



Oxford Cambridge and RSA

Monday 15 May 2023 – Morning

AS Level Economics

H060/01 Microeconomics

Time allowed: 1 hour 30 minutes



You can use:

- a scientific or graph calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

Last name

StemUp Model Solution

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions in Sections A and B and **one** question in Section C.

INFORMATION

- The total mark for this paper is **60**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **20** pages.

ADVICE

- Read each question carefully before you start your answer.

2
SECTION A

Write your answer to each question in the box provided.

1 Which of these contains all the four factors of production?

- A** Capital, enterprise, labour, land
- B** Capital, labour, profit, rent
- C** Enterprise, interest, land, wages
- D** Interest, profit, rent, wages

Your answer A

[1]

2 What is the income elasticity of demand if a 10% increase in consumer income leads to a 40% decrease in quantity demanded?

- A** -4.00
- B** -0.25
- C** +0.25
- D** +4.00

Your answer A

[1]

3 Which of these is an example of a normative statement?

- A** Taxes on cigarettes provide the government with tax revenue
- B** The government should raise taxes even higher on cigarettes
- C** The tax on cigarettes accounts for 80% of the price of cigarettes
- D** VAT is one of the taxes charged on cigarettes

Your answer B

[1]

4 Opportunity cost is defined as the value of:

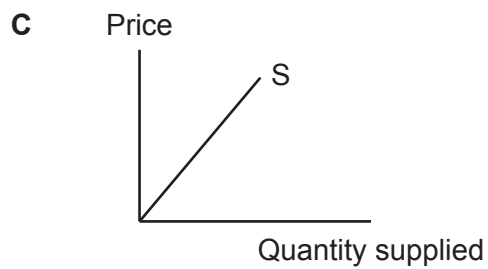
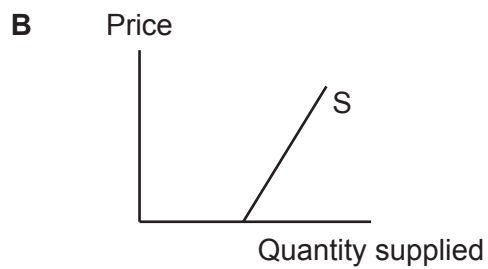
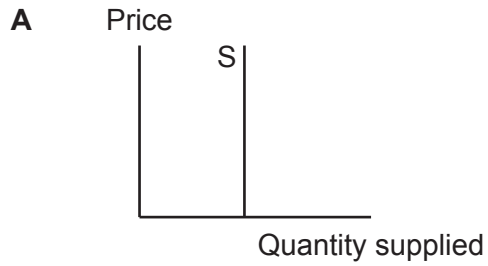
- A** all alternative goods foregone
- B** the cost of other goods and services
- C** the cost imposed on a third party
- D** the next best alternative foregone

Your answer D

[1]

- 5 The diagrams show the relationship between price and quantity supplied of a product.

Which supply curve shows unit price elasticity of supply along the curve?



Your answer C

[1]

6 Which item is **most** likely to be used as a medium of exchange in the UK?

- A A fifty pound bank note
- B A gold wedding ring
- C A government bond
- D A savings account

Your answer

A

[1]

7 The table shows the quantity demanded and quantity supplied of a product at different prices.

Price	Quantity Demanded	Quantity Supplied
£10	100	20
£15	80	30
£20	75	50
£25	60	60
£30	40	80

At the equilibrium price, what is the total revenue?

- A £1000
- B £1200
- C £1500
- D £2400

Your answer

C

[1]

8 Which of these is a cause of market failure?

- A Positive externalities
- B Positive income elasticity of demand
- C Positive price elasticity of supply
- D Positive private costs

Your answer

A

[1]

9 Which of these would lead to a negative externality?

- A A new firm which creates jobs for local people
- B A new firm which processes coal, releasing carbon emissions
- C Information on the effects of smoking cigarettes
- D Subsidy for solar-powered electricity

Your answer

B

[1]

10 When will a subsidy have the most effect on quantity demanded?

- A Demand is perfectly inelastic
- B Demand is elastic
- C Demand is inelastic
- D Demand is unitary elastic

Your answer

B

[1]

11 Which of these defines an inferior good?

- A Quantity demanded decreases when incomes decrease
- B Quantity demanded decreases when incomes increase
- C Quantity demanded decreases when prices increase
- D Quantity demanded increases when prices increase

Your answer

B

[1]

12 The price elasticity of demand of widgets is -1.0 .

If the firm raises the price of widgets by 5%, this is likely to have what impact on the firm's total revenue?

