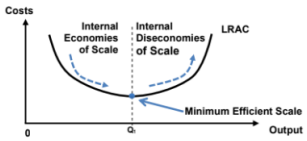
★° Key Terms ϑϱ°★

Item □ .′	Definition >ᴗ<
Firm	Unit of decision making which combines FOP to produce a good or service, assumed to maximise profit in Short Run and may have other objects/be unable to do so (Can be Small and Medium Entreprises - SMEs or Multi-National Companies MNCs)
Plant	^^ Firm is a production unit
Industry	Made up of all firms producing the same products/group of firms in a particular field
Explicit/Implicit costs	Can either be explicit costs (costs that take the form of actual cash payments, like wages, + interest on borrowed capital + rent) or implicit costs (opportunity costs of using the firm's own resources, like the cost of a firm focusing too much on the advertising over the RnD)
Fixed./Variable/Total costs	Either fixed costs (costs that do not change with the level of output) or variable costs (costs that change with the level of output) or total costs (= total fixed costs + total variable costs)
Short/Long run	Either Short run (at least one fixed FOP, output can only be increased by using more variable factors) OR Long run (all factor of productions are variable)
Costs/revenue	Costs is how much you have to spend to create something, revenue is how much you earn from selling something
Marginal C+R / Average C+R	Marginal means the cost/revenue incurred from producing an additional unit of output (change in C or R/Change in output), Average means the total cost/revenue per unit of output sold, (Total C or R/Total Output)
Total Revenue	The firm's total earnings from a sale of a particular amount of output (Price x Quantity)
Accounting Profit	TR - Explicit Costs

Economic Profit	TR - Explicit Costs - Implicit Costs
Long Run Average Cost 	Shows the lowest per unit cost/lowest average cost the firm can attain at every given output level, any point on the LRAC is productively efficient
Productive efficiency	When a firm is producing its output at the lowest cost possible
Economies of Scale	When increasing the scale of production leads to a lower cost per unit of output, either internal (the firm expands its scale of production) or external (the industry expands)
Diseconomies of Scale	When increasing the scale of production leads to a higher cost per unit of output
Minimum Efficient Scale (MES)	Size beyond which a firm cannot achieve anymore internal economies of scale/lowest point on the LRAC/ Growth past here would cause a higher cost to the firm, expressed as a percentage of total size of the market or total domestic production
Indivisibilities	The physical inability to run equipment below its optimal operational capacity
Perfectly competitive market structure	many buyers and sellers + homogenous product + each seller has insignificant market share + no barriers to entry/exit + perfect knowledge (tend to be more theoretical, useful to compare with other MS) = firm has no market power to influence price
Monopolistic competition MS	Large number of small firms relative to market size + each firms have some degree of market power + slightly differentiated products + low barriers ot entry/exit + imperfect knowledge +
Oligopolistic MS	Few dominant firms relative to market size + can be differentiated/homogenous product + high barriers to entry/exit + imperfect knowledge
Monopolistic MS	Single producer + no close substitutes for unique product + complete barriers to entry/exit + imperfect knowledge = no

	competition
Perfectly contestable markets	Markets where new firms can enter easily and exit without significant costs -> competition that keeps prices in check and encourages efficiency
Profits	Total Revenue - Total Costs, where Total Revenue = Price per unit x Qty sold, where it can be split into Normal Profit (TR = TC, zero economic profit), Supernormal Profit (TR > TC, economic profits > 0), Subnormal Profit (TR < TC, economic profits < 0)
Profit Maximisation	Marginal Revenue = Marginal Cost and where MC is rising , traditional objective of firms
Product differentiation	When products are differentiated either through real differences (design, quality, materials) or perceived differences (packaging, brainding, advertising)
Homogenous goods	Perfect substitutes in a market (same in every aspect), no need for non-price competition by any one seller + little incentive for firms to innovate
Perfect knowledge	Buyers (prevailing market prices, product quality) and sellers (technology, cost condition, production processes used by other firms, avail of substitutes) have all the knowledge of market conditions and prices
Barriers to entry	Factors which prevent/deter the entry of new firms into an industry and thereby limit the degree of competition faced by the existing firms
Natural monopoly	When a single firm can serve a market more efficiently than multiple firms due to lower costs caused by high BTEs and substantial startup expenses, comes up when production requires significant fixed costs
Predatory pricing	the illegal business practice of setting prices for a product unrealistically low in order to eliminate the competition
Sunk costs	Costs that have been committed by a firm and cannot be recovered once it has entered hte industry
Marketing	Efforts taken by the firm to promote its goods or services

Cartel	Formal organisation where firms explicitly agree to cooperate in setting price and output levels
Price discrimination	Practice of selling an identical product at different prices to different prices to different consumers and these price differences are not caused by cost differences
Third degree price discrimination	Where a firm divides the market into two or more sub-markets and charges a different price in each sub-market
Merger	Legal consolidation of two firm into one entity through mutual agreement between the two firms
Acquisition	Occurs when one firm takes over another and completely establishes itself as the new owner, target firm still exists as an independent legal entity controlled by the acquirer
Conglomerates	Occurs when firms from totally different industries merge
Allocative efficiency	Defined as the allocation of resources to produce the combination of goods and services most wanted by the society, achieved when P = MC (assuming no externalities are present)
Productive efficiency	Defined as the production of goods and services at the lowest possible average cost of production
Dynamic efficiency	Defined as the situation where firms invest in technology so that productivity and product quality will improve over time
X-inefficiency/technical inefficicency	Arises due to the lack of competitive pressure

Economies of Scale

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- Always always leads to a lower cost per unit outit~! (always write this if you're explaining anything in EOS!)
- The larger the iEOS, the bigger the size and the fewer the no. of firms in an industry
- If there's a high MES: low degree of competition as there is only room for a small number of large firms + significant possible cost savings (e.g: telecommunication industries)

