<u>Organization of Production and Growth of Firms:</u>

Value added to products: The process of production can add value to a certain product. For example, the process of creating jewelry is quite long which would result in the price of the product rising in order to satisfy the hour of labor that was put onto that piece.

To calculate value added -> market price – price of production

Specializing: When companies use their resources for specific tasks that those resources are especially good at. For example, someone who is good with technology would be behind the computer.

Diversification: When firms produce a variety of goods and services, for example, Talabat. In Talabat you can order food, groceries, and services like cleaning.

The production chain -> the process of production

Production sectors:

Primary sector -> sells natural resources, for example, a farmer.

Secondary sector -> firms that process these raw materials and sell a finished product, for example, a car manufacturer.

Tertiary sector -> Distribution of products to customers, for example a supermarket.

<u>Productivity measures the amount of output that can be produced by a certain amount of input.</u>

<u>The main aim of a firm is to combine its resources in the most efficient way for more output.</u>

How productivity can be increased:

- More output is produced by using the same resources
- Same output is created by using less input
- Increase productivity of resources while reducing productivity

How to measure labor productivity: The average amount of output an employee can produce within a time period, or total revenue per employee in a time period.

Average product of labor -> (Total output per period)/(Number of employees)

Average cost per unit -> (Total cost)/(Total output)

Collateral: If you can't pay back the loan from a bank, an asset will be given to them. For example, I take a loan, however I am not able to pay this money back and so the bank gets my house.

Interest rate: Cost of borrowing money

How to improve productivity:

- Train employees better
- Rewarding employees to give motive
- Increase job satisfaction (better working conditions)
- Replacing old technology with new technology (But this can be a drawback for labor considering it may replace workers)
- Lean production which reduces waste and is eco-friendly
- Division of labor

How to determine whether to use labor- or capital-intensive production:

- How much output consumers demand
- The cost of labor relative to the cost of employing capital
- The productivity of labor relative to capital

Aims of a firm:

- Private sector firms want to maximize profit
- Aims of other firms can be charitable
- NPOs do not care about maximizing profit, for example, a sports clubs (NPOs reinvest the money they attain back into their organization)
- Public sector firms provide services for the society

Division of labor: As you increase productivity you specialize the labor in areas, they are good at.

Pros	Cons
It makes the best use of labor	The workers would be doing the same job again and again
It reduces time spent on production	The workers may lack pride because they don’t see their final production
It increases output	If an employee is absent the production chain can be completely disrupted.
Better use of machinery	

<u>Whenever you are answering a question in Economics you should always look at the long run and the short run.</u>

To increase output:

- In the short run you want to increase your factors of production, but one factor will always remain constant (normally it is land). This is because that factor takes time to change.

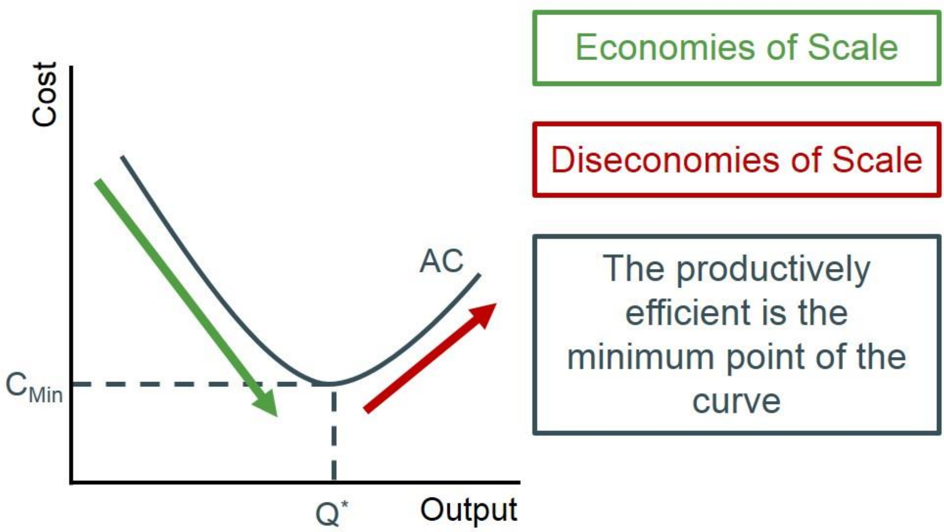
- In the long run all factors of production are variable

Fixed cost: The cost that does not vary based on output, for example, the rent of your warehouse.

Variable cost: The cost that does vary based on your output, for example, the number of buttons you have to buy to satisfy the number of bears you produce.

Average cost of production -> (Total cost)/(output)

Your average cost of production will always be a U-shaped curve:



The law of diminishing returns: In the short run, as you keep adding more variable factors of production to your fixed factor of production your returns will diminish because your average costs will increase due to your production efficiency decreasing.

