1.3.2 Externalities

a) *Distinction between private costs, external costs and social costs*
b) *Distinction between private benefits, external benefits and social benefits*
c) *Use of a diagram to illustrate:*
    - *the external costs of production using marginal analysis*
    - *the distinction between market equilibrium and social optimum position*
    - *identification of welfare loss area*
d) *Use of a diagram to illustrate:*
    - *the external benefits of consumption using marginal analysis*
    - *the distinction between market equilibrium and social optimum position*
    - *identification of welfare gain area*
e) *The impact on economic agents of externalities and government intervention in various markets*

- Externalities: They are the effect that producing or consuming a good/service has on 'third parties' who aren't involved in making, buying/selling and consumption of the good/service.
- Positive externalities are external benefits and negative externalities are external costs
- Examples of externalities in production: A negative externality of producing steel could be pollution but a positive externality of producing military equipment could be an improvement in technology that benefits society
- Examples of externalities in consumption: A negative externality of consuming a chocolate bar could be litter but a positive externality of training somebody to be a doctor could be the benefit to society of this.
- Stakeholders: a person with an interest or concern in something, especially a business.
- Property rights confer legal ownership, which gives people and incentive to protect it from abuse. Failure to protect property rights may lead to the Tragedy of the Commons
- Private costs: Cost of doing something to a consumer or producer. To a consumer they are: the price of a product. To a producer they are: wages, rent, raw materials
- External costs: The costs in excess of private costs that affect third parties who are not part of the transaction
- Social costs: The sum of private and external costs which is the full cost borne by a society
- Examples of external costs (negative externalities): Production: air, noise pollution, habitat destruction. Consumption: obesity causing tax rise, passive smoking
- Private benefits: They are direct benefits to consumers and producer for producing or consuming a product such as revenue or utility
- External benefits: Benefits in excess of private benefits which affect third parties who are not part of a transaction

- External benefits are not accounted for by the producer or consumer so they are often under consumed and produced
- Examples of external benefits: Consumption: vaccination prevent disease spreading, good gardens increases neighbours house price. Production: Bee farming benefits nearby farms, training from other firms
- Social benefits: The sum of private benefits and external benefit
- Negative externalities causes socials costs > private costs
- Ways to value externalities:
    1. Shadow pricing e.g. external cost of traffic congestion can be calculated by working out the wages lost
    2. Compensation: estimating the cost of putting right an externality
    3. Revealed preference: how much people are willing to pay to avoid an externality e.g. house prices
- The external costs of production diagram:
    1. The PMC (private marginal cost) is the supply curve which indicates private costs
    2. The SMC (social marginal cost) includes private and external costs
    3. The PMB (private marginal benefit) curve is a demand curve which indicates that private benefits decrease as consumption increases; it is assumed there are no external benefits
- Distinction between market equilibrium and social optimum position in the external costs of production diagram:
    1. The equilibrium is where PMB=PMC
    2. This is not socially optimum as it doesn't account for external costs
    3. The socially optimum level of output is when SMC=SMB
- The difference between the equilibrium and socially optimum position in the external costs of production diagram causes over-production and over-consumption as it is higher than the socially optimum level
- If MSC pivots away from MPC then marginal external costs are increasing
- Welfare loss: The area between the marginal social cost and marginal social benefit (ABC) which is the loss to society caused by ignoring externalities
- The external benefits of consumption diagram:
    1. The private marginal benefits (PMB) is the demand is the demand curve which indicates that private benefits to the consumer decrease as consumption increases
    2. PMC is the supply curve which is assumed to equal SMC
    3. The SMB (social marginal benefits) curve includes both the private and external benefits so is drawn to the right of the PMB curve
- Increasing the production of merit goods cause the private benefit curve to shift outwards to the social benefit curve
- Demerit goods cause the private benefit curve to shift inwards to the social benefit curve
- The orange section is the welfare loss from under consumption or the welfare loss from over consumption for demerit goods
- The distinction between market equilibrium and social optimum position in the external benefits of consumption diagram:

    1. The equilibrium in a free market is where PMB=PMC
    2. However, this isn't in the socially optimum position as it doesn't account for the external benefits of productions
    3. The socially optimum level is when SMC=SMB
- The difference between the equilibrium and socially optimum position causes under-production and under-consumption, in the external benefits of consumption diagram, which is the gain to society lost by ignoring externalities
- Welfare gain: The area between the SMB and SMC is the potential welfare gain - the gain to society lost by ignoring externalities
- Ways the government can intervene to reduce externalities:
    - Impose a tax- known as 'making the polluter pay', which increases the MPC causing a fall in demand
    - Use a ban
    - Subsidise alternatives
    - Compulsory consumption i.e. forced recycling or a fine
    - Regulation
    - Extending property rights so people are liable for their actions
    - Pollution permit trading or caps (limits)
    - Personal carbon allowances
- The positive impacts of government intervention to reduce negative externalities:
    1. Regulations act as a spur for innovation
    2. They are more effective if demand is inelastic
    3. They can be gradually strengthened to stimulate capital
- The negative impacts of government intervention to reduce negative externalities:
    1. High cost of enforcement
    2. Can discourage small business and reduce competition
    3. Difficult to assign right level of taxation
    4. Producers may pass on a tax to the consumers if demand is inelastic
    5. Producers may shift to countries with lower taxes
- A complete ban is justified if the social marginal cost of consumption is always higher than the social marginal benefit