



**HWA CHONG INSTITUTION**  
**C2 Preliminary Examinations**  
**Higher 2**

**CANDIDATE  
NAME**

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**CT GROUP**

17

**CENTRE  
NUMBER**

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**INDEX  
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**ECONOMICS**

Paper 1 Case Study Questions

**9757/01**

**23 August 2018**  
**2 hours 15 minutes**

Additional Materials: Answer Paper

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**READ THESE INSTRUCTIONS FIRST**

Write your **name, CT group, Centre and Index numbers** clearly in the spaces at the top of this page and on every page you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use an HB pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid and tape.

Answer **all** questions.

Begin Question 2 on a fresh sheet of writing paper.

At the end of the examination, fasten your answers to Question 1 and Question 2 **separately**.

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

You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

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This document consists of **8** printed pages.

**[Turn over**

Answer **all** questions**Question 1: Waste Recycling****Extract 1: US recyclers battered by global commodity plunge**

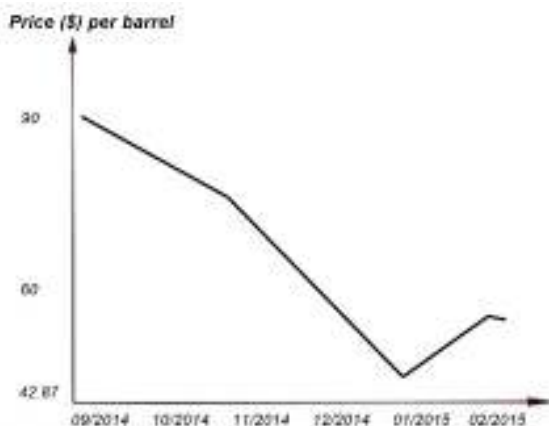
US recyclers are fighting to stay alive. Prices for new materials have fallen so much in the past few years that recycled materials have lost their edge in the market. Besides, some states such as California had cut their subsidies in state-run recycling programs.

Global forces have put the squeeze on recyclers. Growth in China, the largest buyer for several types of recycled materials, has slowed significantly. Beijing even erected a so-called "Green Fence," which enacted standards on imports of Americans' recycling. Add to that a strong dollar, which makes buying U.S. materials more expensive for customers in other countries.

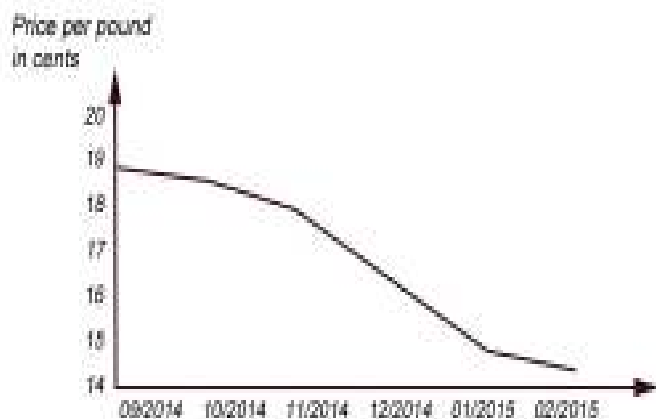
Meanwhile, oil prices have dropped to the lowest level in around 13 years. This is expected to have a further negative effect on the price paid for recycled materials such as recycled plastics. As new plastics, which are produced from petroleum, become more cheaply available, manufacturers buy less recycled plastics.

"Being green costs money," laments Waste Management CEO David Steiner. "When prices are high we'll pay you to recycle. When prices are low we have to charge you," Steiner says.

Sources: *The Seattle Times*, 5 March 2016 and *Forbes*, 14 September 2016

**Figure 1: Price of Crude Oil**

Source: *US Department Of Energy*

**Figure 2: Price of Recycled Plastics**

Source: *SecondaryMaterialsPricing.com*

## Extract 2: The benefits of recycling

Recycling is the process of turning old used materials into new ones. Through recycling, energy and raw materials are saved. Moreover, studies have shown that for every one job in waste management there are four jobs in recycling. Jobs would be created by a new breed of companies that embrace recycling and servicing goods to prolong their lifespan. Examples include designing goods that last longer and can be repaired easily. It has been estimated that recycling and remanufacturing industries create more than \$1 billion in revenue and hundreds of thousands of jobs. According to the Darla Moore School of Business, if just one percent of all households in South Carolina were to recycle an additional eight newspapers per month, it could mean a gain of \$3.8 million in economic activity annually for the state.

Recycling reduces pollution because manufacturers are reusing materials instead of creating new ones, and toxic chemicals and greenhouse gases are not released into the atmosphere through incineration. Recycling also prevents hazardous waste from being dumped in landfills which can potentially contaminate water sources. Increasingly, many countries including the US have turned to recycling given the high opportunity cost of using precious land for the disposal of waste in landfills. Indeed, recycling is better than landfill, because it replaces new materials in the manufacturing process.

From the perspective of sustainable development, recycling helps to prevent resource destruction. It takes 4.4 tons of trees to create one ton of paper pulp, and recycled paper reduces solid waste by 29%. Meanwhile, recycling one ton of plastic bottles conserves about 3.8 barrels of oil.

Sources: *Institute For Local Self-Reliance*, 22 December 2016, *Renewable Resources Coalition*, 15 December 2016, *Eco Cycle Solutions*

## Extract 3: Problems with recycling

The standard waste hierarchy generally demarcates between waste avoidance and waste management, with recycling squarely in the waste management zone. But recycling sits fairly low down the waste hierarchy. Reducing total waste created in the first place and reusing material as many times as possible, are higher up in the hierarchy as compared to recycling.

Besides, recycling process still consumes energy (and other resources) and costs money. In order to repurpose certain recycled materials, separate manufacturing plants need to be built and used. This would counteract the advantage recycling has in creating less pollution, since more may actually be generated as a result of the additional factories.

Recycling sites are also commonly unsafe. As with any waste, materials to be recycled have to be transported and processed somewhere. This means creating additional locations of potentially hazardous waste. These heaps of trash are grounds for bacteria, disease, and a laundry list of other unsafe conditions. In addition to this, recycling sites are also industrial plants. This means they are not without their own forms of pollution.

So recycling needs to be seen as what is – a last line of defence. Minimising waste is more important than managing it, and we need to keep our focus there.

Source: *Renewable Resources Coalition*, December 2016, Planet Green Recycle

**[Turn over**

### Extract 4: How Pay-As-You-Throw works

Traditionally, residents pay for waste collection through property taxes or a fixed fee, regardless of how much trash they generate. Pay-As-You-throw (PAYT) breaks with tradition by treating trash services just like electricity, gas, and other utilities. Households are charged based on the amount of household trash they throw away. They would then purchase trash bags that correspond to the weight and size of the trash that they dispose. This creates a direct economic incentive to recycle or reuse more, and to generate less waste.

One of the most important advantages of a variable-rate program may be its inherent fairness. When the cost of managing trash is hidden in taxes or charged at a flat rate, residents who recycle and prevent waste subsidise their neighbours' wastefulness. Under PAYT, residents pay only for what they throw away.

Source: *United States Environmental Protection Agency*

### Questions

- (a) (i) State the relationship between the price of crude oil and the price of recycled plastics shown in Figure 1 and Figure 2. [1]
- (ii) With reference to Extract 1, explain how a fall in the price of crude oil might impact the price of recycled plastics. [3]
- (b) Explain what Waste Management CEO David Steiner meant when he said, "when prices are high we'll pay you to recycle. When prices are low we have to charge you." [2]
- (c) Use the concept of opportunity cost to explain **two** reasons why many countries have turned to recycling instead of disposing their waste in landfills mentioned in Extract 2. [4]
- (d) Explain why waste collection paid through a flat fee results in residents who "recycle and prevent waste subsidise their neighbours' wastefulness". [2]
- (e) Assess the extent to which the promotion of recycling can help to achieve sustained and sustainable growth in the US. [8]
- (f) Discuss whether it would be more effective for the government to subsidise recycling or implement PAYT to address waste pollution. [10]

[Total: 30]

## Question 2: China's Slowdown on Tourism, Infrastructure and Trading Partners

**Table 1: Selected Economics Indicators for China, 2013 to 2016**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Real GDP growth (%)	7.8	7.3	6.9	6.7
Unemployment (%)	4.1	4.1	4.1	4.0
Inflation (CPI, %)	2.5	1.5	1.6	2.1
Exchange Rate (Renminbi per USD)	6.15	6.16	6.28	6.64
Current Account Balance (US\$billion)	148	236	304	202
Fiscal balance (change in %)	-1.9	-1.8	-3.4	-3.8

Source: *Focus Economics*

### Extract 5: Chinese travellers set a new record for global tourism spending in 2016

The expenditure on tourism for Chinese travellers venturing abroad was US\$261 billion in 2016. Approximately 135 million Chinese travelled outside China last year, a 6 percent increase.

Chinese travellers were the second largest market, after the United States, for their contribution to global tourism in 2016. The World Travel & Tourism Council projects that China will be one of the 10 fastest growing markets for leisure travel spending through 2026.

Japan, Korea and Thailand benefited the most from outbound Chinese tourist spending and the U.S. and Europe also saw more spending from China. There has been an increased Chinese spending in Europe as more Chinese travellers reconsider the continent for trips in place of the usual Asian countries.

Source: United Nations World Tourism Organisation

### Extract 6: Should we charge tourists a higher price than we do for locals

Tourism has long been regarded as a vehicle of economic prosperity and source of increased revenue. It is one of the world's largest industries, with a global economic contribution of over US\$7.6 trillion. The United Nations World Tourism Organisation forecasts that by 2030, the number of international tourist arrivals will reach 1.8 billion. With one in ten jobs on the planet reliant on tourism (that's 292 million people) and an equivalent worth of 10 per cent of global GDP, there is little wonder that host communities want to make the most of the opportunities it brings.

Recently, it was reported that some cafes in Belgium's Bruges are charging tourists 10 per cent more than locals for chips, and food and goods are also considerably higher for tourists in cities like Rome. Asian travellers especially from China could face even higher prices due to their perceived wealth. One of the most famous places for hiking prices up for visitors is Venice in which foreign tickets can cost 6 to 10 times more than local price. The city's "two-tier payment system" became so extreme that a complaint reached the European Commission in 2015 which claimed discriminatory practices against tourists. In the long run, such pricing policy can hurt economies because tourists are less motivated to visit those countries again in the future.

