Answers to 2015 H1 Economics Preliminary Exam

CSQ 1

(a)(i) With reference to Table 1, contrast the health care cost as a percentage of GDP and the health care cost per capita for Singapore and Hong Kong. [2]

Singapore has the lower health-care cost as a percentage of GDP (1) while Hong Kong has the lower per capita health-care cost (1).

(a)(ii) Suggest a reason for the difference in (a)(i) [2]

This could be due to Singapore having a larger GDP but smaller population than Hong Kong (2).

(b) Using the concept of opportunity cost, explain how rising health care expenditure caused by an ageing population will impact a country's economic growth. [3]

An aging population will mean rising healthcare expenditure which is consumption related. (1) The opportunity cost is that less public finances can be spent on capital goods such as infrastructure. (1) Expenditure on capital goods increase capital accumulation thus expanding a country's productive capacity and allow higher GDP growth rates in the long term. (1)

(c) Explain why health care markets fail. [5]

Markets do not work for healthcare due to the presence of positive externalities [1] which result in the divergence between the MPB and the MSB [1]. As mentioned in Extract 2, healthy societies are more productive, creating more wealth for the economy [1]. [Max 2]

This spill-over benefit is ignored by consumers due to their selfishness [1] and thus they only consider their private benefits and costs in consumption [1]. On the other hand, social optimal consumption occurs at MSB=MSC since society takes into account all costs and benefits [1]. [Max 2]

As a result, there is under-consumption of healthcare [1] and a deadweight loss due to the net benefit that is foregone [1].

(d)(i) What can you conclude about the price elasticity of demand of medical tourism in Singapore? [2]

Price elastic [1]

The rise of comparable options in the region as suggested by Extract 3 points to the increasing availability of close substitutes. [1]

OR

Medical tourism typically consists of specialist services which make up a large proportion of consumers' incomes. [1]

(d)(ii) Using demand-supply analysis, assess the reasons behind the fall in medical tourism receipts for Singapore. [8]
Intro: Tourism receipts = total expenditure

Demand factors:
Evidence: Expansion of private healthcare providers overseas has lowered the need for medical tourism.
Explanation: The increased availability of substitutes has resulted in the fall of demand of medical tourism in Singapore.

Evidence: Appreciation of the Singapore dollar against her neighbours such as Indonesia which accounted for 56% of total medical tourism revenues in 2013
Explanation: The appreciation of the Singapore dollar raises the price of medical services in foreign currency, thus lowering the demand for medical tourism.

Evidence: Aggressiveness of governments in competing hubs in attracting medical tourists such as offering a 30% discount on airfares
Explanation: The lowered cost of obtaining healthcare in competing countries reduces the demand for medical tourism in Singapore.

With a fall in demand, equilibrium price and quantity will fall, leading to a fall in total expenditure of medical tourists.

Supply factors:

Evidence: Reduction in healthcare providers' efforts in marketing their services in Singapore
Explanation: Fall in supply of healthcare in Singapore.

Evidence: Reduction in government support for the industry
Explanation: With reduced support, healthcare providers might have to incur greater costs in terms of marketing thus raising their unit cost of production. This decreases supply.

Price elasticity of demand of medical tourism is likely to be elastic as explained in (d)(i). Given the fall in supply, the rise in price will lead to a more than proportionate fall in quantity sold, resulting in a fall in total expenditure of medical tourists.

Coupled with the fall in demand, this explains the overall fall in tourism receipts.

Conclusion:
Based on the above analysis, supply factors are relatively minor and are unlikely to affect unit cost of production significantly. On the other hand, demand factors are likely to be more significant given their impact on key markets such as Indonesia.

Levels	Descriptors	Marks
L1	Shows some knowledge of the relevant factors.	1-2
L2	Explanation of factors using the concept of demand and supply. Some application to the case is demonstrated.	3-4
L3	Strong demand-supply analysis with factors clearly linked to the fall of total expenditure. Good use of case evidence to support analysis.	5-6
E1	Stand with weak justification.	1
E2	Stand with strong justification addressing the relative impact of demand and supply factors.	2

(d) With the help of the data and your own knowledge, discuss whether the Singapore government should protect medical tourism as an export industry. [8]

Assertion: Protecting the industry will boost national income and reduce cyclical unemployment.
Evidence: Total medical receipts fell by 25% in 2013 (Extract 3). Extract 4 highlights financial benefits from health services and associated visitor spending (Extract 4).
Concept: Subsidising the industry will increase export competitiveness of medical services and thus quantity demanded. Assuming the demand for overseas medical services to be price elastic, export revenue will increase. Together with the increase in export revenue from complementary visitor spending, the aggregate demand for Singapore will rise. Given the fall in inventory for firms, this will lead them to increase output, resulting in higher national income. The increase need for factors of production including labour will also lead to a fall in cyclical unemployment.
Evaluation: Given Singapore's small multiplier due to her high propensity to import and save, as well as the small contribution of medical tourism to her GDP (about 1%), the benefit to national income and cyclical employment is minimal.

Assertion: Protecting the industry may reduce structural unemployment.
Evidence: Extract 3 points to the loss of competitive advantage compared to neighbouring cities and the reduced government support also suggests they no longer view the industry with as much promise as before.
Concept: With the loss of comparative advantage, lower skilled workers in the industry may find themselves structurally unemployment, without the requisite skills to switch to other more competitive industries. Protection may also buy these workers time for retraining.
Evaluation: Protection of a declining industry is inefficient as resources ought to be allocated towards more competitive industries. The data indicates that the Singapore government has reduced support for the industry as well. Structurally unemployment may not be significant as Singapore's aging population has fuelled the growth of the domestic medical industry so the unemployed are likely able to find comparable jobs.

