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Examiners' Report June 2024

IAL Economics WEC11 01

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Introduction

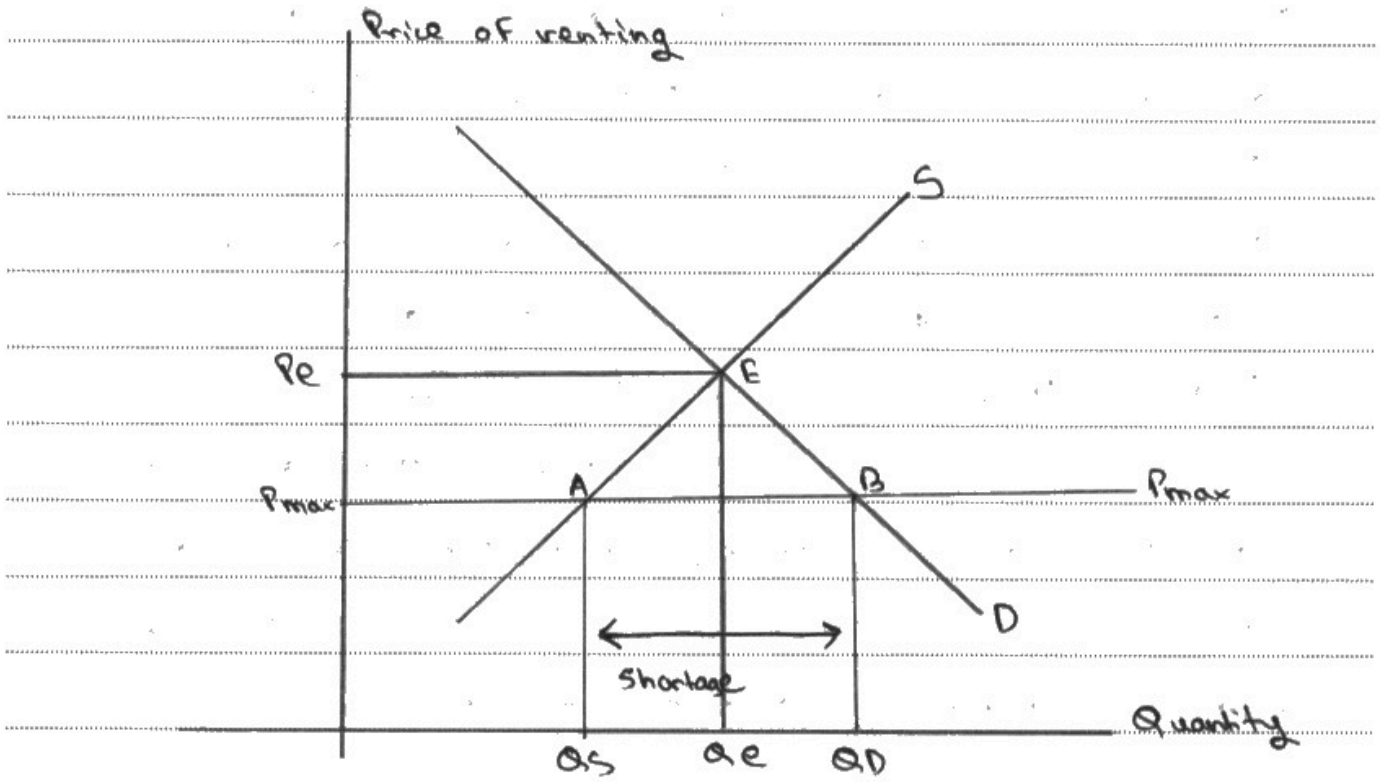
The standard of work seen in this series for the Markets in Action unit has been impressive. In Section A, the multiple choice section, candidates performed best on the questions on free goods, complementary goods and renewable and non-renewable resources. Candidates struggled more on the questions on tradeable pollution permits, varying price elasticity of demand along a demand curve and price elasticity of supply. Section B, the short answer section, saw some mixed performance on questions. For Question 7, the diagram saw most able to draw supply and demand with the maximum price below. The common omission was to miss off the shortage or excess demand. On Question 8 many struggled with the concept of diminishing marginal utility. Question 9, on public goods focused in on non-excludability and non-rivalry. Many struggled to distinguish between the two. Question 10 saw most able to calculate the income elasticity of demand. Question 11 saw most able to draw the correct diagram and identify the areas of consumer surplus although many missed the definition mark. Section C, the data response section is based on information provided in the Source Booklet, in this paper on the market for rice. Candidates could typically access at least one mark on Question 12(a) to show knowledge of capital goods. Question 12(b) saw most candidates able to correctly draw the diagram to show demand increasing. They often missed the application marks by referring to the price change. Most gave two correct reasons for the price rise. Question 12 (c) saw many able to identify correctly the examples of price elastic and price inelastic. On Question 12(d), it is important to explicitly explain third-party effects of external costs associated with rice growing. On Question 12(e), candidates looked at the impact of a subsidy, most were able to define this and draw the diagram accurately and many looked at the impact on two or three economic agents. Those able to achieve a higher score used their diagram in the analysis. Section D, the essay section, offered candidates the opportunity to choose between two questions. Candidates tended to attempt Question 14 and typically performed better on this question on the introduction of an indirect tax on aviation. Question 13 on production possibility frontiers was less popular and had a slightly lower mean score. In both cases, the knowledge of the Economics was sound but candidates struggled in applying it to the context of the question. Another challenge was the level of analysis. Candidates often struggled to fully develop the chain of reasoning. Evaluative comments were often made and whilst some offered supporting evidence and linked to the context, many were unable to offer a logical chain of reasoning. Diagrammatic analysis on the work from the stronger candidates was accurate and was integrated with their written analysis. They would not only draw the diagram accurately, but talk about what they learnt from it in their written explanation. This enabled them to consistently achieve within the top level. Most candidates were able to complete the paper in the time available. We did, however, see several unfinished or very brief essays suggesting that some candidates had not planned their time well. The performance on individual questions is considered in the next section of the report. The feedback on questions shows how questions were well answered and also how to improve further.

Question 7

With house rental prices becoming unaffordable in Brisbane, Australia, there was pressure on the local government to introduce a maximum price. Candidates needed to draw a diagram to show the impact of introducing a maximum price to make rents more affordable. Most could draw the supply and demand diagram and picked up the first mark. Some confused the maximum price with minimum price. The maximum price needed to be below the equilibrium price. The next aspect was frequently missed off. This was to show the new quantity demanded and supplied. The final mark for the excess demand, or shortage was less commonly offered.

