Edexcel

AS Level

Econ

(Code: WEC13 01)

Unit 01

Government intervention in markets

GOVERNMENT INTERVENTION TO CORRECT MARKET FAILURE

There is a variety of types of market failure that include externalities, provision of public goods and information failure. Governments can intervene in a number of different ways to correct market failure. Total welfare will be increased if the cost of an intervention is less than the benefits gained from the intervention.

INDIRECT TAXES

Governments can correct market failure by imposing indirect taxes, such as a tax on production to eliminate negative externalities and ensure the marginal social cost of production equals the marginal social benefit. The optimal level of output is OB, where the marginal private cost equals the marginal social benefit. To achieve this, a government could impose a tax of EG per unit, shifting the marginal private cost curve up to equal the marginal social cost curve at output OB. This approach can be applied to specific taxes, such as duty on petrol, to maintain the socially optimal level of output.

FIGURE 1

Imposition of an ad valorem tax

With an optimal level of output of OB, a tax of EG per unit needs to be imposed to maximise welfare.

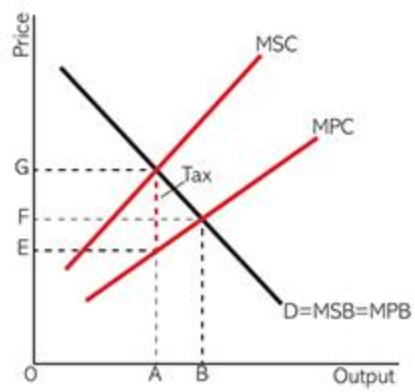
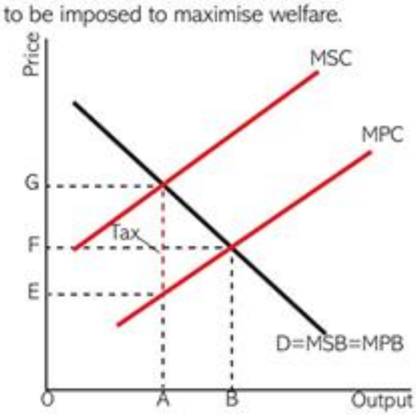


FIGURE 2

Imposition of a specific tax

With an optimal level of output of OB, a tax of EG per unit needs to be imposed to maximise welfare.



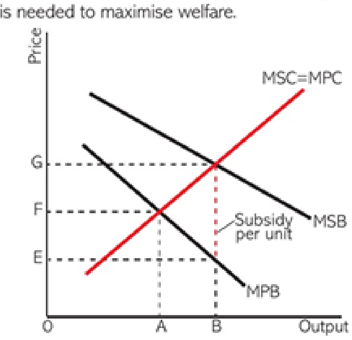
Indirect taxes can have disadvantages.

- They may be difficult to target. So the tax may be too large or too small to correct the market failure exactly. Partly, this may be down to information failure on the part of government: it does not know the exact size of the market failure or it may not know the impact a tax will have on the market.
- Governments may use indirect taxes to raise revenues as well as reduce market failure. The two objectives can then conflict when decisions are made about the size of the tax.
- Taxes are unpopular. In 2017, the state of Louisiana in the USA abandoned a plan to raise tax on fuel because of political opposition. It claimed that the increase in tax revenue was needed to repair the road system.

FIGURE 3

Impact of a subsidy to correct market failure

With an optimal level of output of OB, a subsidy of EG per unit is needed to maximise welfare.



SUBSIDIES

Another way in which governments can correct market failure is through the provision of subsidies.

This can be shown in Figure 3. If left to the market mechanism, there would be OA electric vehicles because this is where MPB = MPC. However, the marginal social benefit is higher than the marginal private benefit. The optimal level of electric vehicles is therefore OB where MSB = MSC. To achieve this, the government has to give a subsidy of EG per unit to owners of electric vehicles.

Subsidies can be used where there are positive externalities. They can also be used to correct information failure. The government could subsidise the provision of information to those suffering from a lack of information.

Subsidies can have disadvantages.

• Subsidies can be challenging to target due to their size or impact on market failure, government information failure, and potential conflict with other policy objectives. In the UK electricity industry, government regulations force producers to buy renewable energy, leading to higher prices for customers. This can increase inflation and impact fuel poverty, as low-income households struggle to heat their homes.

