EC 360: Industrial Organization
Lecture 13 - vertical integration

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Vertical integration

- Consider the production process to bring a car from raw materials to the final consumer
  - First, the metal for the frame and the oil for the plastics are extracted from the ground
  - Then, both are refined into unshaped plastics and metal
  - The metal and plastics are then shaped into components of the car
  - The parts are assembled into a full car
  - The car is sold to the consumer through a dealership
- At each stage of this process is a separate firm that needs to make money
  - In theory, a firm who controls every stage of this process could make a much larger profit
  - Attempts to control all stages of the production process are called **vertical integration**

Vertical integration: cost cutting

- Vertical integration can increase efficiency by cutting costs
  - Cutting costs can help consumer welfare and is not the target of antitrust law
- We'll discuss two specific ways that vertical integration can increase efficiency
  1. Technological interdependencies
  2. Transaction costs

Technological interdependencies

- Assembling a good is much more efficient if the process is seamless; however, the process tends to be broken up into a bunch of disjoint transactions
  - This incentives firms to integrate and eliminate the seam
  - Eliminating this seam can lead to welfare gains
- Consider the production process of creating a bike
  - Having all the parts in one location makes assembling the bike much faster than doing each part of the assembly separately

Transaction costs

- A **transaction cost** is any expenditure of resources associated with the use of a market mechanism in transferring a good or service from one party to another
    - This can be thought of as an efficiency loss from engaging in the market
- Transaction costs tend to fall into three categories
    1. Search costs: it takes time to search for the lowest price
    2. Negotiation and enforcement costs: negotiating a contract and enforcing violations of the contract is costly in terms of time and effort
    3. Long-term contract costs: long-term deals are less flexible, and firms are unable to adjust to changes in the market (i.e. price, consumer demand, etc.)

Transaction costs

- Vertical integration can help firms avoid many transaction costs
  - Transactions are adversarial, and integration aligns incentives so that they can avoid internal welfare loss
  - Information flows much more easily in a vertically integrated firm
- However, there is a limit to integration
  - **Managerial diseconomies**: eventually, managing many stages of production becomes costly
  - Firms expand until the marginal cost of integration equals the marginal cost of transacting in the market

Monopolies and vertical integration

Incentive to vertically integrate

- We'll show that whether or not firms have incentive to vertically integrate depends on the level of competition in each stage of production
  - Is the upstream manufacturing process competitive, or is it monopolistic?
  - Is the downstream retail distribution competitive, or is it monopolistic?
- Let's consider three cases
  1. Competitive markets for both upstream and downstream
  2. Monopoly in upstream and competitive downstream
  3. Monopoly for both upstream and downstream (successive monopoly)

Competitive case

- Recall the supply chain example from lecture 9
  - The upstream manufacturer produces the product and sells the product to the downstream retailer
  - The downstream retailer buys the product from the upstream manufacturer and then distributes the product to the final consumer
- Claim: if both the manufacturing and retail markets are competitive, then all firms at each stage of production earn zero profit, and there is no incentive for firms to vertically integrate
  - However, if there are transaction costs, then vertical integration can increase welfare

Upstream monopoly case

- Claim: if the upstream manufacturer has monopoly power and the downstream firm is competitive, then the upstream firm makes a positive profit and the downstream firm will make zero profit, and there will be no incentive to vertically integrate

Successive monopoly

- We've talked briefly about **successive monopoly** and the problem of double marginalization
  - The upstream manufacturer produces the product and sells the product to the downstream retailer at a markup
  - The downstream retailer buys the product from the upstream manufacturer and then distributes the product to the final consumer at a markup
- Claim: if both the manufacturing and retail firms have monopoly power, then all firms at each stage of production earn positive profit, and vertical integration can increase firm profit, consumer welfare, and total welfare
  - Recall graph 9.1

Vertical integration and welfare

- Let's sum up what we've learned so far

  1. Competitive markets for both upstream and downstream:
     vertical integration will not change welfare (unless there are transaction costs)
  2. Monopoly in upstream and competitive downstream:
     vertical integration will not change welfare (unless there are transaction costs)
  3. Monopoly for both upstream and downstream (successive monopoly):
     vertical integration improves welfare

