Imperfect Competition Market Structure Models (11/10/09)

Today: Oligopoly and Monopsony/Oligopsony

Thursday: Market Structure, Conduct and Performance Model

Exam III 24th

Oligopoly

- Few sellers who may be selling homogenous or differentiated products in a market that has effective entry barriers (patents, control of inputs, start-up costs, economies of scale, brand name recognition) and whose actions have an impact on each other.
- Key term is strategic interdependence ... if I change my price, my advertising, my product, my plant, etc, will that cause other firms to react? ... often leads to rigid prices, non-price competition (advertising, product differentiation, mergers, collusion)
- Examples – airlines, automobile mfgs, cigarette companies, beer companies, soft drinks companies, cereal companies, grocery stores
- Unlike perfect competition and monopoly models, oligopolies do not have a “unique” market structure model

Comparisons of Industry Market Structures

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Perfect Competition</th>
<th>Monopolistic Competition</th>
<th>Oligopoly</th>
<th>Monopoly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Buyers/Sellers</td>
<td>Very large #</td>
<td>Many</td>
<td>Few</td>
<td>One</td>
</tr>
<tr>
<td>(very large number, many, few, one)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Differentiation</td>
<td>Homogenous</td>
<td>Slightly Differentiated</td>
<td>Homogeneous or Differentiated</td>
<td>Unique</td>
</tr>
<tr>
<td>(Homogeneous, Slightly Differentiated, Unique)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of Entry/Exit</td>
<td>Easy</td>
<td>Relatively Easy</td>
<td>Difficult</td>
<td>Blocked or Closed</td>
</tr>
<tr>
<td>(Easy, Relatively Easy Difficult, Difficult, Closed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of Info Available to Competitors</td>
<td>Perfect</td>
<td>A Lot</td>
<td>Limited</td>
<td>None, Unless Regulated</td>
</tr>
<tr>
<td>(Perfect, A lot, Limited, None)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence on Price</td>
<td>No Price Taker</td>
<td>Yes, But Ltd by # of Substitutes</td>
<td>Yes, But Regulated</td>
<td>Yes Price Maker</td>
</tr>
<tr>
<td>(yes or no)</td>
<td></td>
<td></td>
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</tbody>
</table>

Different Types of Pricing Behavior Within Oligopoly Markets

- Price leadership
- Price Rigidity
- Predatory pricing
- Cartels
- Game Theory

Price Leadership Model

One dominant firm sets the price and all other firms follow?

Can you think of industries where this model applies?

Kinked Demand Model

What happens if a seller decides to decrease price along the inelastic portion of the demand curve?

Kinked demand model indicates that prices in oligopoly markets are often very sticky ... compete more on non-price competition

What happens if a seller decides to increase price along the elastic portion of the demand curve?

AEC 305, Food and Agricultural Marketing Principles
Predatory Pricing

- Deliberate attempts by one firm to sell products at less than the cost of production in hopes of increasing its market share and gaining a longer-term market (Schirmper)
- This action may force other firms to lower their prices to survive and result in a price war
- Consumers benefit in the short-run, but may be hurt in the long-run

Cartels

- A group of firms using formal or informal arrangements to act as a single entity in controlling price and/or total volume of business
- Examples include?
- Market collusion is illegal in the U.S.

Game Theory - Soft Drink Advertising

<table>
<thead>
<tr>
<th></th>
<th>OmniCola</th>
<th>Join-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ads</td>
<td>Ads</td>
<td>No Ads</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ads</td>
<td>No Ads</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>250</td>
</tr>
</tbody>
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Game Theory reveals the choices and outcomes of a competitive decision variable among two firms ... illustrates that two firms cooperating through collusion are better off than if they compete.

Source: AmosWeb Economics Encyclopedia

The “Good” and “Bad” of Oligopoly

“Good”

- Product Innovations
  - Motive - strategic interdependencies
  - Opportunity - sufficient resources
- Economies of Scale
  - Large size (through mergers, take-overs, innovations, basic economics) leads to cost efficiencies

“Bad”

- Inefficiencies - charges a price greater than it’s marginal cost and produces less than a firm in perfect competition
- Concentration in wealth and income as a result of enhanced market power

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<tr>
<td>Price Maker</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-Price Competition -- Advertising -- Product Dev. -- Barriers to Entry</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Relationship of Price to Marginal Revenue and Marginal Cost at Profit Max Quantity</td>
<td>P = MR = MC</td>
<td>P &gt; MR &gt; MC</td>
<td>P &gt; MR &gt; MC</td>
<td>P &gt; MR = MC</td>
</tr>
<tr>
<td>Producing at the Minimum Avg Total Cost Level?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Degree of Market Power</td>
<td>None</td>
<td>Limited</td>
<td>Strong</td>
<td>Total</td>
</tr>
</tbody>
</table>
Price Discrimination

- Under some conditions, a firm/cooperative with monopoly market power can enhance revenue by charging different prices for the same product in different markets.
- Must be able to identify and separate different markets.
- Price elasticities of demand must differ among the markets.

