

# Theme 1 (2018/19)

## *Introduction to Markets and Market Failure*

**Teacher:** \_\_\_\_\_ (AT101)

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**NB:** 'Government failure in various markets' (1.4.2c) included throughout the booklet.

## 1.4.2 Government failure – an overview

1.4.2

Government failure

- a) Understanding of government failure as intervention that results in a net welfare loss
- b) Causes of government failure:
  - o distortion of price signals
  - o unintended consequences
  - o excessive administrative costs
  - o information gaps
- c) Government failure in various markets

### 1.4.2(a) Net welfare loss

**Government failure** exists when the government intervenes to correct a market failure – such as underprovision of public goods or overproduction of goods with negative externalities – but the intervention results in a *more* inefficient allocation of resources, leading to a **NET WELFARE LOSS** to society, i.e. a divergence between MSB and MSC or, worse still, a *new* market failure. In other words, by intervening with, say, an indirect tax to correct the market failure associated with smoking, the government could end up either under- or over-correcting for a number of different reasons (see below). So policies may:

- Have damaging long-term consequences for the economy/society
- Be ineffective in meeting aims e.g. where a policy fails to create enough of an incentive to change people's behaviour
- Create more losers than winners

**NB: DO NOT CONFUSE GOVERNMENT FAILURE WITH MARKET FAILURE!!!!**

Per the Edexcel A level Economics (A) specification, government failure can occur for one of **FOUR** reasons:

1. Distorting price signals
2. Unintended consequences e.g. illicit production
3. Excessive administrative costs
4. Information gaps

Other causes of government failure could include:

- **Lack of incentives** – public sector workers are less likely to be paid for performance/profit targets
- **Political interference** – decisions made for short-term political gain rather than sound economics (e.g. keep on unproductive workers)
- **No consistency** – change of government often leads to change of approach and new political initiatives so most policies are short-term ('quick fix') in nature e.g. road widening to reduce congestion

- **Moral hazard** – the government can act as the so-called ‘lender of last resort’ (the Bank of England’s remit in the UK) which may encourage banks to take excessive risks knowing they will be bailed out
- **Regulatory capture** (see Theme 3, CC4) – when government agencies/regulators become ‘too friendly’ with the organisations they are trying to regulate
- **Political self-interest** – similar to regulatory capture whereby the government is influenced by influential *lobbying groups* such as the drinks, car manufacturing or transport industries
- **Conflicting objectives** – e.g. minimum carbon price or a unilateral Tradeable Permit Scheme could damage UK competitiveness
- **Poor value for money** – investment in IT in the NHS, poor record for PFI projects (due to low productivity and high waste)

#### 1.4.2(b)(i) Distorting price signals

Some types of government intervention change price signals and misallocate resources e.g. taxes on imports. Examples could include:

- **Maximum price controls** lead to an excess demand or shortage. If applied to rental housing, this could lead to a reduction in both the quantity and quality of rental housing available, possibly leading to an increase in the number of homeless people.
- **Minimum price controls** lead to an excess supply or surplus. If applied to agricultural products, this could lead to problems disposing of food surpluses which are perishable and expensive to store. The scheme also requires government expenditure which has an opportunity cost.

Consider how the following examples of the government intervening to correct a market failure may distort price signals and lead to government failure:

- a) USA puts tariffs on steel and cotton imports to protect domestic producers
- b) UK government introduces compulsory Living Wage to raise income levels for the poor
- c) Governments increasing benefits to the unemployed to reduce relative poverty
- d) Government taxing cigarettes

### 1.4.2(b)(ii) Unintended consequences

**Class discussion.** Peter Symonds tried to introduce a No-Smoking policy in college – what do you think were some of the unintended consequences?

As an economist would you ban smoking in college? Justify your answer.

#### 5p plastic bag ‘tax’

The so-called plastic bag ‘tax’ (which is not really a tax as the proceeds are not paid to the government but rather to good causes in most cases) introduced in October 2015 in England – the last country in the UK to adopt such a policy – was hailed as a major breakthrough in cleaning up our environment. The expected drop in usage would mean fewer bags caught in trees, rivers and causing harm to wildlife and livestock. It is thought that in the first nine months of its operation, plastic bag use fell by some 85% and in the process generated significant sums for good causes – surely a win-win situation? Not so according to some commentators.

