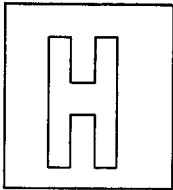


Candidate Name: \_\_\_\_\_

Class Adm No

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## 2022 End-of-Year Exams Pre-university 2

**H1 ECONOMICS****8823/01**

Paper 1

**14 September 2022**

Additional Materials: Answer Booklet

**3 hours**

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**READ THESE INSTRUCTIONS FIRST**

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

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

Answer **all** questions.

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

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This question paper consists of **9** printed pages and **1** blank page.

**[Turn over**

Answer all questions.

### Question 1: Tobacco Endgame

**Table 1: Tobacco production and consumption data for USA and China (in 1,000 tons)**

Year	USA		China	
	1970	2020	1970	2020
Production	825.5	242.6	797.1	2242.8
Consumption	565.3	273.2	556.8	2520.7

Source: Statista 2022, IHME 2021

#### Extract 1: Tobacco - A Global Catastrophe

Smoking was very much a 20th century problem. It was rare at the beginning of that century, but then – decade after decade – it became steadily more common. By the 1960s it was extremely widespread: on average, American adults were buying more than 10 cigarettes every day. The turning point in the history of smoking came in 1964 with the Report of the US Surgeon General that identified smoking as the major cause of the rise in lung cancer deaths.

Smoking is so common, and feels so familiar, that it can be hard to grasp just how large the impact is. The number of smokers worldwide has increased to 1.2 billion in 2020. Every year, around 8 million people die prematurely because of smoking. This means that about one in seven deaths worldwide are due to smoking. Millions more live-in poor health because of it.

The impact of smoking is devastating on the individual level. The life expectancy of those who smoke regularly is about 10 years lower than that of non-smokers. It's also devastating on the aggregate level. In the past 30 years more than 200 million have died from smoking. Looking into the future, epidemiologists Prabhat Jha and Richard Peto estimate that "if current smoking patterns persist, tobacco will kill about 1 billion people this century." An even more sinister fact is that about 1.2 million non-smokers die every year from passive secondhand smoke!

Of particular concern are the persistently high rates of smoking among young people, with over half of countries worldwide showing no progress in reducing smoking among 15 to 24-year-olds. 89% of new smokers become addicted by age 25. Protecting young people from nicotine addiction during this critical window will be crucial to eliminate tobacco use among the next generation. Yet tobacco products remain affordable, especially in developing countries, due to low tax rates on these goods.

Source: ourworldindata.org, accessed in July 2022

#### Extract 2: The World Responds With Taxes And Other Plans

The first international public health treaty, the WHO Framework Convention on Tobacco Control (WHO FCTC), entered into force and became international binding law in 2005. Of all the FCTC interventions, tobacco taxation is a highly cost-effective measure, particularly when combined with a progressive approach to redistributing revenue from taxation to tobacco control programmes, health care, and other social support services. Decreasing affordability is particularly effective in reducing smoking rates among young people. However, taxation or sin taxes are not necessarily the most effective tobacco control policy.

Cigarette taxes could be set high enough to crush the tobacco industry, but no governments will go that far. They rely on this revenue for budget deficit reduction and for things other than curbing smoking. The tobacco industry remains the foremost obstacle to tobacco control. The USA, the UK, China, Japan, Korea, Switzerland, and Sweden, among other countries, host

powerful tobacco companies. Any hope for ending the tobacco pandemic lies in the commitment of every health professional to make smoking prevention, smoking cessation, and relapse prevention a top priority.

An even bolder plan to create a tobacco-free generation was originally proposed by Singapore. Under this plan known as a tobacco endgame strategy, targets will be set by countries to get rid of tobacco by a certain year. This is generally defined as a smoking prevalence of 5 percent or less.

*Source: healthdata.org, accessed in Aug 2022*

### **Extract 3: Two countries act on the problem**

#### **Bhutan**

In 2004, Bhutan became the first and only nation in the world to ban the sale of tobacco and to outlaw smoking in all public places. In June 2010, the country implemented one of the world's strictest anti-tobacco legislations by forbidding the consumption, sale or smuggling of tobacco into Bhutan. Those found guilty of an offence face a prison term of three to five years with no chance of being granted bail. Sadly, this policy did not end well for Bhutan. Many citizens have been charged and imprisoned for infringing the law.

In 2019, smuggling of tobacco remained prevalent and a survey showed that 25 percent of adults and 22.2 percent of youth aged between 13 and 15 years were active smokers. The covid-19 pandemic worsened the situation and recognizing this the Bhutanese government repealed the ban on the sale, distribution, and importation of tobacco for commercial purposes in 2021. Only the ban on the domestic production and manufacture of tobacco products remains.

#### **Singapore**

Singapore's tobacco regulations are among the strictest in the world. Most of the WHO FCTC recommendations have been implemented successfully less the one that was proposed by Singapore itself – to create a tobacco-free generation. Smoking prevalence in Singapore is about 10 percent just 5 percent shy of the tobacco endgame target. The strong anti-tobacco climate and strict measures suggests that Singapore is the perfect candidate for a tobacco endgame.

Besides phasing out smoking as the population ages, a tobacco-free generation policy would send a powerful message that smoking is not acceptable at any age. This is different from the current minimum legal age laws, which imply that smoking is an acceptable rite of passage into adulthood.

Senior Minister of State for health, Koh Poon Koon said in parliament in January 2022 that Singapore is open to the idea of cohort smoking ban like New Zealand's that was announced in December 2021. However, he noted youths in Singapore are generally not taking up smoking and the rising popularity of e-cigarettes is a bigger challenge. Enforcement may also be a challenge if older smokers supply tobacco products to affected cohorts. Also reaching a 5 percent smoking prevalence target would take a few decades. Though it is an effective long-term measure, it needs to be complemented with other measures to reduce smoking in the short-term.