**[Turn over**

Indeed a two-tier tourism payment system may be deemed unfair. But if locals had to start paying the same prices as tourists, it's likely that many of them would be prevented from enjoying heritage sites in their own communities. Furthermore, it may be one sustainable tourism practice to protect valuable resources as more money collected from the tourists could be used to maintain heritage sights. Thus expecting tourists to pay a little more to protect and maintain the sites they enjoy is morally defensible – whether this be Bruges, Venice or Rome.

Source: *Channel News Asia*, 6 July 2017

### **Extract 7: The investment addiction in China persists and only the rich are spending more**

Generally, emerging economies rely on investment and exports, before shifting to consumption-driven models as they mature. Chinese President Xi Jinping has emphasized this transition as a key to achieving "high-quality development." And global companies have been swooping in, determined to cash in on a Chinese consumption boom.

Even if overall consumption is contributing more to GDP now, China is still heavily dependent on investments and government infrastructure projects and continues to grapple with the side effects of its addiction.

Since 2008, when Beijing countered the global financial crisis with a stimulus package worth 4 trillion yuan (\$610 billion at the current rate), investment has continued to account for more than 40% of GDP. This is an unusually high percentage for a large economy. The comparable figures for developed countries are around 20%.

No country has built so many roads, bridges and airports as quickly as China. Anne Stevenson-Yang, research director at J Capital Research, an economic research firm in Beijing, says the government has simply built too much. For example, in the city of Luliang in the inland province of Shanxi, a \$160 million airport, which opened in 2014, gets at most five flights a day and as few as three. Another symbol of the investment addiction can also be found in "China's Manhattan." Tianjin's Conch Bay, a 110-hectare district with a cluster of 40 high-rise buildings, was supposed to be the country's new financial capital as outlays surged over the past several years. But there were few signs of life. A number of buildings were still under construction; the streets were empty; and even completed buildings had no occupants. There are numerous examples of such projects throughout China that are underutilised.

On the other hand, consumption in China appears to be gathering steam, as exemplified by strong online shopping sales on the Nov. 11 Singles Day. But total retail sales of consumer goods increased just 8.8% in real terms in November 2017, which was much slower than the 12% growth in 2012.

Consumption patterns suggest that the masses are reluctant to spend, while the upper and middle classes are doing most of the buying. Sales of instant noodles, a staple for households with lower incomes, have declined for three years in a row. The Chinese beer market also has seen a three-year decline, yet demand for premium beer is robust. Therefore, although it may look like consumption is becoming a stronger driver of the economy, the wealthy are playing a disproportionate role.

Source: *Nikkei Asian Review*, 26 December 2017 and *National Public Radio*, 15 October 2015

**Extract 8: China slowdown is biting Singapore economy amid demographic crunch**

The economy of tiny Singapore is taking a big hit from the slowdown in China, an impact coming just as the city-state is struggling with a homegrown demographic squeeze.

Buying and selling goods is a crucial driver of growth for Singapore's economy: companies based on the island supply components that go into smartphones made in China and the shipping industry helps transport raw materials across the world. This makes Singapore particularly susceptible to the weakness in China's economy.

It's a slowdown immediately apparent in data released earlier this week. Singapore's non-oil domestic exports (NODX) contracted 7.2 percent on-year in December, accelerating the decline from November's 3.4 percent fall. Exports to China fell nearly 19 percent on-year in December.

The picture is complicated by the city-state's looming demographic crunch. By 2030, the number of people over the age of 65 in the city-state is expected to double, making up around 20 percent of the population. At the same time, fewer babies are being born. Singapore's fertility rate was only 1.2 births per woman in 2013, according to World Bank data. That's not just below the replacement rate of 2.1, it's below even famously aging Japan's rate of 1.4 and puts the city-state only fourth from last globally.

Singapore had hoped to resolve this problem of falling birth rates and aging by opening up its borders and allowing immigrants to come in. That surge outpaced the addition of new infrastructure and housing, leading to overcrowded public transportation systems and fast-rising housing prices. However, migrant numbers had slowed down in recent years due to local discontent.

Singaporeans are a practical and pragmatic people. As the population ages, many expect the immigration faucet to turn back on eventually to address economic and social needs such as caregiving.

Source: *CNBC*, 20 January 2016

**[Turn over**



## Questions

- (a) Using the information in Table 1 and Extract 5,
- (i) calculate and interpret the likely value of income elasticity of demand for Chinese outbound tourism in 2016. [2]
  - (ii) explain how the rise in Chinese outbound tourism might contribute to the value of the Renminbi against the USD from 2013 to 2016. [2]
- (b) Explain how an increasing preference for outbound tourism might change China's multiplier value. [2]
- (c) (i) Use an aggregate demand and aggregate supply diagram to explain why investments and government infrastructure projects have led to excess capacity in China described in Extract 7. [3]
- (ii) Explain why the change in the fiscal balance in Table 1 suggests China's government spending on infrastructure projects might not be optimal. [3]
- (d) Discuss whether the practice of a 'two-tier payment system' is, on balance, beneficial to the consumers, firms and recipient country. [8]
- (e) Assess whether the Singapore government should be more concerned with the impact of China's economic slowdown on the economy or the demographic challenges. [10]

[Total: 30]

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(a)	(i)	<b>State the relationship between the price of crude oil and the price of recycled plastics shown in Figure 1 and Figure 2.</b>	<b>[1]</b>
		<ul style="list-style-type: none"> <li>Positive or direct relationship</li> </ul>	
	(ii)	<b>With reference to Extract 1, explain how a fall in the price of crude oil might impact the price of recycled plastics.</b>	<b>[3]</b>
		<ul style="list-style-type: none"> <li>Oil is a key input in the manufacture of new plastics, so when the price of oil falls, the cost of production of new plastics falls. This raises the supply and lowers the price of new plastics (1m).</li> <li>From Extract 1, as recycled plastic is a substitute for new plastic, when the price of new plastic falls, producers of goods using plastics will switch from the buying recycled plastics to new plastics (1m)</li> <li>This causes the demand and hence the prices for recycled plastic to fall (1m)</li> </ul>	
(b)		<b>Explain what Waste Management CEO David Steiner meant when he said in Extract 1, "when prices are high we'll pay you to recycle. When prices are low we have to charge you."</b>	<b>[2]</b>
		<ul style="list-style-type: none"> <li>TR = revenue earned from selling recycled materials</li> <li>TC = cost of buying recyclable waste + cost of processing such waste</li> <li>High prices of recycled materials =&gt; TR exceeds the cost processing recyclable waste =&gt; waste management firms are willing to pay for recyclable waste. (1m)</li> <li>Low price of recycled materials =&gt; TR falls below processing costs =&gt; waste management firms need to charge for the collection of for recyclable waste to avoid making losses. (1m)</li> </ul>	
(c)		<b>Use the concept of opportunity cost to explain <u>two</u> reasons why many countries have increasingly turned to recycling instead of disposing their waste in landfills mentioned in extract 2.</b>	<b>[4]</b>
		<ul style="list-style-type: none"> <li>"Precious land" in Extract 3 suggests that land is limited so when a piece of land is used as a landfill, there is a high opportunity cost in terms of the next best alternative forgone, which could some residential, industrial or commercial development. As recycling of waste reduces the need for landfills, this frees up land for such alternative uses. (2m)</li> <li>Recycling also "replaces new materials in the manufacturing process" thus reducing the demand, extraction and hence depletion of such non-renewable natural resources, which also has high opportunity costs in in terms of other goods that could have otherwise been produced. (2m)</li> </ul> <p>Other possible answer:</p> <ul style="list-style-type: none"> <li>Recycling reduces environmental damage caused by landfills. As such, this free up government spending that was originally spent on reducing pollution to be used for next best alternative such as spending on healthcare.</li> </ul>	
(d)		<b>Explain why waste collection paid through a flat fee results in residents who "recycle and prevent waste subsidizing their neighbors' wastefulness".</b>	<b>[2]</b>

	<ul style="list-style-type: none"> <li>• With a fixed fee charged for all households, those who generate more waste could be paying less than the cost of disposing their waste while those who generate less waste could be paying more than the cost incurred from disposing their waste (1m)</li> <li>• As residents who recycle and prevent waste are likely to generate less waste while those who do not are likely to generate more waste, the profits earned by the recycling firm from the former are therefore used to subsidize the losses incurred from providing waste disposal services to the latter (1m)</li> </ul>	
(e)	<b>Assess the extent to which the promotion of recycling can help to achieve sustained and sustainable growth in the US.</b>	<b>[8]</b>
	<ul style="list-style-type: none"> <li>• Sustained growth refers to a positive and stable rate of growth that can be maintained over a prolonged period.</li> <li>• Sustainable growth refers to growth which is achieved without significantly creating other economic problems like the depletion of resources and environmental degradation that will reduce the welfare of future generations.</li> </ul> <p><u>Thesis: Recycling promotes sustained and sustainable growth in the US</u></p> <p>Sustained growth</p> <ul style="list-style-type: none"> <li>• Recycling sector generates investments and jobs in the recycling and remanufacturing sectors like the designing of long lasting and more repairable goods (extract 2)</li> <li>• Such investments in the recycling sector raises AS and also through the multiplier effect raise overall consumption, AD, output and growth throughout the economy, hence promoting sustained growth</li> </ul> <p>Sustainable growth</p> <ul style="list-style-type: none"> <li>• Recycling reduces the need for landfills, thus preventing environmental degradation through possible contamination of water sources through seepage (extract 2)</li> <li>• Recycling also reduces environmental degradation through air pollution because it prevents toxic chemicals and greenhouse gases from being released into the atmosphere due to the incineration of waste (extract 2).</li> <li>• Recycling reduces the depletion of natural resources as it lowers the demand and extraction of energy and raw materials like fossil fuels and trees/forests that are often non-renewable in nature (extract 2)</li> </ul> <p><u>Anti-thesis: Recycling harms sustained and/or sustainable growth in the US</u></p> <p>Sustained growth</p> <ul style="list-style-type: none"> <li>• Promoting recycling will result in reduced demand, output and employment for firms and workers belonging to the sectors involved in the extracting and processing of new natural resources</li> </ul> <p>Sustainable growth</p> <ul style="list-style-type: none"> <li>• Resource depletion - the recycling process still consumes energy (and other resources) as separate manufacturing plants need to be built and used (extract 3)</li> <li>• Environmental degradation - recycling sites are polluting as they have “heaps of trash that are grounds for bacteria, disease, and a laundry list of other unsafe conditions” and they are also industrial plants that generate their own forms of pollution (extract 3)</li> </ul>	

