ANGLO-CHINESE JUNIOR COLLEGE

2019 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS

9757/01

Higher 2

27 August 2019

Paper 1: Case Studies

2 hours 15 minutes

Additional materials: Answer paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black ink pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid / tape.

Begin each question on a **fresh** sheet of paper.

Answer **all** questions.

At the end of the examination, fasten your answers for Question 1 and Question 2 **separately** using the cover sheets provided.

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

Answer **all** questions.

Question 1: The UK Rail Industry

Table 1: UK Rail Statistics

	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Rail fares index (January 1995 = 100)	187.1	198.6	207.1	212.6	217.2	218.7
Annual passenger numbers (% change)	8.6	6.1	3.3	5.0	4.5	5.1

Source: Office of Rail and Road, accessed 20 July 2019

Table 2: Estimates of elasticities for various modes of transport in the UK

	Elasticity Value
Price elasticity of demand for rail	(-) 0.218
Price elasticity of demand for bus	(-) 0.357
Price elasticity of demand for car	(-) 0.197
Cross elasticity of demand for car *w.r.t rail	0.196
Cross elasticity of demand for car *w.r.t bus	0.116
Cross elasticity of demand for rail *w.r.t car	0.053
Cross elasticity of demand for bus *w.r.t car	0.066

*w.r.t refers to 'with respect to'

Source: https://www.vtpi.org/tranelas.pdf

Table 3: Rail Ticket Prices for Southampton to Manchester (in UK pound sterling (£))

Type of ticket	**Direct route**	**Indirect route**
Advance	57.00	*n/a
Off-peak	113.50	115.10
Anytime	124.80	221.50
First Class Anytime	276.30	305.00

*n/a = not available

When buying a ticket for a rail journey, consumers often face an array of possible prices and types of rail ticket. Consumers could choose the following types of rail tickets:

1. **Indirect route** will require travellers to switch to another rail to reach the destination and the journey will usually include multiple stops.
2. **Advance tickets** have to be bought in advance (up to the day before the day of travel) and are sold in limited numbers and subject to availability. These tickets are only valid on the date/train specified.

3. **Off-Peak tickets** can be bought anytime. However, travellers have to travel during off-peak hours (exclude peak hours in the mornings, late afternoons and late evenings on Mondays-Fridays).
4. **Anytime tickets** can be bought anytime and allow travellers to travel anytime.
5. **First Class tickets** offer additional free Wi-Fi, complimentary food and drinks, free newspapers, extra leg room and reclining seats as well as access to first class lounges at certain stations.

Source: Economic Review February 2019 Vol 36 No.3

Extract 1: Connecting Britain

High-Speed 2 (HS2) is a planned rail network between London, the West Midlands and the North. It will be the biggest construction project in Europe and it is expected to bring great economic benefits to the country. The construction of HS2 will be a major generator of jobs and businesses directly linked to the project. The benefits will fall across a wide range of industrial sectors from the construction sector to the civil engineering and rail industries.

Beyond the construction of the railways and stations themselves, associated development triggered by HS2 can have an important impact on the economy. There is evidence that infrastructure has a stronger positive effect on growth.

However, many who live along the proposed route are naturally opposed to the project. One major reason is obviously the prospect of years of disruptive construction work, followed by up to 28 trains an hour screaming past their homes and villages at speeds of up to 400km/h.

The Institute of Economic Affairs (IEA), predicts that costs will be greater while the economic benefits will be lower than what the government has forecasted.

The overall costs would be higher for a number of reasons, ranging from minor costs such as compensation for disruption during the construction work being paid to residents staying near construction sites, to major expenses arising from a resulting need to expand and upgrade existing stations that are going to link to the HS2. Moreover, when operating costs are added to the initial investment of HS2, the overall cost could increase substantially.

Furthermore, the overall revenue from ticket sales are unlikely to match expectations stated by the UK government.

Source: GOV.UK developer docs, accessed 20 July 2019

Extract 2: Should Britain nationalise the rail network?

Britain's rail network was first nationalised in 1948 and then privatised again in 1993. Now, 24 years on, the main Britain opposition Labour Party says the railways have become inefficient and expensive; it wants to see a return to public ownership.

Over the past decade, fares have risen twice as fast as salaries. Where the rail operators have been left to their own devices, choosing whether or not to invest in new trains, the result is clear: on some rush-hour train services into London, a third of passengers are forced to stand.

Under the existing rail system, Britain's railway lines are divided into regions and each region is run by train operating companies for a fixed length of time. There are currently 20 regions in England, Scotland and Wales, with 25 foreign and local train operating companies competing for the regions.

This system allows for rail companies from around the world to bring new ideas and innovation to Britain's railways.

One in two of the 1.7bn passenger journeys made in the UK each year will be on trains operated by foreign companies. All of those companies are ultimately owned by foreign states – which outrages unions and others who call rail privatisation into question, as this is akin to transferring British fare payers' cash overseas.

Source: The Guardian, 1 April 2017

Extract 3: Rail privatisation: the UK looks for secrets of Japan's success

The two railways – UK and Japan, have something in common: both were once state-owned, then privatised in 1987 and 1994, respectively. There, the similarities end.

The most fundamental difference between the British and Japanese railways is how they were privatised. In Britain, the government chose to break up railway operations into three components: tracks, trains, and train operations. Today, the tracks are publicly owned by Network Rail[1] while companies regularly compete to operate trains in regions such as the West Midlands, leasing their trains from another company. In Japan, however, the former Japan National Railways was split up along regional lines and then everything were sold together. An example is JR East, centred on the city of Tokyo, owns its tracks, trains and stations.

However, Britain split up its system for a reason, and that reason was competition. It was hoped that the regular fight for regions would drive down costs. The obvious downside to the Japanese model is potentially creating a local monopoly with all the risks that entails: exorbitant fares, bloated costs, lazy service and refusal to co-operate with rivals.

In Britain, whether railway privatisation was beneficial is deeply controversial. This is because under privatisation, prices have been rising, yet the train service is unreliable. On top of that, despite operators earning tidy profits, some are still seeking public subsidies to improve services. In fact, Britain's trains are so unpopular that, according to a poll, the public supports nationalisation by a majority of 56 percent to 15 percent. Yet in Japan, the privatisation of its railways is regarded as a triumph. The bulk of Japan's ultra-reliable railway network operates without a single yen of public subsidy. Pricing is straightforward, and apart from consumption tax hikes, JR East has never raised fares once in 31 years as a private operator.

The divergent fortunes of these two systems raises an obvious question: is private ownership really the problem with Britain's railways? If not, can nationalisation cure their ills?

Japan's success offers UK an appealing prospect of fixing the railways in the private sector. As such, a review has been launched that will specifically look at Japan as a model for the UK. What they will find is not just a triumph of private enterprise, but a robust system of regulation and indirect but ferocious competition. Japan's rail success will not be easy to replicate.

Source: The Financial Times, accessed 20 July 2019

[1] Network Rail is a 100 percent public-owned body that runs Britain's railway network and owns the infrastructure, including 20,000 miles of track, 40,000 bridges and tunnels and 2,500 stations.

Questions

(a) Using supply and demand analysis, state what could have caused the changes in annual rail fares and annual passenger numbers in Table 1. [2]

(b) With reference to Table 2, comment on whether the UK government should subsidise rail transport or bus to reduce private car usage. [4]

(c) Extract 1 explains that the UK government is considering building the High-Speed 2 (HS2) rail network to improve rail connections in the country.

(i) Explain a possible opportunity cost that the government might incur in the building of HS2 rail network. [2]

(ii) Discuss the factors that the government needs to consider in their decision to build the HS2 rail network. [8]

(d) Explain whether the UK rail ticketing strategies could be considered an example of price discrimination. [4]

(e) Discuss whether UK should renationalise or to adopt Japan's model of privatisation of its rail network. [10]

[Total: 30]

Question 2: Impact of US-China Trade War

Extract 4: Harmful effects of import restrictions

The history of steel import restrictions by the United States dates back to the 1960s. Because of their strong position in the market, US steelmakers used to have significant power to control prices. In the early 1960s, it was quite easy to pass on any increase in costs onto prices, and thus raising employee wages was not difficult. However, on the other side of the same coin, they were beginning to lose competitive advantage, lagging behind their foreign rivals in investing in continuous casting facilities and technology development. This resulted in higher domestic steel prices and a boost in imports.

Responding to calls from the domestic steel industry, the then President Johnson had Japan and the European Community agree to ‘voluntarily restrict’ U.S.-bound steel exports. More than half a century later, the United States has repeatedly implemented various measures to curb steel imports, including voluntary export restrictions on the part of trading partners, anti-dumping duties and the trigger price mechanism (TPM) designed to inhibit steel imports below set prices.

The US steel industry has long been protected from international competitive pressure, but remains far from being revitalized today. The latest import restrictions will do more harm than good, resulting in higher domestic prices for steel and causing a further delay in revitalisation efforts.

Moreover, steel users are no ordinary consumers but are manufacturers such as automakers. An increase in the prices of intermediate goods means higher costs for user industries, eroding their competitiveness and further reducing jobs. Some companies may move production bases to other countries to avoid higher costs of intermediate goods. The impact of such negative effects will be more serious on companies exposed to higher competition and may prompt those in the user industries to call for similar import restrictions.

Source: Research Institute of Economy, Trade and Industry, 18 May 2018

Extract 5: **Trump's trade war may benefit most global economies**

With the US imposing higher tariffs on Chinese goods, European producers will enjoy a competitive advantage over Chinese producers in the US market. Likewise, in the Chinese market, both European and Asian producers will have a competitive advantage over US producers.

A substantial share of US-China trade is thus likely to be diverted to Europe, Japan and other Asian economies close to the Chinese market. The European Union is likely to reap particularly large benefits, because it remains one of the largest trading partners of both the US and China, and because European producers are often US companies' closest competitors.

Ultimately, however, it seems likely that the Sino-American confrontation will shift global trade significantly. This may benefit most of the world's economies, but it will also have serious consequences for the US and China.

The losses are likely to be larger for the US than for China, because Chinese imports from the US include a larger share of agricultural commodities for which alternative suppliers are relatively easy to find. For example, China can import soya beans from Brazil instead of the

US, at little additional cost. Moreover, Chinese countervailing measures have been more moderate; there is little prospect of a blanket 25 per cent tariff on US imports.

All in all, the Sino-US trade war may lead to some losses for China, but those losses will likely be dwarfed by the costs incurred by the US itself.

Source: Business Time, 11 October 2018

Extract 6: Vietnam's GDP is just 11 years behind China, and growing rapidly

In 2006, Vietnam's GDP was barely $4,000 per capita PPP (Purchasing Power Parity). Today it's close to $7,000 per capita PPP and has more than doubled at market exchange rates.

Over the last 11 years, Vietnam's economy has grown at a compound annual rate of 5.0% in per capita terms. That is far short of China's 8.2%. However, as China's growth is slowing as it reaches the top of the world's middle-income bracket, Vietnam's growth seems to be accelerating as it breaks into the lower ranks of middle-income countries.

Part of Vietnam's growth is coming from China itself. Chinese companies have begun offshoring manufacturing jobs to Vietnam to take advantage of the country's much lower wages. The last 11 years of growth in China have raised even the poorer provinces of western China up to global middle-income levels. Southeast Asia is the new frontier. Vietnam is well-placed to attract Chinese investment companies looking to diversify their manufacturing base.

Source: Forbes, 9 November 2017

Extract 7: A remedy for Vietnam's financial troubles

Vietnam has become one of the Pacific Rim's staunchest proponents of free trade deals. From Hanoi's perspective, free trade agreements are critical to promoting foreign investment and to finding new markets for its exports as competition in the region heats up. The country currently has a dozen free trade agreements in effect with partners near and far, including the European Union and the Eurasian Economic Union.

Vietnam’s economic growth has outpaced even that of other rapidly developing states in the region such as Thailand, Indonesia and Malaysia. Its reliance on exports and foreign investment makes its economy susceptible to external volatility. Furthermore, Vietnam's manufacturing sector relies on importing the raw materials it needs to produce the country's leading exports. Vietnam's incomplete supply chains, coupled with its lack of supporting and processing industries, have cut into producers' profit margins and limited their ability to add value. Without a long-term strategy to develop its industries and boost productivity, the country's economy will remain vulnerable.

Though Vietnam has made a name for itself as an economic success story, the country's worsening structural problems have tarnished its reputation. Vietnam's budget deficit is among the highest in Asia. The protracted imbalance stands to undermine Hanoi's many social, economic and strategic objectives unless the government finds a viable way to boost revenue in the short term, beyond raising taxes.

Its public debt is now estimated to exceed 63 percent of GDP — and is expected to grow as the government increases borrowing to cover the budget and fuel economic growth. The country's state-owned enterprises, meanwhile, have buckled under the weight of their own inefficiency, and the government has fallen short in its efforts to strengthen the banking sector.

Together, these problems (among others) have given Vietnam a sense of urgency in its quest to partially privatise large state-owned companies. The government has already sold off shares of several companies formerly under its exclusive control, including state-owned oil and gas firm PetroVietnam.

Source: The Guardian, 30 June 2019

Table 4: Selected economic indicators of Vietnam

Indicators	**2013**	**2014**	**2015**	**2016**	**2017**
Real GDP Growth (annual %)	5.4	6.0	6.7	6.2	6.8
Households Final consumption expenditure (constant 2010 US$) (billion)	88.6	94.0	102.8	110.3	118.4
Government final consumption expenditure (constant 2010 US$) (billion)	8.6	9.2	9.8	10.5	11.3
Gross fixed capital formation (constant 2010 US$) (billion)	37.4	40.9	44.7	49.1	53.5
Exports of goods and services (constant 2010 US$) (billion)	125.6	140.1	157.8	179.7	209.8
Imports of goods and services (constant 2010 US$) (billion)	123.9	139.8	165.1	190.4	223.7
Inflation rate (%)	6.6	4.7	0.9	3.2	3.5
Unemployment rate (%)	1.3	1.3	1.9	1.9	1.9

Source: Various

Questions

(a) Explain the economic relationship between steel and automobiles. [2]

(b) Using a diagram, explain how rising wage costs in the US steel industry led to increasing steel imports. [4]

(c) Consider whether the US government should continue to pursue protectionistic trade policies to save the steel industry. [8]

(d) **(i)** Describe the change in Vietnam’s trade balance between 2013 and 2017. [2]

(ii) Using the information given, explain how free trade agreements could account for Vietnam’s economic growth. [4]

(e) Discuss the policy options for the Vietnamese government to manage her budget deficit whilst sustaining her economic growth. [10]

[Total: 30 Marks]

Question 1: The UK Rail Industry

(a)	Using supply and demand analysis, state what could have caused the changes in annual rail fares and annual passenger numbers in Table 1. [2]

- Assuming the SS of rail services remains constant, the greater population in UK could lead to an increase in demand for UK rail service → shortage and upward pressure on rail fares → annual rai fares increased
- The increase in demand for UK rail services also saw an increase in the number of annual passenger number

OR

- Greater population could lead to an increase in DD.
- At the same time, there could be an increased in the frequency of rail services. OR At the same time, privatisation might have led to rail companies reducing the SS of rail services.
- Increase in DD > change (increase or decrease) in SS → shortage and upward pressure on rail fares → annual rai fares increased & increase in the number of annual passenger number

(b)	With reference to Table 2, comment on whether the UK government should subsidise rail transport or bus to reduce private car usage. [4]

Impact of subsidies on fares

- If subsidy is given to the producers of public transport (rail transport or bus transport), it will lower the COP → increase the SS of public transport → surplus of public transport services → downward pressure on public transport fare → fall in public transport fare. The fall in public transport fare could prompt private car owners to switch from using private cars to cheaper substitutes such as rail or bus.

UK govt may want to consider subsidising rail transport

- However, the XED value for car w.r.t rail (XED = 0.196) is higher than XED value for car w.r.t bus (XED = 0.116). DD for car w.r.t rail is less positive cross inelastic than DD for car w.r.t bus.
- This suggests that qty dd for car is more responsive to a change in price of rail than bus. The fall in rail fare → fall in DD for car as drivers switch to rail. This fall in DD for car is likely to be more when rail fare fall compare to a fall in bus fare.
- Thus to reduce car usage, govt may want to subsidise rail transport instead of bus as car users are more responsive to a fall in fares of rail than bus.

Comment

- However, government may also want to subsidise bus fares as well.
- Since the XED for car w.r.t. bus is positive, indicating that both goods are substitutes, a fall in bus fare will still prompt car users to switch to bus especially in cities/areas with the parked and ride scheme. Such scheme may further help drivers to switch from cars to bus.

OR

- In addition of reducing the fares of substitutes of car, govt could also increase the cost of owning a car which may reduce the private car usage.

(c) Extract 1 explains that the UK government is considering building the High-Speed 2 (HS2) rail network to improve rail connections in the country.

(i) Explain a possible opportunity cost that the government might incur in the building of HS2 rail network. [2]

- Opportunity cost is the **value** of the **next best** option forgone.
- If UK government build the HS2, the government might have forgone the benefit of spending on higher education such as a making UK a more attractive place for FDI.