A researcher from the Saw Swee Hock School of Public Health, Yvette van der Eijk, commented on yet another option Singapore could follow – cap the nicotine in cigarettes to a very low level. If the level is capped around 0.4mg/gram compared to the current 10 to 15mg/gram, well-documented studies show that addictions among smokers improve, they smoke less and develop only mild withdrawal symptoms.

This policy would also benefit youth because even if they picked up smoking, they would not get addicted to it and fewer would continue smoking into adulthood. Studies estimate that this policy would reduce smoking prevalence to less than 5 percent within just a few years.

*Source: Channelnewsasia.com, Aug 2022, codeblue.galencentre.org, May 2022*

**Table 2: Annual tobacco tax revenues in Singapore, selected years, in million dollars**

Year	2018	2019	2020	2021
Tax revenue	\$1156.4	\$1195.1	\$1364.1	\$1370.3

*Source: Singapore Customs, Aug 2022*

#### **Extract 4: Smoking booths don't work**

Smoking booths, also known by a variety of names such as public smoking shelters, public smoking stands, smoking lounges, cigar rooms are a common feature at airports, railway stations and many other public places around the world. The primary purpose of these shelters is to reduce ambient nicotine vapour levels in the adjacent non-smoking areas by filtering out the nicotine as well as other compounds that are considered dangerous to human health. An average booth that can accommodate 20 persons costs about \$80,000 to construct and another \$30,000 a year in maintenance costs. While private shelters exist in airline lounges and are exclusive to paying members, the vast majority are available to the smoking public for free.

A study conducted in 2017 in several airports in the US and in Europe suggests that these shelters are ineffective in controlling leakage into the adjacent non-smoking areas. The study recommended upgrading these shelters to include newer filtration technology at a much higher installation and maintenance costs. In the US, there is disagreement as to who should foot the bill. While the FAA recommends that more airports should be smoke free, the tobacco industry lobbyists argue that these booths are public amenities and should be accessible to all who want to use them.

*Source: tobaccocontrol.bmj.com, accessed in Aug 2022*

**Questions:**

- (a) Compare the trend in tobacco consumption in the USA and China from 1970 to 2020. [2]
- (b) (i) Explain what determines the size of the increase in the price of tobacco following a tax increase. [4]
- (ii) Using your own knowledge, comment on whether an increase in tobacco tax is the only reason that explains the trend in annual tobacco tax revenue as seen in Table 2. [6]
- (c) Explain how public goods lead to market failure and comment briefly whether a smoking booth can be considered a public good. [6]
- (d) (i) Define and explain the opportunity cost incurred in the allocation of resources to smoking booths. [3]
- (ii) With reference to Extract 1 and using a PPC diagram, explain how the prevalence of smoking may impact growth in an economy. [4]
- (e) Explain the reasons for government intervention in the market for tobacco. [8]
- (f) Using evidence from the case study, discuss the view that Bhutan's total ban is the best policy tool to achieve an efficient allocation of resources in the tobacco market. [12]

**[Total: 45 marks]**

**Question 2: Policy Tightropes in Singapore and United Kingdom****Table 3: Selected Economic Indicators of United Kingdom, 2019-2022**

	2019	2020	2021	2022
GDP, in current prices (in billion £ )	2255.3	2150.4	2317.1	2520.3
Unemployment Rate (%)	3.8	4.5	4.6	4.2
Inflation Rate (CPI) (%)	1.8	0.9	2.6	7.4
Bank of England Base Interest Rate (%)	0.75	0.1	0.1	1.0

*Source: IMF, April 2022*

**Extract 5: The 'Temporary' Shocks of War**

The Ukraine war is already into its eleventh week and no one can say for sure how long more it may drag on. Both Russia and Ukraine are major exporters of many commodities and are the world's largest exporters of wheat and sunflower oil respectively. Russian oil has also been the target of Economic sanctions and boycotts.

On the other side of the world, zero-COVID lockdowns in China have amplified the global prices of goods and services. In April, China's manufacturing output fell to its lowest level in more than two years. This has created further stress for global supply chains.

Meanwhile, firms will find alternatives to get around supply bottlenecks. However, Singapore is unable to fully insulate itself from the continued global supply chain disruptions and the ongoing Russia-Ukraine war. Rising prices will affect all Singaporeans, particularly the lower to middle-income, who spend a large part of their budget on essential items like food and utilities.

*Source: ChannelNewsAsia, 18 May 2022*

**Extract 6: Fighting inflation is more than having higher wages offset cost of living increases**

**SINGAPORE:** Singapore's core inflation continues ticking upwards. Official data released on Jul 25 showed a 4.4 per cent year-on-year increase in June, the highest since November 2008 amid the global financial crisis.

Although the Monetary Authority of Singapore (MAS) has projected it to ease after peaking in the third quarter, core inflation is expected to remain high at around 3.5 per cent to 4 per cent towards the end of the year.

**IS A WAGE-PRICE SPIRAL LIKELY?**

Faced with a higher cost of living, will workers demand larger pay raises? Some are worried a wage-price spiral could be in the making. However, there are reasons to believe a wage-price spiral may not take root here.

MAS managing director Ravi Menon pointed out in July that automatic wage indexation is not common in Singapore, and that the pass-through from prices to wages has been historically weak. This is in contrast to countries like Belgium and Luxembourg where salaries are automatically adjusted according to inflation, a practice that may be difficult to sustain as prices soar.

### **NAVIGATING POLICY TIGHTROPES**

All these point to several policy tightropes which the Government has to navigate in the ensuing months.

The first is how quickly and forcefully to tighten monetary policy. The MAS recently announced its fourth policy tightening move since October 2021. The Singapore dollar has appreciated, even hitting record levels, against major currencies including the yen, the euro and the British pound.

The appreciation in the Singapore dollar against most major trading partners has helped to stem imported inflation and eased price pressures. The impact of increasing international prices will be absorbed by the appreciating Singapore dollar, instead of being transmitted into local prices. So for many households, this will help absorb some of the rising prices.