Assertion: Protecting the industry may improve balance of payment.
Concept: As mentioned earlier, protecting the industry will increase export revenue and thus the current account. The continued growth of the medical tourism sector may also attract long-term capital inflows.
Evaluation: The benefit is not significant given the generally healthy state of Singapore's balance of payment. Furthermore any improvement in the current account will also be limited by the remittance of profits out of Singapore by foreign healthcare providers such as IHH Healthcare (Extract 3).

Reasons for not protecting:

- Given the "aggressive" actions taken by foreign governments in supporting their medical tourism industry (Extract 3), it suggests that any overt form of protection will be met by retaliation, reducing potential benefits.
- Hurts Singapore's reputation as a proponent of free trade and retaliation may take place in other sectors apart from the medical tourism sector.
- The medical tourism industry is not an infant industry and the increased competitiveness of neighbouring cities suggests a genuine loss of comparative advantage. Resources can be better allocated towards new sunrise industries.

Conclusion:

Given the limited impact of the medical tourism industry to Singapore's economy, protection would be unwise as the cons clearly outweigh the pros. The highly globalised nature of our economy also means that resources are most valuable when channelled to unearthing new comparative advantages rather than supporting declining industries.

Levels	Descriptors	Marks
L1	Shows some knowledge of the relevant reasons for or against protectionism.	1-2
L2	Explanation of relevant reasons either for or against protectionism. Explanation is largely descriptive. Some application to the case is demonstrated.	3-4
L3	Relevant reasons analysed with the help of appropriate theoretical concepts and tools. Both reasons for and against protectionism must be addressed. Good use of case evidence to support analysis.	5-6
E1	Stand with weak justification.	1
E2	Stand with strong justification addressing the validity in light of the nature of Singapore's economy.	2

CSQ 2

(a) Compare Germany's government budget balance with that of USA between 2009 and 2013. [2]

Similarity: Both saw an improvement in budget balance as a % of GDP. [1]

Difference: USA's budget deficit as a % of GDP has always been higher than Germany. [1]
OR
Difference: USA experienced a budget deficit throughout the entire period while Germany experienced a budget deficit until 2011.

(b) Explain how slow growth could worsen a government's budget position. [3]

A government's budget position is worsened due to increased government spending and/or falling tax revenue.

With slow growth, there will be slowdown in the rise in income earned and firms will also see a slowdown in the rise in profits due to poor demand. Hence, the government will collect less tax revenue from individuals and businesses which will worsen its budget position. [2]

An economy is likely to experience falling unemployment due to slow growth. This would lead to a fall in the amount of unemployment benefits and transfer payments given out. However, the fall in unemployment benefits is not enough to offset the fall in tax revenue. Therefore, there would be a worsening of the government's budget position. [2]

Impact on govt spending [2] + Fall tax revenue [2] = 3

(c) Explain one reason why the data in Table 2 is insufficient to explain the change in living standards for a country. [2]

Students can highlight any other information needed (besides real GDP growth) such as population growth, distribution of income, or even data about non-material SOL such as amount of leisure time and external costs.

The data in Table 2 shows the change in real GDP and does not account for population growth. If GDP growth is slower than the increase in population, there would be less goods and services available for consumption per head, hence material SOL is worse off. Therefore, data about real GDP per capita is needed to determine whether income per person has increased.

(d)(i) Explain why a weaker yen is a "boon for the Japan's economy" as stated in Extract 5. [4]

A weaker yen would lead to Japan's exports becoming cheaper in terms of foreign currency. [1] Foreign consumers in other countries would switch to consuming Japan's exports, leading to higher export revenue. [1]

A weaker yen would lead to imports becoming more expensive in local currency [1], and this would lead to a fall in quantity demanded for imports. [1]

Assuming Marshall-Lerner condition (sum of PED for exports and imports is >1), a weaker yen would lead to an overall improvement of the current account.

Impact on exports [2] and impact on imports [2]
Need to use elasticity concepts to earn full marks

(d)(ii) Explain why other countries might retaliate in response to the weakening of the Japanese yen. [3]

With a fall in interest rate in Japan, this would lead to an outflow of short-term capital from Japan due to lower rates of return on assets. There would be an inflow of short-term capital inflow into countries like Korea, Thailand and the US as this would "boost demand for higher yielding assets" (Extract 5). [1]

This would lead to an increase in demand for Korean Won and Thai Baht in the forex market, leading to a shortage of currency at the current market exchange rate. This would lead to an appreciation of Korean Won and Thai Baht. [1]

With an appreciation of the Korean Won and Thai Baht, this would lead to a fall in export competitiveness for Korea and Thailand. [1]

OR

With greater inflow of short-term capital into Korea and Thailand, this would lead to a higher supply of loanable funds [1]. If the excess funds are channelled to purchase of assets such as properties, this would lead to over-investment in the property market [1], causing demand-pull inflation [1].

(e) Discuss the view that a government faced with the problems described in Extract 6 should opt for a policy of increased government spending and tax cuts. [8]

Intro

The global recession in 2009 which resulted in slower or negative growth and unemployment led governments to implement expansionary fiscal policy to revive their ailing economies. However, for some countries, this policy resulted in massive government debt for some countries which hurt growth and unemployment further

Body

Thesis: A policy of government spending and tax cuts resolves the problems

1. Expansionary fiscal policy boosts growth and reduces unemployment

Expansionary fiscal policy involves increasing government expenditure (G) and reducing direct taxes to stimulate consumption (C) and investment expenditure (I). As such, an expansionary fiscal policy would lead to an increase in AD. This would then lead to a multiple increase in national income (could include the AD/AS diagram showing a rightward shift in the AD curve) which in turn would increase production and hence increase the demand for labour which would reduce unemployment.

