The Economics of Competition Law

EE403 Law and Economics

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Monopoly vs Competition

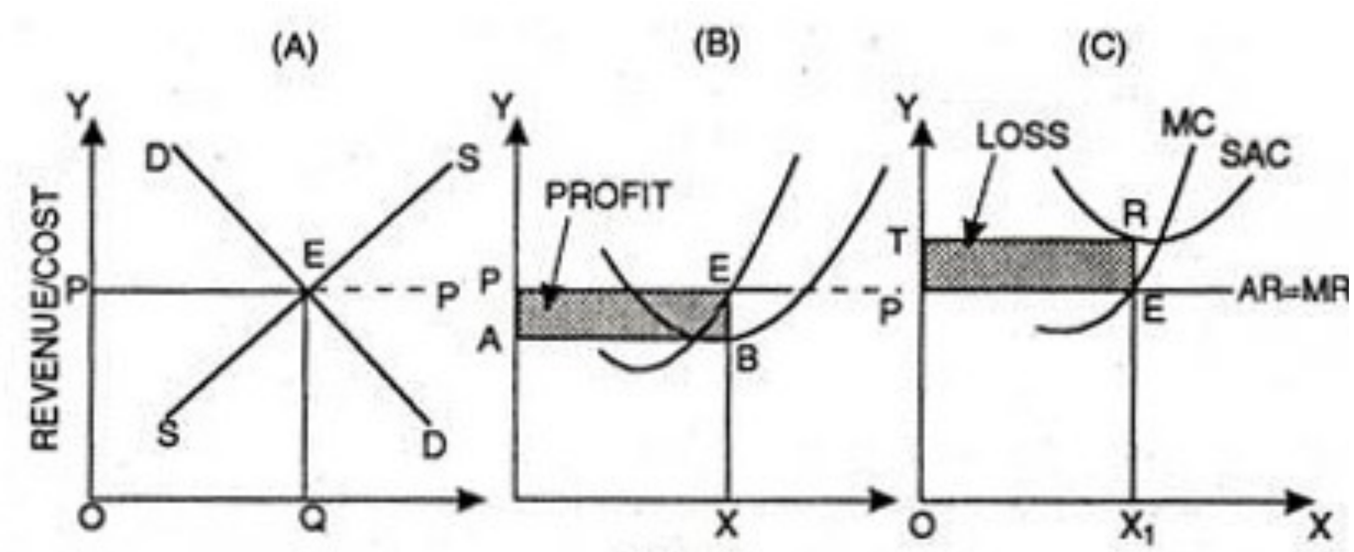
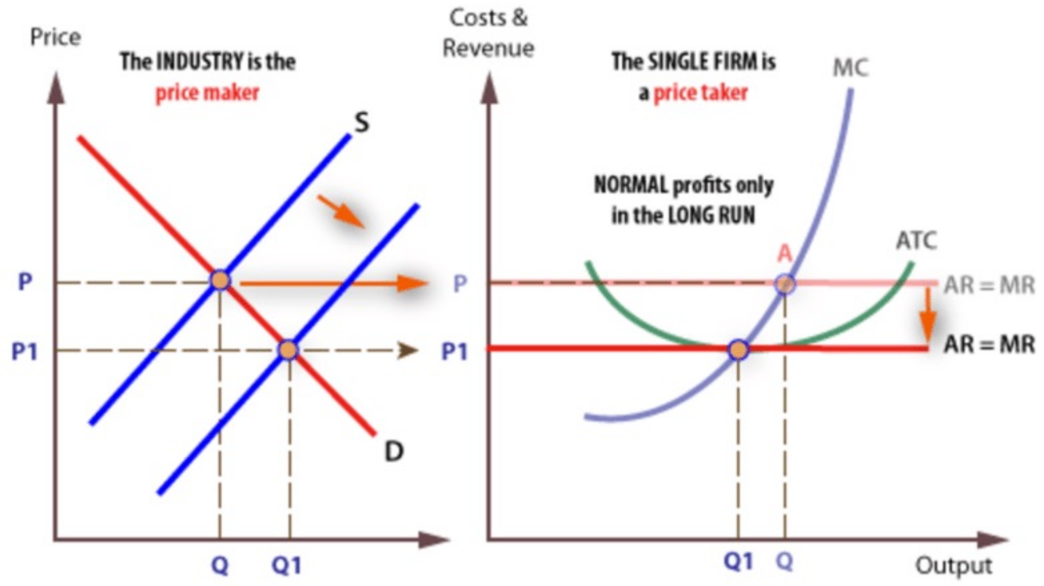


