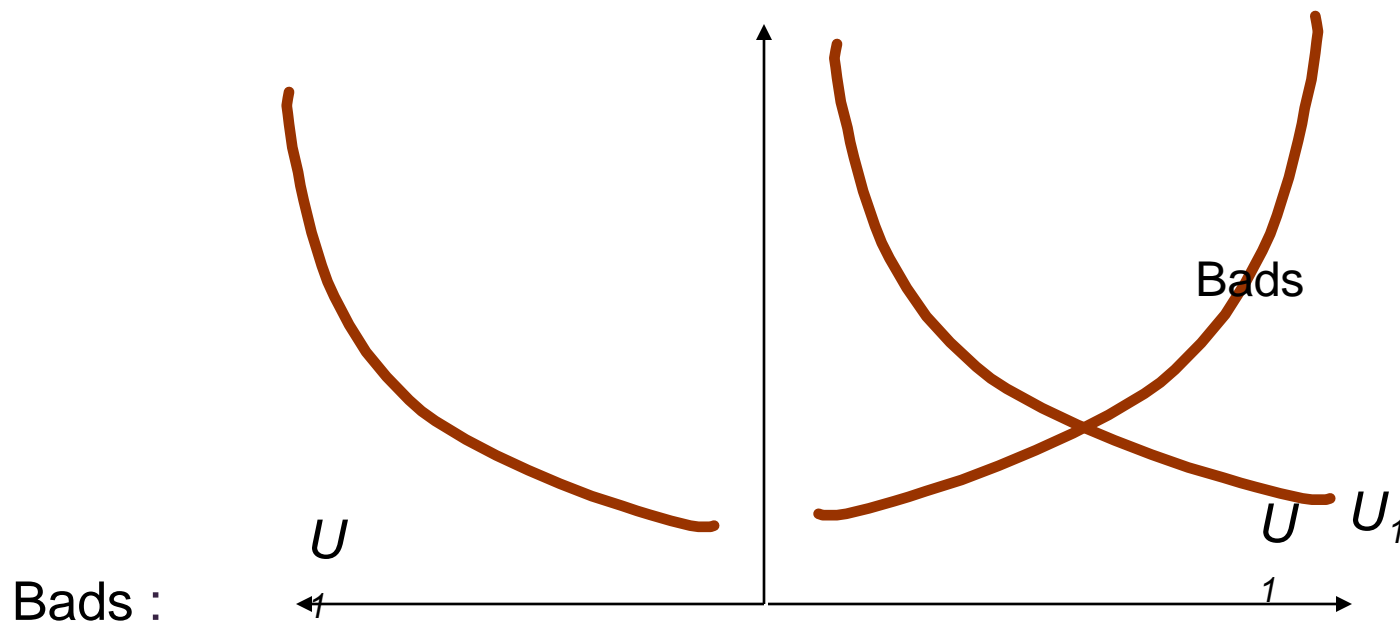


Consumer Preferences for BADS and GOODS

17

□ Bads

Goods



Good for which less is preferred rather than more.

Utility

18

□ *Utility function*

- Formula that assigns a level of utility to individual market baskets
- If the utility function is

$$U(F,C) = F + 2C$$

A market basket with 8 units of food and 3 units of clothing gives a utility of

$$14 = 8 + 2(3)$$

Utility - Example

19

- Baskets for each level of utility can be plotted to get an indifference curve
 - ▣ To find the indifference curve for a utility of 14, we can change the combinations of food and clothing that give us a utility of 14

Utility

20

- Although we numerically rank baskets and indifference curves, numbers are ONLY for ranking
- *A utility of 4 is not necessarily twice as good as utility of 2*
- There are two types of ranking
 - ▣ Ordinal ranking 서수적 순서
 - ▣ Cardinal ranking 기수적 순서

Utility

21

- ▣ *Ordinal Utility Function* 서수적 효용함수
- ▣ Places market baskets in the order of most preferred to least preferred, but it does not indicate how much one market basket is preferred to another.
- ▣ *Cardinal Utility Function* 기수적 효용함수
- ▣ Utility function describing the extent to which one market basket is preferred to another.
- ▣ The actual unit of measurement for utility is not important.
- ▣ An ordinal ranking is sufficient to explain how most individual

Budget Constraints 주머니 사정

22

- *The Budget Line* 예산선
 - ▣ Indicates all combinations of two commodities for which total money spent equals total income.
 - ▣ We assume only 2 goods are consumed, so we do not consider savings