Technical EOS	Managerial EOS	Financial EOS	Commercial EOS	Risk-bearing EOS
Increased Specialisation: if big production, divide labour into simpler tasks -> Workers become better at the specific task they are assigned + less time wasted shifting from task to task + more scope for use of specialised machinery	Economies of management: Similar to specialisation of labour but in terms of managerial positions, scope of division of labour increases -> centralised admin for different tasks -> higher productivity of individual managers in their specialised roles = lower AC	Credit Worthiness: larger firms have high sales -> more valuable assets -> more and better collateral to offer banks/financial institutions -> more trustworthy in the financial institutions POV -> get bank loans at lower interest rates and better conditions	Bulk purchase: larger firms can buy supplies/materials at a higher discount >> Small firms	Insurable risk: larger firms are able to spread the premium/price of insurance in periodic payments over a large amount of output = lower premium paid per unit output

Economies of indivisibilities: Larger machinery usually more technically superior -> larger firm can utilize large machines more efficiently and intensively	Specialisation of labour by employing specialists = increase productivity (more output per fixed input with no additional cost)	Access to other sources of funding: only large firms list their companies in stock exchange to raise capital if they needed it -> larger firms can set their prices higher to get more money -> can get more money without paying back as much compared to a bank	Bulk marketing: promote sales over many different avenues -> spend more on advertising in different areas >> small firms -> larger output of advertising to increase revenue	Uninsurable risk: larger firms can protect themselves by diversifying their products /+ operating in a different market/+ diversify their resources for raw materials -> loss from producing one product in one market may be offset by profits from another = larger firms with many different branches bear a lower uninsurable risk
Greater efficiency of large machines: the bigger something is, the more efficient it is and the more it can serve/do (e.g: normal bus v double decker bus)				

extEOS○ ˚˳°★□。★□.✧˚

- When experiencing external economies of scale, the firm will experience a lower average cost at every/all level of output (IMPORTANT TO SAY WHEN EXPLAINING EXT EOS!!)
- Downwards shift of LRAC curve ^^

Availability of shared resources	Availability of infrastructure	Availability of industry-specific skilled labour
e.g: Research facilities Governments set up research centre to develop better methods and products of higher quality/Firms combine efforts to engage in research = lower cost in RnD e.g: Common shared information services Publication of trade and technical journals and information collated by centralised research institutions = save the individual firm from spending on independent research	e.g; : industrial amenities (water, electricity, gas) ^^ when developed by the relevant authorities and suppliers = decrease in operating costs e.g: transport infrastructure Government provides better public roads and transport system./transport companies may extend service routes into industrial estates = decrease in the cost of transport of FOP and finished products in and out of the plant/to and from the market	Expansion of industry -> talent with relevant skills are attracted into the area -> increase in supply of labour, increase in quality (no mismatch) = cost of training the labour decreases

「 ✦Diseconomies of Scale ✦ 」

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- shown through movement along the LRAC away from the MES at output 0Q

Higher cost of monitoring and management	Lower morale of employees
Larger firms with many departments and divisions may also find it much harder to coordinate its operations than a smaller firms -> hire more managers to coordinate multiple departments = more costs due to the hiring of people	Workers in larger firms do not feel a sense of belonging to the company -> do not feel like they are integral part of the business -> productivity may fall -> quality goes down -> greater expenditure is incurred on quality control = higher costs incurred

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Strain on physical infrastructure	Shortage of industry-specific resource
Industry grows larger -> heavily concentrated in a particular area -> increased flow of traffic in and out of the area -> traffic congestion -> increase in fuel consumption + delays = decrease in productivity + increase in avg costs at all level of output	Industry grows larger -> more demand of industry-specific resource -> growing shortage of specific raw materials or appropriate skilled labour for firms -> bid up wages/push up prices of materials = firms AC increase at all levels of output

AR, MR, TR Curves

Perfectly competitive MS

Horizontal AR & MR Curves

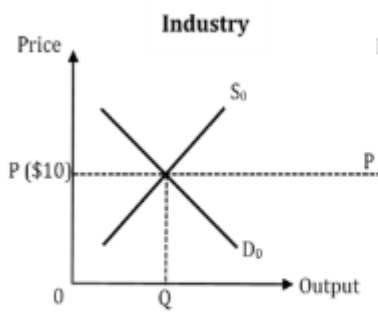


Figure A6: Demand and Supply curve of a perfectly competitive industry

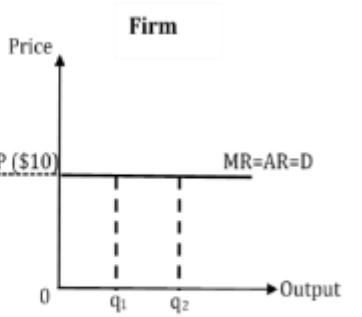


Figure A7: Demand curve of a perfectly competitive Firm

Total Revenue (= Price x Quantity)

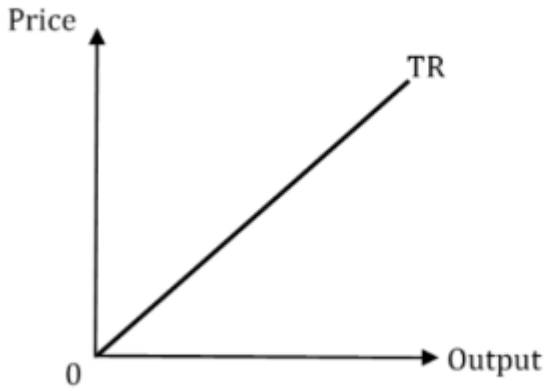


Figure A9: Total Revenue curve

- in PC: Firm is a price taker (follows market price) + every unit is charged at the same price
- AR = Firm's Dd curve
- LR (Profit)

Other MS (Monopolistic Competition, Oligopoly, Monopoly)

Downward Sloping AR & MR Curves

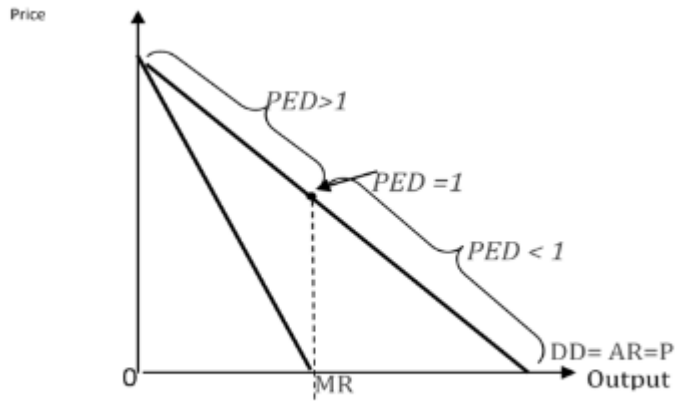


Figure A8: Demand and Marginal Revenue curves of price setting firms

Total Revenue (= Price x Quantity)

