Public ownership

Common in European countries – government runs telephone, water, electric companies.

US: Postal service. Because delivery of mail seems to be natural monopoly.

Private ownership – incentive to lower costs to get some profits.

Government ownership – no real incentives to lower costs. May be less efficient.

Doing nothing

Each of these policies has drawbacks. So some economists argue doing nothing about monopoly is best.

According to George Stigler, ”...the degree of 'market failure' for the American economy is much smaller than the 'political failure' arising from the imperfections of economic policies found in real political systems”.

Price Discrimination

Selling same good to different customers at different price is called price discrimination.

This is only possible with market power. Cannot be done in competitive market.

In competitive market if a firm tried to sell to someone at higher price, they would go to another firm. No reason to charge lower price, since they can sell all they want at equilibrium price.

Consider a publishing company. The best-selling writer for the company has just written a new novel.

Company’s costs: Pays author 2 million for exclusive rights to publish book.
cost of printing book is zero.

Thus profit is revenue minus 2 million. What price should be charged?
Find out the demand: There are 100,000 diehard fans – will pay up to $30 for the book. 400,000 other readers will pay up to $5.

If charges $30, will make 3 million in revenue, profit is 1 million. If charges $5 will make 2.5 million in revenue, profit is 0.5 million. Should charge $30. But this creates inefficiency (deadweight loss) – there are people whose willingness to pay for the book is higher than the marginal cost of producing it and who aren’t getting to buy the book.

Now suppose all the diehard fans live in Australia, all the other readers live in USA. A simple solution to make more profit: Charge $30 in Australia and $5 in USA. (Assuming there is no internet buying of the book).

Then profit is $3 + $2 − $2 million = 3 million. Much more than the 1 million it could earn by charging $30 to all customers. This is price discrimination.

Perfect price discrimination is when every buyer is charged their willingness to pay. Notice that with perfect price discrimination there is no deadweight loss. The outcome is efficient. All potential surplus is taken by the monopolist. There is no consumer surplus, as all consumers pay their willingness to pay.

It is difficult for a firm to price discriminate: Arbitrage – buying a good in one market and selling it in another where the price is higher – can prevent price discrimination.

Suppose Australian bookstores could buy the book in The United States and resell it to Australians. Then they would charge a lower price to Australian readers, and no one would buy the book at the higher price charged by the monopolist.

Arbitrage must be impossible for price discrimination to work.
The graphs compare no price discrimination with perfect price discrimination.

In reality price discrimination not perfect. Firms cannot know every buyer’s willingness to pay for a product.

They make estimates, for instance assume that students’ willingness to pay is less than working people and give student discounts. Or assume retired people’s willingness to pay is lower and give senior discounts.

There is no general answer to how imperfect price discrimination affects welfare.

Imperfect price discrimination can raise, lower or leave unchanged the total surplus compared to monopoly with no price discrimination.

But any kind of price discrimination raises the profits of the monopolist.

Examples of Price Discrimination
Movie tickets sold at cheaper price to children and senior citizens. If parents have lower willingness to pay for their children, and senior citizens have lower willingness to pay, then movie theaters with some (local) monopoly power can raise profits by charging lower prices to them.

This difference in ticket prices would not arise in a competitive market. There price equals marginal cost. The cost of providing an additional seat to a child or senior citizen is the same as to anyone else.

Airline prices

Many airlines charge lower price for a Saturday-night stay. This separates business travelers from personal travelers.

Business travelers have high willingness to pay and do not want to stay over Saturday night.

Another way to price discriminate is through coupons. The people that are willing to spend the time cutting out the coupons are assumed to have a lower willingness to pay, or a higher willingness to spend time to reduce their price of a good.

Or "early-bird specials" – people willing to get up early to get a cheaper price on a good must have lower willingness to pay.

Financial Aid

Needier students have a lower willingness to pay for college than wealthier students. Financial aid lowers the price charged to the less wealthy students. Colleges act like monopolists.

