Market Structures

Chapter 10

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Learning Outcomes

In this chapter we will:

- examine why economists use market structures and models to analyse and find solutions to economic problems
- describe and critique the main features of perfectly competitive, monopolistic and oligopolistic product markets
- demonstrate and analyse how a change in demand or supply in a market structure impacts on equilibrium
- graphically represent, describe and compare market equilibrium under perfect competition, monopoly and monopolistic competition in the short and long run
- graphically represent and evaluate the point of profit maximisation for a firm in a monopoly market and a firm in a perfectly competitive market
- examine the implications of changing levels of competition and market power on price and output under perfect competition, monopoly and oligopoly
- collect data and calculate the concentration of power in a market using a concentration index such as the Herfindahl-Hirschman index; evaluate the implications of its concentration
- explain why particular market concentrations are deemed problematic for consumers and are therefore regulated by Irish and European competition authorities

1. Why do economists use market structures and models?

Economists use **models** and **market structures** to make sense of complex real-world markets.

Main reasons

- **Simplify reality:** focus on the most important variables (price, output, costs, competition).
- **Explain behaviour:** how firms and consumers are likely to react to incentives.
- **Predict outcomes:** what happens to **price**, **quantity**, **quality** if conditions change.
- **Compare "what if" scenarios:** e.g. more competitors vs fewer competitors.
- **Design solutions:** identify when markets deliver good outcomes and when **market failure** occurs.

A model is like a map: it is **not the whole territory**, but it helps you navigate. Models help us to identify key relationships (demand, supply, costs, revenue, profits), separate short-run vs long-run effects and test assumptions (what changes if firms can enter freely? what if there are barriers?)

Limitations of using models to analyse market structures

- real markets have advertising, brand loyalty, imperfect information and regulation
- models rely on assumptions, so conclusions must be applied carefully

Why use *market structures* specifically?

Market structure describes **how competitive** a market is. This determines the level prices, output, quality/innovation, profits and efficiency.

Economists often classify markets by:

- **number of firms** (many vs few vs one),
- **barriers to entry** (easy vs hard to enter),
- **product type** (identical vs differentiated),
- **market power** (ability to control price).

Structure	**# Firms**	**Entry**	**Market power?**
Perfect competition	Many	Easy	Very low
Monopolistic competition	Many	Relatively easy	Some (via branding)
Oligopoly	Few	Difficult	High (strategic behaviour)
Monopoly	One	Very difficult	Very high

As competition falls, market power rises $\Rightarrow$ risk of **higher prices** and **less consumer choice**.

How models help solve economic problems

Models help economists diagnose and respond to problems such as:

- **high prices / inflation pressure** (are firms able to raise prices easily?)
- **low output / shortages** (is supply restricted by market power?)
- **poor quality / weak innovation** (are firms under pressure to improve?)
- **inefficiency** (are resources being wasted or misallocated?)

Policy link

Once the structure is understood, economists can recommend:

- stronger competition (reduce barriers, support entry),
- regulation (rules for pricing/quality),
- consumer protection (information and transparency),
- breaking up or blocking anti-competitive behaviour.

Types of Market Structures

Perfect Competition

Imperfect Competition

Oligopoly

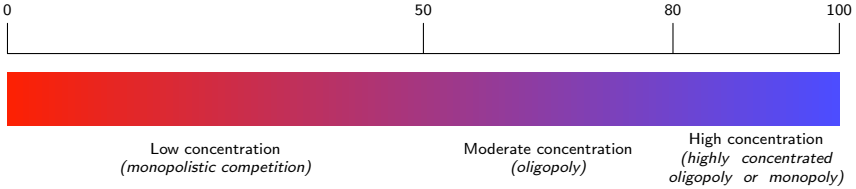
Monopoly

Market Concentration

Measuring market concentration is a very useful tool for determining the type of market structure within an industry. Here are some ways of calculating market concentration:

1. The Hirschman Herfindall Index:

$$HHI = \sum_{i=1}^{n} (s_i)^2$$



2. Four-firm concentration ratio. This can help to identify oligopoly markets, where the majority of the market by four or fewer firms. Here's how to calculate it:

$$FFCR = \sum_{i=1}^{4} (s_i)$$

Concentration of Dublin Airport Parking (Source: CCPC)

Market Concentration of Dublin Airport Car Park

Using the data on the previous slide, lets calculate the HHI of the market:

$$HHI = \sum_{i=1}^{n} (s_i)^2 = 68^2 + 22^2 + 5^2 + 5^2 = 5518$$

What is market concentration, and why can it be a problem?

