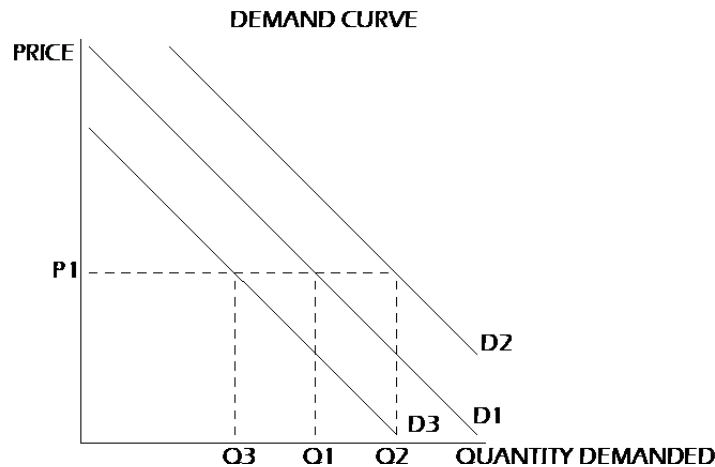


Conditions Of Demand:

- When the assumption of ceteris paribus is dropped, **non-price factors** can affect demand and **shift** the demand curve.



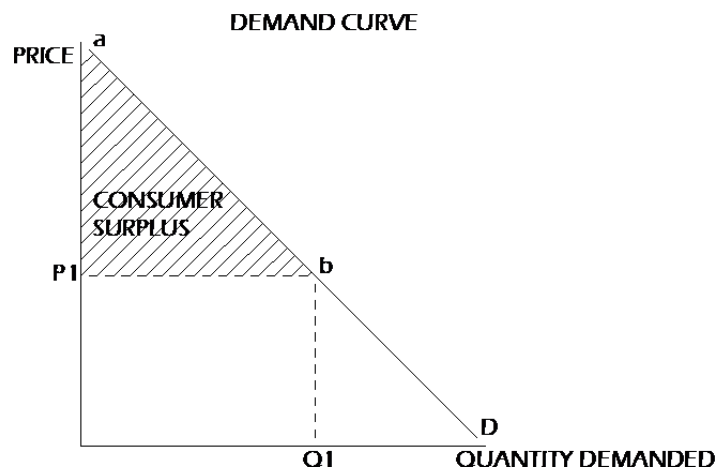
- If a non-price factor increases the demand for a product, the demand curve will shift from D1 to D2. At the same price, more is being demanded.
- If a non-price factor decreases the demand for a product, the demand curve will shift from D1 to D3. At the same price, less is being demanded.
- The following factors can cause a shift in the demand curve, independent of price:
 - If there is an increase in **population**, there will be an increase in demand for a certain good or service.
 - Good **advertising** affects a consumer's willingness to buy a product, therefore increasing demand.
 - If the price of a **substitute** good increases, consumers are less willing to buy the substitute and the demand for the original good will increase.
 - If the **incomes** of consumer's increase, the demand for normal goods will increase while the demand for inferior goods will decrease.
 - If **fashions** or tastes in society change in favour of a good or service, the demand for the product will increase.
 - If **interest rates** decrease, the cost of borrowing money to consumers will decrease and therefore they are more willing and able to increase their demand for a good or service.
 - If the price of a **compliment** good decreases, consumers are more willing to buy the original good and therefore demand will increase.
 - If **legislation** changes to favour a good or service, e.g. the legalisation of cannabis, the demand for that product will increase.

Diminishing Marginal Utility:

- As the quantity consumed increases, the **marginal utility** derived from each extra unit consumed decreases.
- The **paradox of value** is the observation that goods and services critical to life (e.g. water) are very cheap compared to goods and services which have no bearing on human existence, e.g. diamonds. However, the law of diminishing marginal utility can explain this: if there are fewer goods available to buy, consumers are prepared to pay a high price as their marginal utility is high, however if a good is plentiful, consumers are only prepared to pay a low price as their marginal utility is low.
- The law of diminishing marginal utility can explain the downward sloping demand curve: the higher the quantity consumed, the lower the marginal utility derived from consuming the product.