The Budget Line

23

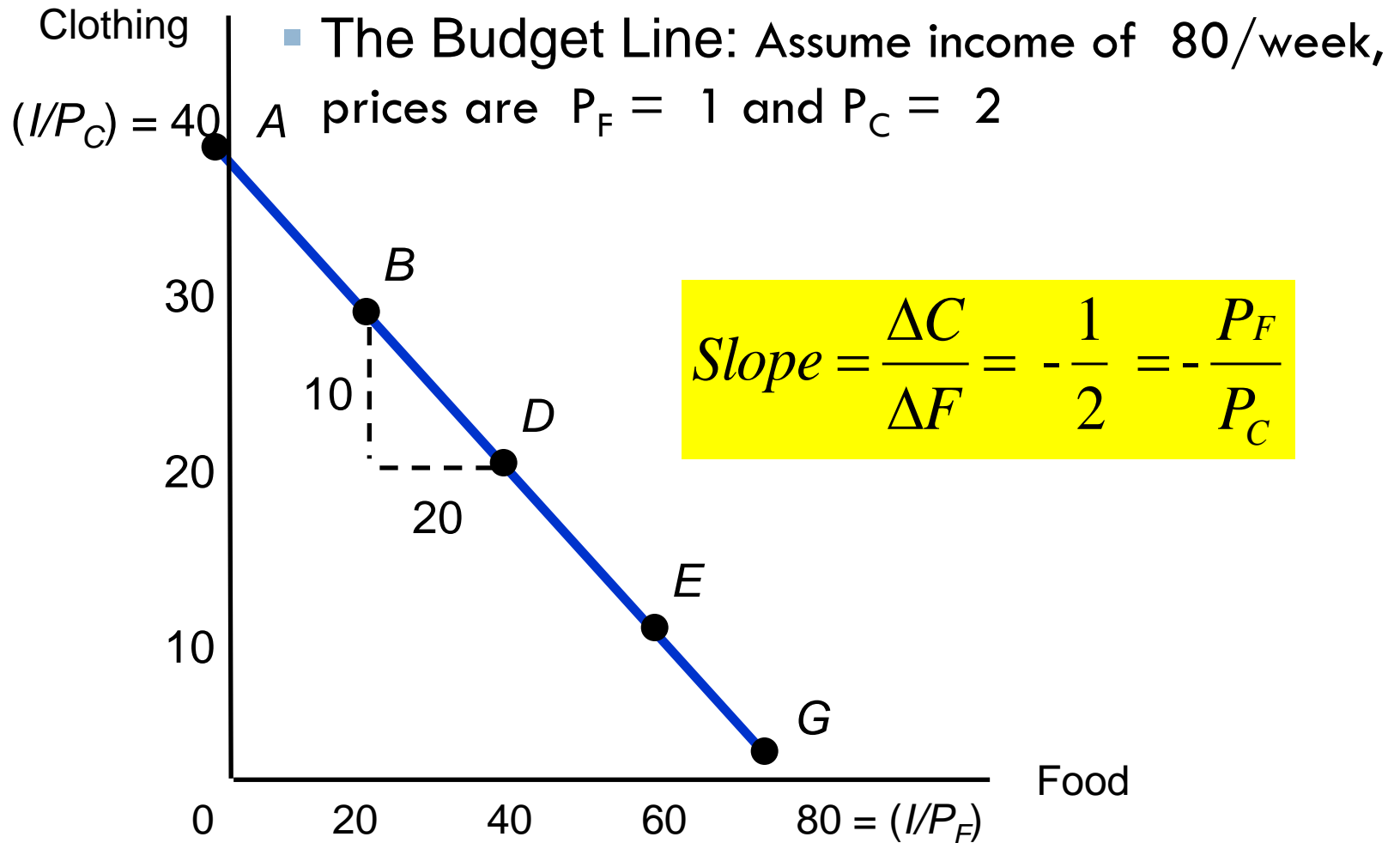
- The budget line then can be written:

$$P_F F + P_C C = I$$

All income is allocated to food (F) and/or clothing (C)