So, high market concentration means a large share of a market is controlled by a **small number of firms**, often increasing **market power** of these firms:

- firms may be able to **raise prices** above competitive levels,
- firms may restrict output to keep prices high,
- consumers may face fewer alternatives.

Main consumer concerns

- **Higher prices:** firms with market power can charge more.
- **Less choice:** fewer competitors $\Rightarrow$ fewer products/brands.
- **Lower quality/service:** less fear of losing customers.
- **Less innovation:** weaker competitive pressure to improve.
- **Unfair practices:** dominant firms may squeeze suppliers or block rivals.

Consumers can be worse off because **consumer surplus falls** when prices rise and choice declines.

Why Irish and EU competition authorities regulate concentrated markets

Competition policy exists to protect **consumer welfare** and ensure markets work fairly.

Core aims of regulation

- keep markets **competitive** where possible
- prevent **abuse of dominance** (using power unfairly)
- stop **cartels and price-fixing**
- review **mergers** that could reduce competition
- support **efficiency and innovation** in the economy

When examining a market or a merger, authorities (like the CCPC or CRU) consider questions like:

- Will it **raise prices** or reduce output/choice?
- Will it reduce **quality** or **innovation**?
- Can new firms **enter easily** to compete?
- Is there a risk of **collusion** among a few large firms?
- Are consumers **able to switch** (or are they "locked in")?

Outcome: authorities may approve, block, or approve with conditions (e.g. selling parts of a business).

Balanced view: concentration is not always bad

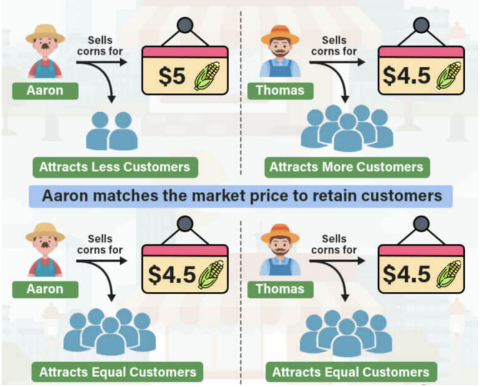
Important evaluation point: sometimes larger firms can benefit consumers.

Possible benefits of concentration

- **economies of scale** $\Rightarrow$ lower costs and potentially lower prices
- more funds for **research and innovation**
- ability to provide **reliable supply** and invest in infrastructure

So why regulate? to ensure these benefits are not achieved through **anti-competitive behaviour** and that consumers are not exploited.

Perfect Competition — Overview



In this section we develop a complete treatment of the perfectly competitive market. We begin with the defining characteristics and the implications of those assumptions for firm behaviour. We then analyse the short run, where firms may earn supernormal profit or make losses, and show how entry and exit drive the long-run outcome. Finally, we evaluate the benefits and challenges of this market structure.

The Characteristics of Perfect Competition

1. **Homogeneous goods.** All firms supply an identical product. Because each unit is a perfect substitute for any other, consumers are indifferent to the producing firm. If milk is homogeneous, a shopper does not care which farmer produced the litre they buy; they simply purchase at the lowest available price.
2. **Freedom of entry and exit.** There are no structural, legal or strategic barriers that prevent new firms entering when profit is available, or existing firms leaving when losses persist. This fluidity is central: entry competes away supernormal profits, while exit reduces excess capacity when the industry is unprofitable.
3. **No collusion and many small participants.** Because the industry contains a large number of buyers and sellers, no single participant possesses market power. Neither buyers nor sellers can manipulate price by withholding or flooding output; each is too small relative to the market.
4. **Perfect knowledge.** Firms understand rivals' costs and the going market price; consumers know the prices charged by all sellers. Transparent information eliminates scope for persistent price differences and ensures resources move towards the most efficient producers.