But a stronger Singapore dollar also means our exports will be relatively more expensive. This may make it harder for businesses to stay competitive in the global market. However, Singapore's exports are generally in high value-added products and services where demand is less sensitive to price, and therefore, exchange rate changes. Further, a stronger exchange rate helps reduce the import costs faced by our export industries.

Given the hard realities of containing inflation, the question becomes one of helping citizens and households tide over this storm. Fortunately, Singapore has the means to provide relief in the form of an S\$1.5 billion support package announced in June.

Help will remain targeted to the lower-income and more vulnerable, as a broad fiscal stimulus risks further stoking inflation. Deputy Prime Minister and Finance Minister Lawrence Wong has indicated that relief packages cannot be sustained indefinitely if inflation remains elevated into next year and beyond.

### **IT'S ABOUT HOW AND WHAT WE SPEND ON**

Governments must drive inclusive and sustainable growth in response to the uncertainty and deep structural challenges that are faced today. To respond to these challenges, Mr Wong noted that it is "not just about the amount of spending, but how and what we spend on".

This means repurposing fiscal policy and the role of the state towards building longer-term capacity and public goods, which can include infrastructure such as healthcare and education.

It also requires fostering a refreshed common agenda between the public and private sectors beyond specific projects, in areas such as research and development (R&D) and lifelong learning, he added.

### **STRUCTURAL SOLUTIONS TO INCREASE PRODUCTIVITY**

The pace of labour market adjustments also has to be considered in the light of immediate cost pressures. A key initiative is the Progressive Wage Model, which aims to raise the pay of lower-wage workers across various sectors and occupations, in tandem with skills upgrading

and increased productivity. This will help to shape a more inclusive society where all workers are valued and paid fairly for their contributions.

Another set of policy moves is intended to calibrate the inflow of foreign workers. These include raising the minimum salary requirements for Employment and S-Pass holders, raising S-Pass levies and tightening the dependency ratio ceilings in the construction and process sectors.

These initiatives, while critical for a sustainable and resilient workforce, contribute to higher wage and business costs. However, the impact of higher labour costs could be mitigated by redoubling efforts at raising automation and productivity, and through upskilling and reskilling workers, while facilitating the entry of foreign workers to plug critical gaps in the workforce.

Finding the right policy balance will be necessary to steer the economy through the inflationary tempest while keeping our sights trained on the goal of a competitive, future-oriented, inclusive and sustainable Singapore.

*Source: ChannelNewsAsia, 5 August 2020*

### **Extract 7: Inflation pushes UK government interest payment costs to fresh record**

Soaring inflation pushed interest payments on UK debt to a record high in June, putting the government's budget deficit on course to reach more than £100bn this year, almost double its pre-pandemic level.

A quarter of the UK's £2.5tn government debt is index-linked, making the cost of servicing it vulnerable to rising inflation.

In a blow to Conservative leadership candidate Liz Truss's plans for expensive tax cuts, the Office for National Statistics said public sector net borrowing increased to £22.9bn, £4.1bn more than in June last year.

However, Philip Shaw, chief UK economist at Investec suggested for the tax cuts to proceed, explaining that the possibility of a resulting economic upturn could reduce government welfare spending and increase tax receipts, helping to correct the fiscal deficit.

Nevertheless, former chancellor Rishi Sunak argued against these tax cuts, explaining that they risk fuelling inflation. Instead, he suggested for tax increases to fight the deficit.

In response to the data, the current chancellor, Nadhim Zahawi, said he recognised there were risks to the public finances, including from high inflation.

*Source: The Guardian, 21 July 2022*



**Questions:**

- (a) (i) Define Inflation. [1]
- (ii) It is said that unemployment and inflation have an inverse relationship. Explain this relationship and describe if Table 3 reflects this. [4]
- (b) With reference to Table 3, explain why the Bank of England might have raised its interest rates between 2021 and 2022. Provide one possible limitation of this approach. [6]
- (c) Using three most appropriate indicators from Table 3, what can you conclude about living standards in the UK between 2019 and 2020? Comment briefly on the effectiveness of these indicators as a measure of living standards. [6]
- (d) Using AD/AS analysis, explain how current global events have resulted in a rise in consumer prices. [5]
- (e) Extract 6 expresses that "Some are worried that a wage-price spiral could be in the making." Explain how inflation might cause a wage-price spiral. [4]
- (f) Extract 7 suggests that by "allowing tax cuts to proceed", it could result in an "economic upturn". Explain how a fiscal policy tax cut could help achieve economic growth. [7]
- (g) With reference to Extract 6, discuss whether exchange rate policy alone is appropriate to achieve inclusive economic growth in Singapore. [12]

**[Total: 45marks]**

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## Questions:

(a)	<b>Compare the trend in tobacco consumption in the USA and China from 1970 to 2020.</b>	<b>[2]</b>
	<ul style="list-style-type: none"> <li>• US shows a decreasing trend while China is experiencing an increasing trend during the period [1]</li> <li>• US consumption in 2020 is less than half of what it was in 1970 while Chinese consumption has increased about four and a half times. [1]</li> </ul>	
(b)	(i) <b>Explain what determines the size of the increase in the price of tobacco following a tax increase.</b>	<b>[4]</b>
	<ul style="list-style-type: none"> <li>• Following a tax increase, the cost of production of tobacco rises, therefore supply will decrease and shift to the left [1]</li> <li>• Size of the increase in price will depend on the PED of tobacco</li> <li>• PED of tobacco is likely to be price inelastic, <math>&lt;1</math>, as it is addictive [1]</li> <li>• Consumers are not as sensitive to price changes [1]</li> <li>• Since quantity demanded will decrease by a smaller proportion compared to the price increase, firms will pass on more of the price increase to consumers [1]</li> <li>• Therefore, the size of price increase is likely to be large</li> </ul>	
	(ii) <b>Using your own knowledge, comment on whether an increase in tobacco tax is the only reason that explains the trend in annual tobacco tax revenue as seen in Table 2.</b>	<b>[6]</b>
	<ul style="list-style-type: none"> <li>• According to Table 2, tobacco tax revenues in 2021 has increased by about 18% compared to 2018 [1]</li> <li>• Since demand for tobacco is price inelastic, price increases will lead to a less than proportionate decrease in quantity demanded [1]</li> <li>• As a result, tax revenues will rise [1]</li> <li>• However, there may be other factors that cause the tax revenue to rise</li> <li>• For instance, a rise in income. Assuming, tobacco to be a normal good, higher income may lead to a rise in demand [1]</li> <li>• At the same price, the quantity consumed is now much higher [1]</li> <li>• Since tax revenue is quantity <math>\times</math> tax, the tax revenue goes up [1]</li> </ul> <p>Accept other relevant reasons such as changes to taste and preferences for tobacco and related products.</p>	
(c)	<b>Explain how public goods lead to market failure and comment briefly whether a smoking booth can be considered a public good.</b>	<b>[6]</b>
	<ul style="list-style-type: none"> <li>• Explain the 2 characteristics of public goods and their consequences</li> <li>• Public goods are characterized by non-excludability in consumption. This implies that consumers cannot be prevented from consuming the good once it has been provided, allowing non-payers to have access to the good. This gives rise to the free rider problem and since effective demand is absent, the good will not be produced by the market. Hence a missing market. [2]</li> <li>• Public goods also exhibit the characteristic of non-rivalry in consumption. This means that additional consumers do not reduce the amount left for other people. Thus, the net benefits of providing this good is very large, while</li> </ul>	

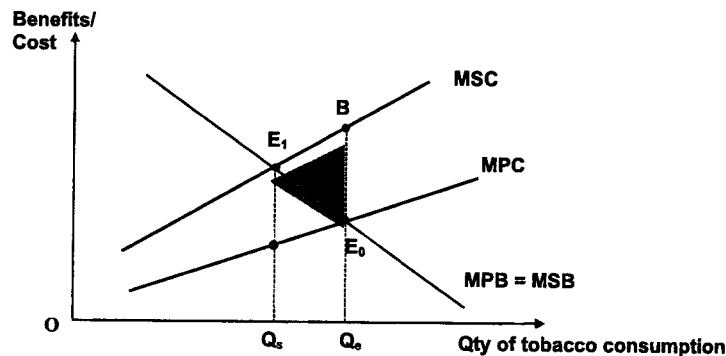
		<p>the marginal cost of providing the additional consumer is zero. Therefore, if the good is not produced the forgone net benefits are large. [2]</p> <ul style="list-style-type: none"> <li>Given the above criteria, smoking booths are not considered a public good. Instead, they exhibit the characteristics of a private good in that they are excludable and rivalrous in consumption. Owners of the smoking booth can prevent non-payers from using it and each booth is limited by its user capacity. [2]</li> <li>Therefore, smoking booths are not public goods.</li> </ul>	
(d)	(i)	<b>Define and explain the opportunity cost incurred in the allocation of resources to smoking booths.</b>	[3]
		<ul style="list-style-type: none"> <li>Opportunity cost is the value of the next best alternative forgone because of a decision made. [1]</li> <li>When resources are allocated to smoking booths, these resources are not available to produce other goods, for example education. [1]</li> <li>Therefore, there is a trade-off in that society must forgo education in favour of smoking booths. [1]</li> </ul>	
	(ii)	<b>With reference to Extract 1 and using a PPC diagram, explain how the prevalence of smoking may impact growth in an economy.</b>	[4]
		<ul style="list-style-type: none"> <li>Extract 1, suggest that millions of people 'live in poor health' because of smoking. Affected people are likely to fall ill and are unable to work efficiently. This suggests, underemployment in an economy resulting in the production point moving inwards from point A to x, and hence, loss of actual growth.</li> <li>Extract 1, also suggests that because of smoking countries are faced with millions of deaths. This translates into loss of labour (resource), implying a loss in productive capacity. This will result in an inward shift of the PPC of an economy (PPC<sub>1</sub> to PPC<sub>2</sub>) and hence, the loss of potential economic growth.</li> <li>Correctly labelled diagram.</li> </ul> <div style="text-align: center;"> </div> <ul style="list-style-type: none"> <li>3 marks for the explanation and 1 mark for diagram.</li> </ul>	
(e)		<b>Explain the reasons for government intervention in the market for tobacco.</b>	[8]

### Identifying and explaining that tobacco is a demerit good

- Tobacco is a demerit good in most countries, such as Singapore and Bhutan, since it is deemed by the government to be socially undesirable and tends to be overconsumed.
- This has to do with the fact that the consumption of tobacco generates significant **negative externalities**. There could also be **imperfect information**, which leads to the overconsumption of it. Hence, market failure.
- Thus, negative externalities and imperfect information are the reason for government intervention in the market for tobacco.

### Explaining why the presence of negative externalities leads to market failure and welfare loss, thus justifying government intervention

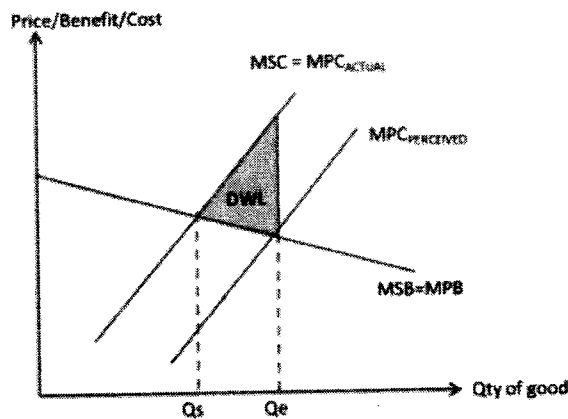
- Negative externalities arise when the consumption of tobacco affects the well-being of a third party negatively and the affected party does not receive any compensation for the effect.
- When consuming tobacco, consumers only consider their MPB and MPC. The private benefit is the satisfaction of smoking while the private costs are the price of the tobacco and related products and the medical costs incurred from consuming tobacco.
- To maximize their own satisfaction, they will choose to consume at  $Q_e$  where their  $MPC = MPB$ .
- However, these consumers do not consider the MEC imposed on third parties.
- Extract 1 suggest that passive secondhand smoke is a killer of 1.2 million people while extract 4 suggests that nicotine vapour is dangerous to human health. Third party affected by these will suffer medical problems such as breathing difficulties and even lung cancer. These are external costs arising from the use of tobacco.
- Since MEC is positive, this implies that there is a divergence between MSC and MPC; and  $MSC > MPC$  as  $MSC = MPC + MEC$ . This is illustrated below.
- We assume that there is no externalities in the benefit curve and therefore,  $MPB = MSB$ .
- The market will only consider private benefits and costs, and therefore will produce at  $MPB = MPC$  ( $E_0$ ) due to its self-interest. The market output will be  $Q_e$ .