<u>Conclusion / Evaluation</u>	
<ul style="list-style-type: none"><li>• In terms of <u>sustained growth</u>, if the estimates of the generation of \$1 billion in revenue and hundreds of thousands of jobs as mentioned in extract 2 are accurate, the impact on sustained growth is likely to be <u>substantial</u></li><li>• As for <u>sustainable growth</u>, given that resource depletion and environmental degradation can be prevented when goods are reused rather merely being reduced when they are recycled, the impact of recycling is arguably <u>much more limited in comparison</u>.</li></ul>	
<b>Mark Scheme</b>	
L2: (4-6)	<ul style="list-style-type: none"><li>• Provides a balanced response (i.e. both thesis and anti-thesis)</li><li>• Covers sufficient scope i.e. considers the impact on both sustained and sustainable growth</li><li>• Applies case evidence to support answers</li><li>• Applies economic concepts or theories</li><li>• Demonstrates sufficient depth and rigour in the analysis</li></ul>
L1: (1-3)	<ul style="list-style-type: none"><li>• Lacking in any of the L2 criteria</li></ul>
E (+2)	<ul style="list-style-type: none"><li>• Evaluates the extent to which recycling promotes sustained <u>or</u> sustainable growth in the US</li></ul>
(f)	<b>Discuss whether it would be more effective for the government to subsidize recycling or implement PAYT to address waste pollution.</b>
	<p><u>How does subsidizing recycling work and what are its limitations?</u></p> <ul style="list-style-type: none"><li>• Waste pollution occurs because of air pollution arising incinerated waste and water pollution arising from landfills</li><li>• With more waste being recycled, less waste is incinerated and diverted to landfills hence recycling generates positive externalities as it reduces pollution associated with such activities</li><li>• Recycling thus benefits 3<sup>rd</sup> parties like the people staying near incineration plants and landfills as they will experience less pollution.</li><li>• In the market for recycling, positive externalities =&gt; SMB &gt; PMB by EMB resulting in underproduction, so subsidizing recycling thus lowers PMC to PMC' such that the private equilibrium coincides with the social equilibrium (illustrate with diagram)</li><li>• Limitations:<ul style="list-style-type: none"><li>○ When prices of recycled materials fall, recycling becomes less profitable and waste management firms may decide to collect or process less recyclable waste (extract 1), resulting in more waste being incinerated or diverted to landfills</li><li>○ Although subsidies will reduce the likelihood and extent, it does not prevent this from happening, so overall waste incineration and dumping may still increase despite such subsidies.</li></ul></li></ul> <p><u>How does PAYT work and what are its limitations?</u></p> <ul style="list-style-type: none"><li>• Whether waste is incinerated, dumped or recycled, pollution and resource depletion will occur so waste generates negative externalities</li><li>• With a flat fee being charged for waste collection and disposal, the marginal cost of disposing an additional unit of waste would be zero, thus firms and households have no incentive to generate less waste, hence resulting excessive waste generation</li><li>• By implementing PAYT, firms and households are charged based on the amount of waste thrown, which creates an incentive for them generate less waste</li></ul>

- Less waste can be generated by not only recycling more, but also reusing rather than disposing existing goods, buying goods which generate less waste (e.g. less packaging) or by switching to less wasteful production methods and lifestyles
- Limitations:
  - Even with PAYT, the cost of waste disposal may still constitute a small proportion of income for the average household, especially for a rich developed country like the USA, so the incentive for households to cut down on waste generation may be less than expected

**Conclusion:**

- Although both policies have their limitations, PAYT is likely to be overall more effective because it will always provide some incentive for firms and households to cut waste, which can occur through a variety of ways in addition to recycling.
- In contrast, subsidies only promote recycling and has no impact on other ways of reducing waste, so it can be totally ineffective when prices of recycled materials were to fall drastically

**Mark Scheme**

L2: (5-7)	<ul style="list-style-type: none"> <li>• Provides a balanced response that considers how subsidies and PAYT address waste pollution.</li> <li>• Limitations of policies are well considered.</li> <li>• Analyses with depth and rigour</li> <li>• Supports answers with case evidence</li> <li>• Applies economic concept and theories</li> </ul>
L1: (1-4)	• Lacking in any one of the L2 criteria
E: (+3)	• Evaluates which of the two policies is more effective and likely to be preferred solution to address waste pollution.

(a)	<b>Using the information in Table 1 and Extract 5,</b>		
	(i)	<b>calculate and interpret the likely value of income elasticity of demand for Chinese outbound tourism in 2016.</b>	<b>[2]</b>
		<p>Calculation</p> <ul style="list-style-type: none"> <li>Income elasticity of demand = % change in Qd / % change in Y  <math>= 6 / 6.7</math>  <math>= 0.90</math> [1]</li> </ul> <p>Interpretation</p> <ul style="list-style-type: none"> <li>Chinese outbound tourism is considered a necessity as it positive income inelastic.[1]</li> </ul>	
	(ii)	<b>explain how the rise in Chinese outbound tourism might contribute to the value of the Renminbi against the USD from 2013 to 2016.</b>	<b>[2]</b>
		<ul style="list-style-type: none"> <li>Renminbi (RMB) depreciated against the USD as seen in Table 1 [1].</li> <li>Rising outbound tourism means that Chinese tourists will exchange more RMB for foreign currencies like the USD to spend on their trips, thus raising the supply of the RMB in the FOREX market [1]</li> </ul> <p><i>(Although tourism expenditure is conceptually considered as spending on the service imports, there is no need for this to be explicitly mentioned for full credit to be awarded.)</i></p>	
	(b)	<b>Explain how an increasing preference for outbound tourism might change China's multiplier value.</b>	<b>[2]</b>
		<ul style="list-style-type: none"> <li>With rising preference for outbound tourism, Chinese households will spend a greater proportion of every additional RMB earned on foreign goods and services, which are withdrawals from the circular flow [1]</li> <li>This will raise China's marginal propensity to withdraw (MPW), hence lowering its multiplier value since <math>k = 1 / MPW</math> [1].</li> </ul> <p><i>(Answers which explain why MPM may rise or why MPC may fall are also acceptable. However, to get full credit, these terms must be explicitly mentioned. Answers which show a clear understanding of the multiplier process can still be awarded full credit even if there is no mention of any form of multiplier formula)</i></p>	
	(c) (i)	<b>Use an aggregate demand and aggregate supply diagram to explain why investments and government infrastructure projects have led to excess capacity in China described in Extract 7.</b>	<b>[3]</b>
		<ul style="list-style-type: none"> <li>Rising investments and government spending on infrastructure raises AD through its I and G components and also AS through greater capital accumulation [1]</li> <li>However, excessive and indiscriminate investments could have caused AS to rise faster than in AD thus causing excess capacity to arise (or causing the extent of excess capacity to increase) [1]</li> <li>Diagram showing AS shifting right more than AD resulting in a larger gap between actual and the full employment output levels [1]</li> </ul> <p><i>(Diagrams which do not <u>explicitly show</u> the change in the gap between actual and full employment output levels will not be credited)</i></p>	

(ii)	<b>Explain why the change in the fiscal balance in Table 1 suggests China's government spending on infrastructure projects might not be optimal.</b>	<b>[3]</b>
	<ul style="list-style-type: none"> <li>Table 1 showed the possibility of a rising fiscal deficit or decreasing fiscal surplus or [1], which suggests that government spending on infrastructure has been rising faster than tax revenues [1]</li> <li>Such spending is not optimal as it has failed generate enough economic growth to enable tax revenues to rise sufficiently to pay for such spending [1]</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Table 1 shows a rising fiscal deficit or decreasing fiscal surplus which could be due to rising government spending on infrastructure [1]</li> <li>However such spending was sub-optimal / excessive / wasteful because it resulted in many underutilized airports and buildings (extract 7) [1]</li> </ul> <p><i>(The use of the term 'worsening balance' is acceptable for 1st mark. The 2<sup>nd</sup> answer will not score full marks because it does not address tax revenues which is the other aspect of a fiscal balance besides government spending)</i></p>	
(d)	<b>Discuss whether the practice of a 'two-tier tourism payment system' is on balance, beneficial to the consumers, firms and recipient country.</b>	<b>[8]</b>
	<p>Introduction</p> <ul style="list-style-type: none"> <li>As tourism accounts for 10% of all jobs and output globally (extract 6), tourism is an undoubtedly an important industry for many countries</li> <li>The 'two-tier tourism payment system' is a form of price 3<sup>rd</sup> discrimination (PD), which occurs when different groups of consumers are charged different prices for the same product for reasons not associated with differences in costs.</li> <li>Given the importance of tourism on any economy, the impact of such PD on consumers, firms and the recipient country needs to be carefully analyzed</li> </ul> <p>Consumers</p> <ul style="list-style-type: none"> <li>The demand by tourists is likely to be less price elastic:             <ul style="list-style-type: none"> <li>They may be more well-off and hence the entrance fees of the attractions form a relatively small proportion of their income</li> <li>They may consider such attractions as 'must-sees' or necessities since they may not get chance to do so once they leave the country</li> </ul> </li> <li>On the other hand, the demand by locals is likely to be more price elastic because they may be poorer and they can always visit such attractions when they are free so there is a low degree of necessity</li> <li>Since locals are charge lower prices than tourists, local consumers will benefit while foreign consumers will suffer from such PD.</li> </ul> <p>Firms</p> <ul style="list-style-type: none"> <li>According to economic theory, PD enables firms to earn higher profits as compared to charging a single price for all consumers, hence firms should benefit from the 2 tier payment system</li> <li>However, if firms were to be too extreme in their PD e.g. those in Venice, this might result in complaints to regulatory bodies like the European Commission, which might then clamp down on such practices (extract 6) thus causing their profits to fall instead</li> </ul> <p>Recipient country (economy)</p> <ul style="list-style-type: none"> <li>As such PD enables firms to earn more revenue from tourists, this will boost AD which through the multiplier effect will generate higher output, income and employment throughout the economy</li> <li>However if the PD were to be too extreme, this may tarnish the reputation of</li> </ul>	