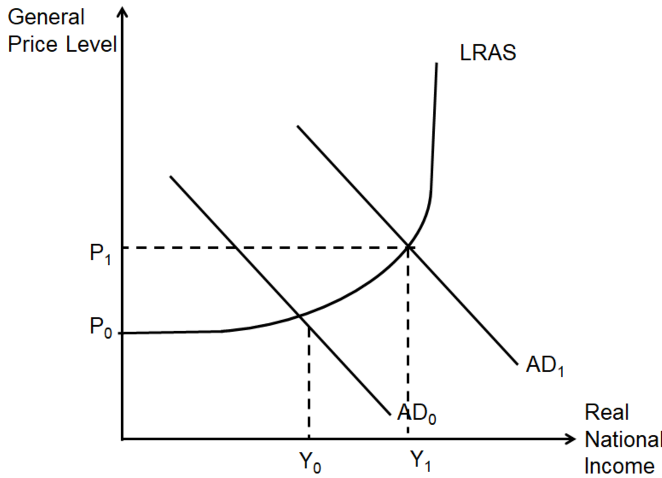
(ii) Discuss the factors that the government needs to consider in their decision to build the HS2 rail network. [8]

<u>Introduction</u>
Briefly explain the factors that government needs to consider:
- Cost and benefit of building the HS2
- Constraints face when building the HS2

<u>Body Paragraph 1: Benefit</u>
UK government needs to consider the benefit of building the HS2 rail network.
- Extract 1 suggests that construction of infrastructure like HS2 could have a stronger positive effect on growth and employment than spending on consumption goods.
- Building HS2 → increase in investment in infrastructure by govt → increase in AD
- At the same time, construction of HS2 also triggered associated development (extract 1) such as investment in capital goods by construction firms → increase AD as seen in the diagram below.
- The increase in AD → increase in NY by multiple times due to the multiplier effect, assuming there is spare capacity.
- Increase in AD → increase in employment especially in a wide range of industrial sectors from the construction sector to the civil engineering and rail industries (Extract 1). This reduces the demand deficient unemployment in the country.
- Economic growth and lower unemployment could mean that higher income tax revenue collected and fewer unemployment benefits given to the citizens → reduce the government debt
- At the same time, increase spending on infrastructure for HS2 → increase in quantity of capital goods → increase the productivity such that workers could travel longer distance within a shorter time and more goods can be delivered given the time period → maximum output that UK can produce increase → this increase productive capacity of the country → increase in LRAS → prevents

any potential DD-pull inflation if the country is near full capacity

Thus, construction of HS2 could bring about macroeconomic benefits to the country.



Body Paragraph 2: Comment on the benefit

- Construction of HS2 has benefit both in the short and long run.
- Such benefits, economic growth and lower unemployment, would be especially beneficial if UK is experiencing slow EG in the country. Such expansionary policy may help to prevent slow EG and rising unemployment.
- However, UK government should not just look at the benefit of HS2. Constructing such mega project will definitely incur cost. Thus, government must also consider the cost of constructing the HS2.

Body Paragraph 3: Cost

Construction of HS2 has significant cost and govt needs to take into consideration the cost of building HS2.

- The UK govt could incur substantial construction cost, such as compensation for disruption during the construction work being paid to residents staying near construction sites, to major expenses arising from a resulting need to expand and upgrade existing stations that are going to link to the HS2 (extract 1).
- Residents living along the proposed HS2 route will suffer from years of disruptive construction work, followed by up to 28 trains an hour screaming past their homes and villages at speeds of up to 400km/h (extract 1).
  Note: not a MEC because UK government has compensated the residents for the disruptive construction work and pollution caused by the HS2.
- The building and running of HS2 generates noise pollution, affecting the quality of life of the residents and increasing the stress of the residents. Housing value near the construction site and HS2 track could fall, reducing the possible wealth of the residents.

Thus construction of HS2 will have substantial cost on both the government and residents living near the construction site.

Body Paragraph 4: Comment on the cost

- The cost of building HS2 may be substantial given the scale of the project. However, government has to consider both the cost and benefit before deciding on the project.
- While the HS2 requires substantial financial cost, if the construction and operation of HS2 generates sufficient revenue for the government so much so that the revenue can cover the cost, government can consider constructing the HS2 rail network.
- However, the cost and benefits are estimations provided by the government and economic agency such as IEA (Extract 1). The accuracy of such estimation is restricted by the available information that government and economic agency have. Furthermore, the information gathered and presented by the respective organisations could be biased, deliberately skewed in favour of their argument.
- Thus, the cost and benefit may be under/overestimated. Therefore, when government makes decision, the government needs to take into account the constraints which include the availability and accuracy of data.

Body Paragraph 5: Constraints

Government needs to take into consideration the possible constraints they might face when deciding on the HS2 rail network.

- Extract 1 suggests that estimation of the cost and benefits may not be accurate and that government may have under-estimated the cost while over-estimating the benefits. Thus, government needs to recognise that the availability and accuracy of information may affect their decision-making.
- Added to the lack of information and accuracy of information, the limited funds might restrict or constrain the decision to build HS2.
- UK has rising government debt and this might prevent government from implementing the HS2. The high and rising government debt would also mean that UK government will face greater difficulty in borrowing funds for their spending and this would further restrict access to funds to build HS2.

Thus, government will also have to consider the constraints they face when deciding whether to build HS2.

Conclusion

- Government will have to consider the cost and benefit of building the HS2 as well as the constraints they face.
- If the cost is within the constraints, the government can consider the HS2 project. For example, if the cost of building the HS2 is within their limited budget, the UK government could consider the project.
- And if there is net benefit, where the cost is at least equal or less than the benefit, the UK government should build the HS2 rail network.
- UK government also need to consider not just current cost and benefit, but also future cost and benefit. If future revenue could more than pay off the cost of constructing the HS2 and repay any loans made to finance the project, then the government might want to consider constructing the HS2.

Level	Descriptor	Marks
L2	• Well-developed analysis of the factors government needs to consider in their decision to build the HS2 rail network. • Good use of evidence from the extract.	4 – 6
L1	• Superficial analysis of the factors government needs to consider in their decision to build the HS2 rail network. • No evidence or inadequate evidences cited or evidence cited incidentally.	1 – 3
E	• Make a reasoned judgement on UK decision to build the HS2 rail network.	1 – 2

(d) Explain whether the UK rail ticketing strategies could be considered an example of price discrimination. [4]

Price discrimination is the practice of firm charging a **different price** for the **same product** when the price difference cannot be explained by differences in costs of production.

Example of price discrimination

Advance tickets

- Travellers who are buying 'Advance' tickets are planning ahead. This group of travellers has the option of buying early ('Advance' tickets) or buying just before boarding the rail. They could buy 'Anytime' tick if they want to travel anytime or buy 'Off-peak' tickets if they are travelling during off-peak hours.
- Given the various options available, travellers have many substitutes to choose from. Thus, their **demand is more price elastic** compare to other groups of traveller → 'Advance' travellers are charge a lower price.
- It is also possible to identify the 'Advance' travellers as this group of travellers are buying their tickets in advance (up to the day before the day of travel).
- Resale of 'Advance' tickets is not possible as the ticket would include the name, time and destination of travel. Thus, it is impossible for travellers to buy 'Advance' ticket at lower price and sell it at higher price to another traveller.
- There is no different COP as the 'Advance' travellers will be enjoying the same rail service as other group of travellers such as travellers travelling using the 'Anytime' tickets.

OR

Anytime tickets

- Travellers who are buying the 'Anytime' tickets could be individuals who need to travel at short notice because of sudden emergency or a business meeting called at the last minute. Such last-minute travellers have a more price inelastic demand → 'Anytime' travellers will be charged a higher price

- It is also possible to identify the 'Anytime' travellers as this group of travellers will not be buying their tickets in advance and likely to buy them at the last minute or any time of the day of their travel.
- Resale of 'Advance' tickets is not possible as the ticket would include the name, time and destination of travel.
- There is no different COP as the 'Anytime' travellers will be enjoying the same rail service as other group of travellers such as travellers travelling on 'Advance' tickets.

Not an example of price discrimination

Higher price for indirect route ticket

- Ticket prices for indirect route is higher and this could be attributed to the higher COP
- Indirect route requires travellers to switch to another rail, with the possibility of multiple stops → thus there could be longer travelling distance and thus higher COP → higher ticket prices

OR

Higher prices for First Class Anytime ticket

- Ticket prices for First Class Anytime is higher and this could be attributed to the higher COP
- Travellers who buy first class tickets are offered additional free Wi-Fi, complementary food and drinks. There is higher COP when Wi-Fi, food and drinks are offered to the consumers. Thus, the higher COP is passed on to the consumers in the form of higher prices.

(e)	Discuss whether UK should renationalise or to adopt Japan's model of privatisation of its rail network. [10]

Introduction

Briefly explain current UK's mode of privatisation

- Railway is split up along regional line
- Govt breaks up railway operations into three components: tracks, trains, and train operations. Each component is owned by different private companies.

Briefly explain the two options available for UK rail network

1. Renationalise: government to take over all the operation (tracks, trains and train operation) of UK rail network
2. Japan's model of privatisation: railway is split up along regional line and all operation (tracks, trains and train operation) is owned by private company

Body Paragraph 1: Using profit to improve services

UK might want to consider renationalise the rail network instead of adopting

Japan's model of privatisation of its rail network because it allows the UK government to keep the profit and use it to improve the quality of service

- Under privatisation system, foreign firms could own the rights to operate the regional line. These foreign firms are actually owned by foreign governments (Extract 2).
- Since foreign governments (Extract 2) own foreign firms, UK government might as well take over the operation and renationalise the rail network instead.
- Given that foreign governments operate some regional rail network, any profit earned would likely be sent back overseas to fund their countries' government spending (Extract 3). Thus, it might be more beneficial if UK government operate the rail network and keep the profit in UK as part of their government revenue. This could reduce the outflow under the primary income balance in the current account, improving the BOP.
- If government renationalise the rail network, the profit earned from rail operation could be reinvested in the rail transport to ensure quality rail services. This is unlike privatisation where private rail operators may not invest in new trains as seen in Extract 2 that about a third of passengers are standing during rush-hour train services in London. Thus renationalisation could reduce such problem.

Thus, renationalisation of the rail network might be a better option.

<u>Body Paragraph 2</u>

- However, this benefit is assumed that there is profit to be earned from rail operation. Whether there is profit to be earned depends on government's management because there is a possibility that UK government may face rising cost due to complacency or lower revenue due to lower fares charged.

<u>Body Paragraph 3: Allocative efficiency and lower prices, higher output</u>

UK might want to consider renationalise the rail network instead of adopting Japan's model of privatisation of its rail network because the government could charge a lower fare and produce at higher output.

- Under Japan's model of privatisation, fares have never risen once in 31 years, except once when there was a consumption tax hike (Extract 3). It may suggest that Japan's model of privatisation is successful in keep rail fares constant over 3 decades. But it may be worthwhile to also consider the cost of providing rail services in Japan.
- There could be a possibility where cost of producing rail services is falling yet fares are constant. Over the past 31 years, technology has improved tremendously with faster and larger trains. And trains are getting more and more energy efficient → reducing the cost required to provide rail services. Furthermore, rail companies are also able to better exploit iEOS → reducing the AC as the cost is spread over a larger output.
- If cost of producing rail services is falling and yet rail fares are constant, it could suggest that private rail companies are not passing the cost saving to consumers in the form of lower price. Thus renationalisation would be a better option, as UK government could pass the cost saving to the consumers in the form of lower price.
- Furthermore, under Japan's model of privatisation, private firms would maximise

profit at MC=MR and produce at output Qm. At that output, rail fares would be Pm, which is higher than MC. Thus under the model of privatisation, firms would be allocative inefficient and charge a fare that is higher than MC, even though rail fares have not risen.

- However, should UK government choose to renationalise it, the government could adopt AC-pricing or MC-pricing.
- With MC or AC-pricing, the fare charge would be lower than the fare charged by profit maximising private firms and output would be higher than profit maximising level, Qm.
- Should government choose MC–pricing, the government could charge fares at P = MC and produce rail services at the allocative efficient level.
- Since government's aim is not to maximise profit, they would be more willing to provide rail services to less popular areas/routes. Unlike privatisation, profit maximising rail companies may not be keen to provide rail services to these areas given that the companies could earn subnormal profit in the long run.

Thus, re-nationalisation would have been a better option than Japan's model of privatisation.

<u>Body Paragraph 4</u>

- If government aims to lower pricing by charging P=MC, the government owned rail company will be earning subnormal profit.
- Thus, government may need to subsidise the company → increase government spending → could worsen the UK government debt.
- However, lower fares would reduce inequity, ensuring that low income group has access to public transportation.

<u>Body Paragraph 5: Efficiency and Prices</u>

UK might want to consider Japan's model of privatisation of its rail network instead of renationalisation.

- When government renationalise the rail network, government intends to be the sole provider, with no intention of allowing new company to enter the market. Thus, the market is not contestable. Given this, government could be complacent and less likely to find the most cost efficient way of providing rail services. Thus, there is a possibility of X-inefficiency.
- Cost of producing the rail services may be higher → fares maybe higher instead.
- However, under the Japan's model of privatisation, government sold the rights to run the region railway to private companies. The market would be more contestable as new firms could win the right to operate the marker. Thus, private firms might aim to produce at the lowest cost possible → the fares would be low. This is evident in Extract 3 where it mentions that fares in Japan have never risen once in 31 years, except once when there was a consumption tax hike.

Thus, UK might want to consider Japan's model of privatisation as it could prevent X-inefficiency.

<u>Body Paragraph 6:</u>

- However, it is worthwhile to note that under Japan's model of privatisation, it could create a monopoly. If UK government decided to adopt Japan's model, UK government must ensure that the market remains contestable so that the private firms will minimise cost and pass them on to the consumers.

Body Paragraph 7: Innovation

UK might want to continue with privatisation of its rail network instead of renationalisation as privatisation may bring about innovation in the rail industry.

- Privatisation allow private companies, both domestic and foreign, to bid for the right to operate the rail services. This allows for rail companies from around the world to bring new ideas and innovation to Britain's railways (Extract 2).
- Transport companies all over the world are using big data treatment to better understand travellers travelling patterns. This helps rail companies to better plan their rail services. This could be in the form of whether to increase/decrease the train frequency.
- Thus, under the privatisation model, private companies could transfer such ideas from other countries into UK, something that may not happen if the rail service is renationalised and owned by the UK government.

Given the benefit of privatisation, government should consider privatisation instead.

Body Paragraph 8:

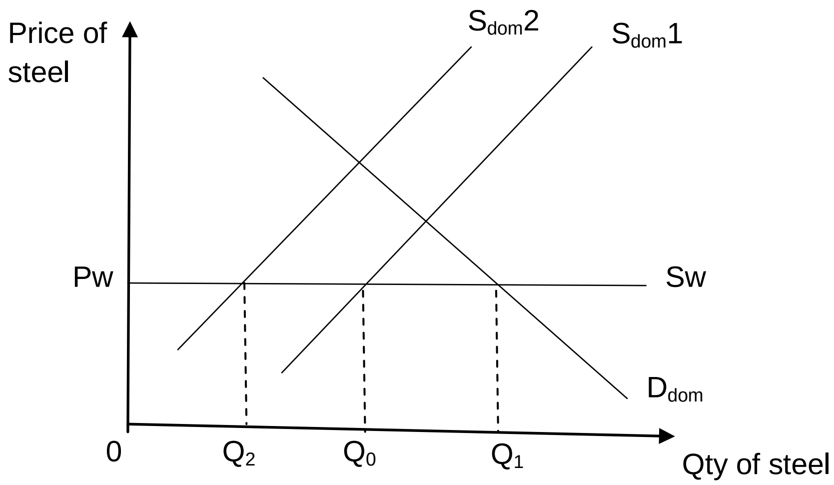
- While privatisation could bring about innovation, it really depends on the willingness of private firms to carry out the innovation. Even if firms are willing to carry out innovation, it may be at the cost to the government.
- According to Extract 3, firms are seeking subsidies from government to improve their services despite the fact that the firms are earning profit.

Conclusion

- Current model of privatisation is not efficient and fares are rising. Thus, there is a need for government to make changes to the existing rail industry.
- Rather than debating whether renationalisation or Japan's model of privatisation is better, it might be helpful for the UK government to first examine the problems in the UK rail industry and identify the root cause of the problems before implementing the right solutions to the problems.
- UK government might not necessary choose one of the two options proposed (renationalisation or Japan's model). UK government might instead keep the existing model of operation but implement changes that could solve the existing problems.
- For example, the rising rail fares may not necessary be a result of privatisation. It could be caused by rising COP such as rising wages and oil prices.
- It might also be worthwhile to note that under Japan's model of privatisation, the constant fares could be due to falling/stagnant cost of production. Inflation is Japan is close to zero, suggesting that COP could be stagnant and thus there is no need for the firms to increase the fares. Unlike UK, the country saw healthy inflation for the past few years, indicating rising COP. Thus, the rising fares.
- Thus, it may not be accurate to state that Japan's model is better base on the fact that Japan's rail fare has been constant for 31 years.