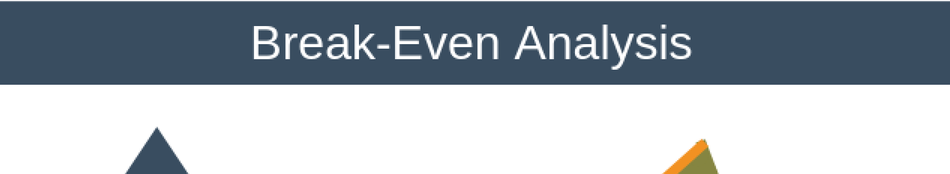
When specialization is used and capital is used properly, production increases and consequently costs fall.

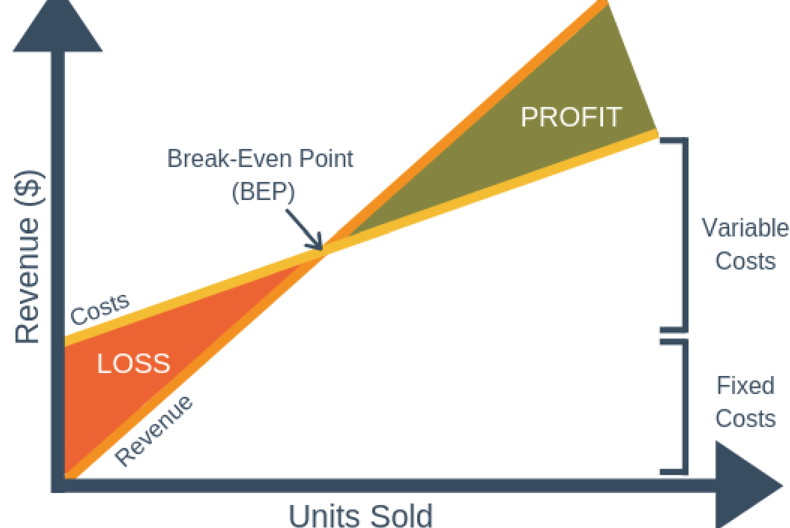
Revenue concepts: Total revenue that the firms receive is price of the product multiplied by the quantity sold.

Average revenue -> (Total revenue)/(Quantity sold)

Profit -> total revenue – total cost

Breakeven point: It is when there is no profit made as the quantity sold is the same as the cost.





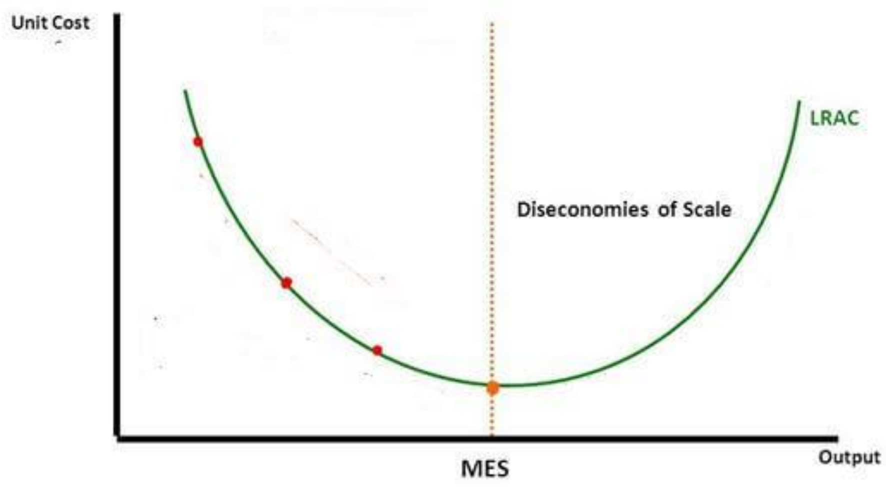
Factors affecting the size of a firm:

- Number of employees
- Capital employed (how much is invested in capital)
- Market share (what percent of a market is controlled by this firm)
- Organization (If they have different specialized departments like sales department, finance, HR, and more)

Economies of scale: As the scale of production grows, the average costs should fall. Whenever talking about EOS make sure to mention that average costs will fall.

Internal economies of scale	External economies of scale
Reducing the average costs within the firm by expanding the scale of production within the firm.	Reducing the average costs as the whole industry grows in size.

