EE481: Industrial Economics

SCP and NEIO

Dr. Wanwiphang Manachotphong

Department of Economics, Thammasat University

6 Sep 2013

Homework (Problem 1)

Due Date: Friday 13 Sep, before 2pm at the BE office.

Problem 1: Given the following travel requirements

- You have to take a flight from Bangkok to ChiangMai on Friday September 13th. AND
- You have to leave between 8:00 AM - 10:30 AM.

1. How many airlines can you fly with? What are they?
2. What would be the price charged by each airline? (inclusive of tax, VAT, and fee for 1 checked baggage)

   note: For this part, you MUST go through the actual online booking process until just before the website asks you to pay. Then, print out the page which shows the final price (of each airline). Submit your print-outs with the homework.

3. Are the prices that you find very similar or very different? Do you think the airlines are being anti-competitive. Discuss why or why not.

Homework (Problem 2 & 3)

** Adapted from Industrial Organization: A Strategic Approach by Church & Ware. Practice Question in Chapter 10. You can also try other problems as your practice for the midterm exam.

Problem 2: Suppose that demand is given by $P = 600 - Q$ and marginal cost equals 20. Firms are Cournot competitors and play a supergame. The collusive agreement being considered is for each to produce one-fourth of the monopoly output (there are 4 firms in this industry). What is the critical discount factor to sustain collusion using grim punishment strategies if detection of deviation requires three periods?

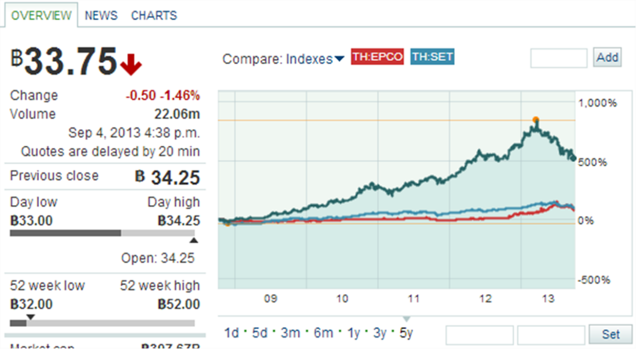
Problem 3: Suppose that demand is given by $P = 600 - Q$ and marginal cost equals 20. Firms are Bertrand competitors with unconstrained capacity and play a supergame.

(a) For what values of the discount factor can grim pubishment strategies support an equal devision of the monopoly output?

(b) Which type of competition–Bertrand or Coutnot–is more likely to sustain the collusive agreement? Why?

Some Questions

How can CP ALL's stock price increased faster than that of Eastern Printing?



source: http://www.marketwatch.com

- May be because their market structures are different (processed food industry in Thailand is more concentrated than the printing industry)?

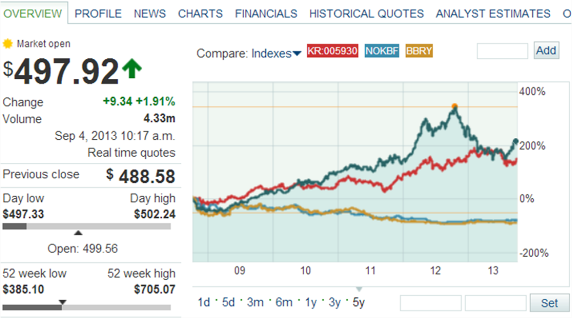
Some Questions

The Smartphone companies (Apple vs.Samsung vs. Nasdaq).

source: http://www.marketwatch.com

Some Questions

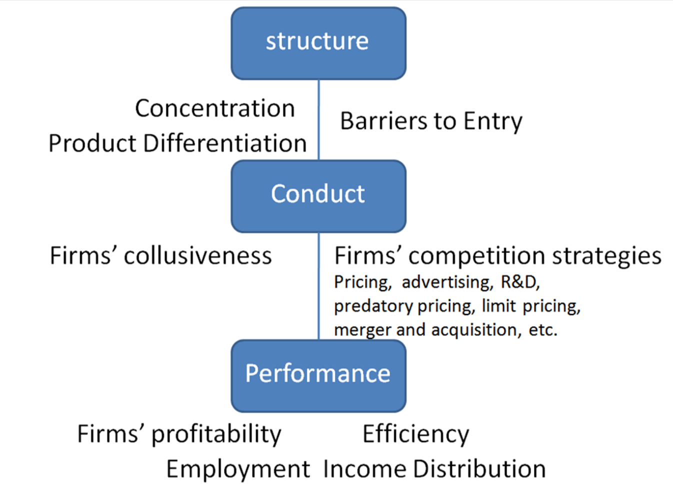
How can Apple and Samsung grow faster than Blackberry and Nokia?



source: http://www.marketwatch.com

- Maybe they adopted different conducts (competition strategies)...