- A Decrease by 5%
- B Decrease by more than 5%
- C Increase by less than 5%
- D No change

Your answer

D

[1]

13 The quantity demanded for oranges falls from 600 to 300 when the price of apples falls by 25%.

In relation to the price of apples, what is the cross elasticity of demand for oranges?

- A 12.5
- B 6.0
- C 2.0
- D 0.5

Your answer

C

[1]

- 14 A firm has successfully introduced division of labour in its factory.

Which of these is the **most** likely outcome?

- A Decrease in quantity supplied and decrease in equilibrium price
- B Decrease in quantity supplied and increase in equilibrium price
- C Increase in quantity supplied and decrease in equilibrium price
- D Increase in quantity supplied and increase in equilibrium price

Your answer

C

[1]

- 15 Which of these would lead to a fall in consumer surplus for a good?

- A Decrease in cost of production
- B Decrease in indirect tax
- C Increase in price
- D Increase in subsidy

Your answer

C

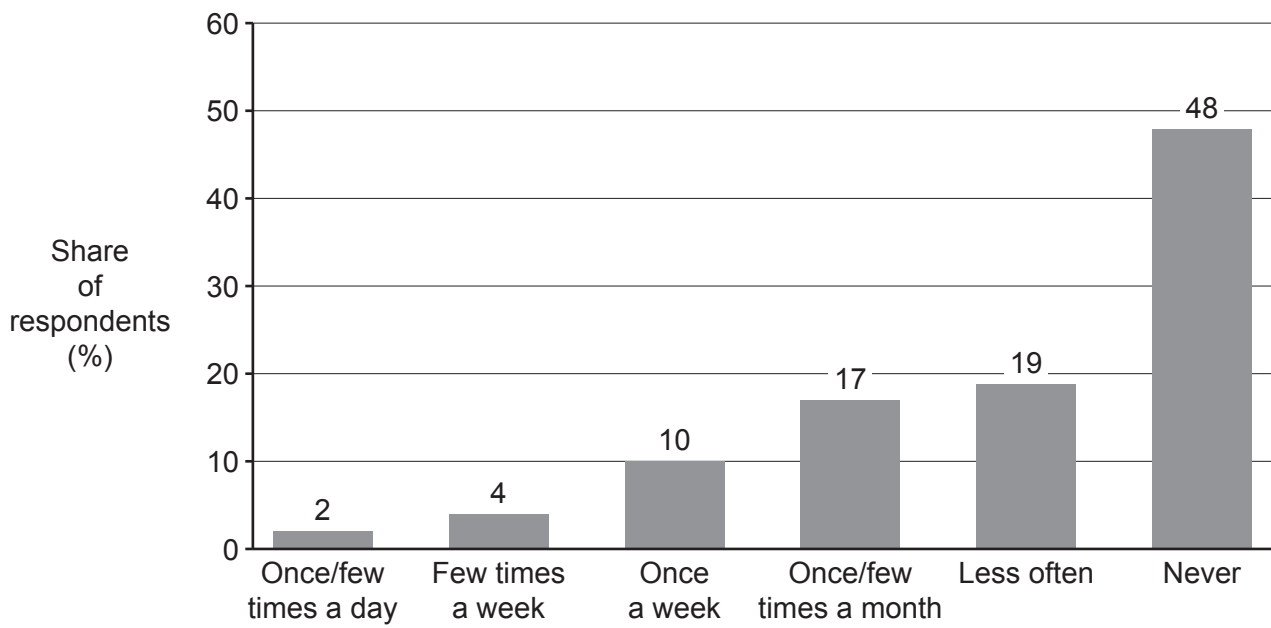
[1]

SECTION B**Flour Mills Worked Round The Clock To Meet Demand**

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Fig. 1
Frequency of baking at home from scratch 2017



- 16 (a) Using Fig. 1, state what percentage of people baked at home from scratch once a week or more often in 2017.