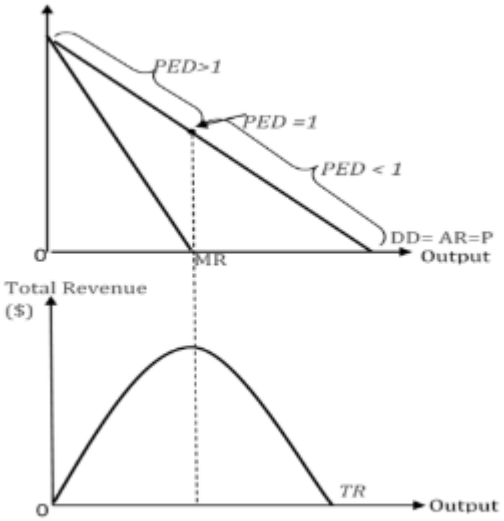


Figure A10: AR, MR and TR curves of price setting firms

Profit Maximization . ⁺ ⊹ . ⁺ . ˙

- PM output level: where MR = MC

Perfectly competitive MS	Other MS
If output is below this level, MR > MC	4. For all of them: each firm has some market power + price-setting

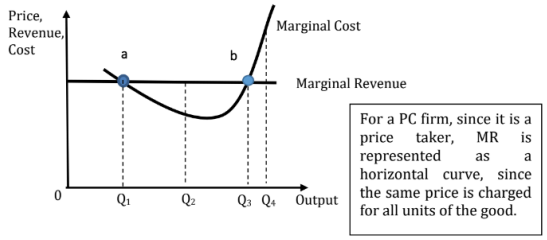
1. Producing more adds more to revenue than costs
2. Firm increases output
3. = Maximise profit

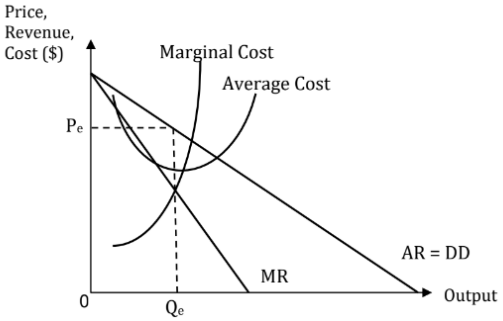
If output is above this level, MC > MR

1. Producing more adds to the costs than revenue
2. Firm reduces output
3. = Maximise profit at the optimal level

ability

5. Limited by their downward-sloping Dd curve
6. Set production and price where MR = MC + MC is increasing



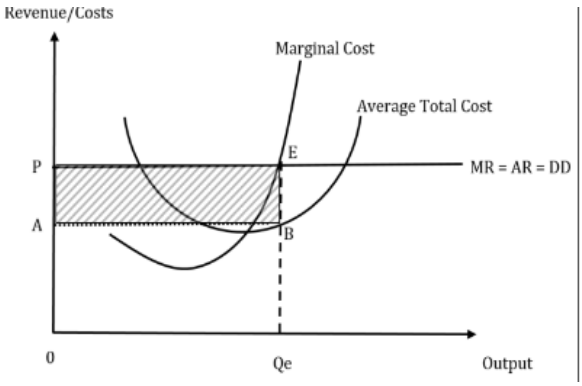
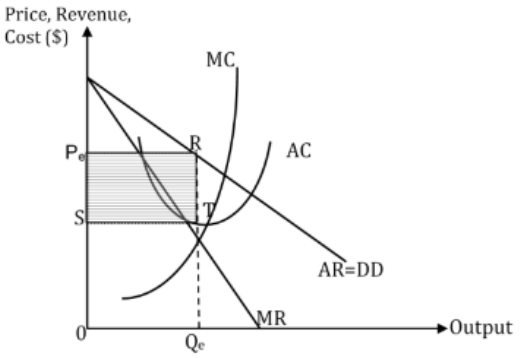


Types of profit ° ₊ □ . ⁺ 🌷 ⋆ ✧ ° . 🎀 ○ ₎₎ ★

Short run equilibrium ⋆ □ ★ ☆

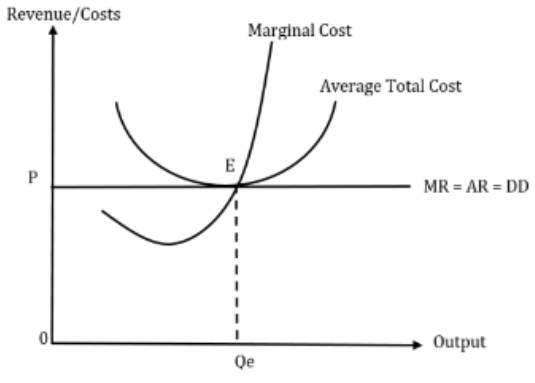
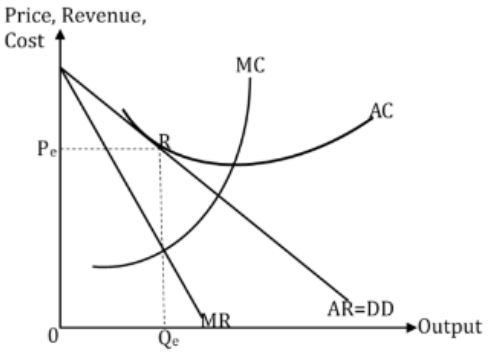
Supernormal profits.′

(TR > TC, AR > AC)

Perfectly competitive MS	Other world/Real worlds MS
	
- Total revenue = P x Q = 0PEQe - Total cost = AC x Q = 0PABQe - Total profit = TR - TC = APEB	- Total revenue = P x Q = 0PeRQe - Total cost = AC x Q = 0STQe - Total profit = TR - TC = SPeRT