Level	Descriptor	Marks
L2	• Well-developed analysis on whether UK should renationalise or to adopt Japan’s model of privatisation of rail network. • Good comparison between renationalisation and Japan’s mode of privatisation of rail network. • Good use of evidence from extracts to support the answer.	5 – 7
L1	• Superficial analysis whether UK should renationalise or to adopt Japan’s model of privatisation of rail network. • Weak/no attempt at comparison between renationalisation and Japan’s mode of privatisation of rail network. • No evidence or inadequate evidences cited or evidence cited incidentally	1 – 4
E2	• Judgement is based on analysis that reaches a conclusion based upon the analysis offered.	2 – 3
E1	• Judgement is may not be supported by analysis.	1

ACJC H2 Econs Paper 1 Question 2 – Answer scheme

(a)	Explain the economic relationship between steel and automobiles.	[2]
	Demand for steel is a derived demand for the production of automobiles. Or steel is a factor of production to produce automobile Direct relationship – increase in demand for automobiles will lead to an increase in demand for steel	
(b)	Using a diagram, explain how rising wage costs in the US steel industry led to increasing steel imports.	[4]
	Rising wages means rising labour cost in the US, raising the cost of production in the steel industry, thereby lowering the supply of domestically produced steel.  From figure 1, at the world price Pw, the domestic quantity demanded is at Q2. This is met by domestic quantity supplied of 0Q1 and import of Q1Q2. Rising wage costs increase steel production costs, causing domestic steel producers to cut down production, thereby shifting the domestic supply curve to the left from Sdom1 to Sdom2. With the cut down in domestic supply from oQ1 to 0Q3, imported steel now increases from Q1Q2 to Q3Q2	
(c)	Consider whether the US government should continue to pursue protectionistic trade policies to save the steel industry.	[8]

Approach:

- Why US has been adopting protectionist trade policies to protect its steel industry since before 1960s (Extract 4)
- Why, to save the US steel industry, protectionist trade policy on steel industry should be limited

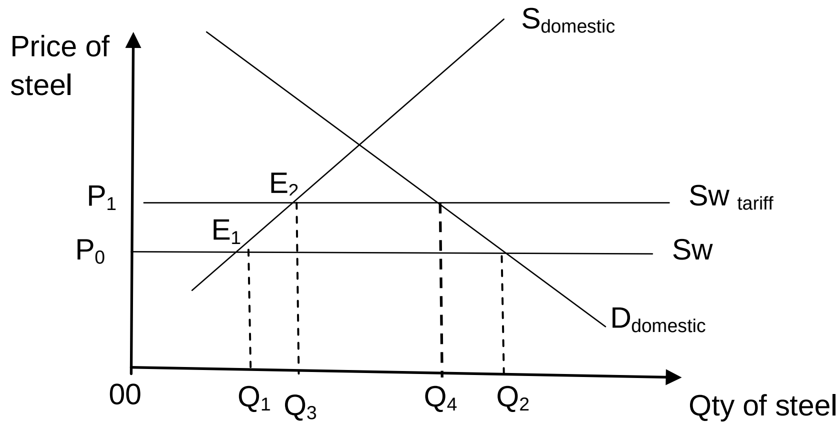
Suggested answer:

The US has been adopting trade restriction since President Johnson's time in the 1960s to protect the country's steel industry, which was deemed to be very important to the economy, ensuring employment and higher income among the steel workers.

Why US has relied on protectionist policies in the steel industry

1) **Protect the domestic steel workers**

Protecting the industry from strong competition from cheaper import will ensure continued production of steel hence maintain high employment in the industry and ensuring high income for the steel workers and shareholders.



From diagram above, import tariff on steel will increase price of steel in the US from P_0 to P_1, enabling domestic suppliers to increase quantity supplied from Q_1 to Q_3, hence increasing their revenue from $OP_1E_1Q_1$ to $OP_2E_2Q_3$.

2) **Inability to compete with cheaper steel imports**

The cheap steel imports are viewed as unfair competition, especially form countries like China which has much lower labour costs.
Tariffs, such as anti-dumping tariffs, are imposed to protect the domestic steel industry from their trading partners' unfair trade practices such as currency manipulation and excessive subsidies to their producers.

Reasons why government should limit its protectionist trade policy on steel in order to save the steel industry

1) **Complacency has stifled efficiency in the industry**

The long-term protection of the steel industry has **led to complacency in the industry**. Allowing for rising labour costs and hence rising price of domestically produced steel to ensure the high income in the industry has not helped in the providing industry players with the incentive to innovate or increase technology in the industry. This has caused the steel industry to lag behind other countries such as China in investing in casting facilities and technology development in the steel industry (Extract 1), hence its inability to match China's productivity and capacity to increase production at low costs. This has caused the US to lose its competitive advantage in steel both in the global market and in its own domestic market.

2) **Loss of consumer welfare**

Also, protecting the steel industry would harm its consumers, such as the automakers. The high steel prices, and lack of access to better quality imported steel, can lead to **higher costs for the automakers and other industries that require steel**, and hence reduce their competitiveness in the global market. The decline of these industries would lead to further decline in the steel industry.

Evaluation

- The government has to **weigh the benefits of protectionist policy on steel industry against the long-run costs** of the policy on the steel industry as well as the costs incurred on other related industries.

- Protectionist will not allow the government to revitalize the industry

  However, the protectionist policies have been adopted for too long, allowing complacency to be entrenched within the industry, causing innovation and technology development within the industry to lag behind other countries. Hence there is a **need to reviltalise the industry** to improve its competitive advantage and regain its comparative advantage.

  - There is a **need to increase investment in the steel industry** to improve its infrastructure and technology development in order to increase productivity and productive capacity, hence lower production cost.
  - However, such supply-side policies will **require large funding and involves time-lag**.
  - **Protectionist trade policies should be a short-term measure** to protect the steel industry from strong competition to give it time to develop, improve and gain back its comparative advantage.

- **A better policy to save the steel industry is to increase competition in the industry** and reduce the level of protection, so that firms are more motivated to innovate and move towards more cost efficient production methods to be able to compete effectively against their foreign competitors.
  - Taking away the protection that has been going on for a long time **can lead to large resistance among the steel producers and the workers**. But to save the industry and bring it back to its former glory, reducing protectionist policies has to be done.
  - To reduce the protectionist policies**, the government will have to accept the fall in employment and closing down of some unprofitable and inefficient firms** in the steel industry. However, the negative impact opening the industry to competition will be only short-term.

Level	Description	Marks
L2	• Sound analysis of the pros and cons of pursuing protectionist policy to save the US steel industry, using relevant economic concepts • Use of relevant case information to support analysis	4-6
L1	Answer that describes the pros and cons of protectionist policies without addressing whether government should pursue protectionist policy to save the steel industry Or Answers that attempts at considering the pros and cons of pursuing protectionist policy to save the steel industry, but superficially explained • Contains major conceptual errors	1-3
	Evaluation	
E2	Evaluative judgment that reaches to a conclusion based on consideration of the analysis. E.g. An answer that comes to a conclusion that weigh the benefits and costs of protectionist policies in saving the US steel industry	2
E1	Superficial/simplistic evaluation Or Evaluative judgment without explanation or elaboration	1

(d) (i) Describe the change in Vietnam's trade balance between 2013 and 2017. [2]

Vietnam's trade balance has worsened
Its trade **surplus worsened into a rising deficit in between 2015-2017**

Note: Students need to calculate the Trade Balance (Exports – Imports) in order to answer this question

(ii) Using the information given, explain how free trade agreements could account for Vietnam's economic growth. [4]

Free trade agreements are treaties between countries to reduce trade barriers and promote trade and investments between countries.

Vietnam's rising economic growth from 5.4% in 2013 to 6.8% in 2017 (Figure 1), one of the fastest growth in southeast Asia (Extract 7 Para 2), can be attributed to its free trade agreements despite the worsening trade balance during the same period.

The FTAs have brought in large amounts of foreign investments and rising exports into the country (Extract 7 Para 1). This is reflected in the rising Gross Fixed

Capital formation and exports in Figure 4. The Large investments from China have flowed into Vietnam, creating jobs and developing its manufacturing industries (Extract 6 Para 3).
These increase in I and X leads to rising AD → increase production, employment and national output → increase economic growth.

The influx of foreign investments and import of technology and capital goods as well as the increasing imported resources (Extract 7 Para 2) have led to the expansion of the country's productive capacity, increasing its LRAS → increase economic growth

(e)	Discuss the policy options for the Vietnamese government to manage her budget deficit whilst sustaining her economic growth.	[10]

Approach:

- State the context
  - Vietnam has high and rising economic growth and a healthy albeit rising inflation rate.
  - Vietnam government's large and rising budget deficit had led to increasing public debt
- Explain, analyse and evaluate the policy options to manage government budget deficit whilst sustaining economic growth

<u>Introduction:</u>

Vietnam's high economic growth has outpaced other countries in the region, Vietnam's government has been having budget deficit is also among the highest in the Asia. The high budget deficit has added to its high public debt that has already exceeded 63% of its GDP. Therefore need measures to lower its budget deficit. (extract 4)

Government budget deficit is when government spending exceeds government revenue.

<u>Body:</u>

Policy 1: Reduce government spending without causing significant fall in AD

- Cutting down on government spending will **reduce its budget deficit**.
- While reducing government budget deficit can lower AD and hence contract economic growth,
  - The fall in AD will **slows down the rising inflation rate**, hence prevent economic overheating

    Given Vietnam's high and rising economic growth and its inflation rate creeping to above 3% in recent years (figure 1), reducing government spending will release the country's resources for the private sector. This will reduce the strain on the country's resources, hence slows down rising cost of resources.

    Keeping inflation rate low will ensure price stability, hence further improve business confidence and attract more investments into the country
  - Figure 1 shows that **government's spending has a much smaller proportion the country's GDP compared to the other components of GDP**.

    Furthermore, Table 4 shows that the **country's rising economic growth is**

- **largely driven by the much larger investment, household expenditure and export**
  - Hence cutting down on government spending will not have significant impact on economic growth

- **Reducing government spending seems to be a better option than continuously increasing taxes**.
  - Further increasing taxes will turn off investors and lower household spending which will lower the country's AD.
  - Raising indirect taxes will increase costs, escalating the rising inflation rate and lower the country's export competitiveness.

  <u>Evaluation:</u>

  - **However, the cut in government spending cannot be significant because government will need to spend** on improving not just infrastructure such as roads and other forms on telecommunications but also develop the country's legal and banking sectors. The country's poor infrastructure is beginning to cause investors to lose business confidence (Extract 7 Para 3). Therefore, **there is an urgent need to improve the country's infrastructure** to retain both foreign and domestic investments in the country**.**
  - Hence cutting down government spending in the midst of developing the economy is not an easy task, but concerted effort and discipline is needed to reduce its budget deficit.

Policy 2: Privatization / selling of government-owned companies

- The government has already sold off some of its state-owned companies, including the oil and gas firm PetroVietnam. **The proceeds from the sale of more state-owned firms will not only add more to its revenue but also an increase in the government's source of tax revenue** annually.
- Selling off these inefficiently run state-owned firms will also **relieve the government from the burden of having to bear the high operating costs** of these firms.
- Sale of state-owned firms will **garner for domestic and international investment** into the country. Privatisation of firms can be viewed by investors as the precedence towards liberalization of the industries, promoting competition and attracting more investments into the country.
- Allowing **these state-owned firms to be run by the profit-driven private sector would transform them to be more efficient**. The private firms would be more motivated to stream-line the production methods, reduce wastage to lower costs and even increase investment on innovate technology development, turn the inefficient firms into more productive and profitable ones. The government will then gain more tax revenue from these firms.

  <u>Evaluation:</u>

  - Government **loses control over production of essential products such as oil and gas**. Hence, there is a need to put in place legislation on these firms to ensure consumer welfare is protected.
  - The private sector's restructuring of these inefficient previously state-run firms

may take a long time and very likely would **require large financial help from the government in the form of subsidies and grants, especially the domestic firms**.

- Also, turning these inefficient previously state-run firms into profitable private companies will take a long time. Therefore **it will be a few years before the government can reap the much needed higher tax revenue** from these firms.
- Privatisation of firms to encourage competition in the industries will require an efficient infrastructure and confidence in the country's banking sector. Hence **there is a need for the government to spend on improving the country's weak infrastructure** especially the banking sector.

<u>Synthesis 1:</u>

- There is a need **for the government to be more reliant on private-sector growth** for it to reduce its budget deficit and yet sustain the country's high economic growth.
    - Both the above policies are needed for Vietnam to move towards the much needed private –sector growth to remain robust and hence sustain economic growth.
    - However, moving from government-led growth to private-sector led growth (i.e. reducing government spending and greater dependence on private sector to achieve higher growth) will lead to **loss of government control over the economy** and greater **economic vulnerability to external factors**, since much of these private sector investments are foreign investments. Although there has been a large increase in Vietnam's export (figure 1), it is to be noted that Import has been rising at a faster rate than export.
    - To counter this vulnerability, there is a need to increase domestic investment. Government spending will be needed to promote/help develop the domestic firms.

- For both policies to be effective, there is a **need for the government to improve its weak infrastructure**, particularly its banking sector.
    - Hence government spending is needed to build and strengthen the country's infrastructure, especially its banking sector to support its policies.
    - Government **needs to ensure that these government spending are short-term** with the aim to reap higher government revenue in the long run.
    - Concerted effort has to be made that increase in government spending to build its infrastructure **does not further worsen its budget deficit**.

Level	Description	Marks
L2	• Answers that provide varying policies addressing both budget deficit and sustaining high economic growth • Use of relevant economic concepts • Use of relevant case information Max 5 marks for answer that discuss only 1 policy	5-7
L1	• Answers that provide superficial and explanation of policies to	1-4

	reduce government budget deficit, with little explanation on "sustaining economic growth" Or Answers that provide policies that address either budget deficit or sustaining economic growth. • Major conceptual errors	
	Evaluation	
E2	• Evaluative judgment that reaches a conclusion based on the analysis offered. E.g. considers how high economic growth can still be sustained through reduction in government budget deficit. Or considers the effectiveness of the policies in reducing government budget deficit and whilst sustain the high economic growth. • Discussion of policies is in the context achieving both objectives	2-3
E1	Superficial/simplistic evaluation Or Evaluative judgment without explanation or elaboration	1

[Total: 30 Marks]

ANGLO-CHINESE JUNIOR COLLEGE

2019 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS — 9757/02

Higher 2 — 2 September 2019

Paper 2: Essay Questions — 2 hours 15 minutes

Additional materials: Answer paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black ink pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid / tape.

Begin each question on a **fresh** sheet of paper.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

At the end of the examination, fasten your answers for **each** question **separately** using the cover sheets provided.

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

This document consists of **3** printed pages (excluding the cover pages).
Please check that your question paper is complete.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

1 Global rice prices are expected to increase sharply by 2050 due to factors ranging from a rise in world consumption, greater use of feed rice for animal feeding, to falling crop yield levels in major rice-producing countries. With Singapore importing most of its rice from Thailand and Vietnam, concerns over long-term food security have prompted the creation of the country's first and only rice variety – Temasek Rice – in 2018.

Explain why global rice prices are expected to increase sharply and discuss the policies that the Singapore government can adopt to keep domestic rice prices stable. [25]

2 Amidst the liberalisation process of Singapore's retail electricity market, five licenced retailers have exited the market. There are now 13 firms supplying electricity in the residential retail market, once monopolised by Singapore Powers.

Source: The Business Times, 13 March 2019.

(a) Explain what determines whether a firm should exit the market in the face of strong cc

(b) Discuss whether market liberalization is always the solution to misallocation of resources caused by a monopolistic firm. [15]

3 According to Zero Waste SG, a non-governmental organization, the government has introduced a few campaigns to encourage people to use less single-use plastic bags. If it is just voluntary and encouragement, there is going to be hardly any impact. The group called on the government to do more to tackle the chronic plastic over-use problem.

Source: Channel NewsAsia, March 2016

(a) Explain how rational decision-making by the government may result in their intervention in the market for single-use plastic bags. [10]

(b) Discuss whether the Singapore government should implement more policies to achieve efficient allocation of resources in the market for single-use plastic bags. [15]

Section B

One or two of your three chosen questions must be from this section.

4 After years of surging foreign manpower growth, the Singapore government moved to tighten the labour market in 2009 as part of its efforts to reduce reliance on low-skilled labour to encourage innovation and automation, especially among small and medium enterprises.

In 2017, the Singapore economy grew 3.5%, more than double the initial forecast.

Source: The Business Times, 5 February 2018

(a) Explain the factors that are likely to contribute to Singapore's actual and potential economic growth. [10]

(b) Discuss the impact of tightening foreign labour supply on living standards in Singapore. [15]

5 A stronger domestic growth outlook, coupled with a possible Goods and Services Tax (GST) hike, may accelerate inflationary expectations and warrant the Monetary Authority of Singapore to potentially tweak its currently neutral stance to a slight appreciation. While global growth prospects are brightening, there is still considerable uncertainty about inflation due to subdued oil prices.

Source: Channel NewsAsia, 14 February 2018

(a) Explain the factors that the Singapore government needs to consider in deciding whether to change its monetary policy stance to a slight appreciation. [10]

(b) Discuss whether failure to achieve price stability in Singapore is more likely to be caused by domestic or international factors. [15]

6 Millions around the globe may have taken to the streets in recent years to protest against the impact of globalisation on their jobs and communities - and this backlash is likely to keep growing.