$10 + 4 + 2 = 16\%$

[1]

- (b) (i) Using the information in the case study, explain why there was an increase in demand for flour.

During the 2020 lockdown people spent more time at home, so there was a trend for baking from scratch: 37% had made bread and 27% had baked a chocolate cake. Flour is needed for home baking, so demand for flour rose.

[2]

- (ii) Explain what the price elasticity of supply is likely to be for flour.

Price inelastic in the short run ($PES < 1$), because it takes time to grow wheat and mills were already working round the clock, so quantity supplied cannot quickly change in response to a change in price.

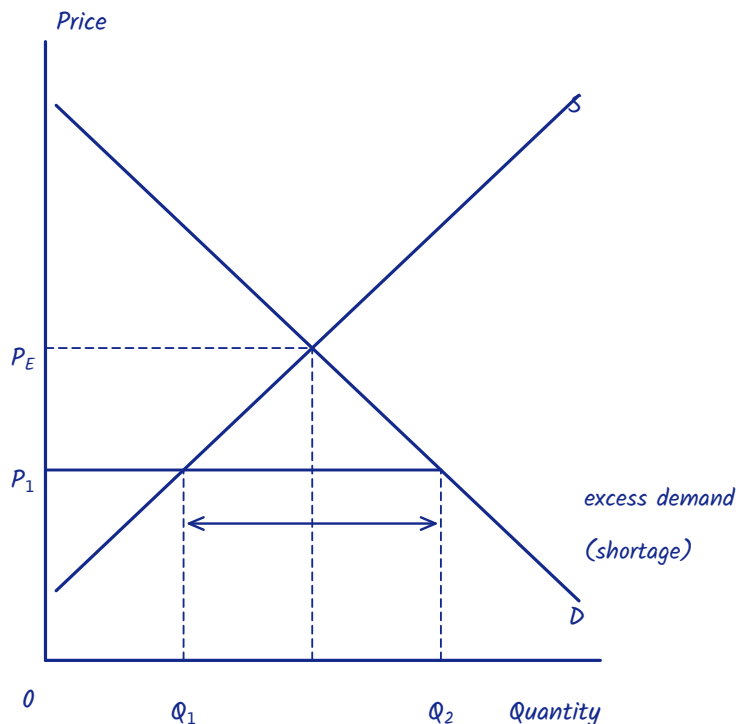
[2]

- (iii) Using the information in the case study, explain what impact the change in demand for yeast would have had on Red Star Yeast's producer surplus.

Demand for yeast rose sharply: Red Star Yeast's sales increased by 647% over the year. The rise in demand raised the price and quantity sold, so Red Star Yeast's producer surplus increased.

[2]

- (c) Using a diagram, explain the disequilibrium that existed in the flour market in 2020.



In 2020 demand for flour rose but price stayed at P_1 , below equilibrium P_E . At P_1 mills supply only Q_1 but demand is Q_2 , so there is excess demand (a shortage) of $Q_2 - Q_1$ as $Q_D > Q_S$.

[4]

- (d) Explain how a buffer stock system can be used to regulate the **market supply** of a product such as flour.