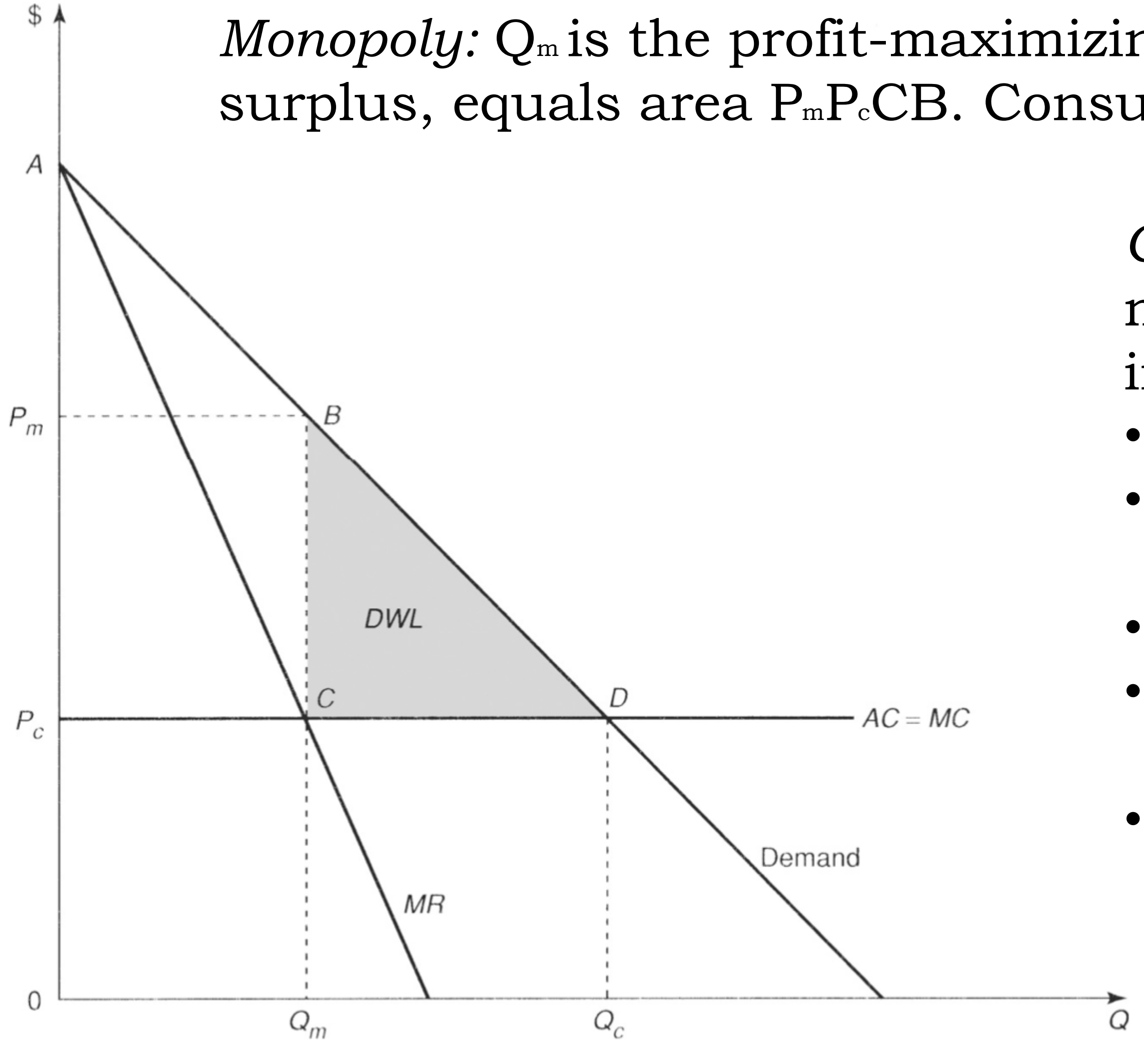
Fig. 9.



- Abnormal profit will attract new entrants into the market . The competition drive prices back down to minimum average total cost and the marginal cost.
- Price = Marginal cost ➔ Allocative effeciency.

Monopoly vs Competition

Monopoly: Q_m is the profit-maximizing level. The associated producer surplus, equals area P_mP_cCB. Consumer surplus equals the triangle AP_mB.



Competition : consider a policy to break up the monopoly and replace it with a competitive industry.

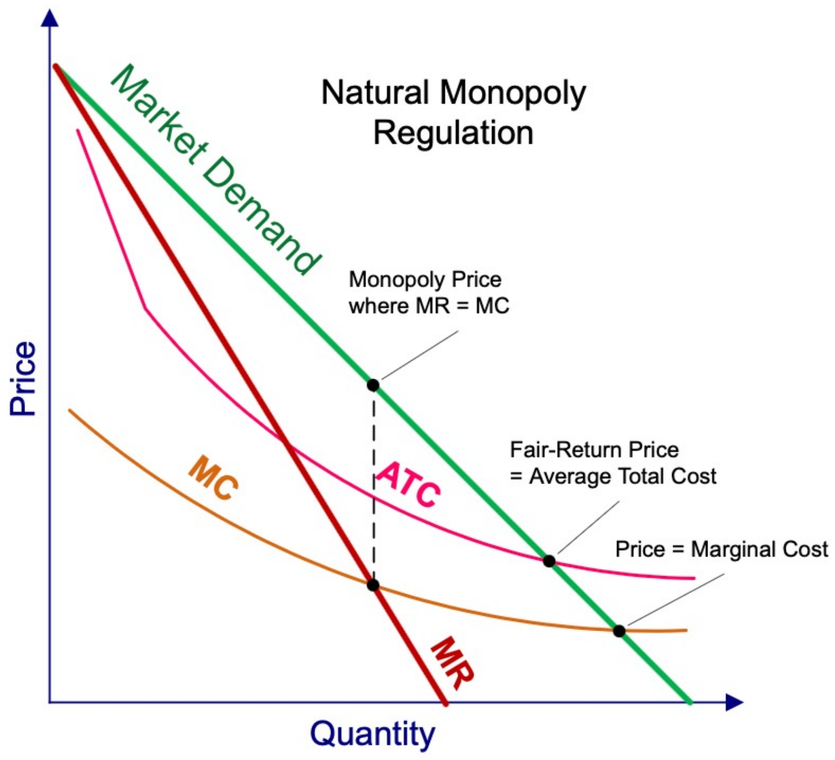
- The new equilibrium is price P_c and output Q_c.
- Consumer surplus increases to the triangular area AP_cD, and
- producer surplus disappears.
- In effect, the elimination of monopoly has led to a net gain in total surplus of triangle *BCD*.
- This triangle, the deadweight loss caused by the monopoly, is labeled *DWL*

Monopoly vs Competition

- Should we divided monopolist into firms so small that they all would be a price taker?
- We assumed that the single firm could be replaced with a large number of firms, with no effect on costs.
- However, large scale production can result in lower per unit costs as a firm expands ➔ “economies of scale”
- Breaking large firms up into smaller firms ➔ sacrificing ”productive efficiency”
- Productive efficiency concerns the production of goods at the lowest cost per unit.

