

Oligopoly

An oligopoly is a market structure in which a small number of large firms dominate the market.

The key feature of an oligopoly is interdependence. With only a few major competitors, each firm must consider how rival firms are likely to react before making decisions over price, output and advertising .

Characteristics of Oligopoly

High Concentration Ratio

A concentration ratio measures the combined market share of the largest firms within an industry.

Five-firm concentration ratio = market share of the five largest firms added together

A five-firm concentration ratio of around 60% or above is typically considered evidence of an oligopoly. The higher the concentration ratio, the greater the proportion of the market controlled by a small number of firms and therefore the greater their potential market power.

For example the top 4 chains (Tesco, Sainsbury's, Asda, Aldi) control a **4-firm concentration ratio of over 66%** of total UK grocery spend.

High Barriers to Entry and Exit

Oligopolies tend to have high barriers to entry, making it difficult for new firms to compete with established firms.

These may include:

- Economies of scale
- High start-up and capital costs
- Patents and regulation
- Advertising and strong brand loyalty
- Limit pricing

There may also be significant barriers to exit, particularly where firms have large sunk costs which cannot be recovered when leaving the market.

High barriers to entry allow existing firms to maintain their market share and can allow them to earn supernormal profits in the long run.

For example Over **£100m+ spent annually on marketing campaigns e.g national TV advertising by the dominant UK supermarkets** .

Interdependence of Firms

Interdependence means that the actions of one firm directly affect other firms

For example, When Tesco expanded "Clubcard Prices", rivals like Sainsbury's ("Nectar Prices") and Morrisons ("More Card") were forced to **match lower pricing** to prevent customer loss.

Product Differentiation

Products in oligopolistic markets are often differentiated.

Firms may differentiate themselves through:

- Branding
- Advertising
- Product quality

For example Waitrose differentiates by emphasizing ethical sourcing and high tier products to command higher prices

Concentration Ratios

An n-firm concentration ratio measures the combined market share of the largest n firms in an industry.

For example:

- 3-firm concentration ratio = combined market share of the 3 largest firms
- 10-firm concentration ratio = combined market share of the 10 largest firms

Higher concentration ratio → fewer firms control a larger proportion of the market → greater market concentration → potentially greater market power

Lower concentration ratio → market share is spread across more firms → greater competitive pressure

Collusive and Non-Collusive Behaviour

Oligopolistic firms can either collude or compete.

Collusive behaviour occurs when firms cooperate to reduce competition, for example by coordinating prices or restricting output. For example major supermarkets including Tesco and Sainsbury's were fined **£50 million** by the OFT for driving up dairy costs for consumers.

Non-collusive behaviour occurs when firms act independently and actively compete to increase their own market share. For example four major chains adjusted standard 4-pint

milk prices to the exact same **£1.45 mark** within a 48-hour window without any formal agreement.

Reasons for Collusion

Higher Profits

Firms may collude to reduce competition and charge higher prices.

Collusion → competition ↓ → prices ↑ → profit margins may ↑ → supernormal profit ↑

For example UK Supermarkets were fined **£50 million** by the OFT due to coordinating dairy prices , this made supermarkets an estimated an extra **£270 million** .

Avoid Price Wars

Because firms are interdependent, a price reduction by one firm may be matched by its competitors.

Firm A lowers price → Firm B lowers price → Firm A lowers price again → repeated undercutting → price war → prices and profits ↓

Collusion allows firms to avoid price wars and maintain higher prices.

For example UK grocers (including Asda, Sainsbury's) agreed to fix retail cigarette prices rather than undercutting each other resulting in a **£225 million fine** .

Greater Stability and Certainty

Collusion makes competitors' behaviour more predictable.

More predictable prices → uncertainty ↓ → firms can plan more easily → greater stability

Reasons for Non-Collusive Behaviour

Increase Market Share

Individual firms may believe they can earn greater profits by competing rather than cooperating.

Lower prices / better products / greater advertising → customers attracted from rivals → market share ↑ → potential profits ↑

For example Tesco launched its Aldi Price Match campaign to undercut discount rivals .

Incentive to Cheat

Written by udoecon.com

Even where firms agree to collude, each firm has an incentive to secretly break the agreement due to short term profits and whistleblowing .

This makes collusion difficult to sustain when firms cannot trust each other.

For example Mercedes exposed a vehicle recycling cartel to regulators and secured **100% full immunity** avoiding a **€35 million fine** while leaving its rival cartel members with a combined **€458 million penalty**.

Legal Restrictions

Collusion can be illegal and firms caught colluding may face significant penalties from competition authorities.

This creates an incentive for firms to behave independently rather than forming explicit agreements.

Different Objectives

Firms may have different costs, objectives and strategies.

