Organization Theory

Make or Buy

- Centralization
  - Economies of scale
  - Coordination of distant operations
- Decentralization
 - Incorporation of local information
  - Incentives

Make

- Holdup
- Coordination in Production and Design
- Double Marginalization
- Foreclosure
- Information Leakage
- Input suppliers as a source of future competition
- Low marginal costs (price war)

Simple Theory of Holdup

- Contracts exogenously incomplete
- Holdup takes 50% (Nash bargaining) of marginal proceeds to investment
- Ownership of assets limits holdup
- Asset ownership determined by maximizing efficiency of investments

Multiple Marginalization: The Silk Road

Figure 6.2: The Silk Road
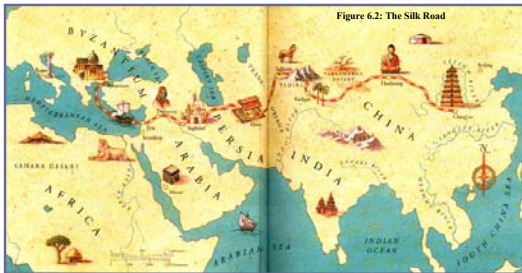
Buy

- Lowest price
- Competitive incentives to innovate
- Elimination of overhead & fixed costs
- Distinct corporate cultures

Fragmented Industries

- Dry cleaners, hardware stores, furniture makers, restaurants, hair cutting, gas stations, taxis
- Mixed or defragmenting: bookstores, accounting, attorneys, software, motels
- De-fragmented: PC, video retailing, office supply

Reasons for Fragmentation

- Need for owner-operators
  - Maximal incentives
  - Personalized service
  - Important unmonitorable characteristics
- Absence of important scale economies

Agency Theory

- Firm sets commission s, salary y.
- Agent obtains

$$u = sx + y - \frac{x^2}{2a} - s\lambda\sigma^2$$

- Where x is the effort in output units, $1/a$ measures the disutility of effort, σ^2 is the risk, and λ is the risk premium.

Agent Maximization

- A working agent maximizes u over effort x, which yields $x = sa$.
- Increasing shares increase effort.
- Salary y is set to insure the agent accepts the job (u_0 is the reservation utility level):

$$u_0 = s^2 a + y - \frac{(sa)^2}{2a} - s\lambda\sigma^2 = y + \tfrac{1}{2}s^2 a - s\lambda\sigma^2$$

Salary Determination

- This gives: $y = u_0 - \tfrac{1}{2}s^2 a + s\lambda\sigma^2$

- The salary must be higher to compensate for increased risk.

Firm Profits

- The firm earns

$$\begin{aligned}
\pi &= (1-s)x - y \\
&= (1-s)sa - (u_0 - \tfrac{1}{2}s^2 a + s\lambda\sigma^2) \\
&= sa - u_0 - \tfrac{1}{2}s^2 a - s\lambda\sigma^2
\end{aligned}$$

- This provides the firm with the output, minus the cost of effort, the cost of the agent, and the cost of risk.

Firm Maximization

- The firm chooses the agent's share *s*

$$s = 1 - \frac{\lambda}{a}\sigma^2$$

- The share increases in the ability 1/*a* of the agent, and decreases in the riskiness or cost of risk.

Selection of Agent

- With a fixed *y*, more able agents obtain a higher return.
- Thus, offering a higher share, lower *y* will attract more able agents.
- RE/MAX

Multidivisional Firm

- First: General Motors, Du Pont, Sears, Exxon
- Product Divisions
  – appliances, consumer electronics
- Customer Divisions
  – military and civilian aircraft
- Technological Divisions
  – aircraft, electronics,
- Geographical Divisions
  – by state, by nation, by region

Transaction Costs Theory

- Minimize total costs of transactions and production
- Production methods and organization affect transactions costs
  - Markets increase search, enforcement, measurement, coordination costs
  - Internal increases incentive, bargaining, influence costs

Transaction Costs Approach

- Specialized Investments and Holdup Costs
- Motivation and Incentive Costs
- Information Acquisition Costs
- Information Processing Costs
- Influence and Lobbying Costs
- Coordination Costs
- Contracting Costs
- Search Costs
- Enforcement Costs
- Bargaining Costs
- Measurement Costs

Multi-Tasking

- Incentives on one task spill over to others
- Increased incentives on one task will reduce effort on others
- Increasing one incentive generally makes increasing others optimal
- When important job is unmeasurable, incentives on measurable jobs produce poor performance

6

Organization of Bread Delivery

	Independent Contractor	**Employee**
Route	Sets own route	Company sets route
Truck ownership	Owns truck	Company owns truck
Compensation	Incentive	Salary or Hourly
Maintenance	Contractor controls	Set by company
Carry other items	Yes	No

Examples

- Teacher rewarded for students' performance on standardized tests "teaches to the test."
- Medicare doctors maximize throughput
- CEO rewarded for near-term stock performance sacrifices investment
- Independent contractors choose most aspects of their job
- High quality workers paid based on skills, not based on job

Ratchet Effect

- Success met with increased expectations, reduced future payments
- Ratchet effect reduces incentives to work
- Chicago GSB set a 5 year, $175 million fund-raising goal
  - raised $100 million in 8 months

Prices Versus Quantities

- Trade-off on errors
- Prices give incentives to equate marginal value to price
- When demand is elastic, price is nearly fixed, so better to use prices
- When demand is inelastic, quantity is nearly fixed, so better to use quantities