



TAMPINES MERIDIAN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION

H1 ECONOMICS

8823/01

Paper 1

16 September 2019

3 hours

Additional materials

Answer booklet

READ THESE INSTRUCTIONS FIRST

Write your name and Civics Group on all the work you hand in.

Write in dark blue or black pen.

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

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

Answer **all** questions.

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

This document consists of 9 printed pages and 1 blank page.

Answer **all** questions.

Question 1: Healthcare systems around the world

Extract 1: Challenges of Singapore's healthcare system

Singapore's life expectancy has already grown from 75 to 83 within a generation. While this is great news for citizens, an increasingly elderly population – and the related problem of rising rates of chronic conditions – means more strain on medical resources, and this problem is compounded as more of us enjoy longer lives. As such, healthcare expenditure is expected to triple by 2030, rising to \$44 billion from \$17 billion in 2013. In light of this, many private healthcare providers are thinking of raising the price of healthcare as a form of revenue-raising strategy.

Singapore has sufficient capacity to meet demand for aged care. More public hospitals are expected to start by 2022. But it will need to continue to grow services to cater to the greying nation, meaning Singapore needs more than just manpower; it also needs to fundamentally change how its healthcare is delivered. Recruiting and training more medical professionals definitely needs to be part of the solution. But this alone will not cut it as a long-term fix because the nub of the problem is that people are living longer.

Sources: *The Straits Times*, 15 August 2018,
and, *Business Times*, 27 September 2018

Table 1: Selected statistics of Singapore

Year	2011	2012	2013	2014	2015	2016
Fiscal position (million dollars SGD)	4,002.7	5,821.1	4,998.2	571.5	-4,049.7	6,124.8
Price Indices of Healthcare	89.8	93.7	97.3	100.0	99.9	101.0
Price Indices of All items	92.5	96.7	99.0	100.0	99.5	98.9

Source: *Yearbook of Statistics Singapore*, 2018

Table 2: Number of nursing homes in Singapore

Year	2011	2012	2013	2014	2015	2016
Total number of public nursing homes ¹	1	1	5	6	11	13
Total number of not-for-profit nursing homes ²	31	31	28	27	26	26
Total number of private nursing homes ³	32	32	33	32	34	30

¹Nursing homes owned or controlled by a government unit or another public corporation.

²Nursing homes not permitted to be a source of income, or profit or other financial gains for their owners.

³Nursing homes capable of generating a profit or other financial gains for their owners.

Source: *Yearbook of Statistics Singapore*, 2018



Extract 2: Artificial Intelligence (AI) to the rescue in the Japanese healthcare industry

Japan has been experiencing a persistent shortage of healthcare professionals. To alleviate the shortage, the government is teaming up with businesses and academia to set up hospitals enhanced by AI and allowing short-handed doctors to spend more time on patient care while curbing medical spending. AI helps with tasks from updating patients' charts to analysing tests and parsing images to help with diagnoses, which in turn frees up medical professionals' time to focus on more important areas. This means that AI can ease some burden for doctors and nurses and help address the labour shortfall.

The Japanese government is expected to invest more than 100 million yen in the effort over half a decade, with a target of establishing 10 model hospitals by 2022. Such government investment in AI aims to address structural challenges to healthcare, including the chronic lack of doctors and nurses in some areas and rising medical expenses. The initiative will also enhance the competitiveness of AI-enabled medical devices alongside the development of AI technology. Currently, Japan's domestic market for AI-enabled medical devices is estimated at about 2.8 trillion yen. But imports surpass exports by 800 billion yen as doctors rely on foreign-made treatment equipment. Overall, Japan's market related to AI-enhanced treatment is set to reach 15 billion yen by 2025, about 4 times as compared to 2016.

Source: *Nikkei Asian Review*, 9 Aug 2018

Extract 3: The pitfalls of AI

AI has been touted as a possible solution to counter the shortage of medical professionals in the healthcare industry. However, AI is still in its infancy in terms of its use in healthcare. There have also been fears that AI may pose a threat to jobs. However, some proponents argued that this would not be the case in healthcare - at least not in our lifetime. In both diagnosis and treatment, understanding context is vital, so human judgement will still have an integral role to play. This means that even as some jobs are destroyed by the rise of AI, new ones will be created. AI in healthcare can also boost economic growth rates and increase productivity. For instance patients can be diagnosed more quickly and accurately by apps designed to identify illnesses. Nonetheless, the biggest obstacle to implementing AI in healthcare is the lack of trust – more than one-third surveyed say patients will not trust AI to play an active role in their healthcare, and 30 percent assumed that clinicians will not trust it either.

Sources: *Business Times*, 27 September 2018,
and www.channelnewsasia.com, 8 May 2018

Extract 4: The 3 'M' healthcare framework in Singapore – is there a need to review?

Singapore's healthcare system has been well-regarded as an example of how government expenditure on healthcare per capita has been kept low even as continual improvements are made. This is largely attributed to the 3 'M' framework – MediSave, MediShield Life and MediFund.

The MediSave scheme is a compulsory national medical savings account system that allows Singaporeans to set aside part of their monthly contribution to the Central



Provident Fund (CPF) for personal or immediate family's medical and certain outpatient expenses. The compulsory contributions to one's MediSave Account are dependent on a few factors, such as age and income. The MediSave scheme is a unique aspect of the Singapore's healthcare system, because it emphasises on a shared responsibility between the government and people. It is anchored by a co-payment system where individuals can use their MediSave account to offset the costs of various treatments, with a portion being partially subsidised by the government and the rest in cash by the patient.

Next, the MediShield Life, a medical insurance scheme, also administered by CPF Board, offers Singaporeans better protection against high medical bills. MediShield Life helps to offset a portion of the large hospital bills and selected costly outpatient treatments, such as dialysis. If the expenses were too large, the patient would have to draw from his or her MediSave account or cash to pay the remaining balance.

Lastly, the MediFund is a safety net for patients who face financial difficulties with their remaining bills after receiving government subsidies and drawing on other means of payment including MediShield Life, MediSave and cash. An independent MediFund Committee will decide on the appropriate quantum of assistance (in the form of, for example, subsidies) to provide.

However, in recent weeks, the affordability of healthcare services and coverage of medical insurance had come under spotlight, following a case where MediShield Life covered only S\$4.50 of a patient's bill that was over S\$4,000. There were also concerns that MediShield Life did not cover maternity and fertility treatments as well as hospice care.

So, what can the government do to make the policies more affordable? Firstly, it can consider revising its MediSave withdrawal limits, and the qualifying conditions must be done in a calibrated manner. This is to ensure it meets the needs of those who need it most. Next, it can also consider offering tax deductions or reliefs for premiums on medical-related insurance policies, which would alleviate the burden of unforeseen or ongoing medical costs.

Singapore's healthcare system is pragmatic and sustainable. The reality is that with an ageing population, the healthcare burden on the government and Singaporeans will inevitably rise. Empowering self-reliance with targeted support will go some way in helping people better bear the future costs of healthcare. Ultimately, optimal healthcare management must be a shared responsibility between the government and people, and having the right policies that nimbly address the different motivations and needs of various income groups is vital.

Sources: *Today*, 11 February 2019,
and Ministry of Health, 2019



Questions

- (a) Identify **two** differences between the change in the price of healthcare and that of all items in Singapore during the period 2011–2016. [2]
- (b) Summarise the data shown in Table 2 on the different types of nursing homes in Singapore during the period 2012–2016. [2]
- (c) Explain why “healthcare expenditure is expected to triple by 2030” (Extract 1) and comment on the effects. [8]
- (d) With the aid of a demand and supply diagram, explain a possible reason why Japan is experiencing a “persistent shortage” (Extract 2) in the labour market for healthcare. [4]
- (e) With reference to Extract 2, explain the impact of an increase in competitiveness of Japan-made AI-enabled medical devices on **two** components of Japan’s Aggregate Demand. [4]
- (f) With reference to data, assess the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector. [7]
- (g) (i) Explain how information failure has caused an inefficient allocation of resources in the healthcare market. [6]
- (ii) Extract 4 mentions that the Singapore’s healthcare system emphasises on a shared responsibility between the government and people.

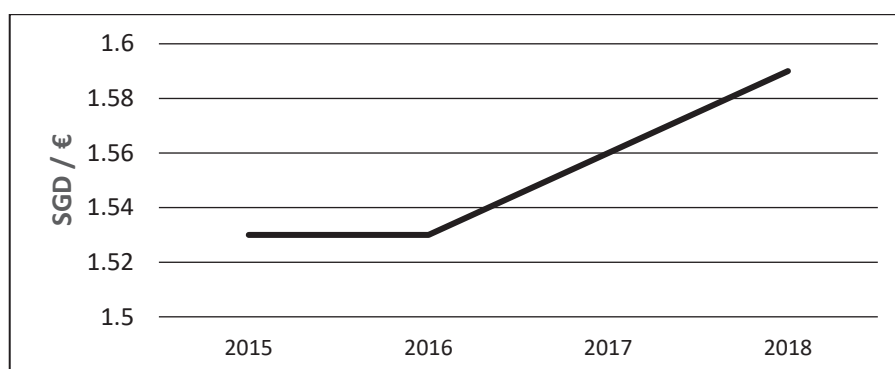
Using evidence from the case study and/or your own knowledge, discuss the extent to which shared responsibility is the best approach to address inefficiency and inequity in Singapore’s healthcare market. [12]

[Total: 45]



Question 2: What happened in the Eurozone and Singapore?