Source: BBC, 1 February 2017

In view of the macroeconomic challenges arising from rapid globalisation, discuss the various policy approaches different countries could adopt to manage these challenges. [25

Suggested Answers to ACJC 2019 H2 Economics Essay Question 1

Global rice prices are expected to increase sharply by 2050 due to factors ranging from a rise in world consumption, greater use of feed rice for animal feeding, to falling crop yield levels in major rice-producing countries. With Singapore importing most of its rice from Thailand and Vietnam, concerns over long-term food security have prompted the creation of the country's first and only rice variety – Temasek Rice – in 2018.

Explain why global rice prices are expected to increase sharply and discuss the policies that the Singapore government can adopt to keep domestic rice prices stable. [25]

Question Approach

- Explanation of both demand and supply factors leading to a sharp rise in global rice prices, with reference to the preamble provided, economic concepts learned (such as PED and PES) and contextual knowledge where appropriate.
- Discussion of policies that the Singapore government can use to keep domestic rice prices stable, contextualised to the Singapore context.

Introduction

- In any market, the price of the good is determined by the interaction of demand and supply forces. At the market equilibrium price, the quantity demanded is exactly the same as the quantity supplied, suggesting that there is neither surplus nor shortage in the market.
- The increase in global rice prices can be explained by an increase in global rice demand coupled with a decrease in global rice supply.
- Given that rice is a necessity, its price inelastic demand would cause global rice prices to increase sharply when there is a decrease in global rice supply.
- In addition, with rice having a price inelastic supply due to its long gestation period, any increase in global rice demand will cause global rice prices to increase sharply.
- To keep domestic rice prices stable, the Singapore government can adopt these policies:
    - Stockpiling of imported rice
    - Expanding domestic rice supply sources
    - Maintaining a modest and gradual appreciation of the Singapore dollar

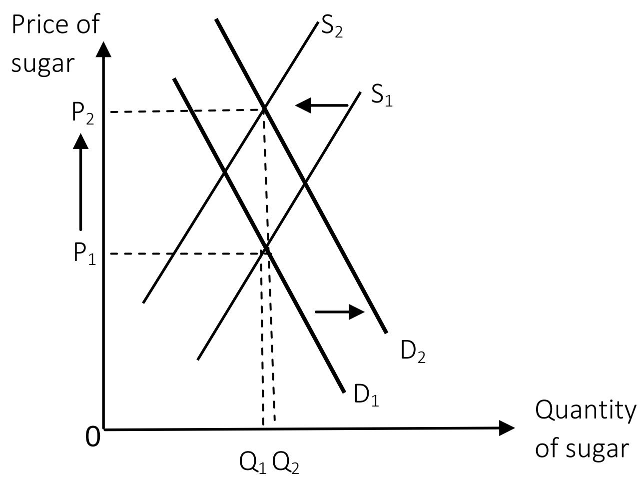
1. Explain demand factors contributing to the sharp increase in global rice prices.

- As mentioned in the preamble, global rice demand has risen due to an increase in world consumption, possibly caused by an **increase in world population size or income.** With rice being a normal good, an increase in household income would cause consumers to demand for more rice. This is particularly true in large emerging economies such as China and India where both purchasing power and population size have been rising in recent years.
- **Demand for rice is price inelastic as it is a necessity required for survival and a staple food for most Asians.** Any increase in price due to changes in supply will therefore only bring about a less than proportionate decrease in quantity demanded, ceteris paribus. To clear the shortage at the original equilibrium price, global rice prices will end up rising sharply.

2. Explain supply factors contributing to the sharp increase in global rice prices.

- As mentioned in the preamble, there has been a **fall in crop yields** in major crop-producing countries. This could be due to factors such as poor weather conditions affecting harvest and falling land productivity.
- When rice-producing countries impose an **export ban** due to domestic shortages (e.g. Thailand), world supply will also decrease accordingly,
- **With all agricultural food items requiring time to grow, the supply of rice is price inelastic** as rice producers are not able to increase rice production immediately in response to an increase in price caused by an increase in demand. This means that an increase in price will only cause quantity supplied to increase less than proportionately, ceteris paribus. Hence, global rice prices will end up rising sharply.

Figure 1: Global Rice Market



3. Explain the combined impact of supply and demand shocks on global rice prices

- The increase in global rice demand (shown by the rightward shift of the demand curve from D_1 to D_2) coupled with price inelastic supply, as well as the decrease in global rice supply (shown by the leftward shift of the supply curve from S_1 to S_2) coupled with price inelastic demand, will cause a **huge shortage** at P_1, hence exerting strong upward pressure on price, eventually leading to a sharp increase in global rice prices from P_1 to P_2 while equilibrium quantity rises minimally from Q_1 to Q_2.

4. The Singapore government should continue to stockpile imported rice as a buffer against short-term rice shortages:

- Singapore currently stockpiles a three-month supply of rice by requiring rice importers to import a minimum of 50 tonnes every month and to maintain two months' worth of imports in government warehouses for up to a year.

- This policy ensures that there can be an increase in the supply of rice in the market during times of short-term rice shortages, thus effectively stabilising domestic rice prices until the stockpiled rice supply runs out.
- **However, stockpiling of rice is subjected to the availability of land required for the building of warehouses, trade policies of rice-exporting countries (e.g. they may impose an export ban), and excessive stockpiling can lead to losses from spoilage.** For instance, if there is a global shortage of rice due to poor weather conditions, rice-exporting countries may limit rice exports to ensure self-sufficiency, hence reducing the amount available for Singapore to import for consumption and stock-piling purposes.
- **In addition, there is a concern that the stockpiled rice may eventually run low, causing rice shortages to return. In view of this, stockpiling is at best a short-term measure.**
- **More importantly, stockpiling does not address Singapore's continued exposure to fluctuations in global rice prices due to a lack of self-sustainability.**

5. In the event that stockpiling of imported rice runs low, the Singapore government can use the strength of the Singapore dollar (SGD) to reduce the extent of imported inflation when importing rice from overseas.

- Being a small and import-dependent economy, Singapore is a price-taker in global markets of goods and services. This means that Singapore is not able to influence world prices and can only take world prices as given. Rising global rice prices will thus eventually pass through to domestic consumers via higher import prices paid by rice importing firms.
- Maintaining a modest and gradual appreciation of the SGD can help to reduce the extent of domestic rice prices rising due to the increase in global rice prices.
- Unlike a price ceiling policy, modest and gradual appreciation will not lead to rice shortages as the domestic rice market continues to operate without distortions.
- **However, if rice-exporting countries were to significantly reduce their export quantity due to supply disruptions, the modest and gradual appreciation of the SGD might not be sufficient to act as a buffer against the sharply rising global rice prices.**
- In addition, whether or not the SGD can be appreciated is dependent on the economic conditions and extent of inflationary pressures faced by the country. **If there are downside risks to the country's economic growth coupled with weakening inflationary pressures, the Monetary Authority of Singapore will choose to adopt zero appreciation,** where the currency is allowed to depreciate, instead of a modest and gradual appreciation, despite rising global rice prices. This is because continuation of the modest and gradual appreciation policy will decrease the country's export competitiveness.
- **In view of the constraints faced when adopting the modest and gradual appreciation policy, the government should explore supply-side policies that can help to address both short-term and long-term rice shortages.**

6. As a long-term approach, Singapore should explore domestic production of rice to enhance the country's ability at mitigating changes in global rice prices.

- **In view of the vulnerabilities caused by Singapore's reliance on rice imports, it is important for the government to look into how Research & Development (R&D) can be used to develop domestic rice varieties.**
- Encouragement of R&D can be done via the government giving **subsidies** to absorb part of the high R&D costs incurred or by promoting **public-private partnerships** among local agricultural firms.
- In 2018, scientists at the Temasek Life Sciences Laboratory have successfully developed Temasek Rice, an organic and whole grain rice variety that can help contribute to longer-term food security in Singapore, after 8 long years of R&D work.
- **However, not only is a long time period required for R&D to take effect, substantial financial resources are also needed by the government to subsidise these R&D efforts.** Faced with the need to support economic restructuring and a rapidly ageing population, the Singapore government may not have sufficient tax revenue to channel into the R&D of domestic rice varieties.
- **In view of these constraints, the government's fastest policy against external price fluctuations is actually its exchange rate policy of maintaining a modest and gradual appreciation of the Singapore dollar.**

Synthesis

- In conclusion, there are several policies that the Singapore government can undertake to stabilise domestic rice prices. However, not all policies are equally feasible and effective.
- As it is not feasible to reduce the domestic demand for rice given that it is a necessity, implementing supply-side policies is necessary and should be urgently looked into to ensure that the country can address rice shortages when they happen.
- With poor weather conditions expected to worsen in the future, the vulnerabilities faced by farmers in rice-exporting countries suggest that continuous dependence on imported rice will only expose Singapore to greater price fluctuations in the future.
- Thus, R&D should be poured into the creation of rice varieties that can withstand extremely dry and weather for extended periods of time. R&D can also help to increase crop yield and enhance resistance against diseases.
- Although Singapore does not have favourable rice-growing conditions domestically, technological advances in the agricultural field can help local agricultural firms to grow crops using methods such as vertical farming, therefore successfully overcoming the geographical constraints faced.
- All in all, the Singapore government should prioritize supply-side policies, continue to adopt a modest and gradual appreciation of the SGD alongside stockpiling of imported rice.

Knowledge, Understanding, Application and Analysis		
Level	*Descriptors*	*Marks*
High L3	• Address both parts of the question • Clear, accurate and comprehensive use of demand and supply analysis (including elasticity concepts) in explaining the sharp rise in global rice prices • Policy discussion is conceptually sound and developed, with consideration of the limitations and constraints faced by the Singapore government in adopting the various policies • Well-substantiated by examples that are contextualized to Singapore	18 – 20
Low L3	• Addresses both parts of the question • Clear, accurate and comprehensive use of demand and supply analysis (including elasticity concepts) in explaining the sharp rise in global rice prices • Policy discussion is conceptually sound as a whole • Answer may contain minor conceptual inaccuracies	15 – 17
High L2	• Addresses both parts of the question but unbalanced • Demand and supply analysis (may or may not include elasticity concepts) is used to explain the sharp rise in global rise prices, and is mostly clear • Some knowledge of the policies that the Singapore government can adopt to stabilise domestic rice prices but may not be sufficiently developed in terms of economic reasoning • Some attempts to use the context given • Answer may contain minor conceptual errors	12 – 14
Low L2	• Answer demonstrates an accurate understanding of the question and tries to address both parts but does so rather unevenly / briefly • Demand and supply analysis (may or may not include elasticity concepts) is used to explain the sharp rise in global rise prices, but is not very clear or accurate at times • Some knowledge of the policies that the Singapore government can adopt to stabilise domestic rice prices but not well-developed and may lack scope in terms of policy discussion • Answer may contain conceptual errors	9 – 11
High L1	• Unable to demonstrate an accurate understanding of the question • Points made appear incidental and does not fully address both parts of the question • Some knowledge and attempt in explaining the sharp rise in global rice prices using demand and supply analysis (without elasticity concepts) but very scanty knowledge of the policies that the Singapore government can adopt to stabilise domestic rice prices • Mere listing of points with limited use of Economic concepts • Answer may contain conceptual errors • Limited use of the context given	5 – 8
Low L1	• Unable to demonstrate an accurate understanding of the question • Points made are mostly incidental and do not address the question • Answer contains significant conceptual errors	1 – 4

	• Mere listing of points with no Economic concepts applied.	

Evaluation		
Level	*Descriptors*	*Marks*
E3	• Sound use of valid evaluation criteria in examining the policies that the Singapore government can adopt • Providing a considered overall judgement	4 – 5
E2	• Some attempts in examining the policies that the Singapore government can adopt, with attempts of using valid evaluation criteria but may lack clarity • May not provide a considered overall judgement	2 – 3
E1	• Simple evaluative statements are made, but they remain largely unsubstantiated	1

2 Amidst the liberalisation process of Singapore's retail electricity market, five licensed retailers have exited the market. There are now 13 firms supplying electricity in the residential retail market, once monopolised by Singapore Powers.

Source: The Business Times, 13 March 2019.

(a) Explain what determines whether a firm should exit the market in the face of strong competition from other firms. [10]

(b) Discuss whether market liberalization is always the solution to misallocation of resources caused by a monopolistic firm. [15]

(a) Explain what determines whether a firm should exit the market in the face of strong competition from other firms. [10]

Approach:

- Explain strong competition – likely to have many firms on the market. Strong competition will mean each firm is faced with lower demand and price elastic demand.
- Explain condition for firm to shut down in the short run and long run.
- Note: Not necessary for students to explain using diagrams.

Suggested answer:

<u>Introduction:</u>

- Firm aims to maximize profit, hence will set price and output at profit maximizing level MR = MC.
- More firms in markets that produce similar products like the energy market would lead to strong market competition. In a **market with strong competition**, each of the firms in the market would have smaller market share. Hence **each firm's demand is low and price elastic.** The firms have to compete not only for consumers' demand but also for resources.
- Whether to shut down or not, depends on whether its revenue can cover its cost, either in the short-run or long run, and market outlook.

<u>Body:</u>

1) In the short run, firm should shut down when its Average Revenue (AR) cannot cover Average Variable Cost (AVC).

- In the **short run where there is at least 1 fixed factor**, the firm's Average Cost (AC) is made up of both Average Variable Cost (AVC) and Average Fixed Cost (AFC). For the energy retail firm, its fixed cost includes cost of operating and maintaining its power grid. Variable costs include billing and meter-reading as well as energy cost that it pays the power generator firm.
- The firm makes **normal profit when its Average Revenue is equal to its Average Cost (AR=AC)** i.e., when its average revenue can covers both its average fixed and variable costs.

- In the short run, it is possible for the firm to continue production and remain in the market even when it earns **subnormal profit where AR< AC**.
  - Its decision whether to remain or leave the market will depends on whether it's AR can cover its AVC.
  - Fixed cost will have to be incurred regardless whether the firm shuts down or continue production. Hence if the firm we to shut down, its loss would be the fixed cost it has to incur even without producing anything hence not earning any revenue.
  - On the other hand, continuing production and remaining in the market will provide the firm is some revenue earned. However, it also means having to incur both fixed cost and variable costs.
  - The inability of its revenue to cover its variable costs would mean that it would incur higher loss than if it were to simply shut down.

Hence the firm should shut down if its AR is less than its AVC.

2) In the long run, the firm should leave the market once it earns subnormal profit

- In the long run, the firm's production is not constraint by any fixed factors. Hence fixed cost is no long a factor in its decision-making.
- The decision whether to remain or leave the market depends on whether its revenue can cover its cost. It will shut down immediately once it earns subnormal profit since it is no longer tied down to any fixed cost in the long run. It will not be burdened with any fixed costs if it were to shut down.
- **Hence in the long run, whether to remain in the market depends on the firm's ability to reap higher revenue and lower costs**
  - Increasing demand and making it more price inelastic will ensure higher revenue earned. Coupled with the ability to lower costs, the firm can definitely be ensured profit earned in order to remain in the market.
  - The larger market share gained as a result from closure of smaller non-profitable firms will enable the larger firm to earn higher revenue. Higher revenue can also be gained through the various marketing strategies such as bundling and consumer loyalty.
  - With a large market share, the firm would be able to enjoy large economies of scale such as bulk-buying electricity from power generating companies will enable. Spending on innovation and technology development will improve productivity and lower average cost.

3) Decision to remain and leave the market also depends on market outlook.

- For firms earning normal profit in the short-run, the decision to remain in the market in the long run depends on expected market outlook.
- Firms in a market with positive outlook, will look forward to higher demand and hence higher profit → will remain in the industry despite only normal profit earned.
- For the electricity market, for example, the rising use of electric appliances due to increasing affluence and rising population would mean higher sources of revenue for the electricity retailer. Retail electricity firms that depends of renewable energy will gain from the expected fall in cost of sources of energy such as cheaper renewable energy due to technology development.

Conclusion

Even in the face of strong competition, firms aim to maximize profit and so will set its price where its MR=MC, and make sure it earns enough revenue to cover its costs. When making losses, i.e. when earning subnormal profit, it will maximize profit by minimising its loss. Hence decision on where to leave the industry will depends on whether it is able to gain the revenue to cover its AVC in the SR. and cover its AC in the long run.

Level	Description	Marks
L3	• Clear and developed economic analysis of shut down condition showing knowledge understanding of the relevant economic concepts • Good use of relevant examples to illustrate the shut-down condition.	8-10
L2	• Answer that is relevant to the question but undeveloped explanation of shut down condition • Expect some conceptual errors	5-7
L1	• Some incidental valid points or Answer is mostly irrelevant or inaccurate • Major conceptual errors	1-4

(b) Discuss whether market liberalisation is always the solution to misallocation of resources caused by a monopolistic firm. [15]

Approach:

- Explain what is market liberalisation policy and effect of market liberalization on the market
- Explain the misallocation of resources in a monopolistic market
- Explain and analyse why and how market liberalisation can help reduce the inefficiencies in a monopolistic market
- Evaluate the policy

Introduction

- Monopolies are known to have very high market power, making use of their high monopoly power to set high price in order to make high profit at the expense on consumer welfare.
- The lack of competition in the monopolistic market can lead to misallocation of resources and large inefficiencies in the market, including allocative, productive and dynamic inefficiencies.
- To ensure better allocation of resources and hence consumer welfare are protected, government measures are needed to reduce the monopoly powers of monopolistic firms, particularly in the case of natural monopolies in markets like telecommunications and electricity.

