**Government intervention**

**Explain the term free market.** In a free market, governments stand back and let the forces of supply and demand determine price and output. There is no direct (eg regulations) or indirect (eg subsidies) government intervention to influence or restrict the behaviour of consumers and producers. This means markets allocate scarce resources.

**What is government intervention?** Government intervention is when the state gets involved in markets and takes action to try to correct market failure and so improve economic efficiency.

**Why do governments intervene in markets?** The state takes action if it believes markets are not delivering allocative or productive efficiency.

**What is the aim of government intervention?** State involvement in markets aims to improve economic efficiency by changing allocation of resources.

**List the main ways by which governments can intervene in markets.** The state can use regulation, price signals, better information or direct provision to change resource allocation.

**Distinguish between market and non-market based government intervention policies**

- **Market based policies**: the state takes action to affect the conditions of supply or demand, hence price and output. Eg by offering subsidies or providing better information
- **Non-market based policies**: the state intervenes directly in markets eg by legally enforced regulations eg smoking bans or direct state provision of products eg NHS

**Government failure**

**What is government failure?** Government failure occurs when state intervention causes an even more inefficient use of resources than that previously achieved in a free market.

**Why can government failure occur?** State action may deepen market failure because of

- **Imperfect information**: causes an inefficient allocation of resources eg if the benefits of the University education overestimated too many places may be supplied:
- **Short-termism**: government nearing an election may over-provide public services in an attempt to win votes
- **Regulatory capture**: overtime, interaction between government officials and monopolies overly influences regulators may begin to favour the vested interests of producers
- **Evasion**: setting higher taxes or strict regulations may encourage some agents to ignore the law. Eg higher taxes on cigarettes encourage illegal importation and black markets
- **Unintended Consequences**: Interventions often generate unanticipated, undesirable outcomes eg increasing state pensions can lead to workers saving less for retirement
- **High administration and implementation costs**: outweigh benefits
- **Reduced incentives**: lost profit motive can lead to lower productivity and inefficiency eg from overstaffing
Taxes

What are taxes? Taxes are compulsory charges imposed by the state on individuals and firms.

Why are taxes levied? Taxes are imposed to raise revenue to finance state spending on eg public goods, child benefits, and subsides and to change market price eg discourage the consumption of demerit goods.

What are the main sources of government income from taxes? The diagram shows the main streams of state income for 2011-12.

Outline the difference between indirect and direct taxes. Indirect taxes are a charge on the sale of products eg VAT. Direct taxes are a charge imposed on income or wealth eg income tax.

Explain the term marginal rate of tax. Marginal tax rate is the amount of tax paid on the last pound of income. Eg A 50% marginal rate means 50p of each extra £ earned is paid in tax.

Distinguish between progressive proportional and regressive taxes

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<tr>
<th>Type of tax</th>
<th>Marginal rate of tax</th>
<th>High income earners pay</th>
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<tr>
<td>Progressive</td>
<td>rises with income</td>
<td>a bigger proportion of income in tax than low income groups</td>
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<tr>
<td>Proportional</td>
<td>stays constant with income</td>
<td>same proportion of income in tax as low income groups</td>
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<tr>
<td>Regressive</td>
<td>falls with income</td>
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List arguments against high tax rates. High marginal rates of taxation improve the distribution of income but may create disincentives to work and show enterprise.

What is a specific indirect tax? A specific indirect tax is a fixed amount per unit eg £1 per bottle.

Illustrate how indirect taxes affect price. When an indirect tax is charged, firms have to collect an extra payment from consumers. The effect is the same as any increase in a firm’s costs of production – the supply curve shifts to the left, from S1 to S2.

S2 is found by adding the amount of indirect tax (Ti) to the initial supply curve S1. Price rises from P1 to P2. There is a contraction in demand from A to B and fall in quantity demanded from Q1 to Q2. S1 and S2 are parallel because Ti is a specific tax.

Does an increase in indirect taxes always raise prices? Firms now pay the state more tax for each item sold – the equivalent of an increase in costs of production. A firm can opt to absorb some or all of the indirect tax increase and accept a lower profit margin or pass on the full amount of the tax increase to consumers in the form of higher prices.
What is the impact of tax generated price increases? Price increases create inflationary pressure and reduce international competitiveness.

How does price elasticity affect the impact of an indirect tax? The impact of the tax on price and output depends upon the PED of the product.

Price inelastic demand: products with few substitutes

Price elastic demand: products with many substitutes

What are ad valorem indirect taxes? An ad valorem indirect tax such as VAT is calculated as a percentage of the selling price. The higher the price the greater the tax raised eg if VAT = 20% a £1 item attracts 20p VAT; a £5 item, £1

Use a graph to show the impact of an ad valorem tax. When an indirect tax is charged, firms have to collect an extra payment from consumers. The effect is the same as any increase in a firm’s costs of production – the supply curve shifts to the left, from S1 to S2.