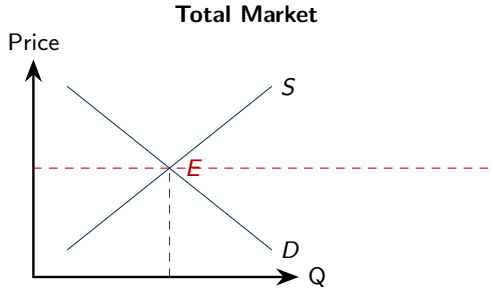
Implications of Assumptions and Lack of Marketing

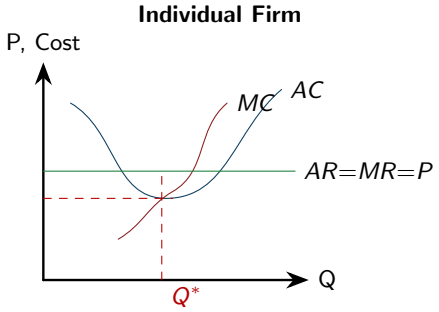
Why firms do not advertise. With homogeneous products, individual advertising cannot create meaningful brand differentiation. Any awareness raised for the product class benefits the entire industry rather than the paying firm. As advertising adds to cost without raising a firm's demand at the going price, it is irrational in equilibrium.

Price-taking behaviour. Because each firm is tiny relative to the market, its own output has a negligible effect on total supply and hence on price. Firms therefore accept the market price as given and choose output to maximise profit: produce the quantity where $MC(q) = MR$, and under perfect competition $MR = P$.

Consequences for efficiency. Perfect information and free mobility of firms ensure that, in the long run, only producers operating at minimum average cost survive. Resources are allocated to lowest-cost uses, and price signals reflect true opportunity cost.

Short Run: Market Price and the Price-Taking Firm





At the market level, the intersection of industry supply and demand determines the prevailing price P. An individual firm faces a perfectly elastic demand at this price: its AR and MR coincide with the horizontal line at P. To maximise profit, the firm produces Q^* where marginal cost cuts the $AR{=}MR$ line from below. If $P > AC(Q^*)$, the firm earns supernormal profit; if $P < AC(Q^*)$, it makes a loss.

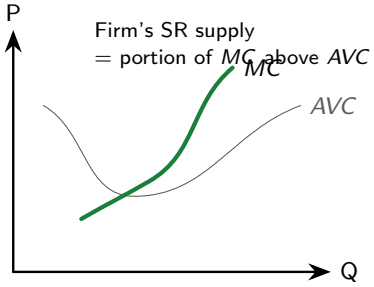
Short Run: Supernormal Profit ($AR > AC$)

Short Run Supernormal Profit ($AR > AC$) Suppose the equilibrium price is above the firm's average cost at the profit-maximising output. The gap $P - AC(q^*)$ is profit per unit, and the total supernormal profit equals this gap times q^*. Because entry barriers are absent, supernormal profit attracts new firms. Industry supply shifts right, the market price is bid down, and the extra profit is competed away. This mechanism prevents any one firm from sustaining excess returns in the long run.

Short Run: Losses ($AR < AC$) and the Shutdown Condition When the going price is below average cost at q^*, the firm incurs a loss. In the short run it will nonetheless *continue to produce* if price at least covers average variable cost, $P \geq AVC$, because production then contributes something towards fixed costs that must be paid regardless. If $P < AVC$, the firm shuts down immediately, since producing would fail even to cover variable outlays. Persistent losses trigger exit in the long run, shrinking industry supply and pushing the price back up.