- To society, the social optimum is at  $Q_s$  where  $MSB = MSC$ , as this maximizes society's welfare and achieves allocative efficiency.
- As such, since  $Q_s < Q_m$ , there is an overconsumption of tobacco by  $Q_s Q_e$ .
- Too many resources are allocated towards the consumption of tobacco, cigarettes, and related products.
- There is a welfare loss of  $E_0 E_1 B$ . Therefore, the government needs to intervene in this market as society's welfare is not maximized.

**Explaining why the presence of imperfect information leads to market failure and welfare loss, thus justifying government intervention**

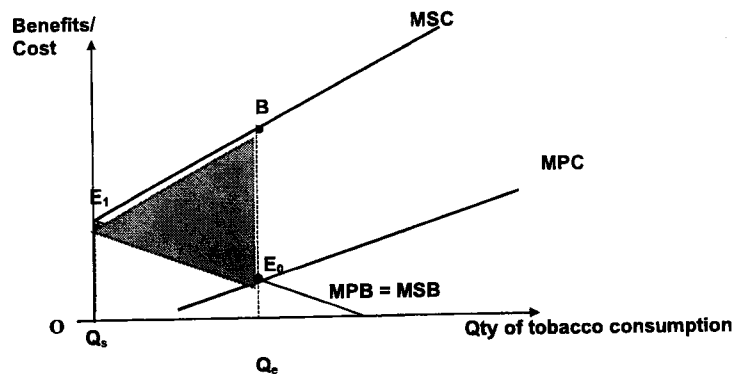
- Another possible reason for government intervention is to correct imperfect information in the consumption of tobacco.
- Consumers of tobacco may underestimate the private costs of consuming alcohol.
- Extracts 1 & 3, suggests that youths in many countries were picking up the smoking habit. They might be unaware of the negative effects on their bodies at such a young age (i.e., lung disease) when consuming tobacco, resulting in the perceived costs to be lower than the actual costs.
- This would also result in an overconsumption of tobacco by  $Q_s Q_e$  and a deadweight loss of the shaded area, and hence the government needs to step in to mitigate the situation.



Level	Descriptor	Marks
L3	<ul style="list-style-type: none"> <li>• A well-developed explanation of market failure due to <b>two</b> different causes.</li> <li>• Good economic analysis and use of diagrams</li> <li>• Good use of evidence from the extracts</li> </ul>	6 – 8
L2	<ul style="list-style-type: none"> <li>• A developed explanation of market failure due to only <b>one</b> cause</li> </ul> <p>OR</p>	3 – 5

	<ul style="list-style-type: none"> <li>• An underdeveloped explanation of market failure due to two causes</li> <li>• Some use of evidence from the extracts</li> <li>• Some conceptual inaccuracies in explanation</li> </ul>	
L1	<ul style="list-style-type: none"> <li>• Inaccurate or unclear economic analysis of the issue</li> <li>• Inadequate answers which lack depth of explanation</li> <li>• Irrelevant answers that focus on how the government might intervene in the market, and not the reasons for intervention</li> </ul>	1 – 2
(f)	<p><b>Using evidence from the case study, discuss the view that Bhutan’s total ban is the best policy tool to achieve an efficient allocation of resources in the tobacco market.</b></p>	[12]
	<p>Question requirement</p> <p>Discuss: requires two-sided approach, with evaluative conclusion</p> <ul style="list-style-type: none"> <li>• Thesis: Total ban is the best policy</li> <li>• Anti-thesis: An alternative policy such as partial bans, cohort smoking ban, reduction of nicotine should be explained and evaluated. The conclusion should include judgement as to the best policy considering appropriateness, effectiveness etc.</li> </ul> <p>Context: Bhutan, other countries</p> <p><b><u>Introduction</u></b></p> <ul style="list-style-type: none"> <li>• A ban is a form of government legislation which prohibits the consumption or production of a particular good or service.</li> <li>• It is often used to correct market failure to achieve a more efficient allocation of resources especially in demerit goods.</li> <li>• To assess if it is an appropriate policy, we need to consider the context in which the ban is implemented, the extent of the ban and its effectiveness.</li> </ul> <p><b><u>Body:</u></b></p> <p><b><u>Explain how a complete ban works to correct market failure</u></b></p> <p>When the government imposes a complete ban on the consumption or production of a good, it reduces the equilibrium quantity to 0. Anyone who consumes or produces this good will face punitive measures. In Bhutan tobacco sales have been prohibited. This means that no retailers are allowed to sell tobacco in their stores. This has to do with the <b>significant negative externalities associated with consumption of tobacco</b> in Bhutan. It is probable from extract 3 that Bhutanese, especially the young, are seriously addicted to tobacco, which could have severe effects on their health. As such, it is plausible that the negative effects to the consumer and external costs are so great that the social optimal level of consumption is close to 0. In such an instance, a complete ban is an economically</p>	

viable option and appropriate in achieving an allocation of resources, to eliminate or reduce the welfare loss.



