

ANTITRUST ECONOMICS 2013

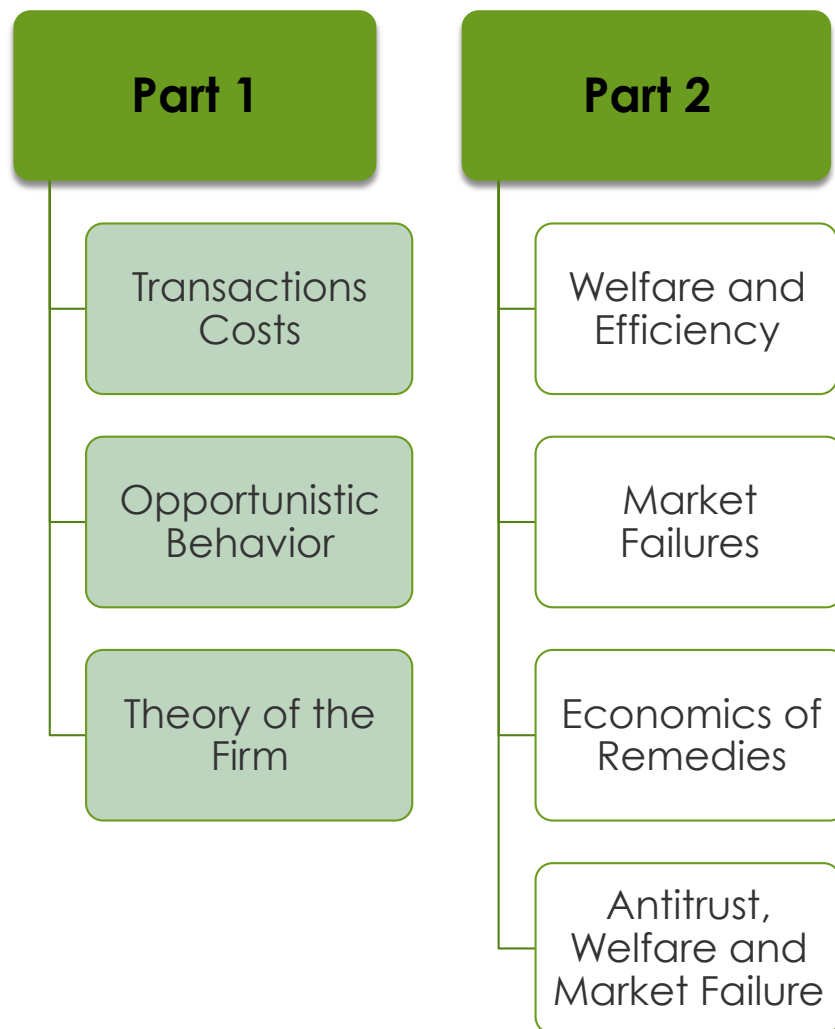
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TOPIC 6: MARKET FAILURES, REMEDIES, AND WELFARE

Overview

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Transactions Costs and the Theory of the Firm

The Organization of the Firm and Transactions Costs

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The emergence, success and growing importance of large firms that organize and coordinate many of their own activities without relying on the market has led economists to pose the following questions:

Which activities are more efficiently carried out within the firm and which are not?

Why are transactions removed from the market system to the interior of organizations called firms?

Most economic production occurs in large firms

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Most economic production occurs in firms that produce many products although these products are often somewhat related.

- Procter and Gamble makes diverse household consumer products but doesn't make cars.
- Mercedes Benz makes smart cars and trucks as well as regular cars. It doesn't make toothpaste.

Across industries there is great variation in the degree of integration and relationships between upstream and downstream firms, and between producers of complementary products.

- Microsoft licenses its software to many hardware makers while Apple makes its own hardware using suppliers
- Starbucks owns most of its own stores while McDonald's mainly has franchisees.