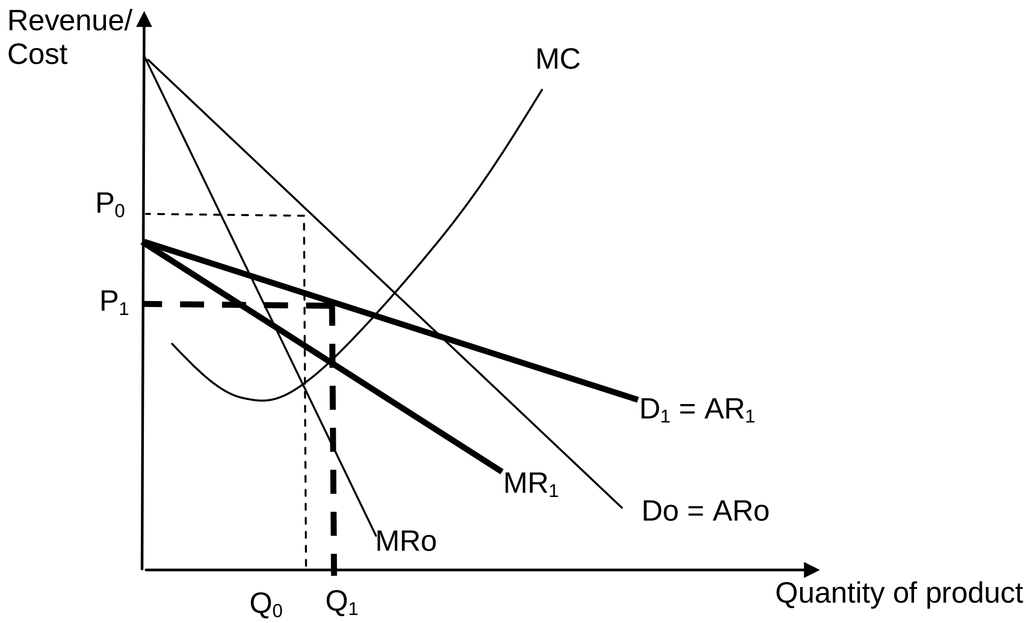
- Governments seem to see increasing competition in the industry is the way to ensure more efficient allocation of resources in the industry. One such competition policy is market liberalisation.
- **Market liberalisation is the opening up of market to greater competition. It involves the introduction of competition in the market**.

<u>Body</u>

How market liberalisation reduce misallocation of resources in the market, hence increase efficiency in the market.

1) Lower price, increase productive and allocative efficiency, lower price and increase consumer surplus

- The entrance of more firms into the market will increase market supply, thereby lowering the market price of the product. Hence consumers enjoy larger consumer surplus and wider choices.
- More firms in the market will check the market share of the large incumbent firms such as SP in the electricity retail market, restricting their dominant market position which can damage consumer welfare.
- As seen in the figure below, Liberalisation of market will reduce market share of the incumbent firm causing its demand to be lower and more price elastic demand from Do to D1. This lowers the firm's price from Po to P1, reducing the firm's allocative inefficiency as seen in the smaller difference between price and MC at quantity Q1 compared to the initial quantity Qo.



- Market liberalisation will exert pressure on the firms to offer their products at the lowest possible price to attract and retain their customers. This provides the firms the incentive to be more productively efficient, i.e. reduce their costs to the minimum. The firms will attempt to lower costs by reducing wastage, improving management processes and using better and cost-saving technologies.

2) Greater competition promotes innovation and technology providing consumers with better quality products and greater choices.

- More firms in the market increases competition will promote dynamic efficiency as firms are motivated to innovate and embark on technological development not only to increase productivity and hence cheaper production methods, but also to improve the quality of their product and provide variety of their product to cater to different tastes and needs of the different consumers.
- The fear of losing its market power will induce the incumbent firm to innovate and embark in technological development to protect its large market power and ensure its ability to reap large economies of scale.

3) Positive unintended benefits of market liberalisation:

- Liberalization of markets of essential products like energy and telecommunication will ensure lower prices that benefit not only the households but also firms.

  The lower electricity price, for example, lowers their business costs of manufacturing firms in other industries, increasing their market competitiveness in the global market.
- To compete better, firms will have to find ways to lower costs. Some firms in the electricity retail market, for example, may take advantage of the subsidies on clean technology. This will promote the use of clean technology, hence moving the market towards social efficiency level. Liberalisation of public transport market can lead to better quality and more affordable transport services, thereby reduce road congestion and pollution as drivers are more willing to switch to public transport.
- Capital spending by local firms adds to increase in both AD and AS in the long run, leading to long-term growth

Limitation of liberalisation policy

1) Market liberalisation of natural monopoly market with high costs and large MES may worsen the inefficient allocation of resources.

- Natural monopolies have high Marginal Efficiency Scale (MES) hence needs to have a large market to be able to enjoy the economies of scale needed to spread its cost over a large output. It is not efficient to have more than one firm in such natural monopoly market as the market size is not big enough for more than one firm be cost efficient in production. Each firm may not have enough market share to earn the revenue to cover its cost, hence will require government support to survive.
- Many firms in the market fighting for a small share of the market. May lead to duplication and wastage as firms embark in unnecessary marketing strategies and artificial production differentiation in attempt to increase market share.

2) Breaking up a natural monopoly into pieces may not lead to the desired level of competition that can lead to better allocation of resources.

- **Large firm's advantage over the smaller firms**
  - The larger firms with larger market share will have lower average costs dues to the benefits of large economies of scale. This allows them to adopt predatory pricing, driving its competitor out of the market.
  - Also large firms the advantage of availability of funds from their supernormal profit to embark in product development and technology to improve their production method. This enable them to compete better in the market.

- **Smaller firms may not be able to survive the competition.**
  - May not have the demand size to earn the revenue to cover cost. For firms to remain in the market, there must be an ability to earn at least normal profit in the long run. The inability to have the market share to earn enough revenue to cover cost.
  - Smaller firms may have problems covering their high costs. They may not have enough fund to innovate and experience to compete effectively. Hence they may not be able to survive the competition.
- Eventually in the long run, there may be closure of smaller firms and firms unable to operate at efficient level, ending up with few large firms in the market.
- **Evaluation:**
  Dues to high costs, smaller firms may need government's help to fund their start-up costs and to compete effectively against the larger firms. However, such financial support to firms may lead to complacency and cause the competition to be less intense. Hence government support in the attempt to ensure larger number of firms in the market should not be long term.

3) Effectiveness of the policy depends on consumers' responses to the new firms in the market.

- The consumer loyalty of the incumbent firm may affect the effectiveness of the policy. Having long served by the incumbent firm, consumers may decide to remain consuming from the existing firm despite its higher price. In the electricity market, for example, consumers are apprehensive to switch to the new electricity supply because unsure of the quality of electricity they will be getting. Afraid of power cuts and supply of electricity in the event the firm shuts down.
- Hence the incumbent firm will remain the dominant firm with high market power despite the existence of other firms in the market.
- **Evaluation**: Need for government to provide assure consumers to gain their confidence in the new firms by providing them information on the new firms and the benefits of competition in the market.

4) Tendency for firms with such large costs producing the almost the same product like energy to collude to gain higher profit.

Strong competition in the market, especially in market where product differentiation is minimal like electricity, may induce firms to find subtle ways to coordinate their combined market supply to keep price high to keep their profits high. Such collusive behavior is at the expense of consumer well and efficient allocation of resources in the market.

Synthesis:

- Competition is essential for innovations, both by existing firms and by new entrants. Without competition, there is little incentive for firms to devote their profits towards improving the quality of their products or developing new products, services, or processes. Competition provides the opportunities to shift towards better technologies and products, and to displace inefficient players from the market, leading to increased productivity and economic growth
- Market liberalisation involves increasing the number of firms in the market. However, increasing the number of firms does not always lead to increase in the level of competition. In industries like telecommunication and public transport and electricity

where fixed cost in high, it is only feasible to have few large firm serving the market, given Singapore's small market size.

- Therefore, what is more important to allocate resources efficiently in a market is not so much to increase the number of firms in the market, but more to ensure there is competition in the market and the threat of competition among the larger firms that serves as motivation to ensure efficiency in production.
- Hence there is a need to substantiate government's liberalization policy with other policies that can promote healthy market competition to ensure that even the smaller firms would have a fair chance to survive and compete effectively in the market.

Level	Description	Marks
L3	• Clear and developed economic analysis on market liberalization policy to reduce misallocation of resources in a monopoly market. • Good use of relevant economic concepts and economic reasoning • Good use of relevant examples	8-10
L2	• Answer that explains the benefits and problems of market liberalization but limited consideration on effect on allocation of resources or efficiency. Or Answer that looks at benefit and problems of market liberalization to reduce misallocation of resources but with limited use of relevant economic analysis Or one-sided answer • Expect some conceptual errors	5-7
L1	• Some incidental valid points about market liberalisation or Answer that contains relevant economic concepts but is mostly irrelevant or inaccurate • Major conceptual errors	1-4
	Evaluation	
E3	• Well-developed synthesise the pros and cons of market liberalization policy to reduce inefficient allocation of resources to arrive at a well-reasoned judgement on the liberalization policy, with good use of relevant economic explanation. E.g. answer that considers the benefits of market liberalization policy and suggests/recommends other policies to improve on the market competitiveness to stimulate firms to achieve efficiency thereby reduce the misallocation of resources in the market. Or Judgement that consider the underlying assumption of market liberalization E.g. answer that consider the assumption that more firms in the market is necessarily more efficient that a monopoly market	4-5

E2	Some attempt at evaluation or summative conclusion that is relevant to government's market liberalization policy to reduce misallocation of resources, but not elaborated or explained E.g. how liberalization policy increases competition that is needed to improve efficiency in the market.	2-3
E1	• Sweeping judgement without explanation	1

Question 3

According to Zero Waste SG, a non-governmental organization, the government has introduced a few campaigns to encourage people to use less single-use plastic bags. If it is just voluntary and encouragement, there is going to be hardly any impact. The group called on the government to do more to tackle the chronic plastic over-use problem.

Source: Channel NewsAsia, March 2016

(a) Explain how rational decision-making by the government may result in their intervention in the market for single-use plastic bags. [10]

(b) Discuss whether the Singapore government should implement more policies to achieve efficient allocation of resources in the market for single-use plastic bags. [15]

Question 3(a)

Introduction

- In the decision-making, government would consider the cost and benefit to the society.
- Rational government aims to maximize society welfare where MSC = MSB
- But under the free market, usage of single-use plastic bags generates MEC, leading to MSC > MSB. Thus the decision to intervene in the market in order to maximize society's welfare.

Body Paragraph 1: Cost and Benefit of using additional single-use plastic bags to the society

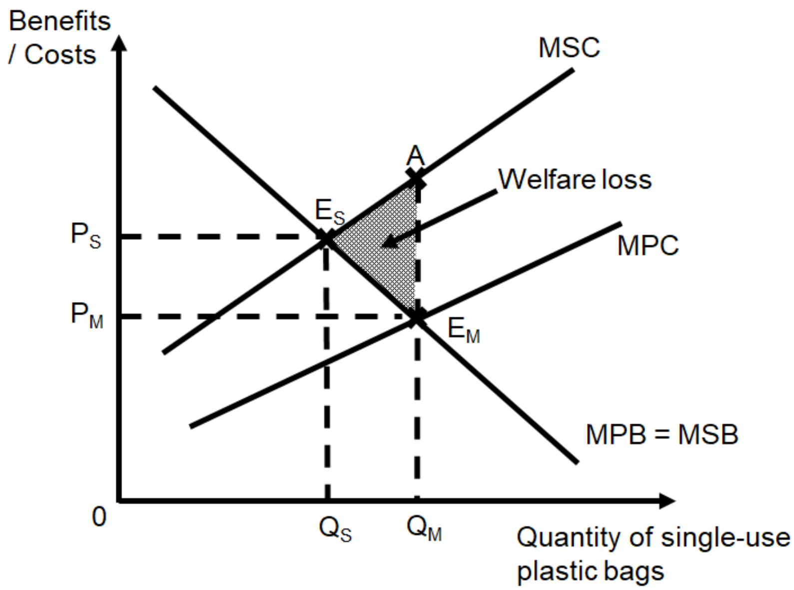
In the decision making, rational government would take into the consideration the **cost** and **benefit** of using **additional** single-use plastic bags to the society.

- MSB takes into consideration the benefits of using additional single-use plastic bags to the society. Assuming that there is no positive externality, the MSC = MPB.
- MPB: single-use plastic bags provide convenience and ensure proper hygiene for the users. For example, single-use plastic bags are used to pack raw meat. This ensures that there would not be any contamination with raw food and the single-use plastic bags could be discarded once used, without having the users having to clean the single-use plastic bags. It also allows firms much convenience as firms could easily package their products into packs for easy sale.
- In additional of looking at the benefits of using additional single-use plastic bags to the society, government has to consider the cost of using additional single-use plastic bags to the society. MSC takes into consideration the MPC to the consumer and producers as well as MEC to the third parties.
- MPC: price of single-use plastic bags
- Usage of single-use plastic bags generates negative externality. Negative externalities arise when the production or consumption of single-use plastic bags affects the well-being of a

third party negatively and the affected-party does not receive any compensation for bearing the negative effect.

- MEC: usage of single-use plastic bags → plastic pollution as the plastic disintegrate into micro plastic and is digested by fishes → consume by human. Singaporeans are consuming 1 credit card worth of plastic per week (5g) → health issues and incur medical cost

Thus rational government would take into the consideration the cost and benefit of using additional single-use plastic bags to society.



Body Paragraph 2: Weighing the MSC and SCB to the society

Government would weigh the MSC and MSB to the society and intervenes in the market for single-use plastic bags because society's welfare is not maximize.

- In a free market, consumers would maximize their satisfaction at MPC = MPB, thus consuming Qm units of single-use plastic bags.
- However, at Qm, MSC > MSB. There is net cost to the society, illustrated by AEm. Society welfare is not maximize and thus there is a need for government to intervene in the market.
- To maximize the society welfare, society would only consume Qs unit of single-use plastic bags where MSC = MSB.
- However, in the free market, any consumption of single-use plastic bags beyond Qs will lead to MSC > MPC, leading to welfare loss to the society. Thus there is over consumption of single-use plastic bags by QsQm under the free market.

Thus rational decision-making by the government may result in their intervention in the market for single-use plastic bags.

Body Paragraph 3: Constraints

Given that society welfare is not maximized, there is a need to intervene in the market for single-use plastic bags. However, rational government will also have to consider if they have the ability to intervene in the market. Thus government has to consider their constraints

- Government would have to consider if they have the budget to intervene. While society's welfare may not be maximized, government may not intervene if they do not have sufficient budget to intervene.
- Government may also consider the receptivity of the public. If the public are not receptive towards the idea of reducing single-use plastic, government may be more cautious in their decision to intervene despite the welfare loss in the society.

Thus, in addition to the weighing the cost and benefit of additional usage of single-use plastic bags, government will have to consider the possible constraints they might face.

<u>Conclusion</u>
Rational government decides to intervene in the market for single-use plastic bags because the cost is more than the benefit of using **additional** single-use plastic bags. Thus government intervenes in the market to maximize society welfare where MSB = MSC.

Knowledge, Understanding, Application & Analysis		
Level	*Descriptors*	*Marks*
L3	• Develop analysis of how rational government decides to intervene in the market for single-use plastic bags. • Answers are well-organized and coherent, with good use of examples.	8 – 10
L2	• Undeveloped explanation of how rational government decides to intervene in the market for single-use plastic bags. • Answers are largely supported by economic analysis • Theoretical answer not supported by examples	5 – 7
L1	• Points are largely irrelevant • Descriptive answer lacking economic analysis or contains many conceptual inaccuracies.	1 – 4

Question 3(b)

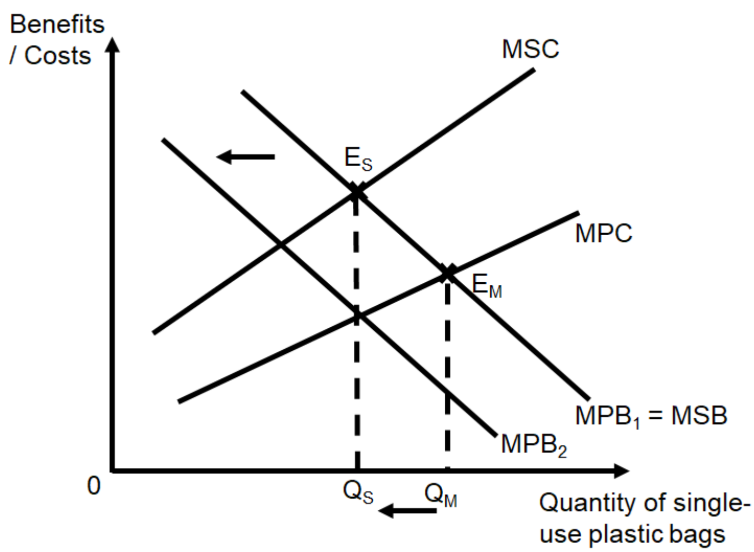
<u>Introduction</u>
- Briefly explain the existing policy Singapore government has adopted.
- Briefly explain why existing policy is not sufficient and that more policies are needed to achieve efficient allocation of resources in the market for single-use plastic bags.
- Briefly explain addition policies that government could adopt – taxation
- Briefly explain your stand [optional]:
  Whether government should implement more policies to achieve efficient allocation of resources in the market for single-use plastic bags depends on
    - Receptiveness of the public
    - Immediacy of the impact

Body Paragraph 1: Current policy could achieve efficient allocation of resources in the market for single-use plastic bags

Singapore government **may not** need to implement more policies as current policy could achieve efficient allocation of resources if the public is receptive of the current policy

- Singapore government has implement a few campaigns to encourage people to use less single-use plastic bags
- Campaigns, a form of public education, aim to educate the public on the harmful effect of using single-use plastic bags on third party. For example, government has launched a 'Year Towards Zero Waste' campaign in 2019 which aims to get public to cut down on waste such as single-use plastic and choose more sustainable products.
- In line with Singapore government's campaign of 'Year Towards Zero Waste', Supermarkets such as Cold Storage, Market Place and FairPrice have offered shoppers reward points and rebates for using reusable bags.
- Thus if the public is receptive towards such campaigns, it could effectively reduce the demand for single-use plastic bags such that MPB will shift left and intersect MPC → usage will be at the socially optimal level Qs

Thus, Singapore government could depend on existing campaigns to achieve efficient allocation of resources in the market for single-use plastic bags.



