Market Structure, Conduct, and Performance Model
(11/12/09)

Government Oversight/Regulation

Market Structure
• # of Buyers and Sellers
• Product Similarity
• Ease of Entry/Exit
• Info Available

Market Conduct
• Price Decisions (product development, advertising/promotion)
• Non Price Decisions
• Quantity Decisions

Market Performance
• Pricing Efficiency
• Operational Efficiency
• Distribution
• Consumer Preferences
• Information

Market Structure, Concentration, and Market Power
Economists evaluate the degree of “concentration” in analyzing market structure and assessing its impact on market conduct and performance

What is concentration?
a measure of the relative size (and thus market power) of an industry’s largest firms

What is market power?
a firm is said to possess market power if it is able to raise (lower) its price as a seller (as a buyer) above (below) competitive levels - characteristic of firms who can restrict entry and possess a high degree of concentration

Concentration Ratios
• To evaluate the degree of concentration, economists calculate the percentage of market share possessed by the largest firms.
• For example, a “CRn” represents the percentage of industry sales (or purchases) made by its four largest firms. What does a CRn measure?

Concentration
• A CRn greater than 50% is customarily regarded as evidence of a concentrated industry - one to which an oligopolistic (or oligopsonist) model best applies.
• Currently more than one-half of the food processing industries have a CRn over 50%.
• Sometimes an individual firm is both an oligopsonist (among a few buyers of a farm product) and an oligopolist (among a few sellers of a consumer product)

Concentration on the Buying (Procurement) Side
• Typically there is more concentration in the buying side than on the selling side. Example include:
  • Hogs - top four firms buy around 70%
  • Beef - top four firms buy around 80%
  • Tobacco - top 4 firms buy around 90%
Selected Major Multinational Food/Tobacco Processors/Manufacturers

- Con Agra – food processor and food manufacturer
- Cargill – food production and processing, commodity trading, feed production, fertilizer production
- ADM – food, fuel, grain buyer
- Delmonte/Kraft – major food processors/manufacturers

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Market Conduct Under Various Market Structures

- Pure Competition
  - No conduct variables to evaluate
- Pure Monopoly
  - No conduct variables to evaluate unless goal is not to maximize profit
- Monopolistic Competition
  - Compete some on price, but more on non-price competition (packaging, promotion, new product development, services)
- Oligopoly
  - Recognized interdependence... leads to indeterminate price and quantity variables

Oligopolist’s Pricing Strategies

- Kinked Demand Model – rigid or ‘sticky’ prices, compete more with other non-price competition variables
- Price Leadership Model – prices established by one dominant firm with others following
- Cartel Pricing – formal agreements (collusion) to set price, quantity and/or other conduct variables
- Predatory Pricing – pricing below cost to sacrifice short-term profits in order to eliminate rivals
- Game Theory – evaluating outcomes of various “games” or decisions that firms make in competition with each other

Oligopolist’s Product Strategies

- The question changes from can I change my price to increase profits to:
  - Can I change quality or services to enhance profits?
  - Can I increase advertising to enhance profits?
  - Will increase R/D expenditures enhance long-term profits

Referred to as non-price competition
Product Differentiation

- Physical and psychological quality differences perceived by the consumer
  - Bayer vs Generic Aspirin
  - American Eagle Jeans vs Levis, vs Walmart
  - Brand-Name Cereal vs Private Label Cereal
  - Dodge vs Chevy vs Ford truck
  - Marlboro vs Kentucky Best
  - Kentucky vs Mexican Tomato
  - Kentucky vs Florida-bred horses

Product Differentiation

- Physical and psychological differences perceived by the consumer
- Services/Reputation
  - Grocery Store
  - Restaurants

Product Differentiation

- Physical and psychological differences perceived by the consumer
- Services/Reputation
- Advertising
  - Firms are attempting to modify consumer preferences
  - What are the benefits/goals related to advertising?

Advertising Goals/Benefits

- Increase consumer information (i.e., reduce search costs on product price and or quality)
- Enhance firm/industry profits, prices, market share and market power.
- Impact the Demand Curve? How?