The Budget Line

24



The Budget Line

25

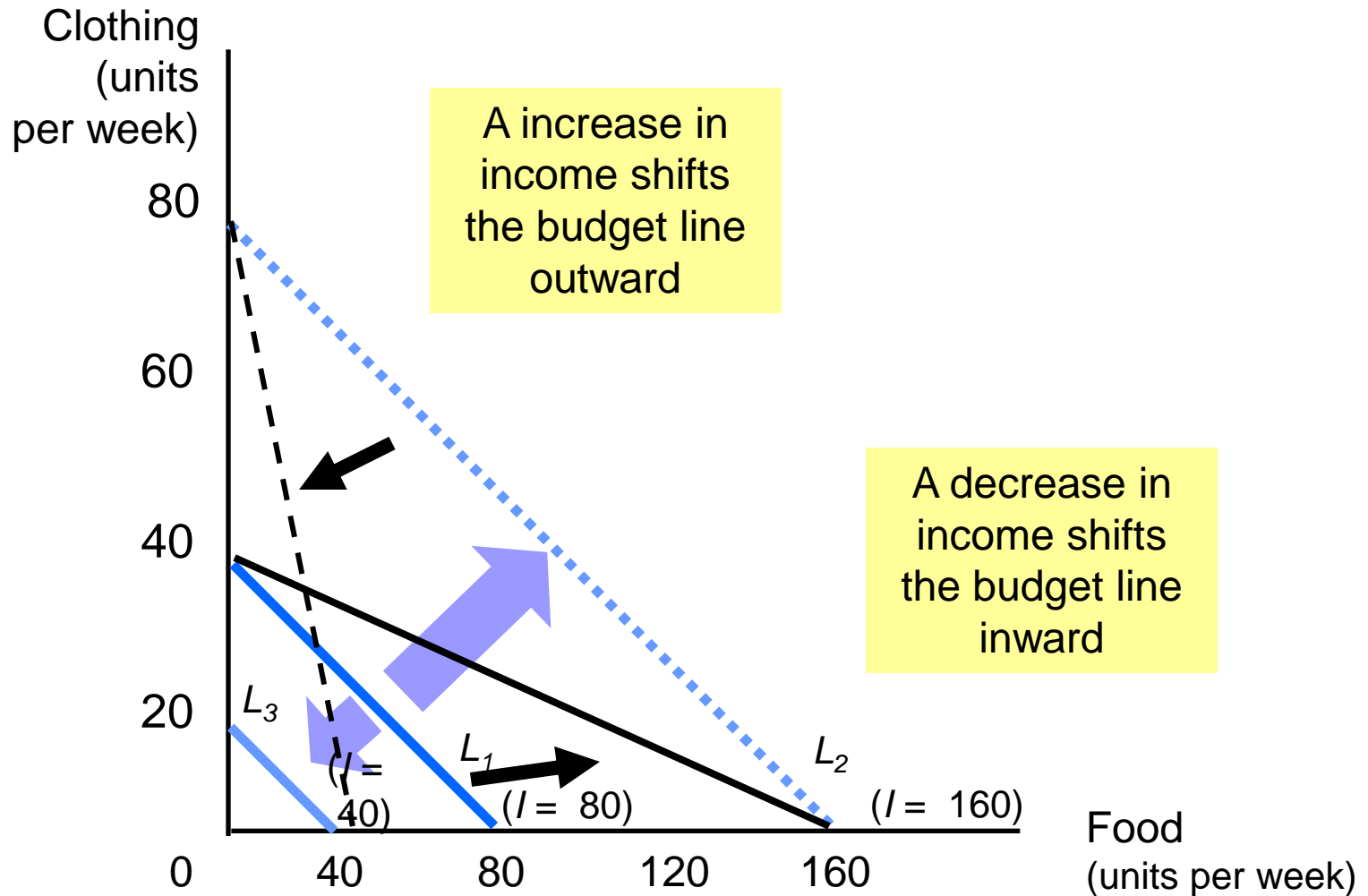
$$I = P_X X + P_Y Y$$

$$I - P_X X = P_Y Y$$

$$\frac{I}{P_Y} - \frac{P_X}{P_Y} X = Y$$

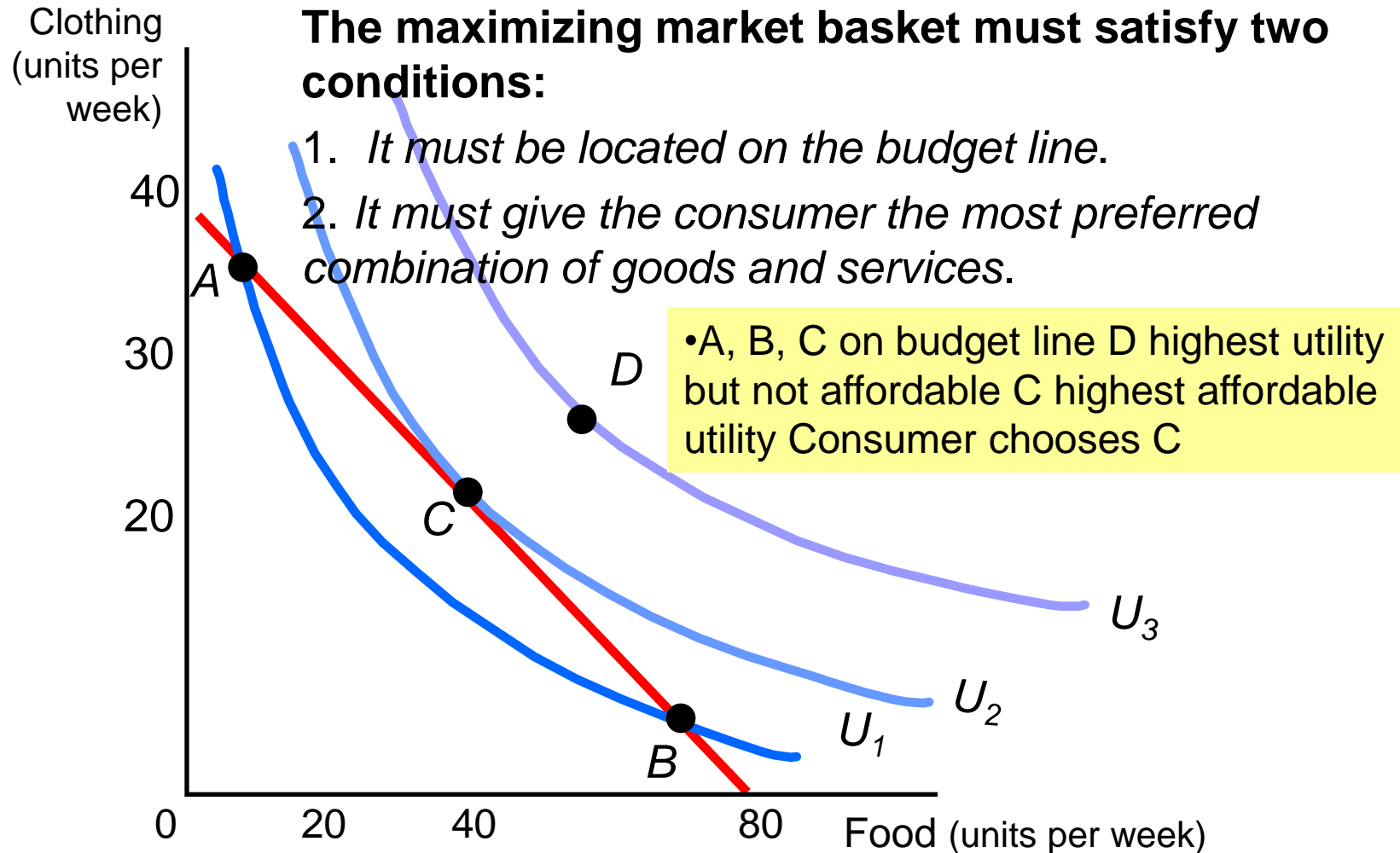
The Budget Line - Changes

26



Consumer Choice: 내부해 Inner Solution

27



Consumer Choice: 내부해 Inner Solution

28

- Recall, the slope of an indifference curve is, Further, the slope of the budget line is