Vertical integration enforcement

Vertical integration and market concentration

- Historically, economists believed that antitrust policy shouldn't worry about vertical integration
  - However, vertical integration that leads to high levels of market concentration across various sectors can lead to anticompetitive outcomes
- Market power and market concentration is a hot topic in economics, as we're experiencing unprecedented levels of market concentration
  - Stagnant wages and falling labor productivity shares: Azar, Marinescu, and Steinbaum (2017); Benmelech, Bergman, and Kim (2018a)
  - Slowdown in aggregate output: De Loecker and Eeckhout (2017)
  - Nationally and globally: Azar, Marinescu, Steinbaum, and Taska (2018); De Loecker and Eeckhout (2018)
  - Traditional and new markets: Benmelech, Bergman, and Kim (2018a); Dube, Jacobs, Naidu, and Suri (2018)

Vertical merger enforcement

- In general, the DOJ and FTC believe vertical integration is pro-competitive
  - The government's latest guidelines regarding vertical mergers focuses on price benefits through the potential for increased efficiencies
  - However, recognizing the *possibility* of price efficiency "is starkly the opposite of what antitrust reformers want" John Newman, antitrust professor at the University of Miami School of Law
- In the past 43 years, the DOJ has only challenged two vertical mergers (the government lost both suits)
  - AT&T Inc.'s merger with Time Warner
  - Hammermill Paper Co.'s acquisition of several paper distributors

FTC vertical merger enforcement

- In 2018, the FTC released a document explaining their approach to vertical mergers
  - "On a case-by-case basis and through enforcement and common law development, we apply antitrust policy to fit changing markets"
  - Their biggest challenge in assessing the likely competitive effect from a vertical merger is forecasting the net price effect
- The antitrust focus in vertical merger review asks if the vertically integrated firm is likely to exclude or collude
  - A vertical merger may reduce the likelihood of beneficial entry
  - A vertical merger may result in anticompetitive foreclosure, focusing on raising rivals' costs or making entry more difficult
  - A vertical merger may lead to anticompetitive behavior due to information sharing about a rival

FTC draft vertical merger guidelines

- In January 2020, the FTC released a draft vertical merger guidelines
  - The “Guidelines should be read in conjunction with the Horizontal Merger Guidelines”
  - The government is unlikely to challenge a vertical merger where the parties to the merger have a share in the relevant market of less than 20%
- The analytical frameworks used to assess horizontal mergers apply to vertical mergers
  1. Define the relevant market
  2. Calculate market shares and market concentration
  3. Evidence of adverse competitive effects
  4. Unilateral effects: foreclosure and raising rivals’ costs, information sharing of a rival
  5. Elimination of double marginalization
  6. Coordinated effects: collusion
  7. Efficiencies: streamline production, reduce transactional costs

US vs. AT&T and Time Warner (2018)

- AT&T and Time Warner vertically integrated and the DOJ filed antitrust an lawsuit
  - The DOJ argued that even though AT&T and Time Warner weren't direct rivals, their merger would form an integrated giant with market power in the TV market
- AT&T and Time Warner have competing interests in the TV market
  - In 2015, AT&T acquired DirecTV to become the largest internet, telephone and television distributor in the country
  - Time Warner owns Turner Broadcasting System (i.e. HBO, Warner Bros., CNN, TNT)
  - Most cities only have a single option for a cable or phone provider

US vs. AT&T and Time Warner (2018)

- The DOJ argued AT&T would be able to force rivals to pay more for Turner networks (i.e. HBO and TNT) after the acquisition
  - AT&T disagreed, claiming a price increase would be unprofitable if Turner didn't appear widely on TV lineups
- The courts concluded that the merger was unlikely to harm competition
  - The court said streaming services such as Netflix and Hulu have made the market more competitive
  - However, since the merger closed in 2018, subscribers have paid as much as 30% more for AT&T's TV NOW services