LRACC -> the long run average cost curve is normally U-shaped:



Type of external economies of scale/agglomeration economies	Example
Access to skilled workforce: There will be more skilled labor that has experience from other firms from the same industry. So, you can recruit these workers.	Silicon Valley in California is known for having many big technology companies. This makes people who are good in that department move to Silicon Valley looking for a job that relates to their skills.
Ancillary firms: These are firms that sell specialized products to other firms to make their production chain easier. Once they locate themselves near firms that acquire raw materials from them, the size of the industry would grow.	An example would be the app rockstar that provides a ticketing system for concerts and shows.
Benefits of shared infrastructure: Suppliers might find it profitable to invest in infrastructure to meet the needs of a growing industry.	An example would be the government to make the internet speed better in the country.
Suppliers will also benefit from EOS: If a firm grows, then the supplier will also grow.	As the output of BMW increases, the input will also increase. Consequently, the suppliers of BMW will produce more output to supply BMW.
Firms benefit from specialized service providers: Firms that provide specialized services and raw materials like ancillary firms help grow the industry.	An example would be a marketing company advertises your industry or firm resulting in your industry growing as a whole.
Joint marketing benefits: Firms gain reputation by collaborating with larger firms and increase the demand for their product, they do this based locating themselves close to bigger firms which creates reputation.	An example of this would be when a smaller firm produces a specialized product, and they supply to a larger firm which gains reputation within the industry.

Type of internal economies of scale	Example
Marketing EOS: If you advertise a lot, it will cost a lot. If you spread the advertisement over a large output, it would lower your average costs. If you increase your output, you can increase your advertising.	When you advertise your brand identity, you are indirectly advertising all the other products you produce under that brand identity like Cadbury.
Reductions in transportation costs: Large firms can buy vehicles themselves to distribute their products instead of depending on transportation companies.	For example the milk companies in America having delivery trucks that deliver milk straight to your home.
Purchasing EOS: If you are a large company you need to buy a lot of raw material for the amount of output you must produce. This is why you get a discount when you buy in bulk. Consequently, the average price will drop.	For example, a company buys a lot of raw material from an ancillary firm, and they get a discount for it as they are buying a lot of stock.
Financial EOS: Larger firms can get loans from banks a lot more easily as they are more asset worthy. Larger firms also get lower interest rates considering they have collateral.	An example would be the bank giving a large company a loan as they cannot possibly shut down overnight. They have collateral that they offer to the bank.
Technical EOS: Average cost can drop because they can employ specialized staff and machinery. They can also employ better technology.	An example of this would be toothpaste companies employing robots to handle packaging of the toothpaste bottles. This allows the owner to control the speed of the robot and so he can increase output relative to his input.
Risk-bearing EOS: Large firms can make multiple products so that if demand falls for one product they can rely on another product's success until they can stabilize again. The output would be increasing faster and so average costs would fall. Diversification is important for risk-bearing EOS.	An example would be Cadbury. They create chocolate and ice cream. They are extremely successful in the chocolate industry and so if the demand for their ice cream falls, they can rely on the demand for their chocolate until they recover.

Diseconomies of scale: As you expand your firm your average costs rise. Whenever mentioning a diseconomy, make sure to mention that the average costs will rise.

Type of Diseconomy	Example
Management diseconomy: This is when there are too many layers of management, so it becomes difficult to communicate with and control the firm.	An example would be a large firm like Amazon, if there was a change in the company, to communicate that change to all the different brands internationally would take a while.
Labor diseconomy: This is when there are so many employees that they feel unmotivated to work and there can be labor disputes. Thus, average costs will rise.	An example of this would be companies in France or the UK where labor disputes have led to their company going on strike for a couple days, consequently, average costs would rise.
Supply chain diseconomy: When you are a large firm, you depend a lot on the supply chain as you will intake a lot of input to produce your normal	An example would be when COVID-19 had caused the lockdown. During this time, a lot of factories

output. If there is an error in the supply chain anywhere, this would result in your average costs rising.	were not able to produce raw materials hence ruining the supply chain for many manufacturers.
Skill shortage diseconomy: If you have a shortage of skilled labor you need to spend money to specialize them so that they can fit into their job. As you train them you should pay them because then they could just leave, hence wasting your time, effort, and average costs would rise. Training them costs money and you need to offer them wages to give them an incentive to stay with your company post training.	An example would be in underdeveloped countries there is a lack of education. Therefore, the companies present in those countries need to train their labor so that they can do their job.
Regulatory risks: When firms grow too large, they start to dominate their market far too much, which is when the government intervenes and places regulations on the market. They place laws on the prices and quality of the products in order to keep it fair for the other firms in the market. This causes average costs to rise.	For example, if the government feels that this company has too much power over the market and so it adds a regulation to their product saying that they can only increase the price by 10%.

Integration: It is when companies merge to benefit from each other.

Horizontal integration	Advantages	Disadvantage
It is when two firms that produce the same product or service merge. An example would be Instagram merging into Facebook with Meta.	- Larger market share - Reduction of competition (aka consolidation) - Economies of scale - Geographical benefits that reduce transportation costs	- Might be difficult for management to handle such a big firm so more management must be employes which can result in management diseconomies of scale - The company will have more control over the market so consumers may be unsatisfied.