Short-Run Supply Curve of the Firm

The short-run supply curve of an individual competitive firm is the segment of the marginal-cost curve lying *above* average variable cost. Below the minimum of *AVC* the firm supplies zero units; above that point, each increase in price induces a movement along *MC* and hence a larger quantity supplied.



Note 4 — Long-Run Entry, Exit and Equilibrium

Because firms may freely enter and exit, the industry adjusts until no firm has an incentive to do either. In the long run, price equals both marginal cost and the *minimum* of average cost:

$$P \;=\; MC \;=\; \min AC,$$

so firms earn **normal profit** only. At this point production occurs at the lowest attainable unit cost, and resources are used efficiently. Any subsequent positive profit invites entry and restores the equilibrium; persistent losses force exit and likewise restore the condition $P = MC = AC$.

Benefits and Challenges of Perfect Competition

Benefits

- **Prices kept to a minimum.** The long-run price equals the minimum feasible average cost, so consumers are not overcharged and firms cannot exploit market power.
- **Production at least cost.** Surviving firms operate at the efficiency point on their cost curves, using scarce resources in the least-wasteful manner.
- **No marketing expenditures.** Since products are homogeneous, there is no need for brand advertising; resources are saved rather than diverted to persuasion.
- **Discipline through competition.** Inefficient firms are forced to improve or exit, which promotes productive efficiency across the industry.

Challenges

- **Limited economies of scale.** Fragmentation into many small producers can prevent the industry from exploiting large-scale efficiencies.
- **Weak innovation incentives.** In the absence of sustained supernormal profit, firms have less internal funding and weaker incentives to undertake risky R&D.
- **Undifferentiated choice.** With identical goods, there's little variety or quality differentiation.
- **Rapid diffusion of know-how.** Perfect knowledge means any process innovation is quickly imitated, reducing private returns to technological progress.

Key Takeaways

A perfectly competitive firm is a price taker: it chooses output where $MC = MR = P$. In the short run, firms may earn supernormal profit or incur losses; in response, entry or exit shifts industry supply. In the long run, the market settles at $P = MC = \min AC$, with production at least cost and only normal profit. While the structure delivers low prices and productive efficiency, it also limits scale advantages and weakens incentives for innovation.

Imperfect Competition — Overview

In imperfect competition, firms face a downward-sloping demand curve and enjoy some degree of price-setting power due to product differentiation. We'll explore the key characteristics, price/output determination, short-run and long-run equilibrium, and finally the benefits and disadvantages of this structure compared with perfect competition.

Market Characteristics

1. **Lots of vendors.** There are many sellers, each acting independently and setting their own prices. Individual firms can influence the quantity sold by adjusting price.
2. **Product differentiation.** Goods are close substitutes but not identical. Firms use branding, packaging, and advertising to establish distinct identities. Differentiation may arise through the product's physical characteristics, marketing, distribution, or human capital.
3. **Freedom of entry and exit.** Firms can freely enter or leave the industry. Entry occurs when profits exist; exit occurs when firms fail to cover costs.
4. **Profit maximisation.** Each firm aims to produce the short-run output where $MC = MR$ to maximise profit. In doing so, it minimises costs and utilises available capacity efficiently.

Examples: pubs, hairdressers, small builders — typical imperfectly competitive industries.

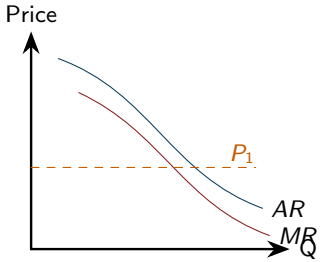
The Demand Curve

Because firms set their own prices, each faces a **downward-sloping demand curve**. This reflects the inverse relationship between price and quantity demanded.

When a firm raises its price, it loses some customers but not all — consumers view products as substitutes, not perfect alternatives. When it lowers price, demand expands but revenue gain depends on elasticity.