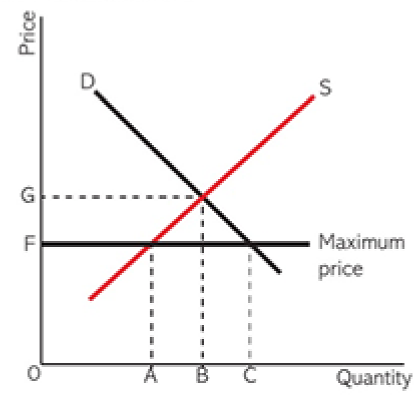
• Subsidies can be difficult to remove. Those who receive the subsidies effectively receive an increase in their income. If the subsidy is lowered or removed, they can lobby government to delay or abandon plans to change the subsidy. Attempts to remove subsidies on basic foods or fuel in countries like Iran, Venezuela or India have caused major riots in the past. In some cases, governments have even been toppled as a result.

MAXIMUM PRICES

Market failure can occur when consumers cannot afford necessities like food and housing, leading to negative externalities such as ill-health and limited education. Imposing maximum prices for these goods can make them more affordable, but this can also lead to black markets. For example, if the government imposes a maximum rent or price of demanded, the quantity supplied falls to OA, causing excess demand for AC. This can negatively impact consumers and producers. However, if the maximum price is set above the free market price, the equilibrium price remains at OB.

FIGURE 4

Maximum prices
OG is the free market price. If the government sets a maximum price of OF, quantity demanded will increase to OC, while quantity supplied will fall to OA. The result will be excess demand of AC.

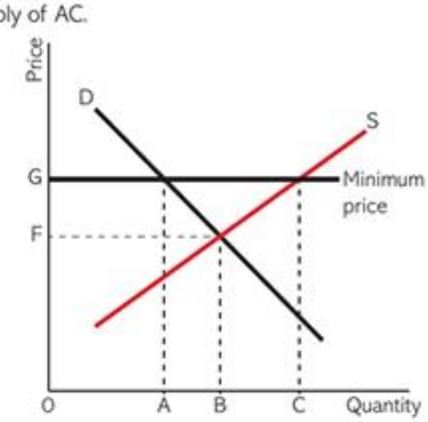


MINIMUM PRICES

Governments can address negative externalities in consumption by setting a minimum price for goods like cigarettes. This reduces demand from OB to OA and increases supply from OB to OC, resulting in excess supply of AC. This excess supply can create black markets, but if set below the free market price, the equilibrium price remains at OB, and equilibrium output remains at OB.

FIGURE 5

Minimum prices
OF is the free market price. If the government sets a minimum price of OG, supply will increase from OB to OC, while demand will fall to OA. The result will be excess supply of AC.



REGULATION

Regulation is a common method to address market failure by closing information gaps, controlling externalities, and imposing stricter regulations. For instance, airlines and banks can disclose charges at the booking process, while Chile's government has implemented regulations to control pollution levels and restrict burning. However, regulation can be challenging to enforce due to its simplicity and cost-effectiveness. The correct level of regulation should balance the economic benefit from reduced externality with the regulation's economic cost.

TRADE POLLUTION PERMITS

Externalities caused by pollution can be reduced through the use of trade **pollution permits,** a key element of **cap-and-trade schemes.** The government controls carbon emissions by setting a cap on emissions over a period of time. Permits are allocated to emit carbon, which are tradable for money between polluters. Firms that reduce their emissions below their limits can sell permits to others exceeding their limits. The higher the price of permits, the greater the incentive for carbon-emitting firms to reduce their emissions. Trade pollution permits have the advantage of lower costs for the industry and society.

STATE PROVISION OF PUBLIC GOODS

Public goods are goods such as defence, the judiciary and prison service, the police service and street lighting. Because of their characteristics of non-rivalry and non-excludability, they will either not be provided by the market mechanism or will only be provided in small quantities. The result is market failure.

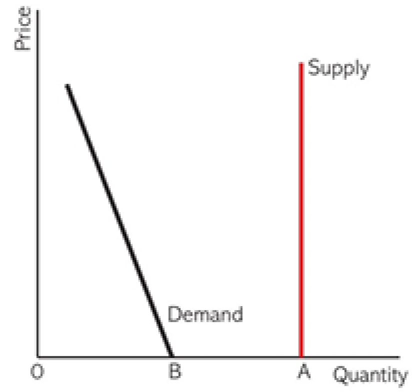
PROVISION OF INFORMATION

Information failure occurs because one party to a transaction does not have the information that is available to make a decision. A government can step in to provide the information itself. For example, it might run advertising campaigns to deliver messages about not smoking. Or it might force parties to a transaction to release information. Forcing cigarette manufacturers to put messages about the dangers of smoking on cigarette packets is an example.