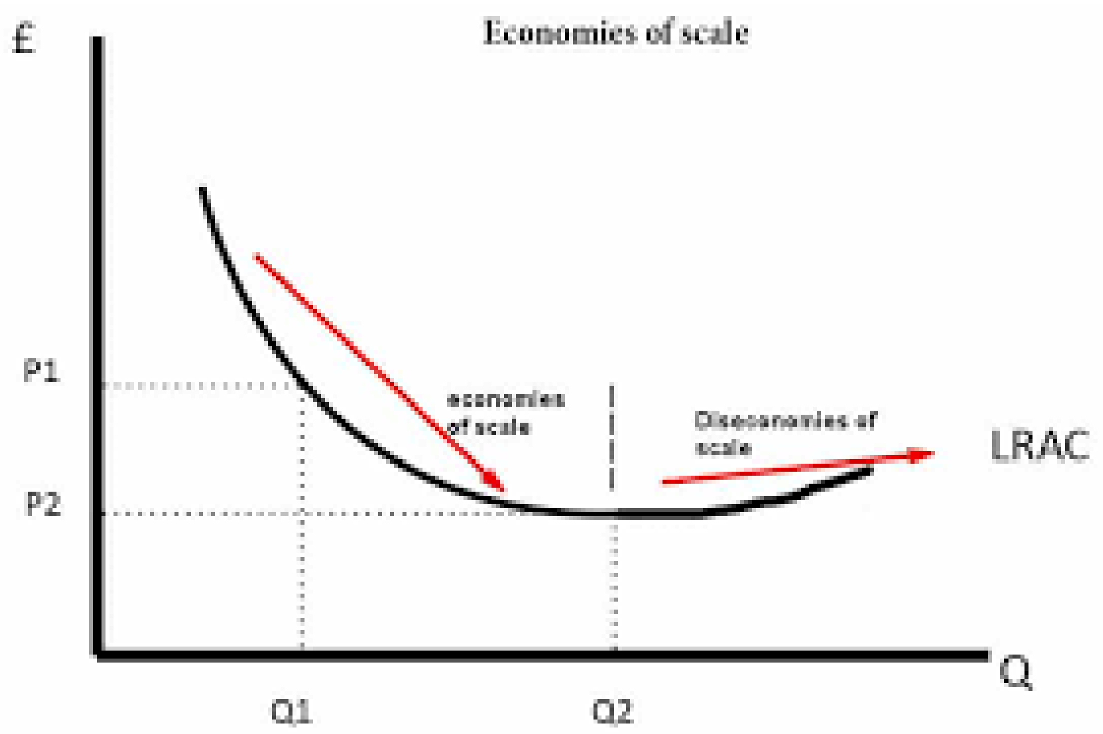
Vertical integration	Advantages	Disadvantages
When firms from a different supply chain stage (primary, secondary, and tertiary firms) merge. For example, a farmer buying a supermarket.	- Firms are assured that the next stage of production is in place - They can assure that manufacturers or retailers do not have business with rival firms - Firms can absorb profits made from the	- Taking over firms in a supply chain are very expensive - If the firms are significantly different in size, there can be an excess capacity in one side of the supply chain stage

	secondary or tertiary stage of production - Firms can be assured of exclusive supplies - They can control costs and qualities of supplies which affects customers - Firms can absorb the profits made by the secondary or tertiary stage of production	- Supply chains cannot be easily relocated - Managers may not have the skills to run firms in two different stages of production - Differences in work culture can lead to conflicts and low productivity
Forward -> When a firm merges with another firm that is lower on the supply chain, for example a car manufacturer buys a car retailing store.	- You will have a retailer where you can promote your product - It can absorb the profit made by the retailer - You can instruct the retailer not to stock up on rival products	- It can be expensive as you need to hire a lot of capital - If the firms are significantly different in size, there can be an excess capacity in one side of the supply chain stage - Differences in work culture can lead to conflicts and low productivity
Backward -> When you merge with another firm that is higher up on the supply chain (primary, secondary, and tertiary firms). For example, when a supermarket buys its own farm.	- The retailer can be assured of regular supply - The retailer can control the cost and quantities from the farm - It can absorb all the profits made from the farm	- It can be expensive - If the firms are significantly different in size, there can be an excess capacity in one side of the supply chain stage - Differences in work culture can lead to conflicts and low productivity

Lateral integration/Conglomerate merger	Advantages	Disadvantages
Firms that merge but sell completely different products, for example, an airline company acquires a newspaper company.	- Firms can increase their customer base and increase sales - Diversification will reduce the impact on fallen demand of one product	- Difficulty for a manager to control two firms that sell completely different products (management diseconomies of scale) - Can lead to a poor performance in the

	- Shared ideas and innovations across all products - Cost advantages across common areas like advertising (advertising economies of scale)	manager as they have to work a lot of long hours - Difficult to get workers used to different work cultures

Diagram explaining the process of economies/diseconomies of scale: Always going to be U-shaped curve.