Price Discrimination Examples

- Price Discrimination Based on Age (Senior Citizen Prices, College Night at the Ballpark)
- Price Discrimination Based on Time (e.g., Theater Ticket Prices, Airline Travel, Early Bird Dinner Specials)
- Within Agriculture ... 2 tier peanut pricing where different prices in the export market than in the domestic market.

Price Discrimination (cont.)

- Profit maximization occurs by shifting quantities among markets until the marginal revenue of selling the last unit in each market is identical.
- Given different price elasticities of demand, which market will charge the highest price?

Price Discrimination Among Markets

![Graph showing marginal revenue and supply curves for different markets]

Alternative Market Structures

**Seller Side**
- Perfect Competition/Competitive
- Monopolistic Competition
- Oligopoly
- Monopoly

**Buyer Side**
- Perfect Competition/Competitive
- Monopsonistic Competition
- Oligopsony
- Monopsony

Perfect Competition on the Buying Side

With many buyers who are so small relative to the entire market (i.e., no market power) the individual buyer's supply curve is perfectly elastic ... leading to each price offered being equivalent no matter the quantity demanded.

![Graph showing demand and supply curves for a perfect competition market]
Imperfect Competition on the Buying Side

- **Monopsony** – single buyer
- **Oligopsony** – few buyers who closely monitor and react to the purchasing behavior of their competitors
- **Monopsonistic Competition** – a larger number of buyers who compete more on offering services than on price competition ...
- In all cases, buyers have some degree of market power who generally offer a lower price to sellers than what they could receive if there were a larger number of buyers who bid competitively.

**Buyer Price Determination Within a Monopsony Market Structure**

Monopsonist faces an upward sloping supply which is the market supply curve

Monopsonist has control over setting quantity and price (price setter) ...
(Note: \( P < MC = MRP \))

**Examples of Imperfect Competition on the Buying Side in Agriculture**

- Minimal number of grain elevators in a large geographic area
- Tobacco markets
- Poultry
- Hogs
- Local cattle markets
- A limited number of contracting firms for local fruits and vegetables

**Imperfect Competition on the Buying Side**

- With increased concentration in U.S. agribusiness, U.S. farmers are discovering a reduction in the number of buyers, raising concerns over the degree of competition in the marketplace.
- Agribusiness counters that the larger size allow them to have a lower overall cost structure (economies of scale) which enables them to pay producers more and their product promotion efforts (both domestically and internationally offers a bigger overall market for producer’s products.)
Summary of Imperfect Competition in Ag Marketing

Agriculture has traditionally been described as an industry with a lot of examples for perfect competition (large number of buyers and sellers selling/buying homogenous goods, with ease of entry and exit). Still, examples exist where ag firms buy and sell in imperfect competitive markets.

- Hormone-free beef
- Organic fruits and vegetables... even tobacco products
- Free-range chickens
- High oil corn
- Genetically modified crops

This leads to market power. How do you measure this? Is this good or bad for society?

Market Structure, Conduct, and Performance

- Government Oversight/Regulation
- Market Structure
  - # of Buyers and Sellers
  - Product Similarity
  - Ease of Entry/Exit
  - Info Available
- Market Conduct
  - Price Decisions
  - Non-Price Decisions (product development, advertising/promotion)
  - Quantity Decisions
- Market Performance
  - Pricing Efficiency
  - Operational Efficiency
  - Profits/Distribution
  - Consumer Preferences
  - Information

http://www.oligopolywatch.com/
http://search.yahoo.com/search;_ylt=A0geus7UXPhKxmkBPM1XNyoA?p=concentration+in+agriculture&vst=0&vs=youtube.com&ei=UTF-8&fr=yfp-t-701

AEC 305, Food and Agricultural Marketing Principles