BSM906
Economic Environment of Business

Lecture 4
Contracts and norms

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What have we learnt so far?

- Transactions form the core of all economic activities
- Transactions require trust between parties that are involved in these transactions
  - Hold up problem
- Trust can be facilitated by a legal system that ensures the existence of clearly defined property rights, and enforcement of contracts that permit the exchange of these property rights
  - Problem with the Coase theorem
- The exact nature of these legal systems are influenced both by history, in the form of legal origin, as well as by politics and coalitions
  - Differences in corporate governance structures

Interactions in the absence of trust
A primer

		Others	
		Low	**High**
Company A	**Low**	(10, 10)	(7, 12)
	High	(12, 7)	(9, 9)

- Each company can choose to produce a lot (*high*) or restrict the supply (*low*) of the product
- In the absence of trust, each is *independently* likely to choose *high* and that would be perfectly rational
- The outcome will be unchanged if this interaction is repeated a finite number of times, but it will change if it is repeated infinitely
  - Grim strategy & Tit-for-tat strategy

Resolving the hold-up problem privately
Infinite interactions

- United States
  - Design-intensive products procured internally or design provided by producer of final product
  - Physical assets that are key to the production of the intermediate goods are owned by the producer

- Japan
  - The producers procure from the market, with the suppliers investing in the designs of the key products
  - Such physical assets are also owned by suppliers

The Japanese contracting environment:

- Few suppliers (i.e., competition with low monitoring cost)
- Frequent repeated interaction (i.e., "infinitely" repeated game)

Resolving the hold-up problem privately
Nature of the market

- Nucor – American steel manufacturer operating mini mills
  - Mini mills generally backward integrated
  - Nucor buys scrap from DJJ
  - Contract:
    - (a) cost-plus pricing based on cost accounting
    - (b) six-month warning period for ending agreement
  - Puzzle: Hold up possible, but not observed

- Boeing and Airbus contracting with Rolls Royce, Pratt and Whitney and GE

Contracting under informational asymmetry
Hidden information & adverse selection

- Lemons’ problem
  - In the used cars’ market, there are two types of cars: good cars worth £5000, and bad cars worth £1000
  - Buyer cannot distinguish between good and bad cars, but knows that 50% of the cars are good and 50% are bad
  - It can be shown that in that case there would be no transactions in the used car market (Why?)

- Application
  - Credit market failure
  - Freezing up of the interbank market during the financial crisis

- Solution
  - Signalling such as collateral in the credit market or a degree in a labour market

Contracting under informational asymmetry Hidden action & moral hazard – I

- Nature of the problem
  - Certain aspects of contract cannot be measured
  - Are the parties involved in a transaction acting in <u>good faith</u>?

- Application
  - Will a worker put in his/her best effort?
  - Will a franchisee manage cost effectively?
  - Will someone taking out an insurance manage risks effectively?

- Solution
  - Contracting on measurable items, e.g., on revenues as opposed to profits
  - Risk sharing, e.g., a flat franchise fee leaving the cost related risks to the franchisee, and a deductible in an insurance contract

