Examiners' Report
Principal Examiner Feedback

October 2022

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Introduction

The entry for this series was significantly higher than is typical for an October series. Once again there were many cases where the standard of work has been impressive. Equally there were examples where learners struggled to perform consistently across the paper.

In Section A, the multiple-choice section, Q1 was on the consequence of diminishing marginal utility. Just over half correctly identified that the demand curve for a product will slope downwards. This was the question candidates performed least well on in Section A. A common error was to identify that the supply curve will slope upwards, this is incorrect as diminishing marginal utility benefits consumers and affects demand and not supply.

The performance on Q2 was the best in Section A. The vast majority were able to identify that the largest increase in the use of the renewable resource, solar, was in the USA.

Q3 tested the understanding of cross elasticity of demand. Four-fifths of candidates identified organic meat and non-organic meat as substitutes when there is a positive XED. The most common mistake was to select B, that the two goods were normal goods. Whilst there is a positive value this was not a value for income elasticity of demand.

Q4 presented a diagram to illustrate a PPF. Candidates performed well on this question, with more than three-quarters able to successfully identify that it was the movement from point X to point Y. Most that got it wrong identifying D when in fact there was a gain of 25 consumer goods not opportunity costs.

For Q5 candidates tended to perform less well with less than two-thirds gaining the mark. Inertia was correctly identified as consumers remaining with their current providers because the efforts to switch was too great. A similar number chose each of the other answers which were incorrect related to A computation difficulties, B not feeling valued, and C being influenced by others.

Q6 illustrated an ad valorem tax and candidates needed to calculate the value of the consumer incidence. Most could identify that the value was Sol 126 000, as they corrected multiplied the quantity of customers, 210 000, by Sol 0.60. Commonly A was selected which was the value of the producer incidence or C which was the tax revenue for the Government of Peru.

In Section B, Q7 asked learners to draw a diagram to illustrate the likely impact of an increase in real incomes on the equilibrium price and quantity of margarine. The value of the income elasticity of demand was given at -0.2 making this an inferior good.

Therefore, learners needed to shift demand to the left. Nearly everyone could draw the original supply and demand curve with the equilibrium price and quantity to gain at least two marks. However only four-tenths correctly shifted demand to the left with many incorrectly shifting it to the right as if it was a normal good.

Q8 explored a topic that was found to be challenging when tested in a previous series. It was pleasing that the performance on this topic, the difference between free goods and economic goods, was much better this series. To achieve the first knowledge mark most could define a free good as a good with no opportunity cost and an economic good as one that has an opportunity cost. Most achieved the first application mark but not the second. Most could identify that in 2017 when farmers could no longer use the lake for irrigation that this was an economic good. But relatively few could identify when local farmers could freely use water from the lake to irrigate crops that it was a free good.

Q9 asked for candidates to explain one advantage to a car manufacturer using the division of labour to organise production. Most defined the division of labour accurately and identified an advantage. There was one mark for identifying the advantage or for the definition. Many then went on to achieve the two analysis marks by using linked development. A common approach was to say that the division of labour would increase productivity as the advantage, this was developed with link to the fact that less time was wasted changing tools and further development of how this would help lower average costs. Few were able to access the application mark. Just listing Henry Ford or saying they moved to using the division of labour was insufficient. Better responses identified the way that the division of labour would be used in a car manufacturer, for example, one worker focusing on tyres, another on painting and another on fitting steering wheels. The most common score awarded was 3 out of 4.

Q10 required the calculation of the price elasticity of demand. The percentage change in price, the change in quantity and new quantity were given in the stem. The first step was to calculate the original quantity. The quantity of customers decreased by 350 000 to 17 000 000. Thus, the original quantity was 17 350 000. Next the percentage change in quantity demanded needed calculating before putting the percentage change in quantity demanded and percentage change in price into the formula to calculate the PED. Many did include the formula in their answer. A common error was to add a percentage after the PED which meant a maximum of 3 was awarded. Similarly, many did not include the negative sign so could achieve a maximum of 3. Whilst most accessed marks on the question, candidates struggled with calculating the correct percentage change in quantity demanded as they used the wrong original quantity demanded.

Q11 looked at the likely impact of the change in price of nectarines on consumer surplus within the market. Often on these questions the definition of consumer surplus is

omitted or is inaccurate but this series the definition mark was more commonly awarded. Many correctly shifted supply to the right to gain the application mark. The original and new consumer surplus areas were typically identified. It was surprising that a number identified the original and new areas of producer surplus in error.

Section C focused on the materials in the source booklet that related to the market for semiconductors.