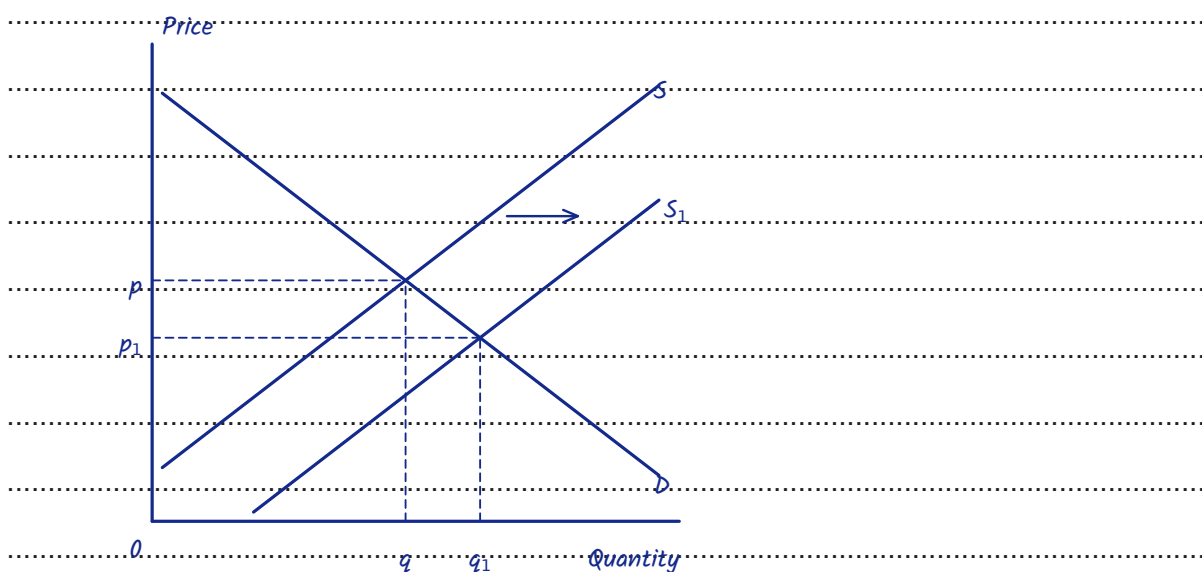
A buffer stock system is where an agency stores surplus stock of a product such as flour for future use, intervening in the market by buying and selling the product to keep the price within a target band. If supply exceeds demand (e.g. a bumper harvest) the agency buys and stores the product, reducing market supply so price does not fall below the floor. If demand exceeds supply, as in 2020, it sells from its stocks, increasing market supply so the price does not rise above the ceiling and shortages are avoided.

[4]

- (e)* Evaluate, using an appropriate diagram(s), the effectiveness of a government policy that can be used to encourage UK flour millers to increase supply. [10]

One policy is a government subsidy to UK flour millers: a payment per unit of output, or a grant to extend mills to increase capacity or to install more efficient capital. This lowers millers' costs of production, so at every price they are willing and able to supply more flour.

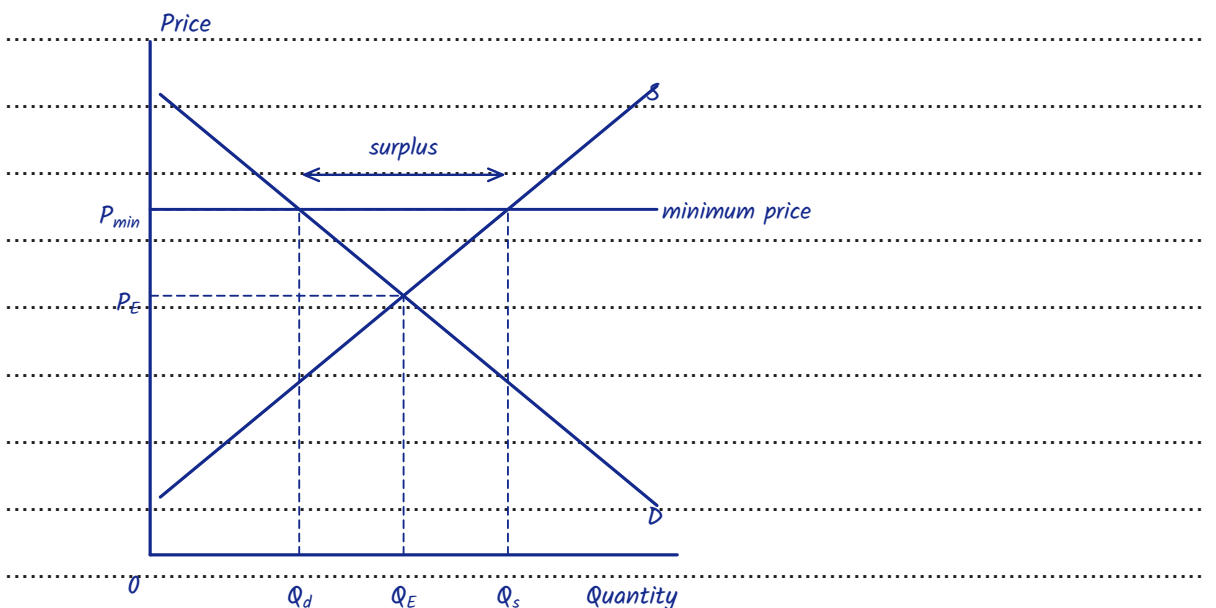
As shown in the diagram below, the subsidy shifts supply from S to S_1 . Equilibrium moves from p, q to p_1, q_1 : the quantity of flour rises from q to q_1 and the price falls from p to p_1 , so the 2020 shortage is reduced and consumers gain from cheaper flour. A cut in indirect tax charged on flour production would have the same effect, lowering costs and shifting S to S_1 .



