Chapter 7

Vertical Integration and Outsourcing

The Employment Relationship

Employees’ duties as per the U.S. legal system
- Duty of obedience
- Duty of loyalty
- Duty of disclosure
- Unlike market suppliers, employers are liable for actions of their employees

Transaction Cost Theory

- Contracts are incomplete because contingencies in a supply relationship cannot be specified in advance
- Two basic conditions in combination lead to vertical integration
  - Supplier invests in assets specialized to the firm, increasing the supplier’s bargaining power
  - Contract incompleteness is increased by uncertainty in the supply relationship, providing the supplier with opportunities to use its bargaining power
    - Uncertainty can be due to:
      - Volatility in downstream demand or volume
      - Changes in technology
      - Shifts in input market prices or volume

The Property Rights Approach

- A firm vertically integrates because it has more to gain from owning and operating the activity than the market supplier
- Theory is most applicable to tradable resources that are not attached to capabilities
  - Difficulty in separating value of asset independent of employees (with specific capabilities) attached to it

Strategy and Control

- A firm wants to control investment decisions in supplier resources and capabilities that are strategically important
- Strategically important activities are more likely to be specialized to the firm

Types of Control Problems

- Distribution of economic gain from the supply relationship
  - Negotiation over price:
    - What is the buyer’s surplus?
    - What is the supplier’s profit?
  - Supplier investment decisions are focused on value and cost
    - Product design
    - Labor
    - Production processes
    - Inputs
  - Supplier incentives
    - Alignment with buyer strategy
    - Supplier handling of sensitive information
The Efficient Boundaries Model

- Compares in-house and market costs as supplier specialization to the buyer increases
- Examines both transaction and production costs
- Assumes that market supply is always more attractive when the input is not customized to the buyer
  - The buyer incurs bureaucratic costs that are not present in the market
  - Production costs are much higher in-house

- In-house production becomes more attractive when:
  - Input customization increases and market suppliers use their bargaining power to reduce the firm’s surplus from the input
  - The production cost advantage of market suppliers declines with customization due to a lower volume of purchases reducing scale-based efficiencies

The Efficient Boundaries Model (cont’d)

- The buyer incurs bureaucratic costs that are not present in the market
- Production costs are much higher in-house

Strategic Sourcing Framework

- Derived from the importance of both control needs and relative competence
  - Higher strategic value of an activity increases the need to control it
  - High strategic value does not indicate a firm’s ability to perform an activity better than its suppliers
  - Sometimes a firm can perform a non-strategic activity more competently than suppliers

Strategic Sourcing Framework (cont’d)

- Initial market purchase of a standard input
  - Low buyer competence
  - Low strategic importance
- Rising strategic importance of the input
  - Low buyer competence
  - High strategic importance
- Supplier unable to give the firm the control it needs
  - Partnering fails

Patterns of Vertical Integration I

- Initial market purchase of a standard input
  - Low buyer competence
  - Low strategic importance
- Rising strategic importance of the input
  - Low buyer competence
  - High strategic importance
- Supplier unable to give the firm the control it needs
  - Partnering fails
Patterns of Vertical Integration I
(cont’d)
- The firm vertically integrates as it invests in building capabilities to increase its competence
  - High buyer competence
  - High strategic importance
- Key point: The firm has a strong incentive to continue investing in the activity since it is strategically important

Patterns of Vertical Integration II
- Initial market purchase of a standard input
  - Low buyer competence
  - Low strategic importance
- The firm’s competence rises due to unrelated investments in capabilities
  - High buyer competence
  - Low strategic importance
- The firm vertically integrates even though the input is not strategically important

Patterns of Vertical Integration II
(cont’d)
- Key point: The firm has no incentive to continue investing in the activity since it is not strategically important so over time the firm’s advantage disappears

Patterns of Outsourcing I
- Initial vertical integration of a strategically important activity
  - High buyer competence
  - High strategic importance
- The firm’s competence relative to competitors decreases
  - Low buyer competence
  - High strategic importance
- The firm’s partnership with a market supplier gives it control over investment decisions to support the firm’s market position

