

## A LEVEL

*Exemplar Candidate Work*

# **ECONOMICS**

**H460**

For first teaching in 2015

## **H460/01 Summer 2018 examination series**

Version 1

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# Introduction

These exemplar answers have been chosen from the summer 2018 examination series.

OCR is open to a wide variety of approaches and all answers are considered on their merits. These exemplars, therefore, should not be seen as the only way to answer questions but do illustrate how the mark scheme has been applied.

Please always refer to the specification <https://www.ocr.org.uk/Images/170839-specification-accredited-a-level-gce-economics-h460.pdf> for full details of the assessment for this qualification. These exemplar answers should also be read in conjunction with the sample assessment materials and the June 2018 Examiners' report or Report to Centres available from Interchange <https://interchange.ocr.org.uk/Home.mvc/Index>

The question paper, mark scheme and any resource booklet(s) will be available on the OCR website from summer 2019. Until then, they are available on OCR Interchange (school exams officers will have a login for this and are able to set up teachers with specific logins – see the following link for further information <http://www.ocr.org.uk/administration/support-and-tools/interchange/managing-user-accounts/>).

It is important to note that approaches to question setting and marking will remain consistent. At the same time OCR reviews all its qualifications annually and may make small adjustments to improve the performance of its assessments. We will let you know of any substantive changes.

# Question stimulus

Read the following stimulus material and answer **all** parts of Question 1 which follow in this section.

## Who should pay for students to study at university?

The proportion of university education provided by the public sector and the private sector varies throughout the world. Most UK universities are generally considered to be in the public sector. In 2017, there were only five private sector universities in the country. The difference between public sector and private sector universities, however, is changing. This is the result of a shift in the funding of higher education, particularly in England. Universities are obtaining less of their income from government financed teaching grants and an increasing proportion from tuition fees. Fig. 1 shows how the amount of government spending on higher education has fallen in recent years.

**Fig. 1 – Spending on higher education government grant**



**Note: Figure for 2014–15 was a predicted figure. Figures are in real terms, adjusted for inflation using the GDP deflator.**

Tuition fees were introduced in 1998 at a maximum of £1,000 a year. By 2017, these had risen to a maximum of £9,250 for UK and EU students studying in England. Most universities charge this maximum annual fee. In October 2017, the government announced that it was freezing tuition fees at £9,250 instead of increasing them in line with inflation and raising the student loan repayment threshold from £21,000 to £25,000. Most students would like the government to maintain the freeze for some time or even scrap tuition fees altogether.

Some A Level students do not gain the grades needed to take up university places. In other cases, however, it is tuition fees which discourage them from applying to university. These students are concerned about future debt levels and value for money. The average pay for university graduates is higher than that for non-graduates. Future earnings, however, vary according to the subject studied, university attended and job gained after graduation. Currently the highest earning post graduates tend to have been students of medicine, veterinary science, economics and engineering. While the lowest earners are found to be former students of English Literature, communication, agriculture and creative arts. A Level pupils are also aware that the learning experience varies between courses and universities, with some undergraduates complaining about lack of contact hours and high numbers of students in seminar groups.

- 25 While a limit on tuition fees may be welcome to many students, universities are concerned about the measure. They are worried that if they are not able to charge higher tuition fees and if they do not get more funding from the government, they will struggle to cover their costs. Universities' operating costs vary with the number of students they teach. Fig. 2 shows a breakdown of the total cost of £31.2 billion incurred by UK universities in 2014–2015 when they were educating
- 30 2.2 million students.

**Fig. 2 – The composition of the total cost of UK universities 2014–2015**




Fig.2 - The composition of the total cost of UK universities 2014-2015 has been removed due to third party copyright.

The cost of providing degree courses varies between subjects and universities. It is, for example, more expensive to provide engineering courses than English Literature courses. The University of Cambridge, for instance, spends more per student than the University of Bedfordshire.

- 35 The amount spent on education for people above school age (tertiary education), includes spending on degree courses and vocational courses. Such education provides a range of benefits not only to those who undertake the courses but also to others. Tertiary education increases a country's output and the productivity of its workers. UK universities are also creating an increasing number of spin-off companies which create new jobs.

Fig. 3 shows how the proportion of people of two different age ranges who had completed tertiary education varied in selected countries in 2016, as well as average income in those countries.

**Fig. 3 – The proportion of people who had completed tertiary education in selected countries in 2016**

<b>Country</b>	<b>25–34 year olds who completed tertiary education</b>	<b>55–64 year olds who completed tertiary education</b>	<b>Average income (GDP per head in US\$) 2016</b>
Canada	60.6	46.2	42 200
Germany	30.5	26.3	42 000
Japan	60.1	39.7	39 100
New Zealand	43.4	28.2	39 400
South Korea	70.0	19.7	27 600
United Kingdom	52.0	37.6	39 900
United States of America	47.5	41.9	57 500

## Question 1(a)

1 (a) Explain, using evidence from the stimulus material, why higher education is a private good. [2]

### Exemplar 1

2 marks

Higher education is provided by the free market and so an annual price is charged to those who consume it, in 2017 the maximum price for UK and EU students was £9,250. Higher education does not experience a free-rider problem as public goods do and so is a private good. [2]

### Examiner commentary

The candidate was given both marks. One mark was given recognising that higher education is provided by the market (private sector) and 1 mark for reference to the tuition fee charged.

### Exemplar 2

1 mark

Higher education is a private good as most of the income generated for universities comes from tuition fees that the consumers, i.e. the students, have to pay later on (£9250 a year). <sup>rather</sup> ~~not~~ government spending is no longer spent on universities as <sup>it is highly</sup> demanded so there is a market price making. [2]  
 it a private good to allocate university spaces, so not a public good.

### Examiner commentary

The candidate was given only 1 of the 2 marks available. There was recognition that tuition fees are charged, but no recognition the characteristics of a private good or of provision by the private sector.

### Exemplar 3

0 marks

Higher education is not a private good because the <sup>cost</sup> of paying fees has risen from £1000 to around £9250 because government spending was decreasing and universities were struggling to reap profits. [2]

## Examiner commentary

The reason for higher education being a private good (an increase in tuition fees) was not accepted as a valid response to the question.



# Question 1(b)

(b) Calculate, using information from the stimulus material, the average fixed cost of educating a university student in 2014–2015.

[3]

## Exemplar 1

3 marks

$$6.3 + 1.4 = 7.7\%$$

$$7.7\% \text{ of } \pounds 31,200,000,000$$

$$2402400000 \div 2.2m = 2.2m = \pounds 1092$$

$$\pounds 1092$$

[3]

## Examiner commentary

Correct calculation using valid fixe costs and correct answer given.

## Exemplar 2

2 marks

university student in 2014–2015.

$$TC = VC + FC \quad \text{Total cost} = \pounds 31.2 \text{ bn} = VC + FC$$

$$VC = 98.6\% \text{ of } 31.2$$

$$VC = 30.7$$

$$FC = TC - VC$$

$$FC = 31.2 - 30.7 = \pounds 1136$$

$$AFC = \frac{FC}{QTY}$$

$$AFC = \frac{\pounds 1136}{2.2m}$$

[3]

## Examiner commentary

The answer given by the candidate was not correct and marks were given for an understanding of average cost and for the identification of a valid fixed cost implicit in the use of 98.6% in the calculation (interest and other overheads).

## Exemplar 3

1 mark

$$31,200,000 \div 2,200,000 = \pounds 14,200$$

[3]

## Examiner commentary

The answer given by the candidate was not correct but 1 mark was given for division of cost by the number of students to get an average cost.

## Question 1(c)(i)

- (c) (i) Explain whether the information in Fig. 3 about average income and about 25–34 year olds who had completed tertiary education shows the expected relationship between the two.

[2]

### Exemplar 1

2 marks

It is assumed that tertiary education will increase output and productivity, however, Fig 3 does not support this as <sup>average</sup> income is not the highest in countries with the highest rates of tertiary <sup>education</sup> income. For example, in South Korea they have the highest rate of tertiary education at 70.0% however they have the lowest average income of \$27,600. Germany has the lowest rate at 30.5% but the 2nd highest average income of \$42,000. Therefore the relationship between the two is negative. [2]

### Examiner commentary

The candidate was given both marks – 1 mark for recognising the data did not support the expected relationship and 1 mark for valid use of the data for South Korea.

### Exemplar 2

0 marks

The percentage of people who are aged 24-34 is higher than the percentage of people aged 55-64 years and also completed tertiary. This is expected because costs of tertiary education would have been even higher for <sup>25</sup>25-34 year olds, therefore they would have <sup>lower</sup> [2]

### Examiner commentary

The candidate compared the data on completion of tertiary education by two age groups and did not answer the question set.

## Question 1(c)(ii)

- (ii) Explain, using information in Fig. 3, which country is likely to have experienced the lowest relative increase in occupational mobility over the last thirty to forty years. [3]

### Exemplar 1

3 marks

Occupational mobility is the ability to ~~move~~ <sup>change profession</sup> ~~the country/area~~ to take on jobs which would be available. Additionally at high wage rates. In the last 30-40 years, Germany's proportion of workers who completed tertiary education increased the least (9.2%) increase. They would experience the lowest relative increase as increase in education and transferable skills = increase in occupational mobility. [3]

### Examiner commentary

The candidate gains all 3 marks by: defining occupational mobility; identifying Germany and justifying the choice by reference to Germany having the lowest increase in the proportion of the workforce completing tertiary education.

### Exemplar 2

2 marks

Occupational mobility refers to the ability of workers to move more between jobs using transferable skills they have acquired. Germany is likely to have experienced the lowest increase because their level of tertiary education is lower, therefore <sup>many</sup> people do not gain the vocational training necessary for them to change occupations. Only a small proportion of the country (30.5% of 25-54 year olds experienced this and 26.3% of 55-64 year olds, therefore the flexibility of labour and occupational mobility <sup>will be lower.</sup> [3]

### Examiner commentary

The candidate is given 2 marks: 1 mark for the definition of occupational mobility; 1 mark for the identification of Germany. There is reference to the 'level of tertiary education' and proportions completing tertiary education but not the **change** in the proportion of young people completing tertiary education.

## Exemplar 3

**1 mark**

The country likely to have experienced the lowest relative increase in occupational mobility would be Germany. This is because the Germany has the lowest percentage difference between 25-34 years and 55-64 years, therefore Germany already has a high skilled work force, so few

### Examiner commentary

Only 1 mark is given for this response. The candidate identifies Germany as the country experiencing the lowest increase in occupational mobility. However, the justification is not over time but between two different age groups at one point in time so no marks can be given for use of the data.

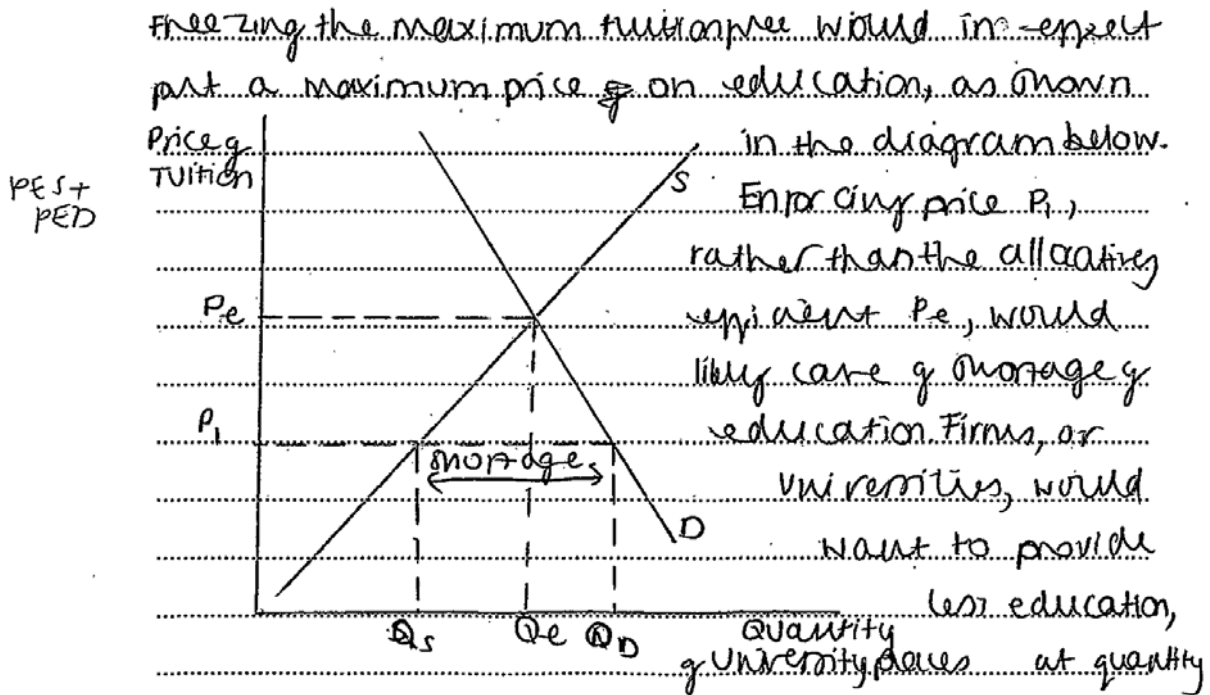
# Question 1(d)

(d) Evaluate whether students will benefit from the government freezing the maximum annual tuition fee for some time.