This response has achieved full marks. Remember that all marks can be awarded to the diagram so the written response was not required.

With reference to the house rental market in Brisbane, draw a diagram to illustrate the introduction of a maximum price for renting a house.



There may be excess demand ~~for renting~~ in the house rental market in ~~Australia~~ Brisbane, Australia due to the introduction of a maximum price.

ResultsPlus
Examiner Comments

The first mark is awarded for the original supply and demand curves.

The second mark is for drawing the maximum price below the equilibrium price.

The third mark is for identifying the quantity supplied and demanded, QS and QD on the diagram.

The fourth and final mark is for identifying the size of the shortage when using the arrow.

ResultsPlus
Examiner Tip

Remember that when drawing a maximum price it goes below the equilibrium price.

It is a minimum price that goes above the equilibrium price.

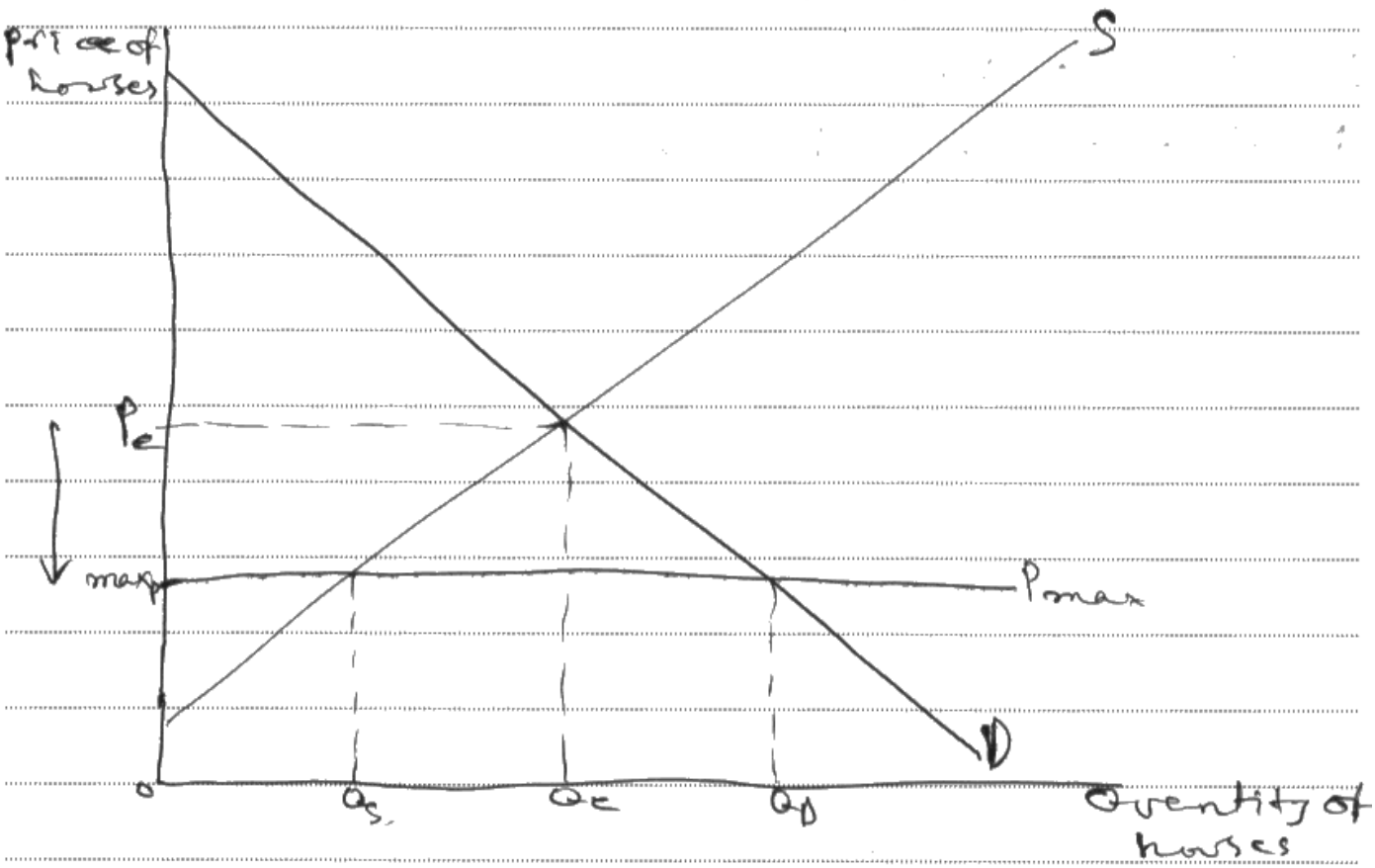
On questions using the command word draw there will never be marks awarded for a written definition, as is offered in this response. There will also be no application marks attached to the values, as offered here.

The diagram is largely accurate with one aspect missing. The size of any shortage or excess demand.

This response therefore achieves three out of four.

With reference to the house rental market in Brisbane, draw a diagram to illustrate the introduction of a maximum price for renting a house.

Maximum Price is a price ceiling above which firms cannot sell at.



The Australian government introduce maximum price, as the house rent increased by 14.6% to $480 per week.

ResultsPlus
Examiner Comments

The response achieves the first mark for the original supply and demand curves.

The second mark is for the maximum price set below the equilibrium price.

The third mark is for showing the new quantity demanded and quantity supplied, QD and Qs.

ResultsPlus
Examiner Tip

All marks can be awarded for the diagram, no accompanying commentary is needed.

Question 8

Diminishing marginal utility was often not well understood. Whilst most could access the application mark many confused diminishing marginal utility with decreasing marginal utility and struggled to access any knowledge or analysis marks. The concept of diminishing marginal utility needs more work, and getting candidates to consider diminishing marginal utility related to all you can eat buffets and breakfasts would be sensible.

This question proved challenging for many as there was a significant number with a misconception about what diminishing marginal utility is. Many identified it as where total utility fell but it is where marginal utility falls. The utility is rising but at a slower rate. This response however accesses full marks as they do understand the concept.

With reference to hotel breakfasts, explain why the above information illustrates 'diminishing marginal utility'.

Diminishing marginal utility refers to the extra utility a consumer receives by consuming an ~~extra~~ additional unit of a good or service is decreasing. Most people, 80% of hotel guests ~~fell~~ feel full after visiting the breakfast buffet three times, so by visiting on the fourth time, they ~~with~~ are getting less satisfaction, thus total utility will fall, and therefore, they won't go on the fourth time.

