

EE481: Industrial Economics

Overview

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Contact Information

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Textbooks

• Textbooks

- Carlton, D.W. and J.M. Perloff, *Modern Industrial Organization*, 4th Edition, Pearson Addison-Wesley Press, 2005. (Maintext, abbreviation = CP)
- Rasmusen, E., *Games & Information*, 3rd. Edition, Backwell, 2001.
- Church, J. and R. Ware, *Industrial Organization: A Strategic Approach*, International Edition, McGraw-Hill Press, 2000. (Supplement text, CW)
- Tirole, J., *Industrial Organization*, The MIT Press, 1989.

Other Readings

- Harvard Business Review (<http://hbr.org/>)
- The Economist (<http://www.economist.com/>)
- Prachachat Online (<http://www.prachachat.net/>)
- Bangkokbiznews (<http://www.bangkokbiznews.com/home/>)

Grading

- 10% Homework and Pop quizzes
- 15% Short Essays (2 people, count the best 2 out of 3)
- 5% Group Presentation at the end of the term (5-6 people, on a case study)
- 30% Midterm Exam
- 40% Final Exam

The Works

- Late homework = 50% of the earned points
- Essays = 3 pages (double spaced). Should include proper reference. Otherwise, you will get an "F". Late essays not accepted. The best 2 of 3 counts.
- Presentation = a group of 5-6 students present their solution to a case study. The presentation takes at most 15 minutes. Overtime is punished by 2 minutes = 1%.
- Pop quizzes = every time students talk while I teach. Otherwise, the 5% is yours for free.


The Purpose of this Course

- The purpose of this course is **NOT** to teach you how to do business.
- This course will teach you how to apply economics theory to explain firms behaviors.
- This course will enable you to view business situations from the society's perspective using economics tools.


Explain the pricing of Toyota Alphard


Alphard **รุ่นและราคา** ข้อมูลทางเทคนิค เลื่อนสี แออส ทุนไฟแนนซ์

รุ่นและราคา





▶ 3.5V




ราคา 4,099,000 บาท 


▶ 2.4V



ราคา 3,339,000 บาท 

▶ 2.4HV



ราคา 3,459,000 บาท 

What is Industrial Organization?

- “The Study of the structure of firms and markets and of their interactions” (Carlton and Perloff, 2005)
 - For example: a study of how **convenient store chains** in Thailand **compete** in the **grocery market**.
 -
 -
 -
 - Or .. a study of how **car companies** set price of their products.

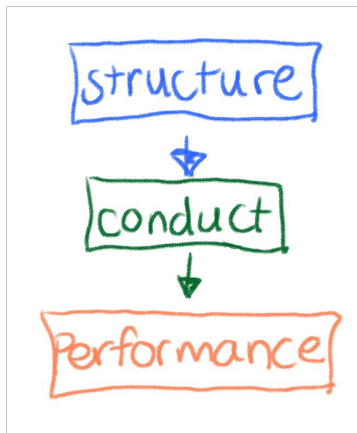
Major tools used in this course

- 1 Structure-Conduct-Performance (SCP)
- 2 Game Theory
- 3 Price Theory
- 4 Transaction Costs Theory

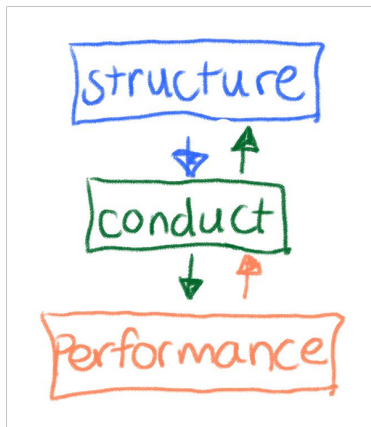
Structure-Conduct-Performance

- Structure = Factors that determines competitiveness of the market, i.e. number of firms, barriers to entry, etc.
- Conduct = behavior of firms, i.e. whether they are collusive, type of competition strategies used, etc.
- Performance =

Structure-Conduct-Performance



Structure-Conduct-Performance



What will you learn in this course?

- 1 Learn how to analyze the **market structure** of an industry
 - Monopoly, duopoly, oligopoly, perfect competition
 - Barriers to entry
 - Product differentiation
 - Vertical integration
- 2
 - Collusion, Merger, Advertising, R&D, Pricing behavior, etc.
- 3 Learn how we can assess firms' **performance** from the society's point of view
 - Price, Production Efficiency, Equity, etc.
- 4 Learn what the government can do in order to promote for more desirable outcomes (**performance**).
 - Anti-trust policy, Government Regulation

Questions we will explore (for example)

- Why do firms offer price match deals?
-
- Why do firms form a cartel?
-

The Objective of a Firm

What do you think is the main objective of a firm?

The Objective of a Firm

- Firm = an organization that transforms inputs into outputs
- Neo-Classical Theory of the Firm (**we use this theory in this course**)
 - Most firms maximize profits
 - Firms utilize its resources in the most efficient way
-

Ownership and Control

Who own firms?

Ownership and Control

Three Basic Forms of Ownership

- 1 Sole proprietorships - owned by 1 owner
- 2 Partnerships - owned by multiple owners
- 3 Corporations - companies whose capital is divided into shares. A corporation raises funds through two channels

1

2

Separate Ownership and Control

If the owners are not the ones who run everything,
how do you think the owners should control their firm?

