MARKET STRUCTURE

• Types of Market Structure:
  – Perfect Competition
  – Monopolistic Competition
  – Oligopoly, Oligopsony
  – Monopoly, Monopsony

MARKET STRUCTURE

• Market Structure Characteristics:
  – Number of firms
  – Nature of product
  – Entry and exit conditions
  – Individual firm’s influence on price
  – Status of knowledge

MARKET STRUCTURE

• Perfect Competition:
  – Large number of buyers and sellers
  – No product differentiation
  – Low barriers to entry and exit
  – Firms are price takers
  – Perfect and equal information
MARKET STRUCTURE

• Perfect Competition:
  – High efficiency (i.e., low costs) essential to increase profits
  – No perception of “horizontal” competition
  – Marketing decisions simplify to time & place

MARKET STRUCTURE

• Monopoly (Monopsony):
  – One seller (one buyer)
  – Product differentiation ??
  – Blocked entry and exit
  – Monopoly (monopsony) sets price
  – Monopoly (monopsony) has better information than buyers (sellers)

MARKET STRUCTURE

• Monopoly (Monopsony):
  – Profitable even if not efficient
  – Success depends on:
    • Barriers to entry
    • Closeness of substitutes
      – Transportation costs may be an issue
MARKET STRUCTURE

• Oligopoly (Oligopsony):
  – Few sellers (buyers)
  – Firms differentiate products
  – High barriers to entry and exit
  – Firms can influence price
  – Oligopolists (oligopsonists) tend to have better information than buyers (sellers)

MARKET STRUCTURE

• Oligopoly (Oligopsony):
  – The fewer the firms, the greater the incentive to collude (“cartels”)
  – Some “cartels” sponsored by governments
    • Example: OPEC (Org. of Petroleum Exporting Countries)
  – “Cartels” are illegal in the U.S.

MARKET STRUCTURE

• Monopolistic Competition
  – Between perfect competition and oligopoly/oligopsony
  – Firms try to achieve some control on prices by differentiating products, but are limited by close substitutes
  – Emphasis on non-price competition
Workable Competition

- Enough buyers and sellers to provide alternatives
- No one can coerce a rival
- Firms respond to profit and loss
- No collusion
- Enough entry and exit for rivals to challenge
- Free access of buyers and sellers

MARKET STRUCTURE

Why care?

- Society’s standpoint
  - Under certain conditions, perfect competition yields maximum benefit to society
  - Uncompetitive markets reduce economic welfare

MARKET STRUCTURE

Why care?

- Private standpoint
  - Any individual firm is better off by having market power
  - BUT any individual firm or consumer is worse off by facing firms with market power
MARKET STRUCTURE

• Rough measures of market structure are “concentration ratios”:
  – CR4 is 4-firm concentration ratio (i.e., market share by 4 largest firms)
    – Strong oligopoly: CR4 > 50%
    – Weak oligopoly: CR4 = 33%-50%
    – Unconcentrated: CR4 < 33%

MARKET STRUCTURE

• CR4 in agriculture:
  – Breakfast cereal 85
  – Steer and heifer slaughter 80
  – Soybean mills 71
  – Cattle slaughter 67
  – Hog slaughter 56
  – Poultry processing 34
  – Fluid milk 22

Concentration and Market Definition

• Structure depends on how you define the market (time, place, form)
  – Iowa steer and heifer slaughter
  – US steer and heifer slaughter
  – US cattle slaughter
  – All livestock slaughter
  – All protein production
Largest Firms

• **Beef:**
  – Tyson/IBP, Excel/Cargill, Swift/Conagra, National, Smithfield

• **Pork:**
  – Smithfield, Tyson/IBP, Excel/Cargill, Swift, Hormel

• **Grain Handling:**
  – ADM, Cargill, Bunge, Conex Harvest States, Peavey/Conagra

• **Ag Chemicals:**
  – Bayer CropScience (Aventis), Syngenta, Monsanto, BASF, Dow Agrosciences

• **Seeds:**
  – DuPont (Pioneer), Monsanto, Syngenta, Groupe Limagrain, Grupo Pulsar

Concentration summary

• More narrowly defined markets are more concentrated
• Vertical integration is *not* concentration
• Economies of scale
  – Plant or firm level economies
  – May drive concentration

TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• Major trends in agricultural market organization:
  – Specialization/Diversification
  – Decentralization
  – Integration
TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• SPECIALIZATION
  – Issues:
    • Economies of scale from greater operational efficiency
    • Market power

• SPECIALIZATION
  – Implications:
    • Increased interdependency of producers, marketing firms, and consumers
    • Increased volume exchanged and thereby increased importance of marketing activity
    • Fewer firms in each industry

TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• DIVERSIFICATION
  – Advantages:
    • Economies of scope
    • Avoid antitrust regulations
    • Continue growth after exhausting economies of scale
    • Risk reduction
TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• DECENTRALIZATION:

   Movement of commodities directly from farms to processors and wholesalers, skipping central/terminal markets

• DECENTRALIZATION

   Implications:
   • **Operational efficiency**: Decentralized markets are cheaper to operate (reduced handling, transportation, shrinkage, congestion)

• DECENTRALIZATION

   Implications
   • **Pricing efficiency**: Centralized markets are closer to perfect competition (large number of buyers and sellers, great amount of public information generated, homogeneous graded products)
   • Problems when using quotations from thin terminal markets to price decentralized sales (e.g., terminal markets have “residual” supply and few buyers)
TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• INTEGRATION:
  Expansion of firms by consolidating additional marketing functions and activities under a single management

TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• Vertical integration:
  A firm combines activities unlike those it currently performs but that are related to them in the sequence of marketing activities (e.g., meat packer deciding to operate meat wholesaling establishment)

Vertical Integration

- Consumer
- Retailer
- Wholesaler
- Processor
- First Handler
- Producer
- Inputs

Example: HyVee owns PDI, a wholesaler
Example: Smithfield is the largest pork processor and largest hog producer in the US
Example: Cargill is a grain processor, has country elevators, and owns controlling interest in fertilizer manufacturer
TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• Horizontal integration:
  A firm performs similar activities at the same level in the marketing sequence (e.g., retail chains)

Horizontal Integration

- Consumer
- Retailer
- Wholesaler
  - John Morrell
  - Farmland
- First Handler
- Producer
- Inputs

TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• Conglomerate integration:
  Activities that do not have direct relation to the activity of the individual firm are brought under a unified management (e.g., addition of nonfood lines by food retailer)
• Walmart enters retail grocery market
TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• Ownership integration (M&A):
  All the decisions and assets of one firm are completely assumed by another

TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• Contract integration:
  Agreement between two firms on certain decisions, with each firm retaining its separate identity

TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• INTEGRATION:
  – Advantages:
    • Vertical integration: substitutes administered coordination for market coordination (prices may not coordinate markets well)
    • Horizontal integration: market power, reduce competition, economies of size/scope.
    • Conglomerated: risk reduction, empire-building, cross subsidization?
TRENDS IN ORGANIZATION OF AGRICULTURAL MARKETS

• INTEGRATION:
  – Implications:
    • Operational Efficiency
    • Pricing Efficiency: Price discovery becomes more difficult.
    • Disadvantage to customers and competitors that must deal with a firm with greater market power and economies of scale