Evaluation: The increase in C to boost growth and employment would be more significant for countries where domestic consumption was a large proportion of GDP such as the USA and Japan (>60% from Table 5).

2. The need for fiscal policy due to the limitations of monetary policy via interest rates

Monetary policy seems to be ineffective as interest rates are almost zero (Extract 6). This means that countries are experiencing a liquidity trap, which is a situation which occurs when the market interest rate in the country has already reached its lowest possible level and cannot fall any further. As the market interest rate will not fall any lower, C and I will not increase.

In addition, some households are heavily in debt and are unable to borrow as much due to the inability to repay their debts. This means that despite the low interest rates, these households do not borrow as much and hence do no spend as much. Hence, expansionary fiscal policy seems to be the best alternative to boost growth and employment.

Anti-thesis: A policy of government spending and tax cuts does not resolve the problems

1. Expansionary fiscal policy which involves tax cuts and increased government spending resulted in huge government deficit for countries such as the USA (-12.8% of GDP from Table 4). This led to creditors demanding higher interest rates due to fears that the governments could not repay their loans (Extract 6). This may lead to higher interest rates in the private sector as well and overall result in a fall in C and I. Overall there will be a fall in AD which will worsen growth and unemployment.

2. Crowding out effect

In addition, for countries which have accumulated high amounts of government debt due to persistent budget deficits like the USA and Japan, these governments can only finance government expenditure through borrowing. This will result in an increase in the demand for loanable funds, which will lead to an increase in interest rates. Higher interest rates would increase the cost of borrowing. In addition, households will have more incentive to save (and hence lower C) as the interest rate earnings they get from banks are higher. Firms will cut back on I as the rate of returns to investment is lower. The initial increase in government spending will simply be offset by lower C and I.

Conclusion
Overall, whether or not a country should opt for expansionary fiscal policy to address its macroeconomic problems depends on the availability of alternative policies and the size of the government deficit. For countries like Japan where lowering of interest rates is rendered ineffective, expansionary fiscal policy does provide a solution to its ailing economy. On the other hand, it also needs to consider how its significant government deficit as a result of expansionary fiscal policy will worsen its macroeconomic problems.

L1	A very brief explanation of the impact of expansionary fiscal policy on the problems mentioned in Extract 6.	1-2
L2	- A well-developed but one-sided explanation of how expansionary fiscal policy can address OR cannot address the problems mentioned in Extract 6. OR An underdeveloped two-sided discussion of how expansionary fiscal policy can address AND cannot address the problems mentioned in Extract 6. - Some reference to context	3-4
L3	- A well-developed, two-sided discussion of how expansionary fiscal policy can address AND cannot address the problems mentioned in Extract 6. - Good reference to context	5-6
E	A well-justified conclusion about how countries should consider the availability of alternative macroeconomic policies and the size of their budget deficit when considering the use of expansionary fiscal policy.	+2

(f) Discuss whether China should rely on her domestic market or exports to drive growth. [8]

Intro
Due to greater vulnerability to external shocks due to the pursuit of export-led growth as well as the global slowdown, this has led to countries switching to relying on their domestic consumption to drive growth.

Body
China should rely on her domestic market to drive growth
1. Reduce vulnerability to global shocks. Relying on domestic demand would be more stable. This would reduce the fluctuations in GDP and demand-deficient unemployment due to a fall in exports and FDI.
With China's large domestic market due to her large population, this could enable her to potentially rely on domestic consumption to drive growth. With urbanisation leading to rising incomes (Extract 8), this could lead to higher spending on domestic goods, leading to higher C and AD.

However, currently, according to Table 5, consumption in China is only 36% of GDP, which is rather low as compared to other countries such as USA (>60%) and Japan (about 60%). This could be due to the Asian thrift culture as well as "lack of financial security" (Extract 8) in China due to the lack of a social safety net. According to Extract 8, there is a need to lower personal income tax and provide more transfer payments to increase disposable income to encourage consumers to spend more, hence increasing household consumption.

Given the large population of China, this might exert a strain on the government budget and would eventually require increases in tax to fund the additional government spending.

2. Producing for the domestic market would mean a move towards less energy-intensive industries. Reliance on energy-intensive heavy industry for the production of exports has led to pollution and negative externalities for China (Extract 7). This would lead to lower pollution and hence less adverse impact on environment through a fall in carbon emissions, for example. This would lead to an improvement in the non-material standard of living as would present a more sustainable growth path as it does not exert too much pressure on the environment.

3. Producing for the domestic market would lead to improvement in external imbalances. China's large trade surpluses have led to external imbalances and "tensions with other trade partners" (Extract 7). As her trade partners would suffer from trade deficit which results in lower growth and higher demand-deficient unemployment, they may blame China and implement protectionist measures such as tariffs or quotas to protect their domestic industries. This would stifle China's exports and hence stifle growth, leading to demand-deficient unemployment. Hence, producing for the domestic market would lead to lesser likelihood of such issues.

China should rely on exports to drive growth

1. China should tap on global demand to increase demand for their exports, hence leading to an increase in AD and a multiple increase in national income. This would lead to higher growth and lower demand-deficient unemployment. This is important as China was able to achieve high growth rates in the past due to increase in exports. A shift to relying on domestic markets might lead to slower growth if the increase in C is insufficient to make up for the fall in X. The lack of government provision of welfare payments or a social safety net might lead to Chinese consumers continuing to save a high proportion of their income (Extract 8), hence limiting the increase in C.