ResultsPlus
Examiner Comments

The first mark is awarded as the learner is clear that it is the extra utility received in consuming an extra unit that decreases.

The second mark is awarded for reference to the stem in terms of 80% visit three times.

The third mark is to them becoming full.

The final mark is for explaining why they do not return for the fourth bowl.

ResultsPlus
Examiner Tip

Diminishing marginal utility is where utility rises but at a slower rate.

Question 9

The question focused on public goods and by looking at their understanding of the two concepts that make up a public good made the question more challenging for learners. The ability to explain non-excludability was more limited as many just said it was not excludable. This just rearranged the words and more was needed. Non-rivalry was better understood. Whilst one mark was for information listed from the stem the second mark needed an explanation relevant to ships' use of lighthouses. Many struggled to access this final mark.

This question tested learners understanding of non-excludability and non-rivalry. It showed that whilst most could identify that this makes good public goods some struggled explaining the difference between the two concepts.

This response though has been able to access full marks.

With reference to lighthouses, explain the difference between 'non-rivalry' and 'non-excludability'.

Non-rivalry means that the consumption of 1 person doesn't effect the consumption of others

Non-excludability means that no one can prevent other people from consuming that good.

Since, there are 24,300 lighthouses globally, ~~no one can~~ ~~if 1 person~~ ~~if one~~ no one can prevent a ship from using lighthou

Therefore lighthous has a characteristic of non-excludability.

Thus, if one ship use lighthouse, the other ship still able to use it as well so it is non-rivalry.

ResultsPlus
Examiner Comments

The first mark is awarded for understanding that non-rivalry means the consumption of one person does not affect the consumption of another. The second mark is for understanding that non-excludability is where people cannot be prevented from consuming. The third mark is for reference to the stem and the number of lighthouses globally. The final mark is for illustrating with the example why ships cannot be excluded or there is not rivalry between ships.

ResultsPlus
Examiner Tip

Many just said non-excludability is where the product is not excludable. This is essence just repeats the key word. It is important to use different words to represent the idea of people not being prevented or stopped from accessing a good.

Question 10

Most learners could calculate the percentage change in quantity demanded and the percentage change in income. Fewer could then put these together to calculate the income elasticity of demand to be awarded the available marks.

A small mistake has costs this response the final mark.

Ceteris paribus, calculate the income elasticity of demand for new cars.
Show your workings.

Income elasticity of demand =

$$\frac{\text{Percentage change in quantity demand}}{\text{Percentage change in income}} \times 100$$

$$\frac{\frac{23.56 - 21.52}{21.52}}{\frac{114029 - 106837}{106837}}$$

$$= \frac{0.094}{0.067}$$

$$= 1.402\%$$

ResultsPlus
Examiner Comments

The response does not have the correct answer so cannot achieve full marks. It is the inclusion of the percentage that means they cannot achieve full marks. Having 1.402 means they can achieve the three marks. They have the correct formula and the calculations of changes in quantity demanded and income are completed – although decimals rather than percentages.

ResultsPlus
Examiner Tip

Remember that whilst the percentages are used on the top and bottom of the calculation the answer is not a percentage.

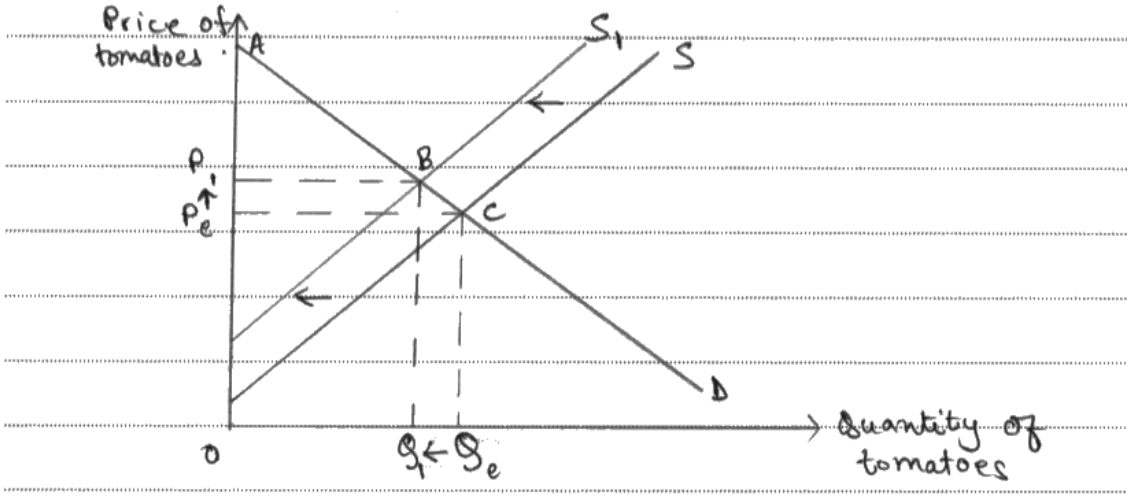
Question 11

The question explained that there had been a reduction in production, most worked out that this resulted in a reduction in supply. The question asked for illustration using a diagram which most did correctly. Most identified areas for consumer surplus correctly before the change in supply.

The response achieves full marks. They have correctly drawn the diagram. Defined consumer surplus and identified the original and new consumer surplus as well as the change in consumer surplus.

Ceteris paribus, explain the likely impact of this change in supply on consumer surplus in the tomato market.

Illustrate your answer with a supply and demand diagram.



Consumer surplus is the ~~amou~~ difference between the price consumers are ~~ready~~ & willing to pay for a good or service and the price they actually pay. Due to fall is supply, consumer surplus has ~~fo~~ decreased from ACP_e to ~~A~~ ABP, by P_1BCP_e.

ResultsPlus
Examiner Comments

The diagram sees supply shifted correctly. Consumer surplus is defined accurately. The original and new consumer surplus are identified. The change in consumer surplus is also offered although full marks are already awarded.