For example, Aldi prioritizes aggressive market share growth via low prices whereas Waitrose focuses instead on profit maximising .

Overt and Tacit Collusion

Collusion can take two main forms: overt collusion and tacit collusion.

Overt Collusion (Illegal)

Overt collusion occurs when firms make a formal or explicit agreement to reduce competition.

Firms may agree to:

- Fix prices
- Restrict output

Tacit Collusion (legal)

Tacit collusion occurs when firms coordinate their behaviour without a formal agreement.

Firms observe competitors → recognise their mutual interests → behave in ways that reduce competition without explicitly agreeing to do so

For example Asda is the price leader in supermarket fuel stations firms often move fuel prices within hours of in response to changes in Asda's fuel price .

Game Theory and the Prisoner's Dilemma

Game theory analyses how firms make strategic decisions when the outcome of their decision depends on the actions of other firms.

Two-Firm Model

		Firm B	
Firm A	Revenue	High	Low
	High	10bn, 10bn	1bn, 15bn
	Low	15bn, 1bn	5bn, 5bn

Suppose Firm A and Firm B can choose either a **high price** or a **low price**. The payoff matrix shows the revenue each firm receives depending on both firms' decisions.

If both firms charge a high price → Firm A earns £10bn + Firm B earns £10bn → joint revenue = £20bn → **highest joint revenue**

However, each firm has an incentive to undercut the other:

Firm A keeps price high + Firm B lowers price → customers switch towards Firm B → Firm B's revenue rises to £15bn → Firm A's revenue falls to £1bn

Because the firms are interdependent, Firm A anticipates this and also has an incentive to lower its price:

Firm B charges low + Firm A lowers price → Firm A avoids the £1bn payoff and increases its revenue to £5bn → both firms charge a low price → each earns £5bn

Therefore, **charging a low price is the dominant strategy** for both firms. This produces the **Nash equilibrium**, where both charge a low price and earn £5bn each.

This creates the **prisoner's dilemma**:

Both charge high → £10bn each → £20bn combined

Both charge low → £5bn each → £10bn combined

Both firms would collectively be better off maintaining high prices, but each individually has an incentive to undercut because it could earn £15bn if the other firm maintains its high price.

This creates an incentive to **collude**:

Collusion → firms agree to maintain high prices → fear of being undercut ↓ → price competition ↓ → both can maintain £10bn revenue → combined revenue rises from £10bn (Nash equilibrium) to £20bn

Price Competition

Price competition occurs when firms compete by changing the price of their products.

The main forms are price wars, predatory pricing and limit pricing.

Price Wars

A price war occurs when competing firms repeatedly undercut each other's prices.

Firms may engage in price wars to increase market share.

For example **in the 1990s the UK had a Bean Wars** . Baked bean prices went from **13p down to just 3p per tin** .

Predatory Pricing

Predatory pricing occurs when an incumbent firm deliberately sets a low price and makes a short run loss in an attempt to force competitors out of the market.

Incumbent firm sets price (AR) less than AVC → firm cannot cover its variable costs → meaning short-run losses → weaker competitors forced leave the market as cannot afford to make a loss → competition ↓ → remaining firm later increase prices and profits

Predatory pricing may therefore increase the firm's long-run market power.

Limit Pricing

Limit pricing occurs when an incumbent firm sets its price low enough to discourage potential competitors from entering the market.

Incumbent firm sets Price = AC → firm earns normal profit → no supernormal profit available to attract new entrants → entry is discouraged

The incumbent sacrifices potential supernormal profit in order to protect its existing market position.

For example Tesco Express set margins low enough returns average just **3%–4% net profit**, making unprofitable for prospective new grocery chains.

Non-Price Competition

Non-price competition occurs when firms compete using factors other than price.

This is particularly important in oligopolies because aggressive price competition may trigger retaliation from competitors.

For example

- Advertising e.g UK Supermarkets spend over £100million+ annually on advertising
- Branding e.g M&S "This Is Not Just Food"
- Loyalty schemes e.g Tesco's *Clubcard* serves over **20 million active UK members**.

Why Firms Use Non-Price Competition

The main aim is to differentiate the firm's product and increase brand loyalty.

Advertising / quality / branding $\uparrow \rightarrow$ product differentiation $\uparrow \rightarrow$ brand loyalty $\uparrow \rightarrow$ consumers become less willing to switch to competitors $\rightarrow$ demand becomes more price inelastic $\rightarrow$ firm's market power $\uparrow$

Successful non-price competition can therefore help firms increase or protect market share without starting a price war.

It can also create an additional barrier to entry. New firms may struggle to compete against established brands with large advertising budgets and strong customer loyalty.