Monopoly vs Competition

- We assumed that the single firm could be replaced with a large number of firms, with no effect on costs ➔ economies of scale were implicitly assumed to be relatively small.



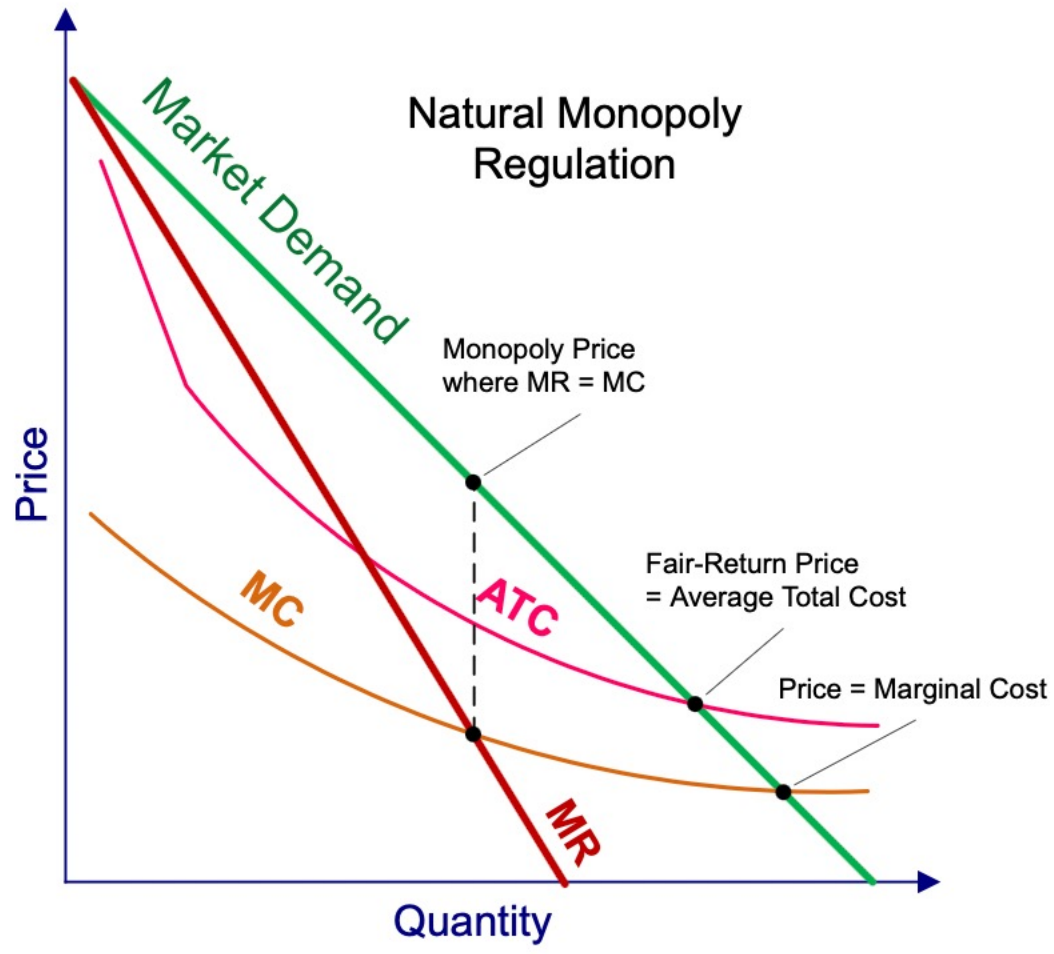
Natural monopolies-

- If the industry has a large fixed cost.
- its average total cost declines continually over any quantity demanded by the market.
- then a single firm can provide the product at a much lower cost than several or many firms

Suppose that it were known that in order to have a sufficient number of firms in the industry for competition to obtain, each firm would only have enough demand to warrant producing an output of q. The average cost of output q would be quite high and would result in a price of P_c, *which exceeds the monopoly price.*

Economies of scale can then make monopoly the preferred market organization. Some examples of a natural monopoly include the distribution of natural gas, electricity, and landline phone service.

