Name:		Centre/Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics (Higher 1)

8843/01

Paper 1 Case Study Questions

16 September 2024
3 hours

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional paper ask the invigilator for a continuation booklet.

Answer **all** questions.

The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **8** printed pages including this cover page.

[Turn over

Question 1: Food (Supply) Chain

Extract 1: A fertilizer shortage, worsened by war in Ukraine, is driving up global food prices and scarcity

Russia and Ukraine are key agricultural players and major providers of basic agricultural-commodities, including wheat, maize and sunflower oil. The two countries are also key players in the world fertilizer market -- Russia and Ukraine together export 28% of fertilizers made from nitrogen and phosphorous, as well as potassium.

As 70% of Ukrainian exports were carried by sea, the massive blockade imposed by Russian forces on all ports in the Black and Azov Seas following the war between the two countries are the main cause of the export crisis. At the same time, countries, particularly those in the West, have imposed sanctions against Russia including restrictions on imports from Russia. Together, disruptions of shipments due to sanctions and war have sent fertilizer and grain prices skyrocketing.

“Agriculture is absolutely going to get hit. Farmers are going to get hurt because they’re going to pay a lot more (for fertilizer),” said Bart Melek, an economist. “They’re going to get lower yield simply because they’re economising, particularly in emerging markets.”

Grain shortages will drive up the cost of basic foods and other commodities. “That’s going to lead to higher input costs for producing everything from grains, wheat and corn. The input costs are higher now because you’re going to have scarcity that bids the price up as well,” Melek said.

“We are absolutely facing a problem of catastrophic proportion here,” said CEO Tony Will, a fertilizer manufacturer.

Farmers are likely to consider rotating in less fertilizer-intensive corps and will economise on the amount of nutrients they use. In turn, yields could be lower.

“Consumers are going to make choices too,” he said.

Sources: (1) CNBC, 6 April 2022, (2) European Parliamentary Research Service, June 2022

Figure 1: Price Indices of Grains and Fertilizer

Source: USDA, Economic Research Service, 18 September, 2023

Extract 2: Urea use in agriculture and transport

Exposure to exhaust from diesel engines can lead to serious health conditions like asthma and respiratory illnesses. These conditions can result in hospital admissions, absences from work and school, and premature deaths. Emissions from diesel engines also contribute to the production of ground-level ozone which damages crops, trees and other vegetation.

Besides its use in the manufacture of agricultural fertilizer, urea is also used in the production of diesel exhaust fluid (DEF). DEF is a liquid used to reduce the amount of air pollution created by a diesel engine, specifically lowering the concentration of nitrogen oxides (NOx).

South Korea has made it mandatory for diesel vehicles and some manufacturers to use DEF to control emissions or face penalties. When the Chinese government ordered the country's major fertilizer companies to stop exporting urea to boost supplies to its domestic market, diesel vehicle drivers in South Korea began panic buying DEF. Korea imports almost all of its DEF needs from China. The low industrial urea inventory in South Korea at the time of the ban added to concerns.

A number of states in the US have also banded together to reduce region-wide NOx emissions through a NOx cap-and-trade programme.

Source: various

Extract 3: What's causing Malaysia's chicken shortage? Farmers cite higher feed costs, weakening ringgit

"The price increase in poultry products is due to the global price increases in its main input feed - which is grain-based, mainly corn, soya bean and wheat - because two of the world's major producers of grains (Ukraine and Russia) are at war with each other," explained a Malaysian economist. Poultry farming costs have increased by about 70 per cent since the war started.

The retail price of chicken is currently capped at RM8.90 per kg but traders have hiked their prices recently despite the risk of being fined, with prices having reportedly soared to as high as RM13 per kg.

Dr Nungsari, a researcher, argued that "the imposition of a ceiling price below cost requires a subsidy to cover the difference to sustain supply at capacity, for farms to continue their operations. It's an industry that was never subsidised before (until recently), so when the government imposed a ceiling price below actual costs, you naturally get supply shortages as firms exit production."

Malaysia on Monday announced a ban on chicken exports from June 1 until supply and prices stabilise.

Source: Straits Times, 25 May 2022

Extract 4: Malaysian farms rushing to send chickens to Singapore before export ban

Chicken suppliers in Malaysia are working overtime and rushing to send as many chickens as they can across the Causeway before the export ban kicks in on June 1. The rush comes amid a surge in demand for fresh chickens in Singapore, with supermarket shelves wiped clean.

The Singapore Food Agency (SFA) is working closely with the industry to manage the chicken supply situation in Singapore. “The industry has activated its supply chains to increase the import of chickens,” it said.

Last year, Singapore imported about 34 per cent of its chicken supply from Malaysia. The other major sources of the poultry last year were Brazil (48 per cent) and the United States (8 per cent), but these were frozen meat.