#### The unintended consequence

The thin modern plastic bags used by supermarkets are actually cleaner to produce, in terms of greenhouse gas emissions – according to the Global Warming Potential (GWP) measure – than paper bags, heavier plastic ‘bags for life’ and textile bags. In 2011 Britain's Environment Agency published a Life Cycle Assessment of supermarket carrier bags, which concluded that long-life bags have to be reused many times – more than 100 times in the case of a cotton bag (most will reuse them far less before they break/become too grubby) – if they are to be environmentally a better option than standard plastic carrier bags. On top of that, if a plastic bag is reused (e.g. as a small bin liner) then its carbon footprint per use decreases even further as fewer rolls of bin bags need to be produced. So, should we scrap this idea and continue to use thin modern plastic bags instead?

‘No’ according to Professor Tony Ryan of the University of Sheffield's faculty of science. Although they are technically cleaner to produce, plastic bags do not biodegrade and plastic bags in landfill could “exist for at least hundreds of years”. Even biodegradable plastic bags have their limitations, needing oxygen and sunlight to degrade; any that get buried in landfill will not, so there is little difference between them and standard carrier bags.

## EU Common Agricultural Policy (CAP)

The EU's CAP was introduced in 1962, and has since undergone much reform. Initially it guaranteed farmers a minimum price and paid farmers to leave fields 'fallow' (to prop up the price), thus stabilising their incomes and in theory agricultural prices. However it led to overproduction and to keep prices from falling (to guarantee farmers' incomes) food 'mountains' and wine 'lakes' resulted. Much of the EU budget was spent on this policy, thus there was an opportunity cost to the taxpayer. The food mountains resulted in a colossal waste of food, with some being dumped at low prices on poorer countries to the detriment of their domestic agricultural sectors. Meanwhile farmers in New Zealand and developing countries were unable to compete with these lower prices.

<http://ec.europa.eu/avservices/video/player.cfm?ref=I053635>

**Explain how the EU CAP when it was first introduced led to unintended consequences:**

**For each example below state the unintended consequence/s; add your own example/s.**

Good/Service	Unintended consequences
Banning legal highs	
'Pension Freedoms'	
Pollution permits	
Fishing quotas	Dead fish thrown back into sea
Bedroom tax	Pensioners living in large local authority houses (exempt)
Means-tested benefits	Over-reliance on benefits, lack of training
Smoking ban	Greater use of outdoor patio heaters (carbo emissions)
Biofuel subsidies	Underproduction of agricultural products
Targets for patient treatment	Falling quality standards in hospitals

### 1.4.2(b)(iii) Excessive administrative costs

When the government intervenes there are inevitably administrative costs (e.g. collection of taxes) and the costs of maintaining and enforcing laws (e.g. customs office to prevent imports of illegal goods/weapons or the monitoring of fish catches to ensure quotas are adhered to.) Sometimes these admin costs involved in correcting a market failure are so large they outweigh the welfare benefits. Study this hypothetical example:

The government introduces a scheme to incentivise all 100,000 unemployed workers back to work, even though 50,000 found jobs independently. The scheme cost £3,000/person. 10,000 find a job through the scheme and 40,000 remained unemployed.

- i) What was the total cost of the scheme?
- ii) How much did the scheme cost per worker in terms of those who successfully found a job?
- iii) Do you think the scheme was worth it?
- iv) What could be some of the administrative costs of such a scheme?

**Q:** How can 'No-smoking bans' and the [use of mobiles in private cars](#) be monitored?

Explain how each of the following may give rise to excessive administrative costs. Can you think of any more examples?

