



## Subsector Approach to Vertical Coordination

- Origins & Objectives
- Basic Concepts
- Relationship to the Principal/Agent Problem
- Subsector Performance Dimensions
- Methods of Coordination
  - Price Discovery Methods
  - Coordination methods that are complementary to pricing



## Subsector Definition

- "The vertical set of activities in the production and distribution of a closely related set of commodities." Shaffer, 1968.
- "An interdependent array of organizations, resources, laws, and institutions involved in producing, processing and distributing an agricultural commodity." Marion et al., 1986.



## Subsector Definition

- Thus, a subsector can be viewed as:
  - A set of activities
  - A related set of rules governing those activities
  - A conceptual way of viewing a problem of economic organization
  - A way of organizing research



## Vertical Coordination

- "All the ways of harmonizing the vertical stages of production and marketing."  
Mighell and Jones, 1963.
- "The sufficiency of the system of prices and other mechanisms as carriers of information and incentives and directors of the allocation of resources in a subsector." Marion et al., 1986.



## Vertical Coordination

- Two types of vertical coordination:
  - Synchronization – static
  - Adaptation – dynamic
- Possible conflicts between the two?



## Stage of Production

- "Any operating process capable of producing a saleable product or service under appropriate circumstances."  
Mighell and Jones, 1963.



## Channel Captain

- Actor in the subsector who takes a major initiative in developing arrangements for improved vertical coordination.



## Vertical Coordination as Incentive Alignment

- Example of a very broad issue in economics
- Typically framed as a principal-agent model:
  - Principal is “owner” of a resource
  - Agent is the manager of the resource



## Principal-Agent Problem

- How to make the incentives of the agent consistent with the objectives of the principal, given asymmetric and costly information?
- Problem arises because of:
  - Conflict of interest between P and A
  - Monitoring takes resources
  - Relying just on observations of outcomes subject to “noise”



## Principal-Agent Problem

- Examples
- Possible solutions:
  - Monitoring
  - Contract design (especially the role of “residual claims”)
  - Reputation (repeat games)



## 5 Key Concepts of Subsector Analysis

- Verticality
- Effective Demand
- Coordination within Channels
- Competition between Channels
- Leverage



## Subsector Performance Dimensions

- Similar approach to IO--e.g., efficiency, equity, progressiveness....
- Efficiency:
  - Synchronization—exchange efficiency & transaction costs
  - Adaptation—dynamics; progressiveness
- Equity: Access to Markets and to Information



## Methods of Price Discovery

- Auctions
- Private Treaty
- Administered Pricing
- Formula Pricing



## Coordination Methods that Complement Pricing

- 5 elements of a transaction
  - Negotiation
  - Transfer of ownership
  - Establishing a price
  - Physical delivery
  - Monitoring and enforcement
- Do you combine or separate these elements when trading?



## Ways of Carrying Out the Transaction

- Terminal markets
- Direct marketing
- Electronic marketing
- Contract coordination
  - Market Specification
  - Production Management
  - Resource Providing



## Ways of Carrying Out the Transaction (cont'd.)

- Vertical integration
- Cooperatives
  - Bargaining
  - Cooperative integration