Source: Straits Times, 28 May 2022

Questions

(a) **(i)** With reference to Figure 1, compare the fertilizer price and grain price in the **first two months** of Russia's invasion of Ukraine. [2]

(ii) Explain **one** possible reason for the difference in the above trends. [2]

(b) "Consumers are going to make choices too." (Extract 1)

Explain the decision-making process of food consumers facing the fallout of the war in Ukraine. [4]

(c) "Agriculture is absolutely going to get hit. Farmers are going to get hurt because they're going to pay a lot more (for fertilizer)." (Extract 1)

Using the case evidence and a demand and supply diagram, explain and comment on how the development would impact consumer expenditure on food. [6]

(d) With reference to Extract 2, and using an elasticity concept, explain the influence of expectations on the price of DEF in South Korea. [4]

(e) **(i)** With reference to Extract 2, explain the difference between private cost and social cost. [4]

(ii) Discuss whether DEF mandate is the best policy to achieve allocative efficiency when private and social costs diverge. [8]

(f) Discuss the desirability of the Malaysian government's policies of price ceiling and export ban in stabilising chicken prices. [10]

[Total: 40]

Question 2: Challenges Facing the Asian Economies

Extract 5: Asia sails into headwinds from rate hikes, war, and China slowdown

"Asia is extremely reliant on China. Its zero-Covid policy continues to disrupt supply chains and keep Chinese travellers from returning to Asian tourist destinations. It's also hurting the region's exports," said Mr Toru Nishihama, a Tokyo-based economist.

Amid lower growth, policymakers face complex challenges that will require strong responses. Inflation now exceeds central bank targets in most Asian economies, driven by a mix of global food and energy prices, currencies falling against the US dollar, and shrinking output gaps. The increase in inflation and its persistence — driven by inflation expectations and wages — must be closely monitored. Central banks will need to persevere with their policy tightening until inflation durably falls back to target.

Sources: (i) Straits Times, 1 Nov 2022, (ii) International Monetary Fund, 13 October 2022

Extract 6: MAS tightens monetary policy for fifth time in 12 months to dampen 'persistent' inflation

Monetary Authority of Singapore (MAS) manages monetary policy by allowing the Singapore dollar nominal effective exchange rate (S$NEER) to rise or fall versus currencies of its trading partners within an undisclosed band. A stronger Singdollar dampens imported inflation, while domestic interest rates follow the lead of those set by major central banks.

"Although the one percentage point increase in the Goods and Services Tax (GST) will result in a one-off step-up in the price level, its effect on inflation should be transitory (or short-lived)," the central bank said.

Source: TODAY, 14 October 2022

Extract 7: Managing Indonesia's commodity windfall for long-term benefits

Despite the gloom in the global economy, the World Bank projects Indonesia's economy to grow by 5.1 percent in both 2022 and 2023. The economic resilience so far could be partly attributed to the high commodity prices. Indonesia, a commodity producer and exporter, has benefitted from a commodity windfall. Coal and fossil fuel contribution to total export revenue increased. The windfall increased the government's fiscal revenues, especially from export taxes and non-tax revenues on natural resources. At the same time, government fiscal expenditure is expected to increase by IDR357 trillion (USD23 billion) beyond what was previously budgeted, mostly due to increased fuel subsidies to compensate consumers for rising fuel prices.

For successive governments, the fossil fuel subsidy has been a large part of the state budget. Nevertheless, the government stated that more than 70 percent of the current fuel subsidies have benefitted the middle and upper classes. Poorly targeted energy subsidies could have been used for more pro-poor and pro-environment spending. In early September, the government cut some fuel subsidies to reduce the fiscal burden. The budget saved has been diverted to various targeted social assistance programmes including direct cash transfers to 20.65 million poor households,

wage subsidy for 16 million workers, and social protection programmes delivered through local governments. However, fuel subsidies are still very high and will increase.

Commodity booms add to inflationary pressure and put upward pressure on the exchange rate, undermining the competitiveness of other export sectors. Commodity booms also compete with the other sectors for scarce resources, which may cause permanent de-industrialisation.

The main policy threat from the commodity windfall is that the government may lose sight of necessary long-term reforms, including climate change mitigation. One policy recommendation is to move away from the trap of reliance on commodities by attracting foreign direct investment towards a green economy.

Source: ISEAS Perspective, 1 November 2022

Extract 8: Takeaways for climate change

Coal, nickel, palm oil, rainforests. The riches of Indonesia matter to the rest of the world.

Indonesia is the world's largest exporter of coal, the dirtiest fossil fuel and something that the world must quickly stop burning in order to avoid the worst consequences of global warming. But Indonesia also has huge reserves of nickel, which is critical to battery-making and the transition to cleaner energy. Processing nickel requires vast amounts of energy. So, Indonesia has been building new coal power plants. That, in turn, has driven up Indonesia's emissions of planet-warming greenhouse gases.

Indonesia's global climate role is important in another way. The country has vast stretches of forest that are vital to the effort to slow global warming because they pull so much planet-warming carbon dioxide out of the atmosphere. However, Indonesia is also the largest exporter of palm oil, which is used in a range of everyday products including soap and ice cream, and the production of palm oil has led to severe deforestation in recent decades.