Patterns of Outsourcing I (cont’d)
- The partner may fail to cooperate effectively – if so:
  - The firm invests in new capabilities to increase its competence and vertically integrates the activity
  - The firm reduces the strategic importance of the activity and sources the input from a standard market supplier

Patterns of Outsourcing II
- Initial vertical integration of a strategically important activity
  - High buyer competence
  - High strategic importance
- Strategic importance of the input decreases
  - High buyer competence
  - Low strategic importance
- The firm disinvests in the activity
  - Low buyer competence
  - Low strategic importance
- The firm outsources to a competent supplier
Key Points

- Control needs dominate vertical integration decisions
- Control and buyer competence affect outsourcing
- Vertical integration almost always involves a change in the way the activity is executed
  - Otherwise there would be no benefit from increased control
- Vertical integration and outsourcing decisions are always made for an activity or for an asset with associated activities
  - Not for a product or input

Outsourcing to China

- What is driving the China export boom?
  - China has a country advantage in rapidly growing industries, e.g., DVD players, computers, HDTV’s – leading to
  - Non-Chinese firms are replacing non-Chinese suppliers with Chinese firms
    - Lower cost
  - Non-Chinese firms are replacing their own in-house units by outsourcing to Chinese suppliers
  - All are true to some extent, depending on the firm and the industry

Hybrid Sourcing Arrangements

- Vertical integration, outsourcing to a commodity supplier and partnering (a specialized supplier) are only three possible forms of supplier arrangement
- Need to expand the possibilities of ownership (employment relation), control over incentives, and control over the activity
- For example, what about franchising?
  - Also, business units in multi-business firms (e.g., GE) sometimes supply each other
  - These internal supply relationships can be managed differently depending on the type of product (e.g., creative or routine)

Hybrid Sourcing Arrangements

<table>
<thead>
<tr>
<th>Location of Activity</th>
<th>Type of Supplier</th>
<th>Asset Ownership</th>
<th>Productivity Incentives</th>
<th>Firm Influence Over Unit</th>
<th>Supplier Task Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-house unit</td>
<td>Cost center with labor to automatic output and strong non-contribution (e.g., staff support)</td>
<td>Firm</td>
<td>Weak</td>
<td>Strong</td>
<td></td>
</tr>
<tr>
<td>In-house unit</td>
<td>Cost center with easily measured output and weak non-contribution (e.g., piece part manufacturing)</td>
<td>Firm</td>
<td>Strong</td>
<td>Strong</td>
<td></td>
</tr>
<tr>
<td>In-house unit</td>
<td>Cost center with creative output (e.g., R &amp; D)</td>
<td>Firm</td>
<td>Weak</td>
<td>Weak</td>
<td></td>
</tr>
<tr>
<td>Market supplier</td>
<td>Single source partner focused on building reputation</td>
<td>Supplier</td>
<td>Weak</td>
<td>Strong</td>
<td></td>
</tr>
<tr>
<td>Market supplier</td>
<td>Franchise</td>
<td>Supplier</td>
<td>Strong</td>
<td>Strong</td>
<td></td>
</tr>
<tr>
<td>Market supplier</td>
<td>Supplier with creative product (e.g., advertising)</td>
<td>Supplier</td>
<td>Weak</td>
<td>Weak</td>
<td></td>
</tr>
<tr>
<td>Market supplier</td>
<td>Commodity producer</td>
<td>Supplier</td>
<td>Strong</td>
<td>Weak</td>
<td></td>
</tr>
</tbody>
</table>

(adapted from Makadok and Coff, 2008)

Key Observations

- Suppliers of creative input, either inside or outside the firm tend not to be controlled
- Franchises and piece-work employees have similar profiles – high productivity incentives and strong firm control over the task
- In-house profit centers tend to be like commodity producers – strong productivity incentives driven by market competition and weak firm control over the task
- In-house cost centers with measurement problems tend to be like outside partners - weak productivity incentives (to prevent alignment problems) and strong control over the task
Competition Interacts with Uncertainty