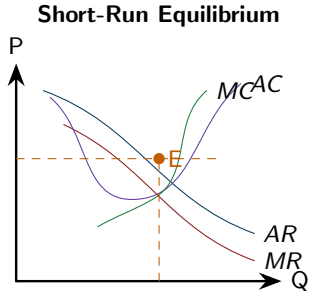
Price makers: Each firm has control over its own price, though the market equilibrium is determined by all firms' collective behaviour.

Firm's AR and MR Curves



The AR curve represents the firm's average revenue at each price–quantity combination, while MR falls twice as steeply. When the firm raises price, it moves upward along the AR curve; when it reduces price, MR declines faster.

Market Equilibrium



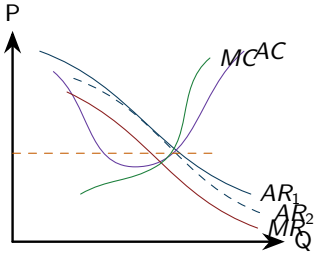
In the short run, equilibrium occurs where $MC = MR$. At this point, the firm sets price from the AR curve and may earn **supernormal profit** ($P > AC$). The shaded rectangle between P and AC represents profit per unit multiplied by output.

SPEC Summary:

- **S**: Supernormal profit if $AR > AC$.
- **P**: Price and output at $MC = MR$.
- **E**: Equilibrium point where MR cuts MC from below.
- **C**: Costs at lowest attainable AC.

Long-Run Adjustment

In the long run, new firms are attracted by supernormal profits. As they enter, each existing firm's share of market demand falls. The demand curve facing each firm shifts leftwards until only **normal profit** remains.



Once AR is tangent to AC at the equilibrium point, firms make only normal profit. Output occurs where $MC = MR$, but price is taken from the tangent point on AR. No further entry or exit occurs.

Benefits & Disadvantages of Imperfect Competition

Benefits

- **Contestable markets:** Low barriers to entry ensure consumers benefit from competitive prices.
- **Dynamic efficiency:** Firms continuously improve products and methods to maintain differentiation and advantage.
- **Information access:** Advertising and marketing provide consumers with useful product information.

Disadvantages

- **Price exceeds marginal cost ($P > MC$):** Allocative inefficiency; resources not optimally used.
- **Excess capacity:** Firms do not operate at minimum AC; production below full capacity.
- **Marketing costs:** Heavy expenditure on advertising raises costs and may not improve efficiency.

Perfect vs Imperfect Competition

Aspect	Perfect Competition	Imperfect Competition
Efficiency Level	Maximised efficiency; firms produce at min AC ($P = MC$)	Resources wasted as firms produce below minimum AC
Price	$P = MC$	$P > MC$, indicating inefficiency
Demand (AR) Curve	Horizontal (perfectly elastic)	Downward sloping (less elastic)

Price competition: Firms compete by changing price — discounts, sales, and cheaper options benefit consumers.

Non-price competition: Firms compete without lowering price — through branding, rewards, loyalty schemes, or giveaways. This fosters customer loyalty and stabilises prices.

Oligopoly – Overview

An oligopoly is a market dominated by a small number of firms. Each firm is large relative to the market and therefore recognises that its decisions about price, output, and marketing will affect rivals and invite reactions. Strategic interdependence is the defining feature. We begin with market characteristics, then develop the kinked demand curve as an explanation for price rigidity, followed by forms of collusion, price leadership, and limit pricing as an entry-deterrence strategy.

Who runs Food & Utilities Industries?

Market Characteristics

1. **Few sellers and price-setting power.** Because only a handful of firms supply the market, each firm's actions materially influence the market price and the sales of rivals. Firms are consequently *price setters* rather than price takers.
2. **Product differentiation may be present.** Like imperfect competition, products are often close substitutes rather than identical. Firms employ branding, quality variation, packaging and advertising to create perceived differences, although in some industries (e.g. fuels) meaningful differentiation can be difficult.
3. **High barriers to entry.** Incumbents typically protect market share through advantages such as access to expensive technology, large set-up costs, control of key inputs or distribution channels, legal protections, and *brand proliferation* (creating multiple sub-brands and closely related variants to crowd the shelf and deter niche entrants).
4. **Potential for collusion.** Firms may find it profitable to coordinate behaviour—explicitly or tacitly—to restrain output and keep prices high. Formal cartel agreements are illegal in most jurisdictions, including Ireland and the EU, but the incentives exist and shape strategic conduct even when explicit coordination is prohibited.