Consumer Surplus:

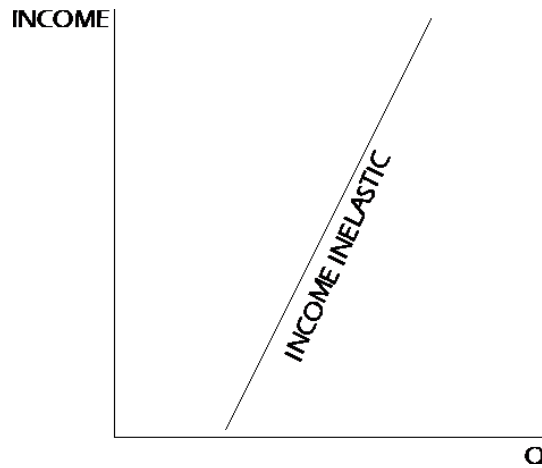
- Consumer surplus is the difference between the value of the product to consumers (the price they are willing and able to pay) and the actual price of the product.



- Consumer surplus is the area below the demand curve and above the price line, therefore the consumer surplus on the above graph is the triangle P1ab.

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Normal goods:



- If YED is less than 1, demand is **income inelastic**; for any given change in income, there is a smaller proportion of change in quantity demanded.
- If the demand for a normal good is income inelastic, the good is a normal **necessity**.



- If YED is greater than 1, demand is **income elastic**; for any given change in income, there is a greater proportion of change in quantity demanded.
- If the demand for a normal good is income elastic, the good is a normal **luxury**.

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Subsidies And Elasticities:

- The largest fall in price as a result of a subsidy will occur when demand is highly inelastic or supply is highly elastic. If demand is more elastic or supply is more inelastic, the subsidy will be absorbed by the producer to allow them to increase their profits and the consumer will experience very little change in price.
- A subsidy impacts economic agents in different ways:
 1. **Consumers** benefit from a decrease in price of the good or service, and therefore increase their quantity demanded.
 2. **Producers** benefit from increased revenue.
 3. There is a significant cost to the **government**, and therefore the government needs to consider the opportunity cost of the subsidy.

Alternative Views Of Consumer Behaviour

Cognitive Biases:

- **Homo-economicus** is the idea that using rational assessments, economic agents attempt to maximise utility when making decisions. Behavioural economics disputes rationality and utility maximisation, arguing that emotional, social, and psychological factors can influence decision making, known as **cognitive biases**:
 1. **Price anchoring** is when a consumer has a price imprinted into their mind as a reference point to compare other prices to. Therefore, if a consumer recognises that the price of a product is lower than the price anchored in their minds, they believe that they are getting a good deal.
 2. **Social norms** are when decisions are influenced by rules dictated in society, e.g. tipping at restaurants.
 3. **Availability bias** is when consumers make decisions based upon the ease of which examples can be thought of, which often inflate the actual probability of the event occurring, e.g. swimming in Australian seas and shark attacks.
 4. **Framing** is the idea that consumers are influenced by the way in which information is presented to them, e.g. low fat food products.
 5. **Loss aversion** is the idea that consumers do not like to give something up or lose things that they value, even if the possible outcome is beneficial to them, e.g. investing money into a low risk savings account. This leads to the endowment effect, where consumers attach too much monetary value to something they have, compared to something they could gain.
 6. **Herding** behaviour is when consumers make decisions based upon the decisions of other people around them, e.g. investors buy up the same shares as other investors.
 7. **Choice architecture** is when consumer decisions are based upon the location or placement of something, e.g. the location of products by a till can influence consumers to add them to their shopping basket while they wait.
 8. **Altruism** is the idea of kindness or selflessness, where consumers do not expect anything in return for a certain act, e.g. charity.
- Consumers are often **bounded by rationality**, which can affect their rational decision making.
 1. Consumer may not have the **time** to research and evaluate all the information available to them.
 2. Consumers may have too much or too little **choice** in regards to the information and products available.
 3. There may be asymmetric **information** in the market or information too complex for the consumer to understand.
- Consumers may be **bounded by self-control**, e.g. a consumer may know sugary drinks are unhealthy, however their self-control affects their ability to cut down.
- **Habitual behaviour** is when consumers follow **heuristics**, or rules of thumb, which are simple ways of assessing situations and making **satisficing** decisions. Satisficing decisions may sacrifice some utility, however overall the decision will satisfy the consumer.

Types Of Market Failure

Market Failure:

- Market failure occurs when the free market fails to allocate scarce resources at the **socially optimum** level of output.
- **Partial** market failure is when there is an overproduction or an underproduction of goods or services in a market.
- **Complete** market failure is when markets do not exist, leading to no production of a good or service, known as a **missing market**.