Type	Explanation
Short run	The short run curve is U-shaped because of the law of diminishing returns. The short run is when 1 factor is fixed and the others are variable.
Long run	The long run curve is U-shaped because of economies of scale. Until Q2 your firm is experiencing economies of scale, so average costs will drop. Beyond Q2 your firm will experience diseconomies of scale so average costs will rise.

Why firms remain small:

- The size of the market is small; so, the firm is able to provide a more special or personalized service.

- Access to capital (money) is limited (when the firm is small the banks won't be willing to offer loans). To help small-scale firms, governments provide subsidies to promote entrepreneurship.
- New technology (you don't need a huge place to run a business), you can just have a couple of computers in a room and run a business.
- Some entrepreneurs just don't want to become big firms because it is too stressful.
- The owners of the firm can make all the decisions whilst in a large firm the decisions are made by the managers
- They will get to keep all the profit
- Decisions can be made quickly and communicated quickly
- There is more personalization in the work environment
- They are in close touch with the workers so there is more loyalty
- They are in contact with the customers so if there are any changes in the market they will get to know directly
- Since they do not invest in capital and land heavily, they can change their production process quickly

Disadvantages to small firms:

- Owners do not have all the skills of management. In a large firm, they have different departments for different aspects like advertising
- They have to work long hours
- If you are sick or on holiday, you get no revenue as no one can replace you as the owner
- You lack financial resources
- They are in competition with large firms
- Banks do not give you loans easier than large firms
- Suppliers won't give products to you on credit since they do not know if you can pay them back
- Due to the fact that small firms cannot buy in bulk (purchasing EOS) so average costs are high
- Small firms cannot employ specialist staff to improve efficiency of production so average costs will be high

Why small firms can be set up easily:

- Very few legal requirements
- They can be run from home or a rented premises
- They receive grants from the government

Whenever talking about small and large firms compare them with each other

Objectives of firms:

- Profit maximization
- Growth -> economies of scale (lowering average costs)
- Increasing sales (increasing market share)
- Diversification of production

- Survival -> to be able to stay open and not be shut down
- Social welfare and environmental objective -> these firms are called social enterprises

Market structures:

Type of market structure			
Perfect competition: Companies that sell identical products.	**Monopolistic competition: Companies that sell products that are**	**Oligopoly competition: When companies have all or a lot of market share but sell**	**Monopoly: A single service, for example DWA, is the only organization that**

	similar but not perfect substitutes.	differentiated products.	provides their service in the whole country.
- Has a large number of firms - Each firm has very low market power - Homogenous products (identical products) - No control over pricing (these firms are called price takers) - There is perfect information between the customer and the seller - The only market that is closest to being perfect information is the foreign exchange market - No barriers to entry -> any firm can enter or leave the market	**- Has a large number of medium sized firms - These firms have some market power - They have differentiated products - They are price makers - Imperfect information of the production - Low barriers to entry of the market - An example of a monopolistic market would be the barber market**	**- Small numbers of big firms competing - These firms have high market power - They have very differentiated products - They control the prices -> price makers - Imperfect information - High barriers to entry of the market - An example of an oligopoly market would be in airline industry**	**- Only supplier of the product or service - Complete market power - Price makers - Imperfect information - Extremely high barriers to entry into the market. - An example of a monopoly would be DEWA - Monopolies are usually run by the government, if not, then they are government regulated**

If you are a dominant firm, you are called a monopolist because pure monopolies are almost always government owned.

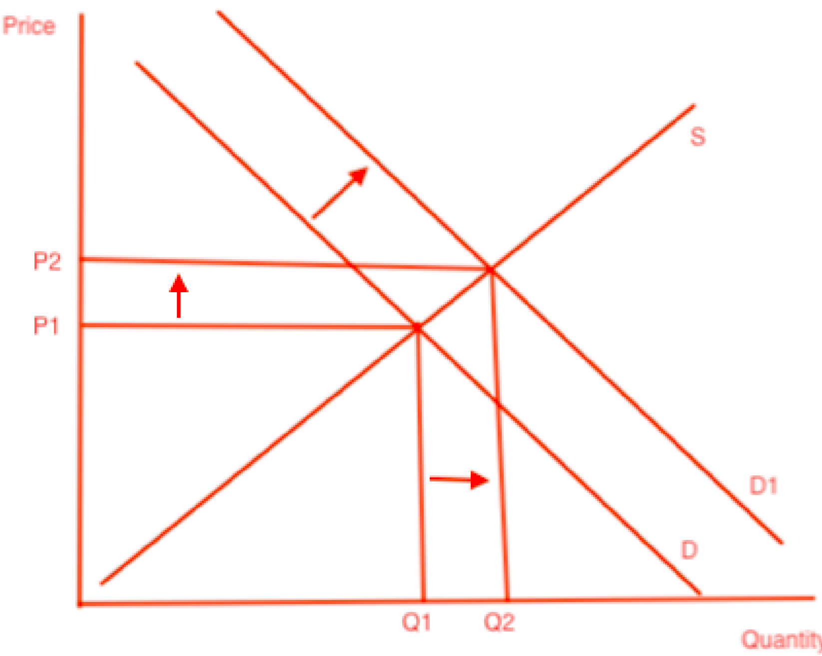
Why do firms compete?