Barriers to Entry in Oligopolistic Markets

1. High Start Up Costs: Some Oligopolistic firms operate on such a large scale that the costs of starting up in the industry faced by potential entrants is so high that it would be unprofitable to set up a new firm in opposition to the existing ones.
2. Limit Pricing: When new firms enter the industry, existing Oligopolistic firms may all agree to each lower their price, in the hope that the new entrant is unable to match this price and as such is forced out of the industry.
3. Existence of Trade Agreements: Trade Agreements could make it difficult for the firms to enter the market. Any import tariffs will add to the cost of doing business and may be passed onto the consumer in the form of higher prices.
4. Brand Loyalty of Existing Customers: it will cost potential entrants a lot of money on advertising to create its own brand loyalty. It can be expensive to establish a distinctive brand name from those already well-established in the market.
5. Economies of Scale in the Market: These may have been achieved by existing producers in the European market over a period of time and resulting in lower average costs of production. It will be difficult for a new entrant to achieve these economies of scale and so compete with existing firms.

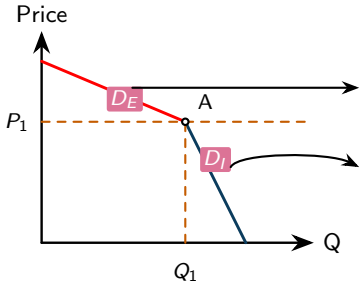
Brand Proliferation

Brand Proliferation – Definition

Brand Proliferation is where each existing firm produces and advertises several brands thus limiting the market available to a new entrant.

Look at the diagram on the "Who runs Food & Utilities Industries?" slides. We can see Coca Cola produces Fanta Sprite, Coke and Monster, along with other soft drink brands. Similarly Kraft Group owns Cadbury, Oreo, Milka and Toblerone, amongst others. This limits the ability of new firms to enter the market as many alternatives already exist by the firms proliferating the market.

Kinked Demand Curve: Elastic and Inelastic Sections



Elastic section

Raising prices will lower demand as competitors will not follow suit.

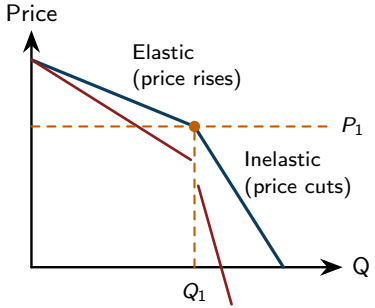
Inelastic section

Lowering prices induces no benefit because all other firms will just follow suit and all lose out.

Kinked Demand Curve: Elastic and Inelastic Sections

Sweezy's hypothesis: rivals *ignore* a price rise (you lose many customers) but *match* a price cut (you gain few new customers). Hence demand is **elastic above** the prevailing price and **inelastic below** it; the kink occurs at the current price/quantity.

Kinked AR (Blue) with MR (Red) gap

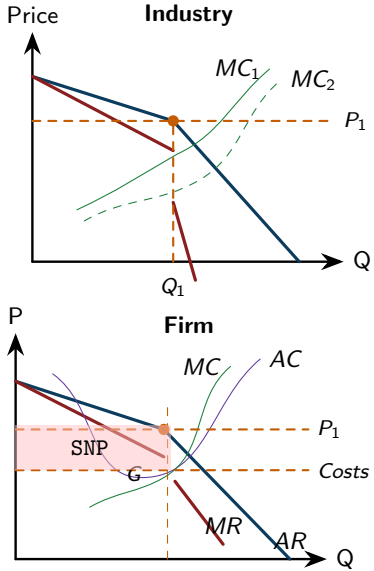


Interpretation

- Above the kink: if you *raise* price, rivals *don't* follow $\Rightarrow$ large loss of customers (elastic).
- Below the kink: if you *cut* price, rivals *match* $\Rightarrow$ small gain in customers (inelastic).
- The MR curve has a **gap**. Small MC shifts that fall inside this gap do not change P_1 or Q_1 $\Rightarrow$ **price rigidity**.