Q12a required a definition of external costs. Most correctly defined it as a negative impact on third parties and were awarded both marks. Many said external costs were costs to third parties which achieved one mark. A less common approach was to say that MSC>MPC which was awarded full marks also. A significant number used the example from Extract C where the production involved acids and toxic gases resulting in cancers. Over two-thirds achieved full marks.

Q12b asked learners to explain the phrase the 'supply of semiconductors is inelastic'. Most defined price elasticity of supply which was not awarded but the definition of inelastic supply was. Most identifying the PES as being between 0 and 1. Many did not pick up the second knowledge mark. Those that did often drew a diagram or explained that responsiveness of quantity supplied was less than the percentage change in price. Application marks were often achieved by making reference to working at 100% and them struggling to respond to the increase in demand. Most achieved at least one of these application marks.

Q12c needed an analysis of two reasons why semiconductor prices increases on average by 20%. Candidates were typically able to access the first mark by drawing the initial supply, demand and equilibrium. Pleasingly most shifted demand to the right and supply to the left to access the two application marks. The analysis marks were also commonly awarded as candidates were able to identify why demand rose linked to the global health crisis and supply fell linked to the costs of steel and copper. The final equilibrium was also commonly awarded. A common issue was the shifts in demand and supply were drawn on separate diagrams meaning the final equilibrium was not awarded. Impressively, the most common mark awarded was 6/6.

Q12d was an examine question that required some evaluation. It was the latter element that was commonly omitted. The question was a challenge for many. Most could define excess demand accurately. Many drew a diagram to show excess demand although not required they were rewarded an analysis mark for doing so. The candidates did very well at making explicit reference to the data. For example, many made reference to falling revenue, shortage of cars resulting in used car prices doubling, car manufacturers removing features and producing fewer cars. The weakness in responses was the development of the effects in terms of analysis. Evaluation when offered focused on the

likely improvements in semiconductor supply resolving the excess demand, possible stockpiles helping manufacturers and the magnitude and size of lost revenue.

The final question in section C, Q12e required a discussion looking at the impact of the subsidies paid to semiconductor manufacturers. Most defined a subsidy accurately. Most attempted a diagram. Most responses shifted supply appropriately and showed the equilibrium price and quantity. Better responses used the diagram to show the areas of consumer surplus, producer surplus or government spending on the subsidy. Evaluation tended to focus on the size of the subsidy, opportunity costs, the time lag before production will rise and external costs. There was good use of the context seen in the evaluation.

Section D had a choice of two essays. Q13 was the more popular question on evaluating the advantages of a free market economy. Q14 required an evaluation of the advantages of state provision of good and services. Whilst Q13 was more popular there was little difference in the performance of the two essays.

Q13 saw many able to define the free market economy. They would then identify a number of advantages, better students went on to give detail as to why each was an advantage. A significant number explored how the price mechanism helps to clear markets. Other focused on government failures and how a free market avoided these. Incentives for workers and producers, and choice for consumers were often discussed. Evaluation focused on the underprovision of public goods, healthcare and education. Others focused on overproduction of goods with external costs. Inequality was often also discussed related to a lack of taxation being used to redistribute.

Q14 Most explained why the state provides public goods linked to flood defences and lighthouses. They explained why the public gods are not provided by the private sector related to the free rider effect. Education and healthcare were linked to positive externalities and information failure. In particular many focused on how the provision supports lower income households. Evaluation focused on possible government failures, opportunity costs, as well as the difficulty in valuing externalities and magnitude of spending.

Most learners were able to complete the paper in the time available. We did however see several unfinished or very brief essays suggesting that some students had not planned their time well.

Report on individual questions
The performance on individual questions is considered in the next section of the report. The feedback on each question shows how they were well answered and also how to improve further.

Section B
Section B, the short answer section, saw students able to access marks on most questions.

Question 7
Q7, required the drawing of a supply and demand diagram to show the likely impact of an increase in real incomes. Some supported the diagram with written explanations, but all the marks are available for the diagram. Most candidates were correctly able to draw a supply and demand diagram with the original equilibrium price and quantity which gained two marks. Having identified the price elasticity of demand for margarine at -0.2 the candidates needed to understand that this made margarine an inferior good. This means that the rise in real income would result in the demand falling at any given price. That is, they needed to draw a shift in demand to the left and then show the new equilibrium price and quantity. Full marks was the most commonly awarded score, so a significant number did draw this fully and accurately. However, the next most popular score awarded was two as a significant number shifted demand outwards. Care should be given in teaching how various income elasticity will impact the direction that demand curves will shift.