Markets do not work costlessly

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Existence of **transactions costs due to** Coase, 1937

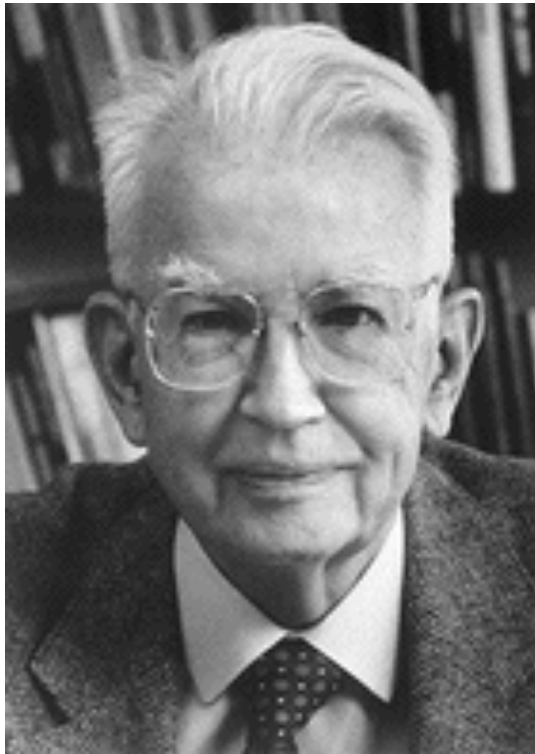
Coase points out that there are unavoidable costs of transacting in the market place. These costs are so high so that they justify **substituting the pricing system for managed coordination**.

Transaction costs refer to the cost of providing some good or service through the market, rather than having it provided from within the firm.

These costs stand separate from, and in addition to, ordinary production costs.

Ronald Coase and the “Theory of the Firm”

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“In order to carry out a market transaction it is necessary to discover who it is that one wishes to deal with, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of contracts are being observed, and so on.”

The Nature of the Firm, 1937.

Ronald H. Coase (1910 -)

Awarded the Nobel Prize in Economic Sciences in 1991

Many types of transactions costs

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Transaction costs include costs of trade in a market

- Information costs such as costs of locating a supplier, and discovering what the prices are.
- Cost of negotiating the terms of the contracts
- Costs related to the policing and enforcement of contracts
- Risks on contracts being breached

When Airbus purchases digital heads-up displays for the cockpit of its A380 Super Jumbo, it incurs costs that are greater than the price it pays for the component: Airbus must expend energy and effort to acquire information about suppliers; bargain to establish the price; write a contract; and, possibly, litigate should the displays not work properly.

Unforeseen contingencies raise the costs of contracts

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Contracts are **incomplete** because it is impossible to foresee all possible contingencies that may arise in the future. Even if firms had a crystal ball, it would be prohibitively costly to write a contract that covers all possibilities.

- Most existing contracts do not specify many relevant contingencies.
- When these contingencies occur, conflicts are likely to arise.

Monitoring the contract: These are the costs of making sure that the terms of the contract are fulfilled by the other party.

Enforcing contracts: Costs of taking the appropriate action (often through the legal system) if it turns out that the other party does not stick to the terms of the contract.

Transaction costs determine market boundaries

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The theory of transaction costs predicts that economic exchanges will tend to be organized in ways that minimize their costs.

Therefore, the cost of employing the price mechanism compared to the cost of conducting transactions within the firm determines the boundaries between the firm and the market.

Opportunistic Behavior and Externalities

Opportunistic behavior and “hold-up”

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One party engages in “ex post opportunistic behavior” by demanding more of the gain from trade after the fact and thereby trying to “hold-up” its trading partner.

The opportunistic party might refuse to carry out its requirements such as providing essential supplies unless it gets a higher price than what it initially bargained for.

Or the party might engage in other behavior that imposes costs on its trading partner.

The causes and consequences of hold up

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Hold up is possible when one party has made specific investments as part of a trading relationship that have little value outside the relationship, at least for some significant period of time.

An “opportunistic firm” can use its leverage over a partner firm that has made specific investments. It may have the incentive and ability to engage in “ex post opportunistic haggling.”

The partner firm may anticipate this risk and therefore be reluctant to make relationship-specific investments that could result in hold-up.

The partner firm may in fact decide that it is too risky to enter into the relationship at all.

Parts manufacturing and hold up

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Suppose a car manufacturer needs a part specifically designed for a single car.

- Investment to design and make the first piece is considerable.
- However once investment and design is completed, the cost of production is very low.
- The car manufacturer has an incentive to refuse to pay for fixed costs. It is still optimal for the part maker to sell at marginal cost.

