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.

Homepage: Deleted
Facebook: Deleted
Wechat ID: barickchung

ECO 2011 (Sections L07-10) Basic Microeconomics

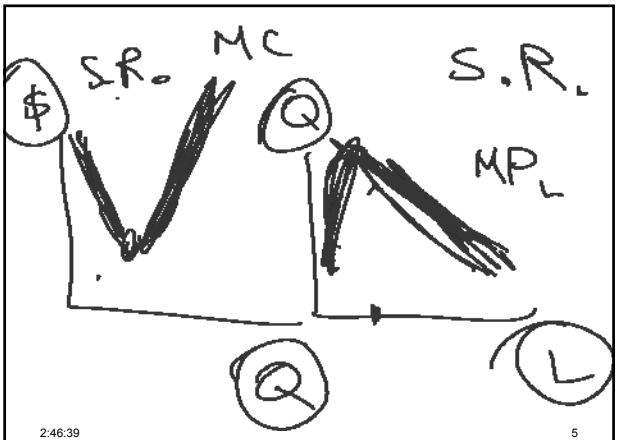
Barick Chung
Department of Economics
235-18822
Zhiren Building, 409
barickchung@cuhk.edu.cn

Mankiw, Gregory, *Essentials of Economics*, 2012, p. 242
"various measures of cost"

Output	Total cost	Fixed cost	Variable cost	Average fixed cost	Average variable cost	Average total cost	Marginal cost
0	$3	$3	$0	–	–	–	–
1	3.3	3	0.3	$3	$0.3	$3.3	$0.3
2	3.8	3	0.8	1.5	0.4	1.9	0.5
3	4.5	3	1.5	1	0.5	1.5	0.7
4	5.4	3	2.4	0.75	0.6	1.35	0.9
5	6.5	3	3.5	0.6	0.7	1.3	1.1
6	7.8	3	4.8	0.5	0.8	1.3	1.3
7	9.3	3	6.3	0.43	0.9	1.33	1.5
8	11	3	8.0	0.38	1	1.38	1.7
9	12	3	9.9	0.33	1.1	1.43	1.9
10	15	3	12.0	0.3	1.2	1.5	2.1

Pindyck and Rubinfeld, p. 238:

- $MC = w / MP_L$



Mankiw, Gregory, 2012, *Essentials of Economics*, p. 239:

Production function is the relationship between quantity of inputs used to make a good and the quantity of output of that good.

Factory	Workers	Output (cookies)	Marginal product	Cost (factory) $30	Cost (workers) @$10	Total cost
1	0	0		$30	$0	$30
1	1	50	50	30	10	40
1	2	90	40	30	20	50
1	3	120	30	30	30	60
1	4	140	20	30	40	70
1	5	150	10	30	50	80
1	6	155	5	30	60	90

Mankiw, Gregory, 2012, *Essentials of Economics*, p. 239:

Production function is the relationship between quantity of inputs used to make a good and the quantity of output of that good.

Factory	Workers	Output (cookies)	Marginal product	Cost (factory) $30	Cost (workers) @$10	Total cost
1	0	0	–	$30	$0	$30
1	1	50	50	30	10	40

$10 for 50 pieces. So, each piece costs: $10 / 50 = 20¢

Mankiw, Gregory, 2012, *Essentials of Economics*, p. 239:

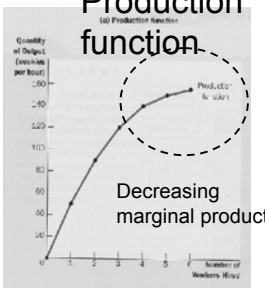
Production function is the relationship between quantity of inputs used to make a good and the quantity of output of that good.

Factory	Workers	Output (cookies)	Marginal product	Cost (factory) $30	Cost (workers) @$10	Total cost
1	0	0	–	$30	$0	$30
1	1	50	50	30	10	40
1	2	90	40	30	20	50

$10 for 40 pieces. So, each piece costs: $10 / 40 = 25¢

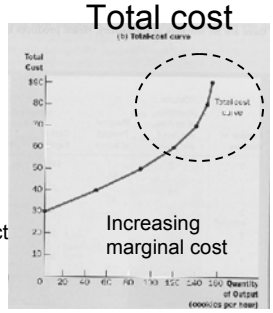
Mankiw, Gregory, *Essentials of Economics*, 2012, p. 240 "production function and total cost"

Production function



Decreasing marginal product

Total cost



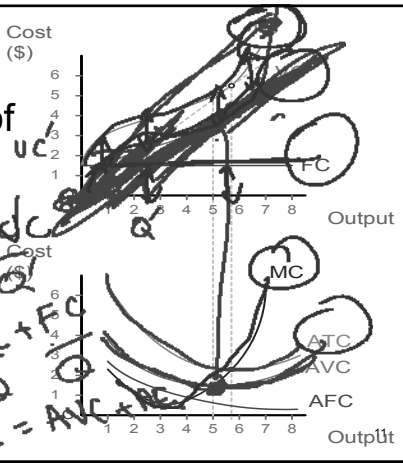
Increasing marginal cost

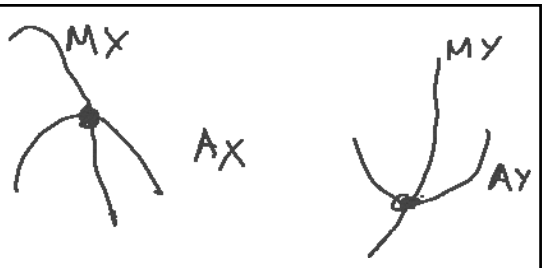
Pindyck and Rubinfeld, pp.206–7:

~~Law of diminishing marginal returns~~ (Law of diminishing marginal products): Principle that as the use of an input increases with other inputs fixed, the resulting additions to output will eventually decrease.

Assumption

Cost curves of a typical firm:





Pindyck and Rubinfeld, p. 243:

If a firm rents an equipment:
User cost of capital = rent

If a firm purchases the equipment:
User cost of capital = Economic Depreciation + Interest

For example, a firm purchases an airplane, which can be used for 30 years. The price of the airplane is $150M and the interest rate is 10%.

Depreciation rate is $150M / 30 years = $5M per year.

In the first year, user cost of capital = $5M + 10% x $150M
In the second year, user cost of capital = $5M + 10% x $145M …

The end