Figure 1: Average exchange rate of Singapore Dollar (SGD) to Euro (€), 2015 to 2018



Source: www.statista.com, accessed on 30 July 2019

Table 3: Selected statistics for the Eurozone¹, 2015 to 2018

	2015	2016	2017	2018
GDP growth (annual per cent)	2.1	1.9	2.5	1.9
Inflation rate (annual per cent)	0.19	0.24	1.54	1.76
Unemployment rate (per cent of total labour force)	10.8	10.0	9.0	8.2
Budget balance (per cent of GDP)	-2.0	-1.6	-1.0	-0.5
Gini Coefficient	0.308	0.307	0.305	-

¹The Eurozone consists of 19 members who are EU members and use the euro. They are Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain.

Source: Various

Table 4: Selected statistics for Singapore, 2015 to 2018

	2015	2016	2017	2018
GDP growth (annual per cent)	2.9	3.0	3.7	3.1
Inflation rate (annual per cent)	-0.52	-0.53	0.58	0.44
Unemployment rate (per cent of total labour force)	3.8	4.1	3.9	3.8
Budget balance (per cent of GDP)	-0.6	-0.5	0.5	-1.1
Gini Coefficient	0.435	0.458	0.459	0.458

Source: Various



Extract 5: Eurozone grows at fastest pace for 10 years

The Eurozone grew by 2.5 per cent in 2017, the fastest growth rate since a 3 per cent rise in 2007. Investec economist Ryan Djajasaputra said much of the growth had been driven by the Eurozone's core four economies: Germany, France, Italy and Spain. He attributed the strength of the Eurozone to the European Central Bank's (ECB) stimulus policies. The quantitative easing (QE) programme cut interest rates in the Eurozone to zero by expanding its money printing programme to revive the economy and fend off deflation. Also, he said confidence had been hitting record levels since the crisis years in the Eurozone and unemployment was down to pre-crisis levels.

Sarah Hewin, chief economist at Standard Chartered, said: "Activity is being supported by strong global growth, which is helping European exporters. In terms of domestic factors, rising wages, low inflation and record-level employment are driving consumer spending; meanwhile, investment is rising, helped by strong profitability and buoyant confidence." However, while she expected Eurozone economic growth to stay strong, "higher energy prices and a stronger euro may be headwinds to growth this year".

Source: www.bbc.com, 14 February 2018

Extract 6: Eurozone unemployment rate falls but youth unemployment rate remains high in some member countries

The unemployment rate in the Eurozone has fallen to its lowest since February 2009. Last month, Greece has the highest rate of unemployment in the Eurozone at 21.7 per cent, and also the highest rate of youth unemployment at 45.5 per cent. The second highest unemployment rate was 17.1 per cent in Spain, which was down from 19.9 per cent a year earlier. Spain also had the second highest level of youth unemployment among 15-24 year olds at 39.2 per cent. Across the region, youth unemployment rates are higher for those who have less education. "The longer that somebody is unemployed, the more likely they are to become discouraged, miss out on opportunities to develop skills and drop out of the labour force," said Jessica Hinds, European economist at Capital Economics.

Sources: www.bbc.com, 31 July 2017,
and Business Insider Singapore, 9 November 2017

Extract 7: European labour market reforms: A two-handed approach

In 1985, European unemployment was double-digit, youth unemployment was high in many countries, and long-term unemployment was increasing. At that time, a group of distinguished economists advocated that policies to lower unemployment must be two-handed – they "must act on supply (on structure) at least as much as on demand; otherwise, gains will be temporary at best and may in fact worsen structural problems".

Thirty years later, aggregate unemployment remains high (though lower than two years ago). Youth unemployment and long-term unemployment are alarmingly high in some countries. Is it time to revive the two-handed approach? And will it work in a world of economic and monetary union and greater global capital and labour integration?

Source: Centre for Economic Policy Research, 5 December 2016



Extract 8: Technological disruption may push up unemployment rate

Singapore's labour market faces challenging times ahead, and not just because of the slowing economy. The lacklustre sentiment has stunted job creation and prompted a wave of layoffs in the hardest-hit sectors. Also, the Monetary Authority of Singapore (MAS) said skills mismatches in the labour market are rising due to the unrelenting technological changes that leave old skills outmoded. The Singapore economy is increasingly moving towards higher value-added, niche sectors – such as medical technology and data analytics – in a bid to maintain its competitive edge. These provide good jobs, but require specialised skills that most retrenched PMETs (professional, managers, executives and technicians) do not have and may take a while to acquire.

More than just a loss of financial security, retrenchment can have a knock-on effect on mental health and well-being too. Middle-aged to older adults tend to be more susceptible to job-related anxiety as they worry that it is too late to start over or re-train themselves. To adapt, workers can keep a lookout for opportunities to deepen and extend their own skills, said SIM University economist Walter Theseira. “It is going to be very hard for the Government or employers to force workers down a particular skills pathway, because everyone has different abilities.” He also suggested that policymakers aim to ease this “adjustment burden” to the firms by subsidising wage costs.

Source: *The Straits Times*, 28 October 2016

Extract 9: Singapore well-placed to weather uncertainties but government ready to step up support

With a strong fiscal position and restructuring of the economy, Singapore is well-placed in the weakened global economy, said Trade and Industry Minister Chan Chun Sing. Nevertheless, the Government is closely monitoring all economic developments and stands ready to step up support for companies here, he said. Noting that the global economy has weakened, the minister pointed to the US-China trade dispute and Brexit as key uncertainties. Singapore’s open and trade-reliant economy logged its slowest growth in nearly a decade during the first quarter.

Given the external challenges, MAS said the Singapore economy will turn towards domestic drivers for growth such as higher government spending on research and technology. The country must constantly refresh its offerings to businesses and investors so as to seize new opportunities such as additive manufacturing which is being created in the field of advanced manufacturing. In addition, the Government tries to provide a skilled workforce that continues to take up training. As digital trade is also a key driver of Singapore’s future economic growth, Mr Chan said Singapore will keep advocating for an integrated and global digital economy by co-developing international trade rules in this area.

Source: www.channelnewsasia.com, 8 July 2019



Questions

- (a) (i) With reference to Figure 1, state what happened to the average exchange rate of the Singapore Dollar between 2015 and 2018. [1]
- (ii) With the aid of a demand and supply diagram, explain one possible reason for the change observed in (a)(i). [3]
- (b) To what extent can it be concluded from Table 3 that the standard of living in the Eurozone in 2018 is better than in 2015? [7]
- (c) With reference to Extract 5 and using AD/AS analysis, explain and comment on how “higher energy prices and a stronger euro may be headwinds to growth this year”. [8]
- (d) With reference to Extract 8, identify and explain the main types of unemployment in Singapore. [6]
- (e) Explain the impact of higher unemployment on employees, the government and the economy. [8]
- (f) Discuss the extent to which a government from the Eurozone should adopt the policies implemented by the Singapore government to achieve both economic growth and a low rate of unemployment. [12]

[Total: 45]



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TMJC Economics Unit 2019
JC2 H1 Economics 8823
JC2 Prelim Suggested Answer Package