- Volume uncertainty
  - Higher volume uncertainty leads to higher levels of vertical integration, especially when competition is weak
- Technological uncertainty
  - Higher levels of technological uncertainty lead to lower levels of vertical integration, especially when competition is strong

The Problem of Consistency

- Gains from consistency among activities determine in part the firm’s need for control over them
- System-wide benefits from coordination inhibit the outsourcing of a single activity

Strategic Boundaries Over the Industry Life Cycle

- In early stages of industry development, firms are integrated because demand for inputs is too small to attract entry of suppliers
- As industry grows and matures, suppliers enter and produce inputs for many firms
  - Firms outsource to benefit from lower supplier costs
- As demand drops due to the introduction of substitutes, suppliers exit and firms in the industry re-integrate production

Chapter 8

Partnering

Roadmap to Partnering

- Conditions fostering partnerships
  - The activity has high strategic value to the firm
  - The firm has low competence to perform activity

Trends in Partnership Formation

- Global integration of manufacturing and service industries
- Diffusion of Japanese partnering practices
- Diffusion of partnerships with suppliers
- Rise of outsourcing
- Rise of supply chain management practices
- Growth of technology intensive industries
- Emergence of regional networks
Global Integration

- Partnering is typically preferred as a mode of entry into foreign markets
  - Opportunities for foreign expansion are increasing as developed world expands
  - Partnering enables control over up-or downstream activities
    - Examples: Airlines, telecommunications, semiconductors, manufactured goods, professional services, media

Diffusion of Japanese Partnership Practices

- Early 1950’s success of the Toyota supplier model and its diffusion to other Japanese companies
  - Focus on higher quality and lower costs
  - Reorganization of traditional Japanese trading companies such as Fuyo, Mitsubishi, Mitsui, and Sumitomo
  - Willingness to describe model to non-Japanese visitors

Diffusion of Partnerships with Suppliers

- U.S. firms developed partners in response to competition from Japanese firms in durable goods industries
- Diffusion of partnering occurred:
  - From assemblers to their component suppliers to their raw materials suppliers

Rise of Outsourcing

- Trend first began in the U.S. and rapidly spread to Europe
- Factors influencing the increase in firms engaging in outsourcing:
  - The need for cost reduction in the face of rising competition
  - Entry of firms designed to induce customers to outsource (e.g., IT services, logistics, human resource etc.)
  - Viability of firms offering alliances as a type of supply relationship

Rise of Supply Chain Management Practices

- Development of supply chain management products and techniques:
  - Focus on delivery as a value driver and on cost reduction through improved practices in logistics
  - Involves establishment of close relationships between producers and distributors, and producers and suppliers
    - Often involves partnering with logistics providers such as FedEx and UPS

Growth of Technology-Intensive Industries

- Startups in advanced technology industries such as semiconductors and biotechnology have tended to partner with established firms to fund research
- Large incumbents have partnered with firms to learn about advanced research and development
- The growth of these industries has greatly increased the prevalence of partnering
Emergence of Regional Networks

- Firms based in the same industry and region benefit from cooperation to increase positive externalities
- Frequently this cooperation takes the form of partnering in coalitions to lower costs through economies of scope

Motivations for Partnerships

- Technology transfer and development
- Market access
- Cost reduction
- Risk reduction
- Change in industry structure

Technology Transfer and Development

- Partnering is common between startups and established firms in advanced technology industries
- Coalitions of established firms may be formed to compete for standards dominance
- Partnering firms may agree to:
  - Share knowledge about technologies
  - Share knowledge about process innovations
  - Share patent libraries

Market Access

- Partnering with local firms is a common method for entering new geographical markets
- Reasons for market access partnering:
  - The need to acquire local knowledge
  - Avoid constraints imposed by local regulation and local content restriction
  - Gain access to non-tradeable local assets (e.g., distribution channels)

Cost Reduction

- Partnering reduces costs through:
  - Efficiency gains in economies of scope as partners share activities
  - Savings associated with the learning curve as partners develop greater cumulative volume
  - Lowering the costs of coordinating transactions between the partners, e.g., strategic sourcing arrangements