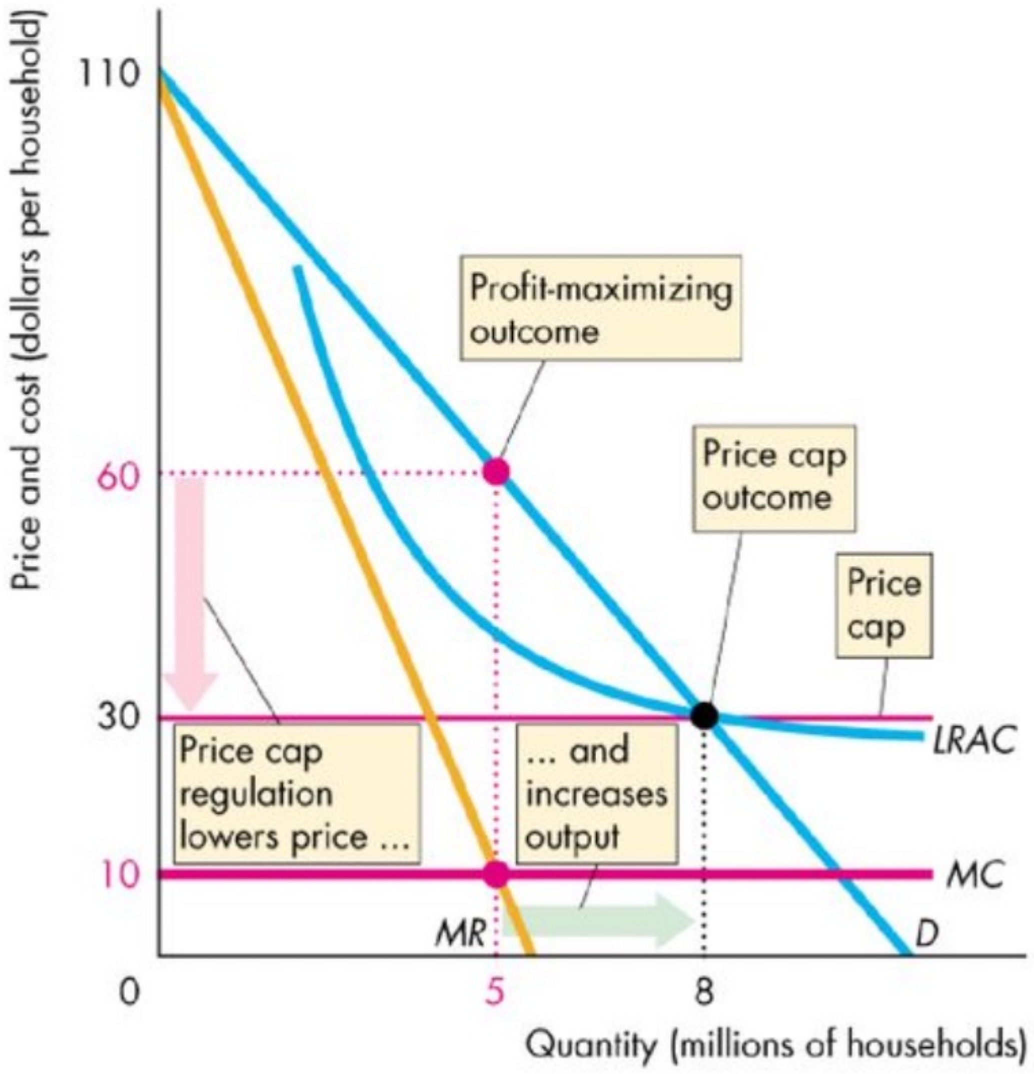
What price should be set for the natural monopoly?



- To achieve allocative efficiency, the regulator will have to impose a price-cap at the marginal cost ➔ marginal cost pricing regulation.
- A public utility's losses could be dealt with in a number of ways, including:

1. Subsidies from the government.
2. Price discrimination ➔ additional revenue can be derived by splitting the market into two or more sub-groups, and charging different prices to each sub-group.
3. Charging one-time fee to cover its fixed cost and then charge price equals marginal cost

What price should be set for the natural monopoly?



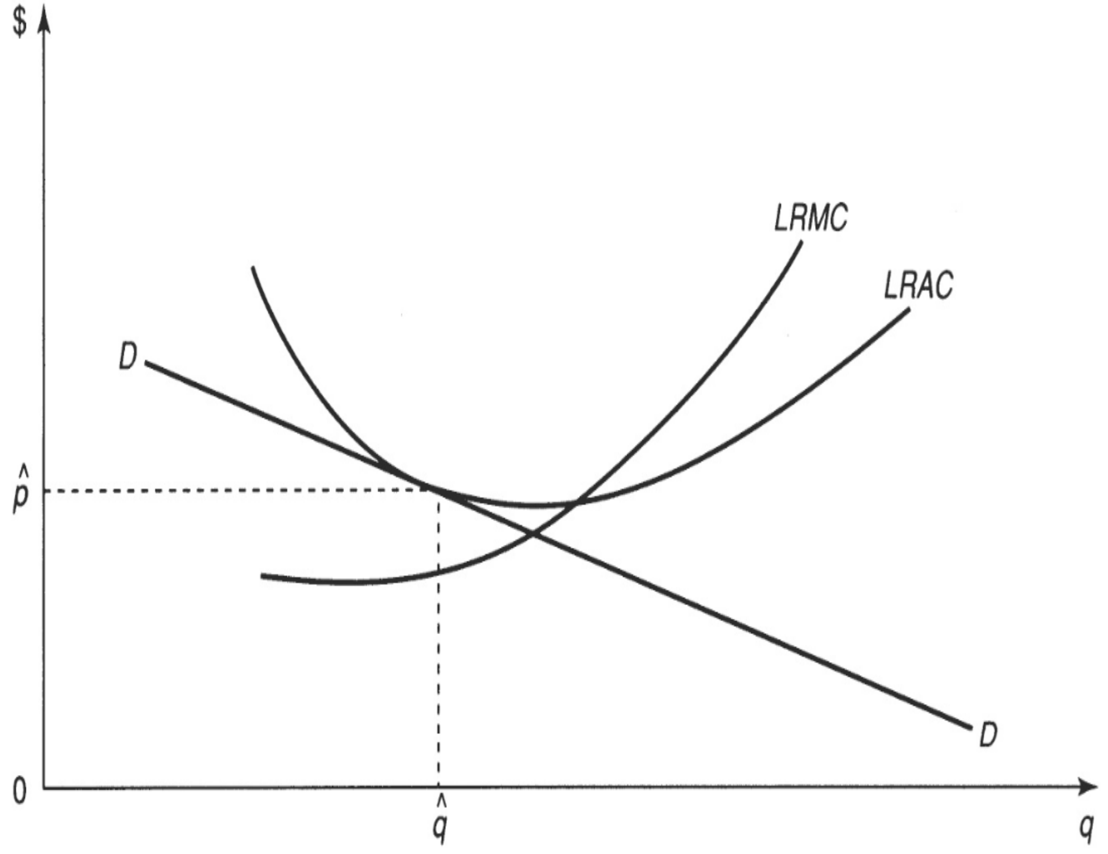
- Average cost pricing regulation==> permit the firm to produce the quantity at which the price equals average cost and set price equals the average cost➔ fair-return price.
- Two practical rules
  - *Rate of return regulation* : a firm must justify it price by showing that its return on capital doesn't' exceed a specified target rate of return ➔ incentive to inflate cost and use more capital than the efficient amount. This type the regulation can be enhanced by allowing the monopolist to keep some of the profits earned by reducing costs.
  - *Price cap regulation :* is a price ceiling that the firm is permitted to charge ➔ incentive to operate efficiently ad keep costs under control.