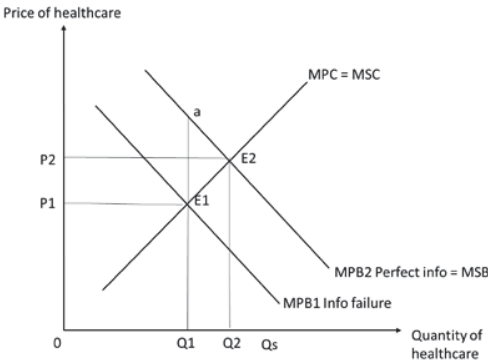
Suggested answers for CSQ1

(a)	<p>Identify two differences in the change in price of healthcare with that of all items in Singapore from 2011 to 2016 (2m)</p> <ul style="list-style-type: none"> - Overall the price of healthcare (12.5%) experience a higher increase of 1.8 times than all items (6.9%) in Singapore - In 2016, the price of healthcare increase, but the price of all items in Singapore fell. 	[2]
(b)	<p>Summarise the data shown in Table 2 on the number of different types of nursing homes in Singapore from 2012 to 2016.</p> <p><u>Overall trend:</u> the number of public nursing homes increased, whilst the number of private and non-for-profit nursing homes has fallen.</p> <p><u>Refinement:</u> The number of the private nursing home remains the highest each year. OR The number of public nursing home remain the lowest each year.</p>	[2]
(c)	<p>Explain why the “healthcare expenditure is expected to triple by 2030” (extract 1) and comment on the effects.</p> <p><u>Explain (5m)</u></p> <ul style="list-style-type: none"> • Increase in Demand → higher life expectancy/Ageing population + chronic diseases → increase in DD by a great extent over a sustained period of time (due to the chronic nature and higher lifespan to demand for healthcare) → Increase in TE (PxQ) • Fall in Supply → shortages of labour in the healthcare industry upward pressure in wages → increase unit COP of supplying healthcare → healthcare is a necessity and broadly defined hence PED < 1. Increase in price of healthcare leads to a less than proportionate fall in qty Dd → gain in TE resulting from a rise in price outweigh the fall in Qty dd due to a fall in TE → Overall TE increases. • Hence, both the increase in DD and fall in SS in healthcare reinforce the increase in TE leading to a very large extent into the future. <p>Comment: Up to 3 further marks for valid and relevant comment on the effects:</p> <p>1. Challenge the claim “expected to triple” → comment on the extent of increase.</p> <p>(Point) In the future, changes in production techniques in the healthcare industry (e.g. The option of AI) may (Economic linkages) increase the productivity hence lower the unit COP. Hence this mitigates the increase in TE. Given the (Evidence) trend that other countries such as Japan are adopting AI, Singapore may follow the model of Japan given the similar demography and hence this is likely to happen to large extent. (Link back to question) Thus, the increase in TE may be to a smaller extent than ‘triple’ effect.</p> <p>2. The increase in expenditure may happen in a shorter time frame than suggested by the extract (i.e. earlier than 2030). This may happen if the demand for healthcare</p>	[8]

	<p>increases faster than expected. In challenging the ceteris paribus assumption, apart from demography changes of ageing population, compounded by chronic diseases occurrence there could be evolving health issues in the younger working adult segments of the population due to mental health problems or work-stress related health issues in the Singapore population. Hence demand will increase by a larger extent, within a shorter time period.</p> <p>3. The effect of healthcare expenditure increase in the future could mean that from the perspective of consumers and government, higher opportunity costs is incurred.</p> <p>Higher healthcare expenditure borne by the consumer imply that there is a trade off in expenditure on other consumer goods, assuming the incomes of households remain unchanged. On the other hand, higher healthcare expenditure may imply that the government will need to increase gov expenditure to provide higher subsidies to lower income households and hence incur an opportunity costs in expenditure on other developmental areas such as education This also assumes that the government revenue remains unchanged.</p> <p>The extent of opportunity costs incurred maybe higher for households because relative to the government, their incomes are likely to be remain unchanged for a longer period of time. Whereas the government can easily garner more resources through policy changes leading to higher tax revenues.</p>	
(d)	<p>With the aid of a demand and supply diagram, explain a possible reason why Japan is experiencing a “persistent shortage” (Extract 2) in the labour market for healthcare.</p> <ul style="list-style-type: none"> An accurate labelling and use of a labour dd-ss diagram.  <ul style="list-style-type: none"> Explain a possible demand increase or supply fall of labour. Define shortage: Qty DD > Qty SS @ W1 wage level, shown on the diagram. Address “persistent” <ul style="list-style-type: none"> Short term rigidity, wages unable to adjust upward due to contract agreements. Time lags for wages to price to clear the labour market. Before a new equilibrium is reached, DD increases again/ SS falls again leading to a shortage again. 	[4]

(e)	<p>With reference to Extract 2, explain the impact of an increase in competitiveness of Japan-made AI-enabled medical devices on two components of Japan's aggregate demand.</p> <ul style="list-style-type: none"> - Define competitiveness - price competitiveness, non-price competitiveness - Define AD: $C + I + G + X - M$ - With reference to Extract 2 → there is government investment in the development of AI → the investment can be in the form of a subsidy to the research & development → An increase quality and applicability of AI in the healthcare sector → increase in non-price competitiveness → Increase in DD for Japan medical devices by foreigners with reason/linkages → X revenue increases - A government investment can also mean a direct subsidy to the production of AI enabled medical devices → lower unit COP of AI enabled devices → An increase in price-competitiveness → healthcare sector switch from imported medical devices to purchase cheaper domestically produced medical devices → Cd 	[4]
(f)	<p>With reference to data, assess the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector.</p> <ol style="list-style-type: none"> 1. Constraints: For a government to invest in AI to apply to the healthcare sector, it will involve expenditure on R&D and development of capital goods e.g. Robotics related to healthcare sector. However, the constraints that the government faces will influence this decision. For e.g. a government with a budget deficit may not have the funding to do so, but the government with a budget surplus (Singapore in Table 1) will have the capabilities. 2. Benefits: The government will need to have information about the benefits and be able to monetize it. The benefits of developing AI in the healthcare sector involve "Automate routine" (Extract 3). This will increase productivity of healthcare services in turn deepening the quality and quantity of healthcare services produced thus raising the material and non-material SOL of citizens. Other forms of benefit can include early detection of diseases, enabling patients to seek medical earlier that can potentially be cheaper. Thus, the overall costs of medical fees to the household will be reduced. 3. Costs (explicit and opportunity costs): It is very costly to research in R&D of AI in healthcare, thus the same value of expenditure in AI cannot be deployed in other sectors e.g. education, thus incurring an opportunity cost. Such trade-offs can be high for emerging economies where the development of healthcare, education and other social sectors still require more expenditure. 4. Unintended consequence: An unintended consequence is structural unN, the application of AI can cause technological unN in the short term due to the lack of skills to manage robotics. <ul style="list-style-type: none"> • Criteria: Time. The long-term prospects of healthcare industry see a fast-growing demand and a situation of shortages of manpower. Assuming a government is not constraint by the budget, the benefits factor is the most important to consider as a 	[7]

	<p>permanent long-term solution to alleviate the manpower shortages and also improve the quality of healthcare. No doubt, AI will be very costly, without it, solving recurring issues (higher wages of labor due to shortages) in the healthcare market over time, may incur as much or more costs.</p> <ul style="list-style-type: none"> Finally, unintended consequence though negative, can also be offset by unintended beneficial consequences. For e.g. the adoption of AI can lead to technological transfer of knowledge to workers, thus raising their skills on the job. For government such as Japan that can also export the capital goods, AD and ADL can increase to encourage further employment in the country. <table border="1"> <tr> <td>L2</td><td>Well-developed, balanced explanation the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector</td><td>4-5</td></tr> <tr> <td>L1</td><td> <p>Descriptive or analysis that lacked depth with regards to the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector</p> <p>OR</p> <p>Up to 1 well-explained factor that a government would have considered in deciding whether to invest in AI in the healthcare sector (capped at 3m)</p> </td><td>1-3</td></tr> <tr> <td>EV</td><td>Well-reasoned evaluation on the factors a government would have considered in deciding whether to invest in AI in the healthcare sector (e.g. ranking of the importance/ significance of the factors from government's perspective)</td><td>Up to 2 marks</td></tr> </table>	L2	Well-developed, balanced explanation the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector	4-5	L1	<p>Descriptive or analysis that lacked depth with regards to the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector</p> <p>OR</p> <p>Up to 1 well-explained factor that a government would have considered in deciding whether to invest in AI in the healthcare sector (capped at 3m)</p>	1-3	EV	Well-reasoned evaluation on the factors a government would have considered in deciding whether to invest in AI in the healthcare sector (e.g. ranking of the importance/ significance of the factors from government's perspective)	Up to 2 marks	
L2	Well-developed, balanced explanation the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector	4-5									
L1	<p>Descriptive or analysis that lacked depth with regards to the factors that a government would have considered in deciding whether to invest in AI in the healthcare sector</p> <p>OR</p> <p>Up to 1 well-explained factor that a government would have considered in deciding whether to invest in AI in the healthcare sector (capped at 3m)</p>	1-3									
EV	Well-reasoned evaluation on the factors a government would have considered in deciding whether to invest in AI in the healthcare sector (e.g. ranking of the importance/ significance of the factors from government's perspective)	Up to 2 marks									
(g)	<p>(i) Explain how information failure has caused an inefficient allocation of resources in the healthcare market.</p> <p>Define information failure in the healthcare market:</p> <ul style="list-style-type: none"> under-estimation of the private benefits in consumption of healthcare For example, consumption of healthcare services such as regular health screening or primary healthcare improves the health status of a person over the long term and the good health enjoyed later on age enables the individual to be more productive in their work and raises their salaries over their working lives. However, the increases in income as well as healthcare costs savings are in the future, uncertain and difficult to estimate accurately. This lack of information leads people to underestimate the private benefits healthcare and leads to an under-demand and under-consumption of education as seen in Figure 1 where MPB_1 (info failure) $< MPB_2$ (perfect information), and <u>it is assumed that there is no externality in consumption of healthcare since only information failure is relevant in this question.</u> 	[6]									

