What does theory tell us about the outcomes?
Which best describes the food system?

**Industrial Organization**

A body of economic research that studies how firms and markets are "organized", how they interact, and how that interaction affects market outcomes, and ultimately society's welfare.

**Structure-Conduct-Performance Model**

**The Industrial Organization Framework**

*Structure-Conduct-Performance*

- Public Policy
- Structure → Conduct → Performance
- Basic Conditions
- Firm Decision Environment
### IO History 101...

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>IO Beginnings</td>
</tr>
<tr>
<td></td>
<td>Case studies of diversely structured industries (Mason)</td>
</tr>
<tr>
<td></td>
<td>Generalizations about structure-performance relationship</td>
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<tr>
<td>1950's</td>
<td>Ongoing argument develops</td>
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<tr>
<td></td>
<td>Market power (Bain, Means, Kaysen)</td>
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<tr>
<td></td>
<td>Efficiency (Schumpeter, Stigler, Adelman, later Demsetz)</td>
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<tr>
<td>1960's</td>
<td>Empirical cross-sectional studies multiplied...Concentration = Bad!</td>
</tr>
<tr>
<td>1970's</td>
<td>Firm behavior, political power, income distribution, information, x-inefficiency</td>
</tr>
<tr>
<td></td>
<td>Growing discontent with SCP empirical approaches</td>
</tr>
<tr>
<td></td>
<td>Game theory development in economics literature</td>
</tr>
</tbody>
</table>

### IO History 101...

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
<td>1980's</td>
<td>New Empirical Industrial Organization (NEIO)</td>
</tr>
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<td></td>
<td>Game theory</td>
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<td></td>
<td>Heavy reliance on microeconomic theory as basis for modeling</td>
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<tr>
<td>1990's</td>
<td>Ongoing debate between SCP “traditionalists” and NEIO empiricists</td>
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<tr>
<td>2000 and beyond</td>
<td>More blending of traditional and NEIO, both conceptually and in modeling</td>
</tr>
<tr>
<td></td>
<td>Impact on and relationship with vertical linkages</td>
</tr>
</tbody>
</table>

*“If we knew what it was we were doing, it would not be called research, would it?”*  

*Albert Einstein*
An Issue of Power

What does society want?
How do we achieve what society wants?
How do we measure "power"?
Indicators of potential power
  1. 4 Firm Concentration Ratio
     % industry sales by 4 top firms
  2. Herfindahl-Hirshman Index
     Concentration & Distribution

How much is too much?

Concentration in U.S. Food and Agricultural Processing

Beef Slaughter: CR₄ = 84
Flour milling: CR₄ = 62
Butter: CR₄ = 40
Cheese: CR₄ = 43
Beet sugar: CR₄ = 72
Canned Fruits & Vegetables: CR₄ = 29

Source: USDA

Concentration in U.S. Food Retailing - 2004

5 largest chains — 38% of sales
- Wal-Mart ($116 billion)
- The Kroger Company ($58.2 billion)
- Cosco ($47.2 billion)
- Albertson's ($39.7 billion)
- Safeway Stores, Inc. ($35.6 billion)

Source: Supermarket News
A Horizontal Indicator of Vertical Behavior?

Does "largeness" allow paying less than competitive prices to suppliers? Or overpricing output to purchasers?

Does "largeness" allow the gain of lower costs through economies of scale?

Does "largeness" facilitate/dictate transaction choices that differ from traditional spot market?

What is the overall impact on society?

---

Basic Conditions

Economic characteristics that shape the market environment

- Geographic Distribution
- Market cycles
- Information availability
- Economies of scale

- Supply Factors
  - Elasticities
  - Supply
  - Input demand
  - Uncertainties
  - Technology
  - Production cycle length

- Demand Factors
  - Elasticities
  - Price
  - Income
  - Substitutes
  - Market growth rate

---

Public Policy

- Taxes & Subsidies
  - Corporate tax structure
  - Farm programs
- Int’l trade rules
- Regulation
  - HACCP
  - Environmental
- Price controls

- Antitrust
  - Degree of enforcement
  - Political environment
- Information provision
  - Food labeling
  - FDA approval
  - Grades and Standards
### Structure

*The market environment that influences the rivalry among buyers/sellers*

- # of buyers & sellers
- Market shares
- Cost structure
- Capital intensity
- Product characteristics
- Vertical Relationships
- Capacity
- Specialization
- Collective Action
- Entry & exit conditions
- Financing characteristics

### A New Language...

- Oligonomy
- Competition Matrix
- Pseudo-Variety

Source: www.oligopsonywatch.com

### The Rise of Oligonomies?

- Market sectors in which the same companies are both oligopolies and oligopsonies.
  - EX: Culinary herbs
  - Simple oligopoly – a few firms act like the gatekeepers between producers and retailers.

- Do oligopolies breed oligopsonies? Do oligopsonies breed oligopolies?
  - Tiered oligonomy

Source: www.oligopolywatch.com
A Chocolate Oligonomy?

Cocoa Growers  
Oligopsony for cocoa beans

Cocoa Processors (ADM, Cargill)  
Oligopoly for processed cocoa

Chocolate Makers (Kraft, Nestle, Mars, Hershey)  
Oligopoly for chocolate candy

Key Retailers (Wal-Mart, Safeway, CVS)  
Partial oligopsony for chocolate candy

Candy Eater  
Partial oligopoly for chocolate candy

www.oligopolywatch.com

Conduct

Actions of firms within the market, acting either independently or together

- U Pricing Behavior
- U Product Strategy
- U Advertising
- U Research & Innovation
- U Collusion
- UMergers & Divestures
- UInformation use
- UExchange terms
- ULegal tactics

Firm Decision Environment

- U Alternatives
- U Incentives
- U Control & influence
  - XCorporate structure
  - XConsistency between owners’ goals and management goals