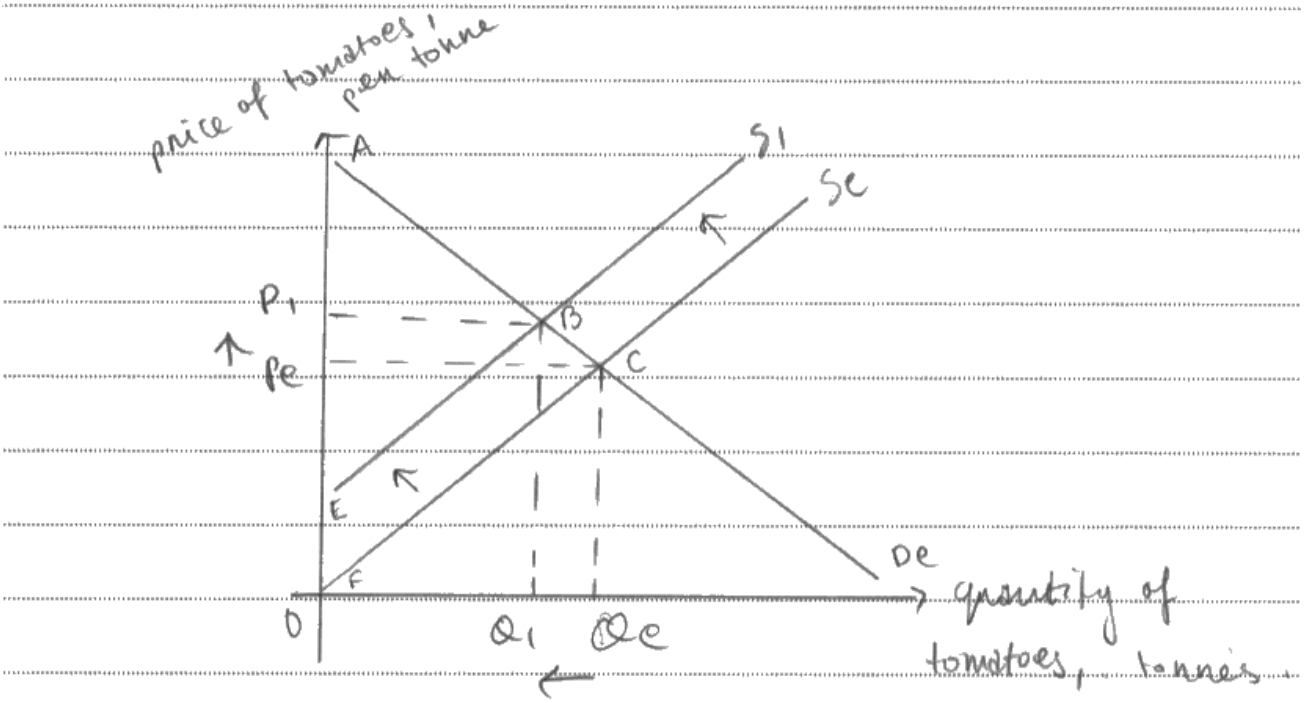
ResultsPlus
Examiner Tip

When asked to illustrate it is essential to draw the requested diagram.

This sort of response was common. They accurately draw the diagram showing the correct shift in supply and identify the original and new areas of consumer surplus. What they fail to do is define the key concept, consumer surplus.

Ceteris paribus, explain the likely impact of this change in supply on consumer surplus in the tomato market.

Illustrate your answer with a supply and demand diagram.



Consumer surplus ~~was~~ decreased from ACPe to ABP1.

ResultsPlus
Examiner Comments

The diagram correctly shifts supply to the left for the first mark. They then correctly identifies the original consumer surplus and the new consumer surplus to access the two application marks.

ResultsPlus
Examiner Tip

A definition of consumer surplus is required with this question.

Question 12 (a)

Most could access at least one mark and many could access two marks. Some focused on the idea of them being man-made aids to production, others on examples and many looked at what they are used to produce.

The response gains the two marks. One for an example and one for what they are used for.

12 (a) Define the term 'capital goods'. (Extract C, line 5)

(2)

Capital goods means the materials, equipments and tools used in the production of other goods or services. ~~Productio~~ producing one kilogram of rice requires 2500 litres of water. Rice production uses over 33% of the world's irrigation water.

ResultsPlus
Examiner Comments

The first mark is for reference to equipment and tools. The second mark is for reference to production of goods and services.

ResultsPlus
Examiner Tip

Capital goods may be used in the production of both consumer goods and other capital goods.

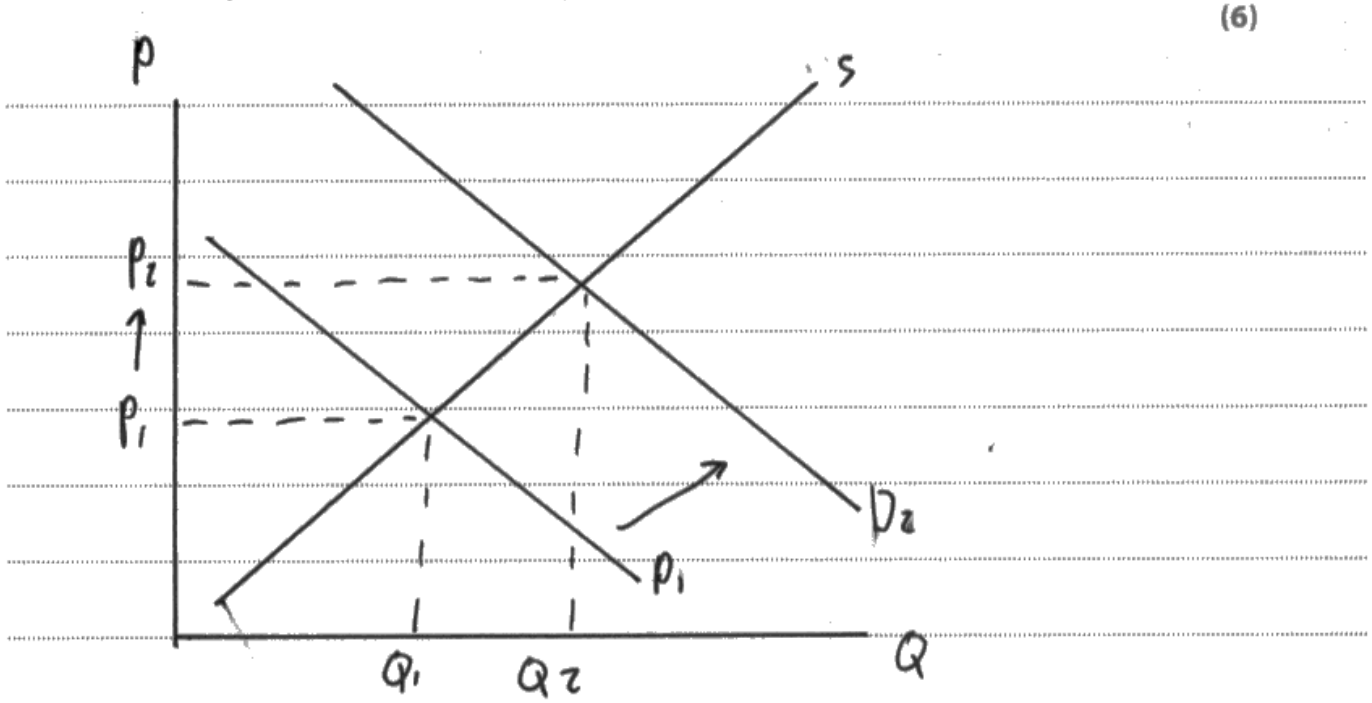
Question 12 (b)