- i) Motoring offences
- ii) Targeted child benefit

### 1.4.2(b)(iv) Information gaps

Sometimes the government lacks sufficient knowledge on the outcomes of a decision (including accurate calculations of marginal costs and marginal benefits and the quantification of external costs), in which case irrational decisions may be taken, leading to an inefficient allocation of resources and net welfare loss. There is also likely to be disagreement between different stakeholders (e.g. conflict between the environmentalist and the industrialist) who may arrive at different figures. For example:

- The allocation of fish stocks per boat by EU quota appears to be set at too high a level as the depletion of fish stocks continues. There is also the problem of boats throwing back dead fish to keep within their quotas rather than risk large fines.
- The EU government failed to understand how the rest of the world would react to the inclusion of air travel in the Emissions Trading Scheme. The EU has been forced to postpone the extension of the ETS due to threats of retaliatory taxes from other governments.
- A government setting a very high rate of income tax might end up reducing the total tax haul due to increased tax avoidance or evasion and/or emigration ('brain drain').

**Case Study:** VW diesel cars. Why is this an example of government failure?

### Independent research task:

The following are all examples of markets where government failure exists. Research one of them. Explain the aim of the measure and the impact – draw a model if relevant.

Market	Example
Agriculture	Cyprus milk maximum price, EU CAP, See Economics Review Vol 24, No 3 Feb 2007 p17-21
Transport	Mexico, car emissions
Housing	Rent controls
Alcohol	Mozambique smuggling

### REVISION EXERCISES



### **(1) Tax on tobacco**

Many governments tax tobacco as a means of raising revenue. The UK government raised £12.1bn from tax on tobacco in 2011/12. The effect in the 2012 Budget was to increase the price of a packet of cigarettes by 37p. However, there is evidence this has led to a significant increase in smuggling as people try to avoid taxes, which account for a large proportion of the cost of a packet of cigarettes.

Similarly heavy taxes on alcohol have led to an increase in sales in secondary markets. Evidence shows that in some years when taxes on alcohol increase, tax revenue falls. The Scottish government have adopted a different approach: a minimum price for alcohol.

- (a) Giving examples, distinguish between the private costs and external costs of cigarette consumption.
- (b) Illustrating your answers with a supply and demand diagram, analyse the effect of an increase in tax on tobacco.
- (c) To what extent does taxation result in government failure?
- (d) Assess the likely economic effects of a minimum price being set for alcoholic drinks.
- (e) Examine two other ways in which the government might discourage the consumption of alcohol and tobacco.

### **(2) Tackling Childhood Obesity**

The McKinsey Global Institute listed 44 measures to tackle childhood obesity. Jamie Oliver has a six-point strategy. Use the following link to read more:

<http://www.jamieoliver.com/sugar-rush/>

- a) List Jamie's six points.
- b) Find the strategy on his website.
- c) Which do you think would be most and least effective measure? Justify your answer.
- d) If the government followed his recommendations, what would be some of the outcomes?

## Limitations to government intervention:

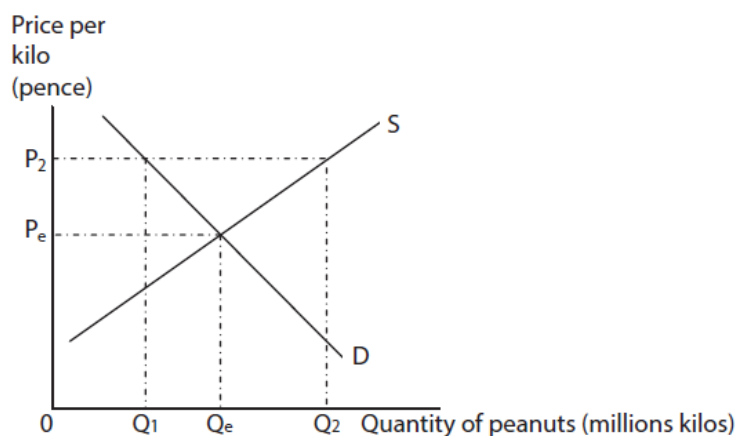
- **Value judgments** – many people want a particular intervention because of their own vested interests which makes policy less effective/unnecessary
- **Changing prices to change incentives and behaviours** – very low PED (inelastic) products are barely affected by the price change resulting from an indirect tax or subsidy
- **Social science** – the effects of intervention cannot be forecast with great accuracy as people's behaviour is subject to change
- **Combinations of policies** – one single intervention is unlikely to produce a solution to deep-rooted problems which complicates the analysis (e.g. both demand- and supply-side policies)
- **The power of markets** – market forces can be powerful in finding profitable solution to problems
- **The 'law of unintended consequences'** – intervention does not always work in the way it was intended or the way in which economic theory predicts it should