$$MRS = -\frac{\Delta C}{\Delta F}$$

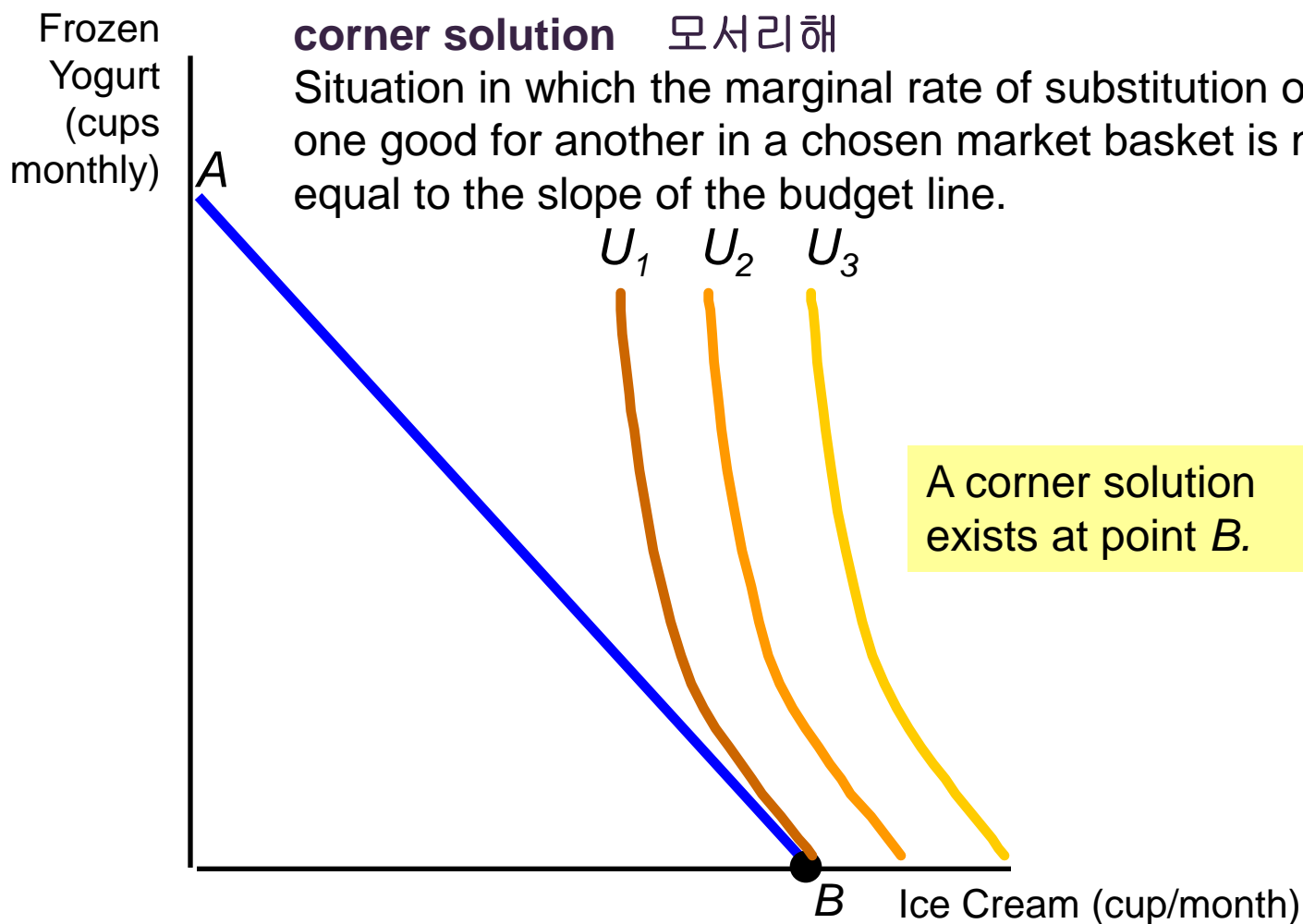
$$Slope = -\frac{P_F}{P_C}$$

$$MRS = \frac{P_F}{P_C}$$

A Corner Solution:

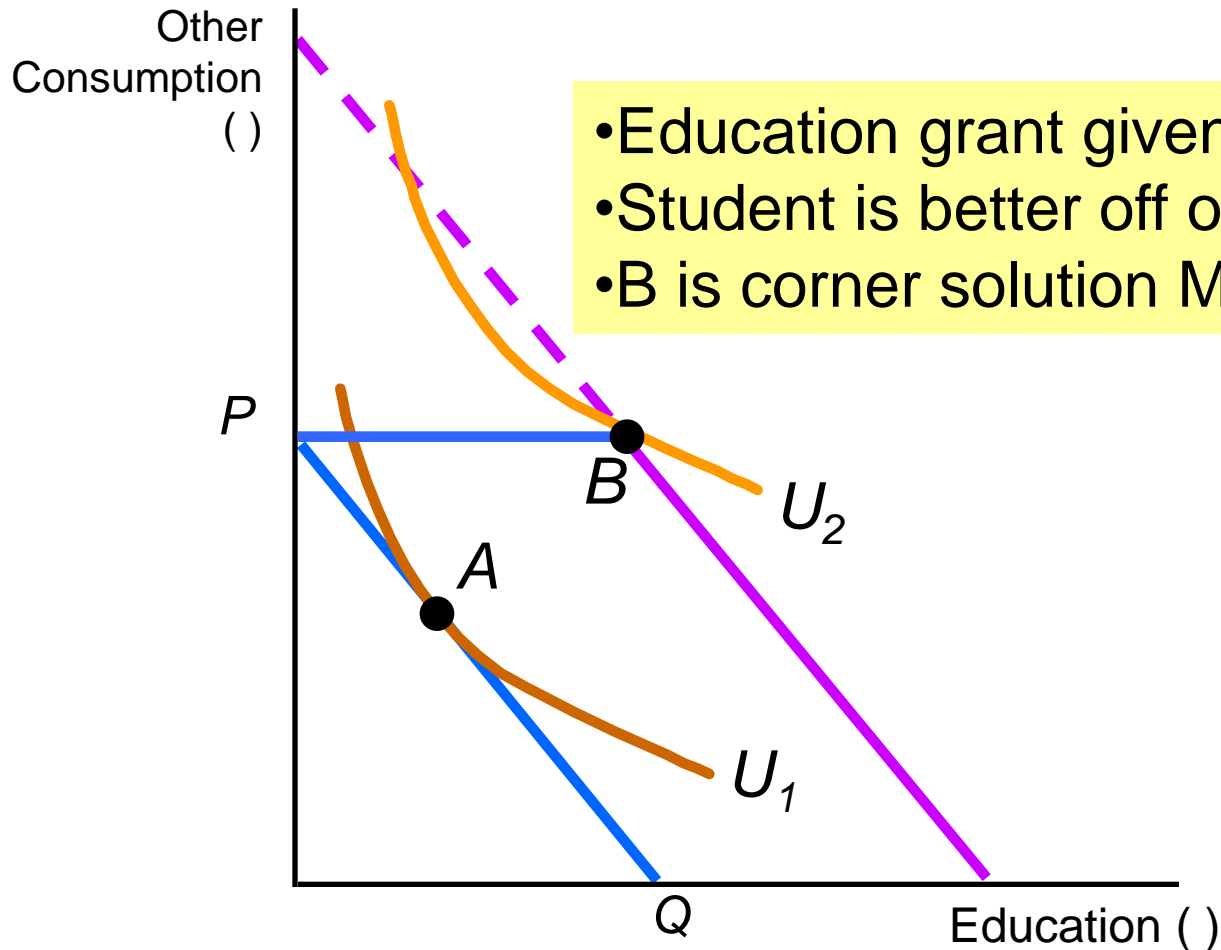
$MRS(\text{yogurt for ice cream}) > P(\text{ice cream})/P(\text{yogurt})$