	<p>the recipient country, thus causing tourist arrivals and spending to fall in the long run, which will instead adversely affect output, income and employment</p> <p>Conclusion / Evaluation</p> <ul style="list-style-type: none"><li>• Unless the difference between local and tourist price is unreasonably large, my view is that a 2 tier payment system should overall be beneficial</li><li>• This is especially so if the extra revenue from PD is used to better maintain the heritage sites (extract 6) as this will enable tourism growth to be more sustainable, thus benefiting all consumers, firms as well as the recipient country in the long run.</li></ul> <p><b>Mark Scheme</b></p> <table><tr><td>L2: (4-6)</td><td><ul style="list-style-type: none"><li>• Analyses the impact on consumers, firms <u>and</u> the recipient country.</li><li>• Provides a balanced response with positive and adverse impacts*</li><li>• Applies the economic concepts of PD and PED**</li><li>• Elaborates with sufficient rigour and detail</li><li>• Supports answers with case evidences</li></ul></td></tr><tr><td>L1: (1-3)</td><td><ul style="list-style-type: none"><li>• Lacking in anyone of the L2 criterions</li></ul></td></tr><tr><td>E: (+2)</td><td><ul style="list-style-type: none"><li>• Takes a substantiated stand on whether the 2 tier payment system is individually / collectively beneficial for consumers, firms and the recipient country</li></ul></td></tr></table> <p>*For full L3 marks to be awarded, positive and adverse impacts need to be presented for each and all parties</p> <p>**Analysis without PED will be capped at 4m</p>	L2: (4-6)	<ul style="list-style-type: none"><li>• Analyses the impact on consumers, firms <u>and</u> the recipient country.</li><li>• Provides a balanced response with positive and adverse impacts*</li><li>• Applies the economic concepts of PD and PED**</li><li>• Elaborates with sufficient rigour and detail</li><li>• Supports answers with case evidences</li></ul>	L1: (1-3)	<ul style="list-style-type: none"><li>• Lacking in anyone of the L2 criterions</li></ul>	E: (+2)	<ul style="list-style-type: none"><li>• Takes a substantiated stand on whether the 2 tier payment system is individually / collectively beneficial for consumers, firms and the recipient country</li></ul>	
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L1: (1-3)	<ul style="list-style-type: none"><li>• Lacking in anyone of the L2 criterions</li></ul>							
E: (+2)	<ul style="list-style-type: none"><li>• Takes a substantiated stand on whether the 2 tier payment system is individually / collectively beneficial for consumers, firms and the recipient country</li></ul>							
(e)	<p><b>Assess whether the Singapore government should be more concerned with the impact of China’s economic slowdown on the economy or the demographic challenges.</b></p>	[10]						
	<p>How could China economic slowdown adversely affect the Singapore economy?</p> <ul style="list-style-type: none"><li>• Economic slowdown in China → ↓ income → ↓ M and ↓ outward FDI</li><li>• China is a major export market for Singapore =&gt; Singapore experiences large ↓ X &amp; ↓ I → ↓ AD → ↓ output and employment → ↑ unemployment</li><li>• ↓ X → ↓ (X-M) → ↓ BOT → ↓ BOP</li><li>• ↓ Inward FDI → worsening of capital and financial account → ↓ BOP</li></ul> <p>How could changing demographics adversely affect the Singapore economy?</p> <ul style="list-style-type: none"><li>• Aging population → ↓ C → ↓ AD → ↓ output and employment</li><li>• Aging population → shrinking labour force → ↓ quantity of labour → ↓ AS → ↑ GPL and ↓ output and employment</li><li>• Aging population → ↑ public spending on healthcare and ↓ taxes from income and consumption → strain on the government budget → ↓ public spending on other productive areas e.g. education → ↓ potential growth</li></ul> <p>(Note: Explanations can be in terms of either reduced output or slower growth)</p> <p>Conclusion / Evaluation</p>							



	<ul style="list-style-type: none"><li>• While China's economic slowdown would have had a large adverse impact on the Singapore economy in the short run, the long run impact is arguably limited as Singapore can always diversify into other export markets given time</li><li>• In contrast, while it is always possible for the Singapore to open its "immigration faucet" to mitigate the adverse effects of its aging population, such policies have proven to very unpopular in the past (extract 8) and is likely to face much social and political objections in the foreseeable future</li><li>• Hence Singapore government should arguably be more concerned about its demographic challenges rather than China's economic slowdown.</li></ul>	
<b>Mark Scheme</b>		
L2 (5-7)	<ul style="list-style-type: none"><li>• Analyses the impact on the Singapore economy of <u>both</u> China's economic slowdown <u>and</u> its own demographic challenges</li><li>• Applies relevant economic tools of analysis e.g. AD AS or PPC</li><li>• Elaborates with sufficient rigour and detail</li></ul>	
L1 (1-4)	<ul style="list-style-type: none"><li>• Lacking in anyone of the L2 criteria</li></ul>	
E (+3)	<ul style="list-style-type: none"><li>• Takes a substantiated stand on which problem is of a greater concern for the Singapore government</li></ul>	

[Total = 30 marks]



**HWA CHONG INSTITUTION**  
**JC2 Preliminary Examinations**  
**Higher 2**

**CANDIDATE NAME**

**CT GROUP**

**17**

**CENTRE NUMBER**

**INDEX NUMBER**

**ECONOMICS**  
Paper 2 ESSAY

**9757/02**  
**13 September 2018**  
**2 hours 15 minutes**

Additional Materials: Answer Paper

**READ THESE INSTRUCTIONS FIRST**

Write your **name, CT group, Centre and Index numbers** clearly on every sheet of answer paper that you hand in.

Write in dark blue or black pen on both sides of the answer 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 and tape.

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.

**Start each question on a fresh sheet of writing paper.**

At the end of the examination, fasten your answers to each essay question **separately** with the strings provided.

If you only attempted 2 essays, please submit a blank piece of writing paper (nil return) for the 3<sup>rd</sup> essay, indicating your full name, CT group, centre number, index number **and the question number of the essay question you would have attempted** if time had permitted. If you only attempted 1 essay, please submit 2 of such nil returns.

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

You are advised to spend several minutes reading through the questions before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of **3** printed pages and a **blank** page.

**[Turn over**

Answer **three** questions in total.

### Section A

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

- 1 The world has spent an estimated \$2 trillion on dams in recent decades. Many nations built dams to control floods, improve irrigation, alleviate water shortages and generate low-carbon hydroelectricity. But recent studies have shown that mostly people living upstream are benefiting from the capture of river flows at the expense of those downstream. Dams also cause decay to the surrounding areas leading to large emissions of greenhouse gases such as methane that contributes more to global warming than carbon dioxide.
  - (a) Use the concepts of public goods and imperfect information to explain why price mechanism fails to allocate resources efficiently in the provision of dams. [10]
  - (b) Assess the determinants that a rational decision-making government should consider in allocating resources to build a new dam. [15]
  
- 2 In 2014, Malaysia ended its decades-old petrol and diesel subsidies and price caps in an attempt to save billions of dollars to reduce its fiscal deficit. However in 2017, motorists welcomed the government's statement that should the retail prices of petrol and diesel exceed RM2.50 per litre continuously for three months, such measures would be reintroduced.
  - (a) Explain the impact of a subsidy and a maximum price on consumer surplus and producer surplus. [10]
  - (b) In view of rising fuel prices, discuss whether the Malaysian government should reintroduce petrol and diesel subsidies or price caps to keep fuel prices in check. [15]
  
- 3 International trade is a driving force behind economic growth. According to the World Trade Organization (WTO), there are around 420 regional trade agreements in force around the world in 2016 in which barriers to trade and foreign direct investment are lowered.
  - (a) Explain the cost savings for firms and industries that might arise when their countries are in regional trade agreements. [10]
  - (b) Discuss the likely impact of regional trade agreements on the profitability and efficiency of firms. [15]

## Section B

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

- 4** In April 2016, despite 18th consecutive months of negative inflation arising from lower oil and car prices and a soft property market, the Singapore government did not show any intention of intervening to boost prices. On the other hand, Japan embarked on another round of extensive monetary expansion as the familiar 25 year-old threat of deflation resurfaced after a brief period of consumer price growth.

**(a)** Explain the possible causes of deflation. [10]

**(b)** Discuss the different approaches used by the two governments. [15]

- 5** In 2016, the Singapore government raised the personal income tax rate for the top income earners of a chargeable annual income of over S\$320,000 from 20 percent to 22 percent. At the same time, those who earned a chargeable annual income of S\$28,000 and below automatically received a higher amount of Goods and Services Tax (GST) cash voucher. Besides, the government expected a deficit of S\$5.6 billion (1.4% of GDP) and thus Fiscal Year 2016 was an expansionary budget.

Assess the importance of automatic fiscal stabilisers in determining whether [25]  
discretionary fiscal policy should be used to reduce business cycle fluctuations and achieve inclusive growth in Singapore.

- 6** In recent years, the refugee crisis is slowly undoing decades of economic integration by generating a new wave of protectionism that is believed to have shocked the global economy.

Discuss the likely impact of protectionism on the economic growth, inflation and standard [25]  
of living of an economy.

1. **The world has spent an estimated \$2 trillion on dams in recent decades. Many nations built dams to control floods, improve irrigation, alleviate water shortages and generate low-carbon hydroelectricity. But recent studies have shown that mostly people living upstream are benefiting from the capture of river flows at the expense of those downstream. Dams also cause decay to the surrounding areas leading to large emissions of greenhouse gases such as methane that contributes more to global warming than carbon dioxide.**
- (a) **Use the concepts of public goods and imperfect information to explain why the price mechanism fails to allocate resources efficiently in the provision of dams. [10]**

Why may dams be considered as public goods?

- Non-excludable: Once a dam is built and operated, you cannot prevent people who stay near the dam from enjoying flood control even if they have not paid for its construction or operation
- Non-rival: The extent of the flood control does not diminish even if more firms or households move into the area surrounding the dam

How does the existence of public goods lead to market failure?

- Non-excludable: As people who stay near the dam can enjoy flood control without paying, most will be unwilling to pay as they can always free ride on others who do. It is thus not profitable for a firm to build and operate the dam as it will be unable to earn enough revenue to cover its cost. The dam will therefore not be provided in the free market, which means that there is total market failure.
- Non-rival: As the marginal cost of allowing an additional person to consume flood control is zero, the socially efficient price should be zero so that as many people as possible can enjoy the flood control. However, as a profit maximizing dam operator will definitely charge a positive price so that it can make profits, the free market outcome will never be socially efficient.

Why are the forms of imperfect information that may exist in the provision of dams?

- Merit goods: the community staying near the dam may underestimate the extent of the benefits (e.g. improvement in irrigation, alleviation of water shortages and cheaper and less polluting electricity) that they may arise from the provision of the dam
- Demerit goods: the community staying near the dam may underestimate the extent of the cost arising from environmental damage (e.g. emission of greenhouse gases arising from the decay in the surrounding regions) due to the construction and operation of the dam

How does such forms of imperfect information lead to market failure?