[8]

## Exemplar 1

7 marks



This may be negative for students as it ~~not only~~ means those who wish to go to university may be restricted from doing so. It may ~~lead to~~ increase entry tariffs as universities seek to ration their scarce places negatively, expecting students through more stress or uncertainty if they are trying to get higher grades. Furthermore, lower tuition fees may reduce the resources available to universities to provide a good education. Students may lose out from ~~higher~~ seminar groups for example.

However the cap is ultimately likely to benefit students, given universities have shown no signs of

dropping asviding as tuition fees are lower. Indeed the recent lifting of the cap on student numbers has shown more places are being opened, so [8]

Students are benefiting from more places, and hence more variety and choice, as well as lower fees than the free market would charge. Lower prices also benefit students through increased consumer surplus and thus higher welfare.

Also freezing the tuition allows ~~larger~~ ~~less~~ certainty for consumers, as they can plan for the whole cost of education. It will also result in less future debt to pay off, thus potentially ~~educating~~ increasing consumption in the long run, having macro-economic effects.

In conclusion, the freezing of the tuition fee is likely to benefit <sup>students</sup> ~~consumers~~ as they pay less for education. The effects of doing so will depend on the rate of inflation: if it is higher the real cost of tuition will fall, ~~the~~ benefitting students yet more. It will also depend on the response of Universities - if they suddenly move to restrict places, then students will lose out, but given the likely inelasticity of demand for education ~~the~~ shown by 2011's tripling of fees and little change in place uptake, the most likely outcome may be

limited in size, and anyhow at the moment many places are available despite the fee cap, so students will benefit.

## Examiner commentary

The candidate starts by explaining the negatives of freezing tuition fees. This is counted as evaluation and is judged to be **Good** because it is supported well by economic concepts throughout and recognises that a free on tuition fees could act like a maximum price. Analysis of the benefits then follows. There is some use of economic concepts and relevant application to the context so it also judged to be **Good**. It is not **Strong** analysis because there is little development of the points made. The final sentence contains judgement which lifts the evaluation to **Strong**. Knowledge and understanding of how and why governments intervene in markets is obviously **Good** and the candidate has shown the skills required for a mark towards the top of Level 2. With stronger analysis of the benefits of freezing tuition fees, this response could have gained full marks.

## Exemplar 2

5 marks

The maximum annual tuition fee is the highest fee universities can charge students for their service (education).

Freezing the maximum annual tuition fee would mean that students will only ~~be~~ be expected to pay the fee of £9,250 in the stimulus material. This means that they face ~~with~~ no future changes in the price of university, so they can ~~then~~ plan their expenditure decisions; for example; a student would know exactly how much they would be paying for their education, so they could begin to prioritise in their accommodation choices relative to the size of their student loan. They also benefit because the student loan repayment threshold has been risen from £21,000 to £25,000 as a result of this, therefore they can keep £4,000 more before beginning to pay their loan off prior to employment; entering a job with less debt will improve their motivation and enthusiasm to work ~~in~~ and could therefore improve their efficiency.

However, students may not benefit from the frozen annual tuition fee because some students may be in worse circumstances than others due to income inequality. This means that it would be far easier for some students to repay their loans because they have inherited more money from their parents, ~~on~~ and some may be able to pay the ~~loan~~ entire fee; it could be argued



a differential fee based on the income of students' parents may be better suited in this case because then everybody would be able to benefit the same amount as some would pay [8] less for their fee with parents on lower incomes.

In conclusion, in freezing the maximum annual tuition fee will be beneficial, but it depends on students' circumstances.

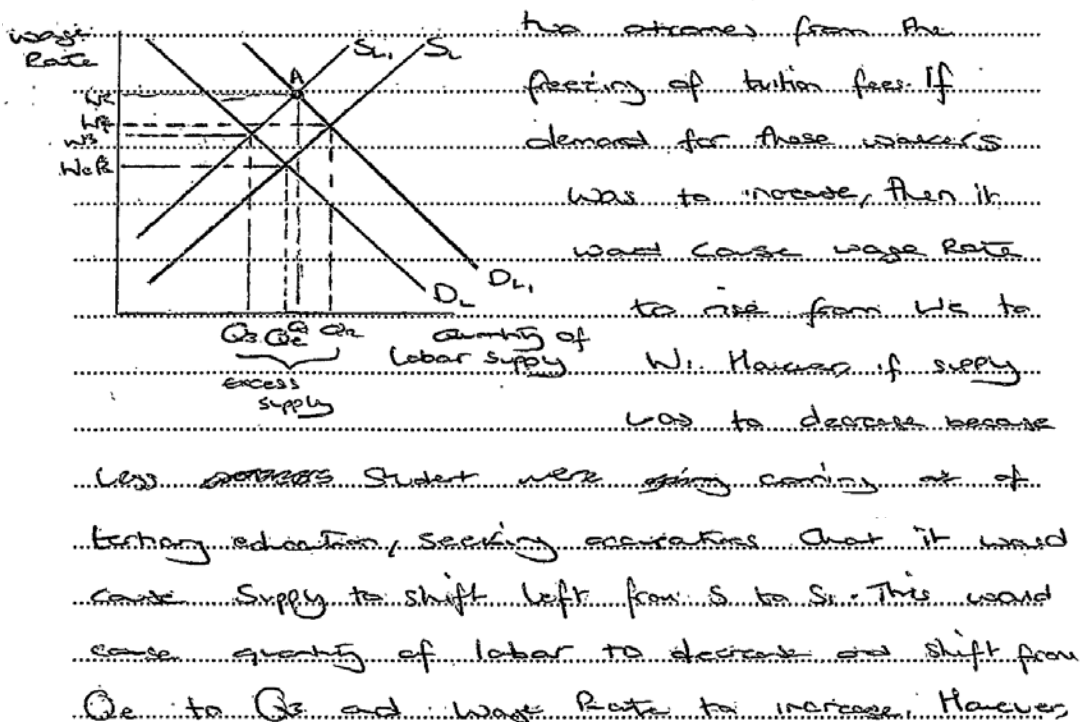
### Examiner commentary

This response is on the border line between Level 1 and Level 2, but has been given a mark at the bottom of Level 2 of the mark scheme. The analysis of the reasons for freezing tuition fees is given in paragraph 2 and is in context but wholly descriptive. For this reason it is judged to be **Reasonable**. Evaluation is given further in the answer and, whilst valid and in context, is again not supported by economic concepts so is also judged to be **Reasonable**. The candidate does show some knowledge and understanding of the reasons for price controls. The candidate shows all the skills for Level 1 of the mark scheme and offers more than **Limited** evaluation, so is given a mark at the bottom of Level 2.

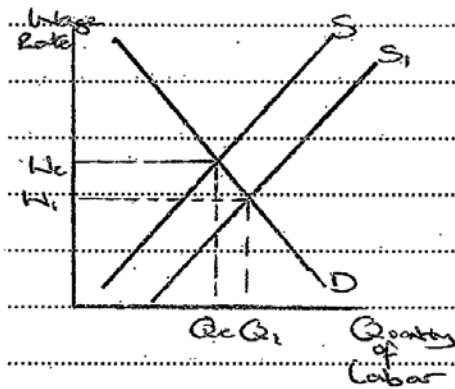
### Exemplar 3

2 marks

The advantage with the government freezing maximum annual tuition fees for someone means the amount of student going to a University may decrease, therefore the amount of student with tertiary education will decrease; therefore those with one will have a greater opportunity to find occupations. From the diagram, we can see



Students could see this tuition freeze as an incentive to go into tertiary education before fees rise again in the future, leading to an increase in the supply of workers, therefore therefore supply



ward shift from S to S<sub>1</sub> and cause quantity to move right for Q<sub>c</sub> to Q<sub>1</sub> and wage rate to decrease from W<sub>c</sub> to W<sub>1</sub>.

[8]

### Examiner commentary

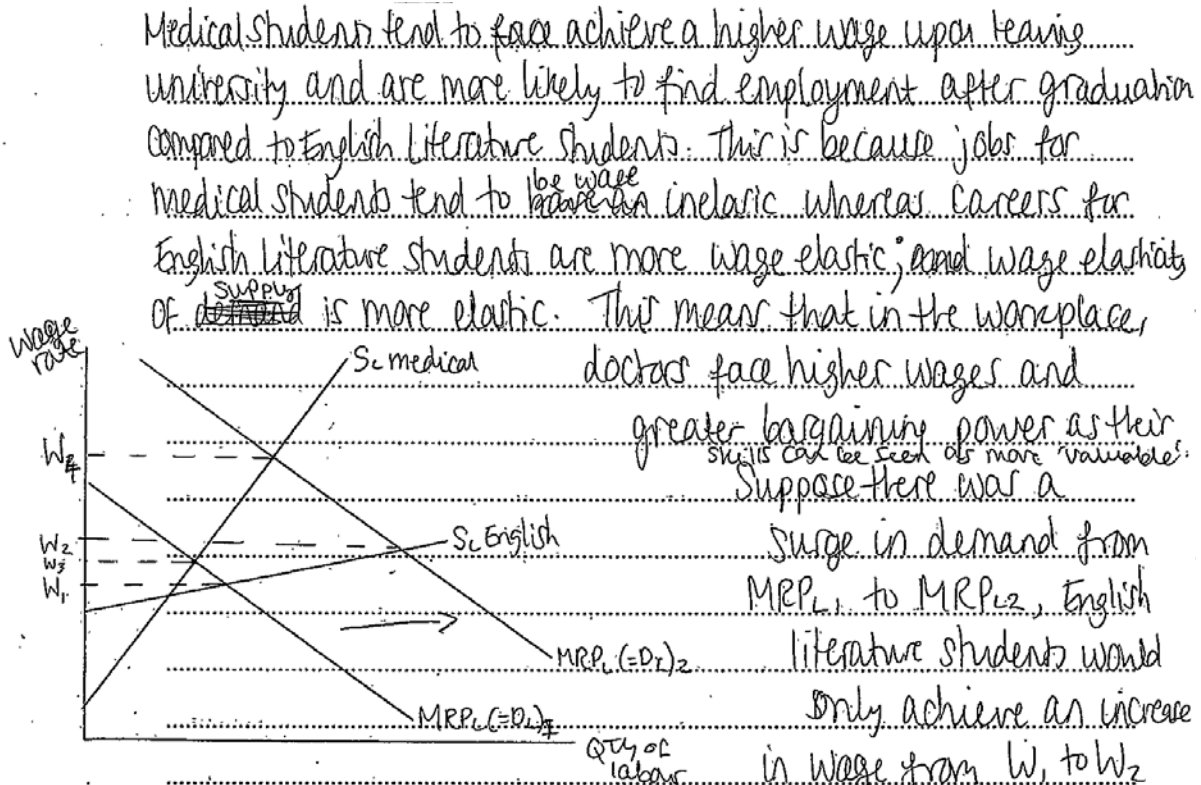
This response is **Limited** in its knowledge and understanding of how and why governments intervene in markets and in its analysis and evaluation of the reasons for freezing tuition fees. There is some **Limited** knowledge and understanding of the determination of wage rates at first and the impact of a reduction in the supply of skilled labour. However, there is a lack of clarity as to why this might arise from freezing tuition fees. Looking at the answer as a whole, credit is given for the idea that freezing tuition fees might reduce the number of people going to university (although it is not explained why this might be the case) and that higher graduate wages might also incentivise young people to apply to university. The response lacks a coherent explanation of cause and consequence throughout, but some **Limited** analysis and evaluation can be inferred from what the candidate writes. A mark towards the bottom of Level 1 has, therefore, been given for this response.