Structure Conduct Performance (SCP)



Measures of Market Structure

1. Industry Concentration
2. Barriers to Entry
3. Product Differentiation
4. Unionization
5. etc.

These factors determine the basis (potential competitiveness) of the industry.

Concentration

- Industry Concentration - the higher the number of firms, the less industry concentration (production activity is not concentrated within just a few firms)

1. **Herfindahl-Hirschman Index**

2. **Concentration ratio (CR4 and CR8)**

Lower market concentration -> likely to be more competitive.

Barriers to Entry

- Barriers to entry may also determine industry performance
  - Economies of Scale
  - Product Differentiation
  -
  -

Lower barrier to entry -> likely to be more competitive.

Unionization

- A strong labor union can take a big share of profit away from firm.
- This increase marginal cost and may increase price.
- A firm that makes a lot of money may not turn out to be that profitable.
- Unionization may discourage entries.

Strong labor union -> likely to be less competitive.

Example of Market Structure Analysis

Market Conditions	Industry 1	Industry 2	Industry 3
Seller Concentration (CR4)	100%	$>$ 80%	95%
Buyer Concentration (CR4)	0.001%	0.001%	>8%
Homogenous Product	almost	yes	almost
Barriers to Entry			
Large Plant Scales	yes	yes	yes
Large Investment Costs	yes	yes	yes
Government License	yes	no	no

- Industry 1 =
- Industry 2 =
- Industry 3 =

Conduct (what firms do)

- Collusion
- Pricing Strategies
- Quality Choice
-
- R&D
- Predatory Pricing, Limit Pricing
-
- Franchise

(Most of these conducts will be discussed in later on in this class.)

Theories of Price Markups and Economics Profits

Predictions Based on Market Structure	$p - MC$	π_{SR}	π_{LR}
Competition	0	+ or -	0
Monopolistic competition	+	+ or -	0
Monopoly	+	+ or -	+ or 0
Oligopoly	+	+ or -	+ or 0

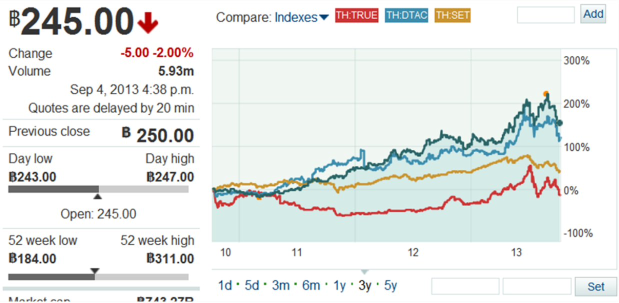
- Market power =
- π_{SR} is
- π_{LR} reflects
- Using $P - MC$ is more informative about the market power than using profits.

Measurements of Market Performace

- Rates of Return - how much is earned per 1 baht (dollar) of investment.
- Price-cost margin - $\frac{P-MC}{P}$.
- Other measures such as Tobin's q ratio $(\frac{\text{Market Value}}{\text{Value based on replacement cost}})$
- In industrial organization, we usually use

Structure vs. Performance

- Industrial Organization researchers have not been able to find a universal pattern of how structure relates to performance.
  - High market concentration ...
  - The relationship differs industry by industry.



source: http://www.marketwatch.com

NEIO

NEIO (New Industrial Industrial Organization)

- Usually studies 1 industry at a time.
- Estimates degree of market power and sources of market power in each industry.
  - i.e. does not assume a stable relationship across industries between structural variables and performance
- Market power = ability to charge price higher than marginal cost.

Price-Cost Margins

Price-cost margin is usually used to measure the degree of market power:

$$\text{Price-Cost Margin} = P - MC$$

$$\text{Lerner's Index} = \frac{P - MC}{P}$$

When MC is not available, people use AVC in practice.

Derivation of the Lerner's Index

The Market's Lerner's Index

The market's Lerner's index is practically the firms' weighted-average Lerner's index.

Market Power Comes from 3 Sources

From the market Lerner's Index, we can infer that market power comes from 3 sources.

1. High Market Concentration
2. Low Price elasticity of demand
3. Ability to Collude

Reference and Further Reading I

Carlton, D.W. and J.M., Perloff.
Modern Industrial Organization. 4th Edition.
Pearson Addison Wesley Press, 2005.

Domowitz, I. G.R. Hubbard, and B.C.Petersen. *Business Cycles and the Relationship Between Concentration and Price-Cost Margins.*
Rand Journal of Economics 17: 1-17, 1986.

Kwoka, J.E.Jr., and David Ravenscraft. *Cooperation vs. Rivalry: Price-Cost Margins by Line of Business.*
Working Paper no.127, U.S. Federal Trade Commission, 1985.