- In a free market, it is possible for a private firm to finance the building and operation of a dam if the revenue that it expects to earn from selling electricity and water exceeds the expected costs of building, operating and maintaining the dam.
- However, for the dam to be built, the firm would probably need to gain the support and approval of the government, which in turn depends on the support and approval of the people staying near the dam as they will be directly affected by its construction and existence.
- So if the people staying near the dam underestimate the private benefits, then the dam might not be built even when it should.
- Conversely if the people staying near the dam underestimate the private costs, then the dam might be built when it should not have been.

(To score L3, the analysis of public goods and EITHER merit OR demerit goods will be sufficient)

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>Explains why dams could be public goods AND how imperfect information may exist in the provision of dams</li> <li>Explains how public goods AND such forms of imperfection information lead to market failure</li> <li>Explanations are rigorous and detailed</li> <li>Illustrates understanding using examples from the preamble OR other plausible examples related to the provision of dams</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>Largely irrelevant response</li> <li>Descriptive response which lack application of economic concepts or theory</li> <li>Serious and pervasive conceptual errors</li> </ul>	1-4

**(b) Assess the determinants that a rational decision-making government should consider in allocating resources to build a new dam. [15]**

What is rational decision making from the perspective of the government?

- A rational decision is one where the expected benefits of the decision outweighs the expected costs
- In general, the main economic aim of a government is to maximize society's welfare and for that to occur, the expected social benefits and costs needs to be considered
- Social benefits and costs include both the private as well as external benefits and costs

What determinants should a rational government consider in deciding to build a new dam?

- Private benefits
  - This refers to the benefits enjoyed by economic agents that are directly derived from the operation of the dam
  - For example, the dam may result in improved irrigation thus benefitting the farmers in the surrounding region
  - Such costs can be estimated based on the expected increase in agricultural output and subsequently the expected increase in farmers' incomes
- External benefits
  - This refers to benefits enjoyed by 3<sup>rd</sup> parties i.e. people who indirectly benefit from the construction or operation of the dam
  - For example, when electricity is generated by the dam, the demand and hence production of electricity from other more polluting carbon sources is lowered, thus reducing global warming so that everyone else in the country benefits from less extreme weather conditions
  - Such costs can be estimated based on the expected power generation capacity of the dam, the carbon intensity of the alternative power generation methods, the reduction in carbon emissions, the reduced probability of adverse weather conditions and the expected damage caused by such adverse weather conditions
- Private costs
  - This refers to costs involved in the construction, operation and maintenance of the dam
  - Construction costs can be estimated by having construction firms to bid for the project while operation and maintenance costs can be estimated by looking at such costs that have been incurred by existing dams

- External costs
  - External costs refer to cost suffered by 3<sup>rd</sup> parties i.e. people who are indirectly harmed from the construction or operation of the dam
  - For example, damming the river upstream may cause fishermen living downstream to suffer from lower water levels, reduced catch of fishes and hence lowered incomes
  - Estimates of such costs can be obtained by studying similar effects in other countries to calculate the reduction in the fish caught and hence the fall in fishermen income.

How important are these determinants in the context of dam provision?

- The easiest cost to estimate is arguably private costs as the cost of building, running and maintenance have already been incurred by many other existing local or foreign dam projects
- While the potential benefits enjoyed by farmers from improved irrigation and potential costs borne by fishermen from reduced catch can be highly variable depending on how and how much water is redirected, the effects are nevertheless specific and thus a range of estimates can be accurately calculated if high quality studies are commissioned
- The most difficult and thus most important determinant is the external costs incurred as the extent to which the reduction in carbon emissions affects the probability and severity of adverse weather conditions and the resulting damage done in a particular country are largely unpredictable as the global weather system is probably still too complex for scientist to predict with much accuracy

(Besides classifying the determinants as private and external costs and benefits and assessing these determinants based on the availability of information, other forms of classification and criteria for assessment can also be accepted if they are relevant, logical and systematic. Examples of such other determinants include the government's budget constraints and the opportunity costs in terms of alternative government projects that are forgone to finance the building of the dam)

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Explains the meaning of a rational decision from a government's perspective</li> <li>• Identifies and explains relevant determinants that a government should consider in its decision to intervene in the provision of a dam</li> <li>• Explains using economic concepts or theory</li> <li>• Explains with rigor and detail</li> <li>• Illustrates understanding using examples from the preamble <u>or</u> other plausible examples related to the provision of dams</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4
E3	<ul style="list-style-type: none"> <li>• Evaluates the relative importance of most of the determinants</li> <li>• Substantiates with relevant and convincing arguments</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>• Evaluates the relative importance of one or two determinants</li> <li>• Substantiates with arguments that are not entirely relevant nor convincing</li> </ul>	2-3
E1	<ul style="list-style-type: none"> <li>• Evaluative comments that are not substantiated, poorly substantiated or are not directly relevant to the requirements of the question</li> </ul>	1



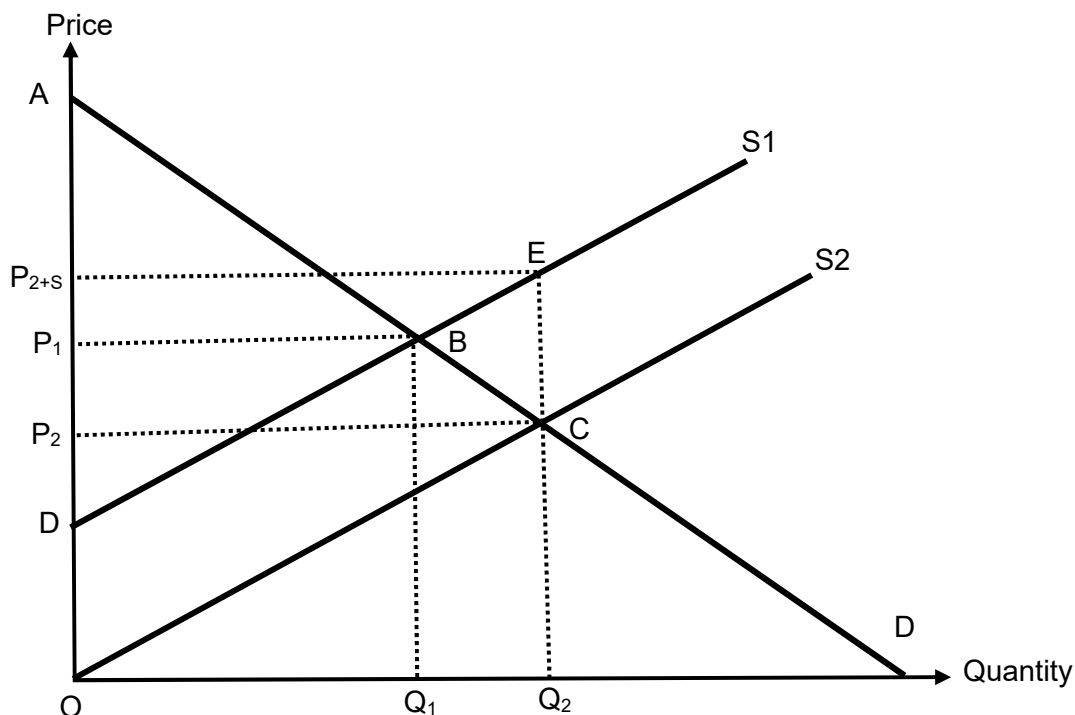
2. In 2014, Malaysia ended its decades-old petrol and diesel subsidies and price caps in an attempt to save billions of dollars and reduce its fiscal deficit. However in 2017, motorists welcomed the government's statement that should the retail prices of petrol and diesel exceed RM2.50 per litre continuously for three months, such measures would be reintroduced.

(a) Explain the impact of a subsidy and a maximum price on consumer surplus and producer surplus. [10]

What is the meant by subsidies, maximum price, consumer surplus and producer surplus?

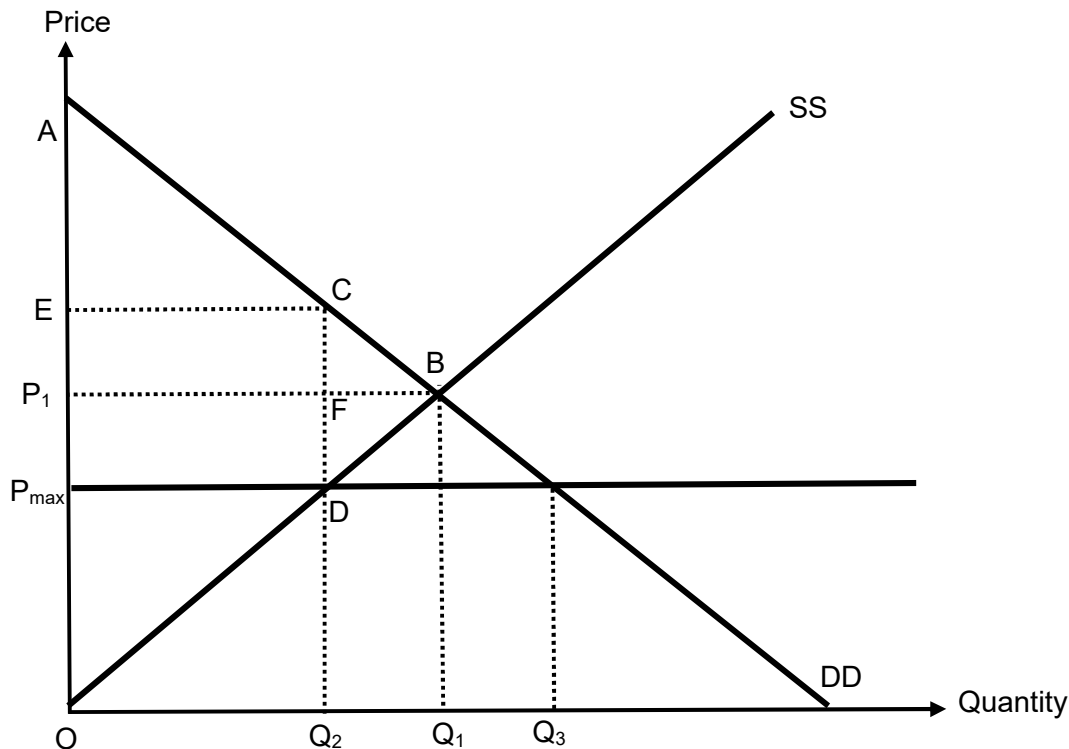
- A per unit subsidy refers to a fixed amount of funding that is provided by the government to firms for each unit of output produced or sold
- An effective maximum price (or price ceiling) is a legally established price that is set below the free market equilibrium price where producers are prohibited from selling above this stipulated price.
- Consumer surplus (CS) refers to the welfare enjoyed by consumers from buying and consuming a good, which can be measured by the area below the market demand curve and above the price line
- Producer surplus (CS) refers to the welfare enjoyed by producers from producing and/or selling a good, which can be measured by the area above the market supply curve and below the price line

How does a subsidy affect consumer surplus & producer surplus?