# Question 1(e)

(e) Evaluate, using evidence from the stimulus material, whether a higher tuition fee should be charged to medical students than to English Literature students. [12]

## Exemplar 1

12 marks



Medical students tend to face achieve a higher wage upon leaving university and are more likely to find employment after graduation compared to English Literature students. This is because jobs for medical students tend to have a more inelastic supply curve whereas careers for English Literature students are more wage elastic, and wage elasticity of supply is more elastic. This means that in the workplace, doctors face higher wages and greater bargaining power as their skills can be seen as more valuable. Suppose there was a surge in demand from  $MRP_1$  to  $MRP_2$ , English literature students would only achieve an increase in wage from  $W_1$  to  $W_2$  whereas medical students would face a greater increase in wages from  $W_3$  to  $W_4$  because their labour supply is more inelastic. This suggests that tuition fees should be higher for medical students as the debt burden will be smaller and the repayment on debt will account for a smaller proportion of total income. On the other hand, if tuition fees for both English literature and medical students are the same, English literature students have more fees to pay back as a percent of total income. Therefore, charging them lower fees can be considered more fair and equal. Despite this, there is no guarantee that doctors will be paid more, particularly in a monopsony employer such as the NHS who have the power to charge lower wages to doctors. Furthermore, a higher tuition fee for medical students may reduce the amount of students applying to complete medical degrees and this creates implications in society because medicine and healthcare is an essential public good that produces positive externalities. A shortage in medical students could create a fall in the demand for supply of

healthcare, therefore a key merit good. Therefore, tuition fees should be kept the same. It could even be argued that tuition fees for medical students should be lower because it will encourage more people to study medicine, therefore increasing the supply of doctors who provide healthcare which improves the welfare of society.

Moreover, the extent to which higher tuition fees should be charged to medical students depends on the costs faced by universities. As stated in line 27, without funding from the government, "universities will struggle to cover their costs", therefore higher ~~costs~~<sup>fees</sup> may be necessary in doing so. The university can then invest the extra revenue gained from increasing tuition fees into improvements in research facilities and teaching quality. This can decrease long run costs if ~~the~~ funds are used efficiently.

In conclusion, higher tuition fees should be charged to medical students because they tend to have a more wage inelastic supply of labour <sup>due to</sup> a greater level of specialist skills, consequently they can demand higher wages and repay student loans faster compared to English [12] literature students who tend to have lower income jobs upon graduating. ~~Higher~~ therefore, higher fees increase equity and improve the distribution of income in the long run, however the universities ~~must~~ should utilize the funds from higher fees and invest in reducing costs ~~of~~ so that tuition fees do not have to remain high.

## Examiner commentary

The candidate received full marks for this response. The analysis of why higher tuition fees should be charged to medical students than English Literature students makes very effective use of marginal revenue product (MRP) theory and the perceived difference in the wage wages the two groups of students are able to command in the labour market. This is **Strong** analysis. A number of reasons are considered as evaluation of the case for charging higher tuition fees, with some use of economic concepts making the evaluation **Good**. The judgement at the end raises the quality of the evaluation to **Strong**. Overall, the candidate shows **Strong** knowledge and understanding throughout and is given a mark at the very top of Level 3 of the mark scheme.

## Exemplar 2

7 marks

Medical students as well as graduates of economics and engineering earn more in the future than students who study English literature. This can be seen as unfair ~~for~~ as all of these students pay the same tuition fee to study the course but medical students

will find it easier to repay their debt as they earn more after they graduate - 'highest earning graduate posts'. Consequently, charging them higher tuition fees makes it more fair to the English Literature students who don't earn as much.

The increase in fees however, will provide a ~~an~~ disincentive to students who want to study medicine as the ~~pro~~ cost is too high and will instead study English instead. This is ~~debtmental~~ disastrous to the supply of medicine graduates as they are a necessity and a leftwards shift would leave a gap in the labor market. Additionally, it would ~~increase~~ ~~de~~ reduce the number of students ~~go~~ trying for high ~~target~~ paying careers if they ~~are~~ charged more, resulting in market failure. This shortage / gap would need to be filled ~~ing~~ by international students.

Additionally, it creates inequality in society, increases relative poverty as the ~~sea~~ richer students would go on to study medicine, leading to high incomes in the ~~first~~ future while the poorer students won't be able to close that gap in income as they ~~are~~ deterred from ~~studying~~ ~~higher~~ tuition ~~high~~ paid courses.

the policy will benefit ~~Universities~~  
On the ~~other~~ hand, it ~~may~~ be a good ~~or~~ policy if the extra income Universities gain by increasing tuition fees is ~~put~~ ~~invested~~ ~~back~~ into used to improve the course and pay for specialist equipment and ~~an~~ improved quality of teaching e.g. paying more staff. As some sources such as medicine cost more to run, this increase

maybe a fair way to pay for this. This may also be a. An increase in cost of ~~medics~~ studying medicine could be a way to manage the large demand for a medicine degree as it allivates some competition in the for students and could allow universities to focus more on smaller seminar groups.

~~Higher~~ Higher tuition fees charged to medical students could solve some of the market failures relating to university education such as the high ~~to~~ excess demand but it only ~~to~~ harms the poorest in society and increases [12] inequality. The government should instead, introduce policies to fund University education such as ~~to~~ ~~the increase~~ the amount of tax given to universities from repayments of loans after students graduate, based on their income levels.

## Examiner commentary

The first paragraph of this response provides **Reasonable** analysis of why medical students should be charged higher tuition fees than English Literature students. Although the point made is valid it is descriptive and needs to be supported by the use of economic concepts to be judged **Good** or **Strong**. The counter argument in paragraph 2 is again general and descriptive with some reference to economic concepts which could have been expanded on to support the point being made. Evaluation here is **Reasonable** as a consequence. Further points about inequality and the revenue for universities are given. These points do not enhance the quality of the analysis and evaluation as they are also considered in a descriptive manner. The final paragraph of the response is a summary of arguments which have been made previously and does not qualify as a judgement. Taking the response as a whole, knowledge and understanding is **Reasonable** to **Good** and analysis and evaluation are **Reasonable** which fits the criteria in Level 2 of the mark scheme and the default mid-mark of 7 has been given.

## Exemplar 3

3 marks

A higher tuition fee shouldn't be charged to medical students than to English Literature students as it could discourage students to take vital courses like medicine. A difference in the price would have negative effects on both courses as ~~it~~ it instils that there are difference in importance and value of the two courses. For English students it puts

them below and undermines the value of their course, which could put students off and affect <sup>the</sup> English in the economy. Moreover it would disincentivise students to take medicine, as the price alone right now deters people from taking any courses so an additional increase would put many students off like there's no point as alot of what they'd earn would have to be put off to repayment. This would have a ~~great~~ decline on the amount of doctors and nurses in the country, which would have a negative effect on the health care side of things as there would be a lack of medical professions. It too would decrease a country's output and productivity as less people would be in tertiary education to which a lack of spin off companies could occur which means no new jobs created per everyone.

However some may argue it should be charged as the highest earnings post graduates have been students from medicine so an increase wouldn't affect them so much as they get paid more than those who done English literature. It could also be a good incentive for students to connect and try their creative side as many students just opt for the courses which ensure a regular ~~career~~ job in the future. But from the difference in tuition fees they enable them to follow what they actually love and in turn could benefit the country's output and production.

as they'd be in a position they generally live and enjoy so will become more productive which helps companies cut cost and lower prices for consumers. Moreover it may make those who would've picked medicine not and just go straight into working to which from figure 3 shows they can still have a good income despite not being in tertiary education. [12]

### Examiner commentary

This response considers arguments in favour of charging medical students higher tuition fees than English Literature students and is, therefore, balanced. Taking the response as a whole the arguments on both sides are very descriptive and it is difficult to see any reference to the economic concepts which are relevant to the question. It is characterised by unsupported statements, many of which are tautological. There is a reference to 'productivity' in the middle of the response, but this is not part of a coherent chain of reasoning. The response as a whole, therefore, is **Limited** in knowledge and understanding of private and external costs and benefits and analysis and evaluation of the reasons for charging higher tuition fees to medical students. This response gained Level 1, 3 marks.



## Question 2

2\* Governments may use buffer stock systems to reduce the market failure caused by price instability.

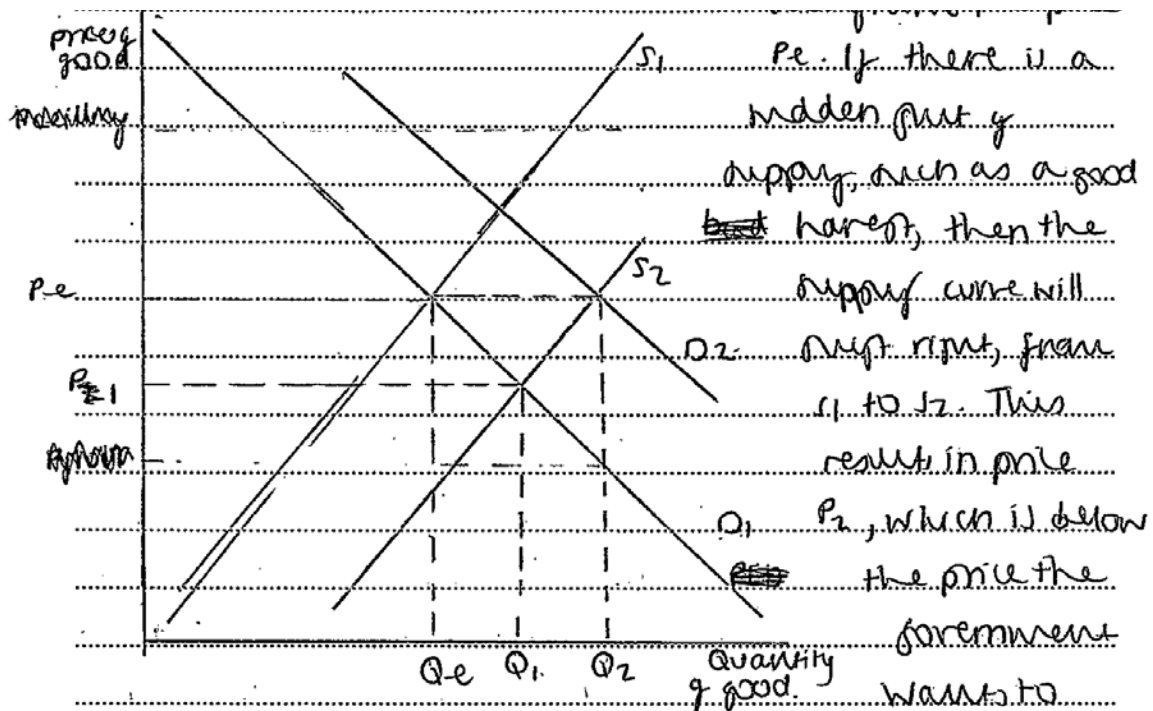
Evaluate, using an appropriate diagram(s), the effectiveness of a buffer stock system in reducing market failure. [25]

### Exemplar 1

25 marks

A buffer stock system is often used in ~~an~~ agricultural markets, or other markets where prices are very volatile. This represents market failure as it means ~~resources~~ consumers cannot plan what they are going to consume or firms what revenues they are going to make, so they cannot allocate resources in the way that will most maximise their welfare. An example of this could be a farmer producing corn: at the time she plants it, the price may be high, but when she comes to harvest it the price may be very low and thus her resources, land and labour to harvest the crop, are not spent in a way that most benefits her welfare. Thus, government intervention through a buffer stock may be needed.

Buffer stocks work by a government setting a price, or price range, that they target as the stable price. In this diagram it is price



set. It therefore increases demand by buying up quantity  $Q_2 - Q_1$  in the diagram. Thus this shifts the demand curve right, from  $D_1$  to  $D_2$ , pushing the price back up to  $P_e$ , so there is no, or less and only not term, instability depending on how quick the response of the government is.

In the future, there may be a ~~contraction~~ decrease in supply in the case of goods such as corn this may be because of unexpected heavy rain or drought. Price therefore would rise above  $P_e$  targeted by the government. The government, to maintain price  $P_e$ , will look to increase supply by selling up the good, such as corn, that they buy up to increase the price during the part of supply. Thus the government increases supply by putting more corn on the market until price has fallen back to  $P_e$ , and market failure has been prevented as price is stable.

Buffer stocks therefore ensure not only a stable price that prevents market failure by allowing forward planning, but also prevent shortages and

This prevents market failure as a price rise during a shortage means consumers who are less well off are less able to purchase the good, and consumer welfare, or allocative efficiency, is certainly not achieved if there is food poverty or hunger from very high prices.

However, buffer stocks may be limited in effectiveness if the good is not storable, or is stored for too long. Thus the government is unable to ~~buy up~~ sell off goods if the price is too high, as the goods have rotted and are no longer good enough to sell.

Therefore the effectiveness of buffer stocks depends on if the market price continuously fluctuates around the government's target price. If the market price is continuously above the target price, then the government may run out of stockpiled stock to sell to lower it. If the price is consistently too low, then it may lead to the government continuously

buying up corn for example. This is an example of government failure: the government is providing a market for these goods where there is no need for one. Farmers, in this example are allocating too many scarce resources to the production of corn, that there is simply no market demand for. This is a waste of scarce resources, either resulting in the destruction of stock or the dumping of it in other countries. Thus buffer stocks will only be effective if the price the government ~~changes~~ is ~~less~~ than target, in which the range the market price fluctuates between

furthermore the ~~the~~ buffer stock system may be expensive to administer. This could be because the space is needed to store the goods, as well as people needing to be employed to monitor prices and ~~also~~ actually do the purchasing. This could create a

ment cause a given the limited resources of a government, there may be more productively spent on reducing other market failures, such as environmental degradation. However, the cost of buffer stocks may be great as in theory they should make a profit, given they buy up stocks at low prices and sell them off at higher prices. Thus buffer stocks may ~~be~~ will be effective at reducing instability and market failure if they do not cost large ~~of~~ amounts, as they are therefore more likely to have ~~but~~ public support and the support of the government, so they will be more sustainable and certain.