Quantity discounts

The monopolist can charge different prices for different units to the same customer. Assuming that people’s willingness to pay for an additional unit declines as they buy more units, a monopolist can make more profit this way than by charging the same amount for every unit.

Firms with some amount of monopoly power are common. Most goods are differentiated from one firm to another. Ben and Jerry’s ice cream is not the same as Breyer’s. So each of these goods has a downwards-sloping demand curve. Then the producer has some monopoly power and charges a higher price than marginal cost.
But firms with a lot of monopoly power are rare. Most goods have some substitute that is similar enough so that customers will switch to another brand if price raised too high.

Oligopoly

There are four major firms producing tennis balls: Wilson, Penn, Dunlop and Spalding. Each of these firms can determine to some degree what price is charged for tennis balls.

Oligopoly is different from both monopoly and from competition. Firms in oligopoly have competitors but they are not price takers. Imperfect competition.

One example of an imperfectly competitive market is an oligopoly. Another is monopolistic competition.

The concentration ratio is the percentage of total market output supplied by the four largest firms in the market. This is used to determine what type of market it is.

In the US most industries have a concentration ratio under 50%, but breakfast cereal is 83%, aircraft manufacturing is 85%, electric light bulbs 89%, household laundry equipment 90% and cigarettes 99%. Thus these industries can be called oligopolies.

In monopolistic competition, firms' product is similar but not identical. Novels, movies, CDs and computer games. To determine whether market is competitive or monopolistically competitive, find out whether goods are differentiated or not.

In oligopoly there is a tradeoff between cooperating and acting in one's own interest. The group of oligopolists is better off cooperating and charging the monopoly price than all charging the competitive price. But there is an incentive for a firm to deviate slightly from the monopoly price, charge a little less than the others, and make more profit.

Duopoly: Oligopoly with two firms.

An example with duopoly.

Jack and Jill are the only two residents of a town who own wells. These wells are the only possible source of water for the town. Every week Jack and
Jill pumps a certain number of gallons of water, bring it to town and sell it for some market price. Assume that marginal cost of an additional unit of water is zero at every quantity.

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If the market for water were perfectly competitive, price would equal marginal cost and the equilibrium price of water would be zero. The equilibrium quantity would be 120 gallons.

If the market for water were a monopoly, profit-maximizing production would take place where marginal revenue equals marginal cost. Since marginal cost is zero, this is where marginal revenue equals zero. This is at a quantity of 60 gallons, and price is $60.

This price and quantity are inefficient. The quantity of water produced is less than the efficient level of 120 gallons.

Possibilities for the duopoly: They could get together and agree on a price that both will charge. This behavior is called collusion. The group of firms acting this way is called a cartel.

If they collude, they will charge the monopoly price. Then the effective situation to the buyers is a monopoly. The monopoly price will be charged and the monopoly output level will be produced (They will produce 60 gallons total and charge $60 a gallon).

The cartel has to agree on how much each will produce. If they split the production equally, each produces 30 gallons and makes $1800 profit.

Oligopolists would like to form cartels and get profits. But antitrust laws make explicit agreements among oligopolists illegal in the United States and other countries. Also cartel members may not be able to agree on how to divide
production among themselves.

There is also the problem of defection from the agreed level of production. In the case of Jack and Jill, suppose they agreed to each produce 30 gallons and get the joint monopoly profit.

Assume that Jack thinks Jill is going to produce 30 gallons. He then compares his profit from producing 30 gallons to the profit he will get from producing another quantity, say 40 gallons. If he produces 30 gallons the price will be $60 and he will make $1800 in profits. If he produces 40 gallons the price will be $50 and he will make $2000 in profits. So of course he will produce 40 gallons.

But Jill must be reasoning in the same way. So she will produce 40 as well. The total output will be 80, and price will be $40. They each get a profit of $1600, lower than the 1800 they get from jointly producing at the monopoly quantity.