The response needed learners to explain two reasons the price of rice increased. Pleasingly most were able to identify the reasons to access the two application marks. The diagram was worth three marks with only the demand side needing to be shifted. With only one shift reference to the size of the price change was needed. This was the mark most likely to be missed.

The response access full marks. They achieve the three marks available for the diagram. They gain two marks for the reasons but also use the data to show the percentage change in price to gain the final mark.

Illustrate your answer with a supply and demand diagram.

(6)



One reason why rice prices increased is due to a rise in population. In Africa there was a 2.45% rise in population and 0.83% rise in Asia. This rise shifts demand of rice from D_1 to D_2 as there are more consumers of rice in the world. This led to a rise in price from P_1 to P_2 which could show the 19.6% price rise in rice from July 2022 and July 2023.

Another reason is due a rise in income. Incomes in Asia rose by 4% and 3.85% in Africa. This means that purchasing rice now takes up less % of their income as a percentage. A signal is then sent to rice producers to increase price. As a result, price rises as rice firms took to maximise their profits.

ResultsPlus
Examiner Comments

The two knowledge marks are achieved as the original and new equilibria are shown. The two analysis marks are achieved as they make reference to the percentage rise in population and income in Asia and Africa. The final application mark is awarded for reference to the 19.6% change in price between July 2022 and July 2023.

ResultsPlus
Examiner Tip

Explicitly using the percentages from the data about income, population growth and the price change help secure the marks.

Question 12 (c)

Figure 2 provided the price elasticity for 4 food groups. For each food group learners needed to identify whether it was price elastic or price inelastic and then define each of these terms. No marks were awarded for defining price elasticity of demand. These marks were for understanding price elastic and price inelastic.

The response correctly identifies the correct elasticity of demand for each to gain the two application marks. But no attempt to define these is made so the knowledge marks are not achieved.

(c) With reference to Figure 2, explain whether demand for **each** of the four selected food groups is price elastic or price inelastic.

vegetables = Inelastic

fish = Inelastic

meat = Inelastic

Rice = Elastic

ResultsPlus
Examiner Comments

The first mark is awarded for making it clear that vegetables, fish and meat are inelastic. The second mark is achieved for identifying rice as elastic.

ResultsPlus
Examiner Tip

Defining price elastic and price inelastic will enable the knowledge marks to be accessed.

The learner has accessed full marks for this question. They have used the data and clearly explained what price elastic and price inelastic are.

(c) With reference to Figure 2, explain whether demand for **each** of the four selected food groups is price elastic or price inelastic.

(4)

The PED values for vegetables, fish and meet is between 0 and 1 which means it is price inelastic. This means that the percentage change in quantity demanded for these food ~~related~~ relatively groups is less ~~significant~~ to the percentage change in price, so consumers will still demand and purchase these food even if price increases. However the PED for rice is ~~price elastic as~~ greater the one 1, making it price elastic. This means that the percentage change in quantity demanded for rice is more relatively to the percentage change in price. So when the price increases, the demand for rice decreases. This may be because rice is not considered a staple daily food, or because there are cheaper substitutes. like bread, pasta or noodles.

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Examiner Comments

The first sentence achieves both marks. It identifies vegetables, fish and meat as inelastic and that this is because the values are between 0 and 1. It then explains that rice is greater than one making it elastic so again accesses both marks.

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Learners only needed to identify one example for inelastic rather than the three given in the data.

Question 12 (d)

Learners needed to examine two external costs associated with rice production. Extract B identifies a number of external costs they could identify. Most people identified the 12% of global methane emissions or 1.5% of greenhouse gas emissions. Where learners struggled was to link this to global warming and then to how it impacts people such as flooding or wildfires affecting homes. Extract B also identified the water use at 2500 litres or 33% of world irrigation water. Once again it was more of a struggle to explain the impact on third parties. For example leading to less water to the production of other crops or on reducing available drinking water. The use of insecticide is linked to the 44% decline in the bee population. Once again this needs to link to the impact of this. For example, reduced honey production and revenue, or reduced cropped yields due to less bees pollinating. Examine requires evaluation. Many referred to 90% of rice being consumed in the country it is grown reducing the external costs. Others looked at the difficulty in calculating the size of external costs or external benefits associated with rice production.

This response has accessed full marks. Having identified two external costs from the extract. The third party impacts are expanded. They then offer an evaluative point which is developed to achieve the two evaluation marks.

(d) With reference to Extract B, examine **two** external costs associated with rice production.

(8)

External Cost is that the negative impact on third parties

To produce rice will have many External Cost like "Rice production Contributes 12% of global methane emission and 1.5% of all greenhouse gas emission" this is means that these harmful gas will cause the global warming that increase the global temperature, this will led to the ice melt, caused sea level rise that destroy citizen house so many people will be homeless also it will occur many extremly wheather like flooding that destroy agriculture that many farmer will loss their job and also destroy animal habitat that led them died and decrease the bio diversity

In another hand, "Rice growers often use an insecticide to protect the crop from insect, In USA these insecticides Contributes to a 44% decline in the bee population in 2020 means that less bee will pollincate the flower, this impact will influence the agriculture because the bee can help them to increase the production, so that the farmer for agricalture production will decrease so they will be loss their job, also some tree and flower eat by animal because of the less pollinate these tree and flower will died the food for animal will decreanse and finally died for hugny. effect the bio diversity

However these will not happend because if the magnitude of the greehouses gases is small it will not have a significan influence on global warmig so it is ineffective ~~it~~ and the greem house gases it is difficult to measure. also to happen the global warmig need a long period if it is just happened in a short term it will be ineffective.