Natural monopoly

- Sometimes the government will regulate a monopoly by actually owning it.
- The main problem with government ownership is that these monopolies are operated by bureaucrats so they have little incentive to operate the business efficiently or to provide good service to the taxpayer.
- Indeed, if technology were available that increased the efficiency of the monopoly, the bureaucrats would probably reject it to protect their jobs

Monopolistic competition

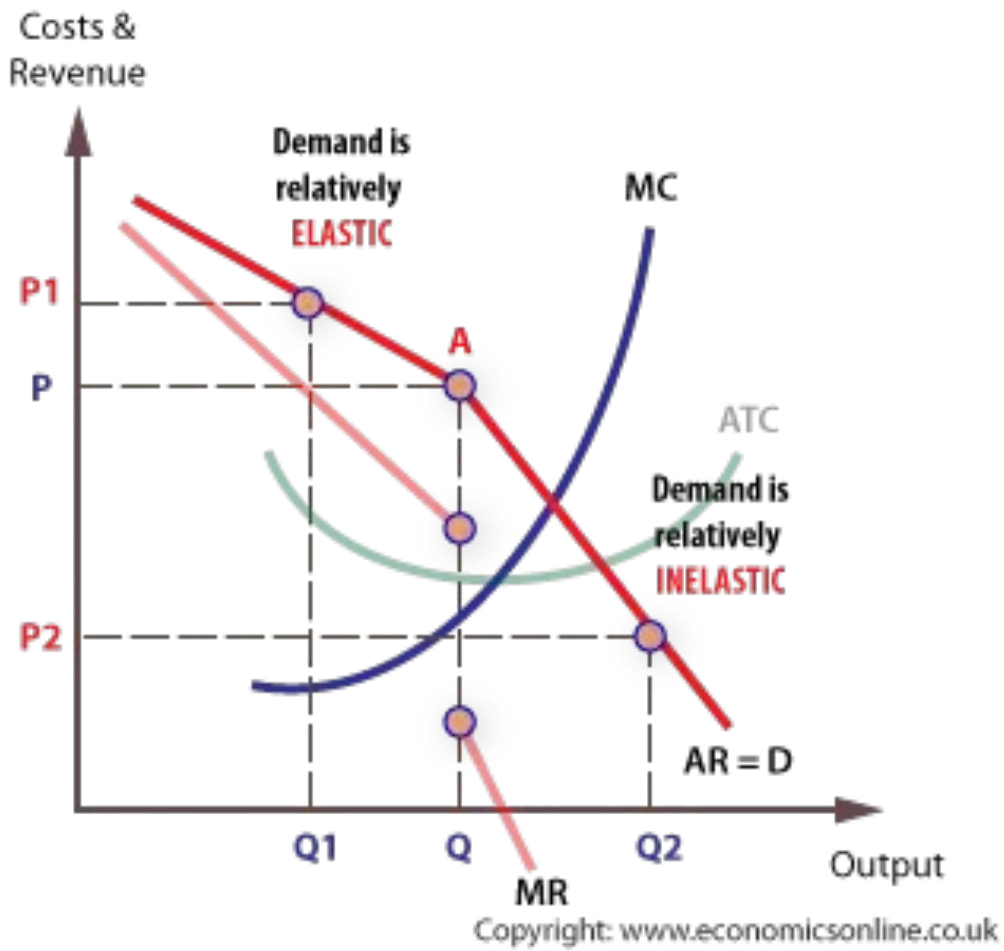
- A second complication is the existence of *product differentiation*. Product differentiation refers to the situation in which buyers perceive differences in the products of rival sellers.
- Consumers regard the differentiation sufficiently important that they are willing to pay a somewhat higher price for their preferred brand.
- Given these assumptions and the assumption of free entry, the long-run equilibrium of a monopolistic competitor is given by the tangency of the typical firm's demand curve with its average cost curve
- Not achieving allocative and productive efficiency.



Monopolistic competition

- With a differentiated product, a firm can increase its price without losing all its sales to competitors.
- The relevant point here is that price exceeds marginal cost—the signal that there is a misallocation of resources. But consider Chamberlin’s argument:
- …. It is true that the same total resources may be made to yield more units of product by being concentrated on fewer firms…. But unless it can be shown that the loss of satisfaction from a more standardized product is less than the gain through producing more units, there is no “waste” at all, even though every firm is producing to the left of its minimum point.

Oligopoly



- **Interdependence** : A firm operating in a market with just a few competitors must take the potential reaction of its closest rivals into account when making its own decisions.
- No incentive to increase price and a price cut would gain a little. No incentive for price competition.
- Non-price competition : advertising, quality improvements, pre/post sale service.

Oligopoly

- **Tacit collusion** (also called 'rule-based' collusion) arises when firms act together, called 'acting *in concert*' but where there is no formal or even informal agreement. For example, it may be accepted that a particular firm is the price leader in an industry, and other firms simply follow the lead of this firm.(eg. Tesla) All firms may 'understand' this, but no agreement or record exists to prove it.
- If firms do collude, and their behaviour can be proven to result in reduced competition, they are likely to be subject to regulation. In many cases, tacit collusion is difficult or impossible to prove, though regulators are becoming increasingly sophisticated in developing new methods of detection.