Market Failure Causes:

- Negative and positive **externalities** are unaccounted for in the free market mechanism. Third party impacts are ignored, as market prices and profits may be misleading and not truly reflect the societal impact of economic activities. This arises from the self-interests of economic agents.
- **Merit** and **de-merit** goods are better or worse for consumers than they believe, which arises from the problem of **information failure**, preventing consumers from acting in a rational and utility-maximising way.
 1. There may be a **lack of information** in the market, resulting in either the overconsumption of de-merit goods or the underconsumption of merit goods.
 2. **Asymmetric information** is when information is not being shared equally between two parties. This may lead to **moral hazard**, where an individual is prepared to take more risks as they know that they will not bear the true costs of those risks, e.g. in the insurance market, where the driver has more information about his driving style than the insurance firm.
- There is an under-provision of **public goods** as a result of the **free-rider problem** and profit motivated firms.
- **Common access resources** are often over-consumed and over-produced, due to the lack of consideration of externalities. This is known as the **tragedy of the commons**, and arises from the self-interests of economic agents.
- **Income inequality** is a source of market failure due to inequity. However, income inequality is **normative** and there are many different opinions about the acceptable levels of inequity in a society.
- **Monopoly power** creates market failure as there is one dominant seller in a market and high barriers to entry, which leads to the exploitation of consumers through high prices and low quantities available.
- **Factor immobility** prevents supply from responding to an increase in demand in a market, causing a misallocation of resources.

Private And Social Costs And Benefits:

- **Externalities**, or spill over effects, arise when private costs and benefits are different from social costs and benefits.
- A **private cost** is the cost of an activity to an individual economic agent, e.g. firms paying for labour and capital.
- A **social cost** is the cost of an activity to third parties, as well as the individual economic agent who carried out the activity. Therefore, social costs include private costs as well as other costs, e.g. pollution.
- The difference between the private cost and the social cost is the externality. If social costs are greater than private costs, a **negative externality** or external cost exists. Negative externalities are detrimental third party effects that arise as a result of the actions of a separate agent.
- However, if the social benefits are greater than the private benefits, a **positive externality** or external benefit exists, e.g. vaccinations prevent the person who was vaccinated against disease as well as other member of society. Positive externalities are third party benefits that arise as a result of the actions of a separate agent.
- Activities where social benefits exceed private benefits are often inadequately provided by a market system, which may result in state provision or a government subsidy to encourage private provision.

Market Failure:

- In a market, output is fixed where demand equals supply at the point where private costs equal private benefits. However, a **misallocation** of resources will occur if market prices do not accurately reflect the social costs and benefits of economic activities.
- The **socially optimum** position would only occur at the point where social benefits equal private benefits.
- The greater the externality, the larger the divergence will be between private and social costs and benefits. Therefore, the greater the externality, the greater the market failure and the less market prices provide accurate signals for the optimal allocation of resources.

Marginal Costs And Benefits:

- The difference between private and social costs and benefits change as the level of output changes, which can be shown using **marginal analysis**.
- The margin is a possible point of change, therefore the marginal costs of production are the extra costs of producing an extra unit of output, and the marginal benefits of consumption are the extra benefits received from consuming an extra unit of output.
- The **marginal costs of production** may fall initially due to the greater efficiencies achieved as a result of producing a higher level of output. However, marginal costs then begin to rise as firms may be paying high prices to obtain more factors of production.
- The **marginal benefits of consumption** fall as consumption increases, as each extra unit brings less benefit to the consumer as the previous one. The marginal benefit curve is the same as the **demand curve**, as they both show the value of the benefit of consumption for the consumer.

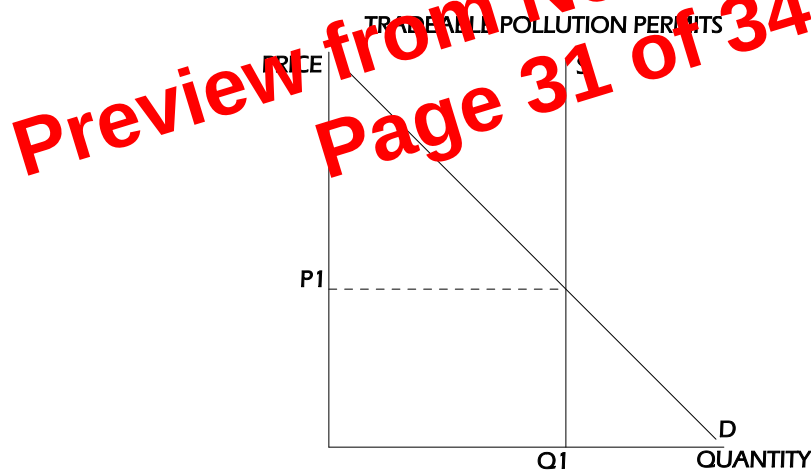
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Regulation:

- Regulation is a **rule** or **law** enacted by the government that must be followed by economic agents to encourage a **change in behaviour**.
- Regulation is a **non-market** based approach to solving market failure. Regulation does not work through a market or the price mechanism, and is therefore not dependent on elasticities.
- Regulation is a **command** and **control** approach:
 - The commands are the rules or laws, which include **bans** (e.g. public smoking ban), **limits** (e.g. age limits for buying alcohol), **caps** (e.g. emissions caps for firms), **compulsory regulations** (e.g. graphic imagery on cigarette packets), or **innovative regulations** (e.g. deposit recycling scheme, where consumers pay extra when buying certain products and only receive the extra money back if the product is then recycled).
 - In order for regulation to work, the government must have control. There needs to be strong **enforcement** of the regulation to incentivise people to follow the rules, and effective **punishment** if the regulation is not followed.
- If both the command and the control is strong, there is the incentive for economic agents to change their behaviour and move the quantity towards the **socially optimum** level. This will solve the issues in the free market without working through the free market.
- The end result of regulation is **allocative efficiency** and a **welfare gain** in the market.
- However, there are significant **issues** with using regulation:
 - If either command or control **break down**, the regulation will not work.
 - Regulation is **costly** due to the **administration** costs and **enforcement** costs. If the government cannot afford the costs associated with regulation, enforcement will be weak and there will be a lack of incentive to follow the rules.
 - If the command is too **strict**, there could be many unintended consequences for firms, e.g. burdening firms and increasing costs significantly, reducing profitability to an extent where firms leave the country, reducing production which results in unemployment, or incentivising firms to cheat, and for producers, e.g. forcing consumers to look to the black market for alternative supply, resulting in a loss of tax revenue, and a need for extra policing.
 - If the command is too **lax**, there will be a lack of incentive to change behaviour.
 - There is the issue with **equity**, where some firms may find it much harder to follow the regulation and their costs may significantly increase compared to others, e.g. firms who are dependent on fossil fuels may struggle to reduce their pollution.
 - Regulation is highly **paternalistic** and forceful, which limits freedom of choice.

Trade Pollution Permits:

- Tradeable pollution permits, a key element of cap and trade schemes, are used to deal with pollution market failure as a specific type of **negative externality**.
- Taxation** and **regulation** are deemed to be **ineffective** when solving pollution market failure.
- The government decides of a level of pollution allowed in the economy. Permits are then issued to firms to match this level of pollution, who can decide to either reduce their pollution by investing in green technology, or buy up permits which are unused by other firms, depending on the most cost effective solution for the individual firm. With either solution, the costs of production for firms will increase.
- If a firm breaks their allowed pollution limit, **finest** are issued.



- The **price** of tradable pollution permits can be determined by the free market, as shown in the graph above.

Advantages of tradable pollution permits:	Disadvantages of tradable pollution permits:
- By distributing permits, there is an incentive for firms to reduce pollution. - If the level of pollution is set correctly, the socially optimum level of output will be achieved, welfare will be maximised, and allocative efficiency will occur. - As a market based solution, tradable solution permits require minimal intervention by the government, and market forces can efficiently allocate permits. - Permits are an efficient and equitable solution for firms, as firms have choices about how they wish to deal with their pollution. Therefore, firms will not be overly disadvantaged.	- Deciding on the level of pollution allowed may be difficult. - There are high administration costs associated with permits and enforcement may be difficult. - Fines may not be strict enough, and therefore firms may continue to pollute at high levels and pay the fines, as this may be more cost effective than investing in green technologies or buying permits. - Permits may result in the geographical distribution of pollution concentrated in one area, e.g. USA bought many permits from developing countries, and therefore there was a large amount of pollution concentrated in the USA. - International cooperation is needed in order for the permits to be effective, as pollution is a global issue.

- The **effectiveness** of the permits depends upon:
 - The **level of information** that the government has about the optimum level of pollution
 - The **number of firms** who are able to reduce their levels of pollution