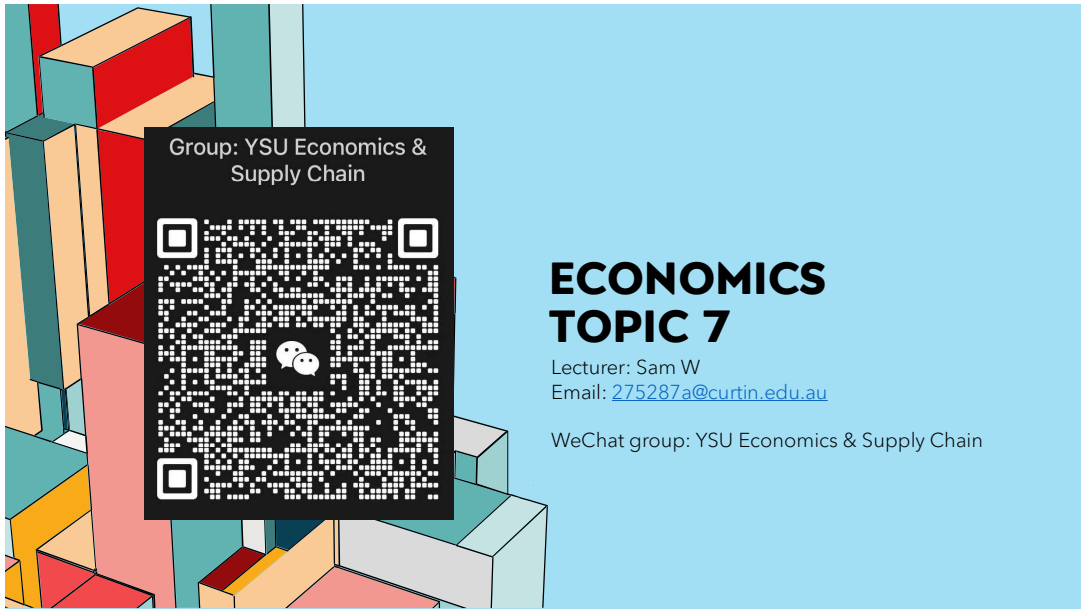


ECONOMICS TOPIC 7

Lecturer: Sam W
Email: 275287a@curtin.edu.au

WeChat group: YSU Economics & Supply Chain

TOPIC 7: PERFECT COMPETITION AND MONOPOLY

1 Alternative market structures
- 1.1 Types of market structure
- 1.2 Factors determining the degree of market power of firms

2 Perfect competition
- 2.1 Assumptions
- 2.2 The short-run equilibrium of the firm
- 2.3 The long-run equilibrium of the firm

3 Monopoly
- 3.1 Equilibrium price and output

4 Monopoly VS perfect competition
- 4.1 Price and output

5 The theory of contestable markets.

0 INTRODUCTION

Previously, we introduced some key economic concepts, supply and demand, and determination of firms' profit-maximising prices and output levels.

Now, we look at how firms behave in different types of markets and some corporate strategies they might adopt.

Topic 7 and 8 consider the different types of market structure, which are characterised by the *degree of competition* that exists. These market structures will be compared with reference to factors, e.g. equilibrium price, output levels, profits, and efficiency.

1.1 ALTERNATIVE MARKET STRUCTURES: TYPES

Perfect competition

Multiple firms producing an *identical* product; where there is freedom of entry to the industry. All firms are *price takers*.

Monopolistic competition

Multiple firms producing a *differentiated* product; where there is freedom of entry, but each firm has some control over its price

Oligopoly

There are few enough firms to enable *barriers* against the entry of new firm

Monopoly

There is *only one firm* in the industry

Imperfect competition is the collective name for monopolistic competition and oligopoly. The majority of firms in the real world operate under imperfect competition.

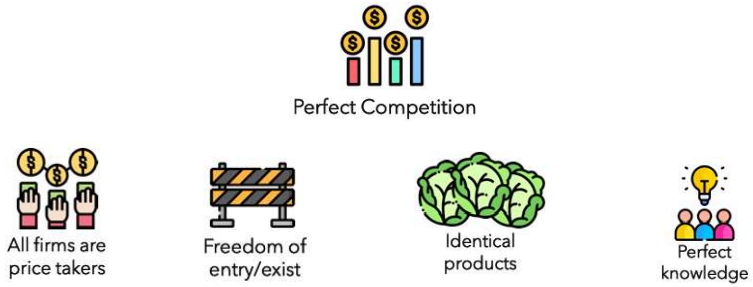
1.2 FACTORS DETERMINING THE DEGREE OF COMPETITION

Number of firms in the industry	The more firms there are in the industry, the more competitive the market is likely to be.
Freedom of entry into the industry	Controlling the number of firms in the industry
Nature of product	If all firms produce an identical product, there is little a firm can do to gain an advantage over its rival.
Degree of control the firm has over the price (shape of demand curve)	If all firms are price takers (with infinitely elastic demand curve), they have no controls over price.