However, the effectiveness of a subsidy depends on the time period. Mills were already working round the clock, so supply is price inelastic in the short run. Extending capacity or installing new capital takes time and would not solve the immediate problem. It also assumes owners expect the higher demand to continue; if the home baking trend fades after lockdown they may not be willing to create extra capacity which may not be needed in a few years' time.

Equally, more efficient machinery still needs people to operate it, and with staff down by 15%, skilled workers may not be easily found or will need time to be

trained. There is no guarantee mill owners will use the subsidy to increase supply rather than profits unless this is regulated in some way. Government failure may be an issue; with a lack of information the subsidy may be inefficient if too large, with an opportunity cost for taxpayers, or ineffective if too small. The overall effect of any subsidy or tax change will depend on PED and the size of the change. An alternative policy is a minimum price set above the current equilibrium, causing an extension of supply from Q_E to Q_S , as in diagram 2.



However, the higher price also reduces demand to Q_d , creating a surplus of supply ($Q_s - Q_d$). This could lead to growth of the shadow economy as mill owners try to remove the excess supply. It is also unlikely to succeed as the 15% fall in staff means supply is unlikely to be able to extend. Overall, a subsidy for installing more efficient machinery is likely to be the most effective policy, as it is more acceptable to mill owners and increases supply while lowering price, unlike a minimum price. However, it may not solve the immediate problem, so it works best as a long run policy, set at the right level and linked to extra output.

SECTION C

Answer Question 17 **or** Question 18.

- 17*** Palm oil companies have been destroying rainforests and habitat for wildlife because they want more land to grow palm oil trees.

Around 24 million hectares of rainforest were destroyed in Indonesia between 1990 and 2015 – an area the size of the UK.

Evaluate, using an appropriate diagram(s), the effectiveness of imposing a tax on palm oil production to reduce negative externalities.

[20]

OR

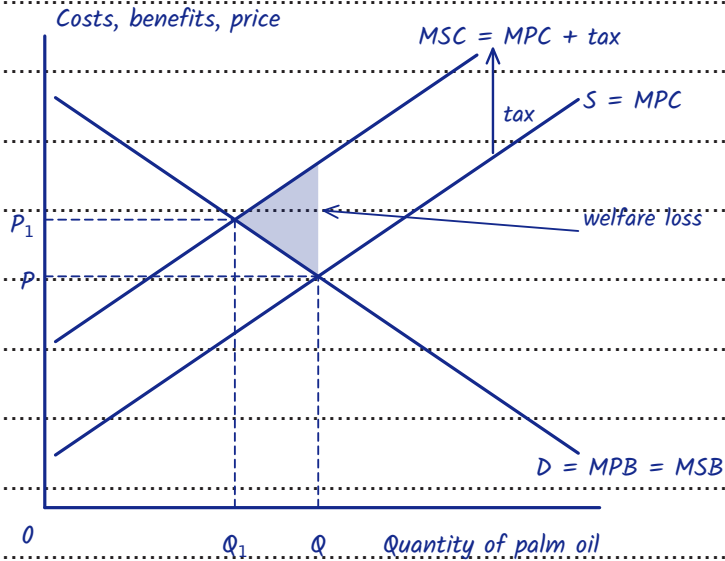
- 18*** For decades China used a planned economy to allocate resources before transitioning to an economy which incorporates some functions of a market economy.

Evaluate, using an appropriate diagram(s), whether a country would benefit from moving from a planned to a market economy.

[20]

Question No. 17.....