2. When China reduces its reliance on exports, the process of rebalancing could lead to structural unemployment as workers who are unemployed in the export-oriented industries might not be able to secure jobs in the rising sectors catered at the domestic market due to a mismatch of skills. With the "shifting from capital-intensive manufacturing to labour-intensive services" (Extract 8), this would mean that those in the manufacturing sector producing for the export market might face structural unemployment if they are unable to secure jobs in the growing services sector.

3. China should specialise and trade based on the theory of comparative advantage. Based on their factor endowments, countries which incur a lower opportunity cost in producing a particular good should specialise in producing the good and hence trade with other countries. China has an abundance of labour and should specialise in goods which require labour-intensive production, such as textiles. This would lead to higher export revenue for China and enable her economy to achieve growth as well as lower unemployment. This has enabled China to achieve high rates of growth in the past, as seen in Table 2.

<u>Conclusion</u>

With a large domestic market, China has the potential consumer base for firms. To achieve sustainable growth in the long run, China needs to rely more on her domestic market. In the short run, this would lead to adverse effects such as higher structural unemployment but in the long run, this would enable the country to move towards a path of sustainable growth.

Whether the shift in strategy to rely on domestic consumption would work also depends on the implementation of other policies to increase consumption on domestic goods and services. There is also a need for policies to enable transition from producing for the international market to producing for the domestic market. In China, there is a need to produce more consumer goods and services rather than focus on energy-intensive heavy industry (Extract 7).

L1	- A brief description of the positive or negative impacts of relying on domestic markets	1-2
L2	- A one-sided explanation of how relying on domestic markets would lead to positive OR negative impacts for China in terms of achieving macroeconomic goals OR - A weak two-sided explanation of the positive AND negative impacts of relying on domestic markets for China - Some use of evidence from the data	3-4
L3	- A well-developed discussion of the positive AND negative impacts of relying on domestic markets for China - Good use of the evidence from the data	5-6
E	- Stand with strong justification, with reference to the likely success of China in switching to reliance on her domestic market or the issues which might hinder the success of the switch in growth strategy.	+2

Essay 1

a) Explain how public goods and demerit goods cause markets to fail. [10]

Key concepts to explain:

- Nature of public goods: non-excludable and non-rival and how they lead to market failure
- Negative externalities and ignorance explanation for why markets for demerit goods fail

Introduction

Left to market forces, the nature of public goods will lead to total market failure. For the case of demerit goods, both ignorance and the presence of negative externalities will lead to overconsumption and thus inefficient allocation of resources.

Body

Public goods such as national defence are non-excludable and non-rival. It is non-excludable as it is not possible to exclude someone from being protected by the defence team, even if the person has not paid. National defence is also non-rival because protecting one more person will not reduce the quantity of protection another receives. As such, the marginal cost of providing protection for one more person is 0. This would mean that the socially optimal output is when MB (price consumers willing and able to pay) = MC = 0. No firm will be willing to produce the good if price is zero. Furthermore, since the good is non-excludable, no consumer will be willing to pay for national defence, and will choose to free-ride instead. Without effective demand, there will not be price signals guiding producers on how much to produce. As such, left to the free market, there will not be production of the public good, and the market fails completely.

Consumption of demerit goods such as cigarettes generates significant negative externalities. These negative externalities are negative impacts on uncompensated third parties not involved in the production or consumption of the good, and one example include bystanders who inhale second-hand cigarette smoke and suffer health problems as a result, thus incurring healthcare costs. The presence of negative externalities leads to a divergence between marginal private costs (MPC) and marginal social costs (MSC). Individuals seeking to maximise their satisfaction will only consider private cost (e.g. cost of cigarettes) and benefits and consume the quantity Q where MPC = MPB (marginal private benefit). However, society welfare is maximised at quantity Q* where MSC = MSB. As such, there is overconsumption of Q – Q* units. For every unit between Q* and Q, MSC > MSB, which means that each unit consumed is adding more to social cost than social benefits. Consuming Q – Q* units generates total cost represented by Area D + E while total benefit is only Area E. This leads to welfare loss of Area D. The market for cigarettes has failed because too much resources are being channelled into the market.

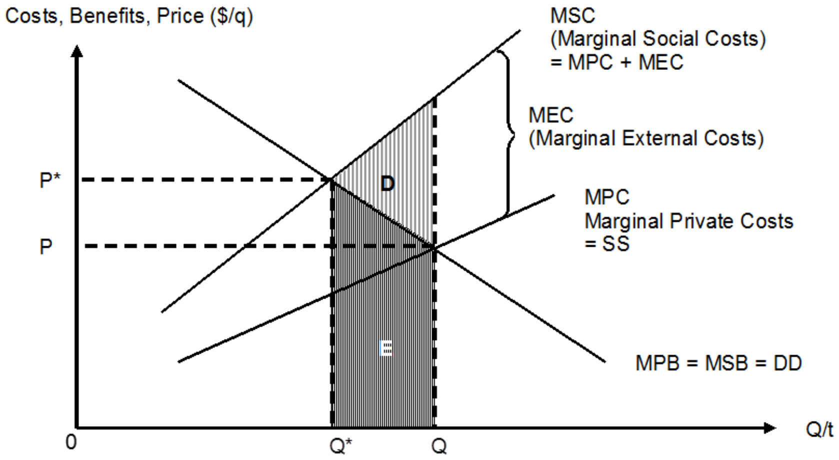

Fig. 1 shows the market for cigarettes where negative externalities are present.