Criticism of Sweezy. The model explains why prices remain stable once established but *does not explain how the initial price is set*. After large cost shocks, prices can and do change; the kinked-demand story offers limited guidance on the new post-shock price.

Industry and Firm under Oligopoly



SPEC (Industry/Firm outcomes)

- **S**upernormal profit: possible if $AR \geq AC$ and entry barriers persist.
- **P**rice and output: P_1 and Q_1 at the kink; chosen output where MC intersects the MR gap.
- **E**quilibrium: any MC between MC_1 and MC_2 leaves P_1, Q_1 unchanged (*price rigidity*).
- **C**osts: firm typically produces below $AC_{\text{min}} \Rightarrow$ excess capacity; $P > MC$ implies allocative inefficiency.
- **S**carce resources: output below the efficient level means some welfare loss relative to $P = MC$.

Short-Run Profit and Strategic Interdependence

In the short run, an oligopolist chooses output where $MC = MR$ given its perceived kinked demand and discontinuous marginal revenue. Profits can be sustained when barriers to entry are strong. However, each firm recognises that departures from the status quo may trigger aggressive responses from rivals, so there is a powerful incentive to keep prices stable and compete through non-price means (branding, product features, after-sales service).

Collusion: Forms and Mechanisms

Definition. Collusion occurs when firms coordinate to raise price or restrict output, thereby increasing joint profits at the expense of consumers.

Main forms.

- **Limit pricing (entry deterrence).** Incumbents deliberately set a price low enough to make entry unprofitable given entrants' expected costs and scale. This strategy sacrifices some short-run profit to protect long-run market power.
- **Output policy (cartel).** Producers agree to cap output to keep price elevated. The classic example is coordinated production quotas, such as those used by commodity cartels.
- **Market sharing / sales territories.** Firms divide customers or regions and agree not to poach, converting potential rivalry into a quiet life.
- **Tacit (implicit) collusion.** Without explicit communication, firms use focal points, repeated interaction, or price-matching guarantees to achieve cartel-like outcomes while avoiding illegal agreements.

Policy note. Explicit cartels are illegal in most jurisdictions (including Ireland/EU), and authorities monitor tacit coordination where it harms consumers.

Price Leadership

In some oligopolies one firm is significantly larger or more efficient. This **dominant firm** sets the market price, and smaller **fringe firms** *take* that price as given and supply the remainder of demand. The leader anticipates the fringe's supply, subtracts it from market demand to obtain its *residual demand*, and then sets price where its own MR equals MC.

Behavioural implications.

- If fringe firms refuse to follow the leader's price increase, the leader's share and profit may fall; the leader will then adjust.
- If fringe firms undercut the leader, the leader can respond by temporarily lowering price to discipline rivals and restore coordination.
- Transparency (public price announcements, list prices) helps sustain leadership by making deviations easy to detect.

Limit Pricing

Concept. Limit pricing sets the prevailing price low enough that a potential entrant—given its expected cost, scale, and learning curve—would forecast post-entry losses or insufficient returns. Incumbents trade off lower short-run profits against the benefit of preventing entry and preserving market power.

Economic logic.

- An entrant compares its *average cost at viable scale* with the price it expects to meet. If price is kept below that cost (or only marginally above), entry is deterred.
- Credibility matters: incumbents must be able to sustain the limit price (e.g., via genuine cost advantages or excess capacity). Empty threats are not persuasive to rational entrants.
- Limit pricing is most effective when demand growth is modest and entrants face substantial sunk costs; otherwise, temporary losses may be acceptable to entrants.

Welfare. Consumers may enjoy lower prices than a pure monopoly would set, but prices typically remain above competitive levels, and output below the socially efficient quantity where $P = MC$.