In conclusion, buffer stocks are likely to be effective at ~~preventing~~ <sup>reducing</sup> market failure in a very given set of circumstances. As long as the goods are storable and the price set at an appropriate level, then there is no reason for them not to prevent volatility and allow forward planning and a socially optimum level of consumption.

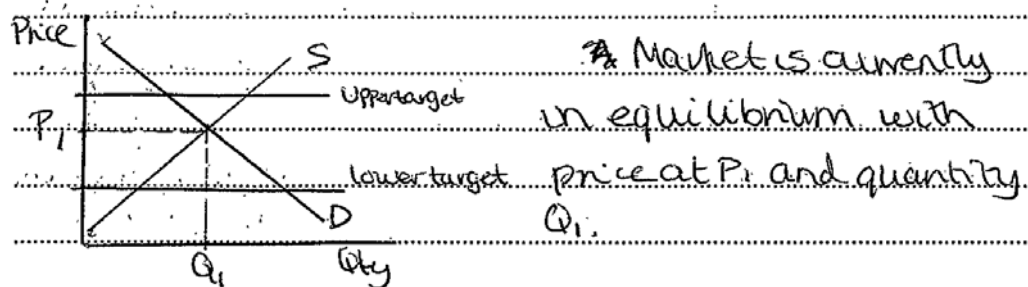
## Examiner commentary

The first paragraph of this response shows **Strong** knowledge and understanding of why governments intervene in markets using buffer stock schemes. This is developed well in the next paragraph into an analysis of how buffer stocks work. The analysis is supported by a diagram which is very well integrated and goes on to consider not only how prices are stabilised but under what conditions they would need to be to correct market failure. Taken together, this is **Strong** analysis of the effectiveness of buffer stocks in reducing market failure. Evaluation of the effectiveness of buffer stocks becomes extremely well developed as the response continues. The conclusion contains a judgement linked to the socially optimum level of consumption which raises the previously **Good** evaluation to **Strong**. Taken as a whole, the candidate shows knowledge and understanding of how and why buffer stocks are used and analysis and evaluation of their effectiveness in reducing market failure at a high or **Strong** level.

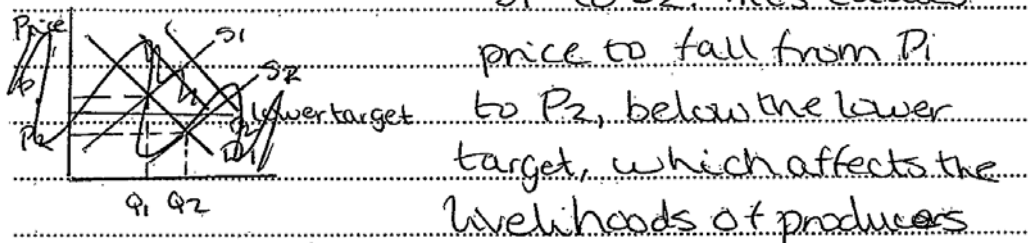
## Exemplar 2

16 marks

Buffer stocks are used by governments to reduce market failure caused by price instability. ~~It protects~~ In agricultural markets, prices are very volatile ~~due~~ <sup>and</sup> to depend upon the success of a harvest. They are aimed to protect the incomes and livelihoods of producers when prices are low and protect consumers from when prices are too high.



An ~~even~~ successful harvest will see supply of wheat increase and shift left from  $S_1$  to  $S_2$ . This causes



as less revenue is earned. There is an excess in supply which the government buys up in order to increase demand from  $D_1$  to  $D_2$ , pushing price back up above the lower target. When there is an excess in demand due to a ~~too~~ bad harvests, the government will release

the stock back onto the market, increasing supply and meeting the demand of consumers.

However, the usefulness of buffer stocks

depends upon whether the government has the ability and essential funding to buy up excess stocks when demands low as it may come with high opportunity costs. Similarly, the cost of storage is very high as stocks need to be kept in good condition, of which money could be better used elsewhere. It could be that the government doesn't have the money at all and so the buffer stock scheme is unsuccessful and producers still suffer from low prices.

~~Other~~ Other stocks may deteriorate rapidly and ~~storing~~ <sup>storing</sup> them would be of no use at all.

The cost of storing could lead to the government trying to find finance from borrowing which can increase a country's debt and thus increase its deficit. Funding can also come from making cuts in other areas of public funding, whereby social welfare reduces due to cuts in benefits. Or the government may have to increase tax in the future to generate enough revenue to fund the scheme which burdens tax payers. Since tax is regressive it will also burden the poor more as it will take a larger chunk out of their disposable incomes.

Another point to make is that with government intervention comes the possibility of government failure which is deemed

to be even worse than the market failure of volatile prices. Market failure is when resources are not allocated efficiently hence there is a misallocation of resources which harms social welfare. Government failure is when the costs outweigh the benefits to society in which case government intervention shouldn't be used at all.

Classical economists would argue that government intervention shouldn't be used at all and that we should just leave it to the free market.

- Perhaps, the government could use other forms of intervention such as a subsidy to allow producers to have specialist machinery that could prevent bad harvests. However, subsidies themselves are very expensive with high opportunity costs and could lead to subsidy dependency. Also ~~if~~ if not monitored, the subsidy could be used instead to deleverage or be put onto a bank, or increase the producers' own income again leading to government failure.

## Examiner commentary

The candidate shows a **Good** understanding of the context in which buffer stock schemes might be used and how they operate with upper and lower price limits. Further in the response the candidate then goes on to analyse how buffer stocks operate to reduce price volatility. The diagram is crossed but not replaced, so it has been considered as part of the analysis. The diagram itself is a correct interpretation of when prices of agricultural commodities might fall below the lower price limit, although the candidate describes the supply curve as shifting 'left'. Benefit of the doubt is given in this case and the analysis offered is judged to be **Good**. It is not **Strong** because there has been no link to market failure as required by the question. Evaluation then follows. To begin with the evaluation consists of a series of points with modest development. However, the issue about the cost of storage shows much more development when it considers the implications of raising taxation. This lifts the evaluation from **Reasonable** to **Good**. There is a consideration of other policy responses to price volatility but no overall judgement on the effectiveness of buffer stock schemes. Taking the response as a whole, knowledge and understanding, analysis and evaluation are all **Good**. This more than meets the criteria for Level 2 of the mark scheme, so a mark at the bottom of Level 3 is given.

## Exemplar 3

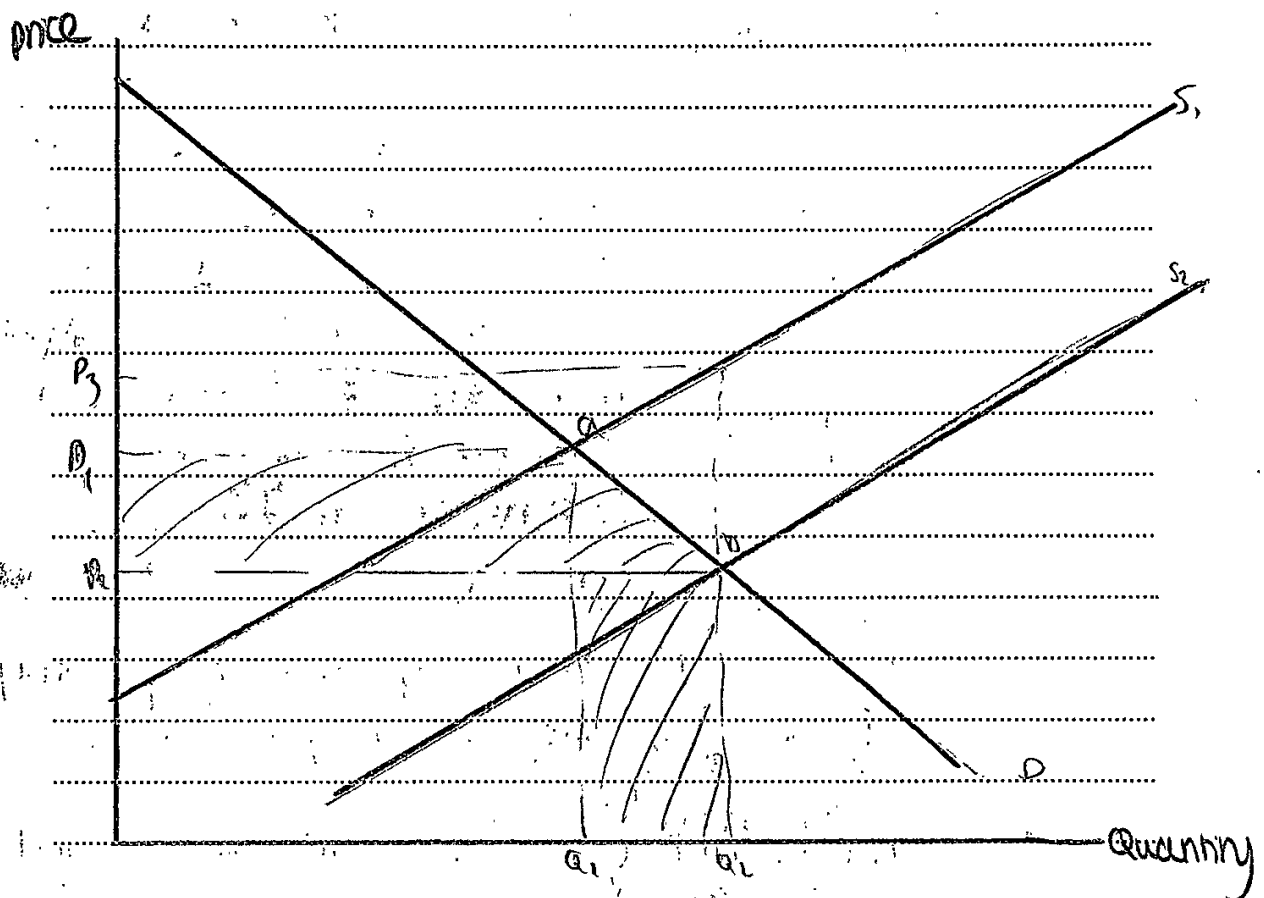
1 mark

In this essay I will be discussing and evaluating how effective a buffer stock system is in reducing market failure.

A buffer stock system is a type of government intervention to which the government would buy a large bulk of a good in order to reduce price cost.

Market failure is the misallocation of resources.

When the government intervenes to correct a market failure via the buffer stock system it has many positives for both consumers and producers.



From the graph we see that due to the buying of bulk from the government, produces



basically get 'payed' that buffer ( $P_1, P_2, ab$ ) to cut prices from  $P_1$  to  $P_2$ . so from it producers get payed, 'incentivised' to cut prices, which in turn increases quantity from  $Q_1$  to  $Q_2$ . so they also gain a surplus of  $ab \times Q_2 - Q_1$  on top of their 'Subsidy' buffer payment from Government. It's then good for consumers as they get cheaper prices as per  $Q_2$  they would've had to pay  $P_3$ .

## Examiner commentary

This is a response which is very **Limited** in all skills. In the first part of the response, the candidate does not have a correct understanding of buffer stock schemes and a general understanding of market failure only. This **Limited** knowledge and understanding is confirmed as the response continues in the description of the diagram. The overall impression is a lack of knowledge and understanding and an inability to correctly analyse how buffer stock schemes operate to reduce the volatility of prices. No evaluation is offered by the candidate. **Limited** knowledge and understanding, **Limited** analysis and **No** evaluation justify the mark given which is at the bottom of Level 1 of the mark scheme.

# Question 3

3\* Some economists claim that the Royal Mail was more efficient when it was a monopoly.

Evaluate, using an appropriate diagram(s), whether a monopoly will be efficient.

