



# EE481: Industrial Economics

## Lecture 1:

### Introduction to Industrial Organization

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# Industrial Organization

Economists have developed a branch of economic analysis called **Industrial Organization** to trace the relationship between the structure of a market and the performance of the firms in that market.

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## What will you learn in this course?

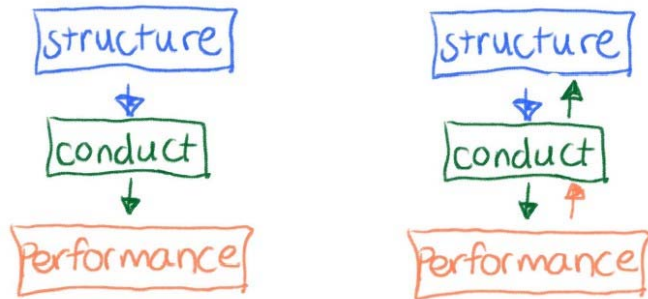
- Learn how to analyze the market structure of an industry
  - Monopoly, duopoly, oligopoly, perfect competition
  - Barriers to entry
  - Product differentiation
  - Vertical integration
- Learn about different competition strategies (conducts) firms adopt to compete
  - Collusion, Merger, Advertising,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

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## Major tools used in this course

- Structure-Conduct-Performance (SCP)
- Price Theory
  - Game Theory  
(von Neumann and Morgenstern (1944))
  - Transaction Costs Analysis  
[Ronald H. Coase (1937), Oliver Williamson (1975)]
  - Contestable Market Analysis  
[Demsetz (1968), Baumol, Panzar, and Willing (1982)]

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## Structure, Conduct, and Performance

Markets have three elements that may be the focus of public policy: structure, conduct, and performance

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## Structure

The **structure** of a market is the set of conditions and characteristics that describe and define the market type. To describe market structure, economists consider

- the number and size distribution of firms;
- The number and size of buyers of the industry's product;
- Price and cross price elasticity of demand
- the effectiveness of barriers to entry;
- the extent of product differentiation / product branding

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- The degree to which an industry is vertically integrated up and down the supply chain. (e.g. forward and backward vertical integration)
- The market share of the largest businesses (measured by the concentration ratio)
- The nature of costs in the short and long run
- The turnover of customers from one seller to another (also called "market churn") – this is affected by brand loyalty and the effects of advertising and marketing

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# Market Structures

Perfect Competition    Monopolistic Competition    Oligopoly    Pure Monopoly

No. and Size of Firm

Extent of Product Differentiation

Barriers to Entry

# Defining the market

- Market and the industry are terms often used interchangeably
- But.....
  - If we define a market in a narrow sense, it is likely that there will be fewer producers
    - E.g. the market for snooker tables or the market for air travel to Chiangmai
  - A broader definition of the market often gives us more choice
    - E.g. the air transport industry
    - The market for sports footwear
  - Defining the market is important when we try to measure the concentration ratio and the extent to which a market is dominated by one or a few large producers

# The Conduct / Behaviour of Firms

**Conduct** refers to the behavior, policies, and strategies used by the firms in the industry. To describe firms' conduct, economists consider the strategies used by firms as they affect

- pricing;
- production;
- promotion; and
- distribution
- How does **market structure** affect pricing, output and other decisions of businesses within the market
- Are there dominant firms?

# Conduct / Behavior of firms

- Is there evidence of anti-competitive behaviour?
  - Collusive pricing agreements
  - Predatory pricing?
  - Vertical restraint?
- How important is non-price competition in the market?
- Is there **interdependence** between firms?
- Do businesses behave strategically to retain profits by deterring the entry of new competitors in the long run?
- Be aware that the market structure will affect the behaviour of firms

## Performance

**Performance** refers to the economic outcomes that result from the market structure and the firms' conduct. To evaluate an industry's performance, economists consider

- allocation efficiency;
- production efficiency;
- equity; and
- technological advancement.

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## The Firm | Definition and Objective

- A firm
  
- The objective of a Firm

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## The Firm | Ownership and Control

- Three Basic Forms of Ownership
  - Sole proprietorships - owned by 1 owner
  
  - Partnerships - owned by multiple owners
  
  - Corporations - companies whose capital is divided into shares. A corporation raises funds through two channels
    - > from shareholders (equity owners)
    - > from debt holders (banks, people who buy the company's corporate bonds)

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## The Firm | Separation of Ownership and Control

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The Firm | Separation of Ownership and Control

Cost Concepts | Types of Costs

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## Cost Concepts | Types of Costs

Output	<i>F</i>	<i>AFC</i>	<i>VC</i>	<i>AVC</i>	<i>TC</i>	<i>ATC</i>	<i>MC</i>
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	

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## The Short Run Vs. The Long Run

- The Short Run
  
- The Long Run

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## Economies of Scale : slope of AC curve

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## Economies of Scope

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

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## Reference and Further Reading

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- Church, J. and R. Ware.  
Industrial Organization: A Strategic  
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