- To increase customer base -> for profit
- To increase sales -> for profit
- To enhance their image -> increase trust with customers

- To expand market share -> have more control over the market
- To achieve product superiority -> to increase profit
- All of these reasons can conclude to profit maximization

Price competition	Non-price competition
- Each firm wants to compete to get control of the price - This competition can result in a price war where each firm starts cutting prices until the firms go into loss. Normally with large firms.	- Invest more on making your products look better with advertisement - This way you get more market share - It is safer to do non-price competition, which is what most markets do, in order to avoid a price war

Non-price competition:



The use of advertising creates more awareness of the product so demand would increase from D to D1. The quantity would extend from Q1 to Q2, and the price would extend from P1 to P2. Hence profit maximization is achieved.

The larger firms benefit a lot more from advertising compared to small firms.

Informative advertisement	Persuasive advertisement

Uses facts and figures to convey an interesting fact about the product that might give it the edge over the other products in the market. For example, this hand wash kills 99.8% of germs and bacteria.	Uses a different technique compared to an informative advertisement where the ad will appeal to the wants and needs of the audience in order to connect with them. It will make them feel that this product is just for them. For example, a KFC ad that uses food that looks very tasty to appeal to your emotions and wants.

Market structure characteristics:

- Number of firms in the market
- How much competition
- The ability of firms to change prices
- Ease of which another company can enter the market

Why is competition good for the customer?

- It encourages firms to make better use of scarce resources, consequently their products will be of better quality.
- There will be an increase of supply
- The prices will be better for the customer

Features of perfect competition:

- A large number of firms
- There is perfect knowledge of the production
- Homogenous products
- Price takers
- Profits will attract new firms into the market (no barriers to entry)

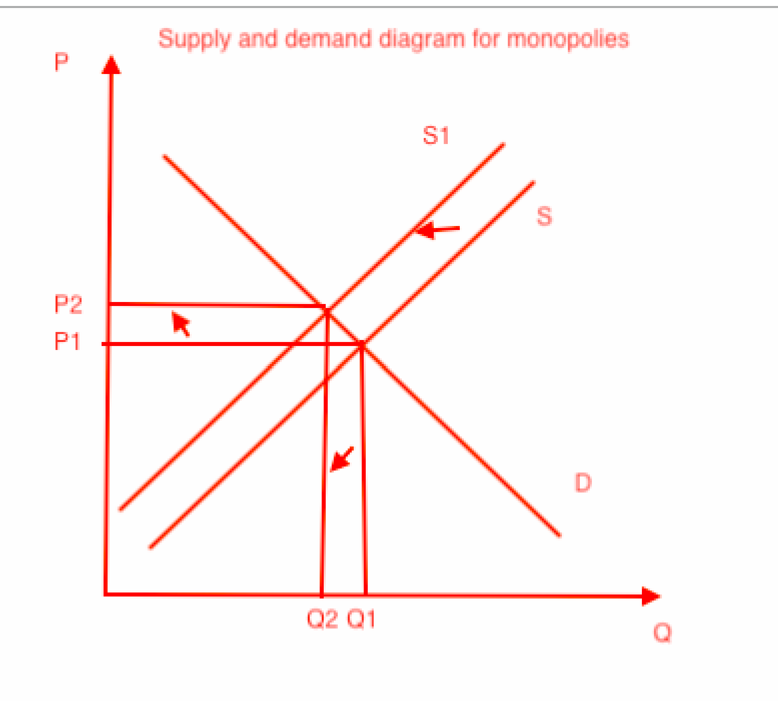
Competitive pricing strategies (barriers to entry):

- Destructive pricing (predatory pricing) -> Large firms use it when they are threatened by a new firm. The technique is to lower the price below their cost of production so they can't compete.

The large firm has enough capital to take a loss until they are no longer threatened. Once the new firm exits the market, the dominant firm will raise their price again.