Hence the part maker knowing this risk would be reluctant to invest in the initial design

Vertical integration can remove this uncertainty and opportunistic behavior and thereby restore efficiency

The adjacent monopoly problem

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Single monopolist supplier (*brewery*) produces an intermediate good at cost c (*Guinness*)

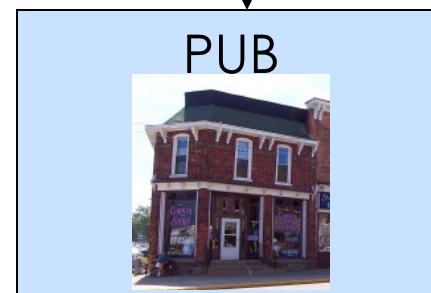
Sells good to a single monopolist downstream retailer (only pub in a village) at wholesale price p_w

Retailer (*Pub*) sells the good to consumers for price p



c

p_w



p

CONSUMERS



The two monopolies charge two mark-ups

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Manufacturer (brewery) maximizes profit by pricing at $MR=MC$

Retailer takes this price as its input cost and maximizes profit again.

This is called “double marginalization”, “double mark-up”, or the “Cournot effect”.

Each “markup” reduces demand for the other firm and therefore imposes a negative externality on the other firm.



CONSUMERS



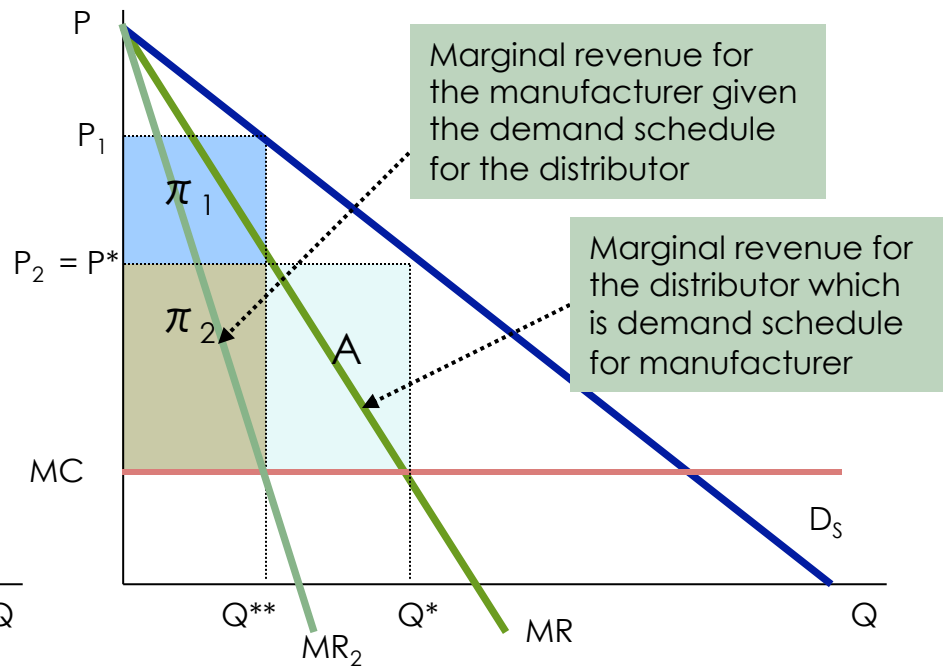
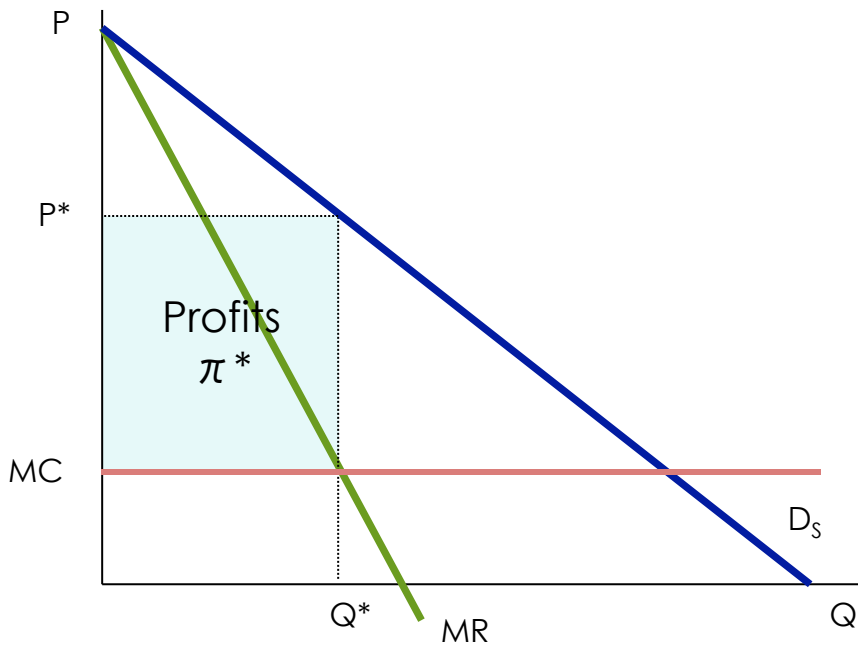
An integrated monopolist is more efficient