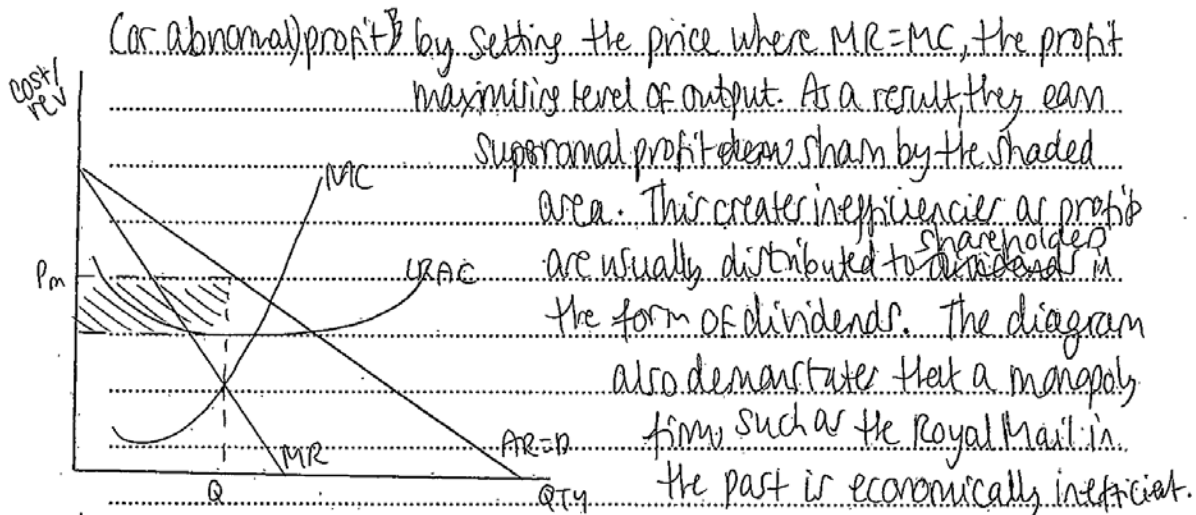
[25]

## Exemplar 1

25 marks

A monopoly is a market structure in which there is one seller of a good or service. They ~~usually~~ dominate the market with a 25% share and they act as price ~~to~~ makers as they face a relatively inelastic demand curve. They are short and long run profit maximisers and lack productive and allocative efficiency, however they can be efficient in other areas. Monopolies ~~are~~ also operate ~~in~~ with little to no competition and so do not face <sup>any</sup> pressures in lowering prices, as is the case with other market structures such as oligopolies and monopolistic competition, therefore the extent to which ~~they~~ monopolies are efficient depend on a number of factors.

In a monopoly, firms ~~face~~ are able to make supernormal



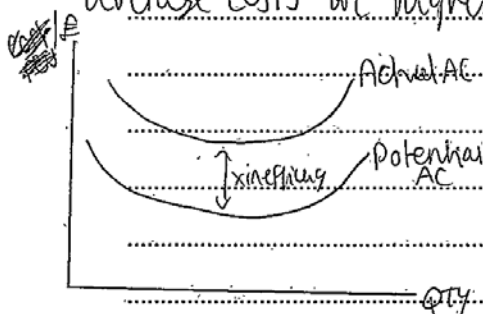
This is because the firm is not operating at the minimum point of its LRAC curve and so is productively inefficient. Price is also not equal to MC and so the firm is not allocatively efficient. They are able to charge higher prices as there is no threat of entry (it is not a contestable market) and so ~~producer~~ <sup>consumer</sup> surplus is converted into producer surplus. This can also occur through <sup>3rd</sup> price discrimination, whereby a monopoly charges consumers based on their willingness to pay (first degree) or their relative price elasticity of demand (3rd degree). This can

also be referred to as optimal pricing and reduces allocative efficiency by reducing consumer surplus, therefore suggesting that monopolies are inefficient.

On the other hand, the extent to which a monopoly is allocatively efficient depends on how it ~~with~~ utilises its supernormal profits. It may have philanthropic objectives, as seen with firms such as Virgin and Microsoft and so may distribute profits to wider society. This can be done in what is known as corporate social responsibility (CSR). A monopoly may use its profits to benefit society, increase its reputation

and create a positive image. Furthermore, the monopoly theory assumes that all monopolies profit maximise, however there are other objectives that they may prioritise such as sales maximisation whereby  $AC = AR$  or revenue maximisation ( $MR = 0$ ). These can increase a monopoly's market share and increase efficiency if such objectives are carried out alongside a lowering of prices. Therefore, the extent to which a monopoly is efficient depends on its objectives.

Furthermore, in the real world, a monopoly is likely to <sup>earn</sup> ~~bring~~ out profit satisfying behaviour as a result of the principal-agent problem and this can create X-inefficiency. This occurs when actual average costs are higher than potential costs as a result of



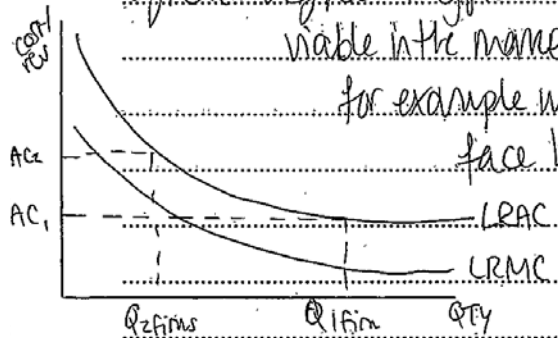
organisational slack. This means that a monopoly does not exploit its potential for cost savings and so may experience technical inefficiencies. This may occur

if a large monopoly decides to merge as operational bottlenecks may create conflicts among shareholders.

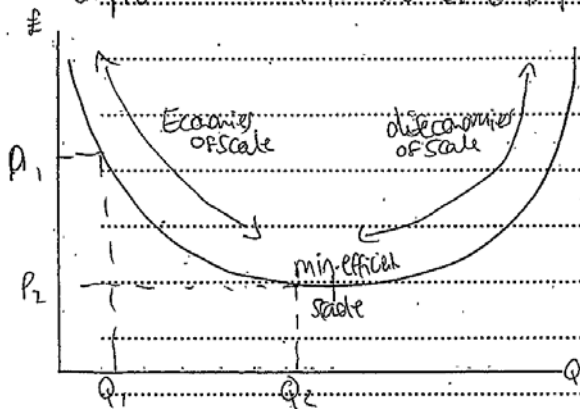
On the other hand, a monopoly may experience dynamic efficiency whereby it improves its coordination and technological production processes, this can be done by investing in research and development which acts as a sunk cost. This dynamic efficiency can improve the quality of <sup>and choice</sup> goods, therefore increasing allocative efficiency and

potentially productive efficiency in the long run if the firm invests heavily in human capital. Joseph Schumpeter argued that a preoccupation with static efficiency prevents dynamic efficiency in the long run, therefore monopolies are the most efficient market structures as supernormal profits provide funds for improvements.

Furthermore, the extent to which a monopoly will be efficient depends on the type of monopoly. If it is a natural monopoly it is highly likely that there will be a greater degree of efficiency. This occurs when the only one firm is viable in the market and the most efficient number is one, for example with railway networks. Natural monopolies face high fixed costs and lower marginal costs. Therefore its LMC is below its LRAC. In the case of a natural monopoly, monopolies are efficient.



Moreover, the extent to which monopolies are efficient also depend on whether they decide to develop economies of scale. Internal economies of scale refer to an expansion in the firm (e.g. risk-bearing, financial, technical and purchasing and economies of scale). External economies of scale refer to expansions in the industry as a result of an increase in <sup>the pool of</sup> skill labour or improvements in the industries infrastructure. Suppose a monopoly is



able to bulk buy, this will be done at a lower cost, therefore reducing LRAC and obtaining  $Q_2$  output. This improves productive efficiency. However, if a monopoly grows too big they may experience diseconomies

3. <sup>monopoly</sup> Economies of scale. A large airline company may face coordination problems as a result of such a large operation, therefore increasing costs and decreasing efficiency. Therefore the extent to which a monopoly is efficient depends on the extent to which it exploits economies of scale efficiency.

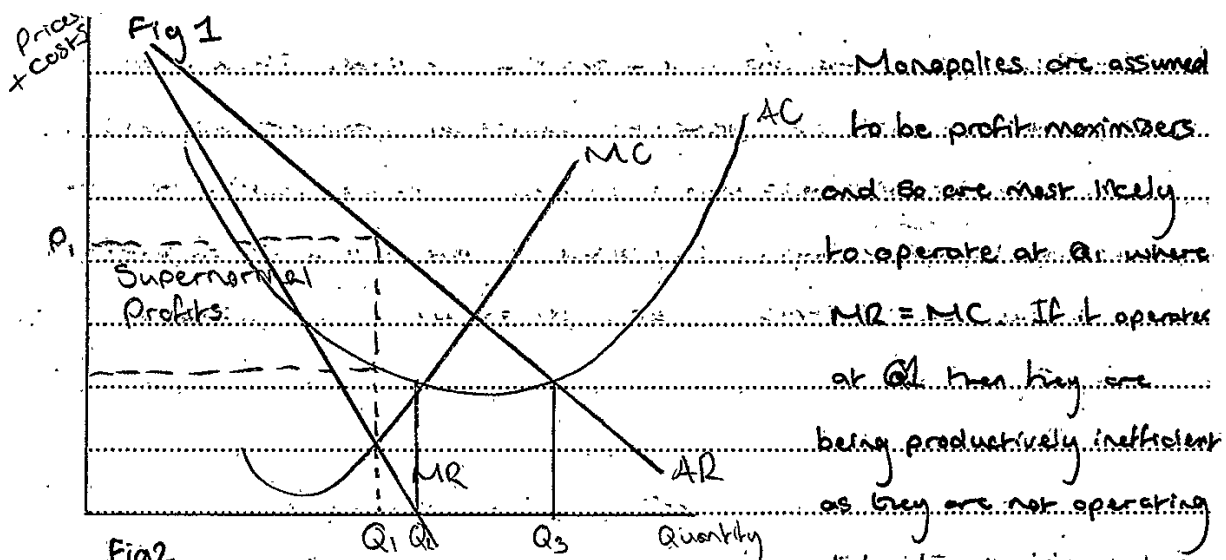
In conclusion, a monopoly firm can be both efficient or inefficient. A monopoly is likely to be more efficient in the long run as it invests its supernormal profits into innovation and R&D. However, a monopoly may experience a high degree of X-inefficiency as a result of little competitive pressures. They may also exploit their price making powers and so the Competition and Markets Authority may need to step in to ensure prices are not too high. Regulation is also required in natural monopoly markets such as water and electricity which is regulated by OFWAT and OFGEM. Finally, the case for monopolies being efficient is debateable, in reality, different monopolies have different objectives and if it is assumed monopolies who seek to profit maximise who are most likely to be inefficient as they seek to maximise self-interest and supernormal profit.

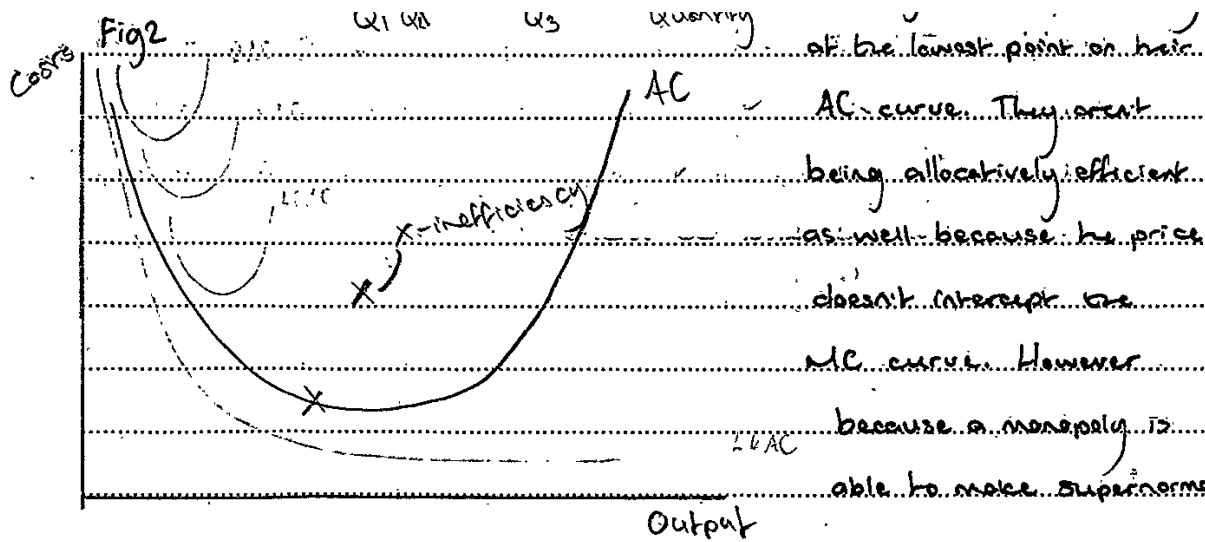
### Examiner commentary

The candidate shows a **Good** understanding of the market structure of monopoly in the opening paragraph. This is then extremely well developed into an analysis of the productive and allocative inefficiencies expected in such a market structure. The diagram is very well integrated and terms and concepts are used accurately. This shows both **Strong** knowledge and understanding and Strong analysis. The candidate begins to offer counter arguments and this evaluation builds to **Good** through consideration of a range of alternative firm objectives and potential dynamic efficiencies in the use of abnormal profit. A clear judgement is made. This is superbly developed by the consideration of efficiencies under conditions of natural monopoly. Taking the answer as a whole, knowledge and understanding, analysis an evaluation are all **Strong** and the top mark in Level 4 of the mark scheme was given.