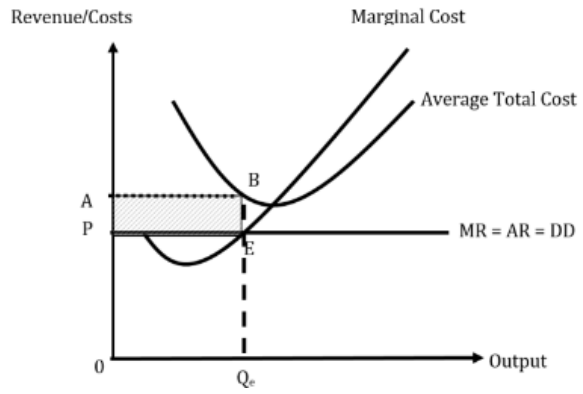
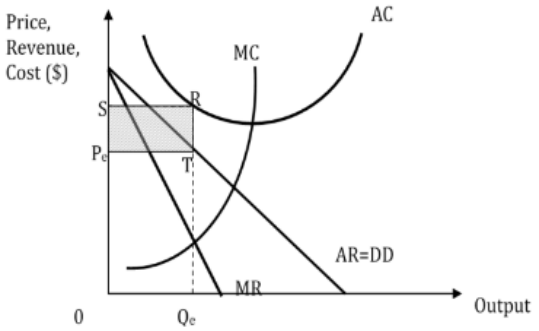
Normal profits !

(Costs = Revenue)

Perfectly competitive MS	Other world/Real worlds MS
	
- Total revenue = P x Q = 0PEQe - Total cost = AC x Q = 0PEQe - Total profit = TR - TC = 0	- Total revenue = P x Q = 0PeRQe - Total cost = AC x Q = 0PeRQe - Total profit = TR - TC = 0

Subnormal profits :'

(Costs > Revenue)

Perfectly competitive MS	Other world/Real worlds MS
	
- Total revenue = P x Q = 0PEQe - Total cost = AC x Q = 0ABQe - Total profit = TR - TC = -(PABE)	- Total revenue = P x Q = 0PeTQe - Total cost = AC x Q = 0SRQe - Total profit = TR - TC = - (PeSRT)

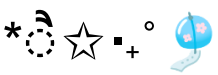
Long run equilibrium*□ ⋆☆

Perfectly competitive MS	Other world/Real worlds MS
Normal profit = free entry and exit in the perfectly competitive industry	- Supernormal profits (Monopolies) = can maintain bc of high entry barriers - ^^ Changes in market conditions (e.g: technology, consumer preferences) can affect those profits - ^^Adjust production in response to changes in demand (Produce more/less or any decision based on Price/Output)

Other objectives of firms • ₊ ° ☁️ ·♡☐ ˖☾ .

Revenue maximisation	Profit satisficing	Market share dominance	Social objective
Choose price/output Maximise total revenue instead of profit, when TR is at maximum/MR = 0 (but company has to sill make at least normal profits)	Choose price/output in order to produce within a range of output levels that achieves a given level of profit deemed acceptable by the shareholders	Can either use - Predatory pricing: used by one supplier to oust the other supplier existing in the market and to restrict the entry of new suppliers by setting very low prices/below AVC prices - Limit pricing; used by the existing supplier to restrict the entry of new entrants which are currently not in the market	Choose to produce goods through environmentally friendly/socially conscious means
For sales managers and commission-based	- When owners may not know	Firms that want to gain a larger market share +	Firms that want to promote social welfare/consider

employees	what the maximum level of profits could be (managers may aim to produce enough to satisfy owners rather than Profit Maximising) - Cost of obtaining sufficient information to make profitmaximising decisions is significantly high - Seperation of ownership and management (shareholders v. CEO)	market power and have enough profits/investment to help them cope with losses they may incur and who can raise price after they have driven out new/other firms	the impact of their goods and production processes on society

Market Structure  

Barriers to entry ⋆⋆˚.⋆

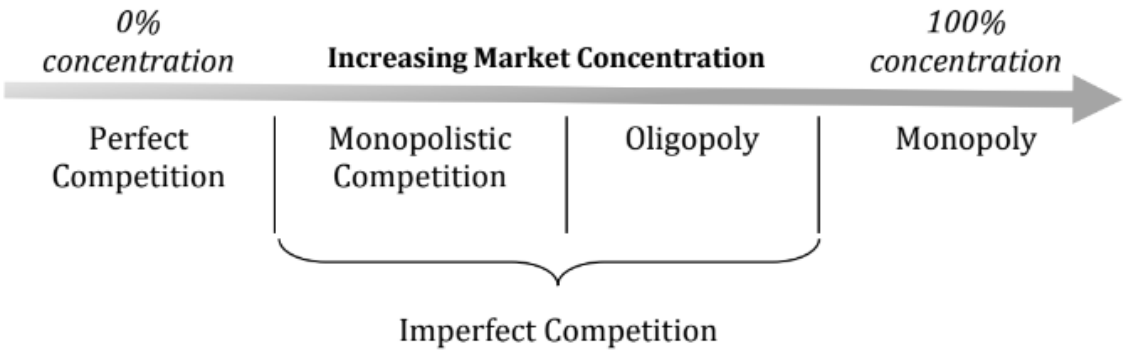
- Is always supposed to lead back to deterring entry into market and competition

- May be temporary, a monopoly may not be able to maintain its monopoly power indefinitely
- ^^ Can shift because global economic conditions, technological advancement, government intervention

Financial barriers	Cost barriers (natural)	Control of raw materials	Legal barriers	Strategic Entry Barriers
1. Monopol firm has large financial reserves 2. Monopol y spends on R&D = New entrants may have to match/exceed this level of spending to compete	<u>Substantial iEOS</u> Usually for natural monopolies, please refer to the intEOS section im not writing more here <u>Huge capital outlay</u> ^^ Means all the capital assets to start production Specialised products require expensive and specialised plants which potential competitors may not be able to compete with/may not be able to	1. Few sources of natural resource s 2. Single firm holds monopol y of a natural resource needed for a producti on of a product 3. Firm is able to prevent other firms from entering the industry	<u>Patent</u> - Exclusiv e right to produce or sell an innovati ve product or service to stimulat e creativit y and innovati on - Allow patent holder to maintai n a monopol y until the patent expires <u>Copyright</u>	<u>Aggressive behaviour</u> - Intimida tion in the form of harass ment/ aggressi ve tactics like predator y pricing/ massive advertisi ng campaig n = forces new entrant s to operate at a loss <u>Advertising</u> - High levels of advertisi ng =

	afford cheaper and thus have to produce lower scale of products that drive up their AC		- IP rights for media - Needs to pay royalties to use these works <u>Licence</u> - Right to produce certain G/S granted by the govern ment - Other firms are prevente d from entering the industry by the gov	establis h branded products + win custome r

