

Agency View of the Firm and Implications for Knowledge and Skill

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Knowledge

Problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. (von Hayek)

Hierarchy

The likelihood that the top decision maker is so removed from reality is the most fundamental reason for diminishing returns to scale. (Williamson)

Moral Hazard

Incentives are the essence of economics

Edward P. Lazear

What are the standard assumptions?

Moral Hazard

Incentives are the essence of economics

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- # What are the standard assumptions?
 - Goods and services are:
 - Specific
 - Observable attributes
 - Costlessly verifiable

Moral Hazard: definition

Post contractual opportunism that arises because actions that have efficiency consequences are not freely observable

When can it occur

- When the standard assumptions are violated.
- What are some examples?

Moral Hazard: Consequences

- # Efficiency loss: impair mutual agreement
 - Conservative medicine
 - Product quality
 - CEO behavior
 - Debt financing (OPM)
 - Less insurance / loss of social benefit
- # Influence costs

Moral Hard: Solutions

- Goal congruence: incentive contracts and monitoring
 - Risk asymmetry
 - Cost / benefit of incentive and efficiency loss
- Reputation mechanisms
- Bonds
- Bureaucracy

Risk Sharing and Incentives

- # Principal-agent problem
 - Shift risk if agent can't be monitored
- # Informativeness principle
- # Incentive-intensity principle
- # Monitor intensity principle
- # Equal compensation principle

Rents and efficiency

- # Quasi-rents
- # Value of reputation
- # Incentives and monitoring are substitutes
- # Reputation requires monitoring
 - Institutional response
- # Competition for rents: influence costs

Decentralized Information

- # Bounded rationality and limited information processing make organizations interesting
- # Constrained optimization (satisficing)
 - Elucidate the constraints
 - Coordination costs (Malone)

Decentralized Information

- # Non-optimal decision rules
 - Complexity
 - Garbage Can (Cohen and March)
- # Communication constraints and bounded rationality
 - Fundamental limit is human attention (Simon)

Markets versus Planning

- # Constrained optimization
- # Socialism requires too much information transfer

Firm versus Market

- # Coase (1937) Nobel prize. Transaction Economics
- # Williamson (1975, 1985) Firm boundary and transaction economics.
- # Information processing needs lead to decentralization, coordination costs bound the firm (Lawrence and Lorsch)

Computer metaphor

- # Decomposition economizes on communication and processing.
- # Communication constraints
 - Iterative procedure
 - Team theory. Statistical decision theory.
 - Pooled information without full disclosure
 - Incentive constraints
- # Computational constraints