#### Effectiveness

A ban can achieve the outcome immediately once implemented and it is mandatory for all to abide by the law. It is also clear and easy to follow, and the government can achieve efficient allocation of resources relatively quickly. However, there are chances that people do not comply with the law if there are weak enforcements. This could result in the government needing to spend on monitoring markets closely.

#### Whether it tackles root of the problem

A ban is only considered appropriate if it does tackle the root cause of the problem. Without tackling the addiction problem, it will be difficult to overcome.

#### Unintended consequences due to imposition of a ban

- When a ban is imposed on a good, the government also loses a potential source of revenue. This is true especially in the case of the market for tobacco, since it is a lucrative market which allows the government to reap a lot of revenue from the taxes it imposes on tobacco consumption. The revenue earned by the government could have been used for other productive purposes to grow the economy.
- In addition, a ban on tobacco could affect the actual growth of a country, especially if the market of tobacco contributes significantly towards the GDP of the country. Extract 3 mentions that domestic production and manufacture is banned. With bans imposed, the dollar value towards GDP will be reduced.
- Finally, another possible unintended outcome of a ban is that a black market could result. A shadow economy would emerge where people sell tobacco illegally under the radar, away from the authorities. This would imply that more resources need to be allocated by the government towards the monitoring and enforcement of such a ban. This unfortunately, became a reality in Bhutan.

#### **Limitations of Bhutan's ban**



The ban was not effective due to the efforts of the smugglers as well as the problem of severe addiction. Smokers were not able to kick off the habit and smugglers took advantage of the existing situation. The covid-19 pandemic worsened the situation leading to a failure of this policy.

### Alternative policies

Bhutan could consider alternative policies that have been successful elsewhere including Singapore. Among these policies are taxes, cessation clinics, cohort smoking ban and reducing the nicotine content and they can be implemented in combination.

Bhutan must consider the addictive nature of tobacco and address this through cessation clinics directed at the youth. In addition, education and campaign targeting even younger children will help to reduce the potential future smoker population, thus addressing the root cause of the problem. Singapore's strong anti-tobacco climate and strict measures had deterred the youth and Bhutan may emulate this example.

Reduction of nicotine in tobacco products is another effective policy that could be considered. Well documented studies show that addictions improve as indicated in extract 3. This will call for new legislative measures by the Bhutanese government.

As the above policies work progressively over time, Bhutan can then consider a cohort smoking ban like the one in New Zealand. Such a ban's success is better assured as the youth can overcome the addiction and is likely to drop the smoking habit.

### Conclusion:

In conclusion, it is important for the government to understand the contexts in which it is considering implementing a ban. In certain cases, a complete ban is more economically viable especially if the costs to society (which include the possible unintended consequences) far outweigh the benefits. In others, a partial ban might be more appropriate in achieving an efficient allocation of resources. The government should also consider the level of ease in enforcing the ban. In the context of tobacco consumption in Bhutan, most likely the addiction problem made the people less compliant, making it difficult for the government to achieve its aims. Nevertheless, the government must continually review the relevance of the bans imposed and should supplement it with other policies such as taxes and public education.

Level	Descriptor	Marks
L3	<ul style="list-style-type: none"> <li>• <b>Two-sided developed answer</b> on whether bans are the best policy tool in achieving efficient allocation of resources</li> <li>• Thorough use of economic analysis</li> <li>• Excellent use of examples from the extracts</li> </ul>	7 – 9

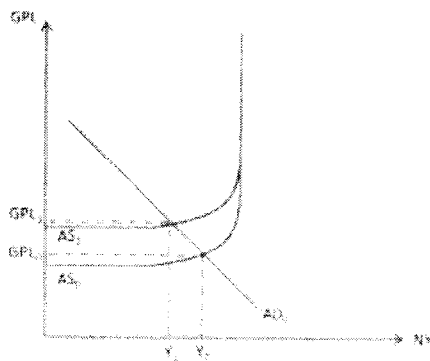
L2	<ul style="list-style-type: none"> <li>• <b>Two-sided but underdeveloped</b> answer on whether bans are the best policy tool in achieving efficient allocation of resources</li> <li>• Some use of economic analysis</li> <li>• Some use of examples from the extracts</li> <li>• Some inaccuracies in explanation</li> </ul>	4 – 6
L1	<ul style="list-style-type: none"> <li>• Inaccurate or unclear economic analysis of bans</li> <li>• Limited or no use of examples from the extracts</li> <li>• Inadequate answers which lack depth of explanation</li> </ul>	1 – 3
E2	<ul style="list-style-type: none"> <li>• Coherent, clear, and insightful evaluation throughout the answer, referring to key criteria in evaluation</li> </ul>	2 – 3
E1	<ul style="list-style-type: none"> <li>• Evaluation is mostly stated, but unsubstantiated.</li> </ul>	1
<b>[Total: 45 marks]</b>		

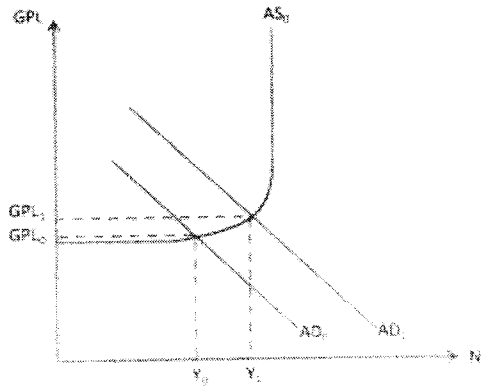
## CSQ 2- Suggested answers:

(a)	(i)	Define Inflation.	[1]
		Inflation refers to a sustained increase in the general price level.	
	(ii)	It is said that unemployment and inflation have an inverse relationship. Explain this relationship and describe if Table 3 reflects this.	[4]
		<p>An increase in AD in an economy will lead to an increase in the output of goods and services (assuming AS is constant), which leads to a fall in unemployment [1]. As the economy reaches near full employment levels, the shortage of goods and services due to the increase in AD will result in a rise in general price levels i.e. inflation rates. [1]</p> <p>This explains the inverse relationship between inflation and unemployment.</p> <p>Table 3 reflects this relationship for UK in 2019-2020 because it is experiencing falling inflation rates along with rising unemployment rates. And in 2021- 2022; there is rising inflation rates along with falling unemployment rates Table 3. [1]</p> <p>However, the relationship does not seem to hold for 2020-2021, where both unemployment rates and inflation rates rose. [1]</p> <p><b>Mark Scheme:</b>  <i>Explain theoretical fall in unemployment – 1m</i>  <i>Explain associated fall in GPL – 1m</i>  <i>Describe whether UK adheres to this relationship– 2m</i></p>	
(b)		With reference to Table 3, explain why the Bank of England might have raised its interest rates between 2021 and 2022. Provide one possible limitation of this approach.	[6]
		<p>The Bank of England had raised its interest rates between 2021 and 2022 in a bid to fight inflation which has risen to 7.4%.</p> <p>Raising the interest rates would increase the cost of borrowing [1]. This would to increase the price of big-ticket items and lead to a fall in C [1]. At the same time, for a given rate of return of investment, this would a smaller number of projects seem profitable [1] and lead to the fall in I.</p> <p>The fall in C and I would lead to a fall in AD and reduce demand-pull inflation. [1]</p> <p><b>Limitation of contractionary MP [2]</b></p> <p>(a) Optimism about the economy (not accepted, since it is not likely the Brits were optimistic based on case material.)</p> <p>(b) Difficulty in Determining Type of Inflation</p> <p>(c) Conflict with economic growth and full employment</p>	
(c)		Using three most appropriate indicators from Table 3, what can you conclude about living standards in the UK between 2019 and 2020? Comment briefly on the effectiveness of these indicators as a measure of living standards.	[6]
		Living standards refer to the well-being of individuals in the economy. There are two aspects of living standards – material living standard is measures by the quantity of	

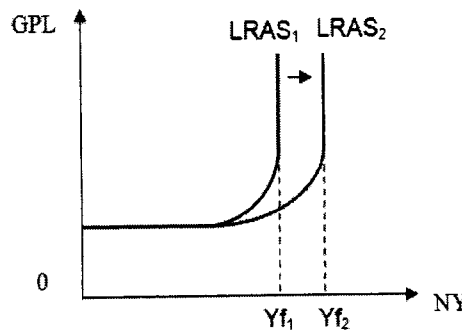
[Turn over

	<p>goods and services by an average individual while non-material living standard is determined by the quality of life. [1]</p> <p><b>Pick 3 of the following 5 points</b></p> <p>The first indicator is GDP, in current prices. The fall between 2019 and 2020 indicates that income levels in the UK fell over those two years, allowing individuals to consume less goods and services thus reducing their material living standard over time, leading to a lower SOL in 2020. [1]</p> <p>The second indicator is the inflation rate. As inflation rate has fallen between 2019 and 2020, this indicates that cost of living has fallen/ slowed down, which would improve SOL [1]. However, given the falling GDP, in current prices, we are unable to be certain about the status of the individual's material SOL.</p> <p>The last indicator is the unemployment rate. Since the unemployment rates in the UK was higher in 2020 than 2019, the material well-being of people in the US was likely to be to have fallen, as the lower income would have allowed them to enjoy fewer goods and services. [1]</p> <p>OR At the same time, the relatively higher unemployment rate suggests that its non-material living standards was lower, because social research has shown that the higher the unemployment rate, the higher the possibility of crime, mental illness and social unrest. [1]</p> <p>Comment [2]</p> <p>Overall, the above indicators are effective to a large extent in showing the state of living standards in the UK in 2020. Despite that, more information can be used to come to a conclusion regarding the overall living standards. For example, we could have population figures to get a clearer idea of material SOL. Without population figures, we are unable to accurately know if the average consumer in the UK was able to enjoy more or less goods and services between 2019 and 2020.</p> <p>And Since UK is a developed country, more data that measures non-material living standards like stress and mental health might be useful in giving a more conclusive judgement regarding the living standards.</p> <p>1m for definition of living standards 1m for explanation of how each indicator shows living standards (max 3m) 2m for comment</p>	
(d)	Using AD/AS analysis, explain how current global events have resulted in a rise in consumer prices.	[5]
	<p>Global Supply chain disruption due to the Russian-Ukraine conflict and zero-COVID lockdowns in China [1] → Supply Shock due to reduced availability of goods and services at every price level <u>or</u> COP rising due to rise in price of factor inputs [1] → Fall in SRAS from SRAS1 to SRAS2 [1] → Rise in GPL from GPL1 to GPL2 [1].</p> <p>Thus, causing rising consumer prices.</p>	

	<p>Diagram [1]</p> 	
(e)	<p>Extract 6 expresses that "Some are worried that a wage-price spiral could be in the making." Explain how inflation might cause a wage-price spiral.</p>	[4]
	<p>When inflation is high, workers may demand for higher wages to compensate for the loss of purchasing power [1]</p> <p>When this happens, the cost of production would increase [1]. This shifts the SRAS [1] upwards and causes another increase in the GPL.</p> <p>In response, workers may demand higher wages again [1], causing a spiral of increasing prices and wages.</p>	
(f)	<p>Extract 7 suggests that by "allowing tax cuts to proceed", it could result in an "economic upturn". Explain how a fiscal policy tax cut could help achieve economic growth.</p>	[7]
	<p>The UK government has suggested implementing fiscal policy tax cuts to boost fiscal policy tax cuts which will help achieve high economic growth and hence indirectly reduce the fiscal deficit.</p> <p>The reduction in income taxes and corporate taxes increases AD indirectly. A decrease in income taxes would increase the disposable income of households. Thus, with the higher purchasing power [1], households will consume more, leading to a rise in consumption expenditure (C). [1] A decrease in corporate taxes would increase the after-tax profit [1] of investments. Hence, with higher profitability of investments, investments (I) increase [1]. Together, the increase in C and I would increase AD from <math>AD_0</math> to <math>AD_1</math>. This will via the multiplier effect lead to a more than proportionate increase in NY [1], and actual economic growth. This is based on the assumption that an initial increase in AD will lead to further increases in national income via induced consumption. This increase in National income from <math>Y_0</math> to <math>Y_1</math> indicates actual economic growth.</p>	



Due to the increase in investment, there is an increase production of capital goods and hence, productive capacity [1], LRAS shifts rightwards [1] resulting in potential economic growth.