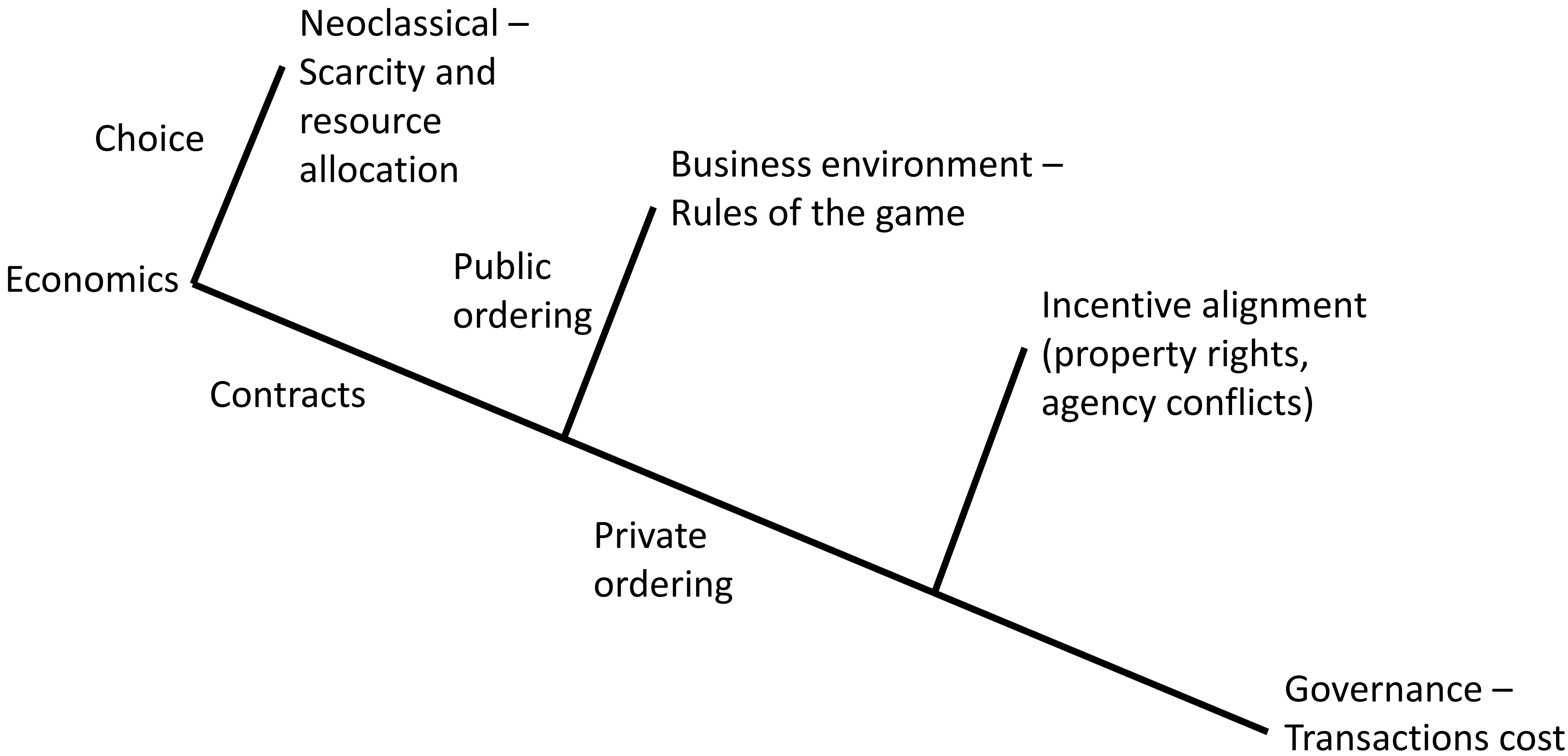
Contracting under informational asymmetry Hidden action & moral hazard – II

- In a context of free choice, the principal has to make the contract acceptable to the agent
  - Examples of principal: employer, insurance company
  - Examples of agent: worker, individual buying insurance

- Key considerations
  - We use the example of the employer and the worker
  - **Participation constraint**: The contract being offered should provide the worker an expected payoff that is at least as much as his payoff from an alternative employment, including self employment
  - **Incentive compatibility constraint**: The contract being offered should ensure that payoff for the worker is higher, on average, if he puts in a lot of effort, than if he puts in little effort

- Key factors
  - **Risk aversion**: how much risk would the agent be willing to bear?
  - **Market structure**: what is his payoff for the best alternative?

Connecting the dots
Economic environment and the firm



An alternative to formal contracting
Advantages of informal contracting

- No cost of *ex ante* verification
  - Adverse selection
  - Signalling

- No cost of *ex post* verification
  - Acceptance of "good faith"
  - No cost of writing formal contracts
  - No cost of monitoring
  - Negligible private cost of enforcement

An alternative to formal contracting
Nature of informal contracting

- Mechanisms
  - Reputation loss
  - Social ostracism
  - Group membership

- Challenges
  - Collective action, especially in large groups
  - Social heterogeneity

An alternative to formal contracting
Rational egoist vs. norm user

- It is well understood that contracting for collective action is difficult, especially in large and heterogeneous groups
  - In a finitely repeated game, the dominant strategy should be zero voluntary contribution

- Evidence suggests that while there is limited free riding, individual voluntary contributions are generally much more than zero

- Laboratory experiments
  - Those who believe that others will cooperate are more likely to contribute (conditional cooperators)
  - Face to face interactions increase cooperation
  - Some will spend personal resources to punish those who are not cooperating (willing punishers)

An alternative to formal contracting
Social norms

- Humans hard wired to think in a domain-specific way; trust is an important part of any transactional relationship

- In an anonymous finitely repeated game, it is always best for a rational egoist to choose non-cooperation, even though payoff from it would be low

- If there is a mix of rational egoists and conditional cooperators, the latter should eventually dominate and get higher payoffs, affecting the behaviour of economic agents in the long run

- External rule based contracting can crowd out norm based contracting, and the outcome may not be good if the rule based contracting cannot fully mitigate opportunism or agency conflicts

An alternative to formal contracting Designing norm based contracts

- Clear boundary rules (knowledge of who is “in” and who is “out”, and hence with whom to cooperate)

- Rules developed by the contracting parties themselves as opposed to external agents (including local elites)

- Presence of a monitoring mechanism with monitors who are accountable to the contracting parties

- Use of graduated sanctions that vary with the degree of the deviation from the norms