Question 8
Q8, required an explanation of the difference between free goods and economic goods. This was tested previously, and candidates had struggled to define both. However, this series very many more could define each. Most focused on economic goods having an opportunity costs and free goods not having an opportunity cost. A common confusion however was that many explained the difference between private and public goods. Application was typically awarded with candidates making reference to the year 2017 and how farmers could no longer use the water for irrigation suggesting it was now an economic good. However, very few made reference to 1960 when they could freely use the eater for irrigation and there being no opportunity costs. It was pleasing to see candidates typically performing better on this question than when previously tested.

Question 9
Q9, asked candidates to explain one advantage to a car manufacturer of using the division of labour. The majority defined division of labour accurately although it is important to remember that the division of labour is not just about breaking up production but also allocating staff to each task. The knowledge mark could also be awarded for identifying the advantage and many also did this. Many were awarded both of these, but the candidates could only gain one knowledge mark. Having identified an

advantage, it was important to offer two linked developments to gain the two analysis marks. For example, lower training costs was rewarded as knowledge, analysis then related to them only having to be trained on one task rather than the whole production process, the linked development (analysis) then explained that the time saved in training could instead be used in producing more output. The mark most commonly missed was for the application. Most attempted to achieve this by saying Ford used the division of labour from 1920. This was not awarded. The key if talking about Ford was to say that the workers went from producing whole cars from start to finish to completing one task. Another way to access the mark was to talk about different tasks that might be completed by different workers, for example painting the bodywork and fitting tyres.

Question 10
Q10, involved calculating price elasticity of demand. Candidates were given the percentage change in price. They needed to start by calculating the original quantity demanded. This required adding the change to the new quantity demanded. This was not successfully completed consistently. As a result, many calculated the incorrect percentage change in quantity demanded. Candidates continue to add a percentage sign on the PED or omit the negative sign. Both would result in a maximum of 3 being awarded. Most learners included the formula.

Question 11
Q11 needed learners to explain the likely impact of a change in the price of nectarines on the consumer surplus. The knowledge mark on these questions is always awarded for defining the key concept, in this case consumer surplus. Many failed to do so but more than was seen previously did. When defining the concept, it is important to ensure they make reference to the difference in the price consumers were willing to pay and the actual price paid. The diagram showing the rightwards shift in supply was typically drawn and gained the application mark. A number stopped there but those that identified the original and new consumer surplus areas were awarded 2 marks. Others explained that the consumer surplus increased and showed the level of the new consumer surplus.

Section C
Section C, the data response section is based on information provided in the source booklet. The Extracts focused on the semiconductor market.

Question 12a
Q12a, asked for a definition of 'external costs'. Performance on this question was pleasing. Most wrote that it was a 'negative impact on third parties', or that 'MSC is greater than MPC'. Both were awarded full marks. A significant number still said that it was the 'cost to third parties'. This is awarded one mark only as the cost aspect is in the key word. Others offered the example of the external cost from Extract C, such as,

acids and toxic gases causing cancer or contaminated water. Other examples of external costs outside of Extract C were not credited.

Question 12b

Q12b, required learners to explain the phrase 'the supply of semiconductors is inelastic'. Two marks were awarded for knowledge of inelastic supply. Defining price elasticity of supply was not rewarded. They needed to define price inelastic supply. Most did this by making reference to the value of PES being between 0 and 1. Others explained that any percentage change in price will result in a smaller percentage change in quantity supplied. Another common approach was to draw an inelastic supply curve. Many struggled to pick up both of these knowledge marks. Application was impressive with most picking up both marks. This was most commonly awarded for the semiconductor manufacturers operating at full capacity. Many explained that they struggled to respond to increased demand which was another application mark. The final application was to how it would take time for additional capacity to become operational.

Question 12c

Q12c, the question required analysis of why the price of semiconductors increased. Candidates could normally draw an initial supply and demand curve with equilibrium price and quantity to gain the first mark. Most drew the demand curve shifted to the right and the supply curve shifted to the left for one mark each. A significant number continue to draw these two shifts on separate diagrams. When it comes to rewarding the final equilibrium, this is only rewarded when the final equilibrium is drawn on the diagram where both supply and demand have been accurately shifted. It was helpful that candidates only tended to draw the original and final equilibrium positions rather than any intermediate equilibria. The final two marks were awarded for reference to the two reasons. The increased demand for laptops, tablets and smartphones and decreased supply due to higher costs of copper and steel. They could still achieve both analysis marks even if they did not shift both curves. Candidates were told in the question that the price change was increased on average by 20% so this was not rewardable.

