

Anderson Junior College JC2 2018 H1 Economics Preliminary Examination

Case Study Question 1 – Aging population: Burden or opportunity?

| а | (i) | Describe the trend for the health spending in Japan from 2000 – 2017. | 1 |
|---|------|---|---|
| | | Trend: increasing from 2000 – 2017 | |
| | (ii) | Discuss how far the concept of price elasticity of demand may account for the above trend in health spending. | 9 |
| | | P1: The concept of PED may account for the above trend Shrinking workforce \rightarrow fall in SS \rightarrow price increase. As $0 < PED < 1$ (lack of substitutes) \rightarrow increase in price will lead to a less than proportionate decrease in quantity demanded \rightarrow increased in total expenditure \rightarrow account for the increase in health spending | |
| | | P2: However, the concept of PED may not account for the above trend → Limitation of ceteris paribus assumption or PED could actually be more than one ($ PED > 1$ due to substitutes available such as robotics) → price increases → increase in price will lead to a more than proportionate decrease in quantity demanded → total expenditure will actually decrease → cannot account for the increase in health spending | |
| | | In addition, other factors may account for the above trend Increase in demand due to aging population (Ext 1) → increase demand → equilibrium price and quantity increase → total expenditure increases EV: Make a stand and justify E.g., demand factor more significant as population "rapidly greys" (Ext 2) E.g., more information needed, for instance on the PED value Mark scheme: | |
| | | Lovel Knowledge, Application, Understanding and Marks | |
| | | L2 Analysis Image: Non-Section 1 L2 An answer that clearly explains with economic framework on how PED may account for the trend 4-6 | |
| | | L1An descriptive answer with multiple basic conceptual errors on how PED may account for the trend1-3 | |
| | | Evaluative comment | |
| | | Up to 3 further marks for an evaluative appraisal of possibly which factor is the main factor | |
| b | | With reference to data, discuss the likely effects of a shrinking workforce in Japan and technological advancement on the robotics market. | 8 |

Shrinking workforce (Ext 1) \rightarrow fall in supply of labour \rightarrow wages increase Thus demand for robotics which are substitute for labour will increase (Ext 4: funding development of elder care robots to help fill a projected shortfall of specialised workers) \rightarrow shift DD curve to the right

Tech advancement \rightarrow fall in unit COP \rightarrow more profitable \rightarrow increase in SS \rightarrow shift SS curve to the right

P1: increase in DD > increase in SS \rightarrow equilibrium P and Q increase It takes time to develop and create robotics suitable for different types of healthcare services, coupled with the aging population. It is likely that increase in demand will outweigh the increase in supply in the SR. Hence, equilibrium price and quantity will increase (Fig 1).



P2: increase in DD < increase in SS \rightarrow equilibrium P falls, Q increases

Once the technology is fully developed, they may be able to produce more robotics. Hence it is likely that increase in supply will outweigh the increase in demand in the LR. Hence, equilibrium price will decrease while equilibrium quantity will increase (Fig 2).