At the same time, lack of information might have caused consumers to make poor choices. For example, smokers may not know the full extent of health problems that smoking can cause them. As such, their perceived benefit from smoking is higher than the true benefit received. If consumers have full information, they would consume at Q* where true marginal value equates marginal cost. However, because of lack of information, they currently consume Q where perceived marginal value = marginal cost. There is overconsumption of cigarettes by Q – Q* units. This leads to welfare loss of Area C in Fig. 2 since MC > MB for every unit between Q* and Q. Welfare is not maximised, thus leading to market failure.

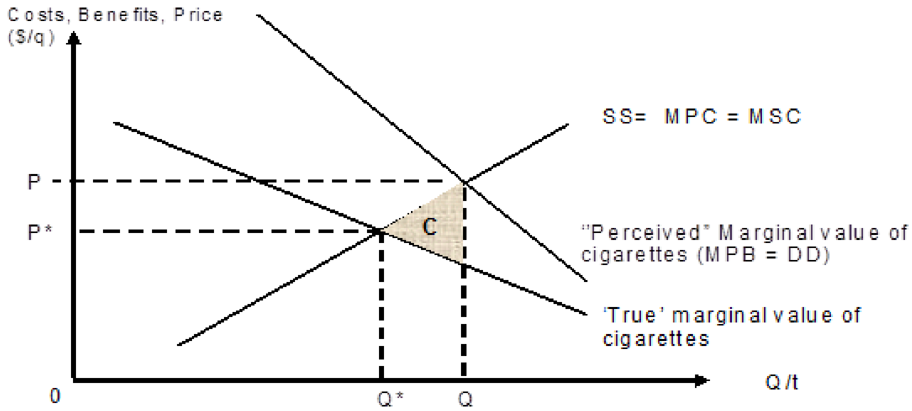

Fig. 2 shows the market for cigarettes where there is imperfect information.

	Descriptors	Marks
L3	• Good explanation of how public goods AND demerit goods lead to market failure.	7-10
L2	• Undeveloped explanation that explains how public goods and demerit goods lead to market failure. OR • Developed explanation of either how public goods or demerit may lead to market failure.	5-6

L1	• Response shows some knowledge of public goods and/or demerit goods, but how they lead to market failure is not explained.	1-4

b) To what extent is a ban the best way to tackle market failure associated with demerit goods? [15]

Introduction

To reduce the allocative inefficiency associated with demerit goods such as cigarettes, various measures including a ban on consumption can be implemented. Whether a ban is the best measure will depend on its effectiveness in improving allocative efficiency and other outcomes from its implementation.

Body

Thesis: A ban is the best way to tackle market failure associated with demerit goods.

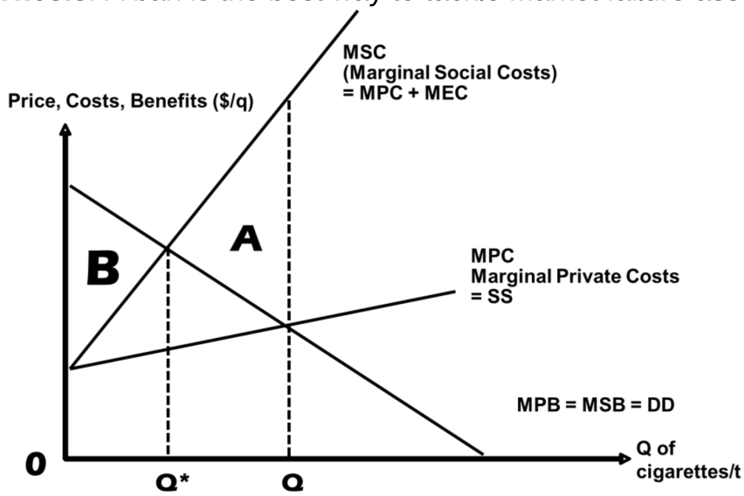

Fig. 3 shows the welfare loss before and after a ban is implemented.

A ban leads to zero consumption of the good, such that net benefit to society would be 0. Although this leads to a loss of welfare from an elimination of satisfaction smokers get from smoking, it may lead to a more allocatively efficient outcome than the free market case. Left to the free market, net benefit of consuming Q units of cigarettes would be Area B (welfare from consuming Q* units of cigarettes) – Area A (welfare loss). In cases where negative externalities are significant, e.g. in enclosed spaces where bystanders breathe in more second hand smoke, or crowded places with a large number of such affected bystanders, Area A may be greater than Area B. For such cases, net benefit of consuming Q units of cigarettes would be negative. A ban would thus result in higher net benefits to society, thus reducing the extent of market failure in the cigarettes market.

[Alternatively, the case where MSC > MSB for all units of output can be explained. In such a scenario, the socially optimal level of output is 0, which a ban will result in.]

Furthermore, a ban is relatively easy to implement and understand (for consumers). Should the ban be enforced, outcomes will also be certain. However, strict monitoring and enforcement of the ban may be necessary, and in large countries the monitoring costs can be significant.

Anti-thesis: A ban is not the best way to tackle market failure associated with demerit goods.

1. In the case where negative externalities are not so significant, Area B may be smaller than Area B. As such, a ban may result in a lower net benefit to society than if the market was left to free market forces.

2. A tax i.e. on cigarettes will be a more precise tool to implement for correcting market failure here, resulting in socially optimal output and the maximisation of society's welfare.