A negative externality is a cost imposed on a third party not involved in a transaction, which is not reflected in the market price. Palm oil production creates large external costs: around 24 million hectares of Indonesian rainforest, an area the size of the UK, were destroyed between 1990 and 2015, destroying wildlife habitat, reducing biodiversity and releasing carbon emissions. Producers consider only their marginal private cost (MPC), not the marginal social cost ($MSC = MPC + \text{external cost}$). Without a tax the market equilibrium is where $S = MPC$ meets D at P , Q , so palm oil is over-produced and over-consumed because external costs are ignored. Social efficiency is where $MSC = MSB$ at P_1 , Q_1 . Between Q_1 and Q , MSC exceeds MSB , creating the welfare loss shaded in the diagram below.



A tax equal to the marginal external cost raises producers' costs and shifts supply up from MPC to $MPC + tax$, which coincides with MSC. This internalises the externality so producers pay the full social cost. Price rises from P to P_1 and output falls from Q to Q_1 , where $MSC = MSB$, so the welfare loss is removed, less rainforest is cleared and the outcome is socially efficient.

The tax also raises revenue which can be used to tackle the problems relating to the externality, such as replanting forest, and to fund administration and enforcement of fines and penalties for deforestation and damage to wildlife. It gives an incentive to reduce the externality in future, e.g. research into ways to grow palm oil so the crop is greater per acre, or water saving methods, so less deforestation takes place.

However, it is difficult to measure the negative externality: valuing lost habitat and biodiversity is subjective, so the government lacks the information to set the tax equal to the external cost. If the tax is too small it will have very little effect; if too large, output falls below Q_1 , causing government failure.

Effectiveness also depends on PED. Palm oil is used in many foods, cosmetics and biofuels with few cheap substitutes, so if demand is relatively inelastic in high-income countries, a higher tax will mainly raise price and will not considerably reduce demand for products containing palm oil.

Taxes may also cause inequality: a tax in poorer countries such as Indonesia takes a higher percentage of income from those on low incomes. There may be unintended consequences: it may deter farmers from setting up businesses and cause unemployment if existing farmers reduce costs to pay the tax. The cost of administration, collecting tax from thousands of small plantations, may be high.

The effect depends on how rigorously the tax is applied, its level and the length of time. Fines and penalties need to be high, with people employed to carry out checks. Producers may also switch to alternative products to avoid the tax, and it will be difficult to tax just palm oil products, as it may be hard to identify which products contain palm oil rather than another oil. A global effort, with consumers in Europe and the USA made aware of the environmental effects, is likely to have better results.

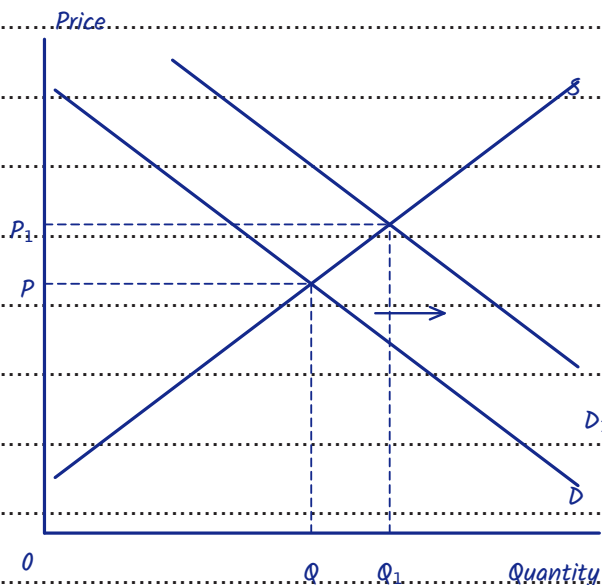
Overall, a tax on palm oil production can be effective in theory as it internalises the externality and raises revenue to repair damage. However, its success depends on setting the right level with imperfect information, on inelastic demand and on strict enforcement, so it is likely to be only partly effective in the short run. It is most effective in the long run if combined with regulation of land clearing and international cooperation.