Body Paragraph 2: Whether current policy could achieve efficient allocation of resources

- However, whether the campaign could achieve allocation of resources depends on the receptiveness of the public.
- Current policy could only achieve efficient allocation of resources if public is receptive towards the campaign. The more receptive the public is, the more likely the market is to achieve efficient allocation of resources.
- However, not everyone is receptive towards campaigns. And for certain groups of people, single-use plastic bags maybe essential for the production process. Thus, these groups of people are unlikely to reduce usage of single-use plastic bags despite the campaigns.

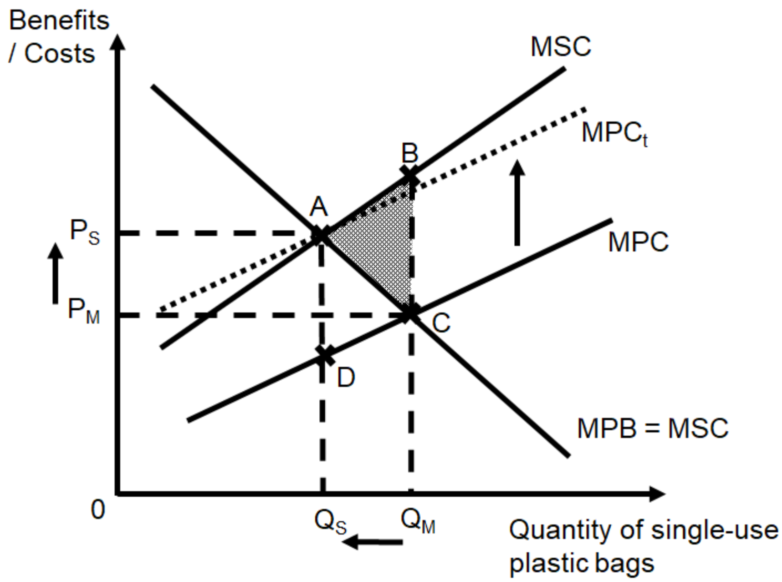
- Due to convenience or cleanliness, some may continue to use single-use plastic bags. For example, for cleanliness purpose, many are still using single-use plastic bags to place raw meat. It is also easier to obtain single-use plastic bags from the retailers rather than bring along our own biodegradable bags. Thus, it may be difficult for government to rely on only public education to convince people to reduce usage of single-use plastic bags to the socially optimal level. Government may need to implement more policies to achieve efficient allocation of resources in the market for single-use plastic bags.

<u>Body Paragraph 3:</u> <u>Singapore government may need to implement more policies</u>

Since Singaporeans are given the freedom to choose whether to use single-use plastic bags, the market may not achieve efficient allocation of resources. Thus government may need to implement more policies such as taxation to reduce usage of single-use plastic bags to the socially optimal level.

- External cost is not accounted for by households and firms in their market decisions.
- Taxes placed will therefore force households and firms to internalise the externalities in their consumption and production of goods and services.
- Taxes will make them pay for the cost imposed on third parties. This will make external cost become part of the private cost.
- Initially, the market equilibrium is at C, with a market price of PM and quantity of QM.
- The amount of tax imposed is equal to the marginal external cost incurred at socially-optimum output Qs (AD).
- The tax will increase the cost of production and shift the MPC (supply curve) to the left to MPCt.
- Output will be reduced from Qm to Qs.
- The imposition of the tax has caused the market output to be reduced to coincide with the socially optimal output, thereby eliminating the welfare loss ABC.
- With the tax, producers such as NTUC Fairprice could pass on the higher cost to the consumers by charging consumers for the usage of single-use plastic bags.

Thus, Singapore government would need additional policy such as tax to achieve efficient allocation of resources.



<u>Body Paragraph 4:</u> <u>Comment on taxation</u>

- This policy is needed in addition to the existing campaign because of the immediacy of the results. By using the campaigns alone, consumers who are not receptive will still continue to use the single-use plastic bags. But once the tax is implemented, consumers could feel the pinch on their wallets as they are charged for using single-use plastic bags. Thus consumers who are not receptive might be more willing to reduce usage of single-use plastic bags immediately as they are charged.
- Furthermore, if left to campaigns alone, it will take a long time before the society could see a result. Thus taxation could help achieved the results quicker if implemented together.
- While Singapore may not have adopted such measures, other places such as Britain, Hong Kong and Northern Ireland have. And due to this policy, the amount of single-use plastic bags in Northern Ireland has decrease from 101.2 million in 2016 to 93.5 million in 2019, thus showing the effectiveness of the policy.
- However, taxation will drives up COP. Single-use plastic bags are used at various stages of production. Such tax would increase COP and prices of final goods and services would increase. This would have a serious impact on the consumers, especially the low income families.
- Furthermore, the demand for single-use plastic bags is price inelastic as it is a necessity for daily usage. Any attempt to increase the price of single-use plastic bags will only lead to less than proportionate decrease in the quantity demanded of single-use plastic bags. Thus a small amount of tax may not be sufficed in achieving allocative efficiency. Substantial amount of tax may be needed instead.

<u>Body Paragraph 5</u><u>: Ban the use of single-use plastic bags</u>

Instead of implementing more policies together with campaigns, Singapore government may want to just focus on using one policy to achieve efficient allocation of resources. Singapore could ban the use of single-use plastic bags instead.

- The external cost of single-use plastic bags could be large enough that some governments may perceive efficient allocation of resources to be zero in the market for single-use plastic bags.
- More than 90 countries (Tanzania and New Zealand etc.) around the world have recently implemented their own bans.
- If Singapore government implements such policy, there will be no allocation of resources to the market for single-use plastic bags and single-use plastic bags will not be allowed to be used in the market.

Thus, instead of relying on multiple policies, government could instead ban the usage of single-use plastic bags and correct market failure.

Body Paragraph 5: Comment on whether Singapore government should ban the usage of single-use plastic bags

- It has been reported that on average, Singaporeans are consuming 1 credit card worth of plastic per week. This has serious implication on human's health.
- Banning of single-use plastic bags would provide an immediate solution to the worsening plastic pollution, which taxation and campaigns could not. Thus, banning of single-use plastic bags does have its merit.
- However, any decision by government should not made just by looking at the benefits. Government would also need to consider the possible cost and constraints of they face.
- Ban of single-use plastic bags would mean that households may have to turn to alternative substitutes such as biodegradable bags. These biodegradable bags required as much resources to produce as single-use plastic bags. Thus biodegradable bags may not be as environmentally friendly as one assumes.
- Furthermore, given that most stay in high rise building and rubbish is disposed via the rubbish chute, single-use plastic bags are needed to contain the waste, especially if it is liquid waste.
- Added to this, single-use plastic bags may be essential for hygiene purpose. Single-use plastic bags may be needed to pack raw food. If biodegradable bags are used to contain the raw food, households would have to wash it after each use, which could lead to more water wastage. If the biodegradable bags are not cleaned thoroughly, there could be food poisoning. Thus ban may be too drastic a measure in Singapore.

Conclusion

- Plastic pollution is worsening and there is a need for change and immediate change is needed to prevent the situation from going beyond the point of no return.
- While existing policy such as public education could change the mindset of the people, it may take time. At the same time, the public education may not reach everyone in the society and even if the public is aware of the harmful effects, there will still be individuals who might prioritise convenience over the harmful effects of single-use plastic bags.
- If left to campaigns alone, it will take a long time before the society could see a result and by then, it may be too late. Thus, plastic tax may be a quicker solution is needed.

Knowledge, Understanding, Application & Analysis		
Level	**Descriptor**	**Marks**
L3	• Developed and balanced explanation on whether Singapore government should implement more policies to achieve efficient allocation of resources in the market for single-use plastic bags • Answer is well supported by economic analysis. • Answers are well-organized and coherent, with good use of examples. • Good use of diagrams to illustrate the answer.	8 – 10
L2	• Developed but one-sided answer: Singapore government should implement more policies <u>OR</u> government should not implement more policies to achieve efficient allocation of resources in the market for single-use plastic bags • Undeveloped but balanced answer. Answers are supported by some economic analysis. • Limited use of examples.	5 – 7
L1	• Points are largely irrelevant • Descriptive answer lacking economic analysis or contains many conceptual inaccuracies.	1 – 4

E3	• Judgement is based on well-developed analysis that reaches a conclusion based upon the analysis offered.	4 – 5
E2	• An evaluative assessment based on some analysis. • But lacks synthesis to wrap up the arguments.	2 – 3
E1	• Arguments evaluated but is superficial & not based on sound evidence and principles	1

4. After years of surging foreign manpower growth, the Singapore government moved to tighten the labour market in 2009 as part of its efforts to reduce reliance on low-skilled labour to encourage innovation and automation, especially among small and medium enterprises.
In 2017, the Singapore economy grew 3.5%, more than double the initial forecast.

Source: The Business Times, 5 February 2018

(a) Explain the factors that are likely to contribute to Singapore's actual and potential economic growth. [10]

Suggested approach

- Use the conceptual framework of AD/AS analysis to explain what contributed to Singapore's actual and potential economic growth.
- Using real-world examples that is contextualized to Singapore, examine the internal and external factors that causes changes in aggregate demand and aggregate supply.

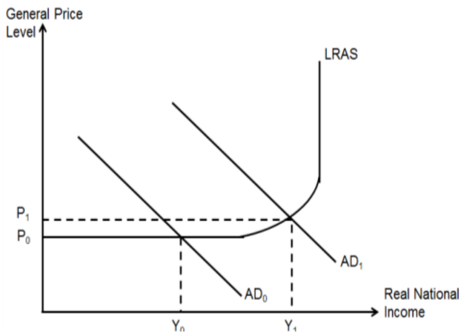
Introduction: **Framing – unpacking actual and potential growth**

- Actual economic growth: refers to an increase in a country's real national income or GDP, and could be caused by an increase in either AD or/and AS as real national output is determined by the interaction of aggregate demand and aggregate supply forces.
- Potential economic growth: refers to an increase in a country's productive capacity, and can be illustrated by an increase in a country's LRAS, that is usually due to an increase in quality and quantity of factors of production, to ensure growth is sustained in the long-run.

Body:

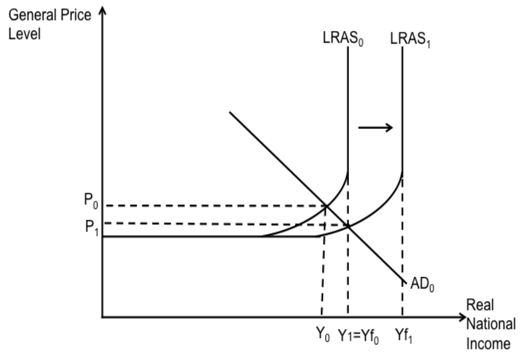
A: Internal factors

- One possible factor is an increase in consumer sentiments due to better job prospects and sound government policies e.g In recent years, Singapore sees largest rise in consumer confidence across S-E Asia in 2017. This leads to greater willingness to spend and hence leads to higher consumer spending → ↑C.
- This will lead to an increase in aggregate demand as AD = C+ I + G + (X-M). This is illustrated by the shift in AD rightwards from AD_0 to AD_1.
- Diagram:



- **Explain multiplier effect:** Hence firms have to draw on inventories of goods that are produced in the past to meet the increase in aggregate demand. Firms will increase output in the next production cycle in attempt to restore their inventories to their optimal level. Firms enter the factor market to demand for more factors of production, including labour, paying out more factor income. As national income (output) rises, income-induced consumption increases, causing another round of increase in AD, adding to the circular flow of income, setting off the multiplier effect where additional spending creates additional income which induces more spending. Eventually the multiplier process will end when the initial injection = withdrawals.
- Assuming that the economy is operating in the intermediate range where there is spare capacity, an increase in AD will lead to a multiplied increase in real GDP from Y_0 to Y_1 → actual growth.

- Another possible factor is government policies. Supply-side policies can help to raise economic growth through an increase of AD/SRAS or productive capacity.
- The Singapore government has encouraged firms to **expand innovation and R&D efforts to increase efficiency leve**l since Singapore is also very open to global competition. For example, the Singapore government has poured in $19billions into the **Research Innovation Enterprise 2020 Plan (RIE2020)** which seeks to support and translate research into solutions that address national challenges, build up innovation and technology adoption in companies, and drive economic growth through value creation.
- Increase in **quality** of labour: Policies to improve skills and productivity of the workforce (e.g. Skills Future, Adapt and Grow Initiative, TechSkills Accelerator etc.)
- Increase in **quantity** and quality of capital: Attract FDI, encourage R&D and innovation through funding and tax incentives etc.
- An increase in the quantity and/or quality of factors of production will lead to an increase in productive capacity causing a rise in LRAS from $LRAS_0$ to $LRAS_1$.
- Diagram:



- This causes an increase in the full employment capacity of the economy from Yf_0 to Yf_1 → potential growth.
- While an increase in LRAS leads to potential growth, it COULD also lead to actual growth from Y_0 to Y_1 if the economy is operating close to full employment.

B: External factors

- Another possible factor is growth in external demand markets such as China and Eurozone.
- As countries like China and Eurozone are experiencing economic growth, this means that they have higher national income and thus greater purchasing power to increase demand for Singapore's exports such as semiconductors and semiconductor equipment, and externally oriented service sectors such as finance and insurance, transportation and storage, and wholesale trade.
- This leads to an increase in net exports due to Singapore's trading partners experiencing higher economic growth and this has a large impact, especially for small and open economies like Singapore which has one of the highest trade to GDP ratio in the world in excess of 300% → ↑(X-M).
- Also, there could be an inflow of foreign direct investment, such as Dyson and Neste, as they are attracted by the sound economic fundamentals, good network and infrastructure, strong legal framework and attractive tax system in Singapore (e.g. US$58 billion of foreign direct investment entered Singapore in 2017, Singapore stand out as attractive BRI (Belt and Road Initiative) destination for Chinese investors) →↑I.
- Hence the ↑(X-M) & I → ↑AD → multiplied ↑NY due to the multiplier effect, leading to actual growth.

Conclusion

- While Singapore is an export-driven economy, internal factors such as domestic consumption and domestic cost are important in contributing to Singapore's economic growth rate.
- These factors are usually interrelated and there would be simultaneous shifts in both AD and AS curves, affecting the growth rate of the economy.

Level Descriptors for 4(a)		**Marks**
L3	• Conceptually accurate and well-developed explanation on how 3 factors – **both** demand and supply-side factors lead to actual **and** potential economic growth in Singapore. • Good use and explanation of **AD/AS conceptual framework.** • Good use of **appropriate examples** in relation to **Singapore.**	8-10
L2	• Developed (comprehensive and well-explained) analysis on: ○ **either** actual **or** potential economic growth ○ **either** demand **or** supply factors that caused a slowdown in Singapore's economic growth _OR_ • Under-developed analysis on both demand **and** supply factors that led to Singapore's actual and potential economic growth. • Conceptual framework of AD/AS is used but there are a few inaccuracies. • Limited use of **appropriate examples** in relation to **Singapore.**	5-7
L1	• Descriptive answer without any conceptual framework • Answer contains many conceptual inaccuracies.	1-4

***(b)** Discuss the impact of tightening foreign labour supply on living standards in Singapore. [15]*

Suggested approach

- Students need to consider the impact of tightening foreign labour supply on both material and non-material standard of living in Singapore.

Introduction:

- **Tightening foreign labour supply**: Its aim is to reduce reliance on low-skilled labour and encourage innovation and automation. This is done by implementing foreign worker levies, minimum salary levels for foreign worker passes and issuing less work permits for low skilled, untrained workers, especially in construction & shipbuilding sectors.
- **Living standards** refer to the quality of life; the welfare of the population and this consists of both material and non- material aspect of living standards.
  - Material – amount of goods and services that individuals in the country have available for consumption
  - Non-material– amount of leisure time, life expectancy, standard of education, amount of pollution
- Context of **Singapore:** Small and open economy and a great reliance on foreign manpower due to our small and ageing population.