Question 12d

Q12d, asked students to examine two likely effects of excess demand for semiconductors. A definition of excess demand was rewarded as was a diagram illustrating excess demand. Many achieved both application marks. This was through reference to reduced production, removing features, car shortages and increased used car prices and falling revenue. Where candidates struggled was picking up the linked knowledge and analysis marks. Many linked the application points without further development. Better candidates would take the application point and develop it. For example, removing features reduces the quality of the cars and results in lower demand for new cars as they meet customer needs less well. Another example would be revenue falls due to reduced quantities of cars being sold and this requires less workers to be employed by the car manufacturer. There were two marks awarded for evaluation. It is

important to note that this can be through making two evaluative points or by making an evaluation point and developing this. Many talked about the magnitude and better responses related this to the sizes of the change in revenue for manufacturers of cars. Many talked about manufacturers having stockpiles and how this would help them to release supply as needed. A common approach was to talk about the likelihood of increased supply due to increased capacity which would reduce the size of the excess demand.

Question 12e

Q12e required candidates to discuss the microeconomic effects of the subsidies paid to semiconductor manufacturers. Many defined subsidies accurately. As requested, many drew a subsidy diagram. Where this was omitted, the candidate was limited to Level 2 for knowledge, application and analysis. Commonly when drawn many just showed the correct shift in supply and the impact on equilibrium price and quantity which was awarded Level 2. Learners needed to show added aspects on the diagram to be able to move this to the top of Level 2. The added aspects included the subsidy area, incidence of the subsidy/consumer subsidy/producer subsidy or consumer surplus/producer surplus. To then move to level 3 the details on the diagram would then need to be integrated into the analysis. The evaluation was commonly offered but it is helpful to consider that they need to make the evaluation point, link this to context and offer expansion to explain the point. Many identify the evaluation point but do not always relate to context. Take magnitude, by candidates relating this to the amount spent makes it more effective. For external costs identifying what theses might be is helpful on developing the response.

Section D

Section D, the essay section offered students the opportunity to choose between two questions. Learners were more likely to attempt Q13 than Q14.

Question 13

Q13 required an evaluation of the possible advantages of a free market economy. Most defined free market economy making reference to the price mechanism and lack of government. Many benefits focused on the benefits of the marking clearing itself when in disequilibrium. Other good work focused on improved productivity, choice, incentives to work hard and innovation. Whilst most could identify these there is a requirement to offer detail on why these are benefits. It is also useful to give real world examples in the essay. Evaluation focused on market failure and how the free-market economy would be less likely to supply these. Key is the need to explain why this will be problematic. The other approach was to consider the problems for free market economies when there are global financial crises or global health crises.

Question 14

Q14 required an evaluation of state provision of good and services. The stem referred to public goods and goods with positive externalities and information gaps, all of which would result in underconsumption without state provision. Many related to lighthouses and flood defences and why private sector firms would struggle with free riders and therefore not be able to profit from production. When referring to education and health care most linked to positive externalities and information failure but a significant identified its provision as a public good, this is not the case. It is a public service and not a public good. Careful attention should be paid on this during delivery as it was a common error. Evaluation often focused on possible government failure, opportunity costs and government lacking information to allocate resources effectively.

Paper Summary

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

Section A: Multiple Choice Questions
- The topic of diminishing marginal utility was the worst performing question and may need additional work in centres. Especially the need for them to understand that diminishing marginal utility results in the demand curve being downward sloping.
- The topic of irrational consumer behaviour and in particular inertia was commonly confused with many unable to identify that is occurred when consumers felt the effort to switch was too great.

Section B: Short Answer Questions
- When asked to draw a diagram for Q7 all marks can be achieved through the diagram and no written explanation is required. The majority of learners supported their response with a written explanation when in fact the diagram had achieved full marks.
- In Q9 the application was commonly missed. In this instance giving examples of tasks linked to car manufacturing was helpful.
- Q10 when calculating values of price elasticity of demand it is important to remember that the value will always be negative and to include this on the response. Also, PEDs should not have a % sign added.

Section C: Data Response
- On Q12(c) when asked to analyse why the price fell the Extract referred to both conditions of supply and demand so both needed shifting in the diagram.
- On Q12(d) when asked to examine the impact of excess demand many failed to develop the application in terms of looking at its impact.
- On Q12(e) it was important to include a subsidy diagram and helpful to show more than just the impact on price and quantity but the areas of surplus,

consumer and producer subsidy or government spending. Integrating the diagram into the analysis also helps.

Section D: Essay
- Define the key terms relevant to the question• Diagrams should be drawn where helpful and many students successfully incorporated these