### Exemplar 2

16 marks

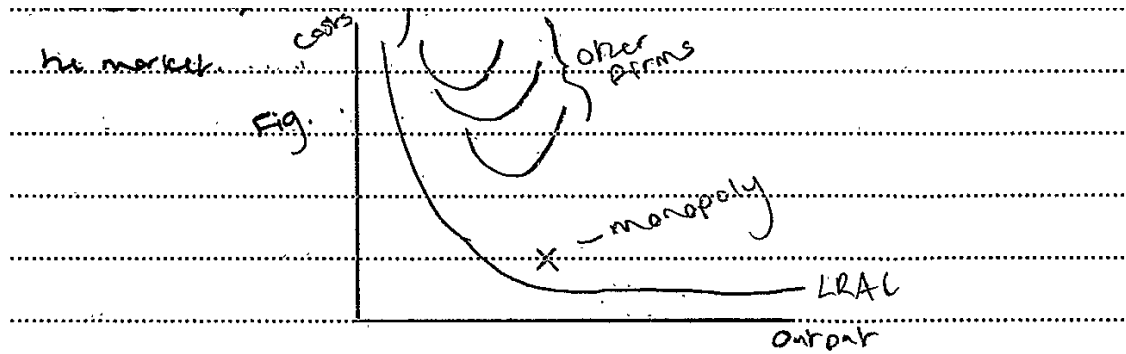




profits in the long run, unlike perfect competition or monopolists, it can do so because there are high barriers to entry e.g. strong established by branding ~~the~~ the monopoly or sunk costs could be really high to deter potential new entrants. So as a monopoly makes supernormal profits it is able to use them to innovate new products.

This is known as being dynamically efficient. Unfortunately due to the market being dominated by one seller a monopoly has little incentive to innovate as it has all the power in the market to set prices and control output so this means that in reality monopolies are dynamically inefficient because there is no threat of competition that forces the business to innovate. A monopoly, ~~can~~, because of no threat of competition, can actually be x-inefficient because once again it has no incentive to operate at the ~~lowest~~ <sup>maximum</sup> lower point on its AC curve because there is ~~no competitors taking away consumers~~ <sup>no competitors taking away consumers</sup> this is shown in figure 2.

Monopolies aren't very efficient at all because they are the biggest ~~the~~ seller in a market where no competitor can stop them, this is why monopolies won't ever be at its most efficient. However as a monopoly being the biggest firm of the market it ~~is~~ <sup>can</sup> actually be <sup>significantly</sup> more efficient than other firms in



With a monopoly growing in size to exploit ~~economies~~ <sup>economies of</sup> scale, it has set its ~~minimum~~ <sup>minimum</sup> LRAC curve lower than any small firm could achieve. So on Figure 3, it shows smaller firms in the market operating at their lowest average cost, being productively efficient, they are actually a lot higher than where the monopoly is operating on its LRAC. Suggesting that monopolies ~~are not really more efficient than~~ <sup>have much lower costs than</sup> small firms.

Overall monopolies aren't efficient at all because of the way the business operates and so the statement that Royal Mail was more efficient as a monopoly is partially true because although a monopoly has no incentive to operate efficiently, it still does operate much lower on its LRAC than small firms do and this is due to its size.

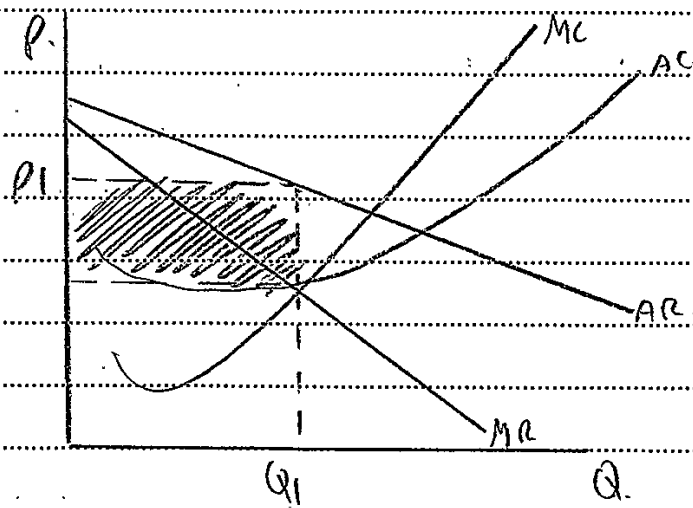
## Examiner commentary


The candidate addresses the question head-on from the start of the response by considering the productive and allocative inefficiencies of a monopoly market structure. The first diagram is not integrated into the analysis and there are inaccuracies apparent in the relationship between marginal cost and average cost. Allocative efficiency could be better explained as  $P > MC$  rather than 'price not intersecting MC' and the second diagram is not integrated into the analysis at all. At this point in the response, analysis was judged to be **Good** rather than **Strong** for these reasons.

## Exemplar 3

9 marks

A monopoly is a market structure where there is one dominant firm who has 100% market share as there are very high barriers to entry preventing other firms to join the market, and there are many buyers.



 = Supernormal profit

On the one hand, Royal mail may be more efficient when it was a monopoly because the firm may have been able to make supernormal profits even in the long run. As there is only one dominant firm in this market structure this shows that as they have 100% market share they are able to make a lot of profit as shown in the diagram Royal Mail will be making supernormal profits as the revenue is greater than the costs of the firm. This will create very high barriers to entry for other competitors making it impossible for them to join the market. As a result, Royal Mail may have been more efficient when it was a monopoly because it may have allowed them to gain as much profit and revenue as consumers would have no substitutes to turn to.

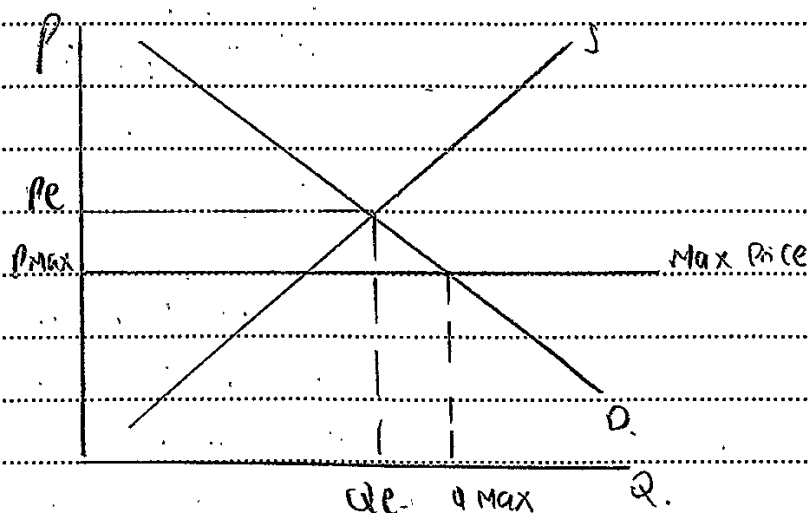
On the other hand, Royal Mail. Another reason why Royal Mail may have been more efficient as a monopoly is because consumers have no substitute firms to turn to. This suggests that monopolists can charge consumers at a good price as demand is likely to be price inelastic which suggests that an increase in price will not have a big effect on quantity demanded because consumers will have no choice but to go to that one firm. As a result, this shows that the firm may be diametrically more efficient as they would be able to use the supernormal



Beliefs that they are markets and invest in more innovative services making it even more difficult for firms to enter. However, in the long run, the government may not allow the monopolist to charge extremely high prices as this could exploit consumers and create inequality which could result in market failure leading to government intervention.

~~On the other hand, a monopoly may not be efficient for royal mail as if consumers are exploited then this could eventually lead to government intervention and market failure.~~

~~On the other hand, as a monopoly only consists of one dominant firm in the market this may not be efficient for royal mail as fixed costs can be really high. Fixed costs are the costs that remain constant throughout the production of goods and services. Monopolists may find it difficult to be the only firm operating in a firm where there is very high demand. As a result, this can impact the demand for their services.~~



On the other hand, a Royal Mail may not be as efficient as a monopoly as if consumers are exploited they will have no substitutes to turn to and this may lead to government intervention where the government will try to set a maximum

Price limit which will help to increase demand for the service and will prevent the Monopolist from exploiting the consumer. As shown in the diagram if a ~~maximum~~ maximum price is set on a good then this ~~will~~ will increase quantity demanded from  $Q_e$  to  $Q_{max}$  and decrease prices from  $P_e$  to  $P_{max}$ . As a result, this will help to increase demand for the good and it will prevent the consumer from getting exploited. However, in the CR this can ~~also~~ impact the profits made by the Monopolist.

~~Overall, although the Monopolist will be able to make profit~~

Overall, a monopoly will benefit a firm like Royal Mail as it will allow them to have 100% market share and make supernormal profits. However, although the monopolist may make supernormal profits in the SR in the CR they may not be able to if the government intervenes and sets a maximum price level. Therefore, the success of this decision depends on the extent of government intervention.

## Examiner commentary

The response begins with **Good** knowledge and understanding of a monopoly market structure, including an accurately drawn diagram showing abnormal profit. Rather than using this diagram to analyse the inefficiencies of monopoly, the candidate chooses to describe the conditions under which supernormal profit is made. There is no attempt to relate this to any of the different types of efficiency. It carries on to look at how supernormal profit may deliver dynamic efficiency, however. The response is a little confused and there is little development, so the analysis is judged to be **Reasonable** at this point. The crossed out material is not assessed and there is a maximum price diagram which does not seem to be relevant to the question. There is a paragraph that provides a consideration of how government intervention in the form of a maximum price might prevent the exploitation of consumers and this is judged to be **Reasonable** evaluation. The final paragraph is not relevant to the question. Overall, the structure of the response is not coherent but Good knowledge and understanding of aspects of a monopoly market structure and efficiency is apparent. Analysis and evaluation are both **Reasonable**. A mark towards the top of Level 2 of the mark scheme is given.

## Question 4

4\* Estonia continues to increase the role of market forces in its economy.

Evaluate whether operating a market economy is the best way to allocate resources.

[25]

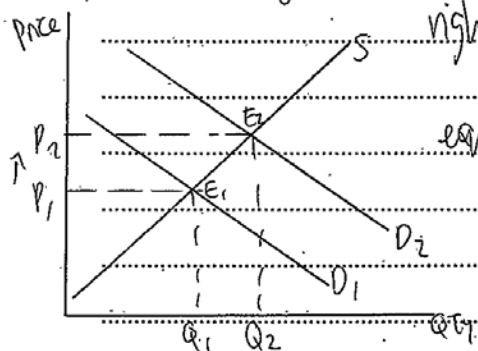
### Exemplar 1

25 marks

A market economy is one in which the price mechanism operates freely and there is little to no government intervention. Resources are allocated based on supply and demand conditions and this is controlled by the invisible hand, as stated by Adam Smith. On the other hand, a centrally planned economy such as North Korea has more government intervention and free market forces have less of an effect in allocating resources. A market economy tends to involve a greater degree of efficiency as individuals are driven by self interest and utility maximisation. This can lead to a more efficient allocation of resources and therefore less market failure, however this is not always the case.

In a market economy, the resources are allocated by the price mechanism which involves signalling and rationalising. For example, if there is a surge in demand for a

private sector good such as leisure, the demand curve will shift to the



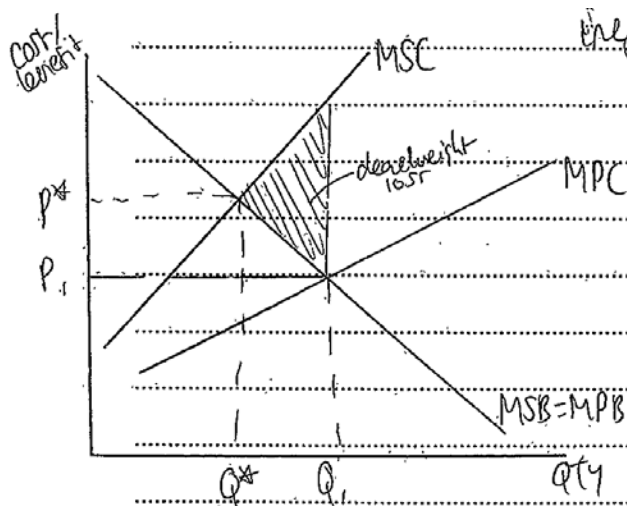
right from  $P.D_1$  to  $D_2$  and there will be an extension along the supply curve. The original equilibrium  $E_1$  with quantity  $Q_1$  and price  $P_1$  will change to a new equilibrium of  $E_2$  following an increase in price from  $P_1$  to  $P_2$  and an increase in quantity from  $Q_1$  to  $Q_2$ . This will lead to

a new allocation of resources, <sup>and</sup> however this may occur automatically in a market economy. This suggests that a market economy is the best way to allocate resources because the price mechanism adjusts rapidly to ensure consumer needs are met.