Body:

Argument: Explain how tightening of foreign labour supply can raise living standards in Singapore.

- Due to the tightening of foreign worker supply, businesses, especially SMEs, have been forced to innovate and automate their processes to increase productivity, to cope with the manpower shortage.

- This is because by restricting foreign labour, this will decrease the supply of labour and increase the wage cost. Hence, firms will be incentivise to substitute labour for automation and switch away from labour-intensive methods of production towards more capital-intensive method of production to increase labour productivity and decrease unit cost of production at the same time.
    - The Singapore government has also committed $2.5 billion over the period of 2010 to 2015 to schemes like Continuing Education and Training (CET) and production innovation credits to help firms drive productivity growth.
    - These schemes will lead to lower cost of production and lead to an increase in SRAS and thus national income will increase, while reducing inflationary pressure.
- Also, when producers pass on the fall in cost of production to consumers, this will lead to lower prices of domestic goods and exports. Assuming demand for exports is price elastic, the more price competitive exports will bring about greater export revenue and hence AD rises → NY increases.
- The increase in AD and SRAS will result in an increase in real national income and thus greater purchasing power → leading to an increase in material standard of living.
- In the long run, the adoption of automation and technology will increase the productive capacity of the Singapore economy, thereby helping to achieve potential growth and dampens DD-pull inflation, maintaining a healthy rate of inflation. In the past, Singapore has a problem of low productivity due to the reliance on low skilled workers. Thus, targeting higher productivity can lead to higher actual & potential economic growth for Singapore → leading to an increase in material living standards.

- In addition, as there are stricter rules on immigration, this will result in less overcrowding in public spaces such as public transport, this will result in less stress on the public amenities, thus this could appease the locals' unhappiness → non-material standard of living could rise.

Transition
- While businesses in certain industries have been able to automate their processes, it is not as easy and sometimes not possible, in the service and construction industries, which is very labour intensive. Hence tightening of foreign labour supply may be detrimental to those industries.

Counter-Argument: Explain how tightening of foreign labour supply can cause a fall in living standards in Singapore.

- Due to the restructuring towards productivity-driven growth, firms may adopt more labour-saving technology, where jobs are replaced by machines. This will lead to a falling demand for lower skilled workers and a higher demand for higher-skilled workers. The lower skilled workers may be less educated and thus lack the knowledge and skills to take up jobs take require knowledge of information technology. Furthermore, retraining to equip workers with new skills takes a long period of time and older and less educated workers may also be less receptive towards the use of technology. Hence, this may result in rising structural unemployment → fall in material standard of living.
- This may also worsen income inequity as there is a higher demand for higher-skilled workers, resulting in higher wages, and lower demand for lower-skilled workers, resulting in lower wages. This could result in greater tensions among groups in society → fall in non-material standard of living.
- In the short run, it is likely that the restriction in foreign labour will cause wages to rise faster than labour productivity. This is because productivity takes a long time to increase. Efforts to improve the work flow and finding and implementing appropriate technology to speed up the

work flow takes time. Hence, in the short run, while the wage cost has increased, labour productivity may have increased less than proportionately, hence, unit labour cost will rise.

- Yet, not every industry is able to automate and substitute labour, especially in service oriented industries. Due to the lower supply of foreign workers and the lack of Singaporeans willing to do more manual work, this will result in higher wages for blue-collar workers. Business owners have to pay higher wages to hire foreign workers due to the foreign worker levies, or turn to hiring Singaporeans who demand for higher wages, but less productive, resulting in higher cost of production → SRAS decreases → This causes the general price level to increase from P_0 to P_1, causing inflation. This will raise cost of living, resulting in purchasing power of locals to decrease, resulting in a fall in material standard of living.
- While there is an increase in domestic cost due to government policies, it could be offset by productivity growth. An increase in productivity through automation can help to reduce average cost. However, as it takes time for business to change their mindset and business processes, living standards will only improve in the long run. For those who embrace automation and technology will benefit more and be able to adapt better when the economy restructures.

Synthesis:

- Instead of tightening all foreign labour supply, perhaps the government should loosen policies targeting lower-skilled foreign workers who do jobs that locals do not wish to, especially as the resident workforce becomes higher-skilled over time. To ensure that there is a substantial labour force, the Singapore government has also increased the retirement age from 62 to 63 by 2022, and 65 by 2030 to slow down the shrinking labour force due to the falling birth rate and ageing population. This will help to increase labour supply and mitigate the negative impact of higher cost of labour on firms and hence cost of living may not increase drastically.
- To reduce no. of lower-skilled foreign workers in labour intensive jobs as an attempt to improve labour productivity is not easy to achieve. This is because; it requires education and retraining which may not be effective if workers are not receptive. Though CET was implemented from 2010, its success has largely been limited with productivity falling in certain years and coupled with ageing population, where older workers mindset could be hard to change. To counter this, the Singapore government advocated for 'lifelong learning' and made systemic changes to the educational landscape and introduced the Skillsfuture package to encourage lifelong learning for all Singapore Citizens. Thus in the future, we would expect to see a change in the receptiveness of workers and this limitation will be less pertinent. Nevertheless, this policy on tightening foreign manpower on low skilled workers to improve labour productivity may only be more beneficial in raising living standards in the long run, but it's likely to have a negative impact on living standards in the short run.

Level Descriptors for 4(b)		***Marks***
L3	• For a well-developed and balanced answer that analyses the impact of tightening foreign labour supply on material and non-material living standards. • Well-contextualised to Singapore with good use of examples.	***8 - 10***
L2	• For a one-sided but developed answer that analyses either the positive **or** negative impact on living standards <u>*OR*</u> • For a two-sided but undeveloped answer that analyses both positive and negative impact on living standards. • Limited or no use of examples and application to the context of Singapore.	***5 – 7***
L1	• Answer is mostly irrelevant or theoretical. • May contain several conceptual inaccuracies. • Descriptive answer without any conceptual framework.	***1 - 4***
	Evaluation	
E3	Well-reasoned judgement that is based on economic analysis that arrives at a	***4–5***

	conclusion of the impact of tightening foreign labour supply on living standards.	
E2	For an answer that makes some attempt at evaluation or a conclusion, but may not be well-reasoned.	***2-3***
E1	Mainly unexplained and unsupported judgements.	***1***

5. A stronger domestic growth outlook, coupled with a possible Goods and Services Tax (GST) hike, may accelerate inflationary expectations and warrant the Monetary Authority of Singapore to potentially tweak its currently neutral stance to a slight appreciation. While global growth prospects are brightening, there is still considerable uncertainty about inflation due to subdued oil prices.

Source: Channel NewsAsia, 14 February 2018

(a) Explain the factors that the Singapore government needs to consider in deciding whether to change its monetary policy stance to a slight appreciation. [10]

Suggested Approach

Introduction:

Current policy stance that MAS adopts: neutral stance – zero appreciation

Objective of government: To achieve macroeconomic goals such as price stability to achieve sustainable economic growth.

Context: Singapore's central bank, MAS, reviews its monetary policy twice a year - in April and October - to ensure that it is consistent with economic fundamentals and market conditions. It changes the slope, width and centre of that band when it wants to adjust the pace of appreciation or depreciation of the Singapore currency.

Body:

Constraints:

- One of the factors that the Singapore government needs to consider is whether there are any constraints in changing its monetary stance.
- The health of balance of payments is a crucial factor that MAS needs to consider as it affects the exchange rate and the amount of foreign reserves is available. When Singapore experiences a balance of payment surplus, this will result in an accumulation of foreign reserves. However if the country is facing a persistent balance of payment deficit, this will result in the withdrawing of foreign reserves to finance the deficit and limit the availability of foreign reserves, which could constrain the MAS's ability to influence its exchange rate.
- The MAS needs to consider if there is availability of foreign reserves to intervene in the exchange rate market. In order to appreciate currency, MAS will need to buy SGD using its foreign currency reserves to ensure that it maintains its stance of slight appreciation. Singapore generally has a substantial amount of foreign reserves and hence this does not really constrain its decision.

Current state of economy:

- Another factor it needs to consider is the current state of Singapore's economy and whether its monetary policy stance will be **beneficial** to the economy.
- If the Singapore economy is facing rising inflation, then it will be beneficial for MAS to change its monetary stance to appreciate its currency to reduce inflation.
- There is a stronger domestic growth outlook and a possible sales tax hike which is likely to contribute to higher inflationary expectations.
- However, whether MAS should change its monetary stance or not, depends on the current level of inflation. An increase in inflation is not always a cause for concern. If the current inflation rate is negative or very low – hovering close to zero – MAS may not need to shift its monetary policy stance, as it should allow inflation rate to increase to a healthy level of 1-3%.
- But if the inflation rate is already quite high (higher than 1-3%), further increase in inflation rate from this level may cause inflation to creep upwards by setting off an inflationary spiral. If the cause of inflation is due to external reasons, such as high import costs or higher

demand or exports, then the MAS should consider changing its monetary stance to a slight appreciation to manage the inflation rate.

Future state of economy:

- Also, MAS needs to consider whether inflation is likely to be prolonged or is temporary.
- MAS needs to consider how domestic and global events such as global growth prospects, subdued oil prices, are likely to influence future inflation rates and act before macroeconomic problems arises.
- If inflation is likely to be temporary as subdued oil prices is likely to reduce inflation rates, then Singapore government may not necessarily change its monetary policy stance.

Benefits of changing its monetary stance: In April 2018, the central bank slightly increased the slope of the policy band from zero per cent to allow for "modest and gradual" appreciation in order to manage inflation.

- Slight appreciation of SGD → Price of exports will be more expensive in foreign currency, price of imports will be cheaper in domestic currency.
- Assuming demand for exports & imports is price elastic → X revenue falls and M expenditure increases → (X-M) falls → AD falls → General price level falls → Reducing inflation.
- As Singapore imports many raw materials, the fall in price of imports will cause cost of production to decrease → SRAS increases → General price level falls → Reducing inflation.

Costs of changing its monetary stance:

- It is important that MAS does not keep changing its exchange rate stance, as this could result in volatility of the value of SGD, that may cause investors to lose confidence in the currency due to its unpredictability.
- Also, the appreciation of SGD will make prices of exports more expensive in foreign currency and if demand for Singapore's exports is price inelastic → X revenue could increase → AD increases → General price level increases→ worsening inflationary pressures.
- Singapore government also needs to consider the impact of changing its monetary policy stance on its other macroeconomic goals.
- By appreciating its currency, this could also result in AD falling → NY falls, causing negative economic growth if it was not close to full employment (*Diagram).*
- The appreciation of SGD could also increase the cost of setting up for foreign investors, and this could cause foreign direct investments to fall in the long run.
- Thus MAS needs to weigh the costs and benefits of changing its monetary policy stance to slight appreciation – whether it should prioritise managing inflation over economic growth.

Conclusion:

Thus the Singapore government needs to consider its constraints, costs and benefits of changing its monetary stance. It needs to ascertain the current and future level of inflation before deciding whether to change its monetary stance as this will have implications on the economy.

Level Descriptors for 5(a)		**Marks**
L3	• Well-developed analysis of the factors that will influence the government's decision to change its monetary stance to maintain price stability. • Well-explained answer that address constraints, benefits and costs of changing its stance. • Well-contextualised to Singapore.	8-10
L2	• Under-developed analysis of the factors that will influence the government's decision to change its monetary stance to maintain price stability.	5-7

	• Scope is limited in explaining various factors that affect government's decision to change its monetary policy stance. • Limited contextualisation to **Singapore.**	
L1	• Descriptive answer without any conceptual framework • Answer contains many conceptual inaccuracies.	1-4

b) Discuss whether failure to achieve price stability in Singapore is more likely to be caused by domestic or international factors. [15]

Suggested Approach

Introduction:

Price stability: It refers to the general price level of the economy to be relatively stable at relatively low levels from 1-3%.

Context: Singapore's economy is generally export oriented and reliant on imports.

Failure to achieve price stability could be caused by domestic factors, international factors, or a combination of both factors.

Body:

Thesis: Failure to achieve price stability could be caused by domestic factors.

Body paragraph 1: domestic factor – stronger domestic growth outlook & possible GST hike

- A stronger domestic growth outlook → increase consumers' and investors' confidence that the economy will experience growth, and hence anticipate higher income→ increases their willingness to consume and invest more → Increase in C & I
- **Possible** Goods and Services Tax (GST) hike → consumers anticipate that prices will rise in future and thus is more likely to spend more now → Increase in C
- AD = C+I+G+(X-M), Thus an increase in C&I → increase in AD against a rigid AS, lack of spare capacity→ increase in GPL and hence DD-pull inflation → failure to achieve price stability
- Failure to achieve price stability is **more likely** due to domestic factors rather than international factors.

Transition

Singapore's limited land space and labour pool make it challenging for Singapore government to achieve price stability. The rigid AS also increases the likelihood for Singapore to experience DD-pull inflation.

Body paragraph 2: domestic factor -Supply-side constraints

- Increase in consumption could increase AD. However, if there is sufficient spare capacity, an increase in AD might not lead to DD-pull inflation in Singapore. Thus AS plays an important role in contributing to the failure to achieve price stability.
- Ageing population → labour force may grow at a slower rate. This is further exacerbated by the restriction on intake of foreign workers. Thus quantity of resources increase at a lower rate → productive capacity may expand at a slower rate → slower increase in LRAS.
- While Singapore government has attempted to increase productivity through the use of SS-side policies such as SkillsFuture, the result has yet to be seen. Productivity growth was low in 2017. This would mean minimal growth in production of output per unit time → productive capacity may expand at a slower rate → slower increase in LRAS.
- Thus if there is a surge in AD, the rigid AS could lead to high inflation in Singapore.

- Hence failure to achieve low rates of inflation in Singapore could also be due to domestic factors.

<u>*Transition*</u>

However, given Singapore's dependence on trade, it is unlikely that domestic factors have a dominant role in affecting price stability. Singapore has a small domestic market and depends heavily on export for economic growth. Her exports and imports (X+M) form 300% of its GDP while other components, domestic consumption, government expenditure and investments each constitute less than 50% of its GDP. Hence a rise in domestic consumption is not likely to have significant impact on AD as the components constitute a smaller proportion (less than 50%) of the GDP. Thus given the nature of Singapore's economy, Failure to achieve low rates of inflation in Singapore is likely due to international factors rather than domestic factors.

Anti-thesis: However, international factors could also result in failure to achieve price stability.

<u>Body paragraph 3: International factor – increase in exports</u>

- Singapore's major trading partners such as USA and China were experiencing strong economic growth → higher income per capita and higher disposable income → higher purchasing power → likely to see an increase in DD for goods and services produced by Singapore → increasing export revenue for Singapore.
- Economic growth and growth in affluence in countries like China and Indonesia sees an increase in tourist arrivals in Singapore → increasing Singapore's export revenue. The number of Chinese tourists visiting Singapore tripled from 2010 to 2017.
- Increase in Singapore's export revenue→ a rapid increase in AD against a rigid AS → increase in GPL and hence DD-pull inflation → failure to achieve price stability
- Failure to achieve price stability is **more likely** due to international factors rather than domestic factors given the **nature of Singapore economy**.

<u>*Transition*</u>

Besides being a small and open economy that depends on trade for economic growth, Singapore also relies on imports for survival. Singapore is a small country with limited resources and thus has to rely on import of basic necessities such as water and food for survival. Not only that, Singapore also imports raw materials such as oil, and intermediate goods so that Singapore could value-add to the products and re-export to other countries. The nature of Singapore economy means that Singapore would also be vulnerable to imported inflation/deflation.

<u>Body paragraph 4: international factor – fall in oil prices</u>

International factors →subdued oil prices → affects COP, (X-M)

- Singapore imports raw materials and factors input such as crude oil. Oil refinery is a major sector in Singapore and Singapore imports crude oil and refines it for re-export.
- Subdued oil prices due to the influx of supply of oil → fall in COP as oil is an input for production → SRAS increases → general price level falls.
- Hence failure to achieve price stability in Singapore is likely due to international factors.

Synthesis/Conclusion

- The relative importance of factors causing the failure to achieve price stability does depend on the nature of the economy.
- For small and open economies heavily reliant on trade, eg. Singapore, export revenue and FDI constitutes a large proportion of the country's AD, hence the failure to achieve price stability would more likely be caused by international factors.

- Furthermore, the nature of the economy affects the ability of the government to avoid or mitigate the impact of international factors. For instance, Singapore is a price taker in the global market and hence any attempt by Singapore to influence the SS and DD of goods such as crude oil and rice will have no impact on price. While Singapore could use exchange rate policy to manage the impact of global prices, such policy will have limited and short term impact. There is an extent to how much and how long Singapore could strengthen her Sing dollar before causing harm to her economy. However, the government definitely has more control in influencing domestic prices.
- Increasingly, globalization has led to the increasing impact of international factors on Singapore's price stability as counties are more connected with each other. Through global supply chains in production and international capital flows and investment, countries are easily economically shocked by external factors and the more open the economy is, the greater the degree of vulnerability. Hence failure to achieve price stability in Singapore is likely due more to international factors compared to domestic factors.