Impact of Effective Quality Changes and or Effective Advertising Campaigns

Decision Rule

- Increase advertising (or quality improvements or R/D) up to the point where the addition to revenue is just equal to the additional cost
- However one must evaluate these changes over a specific time period
**Issues in Advertising**

- Is the message accurate?
- What impact does it have on consumer prices? (Do the benefits of increased information to consumers outweigh the cost of higher prices)?
- What impact does advertising have on competition? Successful advertising permits the growth of firms and markets but the number of competing firms may decline affecting the degree of market competition and pricing efficiency in the long-run.
- Does it create new, unnecessary demand? Do firms not only create products, but create the demand for the product?
- Does society benefit in the long run?

**Types of Advertising**

- **Brand name**
  - Coke vs Pepsi, Bud vs Miller, Jiff vs Peter Pan, Ford vs Chevy
  - Attempts to increase market share of the product
  - Attempts to shift and alter the slope of the demand curve

**Generic or Commodity Advertising**

- **Generic**
  - Instead of advertising a particular brand name (e.g., Jiff PB vs. Skippy or Minute Maid, Tropicana orange juice, advertising is directed to an entire product (e.g. peanuts, oranges)
  - Attempts to increase the entire market (not to affect firm competition) to enhance producer profits by shifting both the primary and derived demand to the right - thus may not alter the slope of the demand curve

- Examples of Promotional Check-off Programs with Agriculture
  - Beef, Pork, Poultry, Dairy, Milk, Wool/Cotton, Peanuts, Fruits and Vegetables, Almonds, Oranges

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**Efficiency**

- **Operational or Technical Efficiency**
  - Does price occur at the minimum of the average total cost curve (ATC)?
  - Are economies of scale exhausted?
  - How does operational efficiency compare in concentrated vs. less concentrated industries?

**Economies of Scale**

Which one of these industries/market structure is more operational efficient? How about which one is producing at the lowest cost?
Efficiency

- Operational or Technical Efficiency
- Pricing Efficiency
  - Does $P = MR = MC$?
  - If Price is greater than MC how much degree of pricing inefficiency is acceptable to gain the benefits of imperfect competition markets?

Does $P = MR = MC$?

If Price is greater than MC how much degree of pricing inefficiency is acceptable to gain the benefits of imperfect competition markets?

Perfect Competition-- Individual Producer

The perfect competition model generates the maximum degree of pricing efficiency since $P = MC$

Producer Price Determination Under Imperfect Competition Models

Profit maximization for monopoly, monopolistic competition, and oligopoly models occurs where: $P > MC$ (i.e., pricing inefficiency)

Efficiency

- Operational or Technical Efficiency
- Pricing Efficiency
- Profit Levels
  - Profits must to entice owners, firms, stockholders to remain in the sector
  - What is an acceptable level of profits?
  - Are profit levels generally higher in concentrated industries?
  - Are profit levels generally higher in industries that have higher barriers to entry?

Benefits and Concerns of Imperfect Competition

Benefits
- Product Variety
- Economies of Scale can lead to lower prices
- Product innovation

Concerns
- Market power lead to lower producer prices and higher consumer prices?
- Limits entry/innovation of new firms?
- Excess capacity?
- Excessive advertising?
- Limited Information?
- Limited R&D
- Excessive profits?

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Government Intervention to Address Market Structure, Conduct and Performance

- If the government perceives a misallocation of scarce resources that results in a poor performance by an industry, it may develop policies or regulations that:
  - **Affect the industry’s market structure**
    - Dissolution of firms, subsidies to protect domestic producers, tax incentives to entice new firms to enter
  - **Affect the industry’s market conduct**
    - Prohibit price fixing, limit advertising, require labeling, prohibit the sale of certain products, affect the design of certain products
  - **Affect industry’s performance**
    - Reduce/redistribute profit levels, limit price increases, induce more competition to improve pricing and operational efficiencies

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**Tobacco Market Structure, Conduct and Performance**

- **Tobacco Farmers** 10,000
- **Tobacco Companies** 3 Major Companies
- **Tobacco Consumers** 45 Million

**Government Intervention/Regulation**

- *Do Tobacco Companies Exert Oligopoly/Oligopsony Market Power?*
- *Does Government Intervention Protect Consumers?*
  - advertising
  - product regulation
  - taxation
  - education
  - merger activity
- *What About Producers?*—formerly heavily involved with a production control/price support system, grading, market information, export promotion, etc… all wiped out by government action to end the tobacco program…. New concern about the degree of market power that the 3 major tobacco companies may have now over producers

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**Next Week/ Exam Resource/ Next Week**

- The Agricultural Competition Enhancement Act of 2007
- For Exam III – 5 questions from the following article
- Read Chapter 8 on Price Discovery