1.2 FACTORS DETERMINING THE DEGREE OF COMPETITION

Market types	No. of firms	Entry	Product	Examples	Demand curve
Perfect competition	Very many	Unrestricted	Homogenous (undifferentiated)	Cabbages, foreign exchange	Price taker (horizontal, infinitely elastic)
Monopolistic competition	Many/ several	Unrestricted	Differentiated	Builders, restaurants, hairdressers	Downward-sloping (relatively elastic)
Oligopoly	Few	Restricted	(Un)differentiated	Cement, cars, electrical appliances, supermarkets	Downward-sloping (relatively inelastic)
Monopoly	One	Restricted or completely blocked	Unique	Local water company, prescription drugs	Downward-sloping (more inelastic than oligopoly)

2.1 PERFECT COMPETITION: ASSUMPTIONS

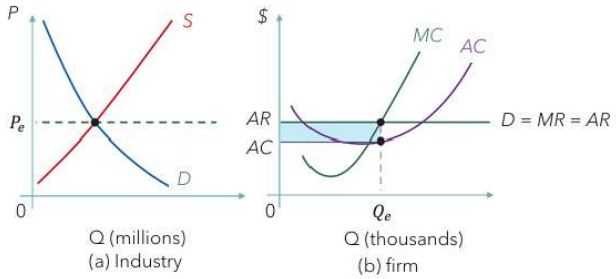


- Producers have perfect knowledge of prices, costs, technology and opportunities in the market.
- Consumers have perfect knowledge of prices, quality and availability of products.

2.1 PERFECT COMPETITION: ASSUMPTIONS

We also assume that consumers act *rationally*, ie they choose. To buy the cheapest and/or best quality goods.

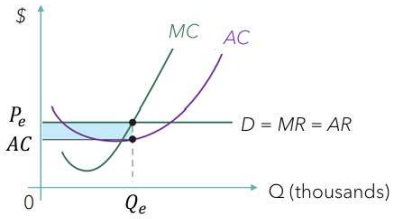
As a result, firms face **a perfectly (infinitely) elastic demand curve**, where the price of the good is determined by total supply and demand in the market.



2.2 THE SHORT-RUN EQUILIBRIUM OF THE FIRM

The **short run under perfect competition** is the period during which there is too little time for new firms to enter the industry.

- **Price (P_e)** is determined by industry supply and demand
- **Output (Q_e)** is at *MR = MC*, where the firm maximises its profit (or minimises its loss).
- **Profit** (or loss) is determined by *AR - AC* at the profit maximising output level.

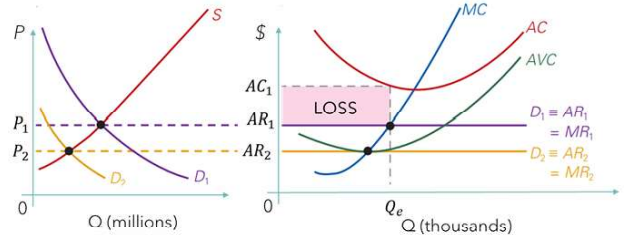


For **profit-maximising firm in short-run equilibrium**, the profit (the shaded area) is calculated as:

$$T\Pi = (\mathrm{P_e} - \mathrm{AC}) \times Q_e$$

2.2 THE SHORT-RUN EQUILIBRIUM OF THE FIRM

If a firm is making a **loss** (ie AC > AR), it will continue producing in the short run provided it is covering its variable costs (ie *AR > AVC*) at the loss-minimising output level (ie *MR = MC)*.



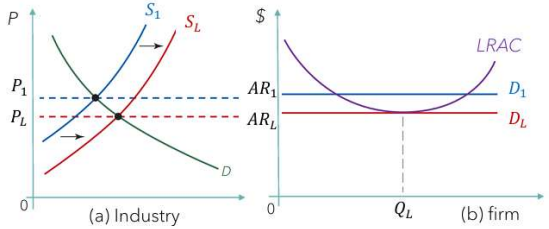
When the market price is P_1, the point *MR = MC* represents the loss-minimizing point, where the amount of the loss is represented by the shaded area.