FIGURE 6

Direct provision of a public good

Assume this is the market for defence. To prevent market failure, OA should be produced. However, there is no price on the demand curve at which OA would be demanded. The government therefore steps in and provides OA whatever the price of defence.



SUBJECT VOCABULARY

cap and trade schemes schemes that set a limit on a particular type of pollution, and then issue pollution permits to the total of that limit, which can be bought and sold between firms that pollute.

trade pollution permit or pollution permit or pollution credit a permission issued, usually by a government, to allow a fixed amount of pollution to be created; this permit can be used by the owner or sold to another firm.

Chapter 20 – Government failure

GOVERNMENT FAILURE

Markets may fail. They may underprovide public goods. They may overprovide private goods that have negative externalities. They may cause prices to be too high because of asymmetric information. One response is for governments to intervene to correct these market failures.

DISTORTION OF PRICE SIGNALS

Some types of government intervention change price signals in the market. For example, many governments intervene in their domestic agricultural markets to support farmers. One way is to impose tariffs (taxes) on a product like wheat or rice being imported into the country. This allows farmers with high costs, who would otherwise be forced out of production by cheaper imports, to stay in business and make a profit. However, it means that domestic consumers have to pay higher prices for the product. It also means that farmers are growing a crop on land that could be more

UNINTENDED CONSEQUENCES

The Common Agricultural Policy (CAP) implemented by EU member countries in 1962 did not predict its impact on agricultural production, leading to higher food prices for consumers. Additionally, CAP depressed world prices of certain agricultural products, affecting farmers in rich countries like the USA and New Zealand and developing countries who struggled to compete with EU prices.

EXCESSIVE ADMINISTRATIVE COSTS

Sometimes, the administrative cost of correcting market failure is so large that it outweighs the welfare benefit from the correction of market failure. For instance, the government may put into place a scheme to help the unemployed back into work. During a year, 100,000 people pass through the scheme.

INFORMATION GAPS

Governments often make the wrong policy decisions due to incomplete information and misleading information. For example, a government may justify a large road bridge project with false benefits like job creation and tourism. However, these projections can be overestimated, leading to government failure and underestimating costs and benefits.

CONFLICTING OBJECTIVES

Governments often face conflicting objectives, such as cutting taxes but increasing defense spending. Decisions have opportunity costs, and sometimes, the welfare gain from alternative options is higher. For example, in education, selective schools and state schools may lead to better outcomes for some, while others may result in lower outcomes for others.

POLITICIANS MAXIMISING THEIR OWN WELFARE

Public choice theory suggests that politicians act to maximize their own utility, potentially resulting in improved welfare for their constituents. This can be seen in policies implemented for re-election, which may benefit their own voters but ultimately lead to economic loss. Additionally, politicians may engage in rent-seeking behavior, influencing resource distribution to benefit themselves without creating additional wealth for society.

MARKET VERSUS GOVERNMENT FAILURE

Market failure in economic theory often requires government intervention to correct it. However, government intervention can lead to economic welfare loss, resulting in government failure. There are two extremes: those who argue that market failures are too frequent and should be avoided, often associated with right-wing political viewpoints, and those who believe that government intervention is necessary.

SUBJECT VOCABULARY

government failure occurs when government intervention leads to a net welfare loss compared to the free market solution.

public choice theory theories about how and why public spending and taxation decisions are made.

rent-seeking the use of political power by an economic agent to influence the distribution of resources for their own benefit at the expense of others without creating any extra wealth for society.

Revision questions

1. 2020 May question number 09 P1 (MARKS 04)

The US state of South Carolina has proposed a regulation to stop the sale of energy drinks to children under the age of 18.

Explain one likely impact of this proposed regulation to stop the sale of energy drinks to children under the age of 18 in South Carolina.

2. 2021 May / June question number 13 P1 (Marks 20)

In 2019 the price of a litre of diesel was 65% higher in Thailand than in Malaysia. The price difference was because of higher taxation on diesel in Thailand. This led to illegal smuggling. For example, on one night, Thai authorities seized 300 000 litres of diesel that was illegally imported from Malaysia.

Evaluate possible causes of government failure in a market of your choice.