- A per unit subsidy of  $P_{2+S}P_2$  (or  $EC$ ) shifts the supply downwards from  $S1$  to  $S2$  causing the equilibrium market quantity to rise from  $Q_1$  to  $Q_2$  and the equilibrium market price to fall from  $P_1$  to  $P_2$
- Before the subsidy, CS is equal to area  $ABP_1$  while after subsidy, CS is equal to area  $ACP_2$ , thus the increase in the CS is equal to area  $P_1BCP_2$
- Before the subsidy, PS is equal to area  $P_1BD$  while after subsidy, PS is equal to area  $P_2CO$  which is equivalent to area  $P_{2+S}ED$ , thus the increase in the PS is equal to area  $P_{2+S}EBP_1$
- A subsidy definitely increase both the CS and PS.

How does a maximum price affect consumer surplus & producer surplus?



- Before the implementation of a maximum price, the free market equilibrium price and quantity is  $P_1$  and  $Q_1$  respectively
- With an effective price ceiling being set at  $P_{\max}$ , the quantity supplied falls to  $Q_2$  while the quantity demanded rises to  $Q_3$ , resulting in a shortage of  $Q_2Q_3$
- As the quantity exchanged is limited by the quantity supplied, the amount transacted will be  $Q_2$
- Before the price ceiling, CS is equal to area  $ABP_1$  while after the price ceiling and assuming no black market, CS is equal to area  $ACDP_{\max}$ , thus the change in the CS is equal to area  $(P_1FDP_{\max} - CBF)$ . Thus the change in CS is indeterminate. Based on the above diagram, there is an increase in the CS.
- Before the price ceiling, PS is equal to area  $P_1BO$  while after the price ceiling, PS is equal to area  $P_{\max}DO$ , thus the decrease in the PS is equal to area  $P_1BDP_{\max}$

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Covers BOTH subsidy AND price ceiling</li> <li>• Analyses the impact on BOTH consumer surplus AND producer surplus</li> <li>• Explains with relevant diagrams</li> <li>• Analyses with detail and rigour</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4

**(b) In view of rising fuel prices, discuss whether the Malaysian government should reintroduce petrol and diesel subsidies or a price caps to keep fuel prices in check. [15]**

Introduction

- Rising fuel prices raises the cost of transportation for motorists in Malaysia, thus reducing the real income and hence material living standards of Malaysian households
- Subsidies and price ceiling are alternative policies which can be used to lower fuel prices to counter the effects of such cost-push inflation
- To assess the suitability of the mentioned policies, the concepts of (1) efficiency (2) equity and (3) budgetary as well as political considerations will be used as criterions

Efficiency

- In the absence of market failure, government intervention in a free market will be distortionary and thus result in deadweight (welfare) losses
- In the case of a subsidy, such welfare losses arise from over production and consumption while the welfare losses due to a price ceiling arises from under production and consumption
- For the same amount of price reduction, the main determinant affecting the size of the welfare loss is the price elasticities of demand (PED), where a reduction in the PED value will reduce the welfare losses of a subsidy but raise the welfare losses of a price ceiling (illustrate with diagram)
- Given that Malaysia does not have a well-developed public transport system, the demand for private transport and hence the demand for motor fuels is likely to be highly price inelastic, hence the welfare losses arising from a fuel subsidy is likely to be lower than that of a price cap
- Furthermore, as a price ceiling leads to shortages, resources are required to prevent potential black markets, so the cost of such resources which are used for non-productive activities needs to be factored in as welfare losses when price caps are used

Equity

- As shown in part (a), a subsidy benefits both consumers producers while a price ceiling benefits consumers at the expense of producers
- Given that fuel retailers tend to be large oligopolistic firms like Shell and Petronas, whose shareholders tend to be more well off than the average motorist, a price cap should overall redistribute welfare from the rich to the poor resulting a more equitable outcome
- Similarly, as the PED of motor fuels is likely to be highly inelastic, motorists should also overall benefit much more from the subsidy than petrol companies, so a fuel subsidy is likely to also be equitable as well.

Budgetary and political considerations

- Given that the subsidy requires explicit funding whereas a price cap appears to be cost free, the former should put a greater strain on the Malaysian government's budget than the latter
- However, given that the PED of such fuels is likely to be very low, only a small subsidy quantum is required to achieve a large price reduction, so the total subsidy spending may not be that much
- Furthermore, as the government may need to hire resources to prevent a potential black market, there could be substantial hidden cost associated with the implementation of a price ceiling
- As for political considerations, a subsidy will be definitely more popular than a price cap as both consumers and producers benefit from a subsidy as compared to a price cap where only consumers benefit while producers suffer
- Furthermore, shortages will cause consumers to be frustrated as they need to waste time queuing for petrol, so a price cap will likely be highly unpopular in the long run

## Conclusion / evaluation

- As the PED of fuel is likely to be very low in Malaysia, a subsidy will likely be more efficient than a price cap, both policies are likely to be comparatively equitable and the total government spending required for a subsidy may not be that substantial
- Also, given that a subsidy is also likely to be politically much more popular than a price cap, it seems obvious that the former will likely be the policy of choice for the Malaysian government
- However, given that motor fuels are only sold by a few large oil companies in Malaysia, the monitoring and enforcement cost of anti-black market measures are likely to be quite low
- As these policies were initially removed due to fiscal budgetary constraints, I would argue that the Malaysian government would more likely reintroduce price caps than subsidies, despite the latter being overall less distortionary and more popular

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Analyses the outcomes of BOTH subsidy AND price ceiling</li> <li>• Provides a balance response that argues for and/or against each policy</li> <li>• Analyses the policies using economic concepts or theory</li> <li>• Analyses with detail and rigour</li> <li>• Illustrates with context specific examples</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4
E3	<ul style="list-style-type: none"> <li>• Takes a stand on which policy should be implemented by substantiating with convincing arguments that compare most of the points covered</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>• Takes a stand on which policy should be implemented by evaluating one or two criteria without comparing the relative importance of most of the points covered</li> </ul>	2-3
E1	<ul style="list-style-type: none"> <li>• Evaluative comments that are not substantiated, poorly substantiated or are not directly relevant to the requirements of the question</li> </ul>	1

**3. International trade is a driving force behind economic growth. According to the World Trade Organization (WTO), there are around 420 regional trade agreements in force around the world in 2016 in which barriers to trade and foreign direct investment are lowered.**

**(a) Explain the cost savings for firms and industries that might arise when their countries are in regional trade agreements. [10]**

**Introduction**

- Regional trade agreements (RTAs) allow firms and industries in a country to gain tariff free access to the markets of the RTA partner countries
- This raises their exports and hence output, thus enabling them to expand their scale of production to reap internal and external economies of scale (EOS) respectively

**Internal Economies of Scale**

- When a firm expand its production scale, it is able to enjoy both technical and non-technical EOS
- Technical economies may arise due to factor indivisibilities e.g. some types of capital goods (e.g. an assembly line) are large and costly, so a greater scale allows the fixed cost of purchasing such equipment to be spread over a greater output
- Non-technical economies may arise due to marketing economies, where an increase output enables a chocolate manufacturer to purchase inputs like cocoa beans at a lower cost per unit because it is able to obtain higher bulk discounts from cocoa suppliers

**External Economies of Scale**

- When an industry expand its output, the firms in that industry may enjoy cost savings in the form of external economies of scale, even if the firm itself does not increase in its size
- For example, when a technologically intensive industry such as pharmaceuticals expands, it becomes profitable for supporting firms that focus on specific types of research (e.g. animal testing) to be set up to supply their services to main pharmaceutical firms
- As such supporting firms supply their services to many firms, they will reap internal economies of scale, which then lowers the cost of producing such research as compared to each pharmaceutical firms operating its own animal testing facility (economies of disintegration)
- It also prevents wasteful duplication as there is now only one research lab shared by many firms as compared to each firm setting up its own lab, thus saving resources for the entire sector

**Cost savings due to other reasons**

- RTAs allow a firm / industry (e.g. car manufacturer / manufacturing) to gain access to cheaper raw materials (e.g. steel) as well as intermediate inputs (e.g. batteries) as they can now be imported tariff free from the RTA partner countries
- Finally RTAs often involve to the removal of barriers to foreign direct investments (FDI), which enables firms and industries to gain access superior foreign technology and production processes, thus leading to higher productivity and hence lower marginal cost.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Analyses how cost savings may arise from internal EOS, external EOS AND at least one other possible reason</li> <li>• Explains using economic concepts and theory</li> <li>• Explains with detail and rigour</li> <li>• Illustrates with relevant examples</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4

**(b) Discuss the likely impact of regional trade agreements on the profitability and efficiency of firms. [15]**

How may RTAs raise the profitability of firms?

- Cost savings mentioned in part (a) → ↓ MC & ↓ AC → ↑ profits
- Access to larger market → ↑ AR & ↑ MR → ↑ profits
- Illustrate above scenarios with price setting firm diagram

How may RTAs lower the profitability of firms?

- ↑ Competition from foreign firms → ↓ AR and ↓ MR and the curves become flatter (more price elastic) → ↓ profits
- ↑ Foreign competition for resources → ↑ price of resources → ↑ MC & ↑ AC → ↓ profits.
- Illustrate above scenarios with price setter diagram

How may RTAs improve the efficiency of firms?

- ↑ Foreign competition
  - ↑ Availability of substitutes → ↓ DD & ↑ PED → ↑ allocative efficiency (AE)
  - ↓ Profits → ↓ organisational slack → ↓ X-inefficiency → ↑ productive efficiency (PE)
- ↑ Foreign funding for R&D → ↑ dynamic efficiency (DE)

How may RTAs worsen the efficiency of firms?