Source: New York Times, 14 Feb 2024

Table 1: Indonesia's economic and social indicators

	2022	2021	2020	2019	2018
GNI per capita, PPP (current international $)	14250	12730	11830	11980	11320
Income share held by lowest 20%	7.3	7	7.1	7.1	6.8
High-technology exports (% of manufactured exports)	7.9	7.2	8.4	8.1	8.2
Inflation, consumer prices (annual %)	4.21	1.56	1.92	3.03	3.20
Immunisation, measles (% of children ages 12-23 months)	84	72	76	88	89

Source: World Bank, 18 May 2024

Questions

(a) With reference to Extract 5

(i) Explain **one** aggregate demand factor and **one** aggregate supply factor that have contributed to the "lower growth" of the Asian economies. [4]

(ii) Explain why economists have called for central banks to persevere with their policy tightening until inflation "durably falls back to target." [3]

(b) With reference to Extract 6,

(i) Explain the effect of the decision by major central banks to raise interest rate on households and firms in Singapore. [4]

(ii) Comment on the effect of the increase in goods and services tax (GST) rate on Singapore's macroeconomy. [6]

(c) Extract 7 raises concerns that commodity booms "may cause permanent de-industrialisation".

(i) Using a production possibilities diagram, explain the effect of a commodity boom. [3]

(ii) Using Table 1, explain why this concern may not be altogether well-founded in Indonesia. [2]

(d) Discuss whether supply-side policies or a weakening of the exchange rate is a better policy to counter de-industrialisation. [8]

(e) Discuss the extent to which the commodities boom provides the basis for inclusive and sustainable growth in Indonesia. [10]

[Total: 40]

DUNMAN HIGH SCHOOL
Preliminary Examination
Higher 1 Economics
Suggested Answers and Mark Schemes

QUESTION 1: Food (Supply) Chain

(a) (i) With reference to Figure 1, compare the fertilizer price and grain price in the <u>first two months</u> of Russia's invasion of Ukraine. [2]

S: Both increased **[1]**
D: Fertilizer price increased by a larger magnitude **[1]**

(ii) Explain one possible reason for the difference in the above trends. [2]

Accept possible reasons including:
- Fertilizer is only one of the factor inputs for grain farmers. Increase in overall marginal cost < increase in fertilizer price => smaller increase in grain price
- As long as dd for grain is not perfectly inelastic, prs are unable to pass on the full extent of the cost increase => price increase of final product (grain) must necessarily < increase in marginal cost
- Gestation period for grain crops => effect of higher fertilizer price has yet to affect grain ss

1m – for reason
1m – for reasoning

(b) "Consumers are going to make choices too." (Extract 1)

Explain the decision-making process of food consumers facing the fallout of the war in Ukraine. [4]

Fallout → increase in grain price

Crs face budget constraints, and will need to make decisions on how to allocate their budgets to alternative goods / services e.g. food, accommodation, utilities
- MPB of consuming an additional unit of grain => additional utility derived
- But with the increase in grain price, this increases the MPC / opportunity cost of consuming an additional unit of grain, i.e. needs to give up more units of other goods like accommodation (rent payment), utilities, etc.

The increase in grain prices raises MPC of consumption an additional unit of grain relative to the MPB, consumers may be compelled to cut back consumption of grains (e.g. by cutting down number of meals per day) until MPB = MPC for the last unit of the good consumed. At this point, the consumer is unable to increase utility further by consuming more or fewer units of the good and utility is said to be maximised.

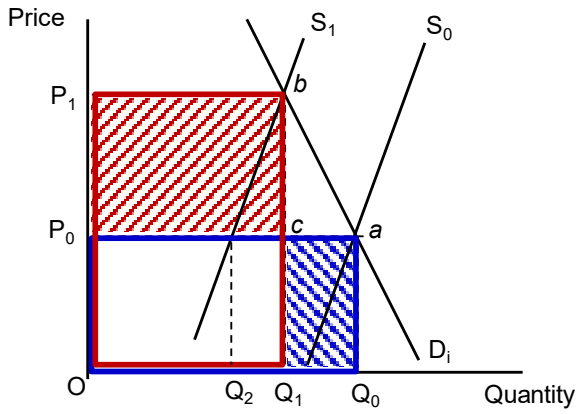
1m – for recognition of the increase in MPC of food consumption following the war
1m – for expressing the increase in MPC as the opportunity cost ("make choices") paying more to consume food means having to give up more units of other goods and the associated utility
1m – for exemplification of MPB
1m – for adjustment process to arrive at the new eqlm

(c) "Agriculture is absolutely going to get hit. Farmers are going to get hurt because they're going to pay a lot more (for fertilizer)." (Extract 1)

Using the case evidence and a demand and supply diagram, explain and comment on how the development would impact consumer expenditure on food. [6]

R1: Effect on rising fertilizer prices on the eqlm P & Q in the food market

Rising fertilizer prices would increase the marginal cost of producing food. Food producers (farmers) would "economise on the amounts of nutrients they use" to protect their profits, causing "yields" to be "lower". The decrease in supply, holding demand constant, creates a shortage of Q_0Q_2 at the original equilibrium price P_0. In competition for the limited supply of goods, buyers bid up its price. As price rises, quantity demanded declines while quantity supplied increases. The adjustment will continue up to the point where Qd balances Qs and the shortage is eliminated. Resultantly, equilibrium price rises to P_1 while equilibrium quantity falls to Q_1.