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Examiner Comments

One knowledge mark is awarded to the definition of external costs. The first application mark is for explicit reference to the greenhouse gas emissions. This is then linked to global warming for the knowledge mark and the analysis mark is awarded when they link this to ice melt, which is linked to sea level rises. The second application mark is for reference to the bee population 44% decline. This is linked to the impact on farmers production and employment of farm workers to gain the knowledge and application mark. A number of evaluative points are made to pick up the two evaluation marks. For example difficult to measure and consideration of short and long term.

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It is important to look at what third party is affected and how.

Question 12 (e)

The question was well answered. Most could define, draw the diagrams and talk about the impacts effectively.

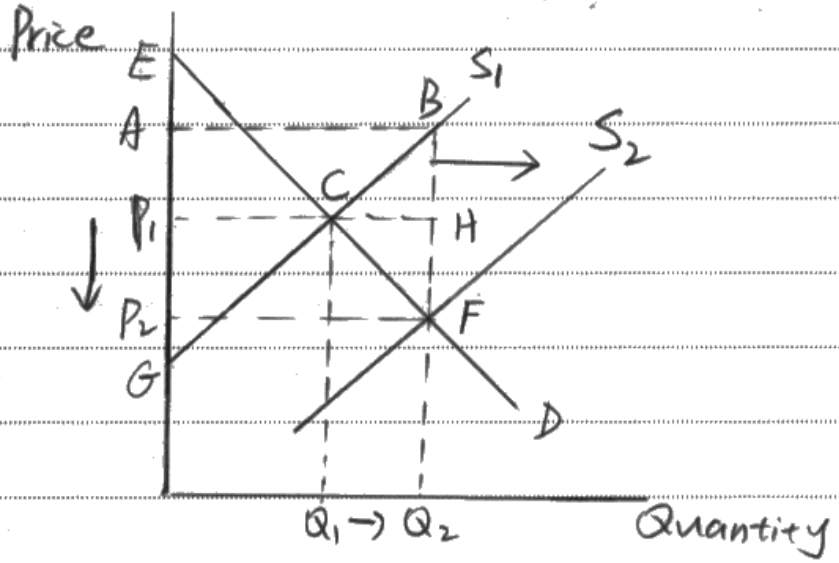
Impressively this response has achieved full marks.

(e) With reference to Extract C, discuss the benefits of subsidies paid to rice growers.

Illustrate your answer with an appropriate diagram.

(14)

Subsidy is a cash grant given by government to encourage the consumption and production of a particular good. In 2021, the Indian Government spent $6.9 billion on subsidising rice production. It can help farmers reduce their costs of rice production. There are various benefits of these subsidies paid to rice growers.



As shown in the diagram, with subsidies, the reduction in costs of rice production shifts supply curve for rice from S_1 to S_2, resulting in increase in output from Q_1 to Q_2, and the decrease in price from P_1 to P_2. Also, it can increase producer surplus from P_1CG to ABG, as well as increase consumer surplus from ECP_1 to EFP_2. The total government spending on subsidies can be represented by $ABFP_2$. The incidence of subsidy on producer is P_1P_2FH, and the incidence of subsidy on consumer is $ABHP_1$.

These subsidies are used by farmers to invest in capital goods and to purchase fertiliser and water used in the production. Increase in capital goods means farmers can produce more output of rice in a fixed than before, so there are more rice sold for domestic consumers to meet great demand for rice within the Indian economy which has a large amount of population. The rice can also be sold for foreigners to increase Indian value of exports. Indian exports rice to 150 countries. Also, the investment in capital goods can encourage the innovation of process, increasing the quality of rice and thereby increasing the non-price competitiveness in the global market. The process innovation can also improve the productivity of rice production, reducing costs of production and increasing price competitiveness in the global market. What's more, the purchasing of fertiliser and water by subsidies can also reduce costs of production for rice farmers. The increase in fertiliser and water can promote the increase in output of rice.

In addition, the increase in sales of rice can improve Indian Government budget. The increase in quantity supplied of rice can increase the exports of rice and meet more demand for rice for domestic consumers. It will increase tax revenue for Indian Government due to indirect tax on rice, improving the fiscal position of Indian Government.

However, government failure may occur. It may be the excess administrative costs, meaning that the costs on implementation, monitoring and enforcement of subsidies may be more than expected amount of Indian Government. Also it is difficult for Indian Government to target the correct size of subsidies to correct the market failure, because government may have asymmertric information about rice market conditions and behaviours of producers and consumers, For example, the subsidies may lead to over farming that results in lower quality rice crops, leading to unintended consequence. What's more, there is an opportunity cost for these subsidies. Increase in subsidies on rice production may mean decrease in investment on other public sectors, such as healthcare and education. In addition, although the Government decided to reduce subsidies, there were mass protests from farmers because it meant the increase in costs of production for farmers, reducing their revenues.

In conclusion, the subsidies on rice production can contribute to higher output of rice with lower price, meeting domestic and exported demands, It also can increase tax revenues of Indian Government. However, there may be government failure such as administrative costs and unintended consequence, opportunity cost. Reduction in subsidies may be impossible due to mass protests from farmers.

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Examiner Comments

The first paragraph defines subsidy and gives data on the size of the subsidy from the data. This starts in Level 1. The diagram is accurate and is supported with analysis that explicitly shows areas from the diagram. Subsidies impact on quantity, price, producer surplus, consumer surplus and government spending. The incidence of the subsidy is wrong but credit is offered to what is accurately shown. On the second page of the response they apply well to how the subsidies will be used and how this will improve output and create innovation, helping with productivity. The response does start to build a macro focus but there is enough microeconomcis to award top of Level 3 for Knowledge, Application and Analysis. The evaluation starts on the third page. It starts by looking at possible government failure, particularly the section focused on setting the correct level of subsidy. It also considers the potential for over farming and unintended consequences. Opportunity costs are also considered. Enough is offered for evaluation to achieve the top of Level 3.