- Domestic firms wiped out by foreign competition → ↑ DD & ↓ PED of foreign monopoly → ↓ AE
- ↑ Foreign competition → ↓ output/scale of domestic firms → ↓ internal EOS → leftwards movement away from MES (min LRAC) → ↓ PE
- ↑ Foreign competition → ↓ profits for domestic firms → ↓ R&D → ↓ DE.

What is the likely overall impact on profitability and efficiency (evaluation)?

- Much of the outcome on profits and efficiency depends on the ability of local firms to effectively compete with foreign firms when the domestic market is open to greater foreign competition
- As countries generally specialize according to their comparative advantage, firms of a country will more likely benefit from RTAs if the RTA partner countries are at different stages of development or have different resource endowments as they are less likely to be producing competing goods
- In such a situation, the profits and efficiency gains arising from lower costs and larger market size is likely to outweigh the harm done by increased foreign competition
- Hence, I would argue in conclusion that RTAs are more likely raise the profitability and efficiency of firms if RTAs consists of countries that have significantly different economic structures

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Analyses the impact of RTAs on BOTH profitability AND efficiency</li> <li>• Provides a balance response that argues for AND against each criterion</li> <li>• Analyses the impact using economic concepts or theory</li> <li>• Explains with detail and rigour and using relevant diagrams</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criterions</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4
E3	<ul style="list-style-type: none"> <li>• Takes a stand on the overall impact on BOTH profitability AND efficiency</li> <li>• Substantiates stand with convincing arguments that compares most of the points covered</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>• Takes a stand on the overall impact on EITHER profitability OR efficiency</li> <li>• Substantiates stand by evaluating one or two points without comparing the relative importance of most of the mentioned points</li> </ul>	2-3
E1	<ul style="list-style-type: none"> <li>• Evaluative comments that are not substantiated, poorly substantiated or are not directly relevant to the requirements of the question</li> </ul>	1

4. In April 2016, despite 18th consecutive months of negative inflation arising from lower oil and car prices and a soft property market, the Singapore government did not show any intention of intervening to boost prices. On the other hand, Japan embarked on another round of extensive monetary expansion as the familiar 25 year-old threat of deflation resurfaced after a brief period of consumer price growth.

(a) Explain the possible causes of deflation. [10]

- Introduction
  - Deflation is defined as a sustained decrease in the general price level.
  - The aggregate demand (AD) and aggregate supply (AS) model will be used to explain how deflation occurs.

Decrease in AD	Increase in SRAS / LRAS
<ul style="list-style-type: none"> <li>• AD ↓ due to a ↓ in any of the 4 AD components               <ul style="list-style-type: none"> <li>○ ↓Consumption - ↓confidence, ↑ interest rates, ↑ income tax</li> <li>○ ↓Investment – ↓confidence, ↑interest rates, ↑corporate tax</li> <li>○ ↓Government expenditure - austerity measures</li> <li>○ ↓Net exports – recession in export markets, appreciation of currency</li> </ul> </li> <li>• Explain with diagram showing how ↓AD → ↓GPL</li> </ul>	<ul style="list-style-type: none"> <li>• SRAS ↑ due to ↓unit cost of production e.g.               <ul style="list-style-type: none"> <li>○ ↓Prices of imported FOPs like oil</li> <li>○ ↑Labour productivity &gt; ↑wages.</li> </ul> </li> <li>• ↑ Quantity or quality of FOP → ↑LRAS → if AD unchanged → ↓GPL e.g.               <ul style="list-style-type: none"> <li>○ Finding new deposits of natural resources like crude oil</li> <li>○ Excessive investment in productive capacity in previous time periods</li> </ul> </li> <li>• Explain with diagram showing how ↑SRAS and ↑LRAS → ↓GPL</li> </ul>

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Covers BOTH demand AND supply factors</li> <li>• Explains using economic concepts or theory</li> <li>• Explains with detail and rigour</li> <li>• Illustrates with relevant examples AND diagrams</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4

(b) Discuss the different approaches used by the two governments. [15]

Introduction

- Governments are tasked with steering their respective economies to achieve various macroeconomic goals, of which one is price stability.
- As deflation results in price instability, governments should intervene if this problem is serious.
- This essay will analyse the reasons that the Singapore and Japanese governments would likely have considered in deciding on their respective approaches in dealing with the types deflation that they had experienced.



## Japan

- Why was there a need for intervention?
  - In the Japanese case, the decision to use expansionary monetary policy implies that deflation was caused by fall in AD.
  - Such deflation was harmful because the fall in GPL was accompanied by negative growth
  - The preamble further states that deflation had been a threat for 25 years, which would likely have resulted in a deflationary spiral where consumers withheld consumption as they expected prices to fall further
  - Such self-reinforcing deflationary pressures would have caused continued declines in AD, thus leading to prolonged contractionary pressures.
- How does Japan's policy approach work?
  - This fear of a renewed deflationary spiral prompted the Japanese government to react aggressively, thus embarking on a new round of "extensive" monetary expansion.
  - This typically involves the lowering interest rates with the aim of incentivising borrowing by households and firms for consumption and investments
  - Lower interest rates also lead to hot money outflows which causes the Yen to depreciate
  - Assuming that demand for exports and imports are both price elastic, a depreciation of the Yen will cause Japan's net exports to rise
  - Rising consumption investment and net exports will then boost AD
  - If the economy is operating near or at full employment, general price levels will rise in tandem, thus countering deflation.
- What are the limitations of such an approach?
  - If current interest rates are already very low, e.g. less than 1%, there's limited room for interest rates to be cut further
  - With the prolonged threat of deflation mentioned in the preamble, consumer and investor confidence in Japan is likely to be weak, so the demand for consumption and investment are likely to be highly interest inelastic

## Singapore

- Why did the Singapore government not intervene?
  - From the preamble, the deflation experiences by Singapore was partly due to falling oil prices
  - As Singapore imported crude oil from overseas, falling oil prices would translate to a decrease in energy and transportation costs and thus shifting the SRAS downwards
  - Such deflation was benign because actual growth would rise even though GPL had fallen, so there was arguably no need for the Singapore government to intervene.
  - Singapore's deflationary pressures also stemmed from falling property and car prices
  - This could have caused headline inflation to be negative but core inflation to remain positive
  - Property and car prices in Singapore are volatile due to proactive government policies to manage property bubbles and vehicle population (and therefore traffic congestion)
  - As only a small fraction of the population would be buying cars or property at any given point in time, the impact of changes in property and car prices would have minimal impact on the real purchasing power of most Singaporean residents
  - Hence core inflation would have been a better measure of the deflationary pressures that were actually being experienced by most Singapore firms and households
  - Unless core inflation was also negative, negative headline inflation was not good enough a reason to warrant any government intervention

- Why could be some concerns regarding Singapore's lack of intervention?
  - Property and cars are likely to be highly income elastic as such goods tend to be seen as luxury goods given the acute scarcity of land in Singapore.
  - Hence falling property and car prices could be useful indicators of a weakening in the economic outlook of households
  - A lack of intervention could mean that the Singapore government might have failed to accurately interpret current and future economic expectations and thus missed the opportunity to counter a potential economic downturn

#### Conclusion (evaluation)

- Given the weak economic outlook in Japan, monetary expansion is unlikely to be effective in countering deflation due to high interest insensitivity
- Expansionary fiscal policy would probably be better as it would have at least guaranteed a first round of injection in terms of public spending
- However, given the high public debt levels of the Japan, running even larger fiscal deficits might result in serious debt related problems in the future
- Hence monetary expansion is in my opinion the only feasible option at this juncture
- As falling oil prices were beneficial to the Singapore economy while falling car and property prices were unlikely to have much impact on price expectations, the Singapore government's position of non-intervention was arguably warranted
- Although car and property prices could have be useful bell-weather for future economic performance, there are other economic indicators such as consumer and business perception surveys which are more targeted and hence more accurate
- Unless such indicators also suggested that the Singapore was heading for a potential downturn, my view is that the current non-interventionist approach was in general economically justifiable

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>• Analyses the approaches of BOTH Japan AND Singapore</li> <li>• Provides a balance response that analyses the rationales, mechanics AND limitations of such approaches</li> <li>• Analyses the approaches using economic concepts or theory</li> <li>• Explains with detail and rigour</li> <li>• Illustrates with relevant diagrams and examples</li> </ul>	8-10
L2	<ul style="list-style-type: none"> <li>• Lacking in any one of the L3 criteria</li> </ul>	5-7
L1	<ul style="list-style-type: none"> <li>• Largely irrelevant response</li> <li>• Descriptive response which lack application of economic concepts or theory</li> <li>• Serious and pervasive conceptual errors</li> </ul>	1-4
E3	<ul style="list-style-type: none"> <li>• Takes a stand on the suitability of the approaches employed by BOTH Japan AND Singapore</li> <li>• Substantiates stand with relevant and convincing arguments that compares most of the points covered</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>• Takes a stand on the suitability of the approaches employed by EITHER Japan OR Singapore</li> <li>• Substantiates stand by evaluating one or two points without comparing the relative importance of most of the mentioned points</li> </ul>	2-3
E1	<ul style="list-style-type: none"> <li>• Evaluative comments that are not substantiated, poorly substantiated or are not directly relevant to the requirements of the question</li> </ul>	1

- 5. In 2016, the Singapore government raised the personal income tax rate for the top income earners of a chargeable annual income of over S\$320,000 from 20 percent to 22 percent. At the same time, those who earned a chargeable annual income of S\$28,000 and below automatically received a higher amount of Goods and Services Tax (GST) cash voucher. Besides, the government expected a deficit of S\$5.6 billion (1.4% of GDP) and thus Fiscal Year 2016 was an expansionary budget.**

**Assess the importance of automatic fiscal stabilisers in determining whether discretionary fiscal policy should be used to reduce business cycle fluctuations and achieve inclusive growth in Singapore. (25m)**

How do automatic fiscal stabilizers reduce business cycle fluctuations and achieve inclusive growth?

- During a recession, household income falls, which pushes them into lower tax brackets, thus causing them to pay proportionately less taxes
- This who become unemployed will probably not pay any income tax but will instead receive welfare payouts in terms of unemployment benefits.
- Such reduction in withdrawals and increases in injections have expansionary effects on the economy, which reduces the severity of the economic downturn.
- When the economy is booming, households' incomes rise thus pushing them up into higher tax brackets which causes them to pay proportionately more taxes
- The formerly unemployed have now found jobs and will stop receiving unemployment benefits
- Such hikes in withdrawals and declines in injections will instead have a contractionary effect on the economy, which helps to bring down inflationary pressures
- Automatic stabilizers work because of the progressive nature of income taxes and welfare benefits, which are fiscal structures that are primarily used to reduce income inequality by redistributing income from the rich the poor, i.e. to promote inclusive growth
- By raising the progressiveness of such fiscal structures, the impact on promoting inclusive growth and reducing business cycle fluctuations will be enhanced

How can discretionary fiscal policy be used to reduce business cycle fluctuations and achieve inclusive growth?