R2: Effect on consumer expenditure

Demand for food is price inelastic. As price rises, quantity demanded will only decrease less than proportionately given that it is a necessity for sustenance and survival. Consumer expenditure on food, given by P × Q, must thus increase (from OP_0aQ_0 to OP_1bQ_1).

Comment

From Figure 1, the increase in fertilizer / grain price appeared to be short-lived. Thus, whilst consumer expenditure on food might increase in the short term, it is likely to fall back over time.

Accept also: Gov policies to mitigate the price increase and ease the burden on consumers, esp. low-income consumers e.g. subsidies.

2m – for R1
2m – for R2
2m – for comment

(d) With reference to Extract 2, and using an elasticity concept, explain the influence of expectations on the price of DEF in South Korea. [4]

[DD] Expectations of shortage / price increase → current dd for DEF increase as rational drivers, seeking to maximise utility with their given budget, stock up to secure ss / buy while the price is still low

[elasticity] PES likely to be inelastic in the SR given the "low industrial urea inventory" which limits the ability of sellers to increase Qs in response to price increase.

Increase dd + inelastic ss → sharp increase in P

- As dd rises, holding ss constant, this creates a shortage at the original price, exerting an upward pressure on price
- Given the price inelasticity of ss, **<L>** price will have to increase sharply to induce a sufficiently large increase in Qs and decrease in Qd before the market clears and a new eqlm establisehd

1m – for demand effect
1m – for recognising low PES of DEF
1m – for direction of price change
1m – for magnitude of price change

(e) (i) With reference to Extract 2, explain the difference between private cost and social cost. [4]

Private cost:
<define> Refers to the cost incurred by the buyer/seller of the good/service
<exemplify> The private cost of DEF use is just the price that buyers/drivers have to pay for the fuel **[1]**

Social cost:
<define> Refers to the cost incurred by the society when the good is produced/consumed. It includes the cost incurred by the buyer/seller and other third-party cost, i.e. social cost = private cost + external cost **[1]**
<exemplify> The social cost of DEF use consists of the

- private cost = price that buyers/drivers pay for the fuel
- external cost (express in $ terms) = income loss from "absences from work", lifetime output loss from "premature deaths", revenue loss from damaged "crops" **[2]**

1m – for specifying the difference between private and social cost (that social costs includes third-party cost, over and above private cost, i.e. MSC = MPC + MEC)
1m – for exemplification of private cost
2m – for exemplification of external cost (cap at 1m if not expressed in $ terms)

(ii) Discuss whether DEF mandate is the best policy to achieve allocative efficiency when private and social costs diverge. [8]

R1: Explain the workings of DEF mandate
<Case evidence> mandatory for diesel vehicles and some manufacturers to use DEF to control emissions
<Ec analysis> Users of diesel vehicles will consume up to Q_P, where MPB = MPC, the private equilibrium level. The existence of the MEC raises the marginal social cost (MSC) above MPC. Considering the full cost of diesel vehicle use to the society as a whole, the socially-optimum output should only be Q_S, where MSB = MSC.

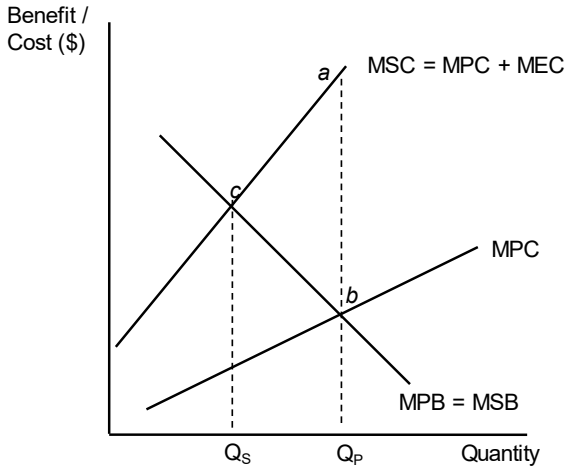


Figure 1: Diesel vehicle use

By compelling the use of DEF through regulation / mandate, MEC generated by the use of diesel vehicles is reduced while the MPC is raised (compared to using urea-free fuel), closing the gap between Q_S and Q_P, **<L>** reducing the allocative inefficiency.

R2: Explain the workings of cap-and-trade programme
The gov sets a limit on the amount of emission permitted (at what it estimates to be the socially-optimal level). Having set the cap, the gov either

- allocates permits to individual firms, and allow the firms to trade the permits among themselves. If the firm produces less emission than what they are legally permitted to emit, the unused credit can then be sold to another firm, allowing the other firm to exceed its original limit.
- puts up the permits in the market for sale through a system of auction.