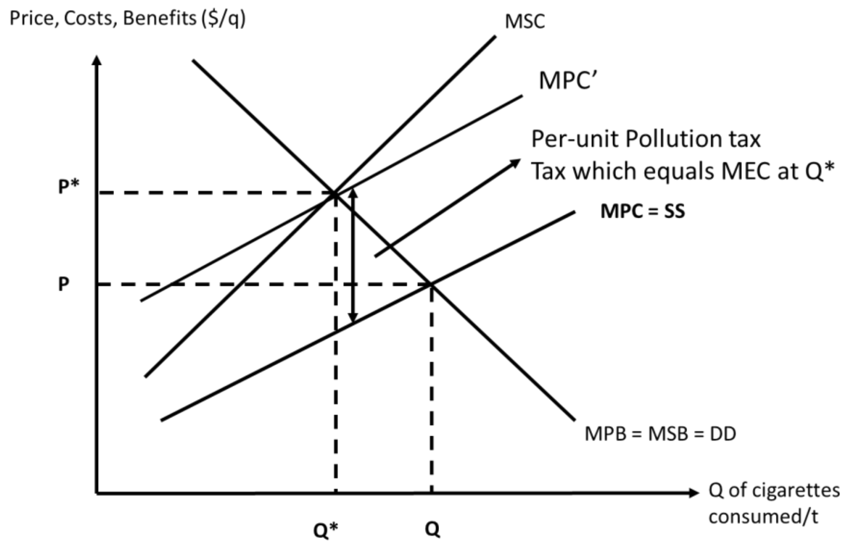

Fig. 4 shows the effects of a per-unit tax on cigarettes.

A tax will increase the marginal private cost of consuming a cigarette from MPC to MPC'. If tax implemented is equal to the MEC at socially optimal output Q*, the new market equilibrium MPB = MPC' will coincide with socially optimal equilibrium where MSB = MSC. Consumers internalise the negative externality, and welfare for society is maximised at Q*. Compared to bans which lead to a net benefit of 0, a tax can lead to a more allocatively efficient outcome. However this requires the government to implement the correct level of tax, which in reality may not be likely since the government lacks perfect information on MEC.

3. Education may be a better way to tackle the market failure here, since it targets one of the root causes of market failure associated with demerit goods, i.e. ignorance. Education through public campaigns would give consumers a better understanding of the health risks associated with smoking, thus reducing the gap between perceived and true marginal benefits (Fig. 2). Demand falls, and new market equilibrium will be where true marginal benefits equates marginal cost at Q*. This maximises society's welfare, though the process may be a long one as people slowly adjust their behaviour with the information they receive. Compared to bans, educating targets a root cause of the market failure, and can lead to socially optimal output without the need to constantly incur monitoring costs. However, outcomes of education are not certain since it depends on how consumers react to the education campaign, unlike the use of a ban.

Conclusion

Unless the extent of welfare loss is high (e.g. due to significant negative externalities or high levels of ignorance), a ban is not the best way to tackle market failure associated with demerit goods because the outcome does not maximise societal welfare. A two-pronged approach of taxing and education can target the two causes of market failure here more directly, and lead to outcomes that maximise societal welfare. However, a ban can lead to more certain outcomes, and when the extent of welfare loss is high and the government is in a hurry to reduce it, bans may be the best method to eliminate the issue of overconsumption in the short term e.g. Beijing implementing smoking bans in public places, since these places tend to be crowded.

	Descriptors	Marks
L3	For a balanced analytical discussion on whether a ban is the best way to tackle market failure associated with demerit goods.	9 – 11
L2	For an *undeveloped two-sided* explanation on whether a ban is the best way to tackle market failure for demerit goods market. OR A developed *one-sided* explanation of whether a ban is the best way to tackle market failure for demerit goods market.	6 – 8
L1	Response shows some understanding of bans and other policies that can be adopted to tackle the market failure associated with demerit goods, but is mostly descriptive or contains glaring conceptual errors.	1 – 5
E2	For an evaluative assessment of whether a ban is the best way to tackle market failure associated with demerit goods.	3 – 4
E1	For an unexplained assessment of whether a ban is the best way to tackle market failure associated with demerit goods, or one that is not supported by analysis.	1 – 2

Essay 2

a) Analyse the causes of inflation in Singapore. [10]

Suggested outline:
Students are required to explain 3 sources of inflation in Singapore that could be due to a continuous rise in AD (demand pull inflation) or AS (cost push inflation)

Introduction
Inflation is a sustained increase in the general price level of goods and services in an economy. Inflation in Singapore can be caused by both domestic and external demand-pull and cost push factors.

<u>Body</u>

1. Demand-pull inflation

Singapore suffers from demand-pull inflation, which may occur when increases in aggregate demand (AD) persistently exceeds that of aggregate supply (AS), causing excess demand when the economy is near or at full employment.

Inflation due to the rise in AD (AD_1 to AD_2 in diagram 1), which can come from a rise in C, I, G and (X−M), thereby causing upward pressure on the general price level.