- During a recession, raising government spending and cutting direct taxes like personal income taxes and corporate taxes will stimulate consumption and investment respectively
- Through the multiplier effect, these initial injections into the economy will result in subsequent rounds of induced consumption, causing AD and output to rise even further
- When there is demand-pull inflation, government spending can be intentionally curtailed and direct taxes intentionally raised to curb consumption and investment
- Through the multiplier effect, these initial withdrawals will result in subsequent rounds of reduction in induced consumption, causing AD and output to fall even further
- To promote inclusive growth, discretionary fiscal policies can be used in a way that also aims to achieve more equitable outcomes
- For example, when combating a recession, the government can choose to provide more transfers to and collect less taxes from lower income households
- When fighting demand pull inflation, the government can raise income tax rates only for the higher income tax brackets and reduce spending that tend to benefit the rich more

How strong and progressive are Singapore's automatic stabilizers?

- As economies with very progressive taxation regimes and generous welfare payments have stronger stabilizing effects, the need for discretionary policies to achieve macroeconomic stability is therefore reduced
- In the case of Singapore, the government does not provide any unemployment benefits and personal income tax rates are low and much less progressive as compared to many other developed countries
- This means that the stabilizing and redistributive effect of Singapore's fiscal structure is quite weak so there is a greater need for discretionary fiscal policy to be used to reduce macroeconomic fluctuations and promote inclusive growth

Why does the Singapore government then not rely on discretionary fiscal policy to reduce business cycle fluctuations and achieve inclusive growth?

- The Singapore government does not use discretionary fiscal policy to reduce macroeconomic stability because it has a very small injection multiplier
- The small multiplier is due to high marginal propensities to import and save as Singapore lacks natural resources and has a system of enforced (CPF) savings that are used for the financing retirement and housing
- Instead of fiscal policy, Singapore relies on short run supply-side policies like wage subsidies to help minimize unemployment during an economic downturn and revalues its currency to combat both demand-pull and more importantly imported cost-push inflation
- As for inclusive growth, instead of giving large handouts to the poor, the Singapore focuses on training and upskilling to enable low wage workers to raise their productivity and upgrade to higher value-added and hence better paying jobs

How important are automatic stabilizers in determining the use of discretionary fiscal policy in Singapore to reduce business cycle fluctuations and achieve inclusive growth?

- Although her automatic stabilizers are weak, Singapore does not rely on discretionary fiscal policy largely because of its small multiplier value
- Hence automatic stabilizers are in my opinion, an insignificant factor in determining Singapore's choice of macroeconomic stabilization policies
- As for inclusive growth, the main reason for relying on supply-side policies rather than discretionary redistributive fiscal measures is that the former will likely to have a longer lasting impact on raising the welfare of the poor than the mere giving of handouts
- Thus, automatic stabilizers are also arguably unimportant in determining Singapore's choice of policies to achieve inclusive growth

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>Addresses BOTH aims of reducing business cycle fluctuations AND achieving inclusive growth</li> <li>Analyses how automatic stabilisers AND discretionary fiscal policy can be used to achieve such aims</li> <li>Analyses other possible reasons for Singapore's choices of policies used to achieved such aims</li> <li>Explains using economic theory or concepts</li> <li>Explains with detail and rigour</li> <li>Illustrates with relevant diagrams and examples</li> </ul>	16-20
L2	<ul style="list-style-type: none"> <li>Lacking in any one of the L3 criteria</li> </ul>	10-14
L1	<ul style="list-style-type: none"> <li>Largely irrelevant response</li> <li>Descriptive response which lack application of economic concepts or theory</li> <li>Serious and pervasive conceptual errors</li> </ul>	1-8
E3	<ul style="list-style-type: none"> <li>Evaluates the importance of automatic fiscal stabilisers by comparing it with other plausible reasons for Singapore's policy choices</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>Evaluates the importance of automatic fiscal stabilisers without comparing with other plausible reasons for Singapore's policy choices</li> </ul>	2-3
E1	<ul style="list-style-type: none"> <li>Evaluative comments that are not substantiated, poorly substantiated or are not directly relevant to the requirements of the question</li> </ul>	1

**6. In recent years, the refugee crisis is slowly undoing decades of economic integration by generating a new wave of protectionism that is believed to have shocked the global economy.**

**Discuss the likely impact of protectionism on the economic growth, inflation and standard of living of an economy.[25]**

Positive impact on the economy	Adverse impact on the economy
<p>Perpetrator country</p> <ul style="list-style-type: none"> <li>• <math>\downarrow M \rightarrow \uparrow (X-M) \rightarrow \uparrow AD \rightarrow \uparrow \text{growth \&amp; } \downarrow \text{unemployment} \rightarrow \uparrow \text{material SOL}</math></li> <li>• Protect sunrise industries <math>\rightarrow</math> gain CA over time <math>\rightarrow \uparrow X</math> of higher value-added goods <math>\rightarrow \uparrow \text{terms of trade} \rightarrow \uparrow \text{material SOL}</math></li> <li>• Protect sunset industries <math>\rightarrow</math> prevent structural unemployment <math>\rightarrow</math> prevent material SOL from <math>\downarrow g</math></li> <li>• <math>\downarrow \text{Unemployment} \rightarrow</math> less stress for the unemployed <math>\rightarrow \uparrow \text{non-material SOL}</math></li> </ul>	<p>Perpetrator country</p> <ul style="list-style-type: none"> <li>• <math>\downarrow</math> Access to cheaper or better imported capital goods <math>\rightarrow \downarrow</math> quantity or quality of K <math>\rightarrow \downarrow \text{LR growth} \rightarrow</math> slower <math>\uparrow</math> in material SOL</li> <li>• Tariffs on imported inputs <math>\rightarrow \uparrow \text{costs of production} \rightarrow \downarrow \text{SRAS} \rightarrow \uparrow \text{inflation, } \downarrow \text{growth \&amp; } \uparrow \text{unemployment} \rightarrow \downarrow \text{material SOL.}</math></li> <li>• <math>\downarrow M \rightarrow \uparrow (X-M) \rightarrow \uparrow AD \rightarrow \uparrow \text{DD pull-inflation} \rightarrow \rightarrow \downarrow \text{material SOL}</math></li> <li>• <math>\downarrow \text{Intra industry trade} \rightarrow \downarrow \text{product variety} \rightarrow \downarrow \text{material SOL}</math></li> <li>• Tariff diagram: <math>\downarrow \text{consumer surplus and overall welfare losses} \rightarrow \downarrow \text{material SOL.}</math></li> <li>•</li> </ul>
<p>Victim country</p> <ul style="list-style-type: none"> <li>• <math>\downarrow X \rightarrow \downarrow AD \rightarrow \downarrow \text{DD-pull inflation} \rightarrow</math> slower <math>\downarrow</math> in material SOL</li> <li>• <math>\downarrow \text{Inflation} \rightarrow</math> less stress for all households especially the poorer ones who find it harder to cope with inflation <math>\rightarrow</math> slower <math>\downarrow</math> in non-material SOL</li> <li>• <math>\downarrow X</math> for countries that export goods which cause pollution when produced <math>\rightarrow \downarrow \text{externalities} \rightarrow \uparrow \text{non-material SOL}</math></li> </ul>	<p>Victim country</p> <ul style="list-style-type: none"> <li>• <math>\downarrow X \rightarrow \downarrow AD \rightarrow \downarrow \text{growth \&amp; } \uparrow \text{unemployment} \rightarrow \downarrow \text{material SOL}</math></li> </ul>
<p>All countries</p> <ul style="list-style-type: none"> <li>• <math>\downarrow \text{Economic outlook} \rightarrow \downarrow I \rightarrow \downarrow \text{capital accumulation} \rightarrow</math> adverse effect on LRAS <math>\rightarrow \downarrow \text{potential growth} \rightarrow</math> slower <math>\uparrow</math> in material SOL.</li> <li>• Retaliation <math>\rightarrow \downarrow X</math> and AD for all countries involved in the trade war <math>\rightarrow \downarrow \text{material SOL}</math></li> <li>• <math>\downarrow \text{Specialisation according to CA} \rightarrow \downarrow \text{consumption possibilities} \rightarrow \downarrow \text{material SOL.}</math></li> </ul>	
<p>Evaluation:</p> <ul style="list-style-type: none"> <li>• In my opinion perpetrator countries are more likely to benefit if their protection is targeted at specific sectors with the aim gaining CA or preventing structural unemployment as compared to indiscriminate tariffs on all imports</li> <li>• Other the other hand, victim countries are more likely benefit if their economies are overheating but more likely to suffer if they are already facing an economic downturn</li> <li>• However, given that protectionism hampers specialisation according to CA which reduces overall efficiency in global resource allocation and also tends to lead to mutually destructive trade wars, I would argue that the overall impact is more likely to be adverse than beneficial in the long run.</li> </ul>	

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> <li>Analyses the impact on growth, inflation AND living standards</li> <li>Analyses impact on BOTH material AND non-material living standards</li> <li>Provides a balance response that cover BOTH positive AND adverse impacts</li> <li>Explains using economic concepts or theory</li> <li>Explains with detail and rigour</li> </ul>	16-20
L2	<ul style="list-style-type: none"> <li>Lacking in any one of the L3 criteria</li> </ul>	10-14
L1	<ul style="list-style-type: none"> <li>Largely irrelevant response</li> <li>Descriptive response which lack application of economic concepts or theory</li> <li>Serious and pervasive conceptual errors</li> </ul>	1-8
E3	<ul style="list-style-type: none"> <li>Takes a stand on the overall impact of protectionism on an economy</li> <li>Substantiates with relevant and convincing arguments that compares most of the points covered</li> </ul>	4-5
E2	<ul style="list-style-type: none"> <li>Takes individual stands on impact on growth, inflation OR living standards</li> <li>Substantiates by evaluating one or two points without comparing the relative importance of most of the points covered</li> </ul>	2-3
E1	<ul style="list-style-type: none"> <li>Evaluative comments that are not substantiated, poorly substantiated or are not directly relevant to the requirements of the question</li> </ul>	1