	 <ul style="list-style-type: none"> • The market equilibrium is at E1 where $MPB1 = MPC$ as producers and consumers maximize their self-interest and suffer from information failure. The <u>market output</u> will be at $0Q1$ and market price at $OP1$. • Society's welfare is maximized at $MSB = MSC$ where there is perfect information. The socially optimal level of output is at $0Q2$ and the socially optimal level of price is at $OP2$ and this is where society's welfare is maximized. The society's welfare is maximized as producing one more or one less unit will reduce society's welfare. • There is, thus an underproduction and underconsumption of $Q1Q2$ units of the good which means that there is an underallocation of resources into the market for education. • Total social cost from consuming $Q1Q2$ units of the good ($Q1E1E2Q2$) is less than the total social benefit from consuming $Q1Q2$ units ($Q1aE2Q2$), leading a welfare loss of area $E1E31$. This is also known as a deadweight loss • Hence there is allocative inefficiency in the market where the right amount of the good is not produced and there is market failure. 	
	<p>(ii) Extract 4 mentions that the Singapore's healthcare system emphasises on a shared responsibility between the government and people.</p> <p>Using evidence from the case study and/or your own knowledge, discuss the extent to which shared responsibility is the best approach to address inefficiency and inequity in Singapore's healthcare market.</p> <p><u>Introduction:</u> State aim of government: All governments, including the Singapore government, aims to maximise societal welfare, and in the aspect of healthcare market, it aims to achieve efficiency in resource allocation and equity in distribution.</p> <p><u>Link to the Extract (4) and address the question:</u> As mentioned in Extract 4, one unique feature of the Singapore's healthcare system is its emphasis on a shared responsibility between the government and people. Such a shared responsibility is anchored by a co-payment system where individuals can use their Medisave account to offset the costs of various treatments, and is partially subsidised by the government. In addition, the Medisave account is a compulsory national savings</p>	[12]

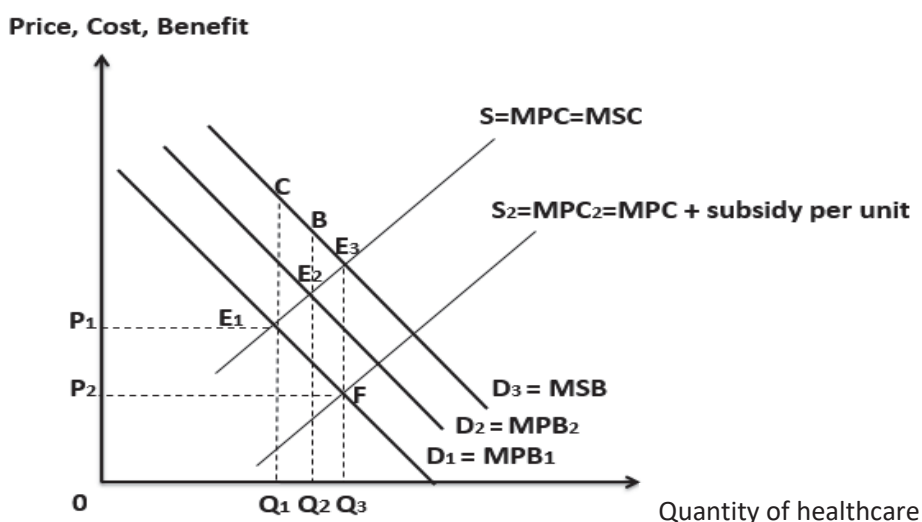
scheme, indicating that it is also a form of legislation. However, there are possible drawbacks in this policy, which are discussed below.

Body/ Development:

Thesis: Shared responsibility is the best approach for the healthcare market in SG
Explain Step (1) What the policy is about + Step (2) How well the policy works + Step (3) How well the policy works (Benefits)

Firstly, the shared responsibility feature is a combination of legislation and subsidies.

The shared responsibility is akin to “a co-payment system” (Extract 4), meaning that patients (e.g. consumers) can “use their Medisave account to offset the costs of various treatments, with a portion being covered by government subsidy and in cash by the patient”. Since the government also partially subsidises for the patients’ healthcare expenses, this would mean that when the government grants a subsidy of E3F equivalent to divergence between D1 and D3 at output, $0Q_3$. This reduces the unit cost of supplying healthcare. With the decrease in unit cost of production, there is now more potential profit for each unit of output the industry produces. The producers are incentivized to increase the quantity supplied at every price thus shifting the supply curve from S to S_2 as shown below. The market output thus increases from $0Q_1$ to the socially optimum output of education, $0Q_3$, correcting the under-allocation of resources. The market price falls from OP_1 to OP_2 . The socially ideal price of OP_3 is not attained.



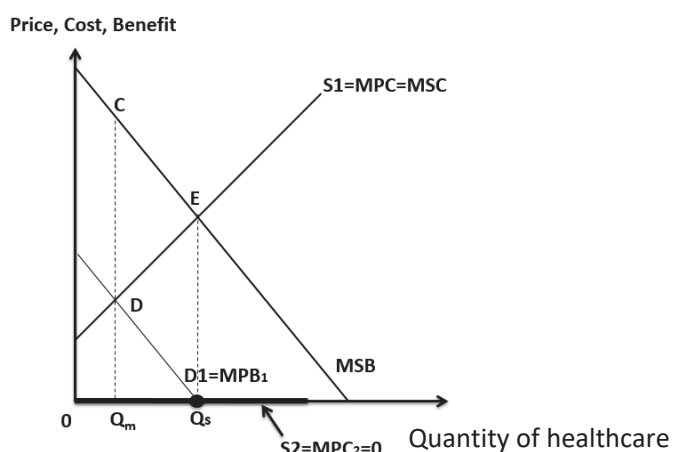
Pros of shared responsibility:

- ⊗ More importantly, since this is a shared responsibility between government and its people, the Singapore government minimises the risk of over-subsidy in this case, which in turn may reduce the extent of government failure due to imperfect information. It also reduces the excessive worsening of government budget, and in turn, the government is then able to allocate its budget to other equally or more important sectors (e.g. education), depending on its priorities. Hence, the opportunity cost incurred here as opposed to a full subsidy is a lower.

	<p>⊗ In addition, such as shared responsibility approach raises the incentive for consumers (patients) to take care of their health, as they still have to pay a portion via their Medisave account. This will reduce the risk of the unintended consequence of overconsumption of healthcare services as opposed to a full-fledged subsidy.</p> <p>⊗ Being a market-based solution, subsidy can be easily implemented to bring about socially ideal level of resource allocation without excessive government monitoring as compared to other measures. It has greater flexibility and fairness as the amount of subsidy can be varied to reflect the extent of information failure and external benefit that arise in the healthcare market. In addition, it gives the patient an incentive to undertake more healthcare (e.g. raise in demand) since it reduces additional private costs of healthcare at any given level of output.</p> <p>⊗ <u>Answer the question / Link back to the question:</u> Overall, this suggests that shared responsibility may be the best approach for the healthcare market in Singapore.</p> <p><i>Antithesis (1): Shared responsibility is <u>not</u> the best approach for the healthcare market in SG</i></p> <p><i>Explain Step (3) How well the policy works (Costs)</i></p> <p>⊗ However, Extract (4) also mentions that “in recent weeks, the affordability of healthcare services...had come under spotlight”. This suggests a possible under-subsidy by the government, thereby unable to achieve a socially optimal level of output in the healthcare industry. As such, government failure ensues. This is further supported by Extract 1, which states that “healthcare expenditure is expected to triple by 2010, reducing the affordability of healthcare and hence a higher subsidy may be required to eliminate the welfare loss. <i>(students can choose to illustrate the possible government failure on a diagram)</i></p> <p>⊗ <u>Answer the question / Link back to the question:</u> Overall, this suggests that shared responsibility may <u>not</u> be the best approach for the healthcare market in Singapore.</p> <p><i>Antithesis (2): Shared responsibility is <u>not</u> the best approach for the healthcare market in SG</i></p> <p><i>Explain other policies pertaining to context and/or with own contextual knowledge</i></p> <p><u>E.g. Government provision (direct provision):</u></p> <p>Since shared responsibility via co-payment system has its limitations, it may not be the best approach for the healthcare market in Singapore. Thus, the Singapore government can consider using direct provision instead.</p> <p>Government can provide healthcare services directly to consumers (in this case this is the firms) free of charge e.g. fully subsidizing the cost of healthcare.</p> <p>For example, the Singapore government could perceive the extent of market failure in the healthcare market to be extremely large and chooses to provide free healthcare services to its citizens. Referring to the diagram below, assume that the extent of positive externality and information failure generated is extremely large at EQs. Without government intervention, the market equilibrium is at $DD = SS$ ($MPB1 = MPC1$) where there exists a severe under-consumption of Q_mQ_s. Free government provision of</p>	
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healthcare results in the marginal private cost incurred to be at 0 (MPC_2) and the supply curve to be perfectly price elastic (S_2). With free provision of healthcare ($P=0$), the new market equilibrium is now at $D_1 = S_2$ ($MPB_1 = MPC_2$) and consumption is at the socially optimum level of Q_s .

There is effectively a 100% subsidy by the government. Deadweight loss of CED is eliminated and the right amount of the healthcare services is being produced thereby achieving allocative efficiency. In this instance, providing healthcare free leads to an efficient and equitable allocation of an economy's resources.