## Overall evaluation:

Government failure is often less serious than the market failure it tries to solve. Without government intervention, the problems associated with market failure are likely to be far greater for both consumers and producers.

## Government Intervention & Government Failure Multiple Choice Questions:

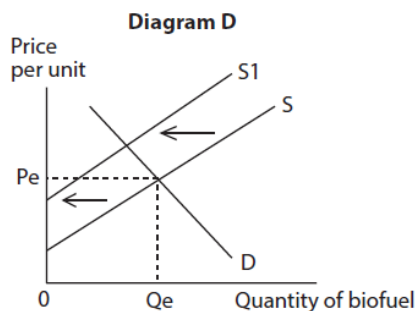
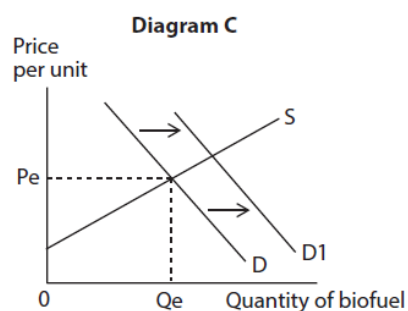
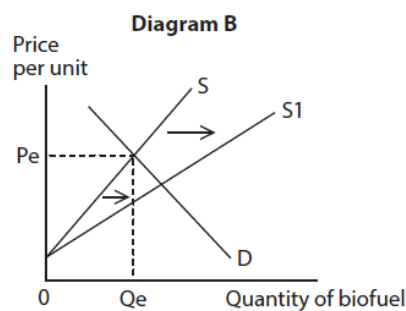
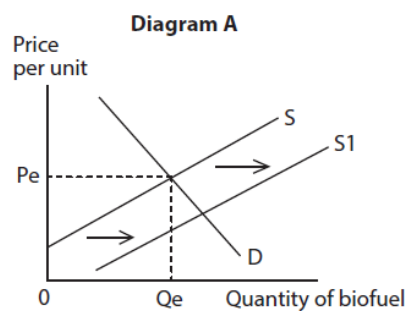
1)



The diagram shows a competitive market for peanuts. Assuming the current price is  $P_2$ , the most likely outcome is the

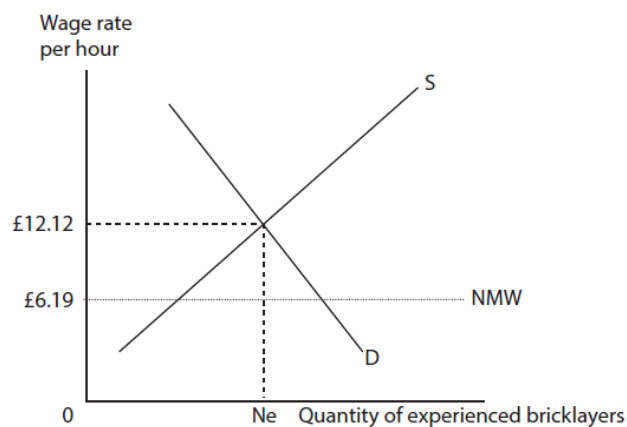
- A price will fall
- B supply curve will shift to the left
- C quantity demanded will fall
- D quantities supplied and demanded will remain unchanged

2)



In order to reduce carbon emissions the US Government provides a unit subsidy to the producers of liquid biofuel. Which diagram, **A**, **B**, **C** and **D**, best illustrates the effects of such a subsidy per unit of output? (You may annotate the diagram in your answer.)

