



## Barick Chung

### Employment:

2014-present Senior Lecturer, Department of Economics, CUSZ – Shenzhen.  
2012-2014 Lecturer, School of Economics and Finance, University of Hong Kong.  
2006-2012 Instructor, Department of Economics, CUHK – Hong Kong.

### Education:

2003-2007 Ph.D. (Business) Indiana University – Bloomington.  
1987-1991 BS.Sc. (Economics) Chinese University of Hong Kong – Hong Kong.

### Research paper:

Chung, Barick, "Two Level Price Discrimination and Vertical Relationship" (March 05, 2012). Available at SSRN: <http://ssrn.com/abstract=1997070>.

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## ECO 2011 (Sections L07-10) Basic Microeconomics

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Pindyck and Rubinfeld, 2014, p.76:

**Perfect substitutes** are two goods for which the Marginal rate of substitution of one for the other is a constant.

**Perfect complements** are two goods for which the MRS is zero or infinite; the indifference curves are shaped as right angles.

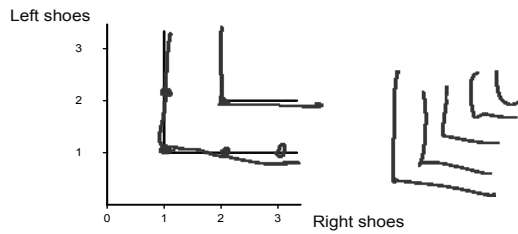
**Bad** is good for which less is preferred rather than more.

 Three extreme cases

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**Perfect complements** are two goods for which the MRS is zero or infinite; the indifference curves are shaped as right angles.



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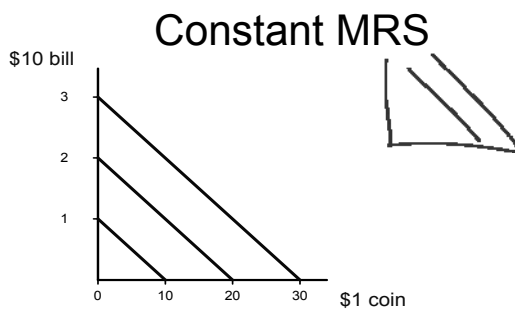
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**Perfect substitutes** are two goods for which the Marginal rate of substitution of one for the other is a constant.



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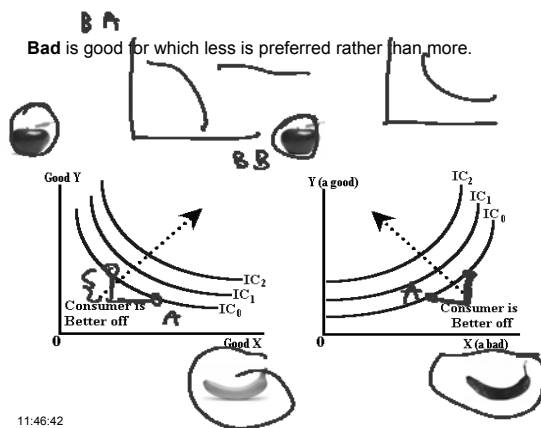
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**Bad** is good for which less is preferred rather than more.



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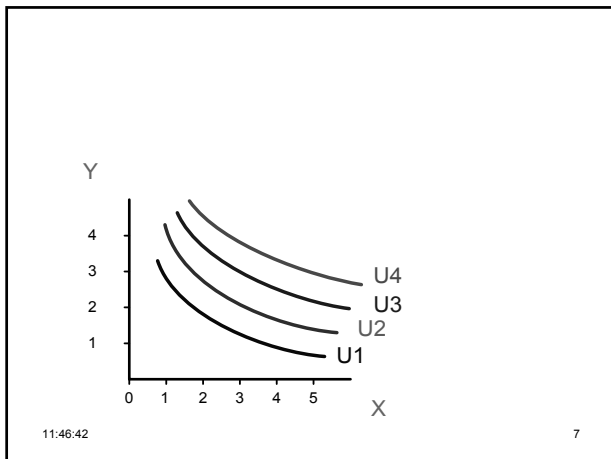
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We assign numbers to represent the consumer's preference, so that  $U(A) \geq U(B)$  if and only if bundle A is preferred to bundle B, i.e.,  $A \succeq B$ .

$u(A) \geq u(B)$

$A \underline{\succeq} B$

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Example #02:

For example: given that  $A \succ B$ .