(g) With reference to Extract 6, discuss whether exchange rate policy alone is appropriate to achieve inclusive economic growth in Singapore. [12]

Inclusive growth is growth that is broad-based across economic sectors, and creates employment opportunities for the majority of the country's population. In the case of Singapore, inclusive growth implies growth without worsening of income inequality. It first requires sustained growth i.e. actual and potential growth.

**Thesis: Exchange rate policy alone is appropriate in achieving inclusive economic growth in Singapore.**

***Exchange rate policy → Actual EG***

"The appreciation in the Singapore dollar against most major trading partners has helped to stem imported inflation". "Further, a stronger exchange rate helps reduce the import costs faced by our export industries." The appreciation of the Singapore currency → price of imported inputs in terms of SGD decreases, this leads to a fall in cost of production and could increase price competitiveness of SG's exports. Assuming imports remain constant, this leads to an increase in (X-M) and AD. NY increases more than proportionately via the multiplier effect i.e. there is actual economic growth.

***Exchange rate policy → inclusive EG***

"So for many households, this will help absorb some of the rising prices." The appreciation of the SG dollar also helps prevent imported inflation by allowing households to buy final products at a competitive price. This will provide broad-based support for households, in particular lower income households.

**Anti-Thesis: Exchange rate policy alone is not appropriate in achieving inclusive growth in Singapore – limitations of exchange rate policy**

“But a stronger Singapore dollar also means our exports will be relatively more expensive.” Exports will become more expensive in foreign currency and imports are cheaper in domestic currency. This will result in fall in quantity demanded of exports and increase quantity demanded of imports. Assume the Marshall-Lerner condition ( $|PED_x + PED_m| > 1$ ) holds,  $(X-M)$  will decrease and reduce actual economic growth.

**Anti-Thesis: Exchange rate policy alone is not appropriate in achieving inclusive growth in Singapore – other policies are needed**

*Labour Market adjustment policy → Inclusive and Potential EG*

Labour market adjustment measures of reducing dependence on low-skilled foreign worker works by “calibrate the inflow of foreign workers” via “raising the minimum salary requirements for Employment and S-Pass holders.” This will make low-skilled foreign workers becoming more expensive to hire and cause an increase in the demand for local low-skilled workers, resulting in higher wages helping to manage the growth of low wage workers, allowing growth to be more inclusive.

It will also forces firms to reduce dependence on foreign workers and increasing innovation and training so as improve worker productivity so as to justify paying them a higher wage. This will lead to an increase in LRAS due to improvement in quality of labour, contributing to potential growth.

Similarly, the “Progressive Wage Model, which aims to raise the pay of lower-wage workers across various sectors and occupations, in tandem with skills upgrading and increased productivity,” would also lead to an increase in LRAS due to improvement in factors of production and technology, contributing to potential growth.

**Anti-Thesis: Exchange rate policy alone is not appropriate in achieving inclusive growth in Singapore – fiscal policy is needed**

Although the above policies do help to encourage inclusive growth to a large extent, it is not enough. Governments will also need to conduct spending i.e. fiscal policy towards “building longer term capacity and goods for the public which can include infrastructure such as healthcare and education.” The increased spending will serve to further boost AD, while infrastructure development will boost LRAS ensuring that economic growth is sustained. The spending on relief packages, healthcare and education will add on to ensure that growth is inclusive for all. Lastly, the cooperation between public and private sectors “beyond specific projects, in areas such as research and development (R&D) and lifelong learning” will ensure growth is broad-based.

**Evaluation**

In conclusion, exchange rate policy is appropriate. However, if calibrated correctly, it helps to manage imported inflation for households and industries in order to ensure cost of living is managed and growth is achieved for the economy. However, it alone is not enough, there also needs to supply side measures, and fiscal policy with a supply side focus to ensure potential economic growth is achieved for all sectors and that there is income equity for households. In the end, “Finding the right policy balance will be necessary to steer the economy” and we cannot rely one policy alone.

L2 (developed)	<ul style="list-style-type: none"> <li>• Answer presents well-balanced arguments of whether exchange rate alone is appropriate to achieve inclusive growth.</li> <li>• The answer considers both limitations of exchange rate policy and importance of supply side policies.</li> <li>• Economic analysis is well-developed throughout, argument is coherent.</li> <li>• Answer makes use good use of relevant case evidence.</li> </ul>	7-9
L2 (cursory)	<ul style="list-style-type: none"> <li>• Answer presents well-balanced arguments of whether exchange rate alone is appropriate to achieve inclusive growth.</li> <li>• If only limitations of exchange policy alone is given, allow up to a maximum of 5.</li> <li>• Economic analysis is generally well-developed, with minor gaps.</li> <li>• Answer makes use of relevant case evidence.</li> </ul>	4-6
L1	<ul style="list-style-type: none"> <li>• Answer is mostly relevant to question requirements but has weak analysis/ weak smatterings of explanation of how exchange policy works.</li> <li>• Economic analysis is incomplete or lacks precision.</li> <li>• Attempts to address the context of the question but has no use of case evidence.</li> <li>• No diagrams or relevant diagrams are used but might not be accurately explained or applied to support economic analysis.</li> </ul>	1-3
E2	Evaluative comments that are based on arguments. Judgement provided with substantiation.	2-3
E1	Judgement provided but no substantiation	1
<b>[Total: 45]</b>		