

EE481: Industrial Economics

SCP and NEIO

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9 Sep 2015

Homework (Problem 1)

Due Date: Wednesday 16 Sep, before 2pm at the BE office.

Problem 1: Go to a BIG stationary store (i.e. B2S or the stationary section of Tesco, etc.). Then, answer the following questions

- ① If you were asked to buy a ream (500 sheet) of 80-gram A-4 paper, how many brands are there for you to choose in that store?
 - ① Find out the name of the “company” that produces each brand.
 - ② How much does each ream of A-4 paper cost? (for each brand)
- ② What is “Retail Price Maintenance” or RPM. Do you think A-4 manufacturers are adopting the RPM strategy? If so, why do you think the A-4 manufacturers are adopting the RPM strategy?
- For this problem, identical or very similar answers are allowed. However, the point you will earn = $\frac{\text{average point}}{n}$, where n = number of students with identical or very similar answers. So, better to do it on your own :)

Homework (Problem 2 & 3)

** 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 $P = 130 - Q$ and marginal cost equals 10. Firms are Cournot competitors and play a supgame. The collusive agreement being considered is for each to produce half of the monopoly output (there are 2 firms in this industry). What is the critical discount factor to sustain collusion using grim punishment strategies if detection of deviation requires two periods?

Problem 3: Suppose that demand is given by $P = 130 - Q$ and marginal cost equals 10. Firms are Bertrand competitors with unconstrained capacity and play a supgame.

- (a) For what values of the discount factor can grim punishment strategies support an equal division of the monopoly output?
- (b) Which type of competition—Bertrand or Cournot—is more likely to sustain the collusive agreement? Why?

Summary

- The SCP framework can be used to analyze firms' performance.
- SCP analyzes 1) Industry Structure 2) Firms' Conducts 3) Firms' Performance.
- Some measures of structure and performance will be discussed in this class.
 - measures of structure: HHI, CR4, etc.
 - measures of performance: price-cost margin, Tobin's Q
- Market power = ability to charge price above cost (has positive margin).
- Market power comes from high concentration, low price-elasticity, ability to collude.

Some Questions

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

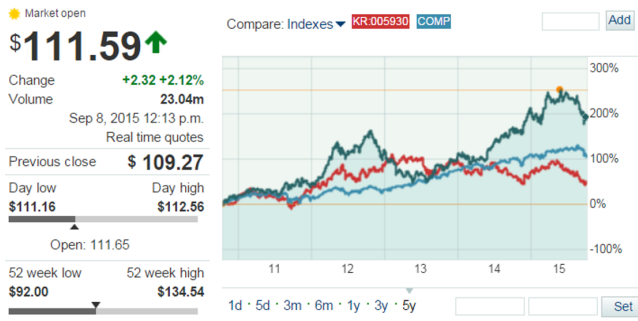


source: <http://www.marketwatch.com>

- May be because their market structures are different (convenient store industry in Thailand is more concentrated than the world's oil exploration and production)?

Some Questions

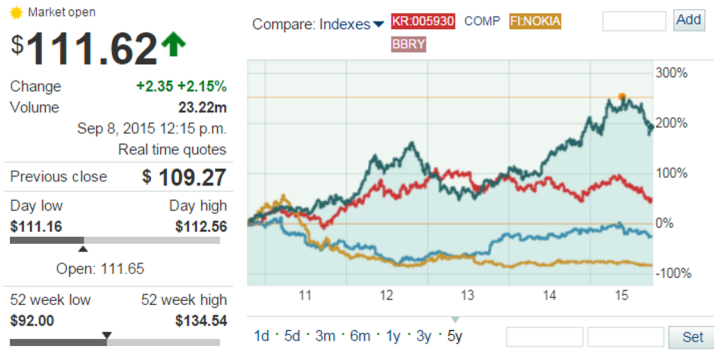
The Smartphone companies (Apple vs. Samsung vs. Nasdaq).



source: <http://www.marketwatch.com>

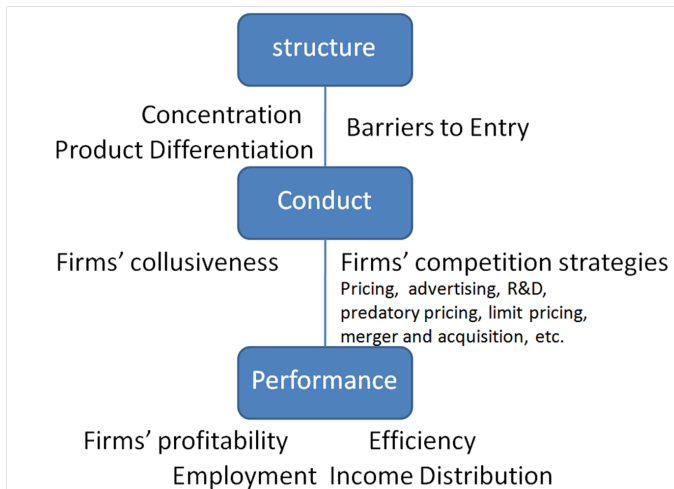
Some Questions

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



source: <http://www.marketwatch.com>

Structure Conduct Performance (SCP)



Measures of Market Structure

- 1 Industry Concentration (number of firms)
- 2 Barriers to Entry (is it easy to enter?)
- 3 Product Differentiation (are all products the same?)
- 4 Unionization (do the workers form a strong labor union?)
- 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
 -
 - Product Differentiation
 - Absolute Cost Advantage
 - Government Regulations

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

Unionization

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- This increase marginal cost and may increase price.
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- 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%	> 95%	98.5%
Buyer Concentration (CR4)	0.0001%		0.0001%
Homogenous Product	no		almost
Barriers to Entry			
Large Plant Scales		yes	yes
Large Investment Costs		yes	yes
Government License	no	no	yes



Conduct (what firms do)

- Collusion
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- Quality Choice
-
- R&D
- Predatory Pricing, Limit Pricing
- Merger and Acquisition
- 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

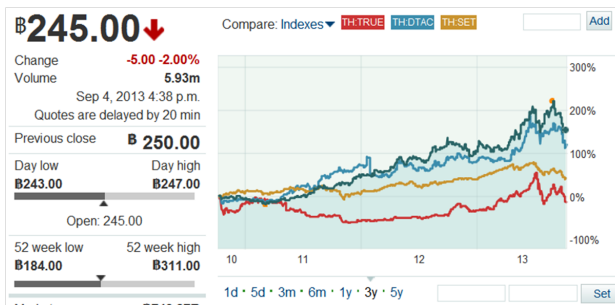
- Market power = ability to charge price above marginal cost.
- π_{SR} is
- π_{LR} reflects whether there is free-entry, not market power.
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Measurements of Market Performance

- Rates of Return - how much is earned per 1 baht (dollar) of investment.
- Lerner's index (or adjusted 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 **price-cost margin**.

Structure vs. Performance

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



source: <http://www.marketwatch.com>

NEIO

NEIO (New Industrial Industrial Organization)

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- 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:

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

Lerner's Index (or adjusted price-cost margin)= _____

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



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Working Paper no.127, U.S. Federal Trade Commission, 1985.