Characteristics of MS



Perfectly competitive MS	Monopolistic Competition	Oligopoly	Monopoly
Many buyers and sellers in the market	Large numbers of firms	A few dominant firms	Single seller and price setter
Price taker	Limited price setting ability	Price setter (Usually competitive and covert price setting)	Price setter
Homogeneous product	Differentiated product	Homogeneous or differentiated product	No close substitutes
Perfect knowledge	Imperfect knowledge	Imperfect knowledge	Imperfect knowledge
No barriers to entry	Low barriers to entry	High barriers to entry	Very high barriers to entry
Can only make normal profits inLR	Can only make normal profits in LR	may make normal/supernormal LR	may make normal/supernormal LR

Contestable Markets

- Theory of contestable markets: suggests that the threat of new entrants can influence how existing firms behave, even in monopolistic situations
- Low BTE -> monopolies might act more competitively to avoid potential new competitors
- Key barriers to market contestability: iEOS, control of supply, strength of customer brand loyalty, control of important technologies, expertise and market reputation

Key conditions for a contestable markets

Low barriers to entry	Access to technology	Low consumer loyalty
Absence of sunk costs = reducing the risk of coming into a market	Perfect information + ability and/or the right of all suppliers to make use of the best available production technology in the market	When companies can freely advertise and introduce similar products, they can attract customers away from other companies that already sell those products.

Recent trends that created an increasing contestability of markets

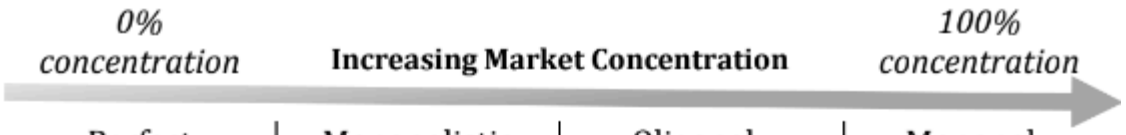
- Deregulation of markets: less statutory barriers to entry that exist
- Competition policy: Laws that prevent predatory behaviour by existing firms
- Technological change: New technology bringing down entry costs in some market -> increase in capital mobility
- Technological spillover: emergence of products that imitate the characteristics of the products of the incumbent firms

Behaviour of firms ⩾^• ˚ • ○⌒⌒⩽

- Things firms can decide: price, cost, product differentiation, strategies

Things can firms do ✯★˙

Price Competition □○⌒⌒⌒⌒□

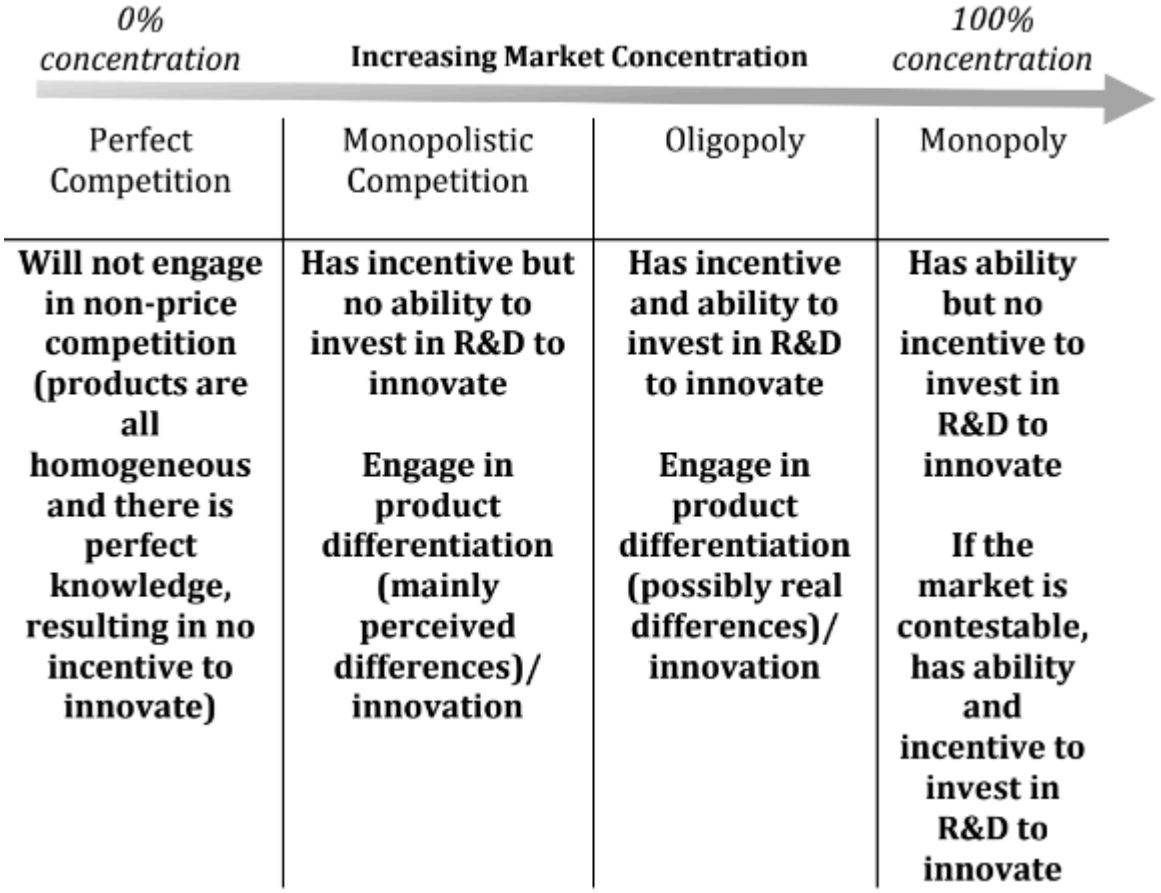


Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Price Takers	**May reduce prices if PED>1 but price wars are not sustainable**	**<u>Collusive Oligopoly</u>: Behaves like a monopoly, no incentive to engage in price competition** **<u>Competitive Oligopoly</u>: May not engage in price competition as prices are rigid (Kinked Demand Curve Theory); May engage in periodic price wars**	**No incentive to engage in price competition**