| | unlikely to increase significantly. Hence the increase in demand is still likely to persist and outweigh the increase in supply. Hence, equilibrium price and quantity will increase. | | | | | | |
|---|---|---|---|--|--|--|---|
| | Level | Knowledge, Analysis | Application, | Understanding | and | Marks | |
| | L2 | An answer that on the robotics | at clearly discus s market | ses the different in | mpact | 4-6 | |
| | L1 | An answer tha framework link | it is descriptive | without much eco to the robotics ma | nomic rket | 1-3 | |
| | Evaluat | tive comment | | | | | |
| | Up to 2 factor is | 2 further marks s the most signif | for an evalua | tive appraisal of e eventual impact | possibl on the | ly which market | |
| | Evalaia | two possible (| henrice that is | | dama | | |
| C | of health | hcare workers | given the intro | duction of robots | dema S. | na curve | 4 |
| | Robots developr 380,000 in price o demand | are deemed a nent of elder o specialised wo of robots → incr for the healthca | as substitutes care robots to rkers) \rightarrow increa ease in quantity are workers \rightarrow le | for healthcare w help fill a project se in supply of ro demanded of the eftward shift of the | vorkers cted sh bots ca robots demar | a (Ext 4: nortfall of auses fall b → fall in nd curve. | |
| | With the therefore elastic/le | introduction of e demand for ess price inelasti | robots, there ar healthcare wo ic → demand cu | e now more subs rkers also becon urve becomes gen | titutes nes mo tler / le | available, ore price ss steep. | |
| d | What is Identify | the main chara one example o | acteristic of a r of such a stater | normative econor ment from Extrac | mic sta t 3. | atement? | 2 |
| | A norma about ec measure | tive economic s conomic fairness (s) <i>ought to b</i> e. | statement expre | esses value judger utcome of the eco | ments (nomy a | (opinions) and policy | |
| | One exa but a bor | mple is "So, Ja nus". | pan's demogra | ohy, paradoxically | , is not | an onus, | |
| | Other ac - "Prim was innov - "I hav | cepted stateme ne Minister Shin not a burden, vations." ve absolutely no | nts: nzo Abe said Ja but an incenti o worries about | apan's aging, shrir ve to boost proc Japan's demograp | nking p luctivity ohy." | opulation / through | |
| е | ls a pub Provide | blicly funded n reasons for yo | oursing facility our answer. | an example of a | a publi | ic good? | 4 |
| | Public g non-rival | oods exhibit bo ry (NR) in consi | oth characterist umption. | ics of non-exclud | ability | (NE) and | |
| | Excludat continge | oility → an elde nt on payment, | rly's consumpti while other indi | on of the nursing viduals who do i | facility | is made y for the | |

| | | nursing facility can be effectively excluded from enjoying the benefits → can exclude non-payer from staying in the public nursing home AND Rivalry in consumption → the consumption of the nursing facility by one elderly reduces the amount of benefit that is available to others. Conclusion → since publicly funded nursing facilities do not fulfil characteristics of NE and NR, they are not an example of a public good. | |
|---|-----|--|---|
| f | (i) | Explain why the operation of a free market may lead to the underprovision of nursing facilities and how a subsidy can help to address the problem. In deciding how much nursing facilities to consume, rational consumers will only weigh their marginal private benefit (MPB) against marginal private cost (MPC) of consuming nursing facilities in order to maximise their utility. The private benefits include the utility gained/ care given, while the private costs include the cost of nursing facilities. Taking these private benefits and private costs include the cost of nursing facilities. Taking these private benefits and private costs into consideration, consumers will then decide to consume nursing facilities up till Qe where their MPB = MPC in order to maximise their utility (Fig 1). In addition, when consuming nursing facilities, positive externalities are incurred. Positive externalities are the benefits to third parties that are not taken into account by those who undertake the activity such as lessening the burden on the families who are the third party, higher productivity for the family members as they do not have to take time off to take care of elderly (Ext 5: "shift the responsibility of supporting the elderly away from the families"). Presence of externality leads to a divergence between marginal social benefits (MSB) and MPB. Due to the divergence, MSB is greater than marginal social cost (MSC) at Qe, indicating that society values an additional unit of the nursing facilities more than what it would cost society to consume it. The socially optimum level of nursing facilities is at Qs, where MSB is equal to MSC. As Qe is at a lower level than Qs, there is under-consumption of nursing facilities. The price mechanism thus under-allocates resources to the market for nursing facilities, resulting in a net loss of welfare to society, known as deadweight loss, which is indicated by the shaded area ABE. Society as a whole could be made better off if the level of nursin | 7 |



"robotics expertise to help cope), resulting in under-consumption of elder care robots. Hence, allocating recourse to the development of elder care robots would help to achieve allocative efficiency. In addition, the development of elder care robots by the government would also ensure that people who require it will be able to access it such as the lowerincome elderly, hence achieving equity.

Another factor that the Japanese government needs to consider will be the benefits from the development of elder care robots such as achieving economic growth. The government could generate export revenue from the sale of elder care robots (Ext 4: potentially lucrative export industry). With increasing export revenue, net exports will increase, ceteris paribus. Hence aggregate demand will increase, leading to multiplied increase in real national income, hence achieving actual growth.