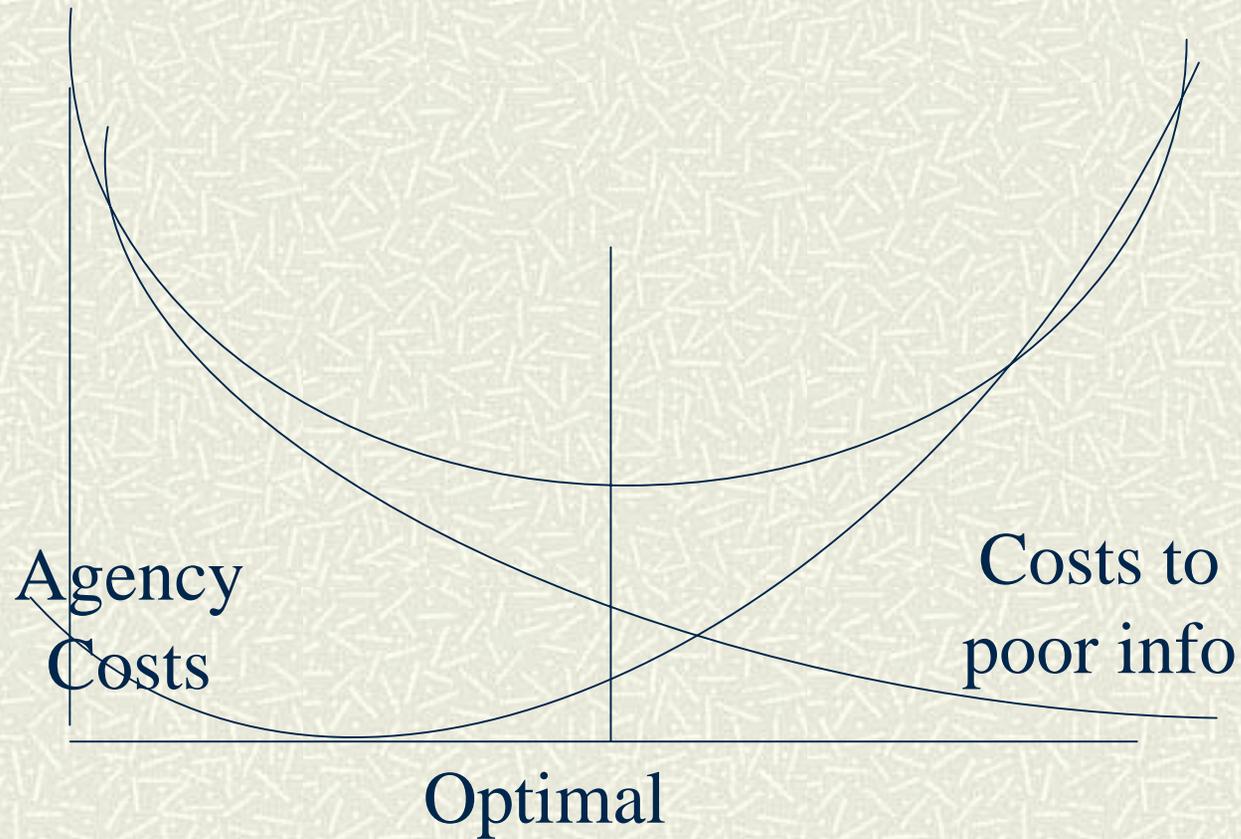
Computer metaphor

- # Decentralized computing
- # Trade-off delay and efficiency: serial and parallel processing.
- # Capacity utilization
- # Coordination costs (dynamic environment)
- # Managerial delay (Robinson, 1958; van Zandt)
- # Incomplete contracts (Brynjolfsson)

Jensen and Meckling

- # Two types of knowledge
 - General: inexpensive
 - Specific: expensive
- # Collocate decision and knowledge
- # Particulars of time and place
- # Alienable rights. Court enforced
- # Firms suppress alienability
- # Tradeoff between centrality and decentrality

Total Organizational Costs



Baker and Jorgensen

- # Question: impact of volatility on incentive contract
 - Insurance for risk averse
 - Importance of managerial behavior
- # Insight: two types of uncertainty
 - That which impacts decisions (volatility)
 - That which doesn't (noise)

Autor, Levy, and Murnane

- # Question: What is it that computers do?
- # Replace repetitive manual and cognitive tasks.
 - Rules-based
 - Symbolic processing
 - Environmentally constrained
- # Both low and high skill work is replaced

Economic argument

- # Insight: repetitive and non-repetitive skills are complements. Decreasing costs of one, increase marginal product of the other.

Analysis

- # DOT task definitions
- # Census of who works in what categories
- # Task change, not educational level change
- # College provides more non-routine cognitive skill development
- # Types of manual tasks performed do not change. No shift.

Results

- # Task shifts within industry
- # Not between industry employment shift
- # Computer technology explains 30-50% increase in the rate of growth. Importance of skilled work was increasing before computers.

Locus of decision making

- # How do information technologies affect locus of decision making and control?
 - Monitoring and contracting. Agency.
 - Knowledge (specific, general)
 - Information flow
 - Coordination
 - Noise and volatility

Skill level (Cat's Cradle)

- # Task type expansion (AI, Expert Systems)
- # Skill versus Cognition
- # Complement versus substitute
- # Design platform
 - Skill to use.