Pros of direct provision:

- ⊗ Direct provision by the government ensures efficiency in the market by solving the shortfall directly. Moreover, state provision allows the government greater control over the quality and quantity of the healthcare services to be provided. This makes it easier to intervene in the healthcare market to achieve their goals.
- ⊗ High initial investment is needed to set up hospitals and healthcare facilities and to ensure that it is provided at the right amount. If the provision of healthcare is left entirely to the private sector, there would be insufficient investment and the market failure will still persist. Direct provision by government would ensure an optimal provision of healthcare is consumed and coordinated in the public interest.
- ⊗ State provision of healthcare ensures that the poor are not left out and there is equality of opportunity. There are some things that should be provided not according to the ability to pay but according to need. It should be provided as a right. Given the inequality in income, people have unequal access to healthcare services and lower income groups might not be able to afford. If healthcare services are left to market forces, they will only be accessible to the higher income groups. The income inequality would persist and worsen over time, eroding social cohesion.

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Cons of direct provision:

- ⊗ However, direct provision requires spending by the government which may worsen the government's budget position. In addition, financing such expenditure by tax revenue may result in **unintended consequences** such as the disincentive effects on investment and work, hampering economic growth in the long term. Raising direct

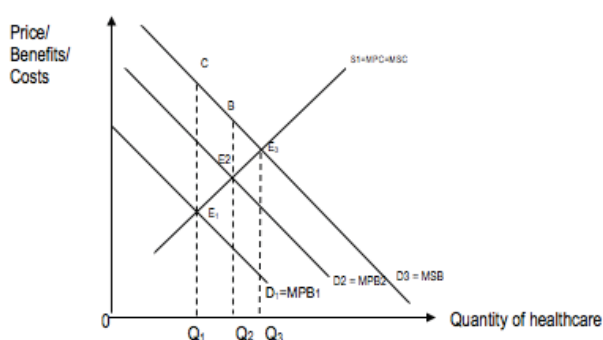
taxes decreases household's incentives to work and firm's incentives to invest. Higher personal income tax decreases disposable income (income after minus taxation and addition of transfer payments). This increases the opportunity cost of working (or lowers the opportunity cost of enjoying leisure). Hence workers may have less incentive to work longer hours, work more efficiently. Or it might entice people that were previously employed to give up work. At every price individuals are less willing to work and each market produces less output. If enough individual supply curves shifted, the total amount the economy can produce decreases.

- ⊗ There is the risk of government failure. Governments face the **constraint** of being unable to gather enough information to determine the right amount to provide in the market. Public ownership may also create more problems if it is plagued by bureaucracies.

E.g. Legislation:

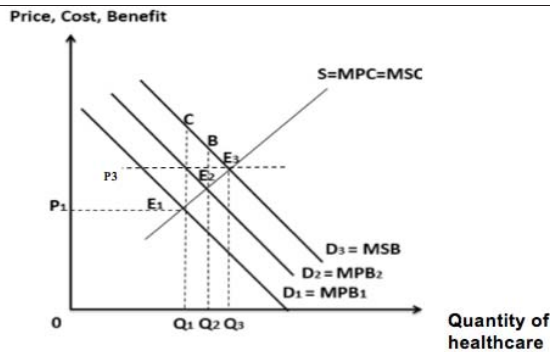
In addition, the government can also consider legislation. Legislations are rules and regulations for compliances. For instance, the government has made certain vaccinations such as those administered to a child before 1 year of age (e.g. for Diphtheria & measles) compulsory.

Punitive measures will be established. There will be monitoring and checking to ensure that consumers adhere to the compulsory vaccinations in the market for healthcare. Otherwise, such lawbreakers will be punished e.g. they may have to pay a fine. Such measures when put in place ensure compliance; and law breakers will be taken to task. The fear of being punished upon violation of the laws prevent the stealing of intellectual property and increases the incentives to consume more healthcare towards socially optimal, thereby correcting the market failure.



The benefits of these legislations raise the industry's demand of healthcare as individuals compliant with the laws to avoid punitive measures. This is shown by a rightward shift of demand curve for healthcare from D1 to D2 (or MPB2) as shown in the diagram above. There is now more incentive to pursue healthcare. At every price level, the quantity of healthcare demanded increases. This results in the industry undertaking education at $MPB = MPB2$ an increase of $Q1$ to $Q2$. The industry is now nearer to the socially optimum level of healthcare, $OQ3$, and there is underproduction of fewer units ($Q2Q3$) of healthcare services thus reducing the deadweight loss from $E1E3C$ to $E2E3B$. Market failure as a result has been reduced. If government intervention is very successful and

	<p>the policy is very effective, the industry will be able to internalize the full external benefits and MPB increase to MSB leading to the market failure fully corrected.</p> <p><i>Pros of legislation:</i></p> <p>✓ Legislation is considered to be a powerful tool as it is mandatory. While market-based solutions may be a more sophisticated means of reaching a socially efficient output, command-and-control methods are usually more straightforward to devise, easier to understand and easier to implement. It is used when it is not possible or effective to rely on changing market signals. E.g. when the extent of the market failure is extensive or plagued with high degree of uncertainty, it is only realistic to use regulations.</p> <p><i>Cons of legislation:</i></p> <p>⊗ However, laws require <u>costly monitoring</u> and <u>enforcement</u>. For this measure to be effective, the government needs regular checks to ensure adherence. This requires large amount of manpower to monitor and enforce, which involves high opportunity cost. The penalties for violations also need to be severe enough for the measure to be a deterrent.</p> <p>⊗ In addition, legislations are also considered to be a blunt instrument compared to market-based solutions as it is not sensitive and cannot be customised to the needs and circumstances of the individual patients (e.g. consumers) and can only be changed through legislation which may be burdened by bureaucracies.</p> <p><u>E.g. Education & campaigns:</u></p> <p>Moreover, as mentioned in gi, information failure / imperfect information as a source of market failure also exists in the market for healthcare. Thus, another policy to solve this source of market failure would be education & campaigns.</p> <p>The Singapore government can conduct many healthcare awareness campaigns (e.g. diabetes campaigns etc). By doing so, the government can educate the public through mass media and carry out campaigns to teach the citizens the importance of consuming healthcare. Private benefits will be appropriately valued and demand for the good will increase, increasing production and consumption of merit goods towards socially optimal level. Referring to the diagram above, if such provision of healthcare successful in addressing the information failure and thus increasing demand from D1 to D2, raising production and consumption from Q1 to Q2, the inefficiency would be reduced. The deadweight loss has decreased from E1E3C to E2E3B.</p>	
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Pros of education & campaigns:

- ✓ Public education may also appeal to people's social responsibility to care for others. Once citizens are convinced, demand for the good will rise further increasing the consumption of the good closer to the socially optimal amount. Public education is particularly useful in addressing one of the 2 problems of merit goods such as healthcare - information failure.

Cons of education & campaigns:

- ⊗ Public education is a long-term and costly process to undertake with uncertain outcomes. The success of this measure depends on the receptivity of the target audience which is highly unpredictable. In addition, financing public education requires government spending which may be financed by high taxes, creating disincentive effects on work and investment. There will be adverse effects on economic growth.

Synthesis & Evaluative Conclusion:

Overall, whether shared responsibility is the best approach to the healthcare market in Singapore depends on:

- ⊗ State / size of government budget → if budget constraint is a concern, then shared responsibility could be considered as the best approach as it is only a form of partial subsidy as opposed to a full-fledged subsidy that may worsen the government budget by a larger extent. For the Singapore government, the budget may not be a constraint as it is experiencing mainly a surplus (Table 1), though high opportunity costs may still be incurred.
- ⊗ Government's objective → if the government's purpose is to prioritise equity over efficiency, then perhaps the shared responsibility approach is not the best approach as it is only a partial subsidy as opposed to a full fledged subsidy approach. However, the shared responsibility approach may be considered relatively more efficient than other policies such as MediFund and full subsidy as it reduces the risk of overconsumption of healthcare.
- ⊗ Extent of information that government possesses → may lead to over/ under subsidisation of healthcare → this is minimised by the shared responsibility approach → may then be considered as the best policy
- ⊗ Root cause → if healthcare is seen as a merit good, then the root cause would be imperfect information → education & campaigns would be the best approach in solving the information failure. However, in the context of SG, the main source of