When the market price falls below P_2, the firm can no longer cover its variable costs (ie AR ≤ AVC); thus, the firm will shut down.

2.3 THE LONG-RUN EQUILIBRIUM OF THE FIRM

The **long run under perfect competition** is the period that is *long enough* for new firms to enter the industry, Price and output are determined the same way as in the short run. However, if firms are <u>making profits in the short run</u>, then in the long run:

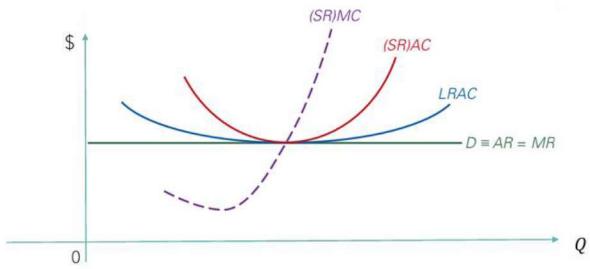
- New firm will enter the industry …
- … leading to an increase in supply (from S_1 to S_L)
- … and a fall in price (from P_1 to P_L)
- where the demand curve for the firm just touches the bottom of LRAC curve



2.3 THE LONG-RUN EQUILIBRIUM OF THE FIRM

Since the LRAC curve is tangential to all possible short-run AC curves, the full long-run equilibrium will be:

$$LRAC = AC = MC = MR = AR$$



3 MONOPOLY

An industry with *only* one firm.

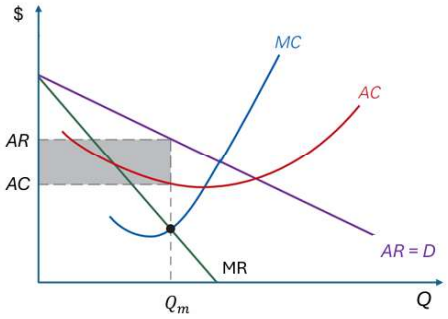
Natural	Geographic	Technological	Government
It is best (lower LRAC) to have only one firm in the industry.	Only one seller available in the particular area.	A firm has exclusive rights over a technology.	A firm is government-owned or state-owned.
Gas We wouldn't want multiple gas lines underground	**Any local servicing with no competitors**	**Pharmaceutical companies** with patents for certain medicines	**Utilities** Water and electricity distribution

3.1 MONOPOLY: EQUILIBRIUM PRICE AND OUTPUT

A monopolist's demand curve will be the industry demand curve, which is relatively **inelastic** due to the lack of substitutes.

A monopolist is a **price maker** that will set price and output to **maximise profits** at MR = MC.

Profits can be made in both the short and the long run due to barriers to entry.



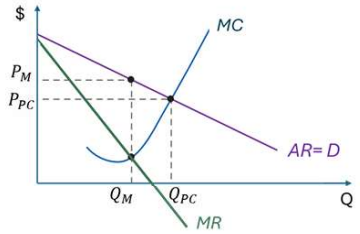
Profit maximising under monopoly

4.1 MONOPOLY VS PERFECT COMPETITION: PRICE & OUTPUT

All other things being equal:

In the **short run**, a monopolist will produce at a lower output (Q_M) at a higher price (P_M).

- a monopolist will produce at MR = MC, and price will be AR.
- firms under perfect competition will set price (P_{PC}) equal to MC and the industry will produce where supply (MC) = demand (AR). (D = MR = AR for firms under perfect competition)



- In the long run, a monopolist may also produce a lower output at a higher price, where firms under perfect competition will produce at the bottom of their LRAC curves.

5 THEORY OF CONTESTABLE MARKETS

The contestable market theory states that companies with few rivals (a monopoly or oligopoly) behave in a competitive manner when the market they operate in has weak barriers to entry. As a result, prices and outputs are determined more by the threat of competition rather than the existing competition. They will:

Keep prices down — **Produces as efficiently as possible**

Characteristics of a perfectly contestable market include:

No barriers to entry/exit	No sunk costs	Same level of technology
Low cost to enter the market and no laws restricting trade	If all capital equipment can be transferred to other uses, the exit costs are (close to) zero.	Regulators may force existing companies to open-up to potential entrants or to share technology

*Sunk costs = fixed costs that have already been incurred and cannot be recovered, eg capital equipment