Level Descriptors for 5(b)		**Marks**
L3	• For a well-developed and balanced answer that analyses how domestic and international factors could result in the failure to achieve price stability. • Good attempt in comparing the relative importance of domestic and international factors. • Well-contextualised to Singapore with good use of examples.	8-10
L2	• An underdeveloped explanation of how both domestic and international factors could result in the failure to achieve price stability *<u>OR</u>* • A developed but one-sided answer on how **either** domestic or international factors could result in the failure to achieve price stability. • Weak attempt at comparing between domestic and international factors.	5-7
L1	• Answer is mostly irrelevant or theoretical. • May contain several conceptual inaccuracies. • Descriptive answer without any conceptual framework.	1-4
	Evaluation	
E3	A well-reasoned judgment on whether domestic or international factors is more likely to result in the failure to achieve price stability, clearly substantiated by economic reasoning based on criteria (e.g. nature of the economy, time period).	4-5
E2	For an answer that makes some attempt at evaluation or a conclusion, but may not be well-reasoned.	2-3
E1	Mainly unexplained and unsupported judgements.	1

6 Millions around the globe may have taken to the streets in recent years to protest against the impact of globalisation on their jobs and communities - and this backlash is likely to keep growing.

Source: BBC, 1 February 2017

In view of the macroeconomic challenges arising from rapid globalisation, discuss the various policy approaches different countries could adopt to manage these challenges. [25

Question Analysis

- Focus/topics covered: Globalisation, macro problems, macro and trade policies
- Skill required/Command word: Discuss
    - Students should first identify and explain the macroeconomic challenges arising from globalization
    - This should be followed by a discussion of various policy approaches that could include (but not limited to):
        - A protectionist approach
        - Rebalancing an economy
        - Embracing free trade and using supply side policies to boost exports
- Context: rapid globalisation, backlash against globalisation

Introduction:

Define and explain key terms

- Globalisation refers to the development of an increasingly global economy. It is characterised by trade of goods and services, international flows of capital, and labour mobility.
- While globalisation has benefited and led to economic growth in many countries, it has also resulted in challenges for some countries.
- Governments have to intervene to manage the macroeconomic challenges arising from globalisation.

<u>Body 1: Explain the macroeconomic challenges arising from rapid globalisation.</u>

Students to explain how rapid globalisation could result challenges for the economy in terms of failing to achieve the 4 macroeconomic goals.

Topic sentence: Rapid globalisation could lead to a loss of comparative advantage

- Rapid globalisation has resulted in lower trade barriers and an increase in both exports and imports globally.
- Developed countries such as the US or UK now face an increase in competition in trade from developing countries such as China or India.
- Developing countries such as China have an abundance of labour and other resources. This allows for a much lower cost of production compared to the more advanced economies, especially in labour intensive industries such as manufacturing.
- Therefore, goods produced by the developing countries are lower in price compared to those produced by developed countries.
- Exports produced by developed countries are unable to be price competitive due to the higher labour cost.
- For example, the US used to have the comparative advantage in producing electronics, but due to opening up of China’s economy to trade, the comparative advantage has shifted to China.

- Developed countries such as the US experience a fall in export revenue, while import expenditure increases as US consumers switch to consuming the cheaper imported goods.
- Overall, this leads to a fall in AD/dampen increase in AD and negative or slow growth in the economy.
- There could be a loss of jobs in these export industries as demand shifts to developing economies. Therefore, unemployment increases, creating challenges for the government.

Topic sentence: Rapid globalisation could lead to lower wages and higher rates of unemployment

- Rapid globalisation has led to increased flows of labour between countries.
- This can be seen especially between developing and developed countries. Labour has moved from developing to developed countries as workers in developing countries seek higher wages in the developed economies. For example, there may be a large migration of workers low skilled workers from Mexico into the US.
- This increases the supply of labour in the US, resulting in a downward pressure on wages.
- If the demand for labour does not keep up with the increase in supply of labour (for example if the increase in LRAS is not matched by an increase in AD), workers may also have difficulty finding jobs.
- Local workers may be replaced by cheaper foreign labour, resulting in higher domestic unemployment creating challenges for the government.

Topic sentence: Rapid globalisation could lead to increased vulnerability to external shocks and imported inflation.

- For small and trade dependent countries such as Singapore, the increase in trade and investment flows from rapid globalisation also result in increased vulnerability in as the world economy gets more volatile.
- Singapore is an export driven economy, and is greatly affected by external shocks. For example, during the Great Financial Crisis of 2008, major economies such as the US and Europe suffered from severe recessions.
- As a result, Singapore experienced a fall in exports, as demand from these major economies fell.
- Singapore’s economy contracted significantly in that year, as the fall in exports lead to a fall in AD and reduced economic activity (fall in GDP). This is because Singapore has a small domestic market, and exports take up a large proportion of the GDP. Thus the negative growth poses a challenge for the government.
- Similarly, Singapore is also dependent on imports due to the lack of scarce resources in the economy.
- Singapore is vulnerable to imported inflation, as almost all raw materials, intermediate goods as well as final consumer goods are imported from other countries.
- When there is an increase in the global price of commodities such as oil produced in other countries, Singapore experiences cost push inflation as the cost of importing these goods increases. Thus high inflation is also a challenge arising from rapid globalisation.

Note: Students can also discuss other challenges arising from globalisation, for example, the increase in capital (FDI) flows resulting in pollution or environmental degradation in developing countries due to over extraction of minerals etc.

Body 2: Discuss the use of a more protectionist approach to address these challenges

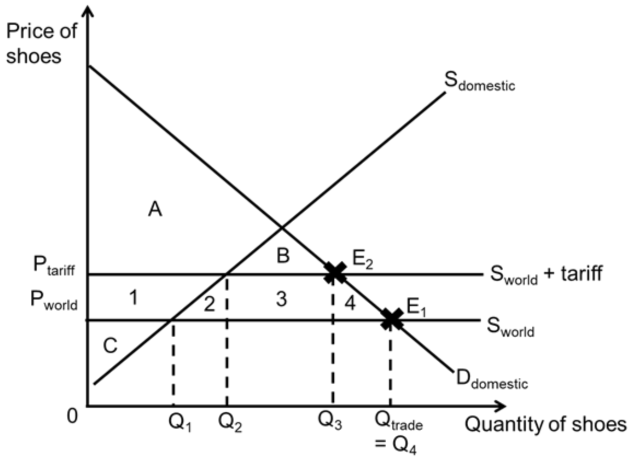
Topic sentence: The government could adopt a protectionist approach to manage the above challenges that arise from globalisation. (US)

Use of Tariffs:

- Some economies adopt a protectionist approach to slow down the impact of globalisation to give the economy time to adjust.
- For example, countries like the US have experienced a loss of jobs as a result of globalisation (as explained above) and have imposed import tariffs to reduce the inflow of imports and increase the demand for domestic goods and services.

Explanation of how tariffs can help manage the challenges from globalisation:

- Tariff is a tax that is imposed on imported goods. The effect of a tariff on imported goods such as shoes can be seen in the follow diagram:



- The tariff reduces the supply and the supply curve shifts up from S_{world} to S_{world} + tariff. Shoe prices will therefore increase from P_{world} to P_{tariff} (Figure 4). Importers will now pay a higher price of P_{tariff} for shoes.
- At this higher price, more domestic firms are willing and able to sell shoes, and domestic production increases from Q_1 to Q_2. Overall, the volume of imports will fall from Q_1-Q_4 to Q_2-Q_3. Hence, import tariffs allow domestic firms to enjoy higher domestic demand and gain higher revenue from the domestic market.
- As consumers switch from imported to domestically produced goods, there is a fall in import expenditure and an increase in consumer expenditure on domestically produced goods. Overall, there is a fall in M and increase in C, leading to an increase in AD.
- As AD increases, <u>there is economic growth</u> as national income increases through the multiplier effect.
- <u>Jobs are created</u> directly in the domestic industries, and other industries also benefit through the multiplier effect.

Use of Domestic Subsidies:

- In addition to tariffs, governments may further provide support for domestic industries by giving out subsidies.
- For example, in the US, the production of sugar is heavily subsidised by the government to ensure sugar producers in the UK remain competitive.
- By subsidising the sugar farmers, this lowers the cost of production for farmers so that their goods remain price competitive in the global market.

- Such policies will further increase domestic consumption, as domestically produced goods are artificially cheaper than foreign imports due to the subsidies.
- This once again increases C and reduces M, resulting in growth and creation of jobs in the economy.
- Thus this address the challenges of unemployment and slow growth resulting from rapid globalisation.

Short-comings and evaluation of the protectionist approach:

- However, protectionism may not be an appropriate approach as it may be ineffective or harmful to the economy in the long run.
- Protectionism encourages inefficient allocation of resources in the market. Inefficient domestic industries can become over reliant on government protection, and remain inefficient.
- This results in a wastage of resources, especially for subsidies, where a high opportunity cost is incurred because the resources could have been allocated to more productive areas.
- It also results in higher prices for consumers due to the increased inefficiency. For example, in the use of tariffs, there is a welfare loss to consumers as illustrated by areas 1, 2, 3 and 4 in the diagram above.
- In addition, protectionism often results in retaliation by trading partners or beggar thy neighbour effect on the economy.
    - For example, when US placed tariffs on imports from China, China retaliated and also placed tariffs on US produced soybeans. This was extremely harmful for US soybean farmers whose largest market is China where there is a high demand for soybeans.
    - The trade war between China and US has escalated and affected many other economies such as Singapore as well. With a fall in national income in other economies, US trading partners will also be less able to export to these countries.
    - Due to the above reasons, export revenue may fall and the US may not experience an increase in net exports.
- Thus, protectionism may not address the challenges of globalisation and may even worsen the situation.

Body 3: Discuss the use of rebalancing to address these challenges (China)

In light of the above, countries may choose a less protectionist approach instead. Some economies have chosen to strengthen their domestic market while still remaining open to globalisation and trade. One example is China. With a large domestic economy and an abundance of resources, China has been trying to rebalance their economy to reduce their reliance on exports and foreign investments. This addresses the challenge of being vulnerable to external shocks and imported inflation.

The rebalancing is achieved through several policies:

Use of Fiscal Policy:

- Fiscal policy can help to rebalance the economy by increasing domestic consumption expenditure. The government can use expansionary fiscal policy and reduce taxes while increasing government expenditure.
- A decrease in income taxes increases the disposable income of consumers, increasing their purchasing power increase consumption expenditure.
- A decrease in corporate taxes increases the after tax of profits, encouraging more domestic firms to increase investment expenditure.

- At the same time, the government can provide subsidies to consumers and firms to further increase consumption and investment expenditure.
- With an increase in C and I, these help to encourage economic growth and reduce demand deficient unemployment caused by globalisation.
- With a stronger domestic demand, countries like China will be less affected by external shocks. Even if there is a fall in external demand due to a global recession, the increase in consumption and investment can offset the fall in export revenue.

Use of Monetary Policy:

- Similarly, monetary policy can be used to strengthen the domestic economy.
- A decrease in interest rate will lower the cost of borrowing for consumers and firms, resulting in increase in consumption and investment expenditure respectively.
- As explained for fiscal policy, this would reduce the reliance on external demand and prevent a large negative impact from external shocks, ensuring stability in the economy.

Short-comings and evaluation of rebalancing an economy:

- However, the government may not always be effective in rebalancing the economy.
- For the case of China, the government may experience a long time lag in rebalancing the economy. This is because the people may have a culture and mind set of saving, and the increase in consumption may not be significant enough to offset a fall in export revenue. It takes a long time to change such societal and cultural norms, and the government will have to ensure a strong social security system before households are willing to increase expenditure.
- Smaller countries such as Singapore are also unable to adopt this approach due to the reliance on external demand. Since Singapore's domestic market is small, consumption expenditure can only increase by a limited amount.

Body 4: Discuss the use of supply side policies and free trade to address these challenges (Singapore)

For countries like Singapore, the protectionist and rebalancing approach are not viable options. As such, these small countries would have to embrace globalisation and implement policies that maximise the gains from globalisation, while addressing the challenges that arise.

Use of supply side policies to increase export competitiveness:

- The government may use supply side policies such as investing in R&D or subsidising skills upgrading programmes.
    - Governments may choose to develop industry clusters, where firms are able to gain external economies of scale to gain a comparative advantage.
- Such policies will encourage firms to be more efficient and innovative.
- Through R&D, firms can adopt new technologies or new methods of production, for example 3D printing, to mass produce goods at a lower cost.
- At the same time, the economy will be able to produce higher value added goods with increased quality.
- For example, Singapore's government provides support for innovation in sectors such as electronics and pharmaceuticals, which help these industries gain a comparative advantage globally.
- With a lower cost and better quality, export are now more competitive. This prevents the loss of comparative advantage to developing countries that could take place as a result of rapid globalisation.
- This will increase export revenue, leading to growth in the economy and the creation of jobs in these sectors.

Use of Free Trade Agreements to boost trade further and diversify:

- Small economies should also sign more free trade agreements to maximise the benefits of globalisation and overcome the challenges.
- Signing free trade agreements removes existing barriers to trade, making it cheaper to import goods from other countries.
- For small countries like Singapore, this is beneficial as resources are scarce domestically. With a lower cost of importing raw materials such as oil, cost of production will be lowered, leading to an increase in SRAS and growth in the economy.
- With more FTA, vulnerability to imported inflation is reduced, as the same raw materials can be imported from different sources. Even if there is inflation in one country, the same goods can still be imported cheaply from other countries.
- In addition, FTAs allow export to be sold more cheaply in foreign markets. If a country's goods are competitive in terms of price and quantity, this should lead to an increase in export revenue.

Short-comings and evaluation of embracing globalisation:

- In order for this approach to be effective, and economy would have to keep pace with advancements in technology globally. There would be constant restructuring and the nature of jobs will always be evolving rapidly.
- For example, Singapore is always investing into new areas of comparative advantage. The focus could shift from manufacturing electronics to the biomedical industry, resulting in a displacement of workers who do not have to relevant skills for the newer industry. These workers will suffer from structural unemployment, and the government would have to ensure they are equipped for such changes in the economy. This can be done through policies such as skills upgrading.
- In addition, supply side policies often have a long time lag, as time is needed for innovation and R&D to be successful. Thus, the economy, may still face challenges from globalisation in the short run.
- These policies are also costly, and only viable for economies with sufficient budget.

Overall Evaluation:

The approach chosen by a government is likely to depend on several criteria:

1. The nature of the economy: For larger economies, the protectionist approach and rebalancing of the economy are feasible options. This is because they have a large domestic market to rely on.
    - The protectionist approach is likely to be more short term in nature as it leads to more harmful consequences in the long run.
    - Rebalancing an economy is a more long term approach, as it is likely to have a longer time lag.
2. The constraints of the government:
    - Not all economies will be able to use policies like supply side policies, as these are costly and not all governments have sufficient budget to finance these.
3. The root cause of the problem faced/level of development in the economy:
    - Globalisation results in different challenges for different economies. For a developed economy, globalisation is more likely to result in a loss of comparative advantage. In such cases, economies should try to develop a new comparative advantage using supply side policies.
    - However, in view of the time lag needed to do so, a more protectionist approach may also be used in the short run to prevent high unemployment.

Level	Knowledge, Application/Understanding and Analysis	Marks
L3 (High)	• **Thorough** knowledge of facts and theory displayed through well elaborated economic analysis • Analysis is explained in a logical and reasoned manner • Excellent use of examples from **relevant current situations** • The challenges arising from globalisation are correctly identified and well explained. • Answers in this range should address the issue of an <u>approach</u> rather than just individual policies to deal with the challenges of globalisation. Each approach should be <u>well evaluated</u>	18 – 20
L3 (Low)	• **Good** knowledge of facts and theory displayed through well elaborated economic analysis • Analysis is explained in a logical and reasoned manner • Good attempts to use relevant examples to support explanations • Candidate may focus on individual policies instead of broader approaches, but the policies are thoroughly explained and well evaluated.	15 – 17
L2 (High)	• Some knowledge of facts and theory but the economic analysis may be incomplete or insufficiently elaborated on • Some use of examples but may not be the most relevant for the context of the question • Candidate may focus on individual policies instead of approaches, with some attempt to evaluate these policies	12 – 14
L2 (Low)	• Some knowledge of facts and theory but may have some conceptual errors • Attempts at economic analysis may be incomplete or lack logical presentation • Little use of examples to support points, answer may be more theoretical in nature • Candidate may have an explanation of various policy tools with little attempts to evaluate them	9 – 11
L1 (High)	• Some knowledge of facts and theory, but has basic conceptual errors and inadequate development of analysis • Answer is descriptive and lacking in development of economic analysis.	
L1 (Low)	• Conceptually inaccurate • Answer is mostly irrelevant or only contains a few valid points made incidentally	1 – 8
E3	• Evaluation and judgement is made using a relevant criteria, and build on appropriate economic analysis • Answer recognises unstated assumptions and evaluates their relevance • Candidate synthesises economic arguments to arrive at well-reasoned judgement and decisions	4 – 5
E2	• For an answer that makes some attempt at evaluation or a conclusion that answers the question but does not explain the judgement or base it on analysis.	2 – 3
E1	• For an answer that gives an unsupported evaluative statement(s)	1