S2 is found by adding the amount of indirect tax (Ti) to the initial supply curve S1. Price rises from P1 to P2. There is a contraction in demand from A to B and fall in quantity demanded from Q1 to Q2.

What does tax incidence mean? The burden of paying a tax can fall on consumers or producers. The more price inelastic demand, the greater the incidence falling on the consumer.

Why does price usually rise by less than the amount of the indirect tax?

The effect of an indirect tax is shown by adding the amount of the tax (Ti) to the supply curve S. Price rises from P1 to P2 and there is a decrease in quantity demanded from Q1 to Q2.

The tax burden is shared: households pay part of the tax. Consumer incidence is given by (P1,A,B,P2); firms pay part of the tax.

Producer incidence is given by (P1,B,C,P3) The total amount of tax raised is (P3,P2,A,C) ie (P1-P3) x Q2.
Why do states use taxation to correct market failure from negative externalities? Indirect tax provides an opportunity to charge economic agents for the external costs they impose on third parties and for which no compensation is paid. Indirect taxes make 'polluters pay'.

How are taxes used to correct market failure? An indirect tax increases the price of a product and so discourages use of products that generate negative externalities and demerit goods.

Illustrate the polluter pays principle. A policy measure that makes the polluter pay for the pollution they create eg a tax on CO2 emissions.

The distance between S1 and S2 is the estimated value in £s of negative externalities caused by pollution. Adding an indirect tax Ti equal to the marginal external cost of pollution forces producers to take account of externalities. The indirect tax turns an external cost into a private cost: the polluter now pays for their pollution. ie indirect taxes make the polluter pay and internalises the externality.

Identify the challenges in using indirect taxes to correct market failure.

- **Estimating MEC:** to set the right level of indirect tax, the monetary value of eg pollution needs accurate estimation. Externalities do not have a market price so what value to use?
- **Price elasticity of demand:** a significant tax is required to reduce the demand of price inelastic goods to acceptable levels. Indirect tax increases create inflationary pressure.
- **Equity:** indirect taxes are regressive and hit the poor disproportionately hard.
- **Relocation:** producers may opt to move to countries with lower green taxes. global pollution is unchanged; the source of pollution moves often to developing nations.

Define benefits. A benefit is a payment made by the government to individuals eg child benefit.

Describe the main categories of benefit. Benefits can be cash or in kind, eg free education. Means tested benefits such as the EMA are related to income. Universal benefits such as child benefits are given to qualifying individuals irrespective of their income.

Why does the state offer benefits? Governments use targeted benefits as a means of improving the distribution of income. For instance, Educational Maintenance Allowances help students from low income families continue in further education.
**Subsidies**

**What is a subsidy?** A subsidy (SU) is a payment made by the government to producers or consumers to encourage production or consumption. Subsidies lower price and raise output.

**State the types of subsidy offered by the state.** Producer subsidies are paid to firms eg train operator companies and bus operators to reduce fares and enable loss making local services. Consumer subsidies are paid to households eg winter fuel payments for pensions, EMA grants to students and bicycle subsidies for workers.

**Illustrate how producer subsidies affect price.** A subsidy is equivalent to a fall in costs and so shifts the supply curve outwards to S2.

The vertical distance between S1 and S2 is the amount of the subsidy (Su)

The subsidy causes price to fall from P1 to P2 and an extension in demand from A to B.

Quantity demanded rises from Q1 to Q2.

The impact of the subsidy depends on its amount and the price elasticity of demand.

Lower prices raise real incomes as consumers can now spend less to buy the same amount of an item.

**How does price elasticity affect the impact of a subsidy?** The impact of the subsidy on price and output depends upon the PED of the product.

**Draw a diagram to illustrate the cost of a producer subsidy to the government.** The subsidy (Su) shifts the supply curve to S1 + Su.

Consumers use to pay P1 but now pay P2. Firms now receive a higher price for their output (P3) and increase their quantity supplied to Q2.

The total cost of the subsidy paid the government to firms is (P3-P2) x Q2 i.e. area (P3,A,B,P2)
**What types of products justify a subsidy?** Subsidies are particularly relevant for merit goods that generate significant positive externalities.

**How can subsidies impact on equity?** Subsidies *reduce inequity* because more of the poor can now afford, e.g., health care. The *distribution of income* becomes more acceptable.

**Illustrate how subsidies can correct market failure from positive externalities.** Market output is Q1. Allocative efficiency occurs where SMB = SMC at Q2. The market has underproduced by (Q2 – Q1).

To correct market failure the government offers producers a subsidy equal to the marginal external benefit (J-K).

Producers receive J and supply Q2; Consumers pay K and demand Q2. The total cost of the subsidy is [J-K] x Q2. The subsidy ensures a socially optimum level of output, Q2 where MSB = MSC.

**Illustrate how subsidies are used to correct market failure for merit goods**

The market supplies Q1. Allocative efficiency occurs where SMB = SMC at Q2. The market has underproduced by (Q2 – Q1).