Another factor that the Japanese government needs to consider will be the costs from the development of elder care robots such as the cost of development (Ext 4: high costs, safety issues and doubts). Development of elder care robots will incur high costs such as recruiting the professionals and purchase of high technology material such as microchips. They will also need to spend on research and development to ensure that the robots are safe for usage. Moreover, they will need to increase production for the rapidly aging population. Hence production cost is likely to increase significantly which will be a strain of the budget. In addition, the government will need to consider the opportunity cost incurred. If they were to allocate the resources to the development of elder care robots, it will mean that they have fewer resources available for other areas such as education and healthcare, hence worsening the efficiency in other markets like education.

Another factor that the Japanese government needs to consider will be the perspectives of others such as the consumers who are the elderly in this case. Elder care is typically seen as a job which requires a human element (Ext 4: a job typically seen as requiring human touch), and if the consumers are not receptive to this idea, there may be low demand for such elder care robots. In this way, the government should not allocate much resources to this development. On the other hand, there is generally warm reception to robots by many Japanese (Ext 4: "many Japanese see them positively). There may be an increase in demand, and hence the government should be allocating more resources towards the development.

Finally, after determining the MSB and MSC, the Japanese government would weigh them to make its decision. It would allocate resources towards developing more robots if the marginal social benefit is greater or at least equal to the marginal social cost as the addition to total benefit is greater than or at least equal to the addition to total cost. This would then allow it to maximise social welfare.

EV: Make a stand and justify

In conclusion the Japanese government makes decisions by considering the factors that affect their costs and benefits and then weigh MSB and MSC to allocate resources to maximise social welfare.

| could the | issues such as slow growth, shrinking workforce ar they may want to focus on boosting economic growt c growth, it will allow them to collect more tax reven the be channelled to developing elder care robots ever | nd tax ba h first. V enue wh ntually. |
|--|--|--|
| The mos governm concurre macroec issue of case, the of the p care rob positive obvious) | at significant factor would also depend on whether the ent has implemented other policies to improve the ently. It is very likely that the government may be look conomic stabilisation and growth policies while add an aging population and promoting elder care. This e most significant factor to consider would then be the ublic towards elder care robots or the direct benefit ots might have on the healthcare sector, rather than impacts on the wider economy (because the latter w | e Japano le econc king at ot lressing s being e percept s that el uninteno vould not |
| | | |
| Mark sc | heme: | |
| Mark sc Level | heme: Knowledge, Application, Understanding and Analysis | Marks |
| Mark sc Level L3 | heme: Knowledge, Application, Understanding and Analysis An answer that clearly explains the different factors that a rational manufacturer would have to consider, including the constraints, benefits and costs. | Marks 5 – 7 |
| Mark sc Level L3 L2 | heme: Knowledge, Application, Understanding and Analysis An answer that clearly explains the different factors that a rational manufacturer would have to consider, including the constraints, benefits and costs. An answer that is descriptive without much economic framework linking the factors to be considered to costs and benefits. | Marks 5 – 7 3 – 4 |
| Mark sc Level L3 L2 L1 | heme: Knowledge, Application, Understanding and Analysis An answer that clearly explains the different factors that a rational manufacturer would have to consider, including the constraints, benefits and costs. An answer that is descriptive without much economic framework linking the factors to be considered to costs and benefits. An answer that merely identifies the factors. | Marks 5-7 3-4 |
| Mark sc Level L3 L2 | heme: Knowledge, Application, Understanding and Analysis An answer that clearly explains the different factors that a rational manufacturer would have to consider, including the constraints, benefits and costs. An answer that is descriptive without much economic framework linking the factors to be considered to costs and benefits. | Mar 5 – 3 – |