Separate Ownership and Control

- Managers (employees) may not have an incentive to maximize the owners' (shareholders') profits.
- The owners have to find ways to make the managers maximize their owners' interests.

How?

- Use performance-related benefits (compensation depends on company's performance).
 - profits
 - ranking
 - revenue
 - etc.

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How do firms grow?



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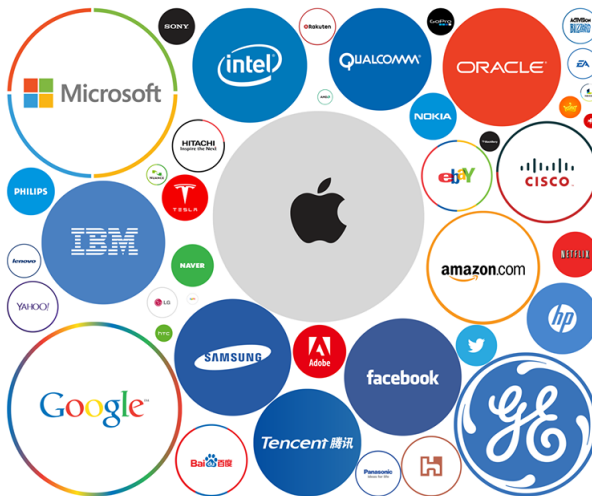
Size of Firms, Mergers and Acquisitions

- Smaller firms are easier to administer but larger firms can 1) do more activities and 2) experience economy of scale/scope.
- How do firms increase their size?
 - Keep accumulating assets and invest
 - Vertical Merger
 -
 - Conglomerate Merger

Why do firms grow?

MARKET CAPITALIZATION OF LEADING TECH COMPANIES

July 18, 2014



**ValueLine
Graphic**

Activision Blizzard	16,410M
Adobe Systems	36,600M
Amazon	165,940M
AMD	2,900M
Apple	569,380M
Baidu	66,900M
BlackBerry	5,200M
Cisco Systems	139,460M
Daum Communications	1,625M
EA	12,040M
eBay	65,230M
Facebook	175,900M
General Electric	265,330M
Google	389,270M
GoPro	9,480M
Hisatsu	36,750M
Hon Hai	47,157M
HP	65,140M
HTC	3,866M
IBM	117,500M
Intel	167,600M
King Digital Entertainment	6,250M
Koninklijke Philips	28,940M
Lenovo	14,798M
LG Electronics	12,658M
Microsoft	369,160M
Naver	23,115M
Nvidia	26,600M
Norson	4,022M
Nokia	28,340M
Nuance Communications	5,640M
Oracle	178,200M
Panasonic	27,688M
Qualcomm	134,000M
Rakuten	17,535M
Samsung Electronics	174,230M
Sony	17,143M
Tencent	148,387M
Tesla Motors	27,300M
Twitter	21,800M
Yahoo!	33,600M
Zynga	2,700M

Original data from Google Finance

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Types of Costs (you should know about this already)

- Firms minimize costs in order to operate efficiently. However, what kind of cost it minimizes? Some important types of costs:
 - 1 Fixed Costs (F)
 - 2 Variable Costs (VC)
 - 3 Total Costs ($C = F + VC$) or ($TC = F + VC$)
 - 4 Average Cost ($AC = \frac{C(q)}{q}$) or ($ATC = \frac{TC(q)}{q}$)
 - 5 Average Variable Cost ($AVC = \frac{VC(q)}{q}$)
 - 6 Average Fixed Cost ($AFC = \frac{F}{q}$)

Types of Costs (Fill in the Blank)

Output	F	AFC	VC	AVC	TC	ATC	MC
0	100	-	0	-	100	-	-
1	100	100	10		110		10
2	100		19	9.5	119	59.5	
3	100	33.3	25	8.3	125	41.7	6
4	100		32		132	33	
5	100		40	8.0		28	8
6	100	16.7	49	8.6	149	24.8	
7	100	14.2	60	9.1		22.9	11
8	100	12.5	73	9.8	173	21.6	13
9	100	11.1	88	10.8	188	20.9	

Short Run vs. Long Run

- Short Run - not enough time to change the factors of production or production technology.
- Long Run - long enough time to allow change in the factors of production or production technology.

Economy of Scale

- Economies of scale (or increasing returns to scale) - AVC falls as output increases
- Constant returns to scale - AVC is constant
- Diseconomy of scale (or decreasing returns to scale) - AVC increases as output increases
- Minimum Efficient Scale (MES) - the minimum units of output required to produce in order to achieve the lowest long-run average cost.

Indivisibilities Create Economies of Scale

- 1 Long-run fixed costs, Set-up costs
- 2 Specialized resources and the division of labor
- 3 Volumetric returns to scale
- 4 Economies of massed reserves

Economy of Scope

- There are positive spillovers (cost-saving, cost-sharing) effects when 1 firm produces more than 1 type of products.

$$C(q_1, q_2) < C(q_1, 0) + C(0, q_2),$$

where $C(\bullet)$ is the cost function, q_1 is output of product 1, q_2 is output of product 2.

Reference and Further Reading I



Carlton, D.W. and J.M., Perloff.

Modern Industrial Organization. 4th Edition.

Pearson Addison Wesley Press, 2005.



Church, J. and R. Ware.

Industrial Organization: A Strategic Approach. International Edition.

McGraw-Hill Press, 2000.