- Firms with Price Elastic goods: lower prices -> more than proportionate increase in Qdd -> rise in total revenue
- Firms with Price Inelastic goods: may engage in a pricing strategy to increase their prices instead
- Can be used to eliminate new competitors in the market to ensure a larger market share, those who can survive it have the resources to endure a price war
- Would likely result in individual firms suffering losses in the short run

Non-price competition □○⁀⁀⁀⁀□

- Product innovation + promotion: increase in demand, reduce price elasticity, minimize cross elasticity with rival products = ultimately boost TR



Product innovation + Process innovation	Production Promotion (Marketing/Advertising)
Product innovation: Innovate products to have more distinct and unique features to stand out from rivals + reduce price sensitivity	- Persuasive advertising: influencing consumers' perception of quality - Informative advertising: providing details about prices, features or locations
Process innovation: Firms innovate production processes to enhance efficiency and lower costs	Used to make brand loyalty: harder for new firms to enter the market and compete with established brands
Innovation costs can range from low-cost improvements to costly research,	Good advertising -> increases demand, reduces price elasticity -> consumers less

Innovation can range from simple - cutting edge	likely to switch brands = firms can charge higher prices without losing markjet share

+ Things firms can use to maximise profits: Cognitive Bias

Sunk cost fallacy	Loss aversion	Salience Bias
When a person's decision is affected by fixed costs rather than variable ones, when decisions are influenced by past investments that cannot be recovered	When a person tends to avoid losses more strongly than seeking equivalent or greater potential gain	When a person focuses on prominent information while overlooking less noticeable but relevant details
Firm: upselling related products after a significant purchase, loyalty programs	Firm: early termination fees to deter customers from switching providers, exploiting the fear of losing	Firm: Highlighting specific information in promotion, placing promoted items at eye level in shops

Collusion with other firms □○⁀⁀⁀⁀□

- Cooperate: lawfully work with other firms TRANSPARENTLY
- Collude: work with other firms probably illegally and secretly to gain an advantage, can be either done by following a Price Leader or following a trend of firms becoming more competitive (cooperate in a secret or unlawful way in order to deceive or gain an advantage over others.)

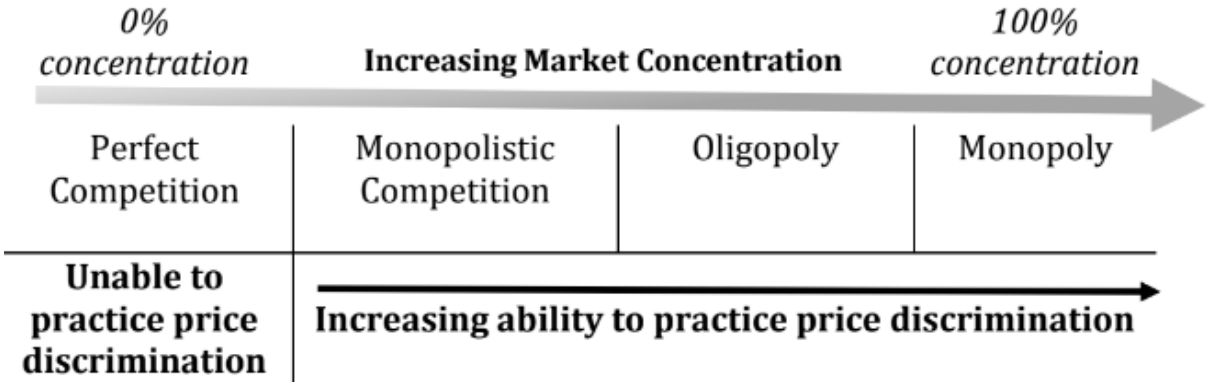
Why would firms collude?	Why would firms compete?
- Only few companies sell substitutes - High barriers to entry - Cheating won't get them in hige trouble - Companies trust each other a lot	- Many companies sell substitutes - Low barriers to entry - One clear monopoly - Very similar products to be sold - Market is already full and companies can only get more

- One company is clearly the price leader	customers by taking them from each other

Collusion

Formal/explicit collusion: Cartels	Informal/tacit collusion: Price leadership
- behave as if they function in a monopoly	

Price discrimination □○⌒⌒⌒⌒□



Conditions necessary for price discrimination

The firm must be able to set its price	Resale is not possible	The price elasticity of demand must differ in each sub-market (Market segmentation)
Firms have to have some market power (monopoly, oligopoly, MC)	Depending on the nature of the product, no seepage or resale should be possible between sub-markets which allows the producer control over the quantity supplied in the market	Firms would be better able to make decisions about prices if they found niches where demand is less price elastic + consumers are less responsive to a price increase

** Third-degree price discrimination

- Firms that want to do this ^^ need to know: the total output it has to produce in order to maximise its profits + the distribution of the total output in between two submarkets + the price it can charge for the good in the two submarkets

Growth and diversification □○⌒⌒⌒⌒□

- When firms grow larger: managers can directly gain from being a part of a growing firm and therefore want to maximise profits more and seek growth of the company

Criterion of measuring the size of firm (Higher of this = the bigger the firm)
- Plant number and sizes
- Number of workers employed
- Sales
- Market share

How to grow??