Advantages	Disadvantages
Price stability / Reduction of market instability	Lower incentive to innovate
Avoidance of direct competition	Barrier to entry for new firms
Higher profits	High prices for consumers

Market power and Market share

- A firm's market power can be measured by the Lerner Index

$$L = (P\text{-}MC)/P$$

- A firm's ability to charge price above competititibe levels is related to elasticity of demand it faces

$$L = 1/\ (\text{Elasticity of demand})$$

- Market share is typically used as a provxy for market power.
  - Market share is only one of the determinants of power.
  - Determination of market share requires defining the relevant market.

Market power

- In general, the ability to raise price above MC can be expressed as

$$L = S/[E_m+E_s(1-S)]$$

- S is the firm's market share, E_m is the elasticity of demand faced by the industry and E_s is the elasticity of supply of competing firms.
- Market power varies directly with market share.
- Market power varies inversely with the elasticity of the industry demand
- Market power varies inversely with supply elasticity
- Consider 2 hypothetical firms, each with a market share of 75%, do they have the same market power?
  - A faces elastic demand and A's competitors have excess capacity and no barrier to entry.
  - B faces inelastic demand and B's competitors are operating near full capacity and costly to entry.

Market share in which market?

Market share in which market?

makro

TESCO
Lotus

Café Amazon

Market share in which market?

1. ร้านไฮเปอร์มาร์เก็ต

46.79%

38.56%

1.89%

2. ร้านซูเปอร์มาร์เก็ต

26.21%

15.79%

14.8%

3. ร้านค้าปลีกขนาดเล็ก

73.60%

9.49%

4.79%

3.24%

Lina Khan, the chairwoman of the Federal Trade Commission

FTC vs Facebook INC.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FEDERAL TRADE COMMISSION
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

Plaintiff,

v.

FACEBOOK, INC.
1601 Willow Road
Menlo Park, CA 94025

Defendant.

Case No.: 1:20-cv-03590-JEB

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- In December 2020, the Federal Trade Commission (FTC) and 46 states sued Facebook, accusing the firm of buying up competitors—chiefly WhatsApp and Instagram—to liquidate competition in the social media industry. The FTC antitrust lawsuit aimed to force Facebook to unwind these two major acquisitions.
- In a surprising move, a federal judge threw out the lawsuit six months after (in June 2021) it was filed, saying the FTC did not provide enough evidence for the claim that Facebook is a monopoly and that it waited too long to present the case.
- In August 2021, The Federal Trade Commission filed the new complaint in federal court in Washington, alleging that Facebook violated antitrust laws by buying Instagram and WhatsApp in order to eliminate them as competitors.
- January 2022, U.S. District Judge James Boasberg, noting that "the FTC has now alleged enough facts to plausibly establish that Facebook exercises monopoly power in the market for [personal social networking] services."

FACEBOOK'S MONOPOLY POWER

- Facebook is the world's dominant online social network, with a purported three billion-plus regular users. Facebook has maintained its monopoly position in significant part by pursuing Chief Executive Officer ("CEO") Mark Zuckerberg's strategy, expressed in 2008: "*it is better to buy than compete.*"
- Facebook holds monopoly power in the market for personal social networking services ("personal social networking" or "personal social networking services") in the United States, primarily due to its control of two of the largest and most profitable social networks in the world, Facebook and Instagram.
- The Facebook social network is known internally at Facebook as "Facebook Blue" and has more than ### monthly users in the United States. Instagram attracts more than ### monthly users.

FACEBOOK’S MONOPOLY POWER

- Facebook collects data on users both on its platform and across the internet and exploits this deep trove of data about users’ activities, interests, and affiliations to sell behavioral advertisements. Last year alone, Facebook generated revenues of more than $85 billion and profits of more than $29 billion.
- high barriers to entry, including strong network effects. a new entrant faces significant difficulties in attracting a sufficient user base to compete with Facebook.. Oftentimes, even an entrant with a superior product cannot succeed against the overwhelming network effects enjoyed by an incumbent personal social network.
- Unable to maintain its monopoly by fairly competing, the company’s executives addressed the existential threat by buying up new innovators that were succeeding where Facebook failed. The company supplemented this anticompetitive spending spree with an opened-first-closed-later scheme that helped cement its monopoly by further thwarting nascent rivals.

FACEBOOK'S MONOPOLY POWER

- Facebook holds monopoly power in the provision of personal social networking in the United States and has held such power continuously since at least 2011.
- Multiple sources of evidence demonstrate that Facebook has monopoly power with respect to U.S. personal social networking services.
- First, Facebook has maintained a dominant share of the relevant market for U.S. personal social networking from 2011 until the present day.
- Second, direct evidence indicates that Facebook has monopoly power with respect to U.S. personal social networking services.
- Further, Facebook's monopoly power is durable due to significant entry barriers, including direct network effects and high switching costs.

Personal Social Networking in the United States Is a Relevant Market

- Personal social networking services are a **relevant product market**.
- Personal social networking services consist of online services that enable and are used by people to maintain personal relationships and share experiences with friends, family, and other personal connections in a shared social space.
- Three key elements distinguish personal social networking services from other forms of online services provided to users.
- First, personal social networking services are built on a social graph that maps the connections between users and their friends, family, and other personal connections.

Personal Social Networking in the United States Is a Relevant Market

- Second, …..include features that many users regularly employ to interact with personal connections and share their personal experiences in a shared social space, including in a one-to-many “broadcast” format. …..include a news feed….., users share content—such as personal updates, interests, photos, news, and videos—with their personal connections. This generally applies to all forms of content on the personal social networking service, including user-created content like user “news feed” posts, publisher-created content like news articles, and advertisements.
- Third, personal social networking services include features that allow users to find and connect with other users, to make it easier for each user to build and expand their set of personal connections.
- The **relevant geographic market** is the United States. The United States is a relevant geographic market for personal social networking services due to several factors, including differences in broadband access and social norms that vary at the country level.
  - In addition, network effects between users are generally stronger between users in the same country.

Substitute for Facebook (personal social networking services)?