29



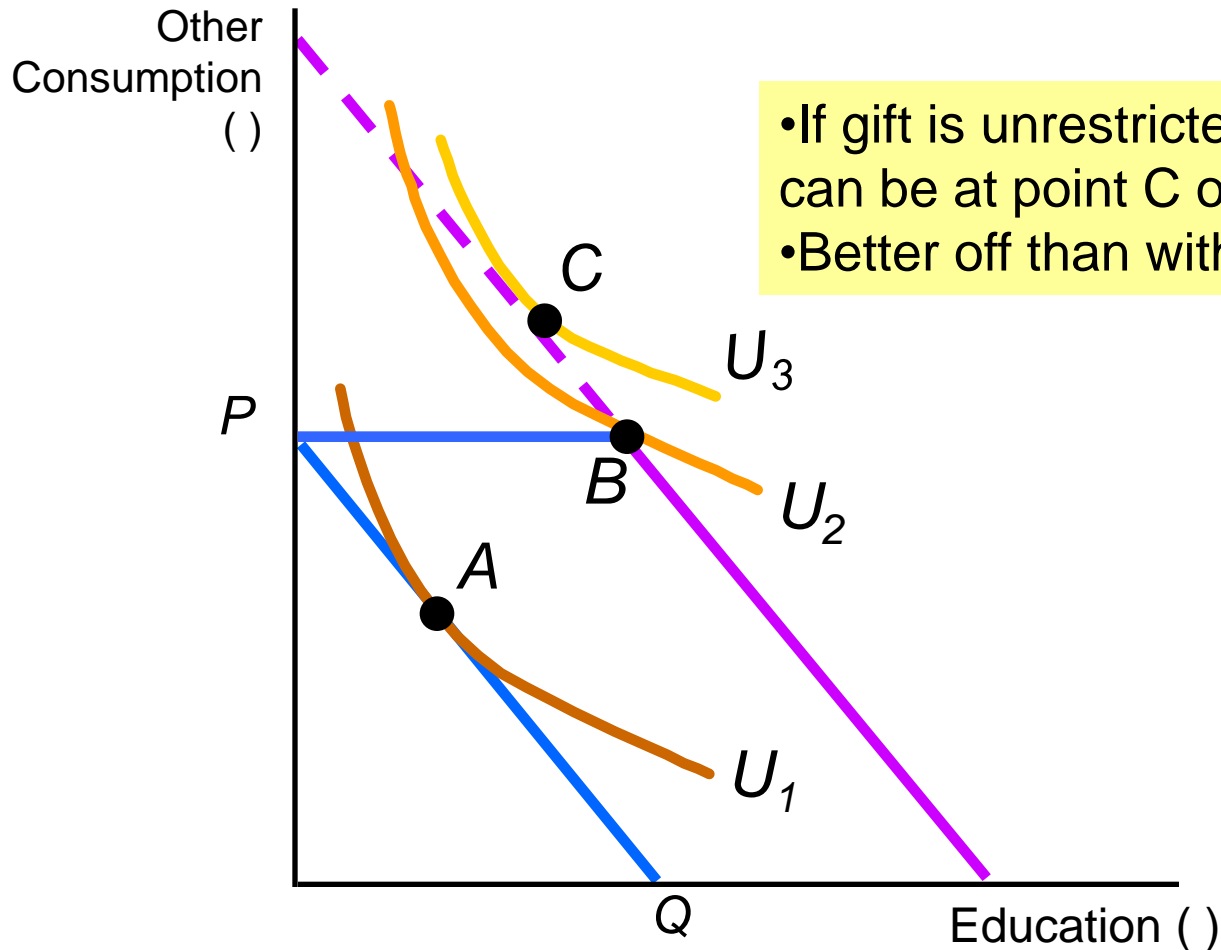
A Corner Solution - Example

30



A Corner Solution - Example

31



Revealed Preferences

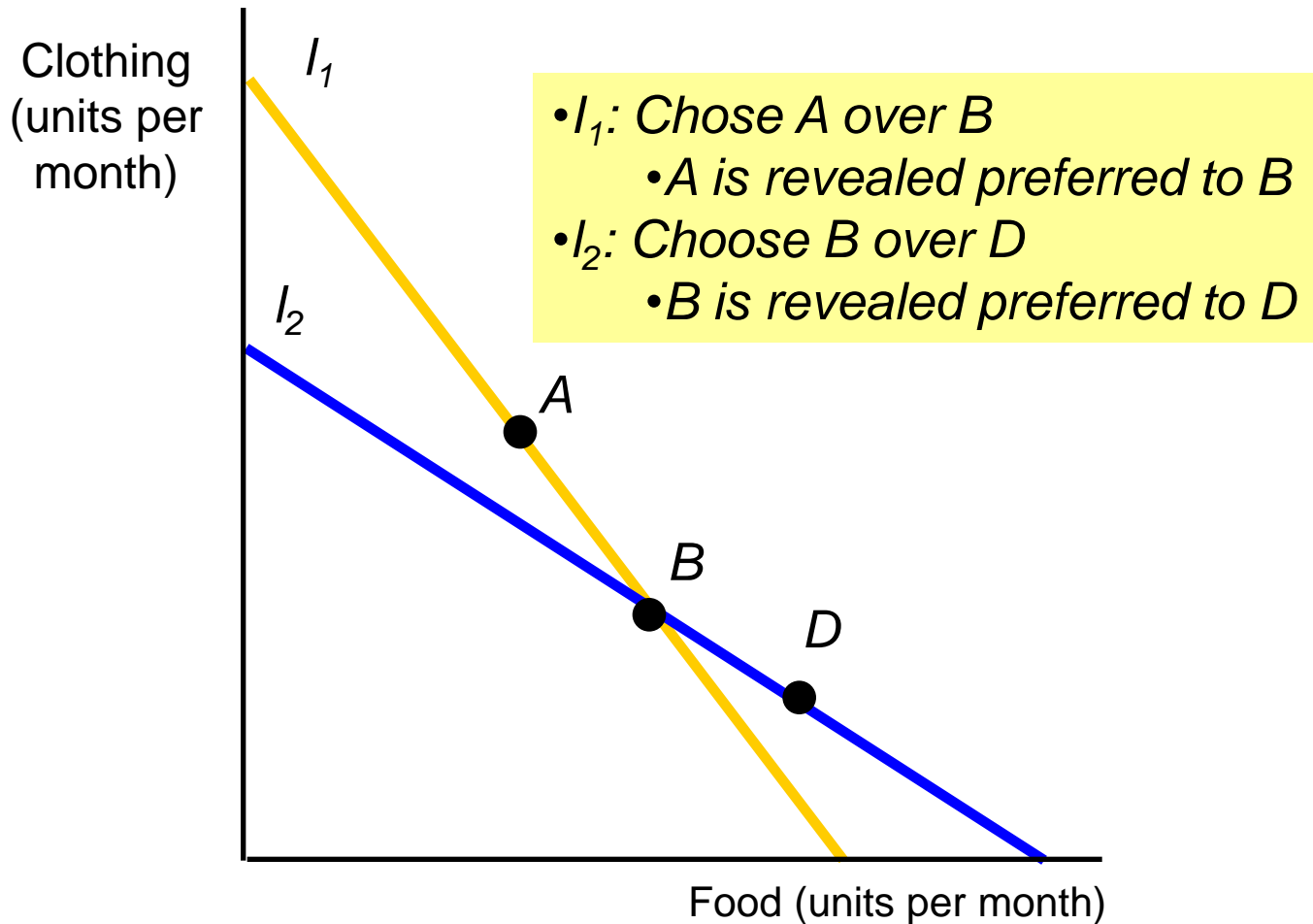
표차서호
표차서호

32

- If we know the choices a consumer has made, we can determine what their preferences are if we have information about a sufficient number of choices that are made when prices and incomes vary.