<p>market failure in the healthcare market could be inequity instead, and hence perhaps subsidy/ shared approach etc may be a better approach.</p> <p><i>Or any other possible synthesis points, as long as they are relevant and appropriate in the context of the question.</i></p> <p><u>Overall conclusion:</u> Since there are pros and cons in each policy suggested, this implies that there is no best approach to the healthcare market. Perhaps, it would be wise for a rational government to implement a plethora of complementary policies instead of relying on 1 as the best approach. This is supported by Extract 4, which states that “having the right policies that nimbly address the different motivations and needs of various income groups is vital”. Also, Extract 4 proposes making refinements /tweaks to the current existing policies, such as revising Medisave withdrawal limits via means-testing approach (e.g. “meets the needs of those who need it most”). This can perhaps better target the equity issue (e.g. “empowering self-reliance with <i>targeted</i> support”), and hence solve the sources of market failure in a more concerted manner.</p>		
L3	An answer that explains how shared responsibility may be the best approach for healthcare market in Singapore.	6-9
L2	<p>An answer that only explains how 1 policy rigourously on how shared responsibility may be the best approach for healthcare market in Singapore.</p> <p><i>OR</i></p> <p>An answer that explains 2 policies (but briefly) on how shared responsibility may be the best approach for healthcare market in Singapore.</p>	3-5
L1	A vague, descriptive or list-like answer on the different types of policies or policies that did not link to shared responsibility nor address the question.	1-2
EV	Well-reasoned evaluative comments on whether the shared responsibility is the best policy for the healthcare market and consideration of existing issues like increasing budget deficit that country is facing which may limit the effectiveness of the proposed policies, root cause, extent of information that government possesses etc.	Up to 3m

Suggested answers for CSQ2

(a)	(i)	With reference to Figure 1, state what happened to the average exchange rate of the Singapore dollars between 2015 and 2018.	[1]
		Depreciated [1]	
	(ii)	With the aid of a demand and supply diagram, explain one possible reason for the change observed in a(i).	[3]
		<ul style="list-style-type: none"> Positive GDP growth (Table 3) → increasing national income → increase purchasing power → increase demand for imported goods → increase supply of SGD in exchange for foreign currency to buy imported goods [1], assume ceteris paribus → surplus of SGD in foreign exchange market [1] → depreciation of SGD Diagram [1]: rightward shift of SS of SGD <p>OR</p> <ul style="list-style-type: none"> Increase in GPL of SG gds & svs (positive inflation rates in 2017-2018 in Table 3) → $P_x \uparrow \rightarrow m.t.p \downarrow Q_{dx}$, assuming demand for SG exports is price elastic → $X \downarrow \rightarrow$ foreigners' spending on SG exports fall → decrease in demand for SGD [1], assume ceteris paribus → surplus of SGD in foreign exchange market [1] → depreciation of SGD Diagram [1]: leftward shift of DD of SGD <p>Note: Can accept any other plausible reason.</p>	
(b)		To what extent can it be concluded from Table 3 that the standard of living in Eurozone in 2018 is better than in 2015?	[7]
		<p>Define SOL</p> <ul style="list-style-type: none"> SOL is classified into material and non-material well-being where material well-being is the amount of goods and services enjoyed by the individuals in the economy while non-material well-being involved how quality of life is affected. <p>Thesis: Explain how data suggest how the living standards of Eurozone has improved.</p> <p>SOL in Eurozone has improved. From Table 3, growth rates is increasing at a decreasing rate for some of the periods but <u>growth rates are positive</u> for majority of the periods. This suggest that GDP is still increasing over the years just that the extent of the increase is smaller in certain years such as 2016 and 2018 but not sufficient for us to see slow growth is happening. The positive growth rates suggest that rate of increase in amount of goods and services increases and material well-being of citizens rises. More jobs are created and there is also increase in wage growth. The economy is also less susceptible to negative shocks. This is further supported by Extract 5 where</p>	

	<p>growth is said to rise fastest. This suggest that business confidence has improved, which higher investment rate, which supports material SOL is higher.</p> <p>Also, the GINI coefficient that is close to zero and smaller over the years suggest that income distribution is relatively equal and hence a rise in real GDP per capita could mean that SOL for the majority should increase not only the minority rich.</p> <p>Moreover, there is a <u>fall in unemployment</u> → increase in jobs and income → able to buy more goods and services thus improving material SOL. Also, lower unemployment → less social problems, less stress from being unemployed → improve <u>non-material SOL</u>. The lower unemployment rate also lower government spending which is supported by the decrease in budget deficit (% of GDP). Furthermore, <u>inflation rate has increased but it still fall under the healthy range of below 3%</u>. This reflects price stability which increases investors' and consumers' confidence and increase real income which increase material well-being.</p> <p><u>Anti-Thesis: Explain living standards of Eurozone may not have improved because there are data that prove otherwise and insufficient data to ascertain.</u></p> <p>Also, the <u>unemployment rate is high</u> at above 5% rate for both periods. Although unemployment rate has improved, the level is still in an unhealthy range which reflect that there are spare resources in the economy and a wastage of resources. Hence, standard of living may not increase.</p> <p>Moreover, there are insufficient data to ascertain that SOL has improved.</p> <p>i) Real GDP figures are not presented</p> <p>A rise in nominal GDP per capita may overstate the change in SOL as it may be due to an increase in GPL and not actual production. High Inflation as reflected by rising general price levels → higher general price level of goods and services → consumers having lower real purchasing power → lowering their ability to purchase goods and services → lower quantities of goods and services consumed → lower material SOL.</p> <p>ii) Not sufficient to assess non-material SOL</p> <p>SOL is made up of both material and non-material wellbeing. There is a need to include more indicators such as PSI, literacy rate, life expectancy, etc. to take into pollution levels or stress levels which are better able to assess Eurozone's non-material SOL. For instance, high growth rate through rapid industrialisation and long working hours can increase pollution and stress which worsen health of individuals. This reduce quality of life.</p> <p>(Choose one)</p> <p><u>Conclusion: Address question intent on SOL.</u></p> <p>There are missing data on indicators such as CO2 emission, stress levels and life expectancy to have accurate assessment on the quality of life of Europeans over the years. Moreover, the GDP growth rates indicates the material well- being of the</p>	
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	<p>country. It does not show tell us whether individuals are better off because it does not inform us about the income distribution.</p> <p>Even so, the majority of the data suggest that the SOL of Eurozone has improve. For instance, Gini coefficient showed a downward trend and other than unemployment rate, all other indicators are in the ideal range. To have a more accurate measurement of the data, there needs to be a composite indicator such as the Human Development Index to better inform us. The HDI measures the real GNP per capita, life expectancy and educational attainment.</p> <p>A higher real GNP/capita, longer life expectancy and higher education attainment would be reflected by a higher HDI. A higher GNP/capita reflects higher material well-being. Longer life expectancy indicates the ability of the people in the country to lead a long and healthy life while a higher education attainment indicates the ability of the people to acquire knowledge and hence, get better job opportunities and obtain higher job satisfaction. This ensure better quality of life.</p> <table border="1"> <tr> <td>L2</td><td>Well-developed, balanced explanation on how the SOL of Eurozone has improved based on Table 3</td><td>4-5</td></tr> <tr> <td>L1</td><td>Undeveloped, balanced explanation on how SOL of Eurozone has improved</td><td>1-2</td></tr> <tr> <td>EV</td><td>Well-reasoned evaluation that considers whether there is sufficient data to suggest improvement in SOL</td><td>Up to 2 marks</td></tr> </table>	L2	Well-developed, balanced explanation on how the SOL of Eurozone has improved based on Table 3	4-5	L1	Undeveloped, balanced explanation on how SOL of Eurozone has improved	1-2	EV	Well-reasoned evaluation that considers whether there is sufficient data to suggest improvement in SOL	Up to 2 marks	
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(c)	<p>With reference to Extract 5 and using AD/AS analysis, explain and comment on how “higher energy prices and a stronger euro may be headwinds to growth this year”.</p>	[8]									
	<p><u>Interpret ‘headwinds to growth’</u></p> <p>Headwinds to growth meant that there is slow growth or decrease in growth in the economy.</p> <p><u>Explain how higher energy prices and stronger euro will reduce growth.</u></p> <p>From extract 5, the <u>stronger euro</u> will increase external value of euro which cause price of exports in foreign currency to increase and price of imports to fall. This reduces export demand and increases quantity demanded of imports. Assuming Marshall Lerner condition holds where $(PED_x + PED_m) > 1$, there will be a fall in net exports and hence AD falls. Since $(X-M)$ is a component of aggregate demand, AD falls. The fall in AD will increase inventories and reduce production of goods and services. This reduces employment of factors of production. Real output falls. This threatens growth in Euro.</p> <p>Furthermore, the <u>higher energy prices</u> suggest that unit cost of production is higher. Firms driven by profit-motive respond by increasing the prices of their goods and</p>										