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Examiner Tip

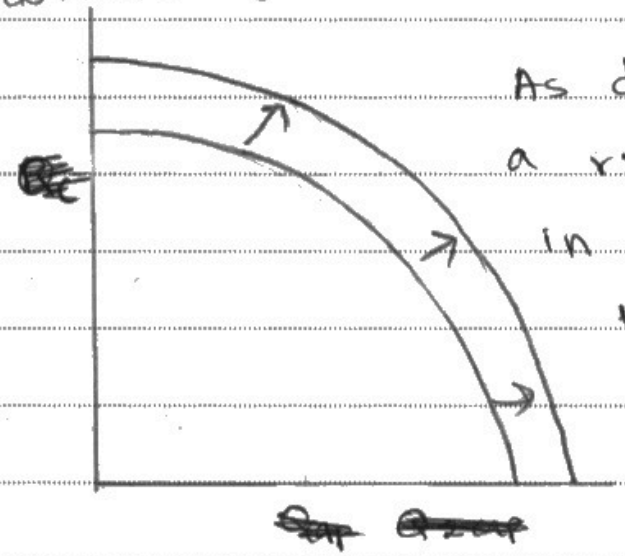
With the incidence of the subsidy the area above equilibrium price is producer incidence and below equilibrium price is the consumer incidence.

Question 13

This essay was far less popular than question 14. Most defined a production possibility frontier (PPF) and drew a diagram to illustrate economic growth. Many could identify a range of factors that would result in the rightward shift of the PPF. The stem indicated population changes and many looked at how this would increase the working population and enable increased production possibilities for both capital and consumer goods. Some looked at ways to increase the population such as immigration and an increased birth rate. Another approach was to look at a range of alternative causes including technological advances, specialisation and the division of labour and infrastructure investment. The weaker aspect of this question was often in evaluation. Many struggled to identify and expand upon evaluative points. When successfully completed many looked at the pressures resulting from immigration or population growth on public services. Another approach was to prioritise what factors were most likely to result in growth.

This is a strong response that achieves 17/20. The response considers a range of factors that will result in a rightward shift of the PPF and each is evaluated.

The Production Possibility Frontier of a country shows the maximum possible output combination of two goods, that can be produced during a given period of time, assuming that all resources are efficiently utilized and technology remains the same. There are numerous factors that can cause rightward shift in ~~PPF~~ PPF meaning the maximum possible output combination that can be produced increases.



As denoted by the diagram a rightward shift in in the PPF increases the output ~~po~~ combinations possible.

One factor that can cause a rightward shift of a country's PPF is the increase in population of the country. In the UAE, population is expected to increase by 4.7 million, 6.7 Million in Bolivia and 66.3 Million in the Phillipenes.

This means that the number of people who are able to work, in other words the workforce will increase these countries This may be due to increasing birth rate or positive net migration (immigration > emmigration). ~~As the number of the population increases, the number of work~~ ~~this~~ c Because labour is a resource needed for production, the increase in the labourforce/ workforce will enable more output to be produced during a given period of time. Furthermore the population increase means there is an increase of human capital, meaning that the ~~no~~ amount of people with knowledge, skill and expertise increases, possibly due to ~~more~~ ~~skilled~~ skilled and expertised people who immigrated to the country. ~~fo~~ for instance, a certain number of the predicted population increase of 4.7 million in the UAE ~~ma~~ could be due to immigration. If, for instance, skilled labour from countries such as China enters ~~Dubai~~ UAE, the skill of labourforce increases, thereby allowing to produce more efficiently (higher output within shorter time period), thereby causing ~~increase in~~ rightward shift of

However, the significance of the ~~rightward shift in~~ population increase, depends on the number of people in the population who are able to work. For instance, if majority of the 18.8 million population in Bolivia are elderly who are beyond retirement age, then the population increase does not largely ~~affect~~ increase production, ~~thereby the PPF~~ and therefore PPF. Furthermore, if about 90% of the immigrants of Philippines that caused population to increase are those without proper training and education, or possess illness and disability, their impact on the labour force ~~and~~ is not large, thereby causing no significant shift in PPF. This goes to show that the PPF may not shift rightwards simply because the population number increased, but depends on ~~the~~ other factors such as the portion of that population who is able to work and who has skill to help increase output.

Another factor that can cause rightward shift of PPF is improvement in technology. ~~If more advan~~ This could, in some cases

be also due to the increase in population. for instance, as the number of ~~pe~~ citizens in Phillipenes increase by 66.3 million, the number of people who are able to bring out innovative and advanced ideas also increase. If these ideas are executed, new machinery, production standardization tactics, specialised equipment and ~~speed~~ other technological factors, that will increase, can speed up and increase accuracy of the production process, ~~will increase~~ This can increase the efficiency of production and the maximum possible output combination of 2 products, thereby causing rightward shift in PPF.

However, improvements in technology depends on many external factors such as economic conditions in the country and also the quality of education and training in the County. If, for instance the Phillipenes is undergoing a recession, building specialised equipment may be expensive and improvements in technology may not be a prority for firms and ~~workers~~ individuals, because their main goal during this time period may be to survive and maintain their standards of living. Furthermore if the education ~~on~~ and

training quality in Phillipenes is not high, the knowledge and skill of ~~the~~ people will not increase ~~proportionately~~ alongside the population increase, thereby not causing significant increase in maximum output combinations and PPF.

In addition, the discovery of new resources can also ~~the~~ increase rightward shift in PPF. For instance, if more amounts of oil and natural resources as such has increased ~~that~~ in the UAE, the usage of these resources can speed up and make more efficient the production processes, such as by increasing the working hours of machinery because of the ~~high~~ larger number of oil litres available to keep them running. However, ~~the~~ if the ~~D~~ demand for these resources are high, the price of these resources ~~for~~ will be more expensive, causing an increase in cost of production for firms, which can decrease their output.

In conclusion, population is a major factor ~~that~~ that can cause rightward shift in PPF, alongside many other factors including, technological advancements and number of resources discovered newly, however the benefits of these factors can only be maximised if countries ~~the~~

TOTAL FOR SECTION D = 20 MARKS
TOTAL FOR PAPER = 80 MARKS

ResultsPlus
Examiner Comments

The response starts with an accurate definition of a production possibility frontier. The diagram is then drawn accurately. They then go on to explore factors that may cause the rightward shift. They start by exploring the increase in population, using the data from the stem of the essay. This is linked to the size of the workforce, including looking at immigration of skilled workers who will improve efficiency. This is evaluated by looking at whether they are able to work, if elderly or unskilled they argue they will have little impact on growth. The response then moves on to technology, linking advancements to the increased innovation from a larger population. This is evaluated linked to the state of the economy and quality of education. The final page looks at finding new resources, focusing on oil. A conclusion is offered which summarises earlier arguments. The Knowledge, Application and Analysis is in Level 4 and the Evaluation is in Level 3.