3)



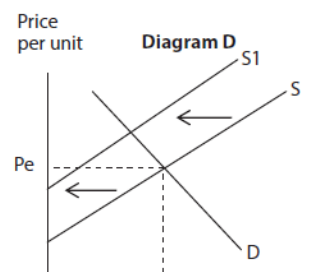
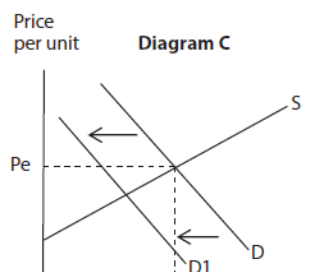
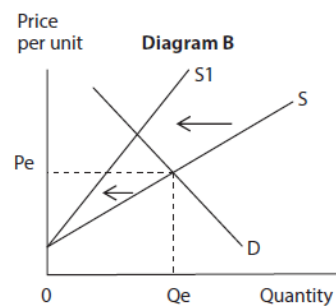
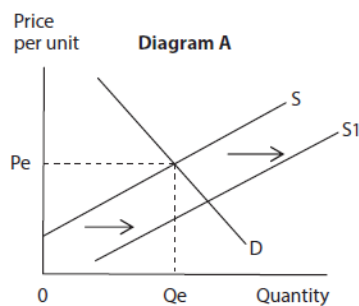
(Source: [www.kgbanswers.co.uk/what-is-the-average-day-rate-4-bricklayers-in-south-england/2154854](http://www.kgbanswers.co.uk/what-is-the-average-day-rate-4-bricklayers-in-south-england/2154854))

The diagram shows the labour market for experienced bricklayers in England where the average hourly rate of pay is £12.12.

In October 2013, the National Minimum Wage (NMW) was increased from £6.19 to £6.31 per hour for adult workers. The most likely effect on the market for experienced bricklayers is

- A an increase in unemployment
- B no change in the equilibrium wage and number of bricklayers employed
- C an outward shift in the supply curve for bricklayers
- D the shortage of bricklayers to increase

4)



In 2011 the European Commission proposed the removal of all government subsidies to train operating companies. The most likely effect of implementing such a policy would be to

5)

- A decrease external costs from motoring
- B increase the price of train services
- C increase demand for train services
- D decrease air fares in Europe

- 6) In November 2010 the UK government increased the tax for passengers flying by aircraft (Air Passenger Duty). The tax increased from £40 to £60 per passenger flying economy class from the UK to the US.
- One effect of this tax is to:
- A increase the consumer surplus for air passengers.
  - B decrease the tax revenue collected if demand for flights is price inelastic.
  - C increase the producer surplus for airlines if supply of flights is price elastic.
  - D increase the price of air flights.
- 7) In 2011 the UK Government introduced a unit subsidy of £5000 for new electric powered cars such as the Nissan Leaf and Mitsubishi i-MiEV. The most likely effect is to increase:
- A the demand for petrol powered cars.
  - B carbon emissions from non-electric powered cars.
  - C the demand for bus transport.
  - D the supply of electric powered cars.
- 8) In 2010 the UK Government expressed concern that many workers had **not** made adequate pension contributions to fund their retirement. A possible explanation for this under funding of pensions is:
- A pensions are a public good.
  - B there is no opportunity cost to making pension contributions.
  - C workers have imperfect information.

- In 2010 the Scottish Government proposed a legal minimum price per unit of alcoholic drink. Other things being equal, a minimum price set above the market equilibrium price is likely to cause
- 9)

- A an excess supply
- B a fall in price
- C an increase in consumption
- D no effect in the market

**10)**

A free market economy fails to allocate resources efficiently to the production of public goods because

- A** No opportunity cost is involved in the provision of public goods.
- B** Providing public goods can result in a free rider problem.
- C** Public goods can only be provided by the private sector.
- D** The prices of public goods may be set at too high a level.

**Example essay questions:**

- (1) Discuss whether large scale projects, such as Crossrail, might result in government failure. (25)
- (2) Discuss whether regulations on the sale of cigarettes and high taxes on tobacco might result in government failure. (25)

**Phew! We're now at the end of the Theme 1 course 😊**