Strategic Sourcing for Cost Reduction

- Lower inventories resulting from faster and more frequent delivery
- Manufacturing efficiencies highlighted by product design practices
- Higher-level planning to coordinate investment and production decisions
### Key Practices for Strategic Sourcing

- Choosing limited number of competent suppliers
- Establishing a long-term relationship
- Close coordination with suppliers from product design through full-scale manufacturing
- Building of a strong purchasing organization backed-up by high-level management and linked through product teams

### Risk Reduction

- Partnering reduces the risks commonly found in industries with high growth rates and large projects (e.g., telecommunications and semiconductors)
  - Reduces risks based on high market uncertainty and limited firm resources
  - Prevents underinvestment in strategically important projects

### Influence on Industry Structure

- Alliance formation separates competitors into clusters that compete with each other (e.g., airlines)
- Firms that are not allied must be able to match the combined capabilities of allied competitors

### Disadvantages of Partnering

- Reduced control over decision making
  - Bilateral or multilateral decision making leads to lower control over investments in activities and over information diffusion
- Strategic inflexibility
  - Conflicting interests regarding decision making to accommodate shifts in environment
  - Commitment to each other’s resources involves both advantages and disadvantages

### Disadvantages of Partnering (cont’d)

- Weaker organizational identity
  - Start-ups may lose control over investment and other types of decisions, increasing variability in capabilities, lowering organizational coherence
  - Antitrust issues
    - To mitigate, demonstrate the partnership provides:
      - Greater efficiency relative to the damage to competition
      - Benefits to the intensity of competition
      - The introduction of new technologies
      - An increase in U.S. economic growth and global competitiveness
- Antitrust issues

### Partner Selection Considerations

- Current capabilities of the potential partner
  - Contribution to value and cost drivers
  - Ability to manage current operations effectively
  - Ability to manage its role in the alliance
- Projections of the partner’s future capabilities
  - Ability to grow its capabilities
- Comparison and assessment of alternative partners
  - Social capital
### Partnership Form
- The partnership form should be aligned with the motivation for the partnership
- The form of technology partnerships is motivated by the desire of the partners for:
  - **Window**: Information about technology but no commitment to market
  - **Options**: Information plus the development of an ability to commercialize in the future
  - **Positioning**: Information and an investment in commercialization

### Technology Partnership Forms
- Technology partnership form is matched to the partnership motivation type:
  - **Window**: Research and development grant
  - **Options**: Research and development contract
  - **Positioning**: Research and development contract, License, Joint venture

### Managing Partnerships
- Maintaining a convergence of purpose between the partners
- Ensuring a consistency of positioning across the partners
- Managing the interface between the partners

### Convergence of Purpose
- Partnerships are likely to have multiple dimensions
  - For example:
    - Technology transfer
    - Cost reduction
    - Equity investment
- Partners will differ in their goals on each dimension
- Mutual understanding of these goals improves interfirm coordination over the course of the relationship

### Consistency of Position
- Partnerships are managed at various levels in each firm
- Each level (CEO, corporate staff, technical staff, operating managers) will have its own perspective on the partnership
- Managing these differences in perspective is critical to achieving partnership goals

### Managing the Interface
- The interface between the partners should be designed to achieve the partnership’s goals
- The interface may involve
  - A separate unit whose charter is to manage the partnership
  - Common in a joint venture
  - Units in each firm that are dedicated to managing the partnership
  - Common in large scale technology transfer, asset sharing or cost reduction alliances
  - Ad hoc relationships between the firms, function by function, e.g., logistics, procurement, technology development and operations
  - Common in strategic sourcing relationships
Alliance Dynamics

- **Life of the project**
  - A partnership’s life span is only as long as the project on which it is based
- **Market forces**
  - Shifts in the market positions of the partners and their competitors affect the strategic importance of the partnership
- **Relationship dynamics within the partnership**
  - Partnerships are most vulnerable to failure after the initial honeymoon period and before significant switching costs develop