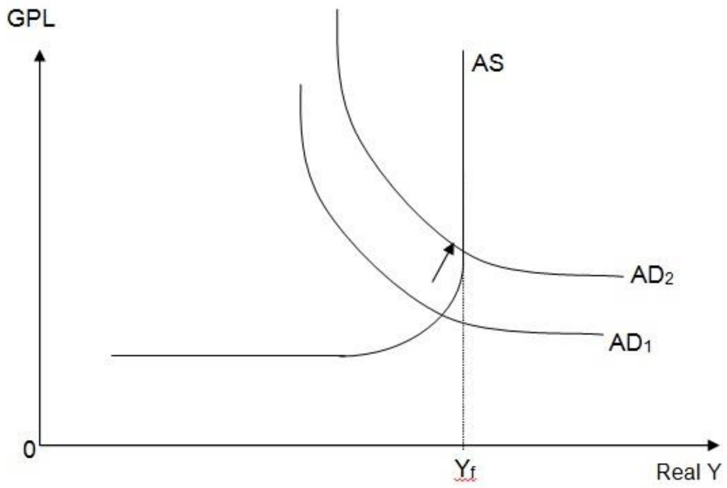

Diagram 1

In the case of Singapore, the major source of demand-pull inflation would be a rise in income of her trading partners, which leads to an increase in the purchasing power of households. This in turn, causes greater an increase in demand for Singapore's exports. When there is a rise in Singapore net exports, her AD rises, leading to a rise in the general price level, assuming the economy is already at/near full employment. This was evident when countries like USA recovered after the 2008 global financial crisis. As USA one of Singapore's largest export market, and when the latter's national income rises, the demand for Singapore's exports rose. Since the value of Singapore's exports is more than twice the size of her domestic economy, this will have a significant impact on AD, hence GPL, especially when the economy already near full employment.

In addition, there might also be an increase in FDI given a higher expected rate of return of investing in Singapore when external demand rises, given that MNCs which produce in Singapore tend to be export-oriented.
An increase in FDI will lead to a rise in AD, and should the economy have limited spare capacity, a persistent increase in AD is likely to lead to upward pressure on prices on the general price level.

Singapore can also face demand-pull inflation from domestic sources. For example, with the recovery of the Singapore economy after the financial crisis, the purchasing power of households rose. Together with the influx of foreign workers coming into Singapore, this also increased the domestic C and AD. The higher demand for housing due to a rise in population growth increased the average price of the basket of goods and services used to calculate the country's CPI.

Cost-push inflation

Cost-push inflation occurs when prices are forced upwards by increases in costs of production which are not caused by excess aggregate demand. If firms face a rise in unit costs, they will respond partly by raising prices, partly by passing the costs on to the consumer, and partly by cutting back on production. This is illustrated by a continuous upward shift in the aggregate supply curve (AS1 to AS2), as shown in Diagram 2. The causes of cost-push inflation are from the supply side. The rise in costs may originate from a number of different sources for example wage-push, imported inflation and depreciating exchange rates.

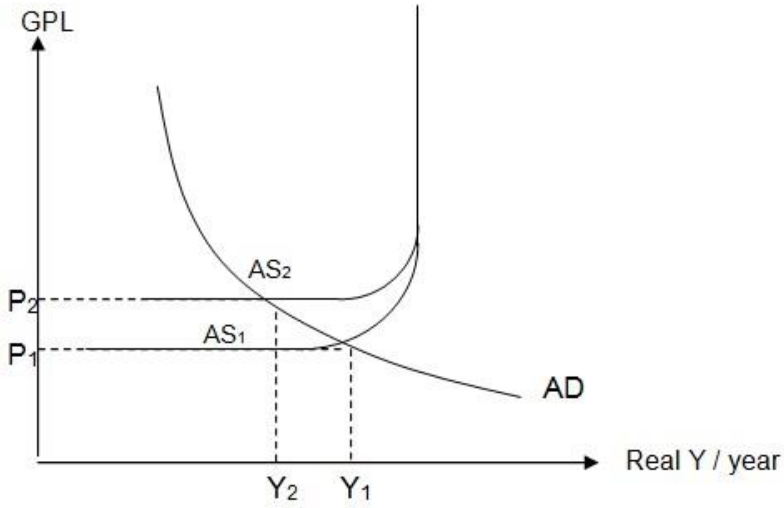

Diagram 2

A source of cost push inflation in Singapore would be the increase in global demand for raw materials or commodities such as food and oil.
This increases the unit cost of production as these raw materials are an important factor of production, causing the AS to rise up wards thereby raising the GPL in Singapore, leading to cost-push inflation. The average crude oil prices in 2012 were at historically high levels because OPEC restricted their oil production. This was an important contributing factor to Singapore's high inflation rat~~es~~ that year, since demand for her imports is price inelastic, and with little or no substitutes to the imported raw materials like oil, the GPL in SG rises.

Another cause of Singapore's cost push inflation would be the government's efforts to reduce the inflow of foreign workers. Tightening of foreign labour policies (e.g. reducing the ease of qualifying for employment passes, foreign worker levy) have led to the overall labour force rising slower than the demand for labour, thus resulting in labour shortage. With the rise in wage rate and productivity growth lagging behind, unit cost rises. Hence AS shifts upwards, giving rise to cost-push inflation.

Level	Descriptor	Marks
L3	Able to explain at least 3 sources of inflation (covers both demand pull and cost push) where explanation is underpinned with accurate use of theory and relevant examples.	7-10
L2	Incomplete explanation of the causes of inflation (i.e. there are gaps in the explanation). Limited use of examples	5-6
L1	Briefly explained the sources of inflation or answers were mainly descriptive	1-4

b) Discuss the appropriate measures that will help mitigate the effects of inflation in Singapore. [15]

Approach:

Students are required to explain the relevant the macro policies to address the root cause of the inflation problem in Singapore. The effectiveness of the policies needs to be evaluated in terms of whether they address the root cause of the problem, the sustainability of the policy and whether there are trade-offs in terms of other macro goals, amongst others. Students need to examine the relevance of these policies in the context of Singapore.

