

Vertical Relationships I

Industrial Organization
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Outline

- Motives for vertical integration
- Double marginalization
 - Solutions
- Quality issues
- Risk and uncertainty issues
- Incentive issues
- Empirical studies

Motives for Vertical Integration

- Strategic Reasons:
 - Raise barriers to entry
 - Raise rivals' costs
 - Reduce potential competition
- Efficiency Reasons:
 - Technological interdependence
- Performance reasons
 - Assurance of supply upstream
 - Uncertainty and risk downstream
 - Ensure effort and quality
- Pricing Reasons
 - Double marginalization

Why are there firms?

- We have, so far, taken firms' existence as given, assumed away the relevance of all intraorganizational processes, and focused on aggregate market behaviour.
- Coase's fundamental insight:
 - Firms exist because it is costly to use the price system to coordinate economic activity

The Transaction Cost Model

- Markets and firms are alternative ways of organizing economic exchanges
- Uncertainty and opportunism increase the cost of using the price system
- Coase focussed explicitly on the contracting process
- In some settings (fuels, agricultural commodities, and financial instruments) markets operate smoothly and efficiently
- Examples where market transactions entail significant costs
 - Production of aluminium
 - Crime syndicates
 - Integrated systems where high-quality parts are necessary

- Oliver Williamson attempted to develop a systematic model as to why firms exist
- Summarized as follows:
 - Markets and firms are alternative instruments for completing a related set of transactions
 - Whether a set of transactions ought to be executed across markets or within a firm depends on the relative efficiency of each mode
 - The costs of writing and executing complex contracts across a market vary with the characteristics of the human decision makers who are involved with the transaction on the one hand, and the objective properties of the market on the other
 - Although the human and environmental factors that impede exchanges between firms (across a market) manifest themselves somewhat differently within the firm, the same set of factors apply to both

Contracting

- A contract is an agreement that defines the conditions of exchange
 - Standardized form
 - Lengthy and specific
- In most exchanges, parties perform obligations sequentially rather than simultaneously
 - W/o contracts, activities would be biased toward those in which performance occurs simultaneously with payment
 - W/o contracts, parties would invest in private safeguard to prevent themselves from being exploited

- The ability of contracts to facilitate exchange depends on
 - The “completeness” of the contract
 - The available body of contract law
- Complete contracts
 - eliminate opportunistic behaviour
 - stipulates each party’s responsibilities and rights for each and every contingency that could conceivably arise during the transaction
 - bind the parties to particular courses of action as the transaction unfolds

- Three factors prevent complete contracting
 - Bounded rationality
 - Boundedly rational parties cannot contemplate or enumerate every contingency that might arise during a transaction
 - Difficulties specifying or measuring performance
 - Performance can be complex or subtle
 - Lease contracts for new cars allow a company to bill lessee for “excess wear and tear”
 - Dimensions of performance may be ambiguous or hard to measure
 - What is engine thrust?

- Asymmetric Information
 - Hidden information (adverse selection)
 - One party knows about the conditions of demand, technology, or cost that other parties do not have and cannot learn
 - Hidden Action
 - Quality in a manufacturer’s plant cannot be easily observed
 - A contract that required the manufacturer to take a specified level of care would undoubtedly be contentious and very costly to enforce
- Contract law might ameliorate problems of opportunism that can arise under incomplete contracting, but is unlikely to eliminate them

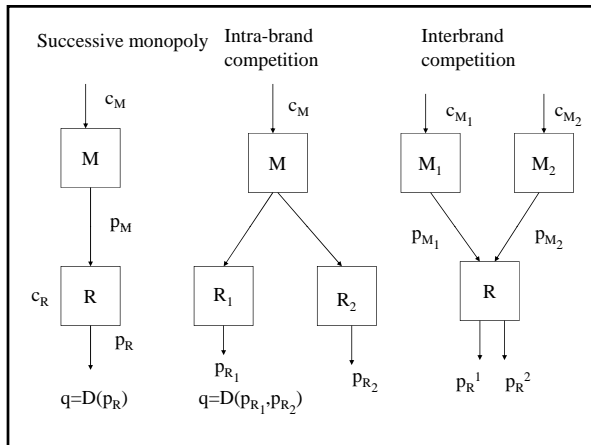
Relationship-specific Assets, Quasi-rents, and the Hold-up Problem

- Forms of Asset Specificity
 - Site specificity
 - Physical asset specificity
 - Dedicated assets
 - Human asset specificity
- Rent: The difference between the revenue a seller actually receives and the revenue it must receive to make it worthwhile for it to enter the relationship

- Quasi-rent: The difference between
 - The revenue the seller would actually receive if the deal were consummated according to the original terms of the implicit or explicit contract
 - The revenue it must receive to be induced not to exit the relationship after it has made its relationship-specific investments
- The hold-up problem:
 - Even when the ex-ante contracting environment is competitive, the existence of quasi-rents creates an ex post “pie” that the buyer and the seller can negotiate over.

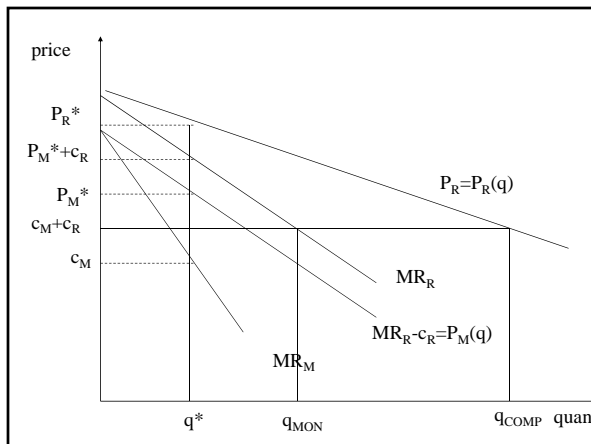
- The hold-up problem raises the cost of transacting arm's length market exchanges in four ways
 - More difficult contract negotiations and more frequent renegotiations
 - Investments to improve ex post bargaining positions
 - Distrust
 - Reduced investment in relationship-specific investments

- General framework:
 - Upstream supplier/manufacturer M produces good at a constant marginal cost c_M .
 - M sells quantity q at (wholesale) price p_M to downstream retailer R.
 - R chooses p_R and quality level s
 - Final demand is $q=q(p_R,s)$
- Alternative forms of Vertical Relationships
 - Complete integration
 - Successive Monopolies/Oligopolies
 - Intra-brand competition
 - Interbrand competition
 - Several inputs



Double Marginalization Problem

1. Start at end. Figure out monopoly price of retailer, given that MC of the retailer equals the monopoly price of the manufacturer [+ any possible costs of retailing]
2. Rearrange solution to retailer's problem in terms of p_m . This is the demand curve facing the manufacturer (which without costs of retailing, exactly equals the marginal revenue curve of the retailer)
3. Solve for manufacturer's optimal price.



Double Marginalization

- Outcome: Output of successive monopoly is lower than vertically integrated monopoly and lower than the competitive level of output. Profits are lower and social welfare is lower than the monopoly case.