To correct market failure and ensure a socially optimum level of output, Q2 where MSB = MSC, the government offers producers a subsidy equal to the amount by which consumers are undervaluing the merit good: J-K. Producers receive P3 but consumers only pay P2. Q2 is traded.

**Give arguments against the use of subsidies.**

- Subsidies can encourage *productive inefficiency* – firms have no market incentive to maximise output from given inputs and so minimise unit costs.
- Subsidies have an opportunity cost: other public services or reduced state borrowing.
- Cost: state subsidies are financed from taxation or borrowing.
State provision

**Explain the term state provision.** State provision is when the government supplies goods and services such as education, health and housing.

**Explain the term public services.** Public services are products society believes should be provided to all consumers regardless of income eg education and fire fighting.

**How does the state provide public services?** Public services are provided by the government either directly through the public sector or by the state paying private sector firms.

**How are state provided goods and services financed?** The cost of providing public services is finance through taxation eg VAT. Taxpayers *indirectly* fund state spending on eg NHS

**Why does the state provide services?** Governments provide items they feel free markets will either fail to supply at all (public goods) or produce in insufficient amounts: (merit goods and quasi-public goods)

**Identify factors influencing the extent of state provision.** The amount of state provision depends on the extent of perceived market failure, tax revenues and cost of provision.

**How is the socially optimum level of output for a state provided product decided?** There are no markets for public or merit goods to reveal the actual value consumer place on private benefit. The state has to estimate and place a monetary value on:

- the extent to which consumers undervalue the private benefits of a merit good
- the value of external benefits generated by positive externalities

The impact on *equity* of providing free education, health, etc to the poor is also considered

**How can government arrange production of state provision?** Government can provide free or nearly free merit goods to consumers:

- *Itself* eg by building and staffing state schools and NHS hospitals
- Via state owned public corporations or *nationalised industries*
- Paying *private sector firms* to provide government funded services eg. paying BUPA, rather than the NHS, to provide free hip replacement operations.

**Outline productive efficiency issues associated with state provision.** State run organisations are monopolists and face minimal competition. There is little incentive to be productively efficient or exploit consumers by charging high prices.
Regulations and standards

What are non-market based policies? Non-market based policies are direct state intervention in markets eg legally enforced standards and regulations that restrict economic agent’s choices.

List the main types of non-market based policies. The main categories are:

- Government set regulations and standards enforced by law eg bans on smoking in pubs
- State provision of goods and services eg NHS
- Price controls to limit the highest or lowest price set in a market eg a minimum wage

How do non-market based policies work? Economic agents adjust their decision making to comply with state-set standards and regulations or risk prosecution, fines or imprisonment.

What are standards? Government standards set out minimum legal requirements for a given economic activity eg the level of CO2 emissions above which a car fails its MOT.

Explain regulation. Regulations are legally enforced rules set by government that restrict or ban specified activities. Eg HGVs entering London must meet a defined emissions standard.

Give examples of regulations used to reduce market failure.

- Information failure is corrected by requiring producers to label products with missing information eg mandatory ‘smoking kills’ messages on cigarette packets
- Some economic activity generating negative externalities is banned eg fly-tipping
- Legislation bans price fixing, limits Sunday opening for shops and sets a minimum wage

What if economic agents ignore regulations? Regulations are legally enforced rules that override economic agents own preferences. Offenders risk legal action, fines and imprisonment.

Why is monitoring important? Monitoring helps ensure compliance ie consumers and firms observe regulations and meet standards. Law breakers can be prosecuted.

When is regulation important? Regulation is particularly used for any economic activity where the consequences of associated market failure are highly damaging to society. Eg Nuclear power stations and the manufacture sale and use of drugs are strictly regulated.

List the potential benefits of regulation. Laws and regulations can be passed quickly and are

- Legally binding. Economic agents must adjust their behaviour or risk prosecution.
- Effective when the cost of the fine is greater than the benefits of ignoring a regulation
- Regulation can be passed quickly and so have a rapid impact
- Revenue from fines can be used to correct the cause of market failure or compensate those affected eg by negative externalities

Can all regulations be enforced? A law must command the support of the general public. The prohibition of alcohol in the USA during the 1930s became unenforceable.

What are the drawbacks of regulations? New laws, regulations or standards usually

- Increase a firm’s costs of production causing higher prices or lower profit margins
- Impose monitoring and enforcement costs – which have an opportunity cost
- Restrict consumer and producer choice.
- Illegal black markets may emerge reducing the effectiveness of regulation
- Economic agents can bypass regulations if other nations do not also regulate to the same standard. Eg firms may shift production to a country with less stringent regulations.
- Regulators must decide on the extent of regulation eg how much pollution is acceptable?
- Requires international coordination to prevent firms may relocate overseas to avoid compliance ie the same level of regulation is required in all/most countries

Can regulation fail? State intervention through regulation can lead to government failure if the costs of regulation are high or imperfect information is used in setting regulations.