	<p>decreasing their output level. This is represented by a reduction of SRAS. This increases general price level and reduces real output which worsens the growth in Euro.</p> <p><u>Comment how higher energy prices and stronger euro may not reduce growth.</u></p> <p>The extent of fall in AD due to <u>stronger euro</u> is <u>dependent on the size of external demand</u>. If external demand is small, there will be an insignificant fall in AD and hence growth rate. With stronger euro, prices of imported goods fall. This is likely to be the case since the domestic demand is large and the Eurozone will provide sufficient demand for goods and services.</p> <p>If EU countries is reliant on imported raw materials, this will reduce unit cost of production and increase SRAS. This reduces imported inflation and increases real output. Furthermore, if there is discovery of alternative energy sources, the higher energy prices will not persists in the long term and this will not cause a fall in real output. Hence, growth may not reduce significantly.</p> <p><u>Overall judgment:</u> Overall, the positive business and consumer sentiments due to the domestic factors should cause an overall increase in growth. The extent of increase in AD due to stronger global growth and quantitative easing programme in Extract 5 is huge. Moreover, the indicators in Table 3 has generally showed an improvement in SOL over the years as elaborated in part (b). While stronger euro and higher energy prices will decrease growth, the overall impact on growth will still be positive.</p> <p><u>Marking Scheme</u></p> <p>Up to 5 marks for an how higher energy prices and stronger euro will affect growth in country</p> <p>Up to a further 3 marks on how likely higher energy prices and a stronger euro will pose headwinds to growth</p> <p>To get full 8m [they need to look at both changes in AD and AS and how growth is affected with judgement on the final impact of growth.]</p>	
(d)	<p>With reference to Extract 8, identify and explain the main types of unemployment in Singapore.</p>	[6]
	<p>1. Demand-deficient unemployment [1]</p> <ul style="list-style-type: none"> • is due to a fall in the aggregate demand for labour caused by an economic recession, and wages being sticky downward. • Extract 8: ... slowing economy... lacklustre sentiment has stunted job creation and prompted a wave of layoffs • Poor economic outlook → fall in C and I → AD falls [1] → firms are unable to sell their current level output → cut back on production reducing the amount of labour they employ → fall in AD_L + wages are sticky downwards [1] → real wage remains constant and creates surplus of labour [1] <p>Note: Students can explain with the aid of diagram.</p>	

	<p>2. Structural unemployment [1]</p> <ul style="list-style-type: none"> • is caused by the changing pattern of demand or supply in the economy. • Extract 8: ... skills mismatches in the labour market are on the rise due to the unrelenting technological change that leave old skills outmoded... moving towards higher value-added, niche sectors... require specialised skills that most retrenched PMETs do not have and it may take a while to acquire... • SG moving towards higher value-added, niche sectors that require specialised skills in medical technology and data analytics → retrenched workers from 'sunset' industries like manufacturing sector do not have the require specialised skills → unable to gain employment in the 'sunrise' industry → remain unemployed [1] 	
(e)	Explain the impact of higher unemployment on employees, the government and an economy.	[8]
	<p>The unemployment rate is three times higher in Eurozone as compared to Singapore. The unemployment rate remains around the healthy range of around 3-5% in Singapore while there is a decline for Eurozone. It is important to keep unemployment rate within the healthy range because it affects different agent of an economy, which is the individuals, firms and economy. We will look at the negative and positive impacts of unemployment on different agents of an economy.</p> <p><u>Devt (1) Negative impacts of higher unemployment</u></p> <p>i) <u>On the economy</u></p> <p>1. Loss of output</p> <p>Most significant disadvantage is the opportunity cost involved:</p> <p>Unemployed people → lower output</p> <p>Under-utilisation of resources</p> <p>→ Loss in potential output</p> <p>→ operating inside PPC</p> <p>GDP is lower than it should be because of the idle resources in the economy.</p> <p>2. Decline in investment and implication on potential growth</p> <p>With the rising youth unemployment due to mismatch of skill sets in Eurozone and structural unemployment due to technology advancement in Singapore → increase idle labour resource as young graduates and less educated young workers are not taking on the available factories jobs → loss of output as these idle labour can be utilised to achieve higher output, hence resulting to a lower than expected actual economic growth. In addition, workers are skill set and knowledge become obsolete</p>	

	<p>and de-motivate workers to work in LR → fall in productivity level and efficiency → production capacity fall → LRAS to fall → reduce potential growth.</p> <p>Government's macro-aim of high and sustainable economic growth is not achieved → worsens economic health of a country</p> <p>Slowdown in actual (GDP) growth</p> <ul style="list-style-type: none"> → Households earn lower income → less purchasing power → able to consume fewer goods and services → Lower material standard of living <p>3. Undermine consumer and investor confidence</p> <p>Job insecurity increases with higher unemployment which result to lower consumer confidence and hence fall in C. With consumer who are unwilling to spend, firms will face falling demand and profits. Firms will reduce expected return from investment and I will fall. With both C&I falls, this will cause a greater fall in AD and hence negative growth and unemployment.</p> <p>ii) <u>On the government</u></p> <p>1. <u>Impact on government budget</u></p> <p>Larger government resources required to restructure the economy to solve unemployment problem hence worsen budget position</p> <p>Budget deficit in recent years:</p> <ol style="list-style-type: none"> 1. ↑ expenditure on training subsidies, unemployment-related benefits, health and to combat increased crime rate; 2. ↓ personal income & corporate taxes. <p>→ More difficult for govt to pursue other development projects due to lower revenue from direct and indirect taxes. As the unemployed does not pay income tax and pay less goods and services tax, government's tax revenue will fall.</p> <p>As shown in Table 3, budget position of Eurozone improve as unemployment falls over the period.</p> <p>2. <u>Distribution of income becomes more uneven.</u></p> <p><small>Islandwide Delivery Whatsapp Only 88660031</small></p> <p>The group that are most badly affected are the older & less skilled workers retrenched mainly from the low value-added manufacturing industry → loss of income → lowers material aspect of SOL. Government is thus faced with worsening market failure due to increasing inequity.</p>	
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	<p>iii) <u>On employees</u></p> <p><u>Those who are employed → more productive</u></p> <p>1. Unemployed → loss of income → lower purchasing power → lower material well-being</p> <p>2. Loss of status + stress of being unemployed → lower non-material well-being</p> <p>This is supported by <u>Extract 8</u> where increase in individuals taking on psychological services due to job changes. The severity of unemployment will depend on the duration of unemployment. This is because workers will be more discouraged if they cannot find jobs for extended period of time. Deskilling will happen where skills that they possessed will be obsolete and they will no longer be actively looking for job and drop out of the labour force as supported by Extract 6. This is likely to be a serious problem for Eurozone where youth unemployment is on its high.</p> <p>3. Distribution of income becomes more uneven</p> <p>The group that are most badly affected are the older & less skilled workers retrenched mainly from the low value-added manufacturing industry → loss of income → lowers material aspect of SOL as supported by Extract 8. Government is thus faced with worsening market failure due to increasing inequity</p> <p>Ranking the consequences of a higher rate of unemployment <i>[Not required in this question but is required as evaluative point if the question is higher order thinking question with the command words like “discuss”]</i></p> <p>Wastage of resources is the most significant consequence due to its pervasiveness – it affects many economic agents. With a higher rate of unemployment, more resources are wasted as the economy experiences negative economic growth. There is a need for government intervention if unemployment rate is high and increasing and is especially worrying if it is due to structural unemployment where it is a long term unemployment as the impact persist in the long term.</p>	
(f)	<p>Discuss the extent to which a government from the Eurozone should adopt the policies implemented by the Singapore government to achieve both economic growth and low rate of unemployment.</p>	[12]
	<p><u>Problems encountered by the Eurozone e.g. Greece and Spain:</u></p> <ul style="list-style-type: none"> • sustained EG but expected to slow down due to “higher energy prices and a stronger euro” (Extract 5) • high rate of unemployment (structural unemployment), especially youth unemployment 	

Policies implemented by the SG govt (Extract 9):

- SS-side policy (interventionist) → retraining: “provide a skilled workforce that continues to take up training”
- DD-mgmt policy (fiscal policy) → “higher government spending on research and technology”
- Trade policy → FTA: “integrated and global digital economy by co-developing international trade rules ...” [Free Trade Agreements help to promote sales of exports in foreign countries hence $X \uparrow \rightarrow AD \uparrow \rightarrow \dots$ (adjustment process) → real o/p $\uparrow \rightarrow$ actual growth + \downarrow demand-deficient unemployment]

Explain how any 2 adopted policies work + strength(s) & limitation(s) (contextualised to the Eurozone) → must link to both EG (AG + PG) and/or unN+

- **SS-side policy (interventionist) → retraining: “provide a skilled workforce that continues to take up training”**

What is it:

- Govt can provide subsidies for education and training. Education and training aim at increasing labour mobility and labour productivity.

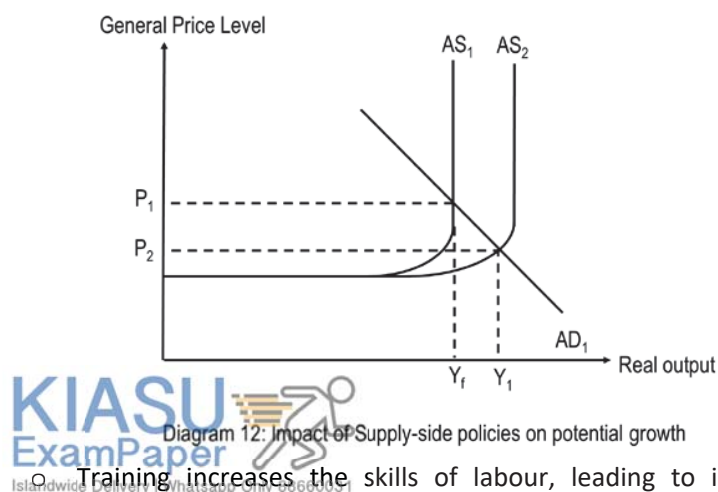
How it works:

- With retraining, labour productivity increases, allowing workers to be more employable. Equipped with more relevant skills, this will help to reduce the mismatch of skills and thus, improve labour mobility across industries.