Profits of an integrated manufacturer-distributor

$$\pi^* \gg \pi_1 + \pi_2$$

Profits of separate manufacturer and distributor

π_2 = Manufacturer's Profits
 π_1 = Retailer's Profits
 A = Loss in profits on reduced output



NOTE: manufacturing cost=MC, distribution cost=0
 (basic result holds when distribution cost is positive).

One monopolist is more efficient than two

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Compared to a single vertically integrated monopolist the two successive monopolies:

- Charge a higher final price and sell less to consumers.
- Provide less consumer surplus.
- Make less total profit.

Everyone is worse off with two monopolists than one.

Merger of the two monopolists could increase profits and make consumers better off.

Vertical contracts are imperfect substitute for full integration.

Three major solutions to double mark-up problem

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Vertical merger: the monopolies merge or one acquires the other.

Force competition: one monopoly tries to force the monopolist in the other market to be competitive.

Vertical restraints: the monopolies enter into contracts that enable them to maximize and share the pie.

Note: This theory applies whenever there are related firms with market power. It does not require a literal monopoly, only that each firm have the power to set price above cost. The magnitude of the double mark-up problems depends on degree of market power held by each firm.

Theory of the Firm

Transaction costs can encourage vertical integration

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A firm's decision to vertically integrate or rely on markets is a basic strategic decision

The impetus to vertically integrate often comes from an opportunity to reduce costs or eliminate a market externality.

Additionally, the interplay of different sections of competition policy can shape the incentives to vertically integrate:

- If authorities are more hostile to vertical restraints and less hostile to mergers, firms could tend to merge instead of contracting and being subject to antitrust investigations.

Costs and Benefits of Integration

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However, not only coordination through the market place is costly.

Coordinating activities “in-house” is also costly.

Upstream and downstream integration may also involve substantial costs

Costs of Integration

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Supplying its own factors of production or distributing its own products may be more expensive for a firm that vertically integrates than for one that depends on competitive markets, which serve these needs efficiently.

As the firm gets larger the cost and difficulty of managing increases.

The firm may face substantial legal fees to arrange to merge with another firm.

Benefits of Integration

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It may lower transaction costs: transaction costs of buying from or selling to other companies are avoided.

A firm may want to assure itself a steady supply of a key input (the firm may want to vertically integrate backwards).

Shell began as a kerosene shipping company in 1892. In 1907, it merged with Royal Dutch, which was developing oil fields in Asia but had only a small tanker fleet.

Benefits of Integration

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A firm may also want to vertically integrate to correct possible market failures due to externalities:

- Example: By owning or controlling all its coffee shops, Starbucks can ensure a uniform quality all over the world, which results in turn in a positive reputation (externality between shops). (Couldn't it achieve this through properly written contracts with franchisees?)



Vertical organizational forms of enterprises

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Enterprises that engage in arms-length relationships with upstream and downstream firms.

- Manufacturer-distributor: manufacturer sells product to distributors who in turn sells to end users.
- Franchises: manufacturer licenses its brand names, procedures, etc. to “independent” firms who get the risks and rewards of success.
- Cooperatives: firms cooperate in the production of an upstream input or the distribution of products downstream
- Joint ventures: upstream and downstream firms form separate companies that split profits.

Contracts can substitute for integration

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If vertical integration is not possible, different agreements and contractual provisions between vertically related firms may be helpful to:

- Decrease transaction costs
- Guarantee the stability of prices
- Improve coordination of actions between players at different stages of the vertical process or
- Induce a particular behavior.

These agreements and contractual provisions between vertically related companies are known as **Vertical Restraints**. They result in agreements between firms to either engage in certain behavior or not engage in other behavior.



End of Part 1, Next Class Part 2