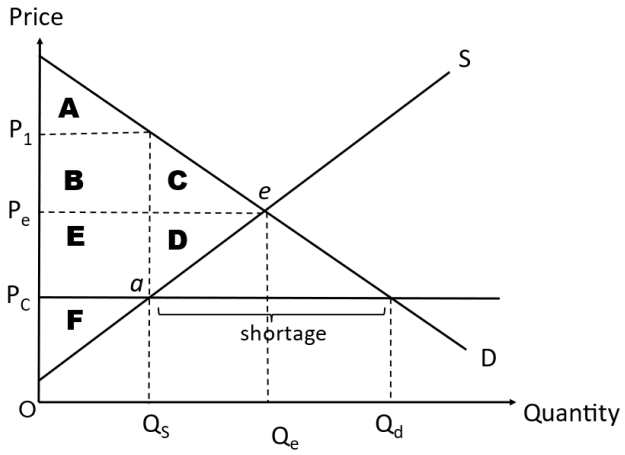
Similar to indirect taxes, the external cost is internalised in the form of price paid for the permit. Q_P falls towards Q_S, **<L>** reducing the allocative inefficiency.

Evaluation:
[certainty of outcome] The cap-and-trade programme, by setting an absolute limit on NO_X emissions, has greater certainty in terms of the extent of NO_X emissions. On the other hand, the DEF mandate only reduces the NO_X emissions for every trip made in diesel vehicles. Without curtailing the total number of trips made, total NO_X emissions could still increase if strong economic activity / economic growth drive up demand for transport.

Level 2 (4–6 marks) *Answers in this level will provide analysis of DEF mandate (a command-and-control measure) and one other measure work to correct the market failure.*
Level 1 (1–3 marks) *Answers in this level will show an awareness of one or both policies.*
Evaluation (1–2 marks) *Evaluation marks will be awarded for evaluative comment on which policy is 'best'.*

(f) Discuss the desirability of the Malaysian government's policies of price ceiling and export ban in stabilising chicken prices. [10]

R1: Explain the workings of price ceiling
<Case evidence> retail price of chicken is currently capped at RM8.90 per kg
<Ec analysis> Price ceiling is the maximum legal price allowed by government.



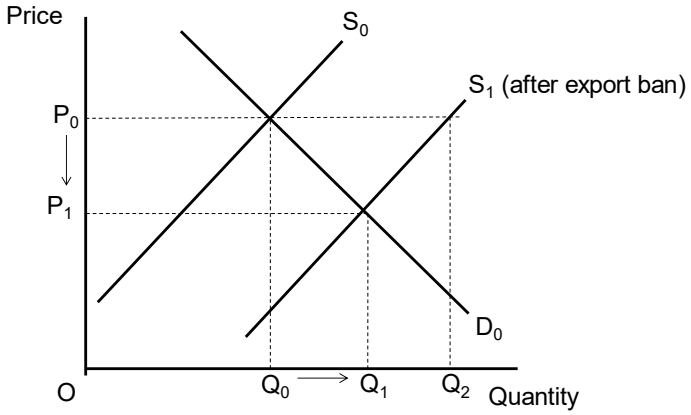
In the absence of price control, price will equilibrate at the market-clearing level OP_e where quantity demanded equals quantity supplied. A legally-binding price ceiling, set below the market equilibrium price will thus force price down to OP_c. **<L>** Set against the backdrop of sharp price increase, this helps to stabilise chicken prices.

Point evaluation:
<Case evidence> when the government imposed a ceiling price below actual costs, you naturally get supply shortages as firms exit production
<Ec analysis> As the price decreases below costs, firms reduce quantity supplied (Q_SQ_e) to avoid marginal loss. Simultaneously, the decrease in price increase crs w&a to purchase chicken, increasing quantity demanded (Q_eQ_d). Overall, a shortage of Q_dQ_S develops. This is undesirable for

- the group of consumers who no longer get to consume chicken → **<L>** loss of satisfaction, utility declines
- higher-cost producers who are compelled to exit production due to **<L>** losses

- other producers who are forced to accept lower prices. **<L>** Whilst they might not make a loss, they experience reduced profits

R2: Explain the workings of export ban
<Case evidence> ban on chicken exports until supply and prices stabilise
<Ec analysis> By banning exports, this leaves more chicken available in Malaysia locally.



As ss increases from S_0 to S_1, a surplus of Q_0Q_2 is formed at the original price P_0, exerting a downward pressure on price as firms lower price in attempt to get rid of the excess supply. As price declines, quantity demanded rises while quantity supplied declines. The adjustment will continue up to the point where price falls enough to remove the entire surplus (P_0 to P_1). **<L>** Set against the backdrop of sharp price increase, this helps to stabilise chicken prices.