Growth by internal expansion	Growth by merger or acquisition	Growth by diversification
Requires an increase in sales - Increasing demand and/or increasing supply of the firm's products and can take and/or improving the firm's productive capacity	- Vertical integration: Firms in the same industry but at different stages of the production process join together either through forward VI (The firm works with firms that serve the customer) or backwards VI (Firm works with sources of it supply) - Horizontal integration: Firms in the same industry at the same stage in the production proces sintegrate	- For product diversification > reduce risk Enables a firm to - Achieve new sources of revenue and allows it to spread its risks (losses incurred for one product can be offset by proifts earned from another) - Enjoys economies of scope (E.g: Costs spent on promoting the brand is more spread out) - Secure access to retail markets (requires VI to do so can secure some kind of collaboration w a related firm)

- **Benefits of Growth:**

1. **Revenue Advantages**

- **Market Dominance:** Merging or acquiring allows the firm to have a bigger share of the market.
    - This means they can attract more customers and potentially charge higher prices because of their increased influence.
    - Selling more products or services at higher prices leads to higher total revenue (TR = Price x Quantity).
- **Wider Product Range:** With more capacity from the merger, the firm can offer a wider variety of products.
    - This attracts more customers with different preferences, allowing the firm to sell more and charge higher prices.
    - Again, this leads to higher total revenue due to increased demand and sales.

2. **Cost Advantages**

- **Market Security:** Having a larger market share gives the firm more stability against competitors.
    - They can benefit from internal economies of scale, like technical and commercial efficiencies, leading to lower average costs.
    - Streamlining resources and cost savings become easier with a larger operation.

Decision to shut down ᓚ₍´„• . • ⑅₎ᐕ

- Firm has to consider the shut-down conditions in the SR/LR
- If a firm makes losses/makes subnormal profits ^^: it has to consider whether or not it will shut down
- Shutdown if TVC > TR
- ^^ If they can come back (efforts to increase TR or drop TC). and if TVC < TR = do not shut down!
- A firm will continue to produce as long as TR can cover TVC
- ^^ Additionally if producer is optimistic/want to preserve their reputation: they will continue to produce
- LR: A firm has to earn at least normal profits, TR has to be equal to/greater than

Reasons for firms remaining small

Dd side factors	S side factors

Limited/small demand: Market is likely to be small = firms in these markets stay small	Initial capital outlay: some goods can be provided for with very little initial capital outlay
Personal service: Services need the personal attn of the service providers = smaller size firms	Availability of capital: if they don't have capital readily available, they cannot expand = remain small
Product differentiation = Require variety or differentiated products that cannot be mass-produced	Managerial attitude: if managers want the security/stability/responsiveness of a small firms = remain small
Localised demand: consumers within certain area may want goods/.services unique to the area = firms remain small to cater to the low levels of demand	Government policies: if there are anti-trust laws, firms cannot get too big
	Small optimum size (EOS):

How technology can affect firms

- Firms that can ride on and exploit technological changes will expand and may eventually dominate the market
- Technological disruptions can transform an entire' industry's market structure = bad for firms
- Firms that are slow to respond to technological changes may eventually exit = tech disruptions can affect shut-down decision

Performance of firms

0% concentration → **Increasing Market Concentration** → *100% concentration*

	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Allocative Efficiency	**Yes**	**No**	**No**	**No**
Productive Efficiency	**Yes (from firm's and society's point of view)**	**Yes (from firm's point of view)**	**Yes (from firm's point of view)**	**Yes (from firm's point of view)** **No (if there is X-inefficiency)**
Dynamic Efficiency	**No**	**No**	**Competitive Oligopoly: Yes** **Collusive Oligopoly (behaves like a monopoly): No**	**No** **Yes (if market is contestable)**

Economic efficiency

Allocative efficiency

- Only perfectly competitive firms are allocatively efficient in the short run and the long run as only perfectly competitive firms would be able to set their P=MC

Thus, the good is said to be ***under-produced*** and hence there is ***under-allocation*** of resources to the production of the product or allocative inefficiency. The loss of consumer and producer surplus due to the underproduction Q_mQ_{pc} units is also known as ***deadweight loss***, represented by area ABC.

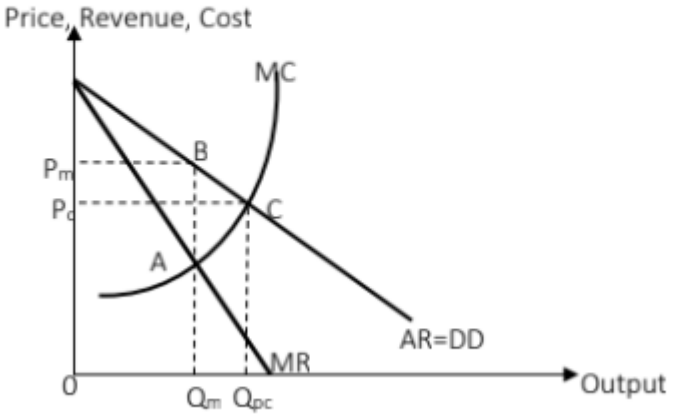


Figure C7: Allocative Inefficiency present in firms in imperfect markets

- This happens to every other firm btw ^^
- Allocative efficiency would be a bigger problem in oligopolies and monopolies rather than monopolistically competitive markets (PED in monopolistically competitive firms, likely to charge at a lower price = divergence between P and MC is likely to be smaller)

Productive efficiency

- From a firm's POV: achieved when the LRAC of producing any output is attained = any point along the LRAC is productively efficient,
- ^ all profit-maximising firms should be able to achieve productive efficiency from the firm's POV
- From a society's POV: achieved when the firms produce at the lowest point of the LRAC, producing at the MES = achieved when the firms produce at the lowest point of the LRAC, producing at the MES
- Perfectly competitive firm is the only firm that can be productively efficient from both the firm's and society's point of view in the long run

Firm's POV	Society's POV

Achieved when the LRAC of producing any output is attained = any point along the LRAC is productively efficient,	Achieved when the firms produce at the lowest point of the LRAC, producing at the MES
All profit-maximising firms should be able to achieve productive efficiency from the firm's POV	- A monopolistically competitive firm is productively inefficient as the firm as it will not producing the good at the lowest possible unit cost, firm operating at less than optimum output (output of lowest unit cost at 0Qe) - Monopolies may not be productively efficient due to technical inefficiency = without the pressure to protect profits the firm's cost control may become lax and thus can raise AC and MC curves higher