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

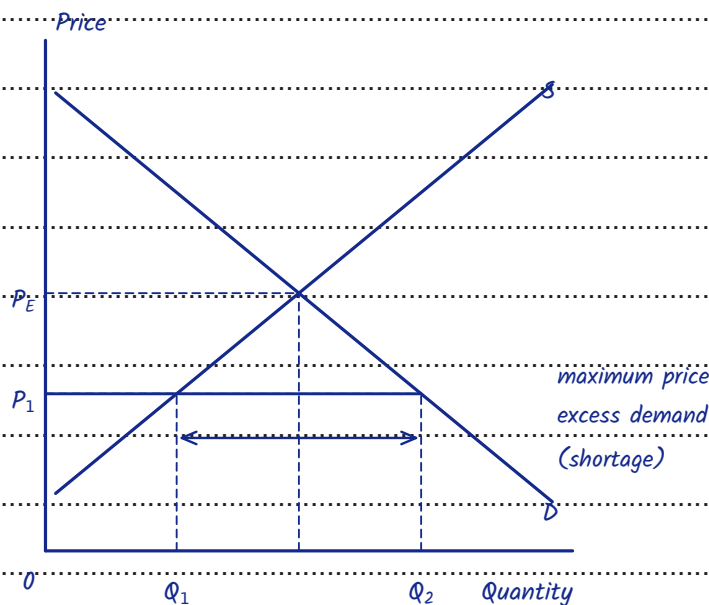
If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

18. A planned economy is one where the government makes all the major economic decisions, such as what and how much of each good to produce, how and for whom, and owns most resources. In a market economy these decisions are left to the free market through the price mechanism, with no government intervention. Many planned economies, such as China, have begun to make the transition to a mixed economy.
- The main benefit of moving to a market economy is that prices tend towards the equilibrium where demand equals supply. In diagram 1, if demand rises from D to D_1 , price rises from P to P_1 . This signals that more should be supplied and, through the profit motive, gives firms an incentive to extend supply from Q to Q_1 , so resources move to what consumers want.



This makes resources allocatively efficient. Firms driven by profit also cut costs to be productively efficient, and competition creates a high level of innovation, raising choice, quality and economic growth.

18. In a planned economy, the lack of a price mechanism means governments generally have poor information about what to produce, so they are unable to respond to consumer preferences. Price controls lead to shortages of some goods and surpluses of others. In diagram 2, if the government sets a price of P_1 to make the product affordable for all, quantity demanded is Q_2 but only Q_1 is supplied, so there is excess demand of $Q_2 - Q_1$, causing queues and black markets. In a free market the shortage would be cleared as price rises to P_E .



Planned economies also tend to be very bureaucratic with slow decision making, inefficient firms are protected, and there is no profit incentive for managers or workers. Moving to a market economy should therefore raise efficiency, output and living standards.

However, a country would not necessarily benefit from a pure market economy. It may lead to an increase in inequality, as rewards go to those who own resources, leaving some in absolute poverty. There may be market failure, such as firms abusing their market power with high prices. There will be under provision of public goods such as defence and street lighting, due to the free rider problem, and of merit goods such as health and education. There may also be overproduction of negative externalities such as pollution and traffic.

18. congestion, which lowers living standards, and information failure may lead to overconsumption of demerit goods such as cigarettes.

On the other hand, a planned economy has advantages: the government may be able to overcome market failure and inequality, and could produce goods which benefit society and ensure everyone has access to necessities such as housing and healthcare.

This suggests a mixed economy may be better than either extreme. China seems to have seen strong economic growth, close to 10% a year for around three decades after its reforms, using this combination of free market with government intervention. A mixed economy reduces market failure, as the government can regulate where markets fail and provide public and merit goods. It can create greater equality and help to prevent people living in absolute poverty, while still enabling people to enjoy the financial rewards of hard work and entrepreneurship.

The benefit also depends on the speed of transition and the country's institutions. A sudden move, as in Russia in the 1990s, can cause unemployment, inflation and falling output in the short run, whereas China's gradual approach was more successful. Markets also need property rights, a legal system and competition policy to work well.

Overall, a country is likely to benefit from moving away from a planned economy, because the price mechanism improves efficiency, innovation and growth. However, it would benefit most from moving to a mixed economy rather than a pure market economy, keeping government intervention to correct market failure and reduce inequality, and moving gradually so that short run costs are limited.

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