Point evaluation:
<Case evidence> Chicken suppliers in Malaysia are working overtime and rushing to send as many chickens as they can across the Causeway before the export ban kicks in on June 1.
<Ec analysis> This suggests that selling chickens to Singapore is more profitable than selling them in Malaysia. **<L>** Banning such sales thus means reduction in profits for the Malaysian producers.

Overall evaluation

Stand: The desirability of the policies thus depend on whose POV is considered

Justification:
From ***Malaysian consumers' standpoint***, export ban is the more desirable of the two measures. Whilst both measures stabilise prices, export ban results in larger Q of chicken while price ceiling reduces Q of chicken available. Export ban therefore allows more wants to be satisfied, raising utility.
From ***Malaysian producers' standpoint***, price ceiling is the more desirable of the two. Faced with a price ceiling within Malaysia, the producers would at least have the option to sell the chickens at a higher price in Singapore, minimising the adverse effect on their profits. Export ban, however, forces all producers to only sell within the domestic Malaysian market.

Level 2 (4–7 marks) *Answers in this level will provide analysis of the workings of price ceiling and export bans in stabilising prices.*
Level 1 (1–3 marks) *Answers in this level will show an awareness of one or both policies though policy mechanism might not be well analysed or meaning of 'price stabilisation' might not be well understood.*
Evaluation (1–3 marks) *Evaluation marks will be awarded for evaluative comment with reference to the overall "desirability" of each policy.*

QUESTION 2: Challenges facing the Asian Economies

(a) With reference to Extract 5

(i) Explain <u>one</u> aggregate demand factor and <u>one</u> aggregate supply factor that have contributed to the "lower growth" of the Asian economies. [4]

[AD] <E> Chinese gov's zero-Covid policy <E> limits outward tourism by Chinese. For the other Asian countries, the decrease in tourism revenue presents a decrease in X, **<L>** contributing to decrease in AD (or at least a slowdown in AD growth

[AS] <E> Rising global food and energy price <E> raise unit cost of production faced by firms. Prs **<L>** respond by reducing AS.

Accept other AD / AS factors derived from Extract 5

For each factor,
1 mark for identification of factor
1 mark for reasoning

(ii) Explain why economists have called for central banks to persevere with their policy tightening until inflation "durably falls back to target." [3]

Not lowering inflation till it "durably falls back to target" risks having the <E> inflation expectations feeding a wage-price spiral. <E> A stubbornly high inflation may cause households to expect inflation to stay high. To protect the real value of their nominal wages, they demand for wage increase. Without a matching increase in productivity, this wage increase adds to firms' uCOP. To protect their profits, firms pass on part of the cost increase by raising prices of final g&s. **<L>** It is thus necessary for central banks to persevere with their policy tightening to avoid the acceleration of inflation lest wage-price spiral takes hold.

1 mark for the reason
Up to 2 marks for the reasoning

(b) With reference to Extract 6,

(i) explain the effect of the decision by major central banks to raise interest rate on households and firms in Singapore. [4]

<Case evidence> Domestic interest rates in Sg "follow the lead of those set by major central banks"

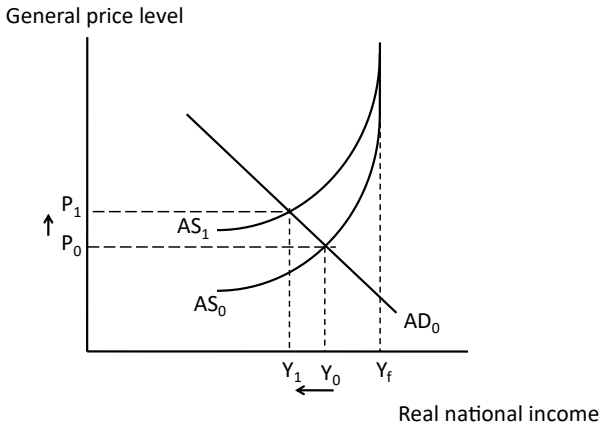
[hhs] Higher i/r raises the cost of borrowing, discouraging purchases financed by credit, **<L>** reducing consumption.
OR Higher i/r increases the rewards (or marginal benefits) from savings, **<L>** incentivising higher rates of savings, and hence reducing consumption.
[firms] Higher i/r raises the cost of borrowing relative to the expected rate of return on investment, **<L>** reducing investment.

Accept also:
- Households that have loans will have to devote a larger share of their budget towards loan repayment, leaving them less w&a to consume.
- Households that are savers will experience an increase in interest income, raising their w&a to consume.

For each economic agent (household and firm),
- *1 mark for effect*
- *1 mark for reasoning*

(ii) comment on the effect of the increase in goods and services tax (GST) rate on Singapore's macroeconomy. [6]

<E> Increase in GST rate adds to firms' uCOP. The same output will be supplied by firms only at higher prices, represented as an upward shift of the AS from AS_0 to AS_1, described as a decrease in AS. Firms respond to the higher unit cost by partly decreasing output and partly increasing price of final goods and services to protect their profits. As firms cut back production, demand for factors of production also fall. Overall, the general price level rises from P_0 to P_1 and real national income falls from Y_0 to Y_1, away the full employment level of real national income Y_f.