- **Personal social networking is distinct from, and not reasonably interchangeable with** ……
- Mobile messaging services do not feature a shared social space in which users can interact, and do not rely upon a social graph that supports users in making connections and sharing experiences with friends and family
- Specialized social networking services that are designed for, and are utilized by users primarily for, sharing a narrow and highly specialized category of content with a narrow and highly specialized set of users for a narrow and distinct set of purposes.
    - Networks that focus on professional (e.g., LinkedIn)
    - Interest-based (e.g., Strava) connections
    - Online dating services.
    - Nextdoor, a service which focuses on facilitating sharing only among users that reside in close physical proximity to one another.

Substitute for Facebook (personal social networking services)?

- **Personal social networking is distinct from, and not reasonably interchangeable with** ……
- online services that focus on the broadcast or discovery of content based on users' interests rather than their personal connections.
- These services do not focus on connecting friends and family:
  - Twitter focuses on enabling users to stay informed about topics that interest them,
  - Reddit facilitates conversations centered around topics of interest to the participants rather than to connect with friends, family, and other personal connections.
  - Pinterest allows users to browse content by conducting searches based on their interests, and allows connections based on such interests.

…….but does not focus on connecting users with friends and family

Substitute for Facebook (personal social networking services)?

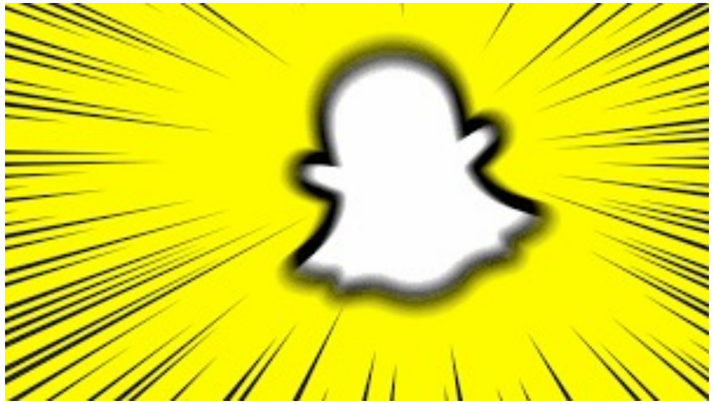
- **Personal social networking is distinct from, and not reasonably interchangeable with** ......
- online services focused on video or audio consumption.
  - Users employ such services primarily for the passive consumption of specific media content (e.g., videos or music) from and to a wide audience of typically unknown users. These services are not used primarily to communicate with friends, family, and other personal connections, a
  - TikTok users primarily view, create, and share video content to an audience that the poster does not personally know, rather than connect and personally engage with friends and family.
  - The purpose for which users employ TikTok, and the predominant form of interaction on the platform, is not driven by users' desire to interact with networks of friends and family.

Facebook's Dominant Share of the U.S. Personal Social Networking Market

- Facebook provides personal social networking to users via its Facebook Blue and Instagram services, and has been the dominant provider of such services since at least 2011. Further, Facebook Blue and Instagram are the two largest personal social networking services in the United States.
- After Facebook, Snapchat is currently the next-largest provider of personal social networking services in the United States. Snapchat provides a shared social space that users employ to engage in personal sharing with friends and acquaintances.
- In 2011,Google launched Google+, a personal social networking , however Google+ failed to gain significant traction. "People who are big fans of G+ are having a hard time convincing their friends to participate because

1) there isn't yet a meaningful differentiator from Facebook and

2) switching costs would be high due to friend density on Facebook



Facebook's Dominant Share of the U.S. Personal Social Networking Market

- Measurements of a personal social networking service's active user base and how much users use the service are appropriate measurements of market shares and market power for personal social networking services.
- a personal social networking service's attractiveness to users, and therefore its competitive significance, is related to its number of users and to how intensively its users engage with the service.
- Facebook Blue has been the dominant and largest personal social networking service in the United States since at least 2011. Based on analysis of data maintained by Comscore, a commercially-available data source, in every month of last year, more than ###### people in the United States visited Facebook Blue, with U.S. users spending in total an average of more than #### minutes per day on the service.

Facebook’s Dominant Position is Protected by Barriers to Entry

- Direct network effects are a significant barrier to entry
- It is very difficult for a new entrant to displace an established personal social network in which users’ friends and family already participate.
- A potential entrant in personal social networking services would also have to overcome the high switching costs faced by users.
- Over time, users of Facebook’s and other personal social networks build more connections and develop a history of posts and shared experiences, which they cannot easily transfer to another personal social networking provider.
- Further, these switching costs can increase over time—a “ratchet effect”—as each user’s collection of content and connections, and investment of effort in building each, continually builds with use of the service.

“*Ratchet effect is an economic phenomenon when a process continues indefinitely and has difficulty reversing its direction. The effect is based on the mechanics of a ratchet or a cog, which rotates smoothly in one direction, but finds trouble turning in the opposite direction*”

HARM TO COMPETITION AND CONSUMERS FROM FACEBOOK’S CONDUCT

- Facebook has hindered, suppressed, and deterred the emergence and growth of rival personal social networking providers and unlawfully maintained its monopoly in the U.S. personal social networking market through means other than competition on the merits.
- Facebook has excluded potential competitors from effective distribution channels and thus denied these firms the scale needed to emerge as meaningful competitors in the U.S. personal social networking market.
- As a result, users of personal social networking in the United States have been deprived of the benefits of competition for personal social networking.
- By monopolizing the U.S. market for personal social networking, Facebook also harmed, and continues to harm, competition for the sale of advertising in the United States.
- Without meaningful competition, Facebook has been able to provide lower levels of service quality on privacy and data protection than it would have to provide in a competitive market.
- Facebook’s anticompetitive conduct stunted innovation and the development of new products that could have disrupted Facebook’s monopoly during this period of transition.