- Follow the leader pricing -> The dominant firm sets the price, and every other firm will follow this price (considering that this market is not a monopoly). The firm with the largest market share will be the price maker.

Monopolies -> will restrict supply in the market and increase the price. In order to reduce competition, they impose barriers to entry.



Disadvantages of monopolies:

- Less consumer choice because the monopoly is a single seller in the market.
- The monopoly can restrict output and increase prices.
- Lower product quality, because they have less incentive to improve their products; being a monopoly they don't have competition.
- They are already making abnormal profits so there is no incentive to use resources efficiently. This can lead to higher costs. This is called X-inefficiency. They are already facing economies of scale as they have high costs, but low average costs.
- Governments need to control monopolies to make sure they are not exploiting the consumer.

Competition policy -> Different ways governments can control monopolies:

- Imposing fines
- Regulating prices and services
- Breaking monopolies into smaller competing firms

Additional policies:

- Governments can induce higher taxes; they will reinvest this money into the economy.
- Nationalization, they can take over the company by buying the company. The government does this for the public's interest.

<u>Barriers to entry:</u> Ways in which a firm can stop a new firm from entering the market.

Natural barriers to entry: Pre-existing barriers that restrict other companies from competing with the dominant firm.	Artificial barriers to entry: Companies impose their own techniques to stop other firms from competing with them.
- Economies of scale (natural monopoly) -> if there is more than 1 firm in the market, average costs will be too high. For example, DEWA, if there were more than one supplier of water and electricity there would be too many power grids and so forth. The fixed costs would be too high for another firm to enter the market. - Capital size -> the capital required to make the product is too high. The fixed costs of the product are too high, for example, nuclear power plants. - Historical reasons -> These firms have been pioneers in the market for so long that everyone just buys from them due to brand loyalty. For example, Pepsi and Coca-Cola. - Legal considerations -> Governments get involved and provide patents and copywrite forms to pioneer firms. This prevents other companies from copying their ideas.	- Predatory pricing -> the firm will lower their product prices below the cost of production where they would be taking loss. This loss can be handled and taken by bigger dominant firms; however, the new firms cannot compete with this as they do not have enough capital to withstand so much loss. - Restricting supply -> Dominant firms can tell suppliers not to provide for the rival firms otherwise they will threaten to leave. - Exclusive dealing -> Monopolies can tell retailers not to stock up on rival products. - Tying or bundling -> Firms agree to conditions on their products. They would give an offer for example, buy a cereal pack and get the bowl and spoon for free.

<u>Market failure:</u> Market failure occurs in a free-market system where the government cannot intervene with the firms.

Free rider -> Getting the benefit of a good without paying for it (for example, a streetlight on the sidewalk).

<u>How do markets fail?</u>

- Public good can't be provided by private firms (for example, the military and streetlights) -> Once this public good is provided it applies to everyone and does not exclude anyone, even if they have not paid for it. The consumption of this product does not limit the consumption for the next consumer. Since these goods

are provided to everyone, they cannot charge every single consumer of this product which makes it hard for private firms to provide public goods.

- Too few merit goods will be provided (for example, education and healthcare) -> A merit good is a good that is beneficial for everyone not just yourself. Merit goods are beneficial for the individual consumer and society. Providing merit goods is expensive so they charge high prices for their service. Thus, these services from private sector firms will only supply those who can afford them. Therefore, merit goods are underprovided and under consumed.
- Demerit goods are overconsumed and overprovided (for example cigarettes) -> Demerit goods are harmful for yourself and society. Private sector firms will supply these goods because they are profitable.
- Some firms can exploit their consumer or employees (for example, threatening to fire your employee if they don’t work overtime) -> Large firms like monopolies and oligopolies can restrict supply and higher prices. They can do so because they are monopolistic. This leaves consumers with less income to spend on their lifestyle. Some firms can overwork their employees.
- Factor immobility (for example, you can't shift a power plant form a village to the city) -> It is when it is difficult to move factors around.

Negative externality: A cost to the third party, for example, smoking causes third parties to take in secondhand smoke Demerit goods give negative externalities.

Negative production externality: The problem created by the producer.

Negative consumer externality: A problem created by the consumer when consuming the product.

Positive externalities: They are the opposite of negative externalities as the consumption of these products help the environment and society, for example, taking the Covid vaccine.

<u>Private and social costs and benefits:</u>

Private costs -> The costs of the factors of production when creating the product.

Social costs -> The external costs to third parties or society.

Private benefits -> The revenue made from the product.

Social benefits -> Positive externalities that come from consuming the product.

If your costs are greater than your benefits, then this product is causing harm to your economy which leads to an uneconomic use of resources.