How well it works:

Strength

- able to deal with their structural unemployment + youth unemployment as it equips the youth with more skills to join the industries as the main cause of the high youth unemployment is due to lack of skills (Extract 5)



○ Training increases the skills of labour, leading to increases in labour productivity. Workers will be able to produce more output per man hour. This increases individual market supply curves. If enough individual supply curves are impacted, total output that the economy can produce increases. Productive capacity of the economy increases. AS shifts right from AS1 to AS2, leading to potential economic growth.

		<ul style="list-style-type: none"> ○ Assuming that there is a certain level of AD, real national output increases from OYf to OY1, resulting in actual economic growth. ○ Able to boost both actual and potential growth by attracting more FDI ○ May also help to achieve inclusive growth as the displaced workers now have the skilled to gain employment again. <p>Limitation</p> <ul style="list-style-type: none"> ○ Supply-side policies are costly, their outcomes seen only in long-term and often these outcomes are uncertain. Policies requiring education and training requires significant investments and have high opportunity cost. Since Greece and Spain were suffering from debt crisis, the government will not be able to finance the spending and if they do, they will need to divert spending from other developmental projects. Some other public amenities will have to be given up which may affect the standard of living of their people. ○ Financing of the education and training subsidies might also require the government to raise taxes, which would result in unintended consequences. An increase in personal income tax would lead to lower disposable income and lower opportunity cost of leisure thereby creating a disincentive to work. Similarly, an increase in corporate tax could discourage investment as the after-tax profits would be lowered. All of these could lower the production capacity of the economy, thereby lowering national income and output, resulting in negative economic growth. As seen in Table 3, the Eurozone is already experiencing slowing growth so it might be possible that the growth might slow down even more if the govt finances it via raising taxes. ○ It also takes time to improve literacy & numeracy skills, and to complete an apprentice or a degree! Hence, it will take several years before improvements in education and training result in higher labour productivity. In addition, the effectiveness of this measure is more uncertain. Thus this may not be an effective policy to deal with the pressing high youth unemployment in the short run and “very hard for the Government or employers to force workers down a particular skills pathway, because everyone has different abilities” [Extract 8] → workers may not be receptive to retraining <ul style="list-style-type: none"> • DD-mgmt policy (fiscal policy) → “higher government spending on research and technology” <u>What is it:</u> <ul style="list-style-type: none"> ○ Fiscal policy refers to the use of government spending and taxation to achieve the macroeconomic policy objectives such as high and sustained economic growth, low and stable inflation, full employment and a healthy balance of payments. <u>How it works:</u> <ul style="list-style-type: none"> ○ Expansionary fiscal policy may be employed to reduce demand deficient unemployment. This involves reducing taxation and/or increasing government expenditure. 	
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- A rise in government spending on public projects like research and technology will raise AD directly via a rise in government expenditure.
- Hence, an expansionary fiscal policy raises AD via the increases in G. This increase in AD, from AD1 to AD2 as depicted in diagram 1a promotes actual economic growth via the multiplier process. Real national output increases from Y1 to Yf.
- Potential growth may also be realised in the long run as there is an increase in AS due to the improvement in quality of factors of production when there is innovation via R&D.

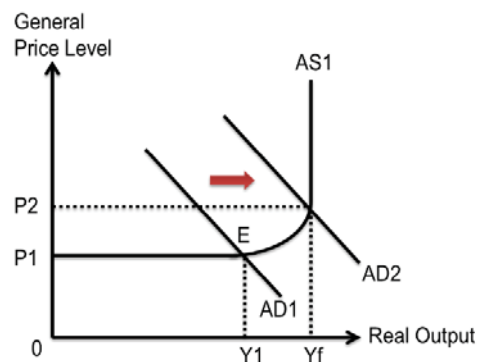


Diagram 1a: Effect of Expansionary Fiscal Policy

- Diagram 1b depicts demand deficient unemployment in an economy represented by the horizontal distance of $L_D L_s$ due to sticky wages at W_1 . When the real output rises, firms produce more goods and services. As such, they need to hire more factors of production like labour to produce these goods and service. Since labour is a derived demand, the demand for labour rises. This is represented in diagram 1b by a rightward shift in aggregate demand for labour from AD_{L1} to AD_{L2} bringing about an increase in employment from L_d to L_s . Demand deficient unemployment is eliminated. Unemployment rate falls.

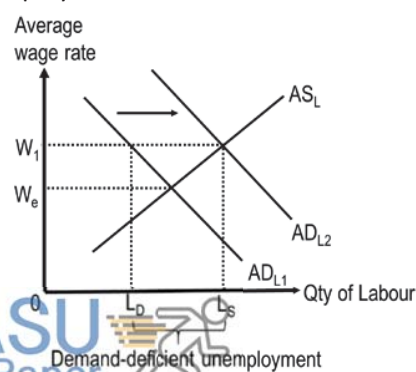


Diagram 1b: Reduction of Demand-deficient unemployment via expansionary fiscal policy

How well it works:

Strength

- Thus, expansionary fiscal policy shifts AD to the right, promoting actual economic growth. There is an inverse relationship between changes in real national output and unemployment rate. Increases in real output leads to falls in unemployment rate.
- Hence, expansionary fiscal policy reduces demand-deficient unemployment.
- Able to boost both actual and potential growth by attracting more FDI.
- If the R&D is in terms of green technology, it may help to achieve sustainable growth as the increase in output will not cause as much harm to the environment via lower emissions of pollutants or greenhouse gases. There may also be improved methods of production that make use of lesser raw materials thus leading to a slower rate of depletion of resources, allowing a more sustainable rate of growth.

Limitation

- If AD increases too fast such that AD is persistently greater than AS, demand-pull inflation will result. Demand-pull inflation is defined as a situation where AD is persistently greater than AS, close to or at full employment of all resources. The excess demand cannot be met because existing resources are fully or almost fully employed. This will bid up prices of real output, causing demand-pull inflation. This may be worrying for Eurozone as the inflation rate was already on the rise [Table 3].
- Another unintended consequence of using fiscal policy is the crowding out effect. If the increase in government spending is financed by borrowing, it will be competing with the private sector for funds. This increase in demand for funds creates an upward pressure on interest rate which rises. Higher interest means higher cost of borrowing, discouraging firms from investing (reducing I) and individuals from buying on credit (reducing C). Thus, we say government expenditure crowds out private expenditure. In the extreme case, the fall in consumption and investment may completely offset the rise in government expenditure, with the result that AD does not rise at all. Hence, government's attempt to tackle negative growth may be rendered ineffective.
- If government increases spending and reduces tax rates, in an attempt to promote economic growth through increasing AD, there is a risk of government running into budget deficit. A budget deficit in any one year is where government's expenditure (including benefits) exceeds its revenue from taxation. If the government runs persistent deficits over many years, these debts will accumulate. In order to finance these debts, government may resort to borrowing, which may further enlarge its national debt to service. The government may also need to increase the tax rate in future, which may result in the unintended consequences of disincentive effects on work. Thus, labour productivity rate may fall in the future and hinder potential growth. Too huge a government debt weakens investor confidence which may lead to capital flight. It also reduces credit rating of the country making it more difficult & expensive (may have to pay higher interest rates) for a country to borrow money to finance its expenditure. This slows down the progress of the economy.

Evaluative conclusion: (Similarity to characteristics + Nature of issue)

What policies a country should implement or adopt depends on the nature of the economy and the economic situation of the economy. Although the Eurozone may find that adopting the policies may help in their youth unemployment problem and in boosting growth, the policy decision to increase G might be constrained by a government's fiscal position. The Eurozone is suffering from a slightly higher budget deficit as compared to SG (except for 2018) → some member states also suffering from budget deficit hence may not have sufficient funds to provide retraining or spend on research and technology which may worsen their budget deficit → may cause consumers and investors to lose confidence in the economy which they have managed to build up over time.

However, Extract 5 mentioned "confidence had been hitting record levels since the crisis years in the Eurozone and unemployment was down to pre-crisis levels" hence this shows that although the countries in Eurozone might have problem adopting the policies due to limited budget, the situation is improving hence the scale of implementation of the policies may not need to be so big. Hence the countries in Eurozone may still adopt the policies but to a limited extent, depending on the amount of funds they can afford to spend. They should be adapting where appropriate.

L3	Well-developed, balanced answer with good contextualisation to the Eurozone.	6-9
L2	Well-developed one-sided answer covering at least 2 policies, with limited contextualisation to the Eurozone. Or Well-developed balanced answer covering only 1 policy, with limited contextualisation to the Eurozone. Or Under-developed, balanced answer covering at least 2 policies, with limited contextualisation to the Eurozone.	3-5
L1	An answer that merely identifies the policies implemented by SG govt.	1-2
E	Valid evaluative comment. This should focus on whether the Eurozone should or should not adopt SG policies and reason(s) to justify.	1-3