<L> This could undermine the attainment of macroeconomic goals by exacerbating inflationary pressure, adding to the slowdown in economic growth, and raising unemployment.

COMMENT

<E> Its effect on inflation is, however, expected to be "transitory". <E> The GST increase raises the UCOP, which, in subsequent years stayed high. As long as it does not to continue to increase, it would not contribute to inflation (price increase) in the subsequent period.

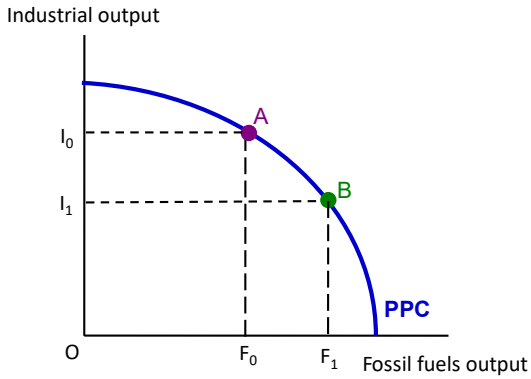
Up to 2 marks for an analysis of the GST increase on RNY and employment
Up to 2 marks for an analysis of the GST increase in the GPL
Up to 2 marks for a relevant comment on the severity of the problems – magnitude and/or duration

(c) Extract 7 raises concerns that commodity booms "may cause permanent de-industrialisation".

(i) Using a production possibilities diagram, explain the effect of a commodity boom. [3]

(ii) Using Table 1, explain why this concern may not be altogether well-founded in Indonesia. [2]

(i) <E> Commodity booms "compete with the other sectors for scarce resources". <E> The diversion of resources from industrial goods to commodities or minerals (e.g. coal) production reduces the output of industrial goods from OI_0 to OI_1 as it supports the increase in output of fossil fuels from OF_0 to OF_1. **<L>** This change is represented as a movement along the PPC from Point A to Point B.



Up to 2 marks for a well-referenced PPC diagram
1 mark for the reasoning

(ii) <E> High-technology exports as a share of manufactured exports declined over the period, offering some basis for concern.

<E> However, there was a sharp increase in this share in 2022, suggesting that there might not a really need to be overly concerned about 'permanent' de-industrialisation in Indonesia.

1 mark for each feature offering different readings about de-industriailisation in Indonesia

(d) Discuss whether supply-side policies or a weakening of the exchange rate is a better policy to counter de-industrialisation. [8]

Supply-side policies

<P> One way to counter de-industrialisation is through supply-side policies. **<E>** To move away from the trap of reliance on commodities, FDI promotion could be focused on attracting green investment. (Extract 7) **<E>** FDI promotion could include policies such as targeted tax holidays to attract investment in the green technology sector. This increases

the expected rate of return on investment, incentivising foreign firms to increase investment. This could be complemented by human capital development (e.g. expanding university intake, subsidised training, etc) to equip its workforce with skills relevant to the green economy. With the skills and capital accumulation directed into the green economy, factor quantity and quality increase.
[analyse how this counters de-industrialisation using the PPC analysis (follow-up from part c) or AD/AS analysis]
<L> Overall, this could help increase in the industrial output's share of total output.

Weakening of exchange rate

<E> Commodity booms put upward pressure on the exchange rate, undermining the competitiveness of other export sectors. (Extract 7) **<P>** To counter the above, the Indonesian gov could weaken its exchange rate. **<E>** As the INR weakens against foreign currencies, prices of Indonesia's exports fall in foreign currency terms, causing the quantity demanded for exports to rise, including exports of industrial goods. The more price elastic the demand, the larger the increase in Qd. **<L>** Overall, this could help increase in the industrial output's share of total output, countering de-industrialisation.

Evaluation

Stand: SSP is a better policy than depreciation of the INR. Even though long gestation period is involved in SSP, it avoids the adverse effects of the INR depreciation and is thus a policy that can be sustained over time.

Justification:

- Depreciation as a means to support the growth of the industrial sector, without adding capacity, would likely prove self-defeating. This is because it would result in inflation and the rising prices would then erode the competitiveness of Indonesia's industrial exports.
- In contrast, SSP keeps down unit COP by building capacity. This would prove to have a more long-lasting benefit.

OR

- Inflation in Indonesia rose sharply in 2022 (Table 1). Weakening of its currency would add further inflationary pressure, threatening macroeconomic stability. With a weakening of the INR, prices of imports (including imported fops) increase in domestic current terms, adding to cost-push inflationary pressure.
- A low inflation environment is one that is conducive to investment. By accelerating GPL increases, weakening of the INR undermines the efforts of SSP in attracting green investment.
- In contrast, SSP, by bringing about the expansion of productive capacity, supports non-inflationary sustained growth.