We can assign:  
 $U(A) = 5$ ;  $U(B) = 3$

Alternatively, we can also assign:  
 $U(A) = 17$ ;  $U(B) = 2$

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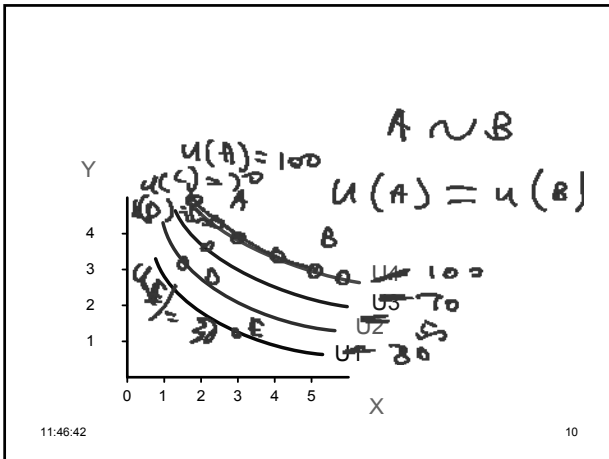
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 Pindyck and Rubinfeld, 2014, p.80:

**Ordinal utility function** is a utility function that generates a ranking of market baskets (bundles) in order of most to least preferred.

**Cardinal utility function** is a utility function describing by how much one market basket is preferred to another.

**Definition**

$u_1 = 1000$     1     $u_2 = 999$   
 $u_2 = 200$     2  
 $u_3 = 10$     3

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 Pindyck and Rubinfeld, 2014, p. 82:

**Budget constraints** are constraints that consumers face as a result of limited incomes.

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My remark #11:

The consumer's constraint is call budget constraint:

$$\text{Total expenditure} = \underbrace{P_X \cdot X}_{\text{expenditure on X}} + \underbrace{P_Y \cdot Y}_{\text{expenditure on Y}} = I = \text{Total income}$$

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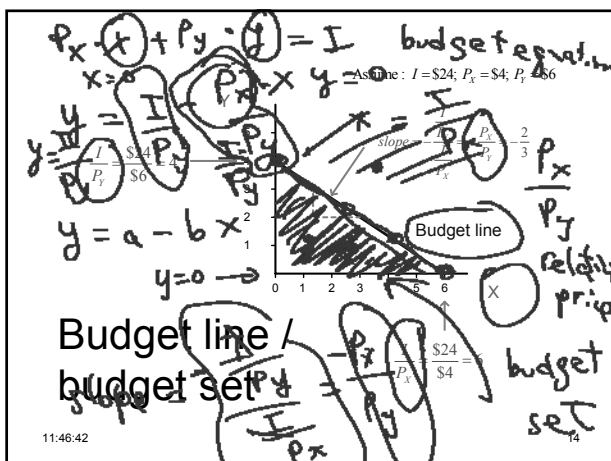
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Pindyck and Rubinfeld, 2014, p. 82:

**Budget line** are all combinations of goods for which the total amount of money spent is equal to income.

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Exercise #01:

If income falls (prices are unchanged), what happens to the budget line?

Income ↓

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Exercise #02:

If income rises (prices are unchanged), what happens to the budget line?

Income ↑

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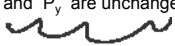
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Exercise #03:

If  $P_x$  rises (I and  $P_y$  are unchanged), what happens to the budget line? 

$P_x \uparrow$

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Pindyck and Rubinfeld, 2014, p.86:

The consumer's problem is to maximize satisfaction, given the limited budget available to them.

The optimal bundle satisfies two conditions:

- ✓ 1) It must be located on the budget line.
- ✗ 2) It must give the consumer the most preferred combination of goods and services.

## Two conditions

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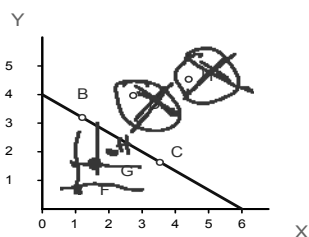
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Bundle D and H is not feasible, and bundles G and F are not optimal:



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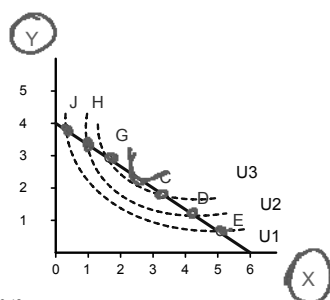
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Bundles E and J are not optimal. Similarly, bundles H, G, C, D, ..., are not optimal.



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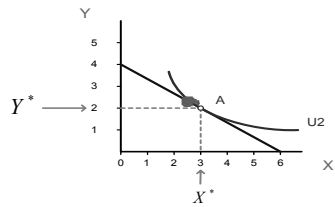
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Bundle A is optimal:



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Pindyck and Rubinfeld, 2014, p.96:

**Equal Marginal principle** is the principle that utility is maximized when the consumer has equalized the Marginal utility per dollar of expenditure across all goods.

$$\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y}$$

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