ResultsPlus
Examiner Tip

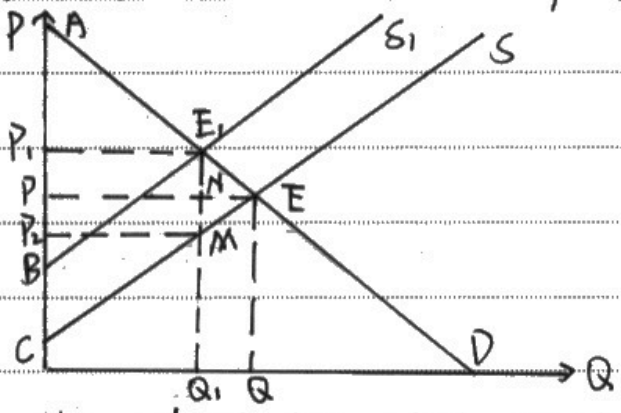
Rather than using the white space at the end of a page continue the response on a continuation sheet or new answer booklet. Ensure you make it clear that this has been used. This ensures that the examiner knows they have not seen the full response.

Question 14

The final question required an evaluation of the introduction of an indirect tax to tackle carbon emissions in the aviation industry. This question was far more popular and responses tended to be of a higher quality. Most could accurately define indirect taxes with some exploring ad valorem and specific taxes in the answer. Most could accurately draw the diagram. Better responses used the information from within the diagram in their written analysis. Weaker responses focused on the impact on quantity and price. Better responses went on to explore, consumer surplus, producer surplus, tax revenue, incidences of the tax and external costs. It was pleasing that so many responses focused on the airline industry in their answers and it was rare to see generic responses about indirect taxation.

The essay achieves 17/20. It looks at a range of impacts on different economic agents, integrates the diagram in this analysis and is well applied to context. The evaluation looks at a range of viewpoints.

Indirect tax is a tax which is imposed on goods and services, set by the government. An increasing [redacted] carbon emission in the past decade from by 0.5% brings [redacted] negative externality to the environment, leading to global warming and flood. This might because of the increasing number of [redacted] airplane flights by 13 million. Therefore, [redacted] an indirect tax is imposed [redacted] on aeroplane flights.



After the indirect tax which equals to P1P2, the cost of production for air travel rises, supply will shift to the left to S1. Price rises from P to P1, quantity sold [redacted] falls from Q to Q1.

For consumers, their tax incidence is P1E1PN. The higher price of air travel reduced their consumer surplus from PEA to P1E1A High price will reduce the consumer's quantity demand for air [redacted] travel. They will switch to take [redacted] other ways of transportation, such as train travel or private cars. [redacted] Carbon emission from air travel could be reduced, which would slow [redacted] down the trend of climate change. Negative [redacted] externality has been reduced. However, indirect tax is regressive, which means

it has a greater impact on the poor. The living cost for people is [redacted] raised, leading to inequality in the society. It also brings extreme inconvenience for people who [redacted] must take long haul traveling.

For firms, their tax incidence is PNP2M. The lower demand of air travel [redacted] reduced their producer surplus from PEC to P1E1P2. Firms' revenue and [redacted] profit will fall due to the reduction of sales. Some of the firms may leave the market and [redacted] switch to produce services with higher profitability, while some of them will try to reduce cost by reduction in [redacted] employment. Both will lead to unemployment of labours and lower wage rate in the industry. Producers of other ways of transportation such as bus and train will be [redacted] benefited by increasing sales, since consumers switch to their services.

For government, it would receive a tax [redacted] revenue equals to P1E1P2M. Government [redacted] would have more budget to spend on many aspects, such as improving the quality of health care to improve people's body [redacted] health in the country.

However, the PED of air travel is very likely to be [redacted] inelastic. Some people who take long haul business travel would have no choice but to take a plane, which means [redacted] despite the price of it is rising, consumers may still choose air travel. Firms would [redacted] pass most of the cost to consumers, and the [redacted] consumption of air travel did not fall a lot. The policy would be less effective.

Second, the effectiveness of indirect tax also largely depends

on the power of government supervision. Firms may try to find ways of tax evasion to gain more profit, for example, by setting the head office of company abroad. The effect of the tax is largely depending on the extent of policy enforcement.

Third, government has information failure on the negative impact of air traveling since it is impossible to give the externality a monetary value. The harmfulness of carbon emissions might be overstimated or underestimated, which means the size of tax imposed could be too large or too small.

At last, it depends on the magnitude of the taxation The higher the tax rate, the greater the impact.

ResultsPlus
Examiner Comments

The first paragraph defines indirect taxation accurately and then uses the data on the change in carbon emissions. This is then linked to global warming and flooding. The diagram is drawn accurately and the second paragraph uses the diagram to consider the impact on price and quantity. The third paragraph goes on to consider the impact on consumers including looking at consumer incidence and consumer surplus. This then moves on to negative externalities being reduced. This then moves into evaluation, in terms of the regressive nature of the taxes. On the second page the response considers the impact on firms, then government. The evaluation looks at the like inelasticity of demand and the limited impact on the quantity consumed. Tax evasion and information failure are also then considered. Once again the response is in Level 4 for Knowledge, Application and Analysis and Level 3 for Evaluation.

ResultsPlus
Examiner Tip

When drawing diagrams in essays it is important to be able to access higher marks that it is integrated in the written analysis. For example, by referring to specific areas on the diagram.

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

Section A: Multiple Choice

Question 4 required candidates to identify the point on a demand curve where the price elasticity of demand will be one. It was the worst performing question with less than half able to identify that this was half way along the demand curve. Some work is needed with learners on how price elasticity varies along the demand curve.

Question 6 – many candidates struggled to deduce that house prices decreasing by 2.1% when the price elasticity of supply is 2.8 would lead to a reduction in supply of 5.88%. Many incorrectly identified an increase in supply of 5.88%.

Section B: Short Answer

Question 7 – When asked to a draw a diagram, all marks can be achieved through the diagram and no written explanation is required. A number of candidates supported their response with a written explanation when, in fact, the diagram had achieved full marks.

Question 8 – Diminishing marginal utility was not well understood and the confusion with decreasing marginal utility needs exploring.

Question 9 – Candidates need to be able to define the concepts of non-rivalry and non-excludability. With the latter it is important not to just use the word excludable in the definition.

Question 11 saw many not defining consumer surplus.

Section C: Data Response

Question 12(c) – when giving the examples of inelastic demand it is best to give one example.

Question 12(d) – candidates need to link the external costs to how it impacts the third party negatively.

Section D: Essay

Define the key terms relevant to the question.

Diagrams should be integrated into the analysis.

Grade boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

https://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html

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