Level 2 (4–6 marks) *Answers in this level will provide analysis of how supply-side policies and managed depreciation work to successfully support the growth of the industrial sector in Indonesia.*

Level 1 (1–3 marks) *Answers in this level will show an awareness of one or both policies. The answers are also not focused on countering de-industrialisation.*
Evaluation (1–2 marks) *Evaluation marks will be awarded for evaluative comment on which of the two policies is 'better'.*

(e) Discuss the extent to which the commodities boom provides the basis for inclusive and sustainable growth in Indonesia. [10]

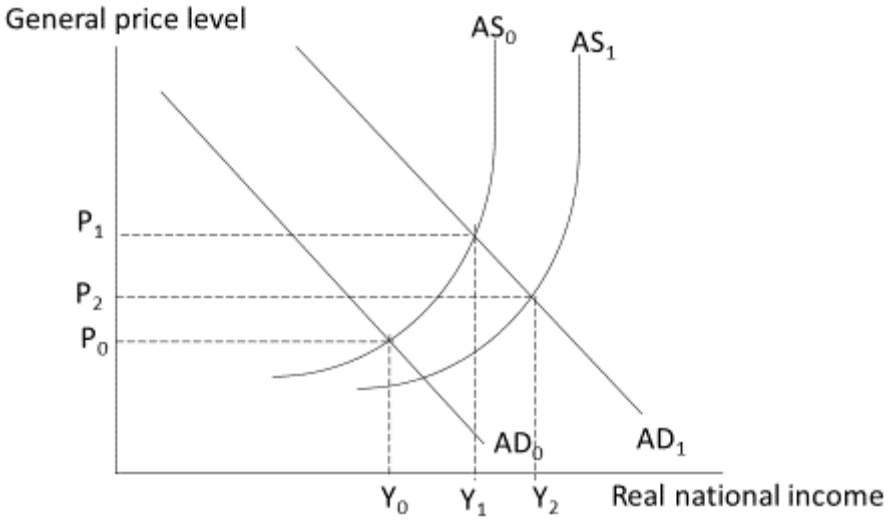
R1: GROWTH

Commodities boom appears to have driven sustained growth in Indonesia.

<E> "Coal and fossil fuel contribution to total export revenue increased" (Extract 7). <E> With large reserves of fossil fuels, Indonesia is able to continue to meet the rising demand for commodities by the rest of the world. Facing an increase in AD, driven by increase in commodities X, firms will increase output. To do so, firms enter the factor market to demand for more factors of production, including labour, paying out more factor income. Through the multiplier process where spending creates income and income generates more spending, AD eventually increases from AD_0 to AD_1.

Where the commodities boom also raise the expected rate of return on investment in Indonesia, this creates the incentive for firms to increase investment. With the capital accumulation, productive capacity expands, shown by the rightward shift of AS from AS_0 to AS_1.

With AD and AS both increasing, real output increases from Y_0 to Y_1 with an increase in AD from AD_0 to AD_1, and further to Y_2 following an expansion of the productive capacity, yielding sustained growth.



R2: INCLUSIVENESS & SUSTAINABILITY

2.1 GROWTH IS INCLUSIVE

<E> "The windfall increased the government's fiscal revenues… from export taxes and non-tax revenues on natural resources" which can be directed towards "targeted social assistance programmes" to raise the disposable income of lower-income households. **<E>** Through redistribution policy, the benefits of growth is shared out equitably.

<E> This is corroborated by the data in Table 1. Not only did GNP per capita, PPP increase, the income share held by the lowest 20**%** also increased. **<L>** This helps to reduce income gap, lower the Gini coefficient, suggesting that the commodities boom not only brings about EG but that this growth has been inclusive.

2.2 GROWTH IS NON-SUSTAINABLE

<E> The commodities boom is accompanied by increased negative externalities. Coal power plants needed to process nickel and deforestation to allow for the production of palm oil, have resulted in increased CO2 emissions. **<E>** The resultant global warming and climate change could, in the worst-case scenario, cause a contraction of the economy's productive capacity (relate to destruction of productive resources caused by extreme climate event, and loss of labour productivity from heat wave and other climate-related diseases). Future generations could thus face negative EG and declining SOL, **<L>** indicating that non-sustainability of growth.

EVALUATION

It all *depends on* what the gov does with the dividends of growth – whether the revenue windfall is directed towards

- **<E>** fuel subsidies – which disproportionately benefits the middle- and higher-income households who tend to own private large-engine vehicles, and incentivizes over-consumption of pollutive fuels – or are distributed out to lower-income households through targeted subsidies.
- **<E>** long-term reforms, including climate change mitigation, attracting green energy

Accept other arguments for / against inclusive and sustainable which are derived from the data

Level 2 (4–7 marks) *Answers in this level will provide analysis of the effect of the commodities boom on the inclusiveness and sustainability of growth.*
Level 1 (1–3 marks) *Answers in this level will show an awareness of growth though concepts of inclusiveness and sustainability might not be well analysed.*
Evaluation (1–3 marks) *Evaluation marks will be awarded for evaluative comment with reference to the overall "inclusiveness" and "sustainability", with the top marks awarded for comments that make reference to 'extent'.*