Moreover, a market economy is the best way to allocate resources because goods and services tend to be varied and markets respond to changes in consumer preferences and so there is greater choice. This can result in greater allocative efficiency as consumer satisfaction will be maximised. This contrasts to a centrally planned economy whereby consumers lack choice and the government decides what goods are produced, how they are produced and for whom. Therefore it could be argued that the basic economic problem is dealt with more efficiently in a market economy.

On the other hand, in a market economy such as Estonia which continues to operate in such a market, public goods may be underprovided. This is because there will be no fiscal incentive to produce such goods due to the free rider problem and the nature of public goods as non-rival and non-excludable. As a result, merit goods with positive externalities will be underprovided such as national defence and law and order. There ~~are~~ may also ~~only~~ be a lack of public healthcare and this can create inequality in society as ~~obtain~~ the poor have to pay for healthcare and private firms have the power to exploit consumers by charging high prices. This is particularly the case with monopoly firms whereby there is one seller of a good or service. Therefore market economies are not the best way to allocate resources, however this does depend on the type of resource, particularly public goods

market failure through  
 Furthermore, a market economy can create a misallocation of resources ~~is~~ as there is likely to be few government regulations. As a result, firms are more likely to pollute ~~in a firm~~



efficient production techniques as a result of ~~the~~ cost saving incentives. In a market economy, resources will be allocated at  $Q_1, P_1$  and this creates a deadweight loss to society shown by the shaded area. This demonstrates a loss in consumer welfare as

a result of a negative production externality as marginal social cost exceeds marginal private cost. This is far from the social optimum of  $P^*Q^*$  and ~~again~~ therefore suggests that a market economy

is not the best way to allocate resources. Despite this, in the real world, a market economy is likely to face some government intervention and so this misallocation of resources as a result of pollution and environmental degradation may be internalised by a tax which will bring the economy closer to social optimum and solve market failure. Therefore the extent to which a market economy is the best way to allocate resources depends on the extent to which there is government intervention or provision, if there is any at all. ~~the examples~~

Furthermore, in a market economy there is likely to be more unemployment than in a planned economy such as North Korea where the government can allocate jobs. This suggests that market economies may face greater inequality. However this is not always the case as the UK is a market economy with a relatively low gini coefficient of 0.34, suggesting a relatively high level of income equality and a benefits system is in place to improve <sup>income</sup> equality.

In conclusion, it can be argued that a market economy is the best way to allocate resources as the price signals act quickly and automatically, therefore allowing for greater flexibility in market forces. In a market economy there

tend to be a greater degree of incentivising behaviour and competition whereby firms and households ~~will~~ maximise ~~utility~~ profits and utility. However, there may be exploitative monopolies that charge a

unfair price well above the market equilibrium, therefore suggesting market economies do not always efficiently allocate resources. It is for this reason that a degree of government intervention is necessary to improve ~~or~~ the operation of a market economy, for example with ~~the~~ organisations <sup>such as</sup> like the Competition and Markets Authority and the Office of Fair Trade. In this case, a market ~~with~~ ~~be~~ economy will be the best way to allocate resources.

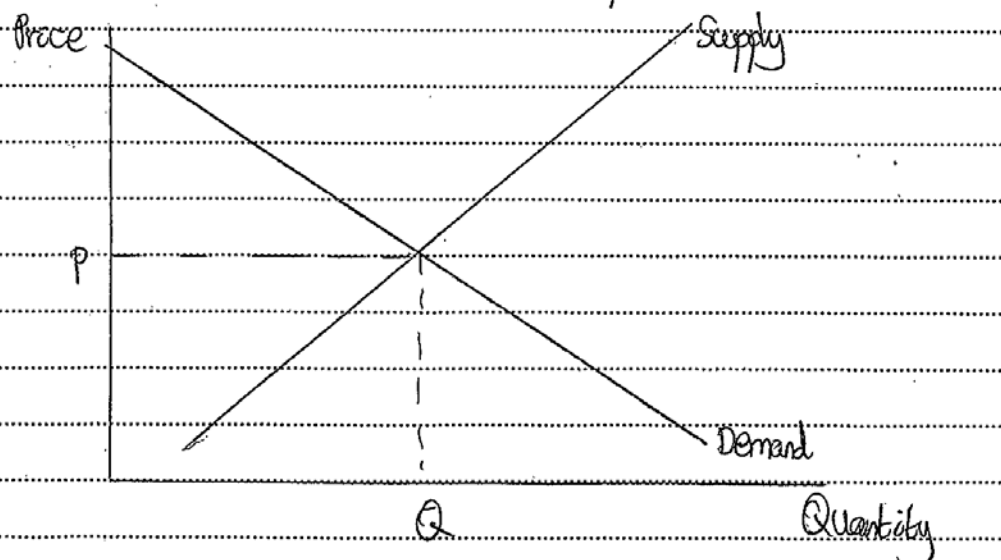
## Examiner commentary

The response begins with very clear knowledge and understanding of the characteristics of the market economy. The candidate does focus on the nature of resource allocation. This is developed, with the aid of a fully integrated diagram and in two separate paragraphs, into an analysis of how the market economy allocates resources optimally. This analysis is judged to be **Strong**. The candidate then offers evaluation of the way in which the market economy allocates resources by considering the under-provision of public goods and the over-provision of goods with negative externalities. The explanation is rich in terms and concepts and is supported by a fully integrated diagram. At this stage the evaluation is judged to be **Good**. A judgement about the need for government intervention to ensure a better allocation is made which raises the evaluation to **Strong**. Taken the response as whole, knowledge and understanding, analysis and evaluation are all **Strong** and the top mark in Level 5 of the mark scheme is given.

## Exemplar 2

19 marks

A market economy involves where resources are allocated by the interdependent forces of supply and demand (Adam Smith's "invisible hand"), this is also known as the price mechanism.

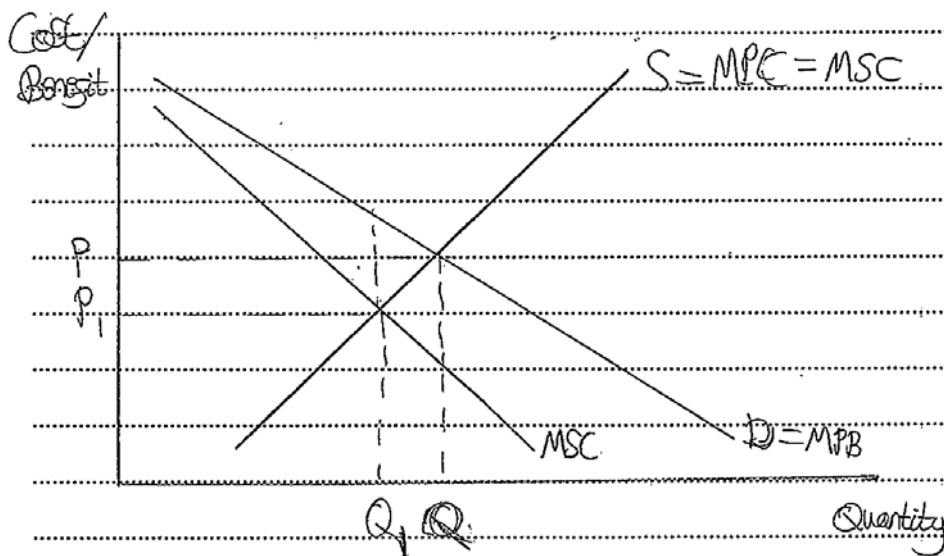


It can be seen via the very basic supply and demand diagram that prices will be set at market price of  $P$ , selling at a quantity of  $Q$ . This would mean that allocative efficiency would immediately be present, so the correct bundle of goods and services relative to consumer preferences would be allocated at the quantity  $Q$ ; this is where the Pareto optimum is met so it could be argued that resources are best allocated by the market economy because otherwise it would be impossible to make somebody better off here without making somebody else worse off. Greater competition could be assumed to be present because more products available in the market would have to be developed by firms to be different so that consumers will choose ~~more~~ for goods over other firms. ~~More competition~~ competition could lead to lower prices for consumers ~~no~~ because firms are as ~~if~~ ~~the threat of competition in the market leads to all firms~~ ~~KN~~.

There may be "an existence of consumer sovereignty in the market economy, simply because supply and demand interact to determine prices and no prices are set otherwise; this would mean that consumer preferences would be dictated by the market and not only ~~the~~ the most correct amount of goods and services would be produced for consumers, but the correct type of goods and services. This means that the market economy model is therefore also logical because it co-exists with democratic freedom; this is because consumers and firms are in charge of supply and demand and no central authorities can restrict on the supply of some goods, as the government would do.

via regulations in a ~~planned~~ centrally planned or mixed economy, such as that of banning sugary drinks in some countries, which has once been created by the likes of countries such as Denmark. This allows consumers to maximise their utility by ~~not only~~ ~~consuming~~ consuming whatever their preferences are.

However, the massive issue with the market economy of countries such as Estonia is that it entirely misses out markets for ~~provision~~ public goods. This can be because of the characteristic of non-excludability meaning that ~~public goods must be used by all around them~~ ~~every one~~ cannot the benefits of public goods cannot be excluded from anyone in at their point of consumption. The classic example is street lighting whereby if somebody were to pay for ~~the~~ street lighting, the free rider problem would occur as ~~even~~ other consumers would simply enjoy the benefits of the light. This means that consumers would not be willing to pay for ~~that~~ these goods and they would subsequently be an entirely missing market for them.



It can also be seen that the existence of the market economy could give rise to negative externalities



of consumption because as consumer sovereignty exists, consumers are able to fully consume whichever goods they wish and are likely to consume demand goods at quantity  $Q$ , when it would be socially optimal for them to consume the quantity of  $Q$  because this would ensure minimal external costs to society. In this case, consumers would experience a welfare loss as in under the market economy because of the market failure that could arise from consumer sovereignty meaning that

END OF QUESTION PAPER

goods are likely demand goods are likely to be consumed and create negative impacts to third parties such as more cigarettes leading to more people experiencing respiratory issues via passive smoking.

In conclusion, whether or not the market economy is best suited to allocate resources depend on the economy upon which it is operating. In an Estonia, it may work effectively because there is more room for it is more of a developing economy than the UK for example, so consumers may not decide to consume demand goods because there may be less of an abundance of demand goods to consume. A centrally planned economy may be a more effective because it would help prevent market failures via government intervention.

## Examiner commentary

The candidate begins their response by defining what is meant by a market economy and shows knowledge and understanding of the operation of a market drawing a demand and supply diagram. This is then developed into an analysis of how markets allocate resources and reference is made to allocative efficiency, consumer preferences and competition. Because these terms and concepts are stated rather than fully explained the analysis is judged to be **Reasonable** rather than **Good** at this point. What follows is an attempt to explain the implications of consumer sovereignty for resource allocation and the maximisation of consumer utility which raises the analysis offered to **Good**. The candidate then turns to the issue of public goods as a counter argument. The characteristics are clearly explained and the evaluation is, therefore, **Good**. The candidate offers a diagram to support their consideration of the implications of negative externalities, but this is incorrectly labelled. The conclusion does not include a valid judgement. Taking the response as a whole, therefore, knowledge and understanding, analysis and evaluation are all **Good** and a mark towards the top of Level 4 is given.

## Exemplar 3

9 marks

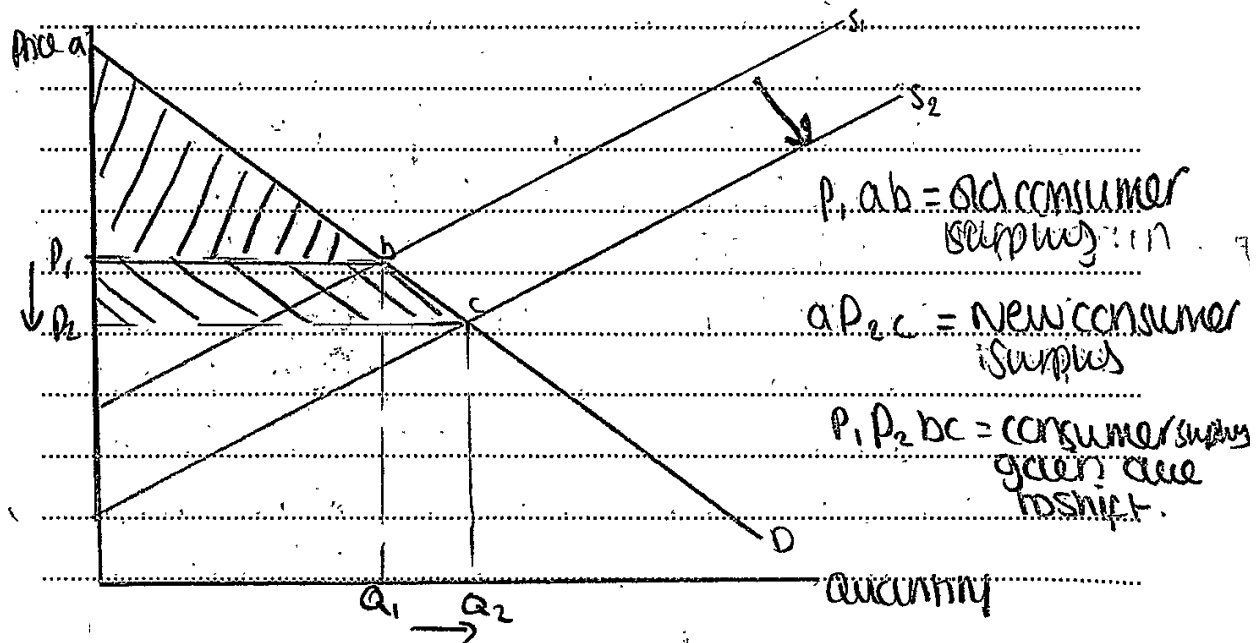
In this essay I will be evaluating whether operating a market economy is the best way to allocate resources.