Irish Monopolies

an post

Uisce Éireann
Irish Water

Iarnród Éireann
Irish Rail

Market Characteristics

- **One supplier:** One firm provides output for the entire industry. No need for distinction between the firm and the industry.
- **Controls price or quantity:** A monopolist can control *either* price *or* quantity, but not both. For example, *Eircom* could set its price, but the quantity demanded depends on consumers.
- **Maximises profit:** Firm produces where $MC = MR$. As monopolist maximises profit, supernormal profit (SNP) is earned.
- **Entry barriers:** High barriers prevent new firms from entering. Examples: high setup costs, control of resources, patents, or government regulation.
- **Cartels:** Firms may form agreements to divide markets and reduce competition.
- **Patents:** Exclusive rights to production processes allow firms to protect profits until expiry, encouraging innovation.

Sources of Monopoly Power

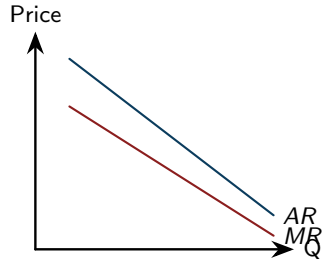
1. **Mergers and acquisitions:** Monopoly power can be gained by buying competitors, eliminating competition.
2. **Brand proliferation:** Strong firms may use aggressive marketing and sub-branding to deter entry, convincing consumers that alternatives are inferior.
3. **Statutory Monopolies:** There are several State-sanctioned monopolies in Ireland. For example, only Uisce Éireann is able to supply water to Irish homes and businesses. Likewise, Iarnród Éireann (at the direction of Córas Iompair na hÉireann) is authorised to operate passenger train services.
4. **Monopoly Enforced Patent/Copyright/Trademark:** Apple's "Airdrop" technology is trademarked, the Star Wars franchise is copyrighted by Disney and Gilead's sofosbuvir is an example of a patented drug. In each case, only the company named is allowed make and sell the product. These are called "legal monopolies"

Critical Thanking

Can you think of any reason why patenting an idea would be positive for innovation and investment? Structure your answer neatly with a statement and explanation.

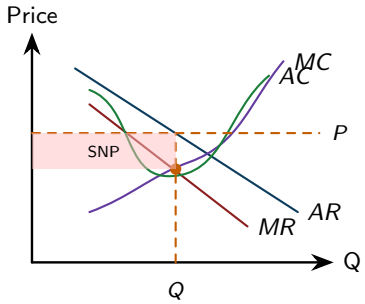
Demand Curve

A monopolist faces a **downward-sloping demand curve**, showing an inverse relationship between price and quantity.



Price	Q	TR	AR	MR
10	1	10	10	+10
9	2	18	9	+8
8	3	24	8	+6
7	4	28	7	+4

Equilibrium of the Monopolist



Analysis:

- SNP exists as $AR > AC$ at equilibrium.
- Firm produces where $MC = MR$ (profit-maximising output).
- Price is determined by the demand curve above this point.
- Barriers prevent new firms entering $\rightarrow$ SNP continues long-run.
- Scarce resources are wasted as firm not at AC_{min}.

Comparison: Monopoly vs Imperfect Competition

- Both have **downward-sloping demand curves**.
- Neither operates at minimum point of $AC \rightarrow$ inefficiency.
- Both produce where $P > MC$, meaning not allocatively efficient.
- SNP in short run and long run for monopoly (barriers prevent entry).
- In imperfect competition, SNP eroded by entry $\rightarrow$ normal profit in long run.

Advantages and Disadvantages of Monopoly

Advantages

- **Economies of scale:** Large-scale production reduces costs and allows lower prices.
- **Security of employment:** Stable profits encourage long-term employment and R&D.
- **Guaranteed supply:** Single suppliers can maintain stable supply even at lower profit margins.

Disadvantages

- Lack of competition may lead to inefficiency and higher prices.
- Poor consumer choice due to absence of alternatives.
- Potential exploitation if prices far exceed marginal costs.