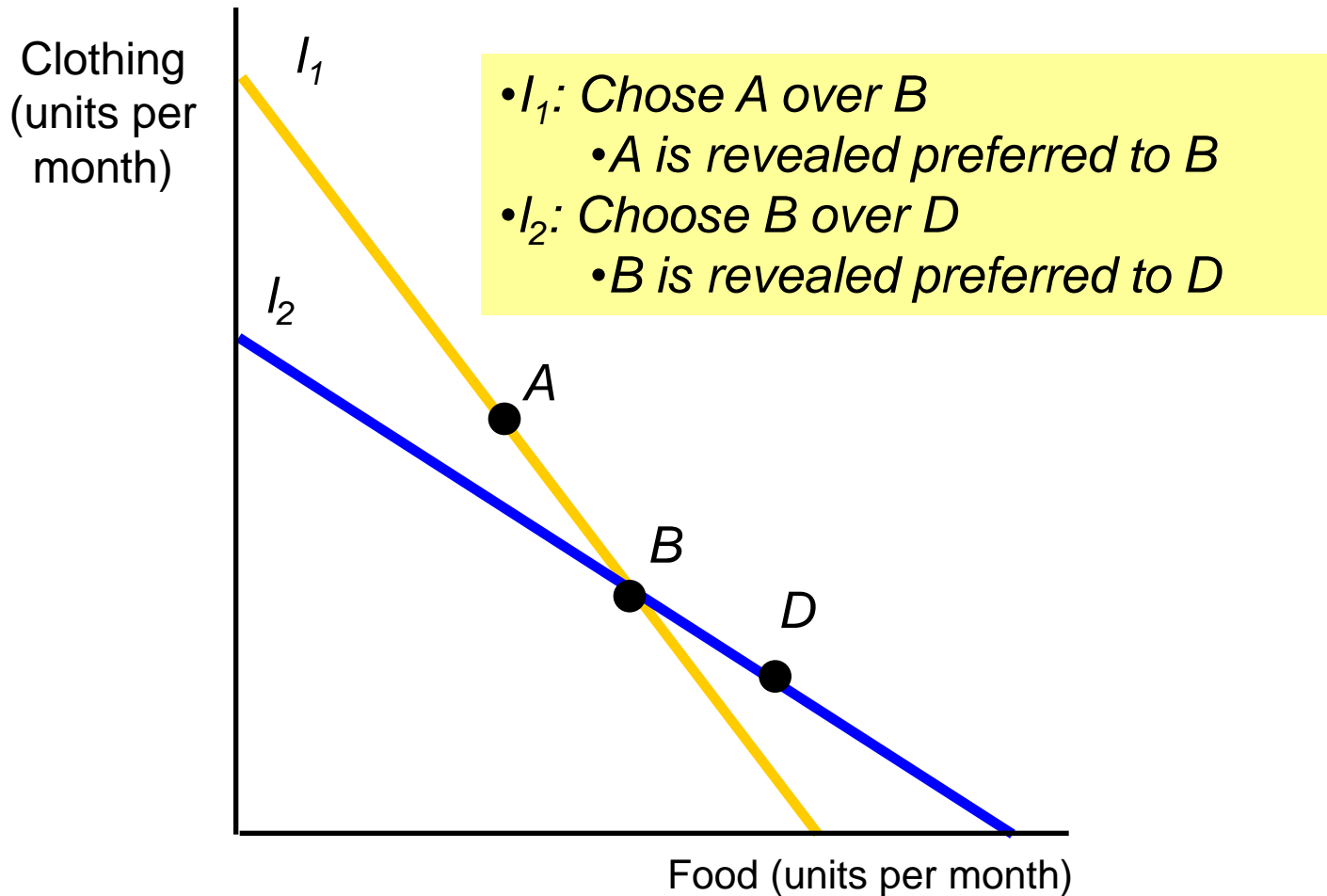
Revealed Preferences – Two Budget Lines

33



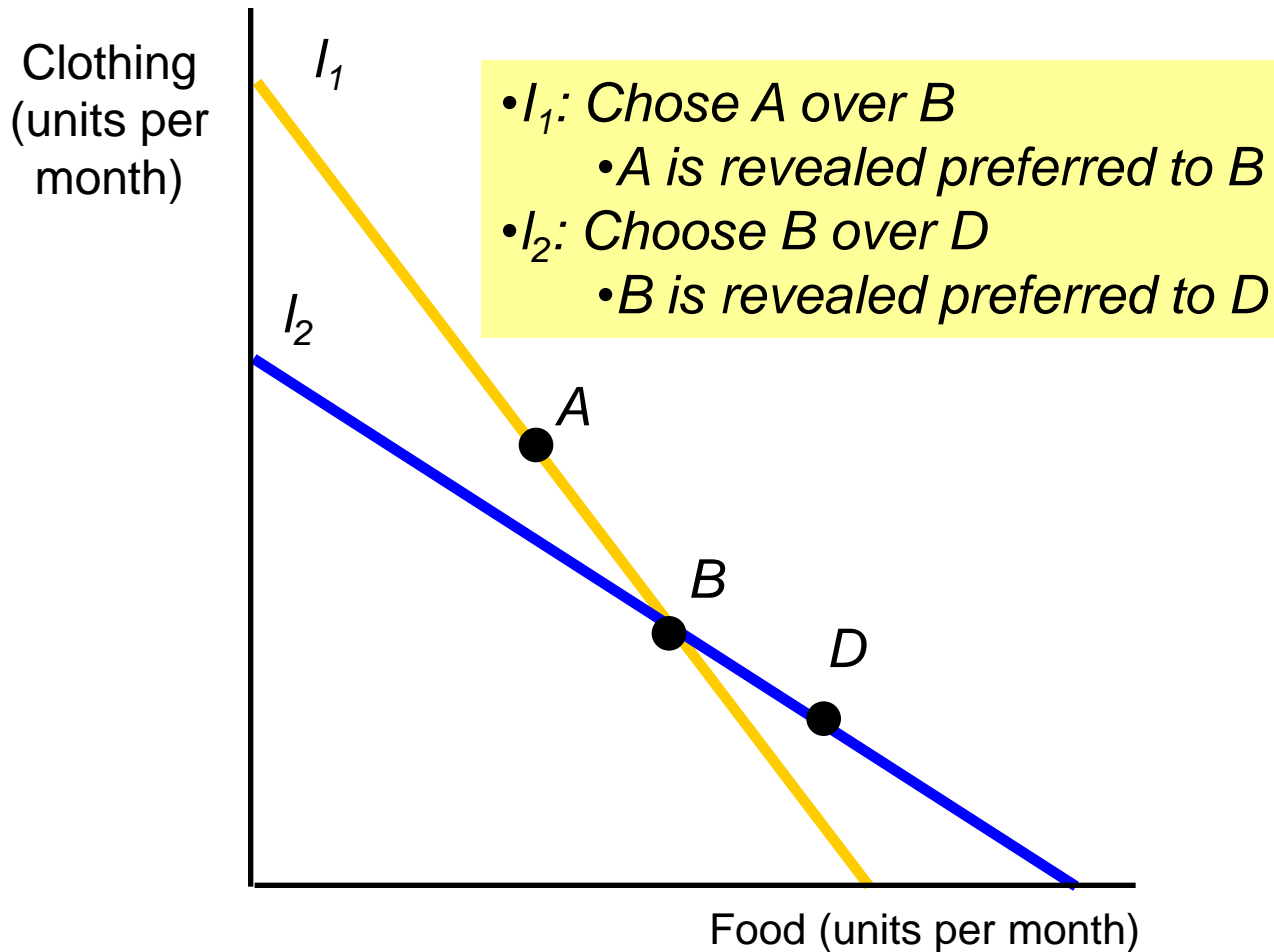
Revealed Preferences – Two Budget Lines

34



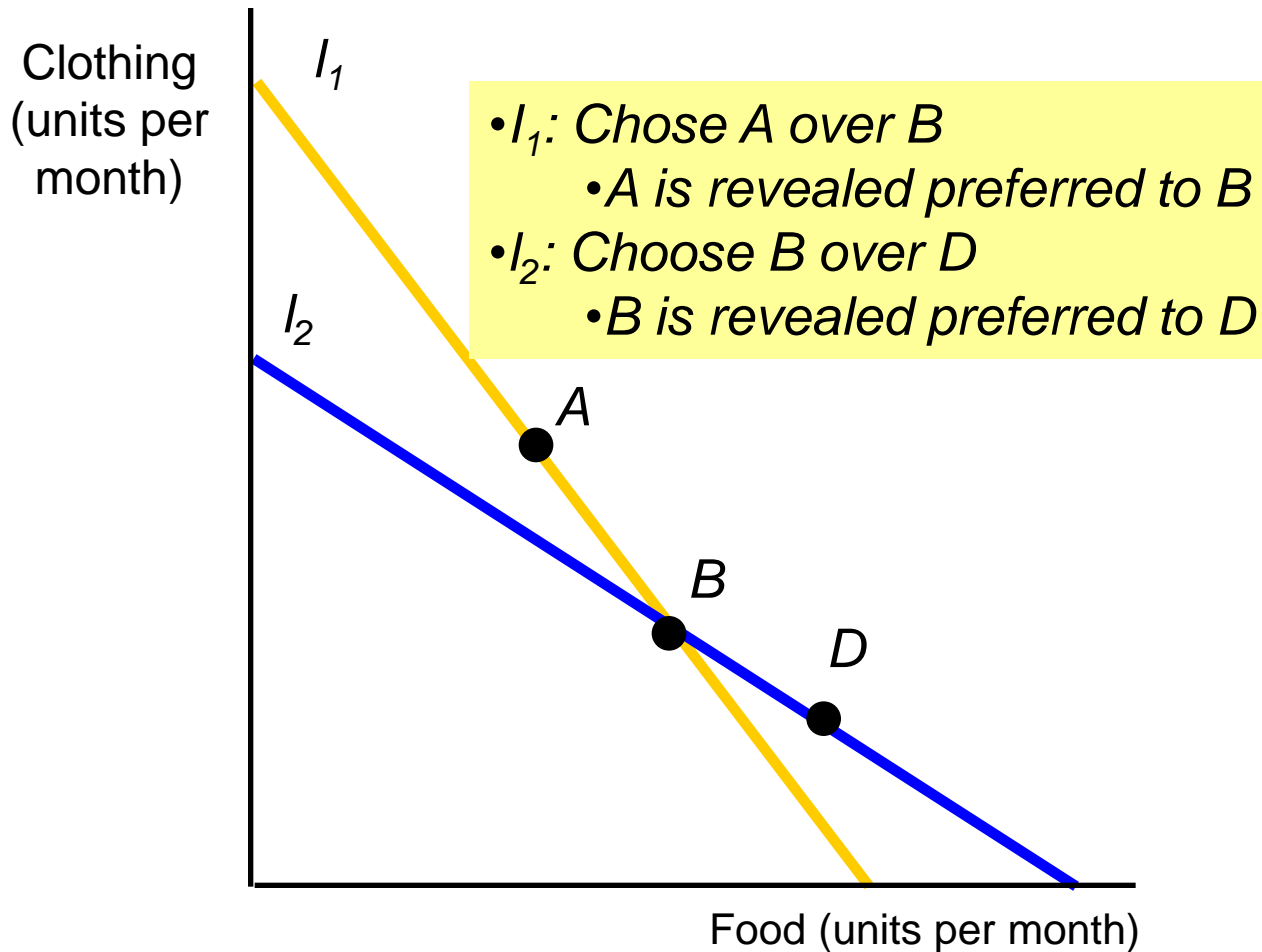
Revealed Preferences – Two Budget Lines

35



Revealed Preferences – Two Budget Lines

36



Revealed Preference

37

- As you continue to change the budget line, individuals can tell you which basket they prefer to others.
- More the individual reveals, the more you can discern about their preferences
- Eventually you can map out an indifference curve

Revealed Preferences – Four Budget Lines

38