A market economy is one which is controlled only by the market to which they allocate resources via the price mechanism, which looks at <sup>views</sup> the supply and demand. Also with no help from the public sector, the government.

Operating a market economy is a good way to allocate resources as ~~the~~ as it's the market the people controlling it, they're supplying their own wants. This gains consumer benefit as their demands would be met and heard. ~~the~~

This in turn could lead to more incentives of new businesses, <sup>insert</sup> as due to ~~there~~ <sup>there</sup> being no input of the government. There could be less regulations and laws opposing some ~~ideas~~ innovative ideas ~~firm~~ which would've had to stop such as collusion. Collusion is illegal ~~but~~ yet some benefits could come from two firms coming together gaining more market share by coming ~~to~~ one. Research and development could improve drastically via the collusion which could decrease asymmetric information of when consumers, producer or the government have a lack of information upon buying or selling a good. It could also make them cut costs and become more allocative efficient.

to where they're optimising their factors of production. And which they could reflect it in lower prices.



From the conclusions, firms was able to ~~the~~ lower prices due to more market share which reduces competition, research and development which could enable them to innovate and cut cost increasing consumer benefit. So from the graph we see  $S_1$  shift to the right to  $S_2$  illustrating increase in supply ~~which~~ ~~reflect~~ from  $Q_1$  to  $Q_2$  and decreases price from  $P_1$  to  $P_2$ . This in turn to increase consumer ~~benefit~~ <sup>surplus</sup> as from the decrease in price they save more money of a gain of  $P_1, P_2, bc$ .

However there's alternatives to effectively allocate resources and an ~~market~~ <sup>economy</sup> could work even better if say communal or mixed.

Communal economy is an economy totally controlled by the public sector, the government. This could be the best method for an economy. ~~They~~ <sup>now</sup> for example China is a communal economy.

and ~~the~~ <sup>now</sup> on a cyclical upward growth in their economy. Sometimes the government can see the bigger picture and know what best for the economy in terms of growth and how to be efficient when allocating resources, benefiting consumers as they're able to have economies of scale where with their increased output, their prices decrease.

On the other hand some may counter act that and argue ~~that~~ that a command economy can increase the chance of a dictatorship which would ~~completely~~ not benefit the economy but yet make them worse-off.

So that's where mixed economies are the better option as from it being controlled by both the market and the government, consumers needs and wants can be met and where market failure the government can intervene and correct it. By the control of both parties, the <sup>market</sup> market can concentrate on consumer wants while the public can focus on ensuring there's good allocation of necessities such as education, healthcare and benefits. It also reduces inequality as those not benefiting ~~from~~ private ~~market~~ market allocation have the government to fall back on with benefits so they can live and be able to get by.

Overall a market economy is ~~not~~ not the best way to allocate resources as it gives more room for market failures, misallocation

of resources and monopolies which could  
create and export consumed of necessities.

## Examiner commentary

The candidate begins with a simple definition of a market economy. The reasons offered as to why the market economy is a good way to allocate resources are, in the main, treated descriptively. However, the argument that a market economy would reduce costs and increase consumer surplus is, on its own, evidence of **Reasonable** analysis. The candidate chooses to look at the alternative to a market economy as evaluation rather than reasons why the market economy may not be the good way to allocate resources. Because of this, the evaluation offered is **Reasonable** rather than **Good**. Overall, the response does not consider the issue of resource allocation in depth and a mark towards the top of Level 2 is given.

## Question 5

- 5\* Firms usually take into account the income and cross elasticities of demand for their products when setting their prices.

Evaluate whether a firm which produces a product that has positive income elasticity of demand and positive cross elasticity of demand should lower the price of the product. [25]

### Exemplar 1

25 marks

Income elasticity of demand (YED) is the responsiveness of demand for a good or service to a change in real incomes. Cross elasticity of demand (XED) is the responsiveness of demand for good  $x$  to a change in price of good  $y$ . These measurements are very useful to firms as they tell them what affect competitors pricing and changing incomes will have on their product. A positive YED would make it a normal good where a rise in incomes equate to a rise in demand. A positive XED would make the good a substitute to another good.

Firstly, ~~it is assumed~~ as the good has positive YED, ~~rise~~ a fall in incomes will lead to a fall in demand. Therefore in times of falling incomes the firm should lower price to maintain demand. This is because consumers will face a relative change in their incomes to the price of the product and they will continue consumption.

However, this is dependant on the assumption that the relative changes are equal. If prices falls less than income consumption won't continue at the same level.

Furthermore, ~~as the~~ the product has a ~~sub~~ substitute, as XED is positive, the firm is incentivised to lower prices to attract consumers away from the other product.

to them. This will raise their revenue and depending on their costs, their profit too.

However, this is dependant on ~~the~~ how close of a substitute the product is. The more close the substitute the more effective the strategy to lower their price will be as the higher the relative change in demand to the change in price.

On the other hand, the firm shouldn't lower price as they don't have/don't know the price elasticity of demand (PED) for example, even if the XED and YED are positive, the PED may be inelastic, meaning that a ~~change in~~ lowering of price will lead to a fall in total revenue. In this scenario, the firm would be better to increase prices to increase total revenue. For example, cigarettes will have both positive XED and YED as there are many similar brands and it is a normal good. However their PED is ~~not~~ inelastic ~~and~~ due to it being an ~~addictive~~ addictive substance. Therefore lowering price will lead to a fall in total revenue.

However, this can be evaluated as it is dependant on which elasticities would have a greater impact. The sum of change in revenue from ~~raising~~ XED and YED when raising price could outweigh the change from PED meaning that in fact lowering price would be more effective.

Furthermore, we don't know the aim of the firm. It is dependant on what their objectives are. If they aim to profit maximise

then lowering price may be a good idea, as the same for with sales volume and sales revenue. However, if welfare maximisation is the motive then it may not be best to lower price as it could decrease the total welfare.

In conclusion, to know whether or not the firm should lower prices based solely on the XED and YED is difficult to say. However, I do believe it theoretically can increase revenue. But, it is dependant on PED. Most importantly it is dependant on the firms objectives, and why they wish to change the pricing.

\* Alternatively, the firm could invest in their product to turn it into less of a substitute and therefore less sensitive to changes in prices of competitors. Moreover, if their objective was to increase profit a better quality product may increase sales and maybe even profits.  
~~However, this may be~~

## Examiner commentary

Correct definitions of income and cross price elasticity are offered at the start of the candidate's response, showing **Good** knowledge and understanding. The candidate goes on to explain the implications for demand for a good with a positive income elasticity of demand of a fall in income and how a reduction in price in this situation may be an appropriate response by firms. This is then counter-balanced with an undeveloped point of evaluation. The implications of a positive cross elasticity of demand are then considered and related to the appropriateness of a reduction in price. Again, a single and undeveloped point of evaluation is offered as a counter balance. The evaluation becomes stronger as the importance of price elasticity of demand for pricing decisions is considered in detail. The response includes a judgement about the importance of the objectives of firms. Taking the response as a whole, this is a well-focused response to the question with **Strong** knowledge and understanding and analysis and evaluation which are both **Strong**. The top mark in Level 5 of the mark scheme is given.

## Exemplar 2

16 marks

A positive income elastic product would suggest that this product is either a luxury or a normal good and a positive cross elastic good would suggest that the good is a substitute good.  
As the product is a normal or luxury good then in times of low income, then the good is less likely to be demanded and



most likely can easily be substituted.  
 A reduction in price for this good, as it is a substitute, means a reduction in the quantity demanded of the other good being compared, which means that lowering the price of this positively cross elastic product is most likely <sup>going to</sup> increase demand for this product.

As this product is a luxury ~~or~~ normal good then lowering the price will also increase demand regardless of what income is because consumers on a low income might buy this product if the lowering of the price matches the lowering of their income.

However if the XED of this product is something like 0.25 then a ~~the~~ reduction in price ~~might~~ will only increase demand minimally and so might not be worth reducing the price to gain a few extra customers.

On the other hand if incomes rise by, for example, 0.5% then it would also be better to keep prices where they are to potentially maximise revenue gained from extra demand.

Overall lowering the price in this situation would be a good idea, as it will attract more demand. However this depends on how income elastic the product is as well as cross elastic as low elasticities would see a minimal change in quantity demanded and high elasticities would see significant increases. Price elasticity also needs to be taken into account because a price inelastic product wouldn't see much change in demand when the business lowers the price.

## Examiner commentary

The candidate clearly understands the two elasticities and is able to analyse how the given values would justify a reduction in price. The analysis is straightforward but clear and focused and, therefore, considered to be **Good** for this question. Similarly the evaluation is also relatively straightforward but focused and developed. There is no judgement offered, however. Knowledge and understanding throughout the response is **Good** and analysis is **Good** rather than **Strong**. However, because the candidate offers more than **Reasonable** evaluation the response can be given a mark at the bottom of Level 4 of the mark scheme.

## Exemplar 3

9 marks

Income elasticity measures the responsiveness of change in quantity demanded over the change in income. Whilst cross elasticity of demand measures the responsiveness of a change in quantity demand for a good / service given a change in price of another.

Products that have an <sup>positive</sup> income elasticity are said to be normal goods. This means as income increases demand for the certain good ~~also~~ decreases this is because consumers have a higher income. This could suggest that a firm should lower ~~their~~ their prices because their goods are income elastic. However it also depends on whether the YED is greater than or less than one. This is because when YED is positive and less than 1 it means that it is a normal inferior. This means that income will increase however <sup>demand</sup> consumption of the product will not increase at the same rate. If the YED is more than 1 it means that the product is a normal luxury meaning that when income increases demand is ~~proportionally~~ more. This means that the firm should take into account the whether the number is greater or less than one. Meaning that price may not be the deciding factor and that the type of firm ~~could also produce a product that has~~ a positive cross elasticity of demand. good it is also play a role.

Firm should also lower the price of the product if the cross elasticity of demand is

positive. This is because it means that the product has substitutes that are strongly related. The substitutes are highly dependent on value. If  $XED > 1$  it means that the products are strongly related meaning that lower prices will be effective as it may not have a distinctive feature that sets it apart from other competitors. However, when  $XED < 1$  it means that the products are not strongly related meaning that a firm could possibly charge higher prices. However, when  $XED = 0$  it means that there is no relationship between the goods. This could allow firms to charge higher prices or keep prices the same because the price of other products will not have an effect on demand.

Overall, the firm could lower the price of the product based on the fact it has a positive income elasticity of demand and a positive cross elasticity because it could allow firms to achieve one of their main objectives which is profit maximisation. They could use this to invest in R&D or use it to innovate and differentiate their products and this could increase revenue further. However, the firm should consider what type of market they are in. If they are in a competitive market, they should use competitive pricing rather than predatory pricing as this could lead to a price war which would not be beneficial to any of the firms in the

industry. firms should also consider increasing sales of their products via non-monetary ways such as promotion. Also firms need to also take into account how their products are being distributed. If online consumers have greater choice and knowledge meaning they may pick the company with the lowest price. This may not always be the case as some consumers are loyal.

## Examiner commentary

The response begins with correct definitions of income and cross elasticity of demand. The second paragraph of the response shows incorrect analysis of the impact of rising incomes on the demand for a normal good. The analysis of the implications for price of a positive cross elasticity of demand is better, but still only **Reasonable**. Some of the evaluation offered is not relevant to the question and is, therefore, only **Reasonable** in its focus on the question. Taken as a whole, knowledge and understanding of the usefulness of and significance of the given elasticities is **Good** but the analysis and evaluation are not fully developed in the context of the question and are, therefore, both **Reasonable**. A mark at the top of Level 2 of the mark scheme is appropriate for this response.



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