Dynamic efficiency

-> Product and process innovation = reduce the AC and/or meet changing needs and wants of consumers over time

Product innovation	Process innovation
Leads to the creation of new products and/or services over time = consumers' changing needs and wants	Innovate and improve its production processes to lower their cost of production and increase their productivity

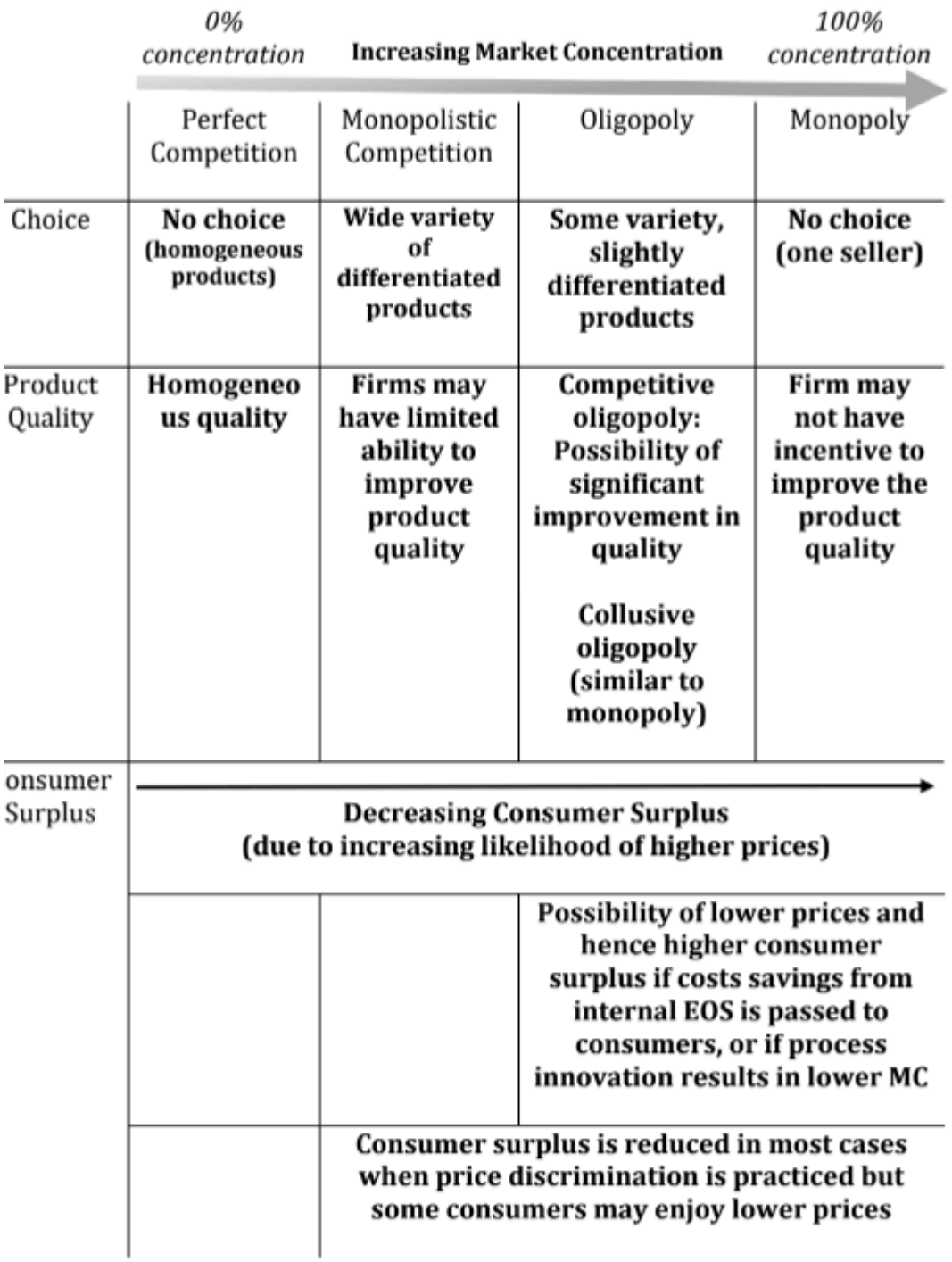
- PC firms only make normal profit in the long run -> do not have the ability to work on product and process innovation = NOT DYNAMICALLY EFFICIENT
- MC only earn normal profits in the long run -> no capital to work on R&D + but wants to compete -> Has the incentive but lacks ability = Unlikely to be dynamically efficient
- Monopolies earn supernormal profits but literally have no competition -> have the ability but not the incentive = unlikely to be dynamically efficient

Conditions for dynamic efficiency

- Ability to innovate: Do they have the capital to undertake research and development? (i.e: Supernormal profits)
- Incentive to innovate: Do firms need to innovate to compete with other firms?

Consumer Welfare

-> Individual benefits derived from the consumption of goods and service



- Consumer choice: Range of products made available to consumers (More choices = higher CW)
- Consumer surplus: High market power can reduce CW -> higher market power charge a higher profit-maximising price + lower output // if iEOS can be passed onto consumers = consumer surplus can positively impact CW
- Under a monopoly, consumers get more of the product at a lower price compared to perfect competition, improving consumer welfare.

- Improved profits from economies of scale can fund product innovations, offering consumers more choices and higher-quality products.
- Investing in process innovation can lower production costs, leading to lower prices and increased quantity consumed, benefiting consumers.
- Generally reduces consumer surplus as it's aimed at increasing profits.
- However, in some cases, it can benefit consumers in sub-markets with lower prices.
- Profits from profitable services can fund loss-making but socially important services, like rural bus routes, benefiting consumers indirectly.

Equity

- -> Equality based on efforts, opportunities or outcomes
- • If the firm makes supernormal profit in the long run15, it can be said
- that these profits are made at the expense of consumers hence income
- is disproportionately concentrated in the hands of the producers.
- • On the other hand, if the firm only makes normal profits, then incomes
- can be said to be more fairly distributed.

TLDR; Firms must stay competitive through marketing, innovation, and R&D, as failure to match competitors' advancements may lead to decreased demand and revenue due to consumers opting for superior and more affordable alternatives.