Introduction:

Singapore government could consider exchange rate, supply side and trade policies to better cope with strong inflationary pressures as Singapore. The criteria to consider when deciding between policies are 1) effectiveness in addressing the root cause of inflation and 2) minimal conflicts with other macro goals/government objectives, bearing in mind the nature of Singapore's economy who has no natural resources and highly dependent on trade. The most appropriate policy would be the ones that address the main underlying reasons for inflation in Singapore.

Body:

1) **Exchange rate policy** is the main policy tool to mitigate the <u>rise in prices of imported factor inputs leading to cost push inflation</u>.
   In this case, MAS should adopt a slow and gradual appreciation of the Sing dollar so that the price of imports in *domestic currency* falls. Imported inflation falls due to a fall in price of raw materials and intermediate goods. Unit cost of production falls leading to a down wards shift in AS. We would expect the GPL to fall as well.

   This is useful in the context of Singapore since we are dependent on imported raw materials and by maintaining a strong Sing dollar will be effective in curbing high imported inflation.

   If Singapore experiences <u>demand pull inflation due to a strong demand for her exports,</u> a **gradual appreciation of the Sing dollar** may address this type of inflation. The strong Sing dollar will lead to a fall in demand for Singapore's exports and export revenue decreases. At the same time, imports become cheaper in domestic currency, and this increases quantity demanded of imports. Assuming that Marshall-Lerner condition holds, the fall in net exports revenue causes AD to fall, reducing demand-pull inflationary pressure.

   A strong S$ would reduce the price competitiveness of Singapore's exports. However, since it also causes the price of imported inputs and goods to be cheaper, this may off-set some the adverse effect of the strong Sing dollar on the price competitiveness of the exports. Net exports revenue decreases but by a small extent and therefore exchange rate policy may not be able to curb demand pull inflation.

   The government should also ensure that the appreciation is gradual and domestic cost pressures (e.g. the rise in wages) are contained, or else the erosion of exports competitiveness may be severe, and the fall in AD may be large which will result in negative impact on actual growth and employment.

2) If the cost push inflation is caused by domestic cost pressures due to a rise in wages, then the Singapore government can implement **supply side policies.** The policies should focus to raise productivity of workers and firms so that growth in productivity is greater than the growth in wages. This would help to lower unit cost of production, AS will shift downwards and this causes a fall in general price level.

Growth in productivity can be achieved through R&D and the use of better technology to create more efficient production processes. One policy that has been introduced to encourage this is the Productivity and Innovation credit (PIC) scheme. Low skilled workers are also encouraged to upgrade their skills so that they can be more productive at the workplace. The SkillsFuture programme is a new scheme that provides all Singaporeans with the opportunities to acquire greater skills proficiency, knowledge and expertise.

In the last few years, the government has also curbed the growth of foreign workers with the aim of getting firms to switch to utilize more technology in their production and encourage the retraining of low skilled local workers.

These supply side policies not only curb cost push inflation but it helps to increase the productivity capacity of the economy, and this helps to reduce the effect of demand pull inflation in the long run as well.

Despite the fact that Singapore government has been actively promoting policies to raise workers' and firms' productivity, the growth in productivity in some sectors are lagging behind e.g. construction and services, as the scope for increasing productivity in certain sectors may be limited (R&D efforts may not succeed). Also, newly acquired skills can become obsolete quickly due to rapid advancement in technology.

The reduction in the inflow of foreign workers have caused a shortage of workers, especially in sectors such as F&B and manufacturing, supply of labour rises slower than the demand, thus resulting in labour shortage, causing wages to rise. Thus in the short run, these productivity driven policies may cause cost push inflation. Structural unemployment may also rise as the economy restructure to a more productivity-based economy.

3) The government may choose to sign **Free Trade Agreements (FTAs)** with countries that are an important source of imported raw materials and food products e.g. ASEAN, Australia, Brazil. Through these trade partnerships, Singapore is able to diversify its sources of imports. Should there be disruptions in the supply of these raw materials or commodities in a particular foreign market, e.g. steel, food products, Singapore is able to import them from other countries instead and this helps to minimise imported inflation. As the fall in price of imported raw materials affect cost of production of firms, AS curve shifts upwards.

Conclusion

In conclusion, the government has to diagnose and ascertain the type of inflation that the countries and implement policies that address the root cause of the inflation problem. In times when there is a high level of imported inflation and external demand is strong, a strengthening of the S$ would be an appropriate policy since the alleviation of inflation via this method will not compromise economic growth that much. In times when there is high cost-push domestic inflation with weak external demand, the government would have to rely more on supply-side policies that address the rising domestic costs. Singapore government has to consider thd combination of policies in order to alleviate inflationary pressure while keeping in mind the other macroeconomic goals. In the last few years, Singapore's inflation rate has been caused mainly by domestic reasons, namely due to the slow growth in productivity. Therefore supply side policies which reduce structural rigidities in the labour market and certain production markets should be the priority of the government.

L3	9 - 11	Accurate and complete conceptual/ theoretical evaluation of 2 policies that will address both demand pull and cost push inflation. A good reference made to Singapore's economy
L2	6 - 8	Explanation of 2 policies that address both demand pull and cost push inflation, with relevant theoretical concepts but there are gaps in explanation. Limited reference was made to Singapore's economy
L1	1 - 5	Answers are mainly descriptive, limited analysis

.

E2	+ 3-4	Makes a stand supported by good synthesis of the arguments in the body and stand is also linked to varying contexts.
E1	+ 1-2	Makes a stand but substantiation is weak – can't really link arguments in body to the stand taken – i.e. weak synthesis. Reasoning to support stand seems more memorised than understood.