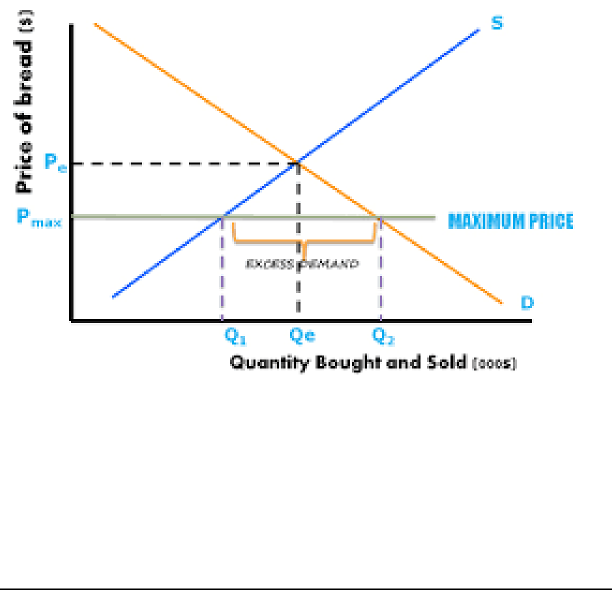
<u>Types of government intervention for market failures:</u>

- Direct provision: This is when the government set ups a public sector company in the market where the market failure is present (this is not always the best way because public sector companies are not profit driven which can lead to an inefficient use of resources.
- They can provide subsidies to research and development programs.
- Nationalization: when the government buys out a private company.

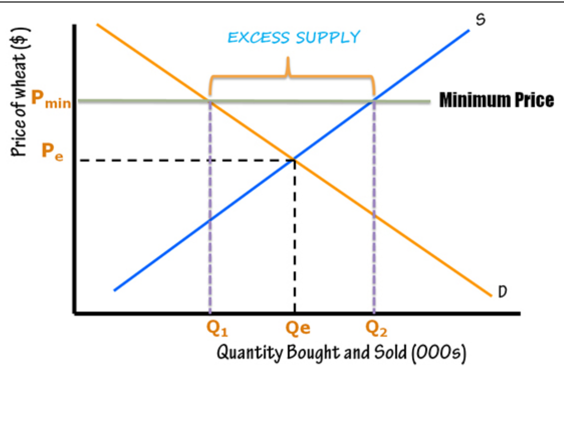
<u>Government regulations:</u>

- Banning or restricting the consumption of demerit goods like drugs.
- Establish some basic standards for the product safety and quality for example, the government in the UAE putting a maximum concentration of zinc in bottled water.
- Protecting animal welfare and the natural environment, for example the government banning animal testing.

<u>Price controls:</u>

Maximum price control: It is when the government decides what is the maximum legal price a company can set for a product in a market. This price is usually set below market equilibrium because according to the government, the market equilibrium price is too high for the economy. Maximum price controls are normally set on merit goods like education. Demand for these markets is usually inelastic. As the maximum price is set below the market equilibrium, the price will decrease. Consequently, according to the law of supply, supply will	

contract when the price decreases. According to the law of demand, demand will extend as the price decreases. This will result in a market disequilibrium where there is a shortage of supply for the demand in the market. The disadvantage to setting these maximum price caps is that firms may have less incentive to work because their revenue is less now.	

Minimum price control: It is when the government sets the lowest possible price for a product. The firms in the market cannot legally shorten their prices below this price cap or they will be fined. Minimum price caps are usually set for demerit goods like cigarettes. This is because if demerit goods are sold for cheap, it will lead to an overconsumption of demerit goods where their negative externalities start impacting the economy at a large scale, this involves the demerit good market failure. The minimum price is usually set above the market equilibrium so that in the short run, the demand will decrease, and the supply will increase according to the law of supply and demand. Consequently, in the long run, firms will not want to be at a surplus as it is a loss for their company which is why they will eventually restrict their supply as well resulting in less consumption of the demerit goods. The disadvantage to these minimum price caps is that it influences a lot of illegal activities like smuggling demerit goods and selling them at cheap prices in the economy.	

Indirect taxes:

The government enforces indirect taxes on demerit goods and goods with negative externalities like alcohol. These taxes give the government revenue, and it restricts the supply of demerit goods. Since demand for these products is usually inelastic this technique is very good because it cuts the supply so demand will have to cope with that, consequently reducing the consumption of demerit goods.

Problems created by government intervention:

- They can take too long to be implemented.
- Price controls can encourage black markets and smuggling.
- Subsidies can cause prices to be too low or too high.
- Regulations can increase the cost of production, so supply is restricted to a high price.
- Public sector companies can be inefficient because their main goal is not profit driven, leading to a misallocation of resources.
- Government intervention can cause conflict of interest-direct provision of merit goods lead to higher taxes to pay for these services.
- Government intervention is often based on political agendas and not for public interest