FEDERAL TRADE COMMISSION
PROTECTING AMERICA'S CONSUMERS

- Facebook cannot justify this substantial harm to competition with claimed efficiencies, procompetitive benefits, or business justifications that could not be achieved through other means.
- **COUNT 1 – MONOPOLY MAINTENANCE THROUGH ANTICOMPETITIVE ACQUISITIONS**
- **COUNT 2 – MONOPOLY MAINTENANCE THROUGH AN UNLAWFUL COURSE OF CONDUCT INCLUDING ANTICOMPETITIVE ACQUISITIONS AND ANTICOMPETITIVE CONDITIONAL DEALING POLICIES EMBODIED IN AGREEMENTS GOVERNING DEVELOPERS' ACCESS TO FACEBOOK PLATFORM**

Market definition

- Market definition is a tool to identify and define the boundaries of competition between firms.
- The main purpose of market definition is to identify in a systematic way the competitive constraints that the undertakings involved face.
- The objective of defining a market is to identify those actual competitors of the undertakings involved that are capable of constraining their behaviour and preventing them from behaving independently of an effective competitive pressure.
- For competition law purposes, a relevant market is defined to include those suppliers among whom there is close competition. The focus is upon those goods or services that are close substitutes in the eyes of buyers and upon those suppliers who could produce or who could easily switch to producing those goods or services.
- Firms face three types of competitive constraints: demand substitutability, supply substitutability and potential competition.

Dimensions of the relevant market

- **Relevant product market** consists of the group of products that are considered close substitutes- the market for broadband internet services (whether over cable or fixed-telephony networks)
- **Relevant geographic market** is the area in which that group of products is sold or purchased. (local, national, international)

Dimensions of the relevant market

- Time of purchase or consumption: peak vs off peak market.
- Different distribution channels : same bottle of beer can be in a different relevant market depending on whether it is sold in a supermarket or in a bar.
- Relevant geographic market is the area in which that group of products is sold or purchased. (local, national, international)

Concentration Ratio

- The *m*-firm concentration ratio is simply the share of total industry sales accounted for by the *m* largest firms.

Table 6.1
Percentage of Sales Accounted for by the Five Leading Firms in Industries X and Y

Firm	Industry X	Industry Y
1	20	60
2	20	10
3	20	5
4	20	5
5	20	5
Total	100	85

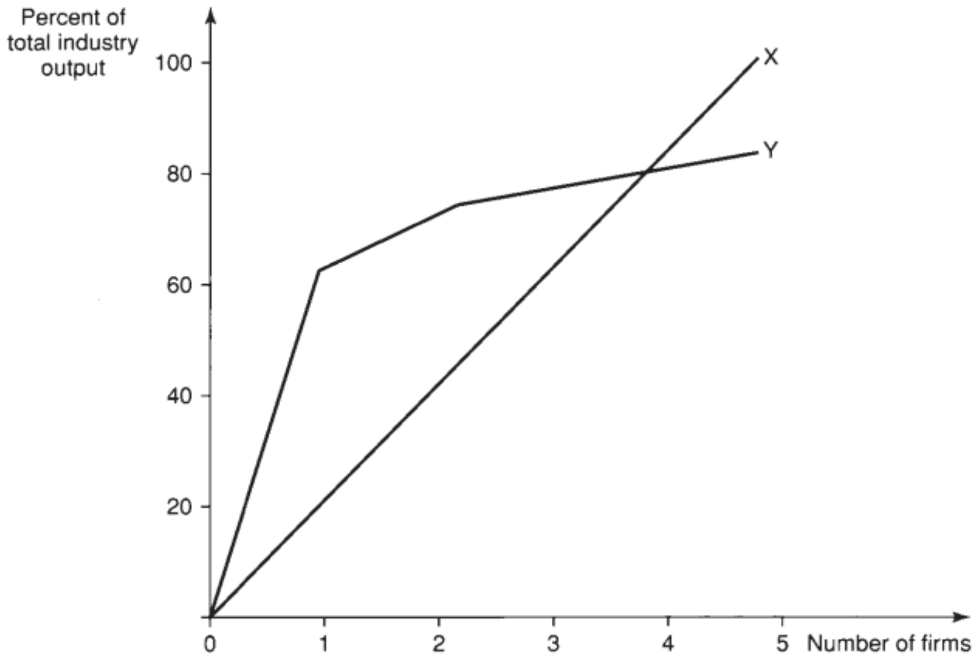


Figure 6.1
Concentration Curves for Industries X and Y

If the curve of Industry Y is everywhere above the curve of X, then Y is more concentrated than X. However, when the curves intersect, it is impossible to state which is the "more concentrated" industry unless we devise a new definition.

HHI Herfindahl -Hirschman Index

- The HHI has the advantage of incorporating more information about the size distribution of sellers than the simple concentration ratio does.

$$HHI = (100s_1)^2 + (100s_2)^2 + \ldots + (100s_n)^2$$

- If an industry consists of a single seller, then HHI attains its maximum value of 10,000.
- The index declines with increases in the number of firms and increases with rising inequality among a given number of firms.

Industry X: $HHI = 20^2 + 20^2 + 20^2 + 20^2 + 20^2 = 2{,}000.$
Industry Y: $HHI = 60^2 + 10^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 = 3{,}850.$

- Divides the spectrum of market concentration as measured by the HHI into three regions that can be broadly characterized as
  - unconcentrated (HHI below 1000),
  - moderately concentrated (HHI between 1000 and 1800), and
  - highly concentrated (HHI above 1800).

Concentration Ratio VS HHI

1. A 40, 20, 20, 5 ➔ CR_4 = 85, HHI = 2,440
2. B 25, 20, 20, 20 ➔ CR_4 = 85, HHI = 1,840
3. C 75, 5, 3, 2 ➔ CR_4 = 85, HHI = 5,678