| (a) | (i) | Compare Singapore's budget balance for 2015-2016 with 2013-2014. | [2] |
|-----|------|--|-----|
| | | Singapore's budget balance was in deficit and the deficit was constant in 2015-2016 whereas the budget balance was in surplus from 2013-2014 and the surplus was decreasing. | |
| | (ii) | To what extent can it be concluded from Table 1 that the standard of living in Singapore in 2016 is better than in 20132 | [5] |
| | | living in Singapore in 2016 is better than in 2013? Standard of living (SOL) consists of both material and non-material aspects. The material aspect refers to the quantity and quality of goods and services available for consumption whereas the non-material aspect refers to the more intangible aspects of life such as amount of leisure time, quality of the environment etc. P1: Can be concluded from Table 1 that SOL is better Real GDP growth has been positive throughout 2013 to 2016. Assuming that population growth is largely constant and the rate is lower than that of real economic growth, real GDP growth per capita would then also be positive throughout. This suggests that RNY per capita is higher in 2016 than in 2013. With higher purchasing power, the people are able to purchase more goods and services, thus leading to a higher material SOL. Gini coefficient after government transfers and taxes is lower in 2016 than in 2013, decreasing from 0.409 to 0.401. This implies that | [5] |
| | | inequity has reduced and income distribution has improved. There is more inclusive growth which should allow for higher material SOL. Life expectancy at birth, as shown in Table 1, is higher in 2016 compared to 2013. Higher life expectancy may indicate greater access to healthcare services and lower levels of environmental pollution, which indicates higher non-material standard of living. P2: Cannot be concluded from Table 1 that SOL is better | |
| | | Lack of information on other indicators for non-material SOL (e.g. level of externalities, literacy rates and leisure hours). Lack of information such as population growth rate or GDP deflator to accurately determine real GDP per capita for material SOL | |
| | | Conclusion | |
| | | • Assuming that population growth rate did not outstrip real economic growth rate, the material SOL in Singapore would have improved. Given that it is likely that the non-material SOL in Singapore has also improved, overall SOL in Singapore in 2016 is better than in 2013 to a large extent. | |
| (b) | (i) | With the help of a diagram, explain why Singapore experienced falling consumer prices in 2015 and 2016. | [3] |
| | | Lower oil prices (Extract 6) \rightarrow Fall in COP since oil is a factor of production used across many industries as a main source of energy \rightarrow | |

Question 2: Addressing deflation, fostering inclusive growth



| | | COE prices and accommodation costs have fallen. With the larger weights assigned to them, it will have a greater impact on the overall CPI by a larger extent. As compared to the rise in household durables, education and recreation, they have relatively smaller weights and hence lesser impact on the overall CPI. The fall in CPI due to the fall in COE prices and falling accommodation costs outweighs the rise in household durables, education and recreation. This results in an overall fall in consumer prices despite prices of household durables, education and recreation holding up. | |
|-----|------|---|-----|
| (d) | (i) | How does the value of the Singapore dollar in 2016 compare to its value in 2013? | [1] |
| | | SGD has depreciated against the USD or value of SGD has fallen against the USD. | |
| | (ii) | Suppose that deflation takes root in Singapore. Discuss the merits of managing the problem by depreciation, rather than using interest rates. | [8] |
| | | It is better to manage deflation in Singapore by depreciating the exchange rate as compared to decreasing interest rate because of Singapore's small size and openness to trade & capital flows . A depreciation of the currency will decrease the foreign price of exports. The lower exchange rate results in a decrease in the foreign price of exports and an increase in the domestic price of imports. In the long run, when firms are not bounded by contracts and are able to switch to cheaper alternatives more easily, PEDx + PEDm is likely to be greater than 1 and since MLC holds, net exports (X-M) will increase, reducing deflation. | |
| | | The Singapore economy is a 'small and open economy' (extract 8); very reliant on trade and the external economy . For instance, export revenue (X) takes up approximately 180% of GDP. This shows that a rise in net export revenue will have more significant impact on AD as compared to increase in C or I (brought about by cuts in interest rate). | |
| | | In addition, higher import prices also leads to higher domestic prices. As there is a high import content of domestic demand where 'much of the country's consumer goods are imported' (Extract 8) in Singapore due to her small economy and her lack of natural resources, a higher imported inflation is likely to have a substantial impact on the overall inflation rate | |
| | | Hence, depreciating the exchange rate is more effective to tackle deflation, as it is relatively controllable by the central bank, and has a significant impact on Singapore's small, open economy. | |
| | | On the other hand, it is not advisable for the Singapore government to decrease interest rate to tackle the problem of inflation. | |

| Itel in point of the point of the point of the orgapore. Itel is a point of the point point of the point of the point of the point of the point of t | Firstly, a investm direct inv be affect funding | decrease in interest rate may have limited effect i ent as the main types of investment in Singapore vestment and government investment. The former is ed by domestic interest rate as they may have externa and other determinants of investment, such as expe- political stability and quality of the workforce in Sing | n inducin are foreig not likely f al sources o cted rate o | |
|--|---|---|--|--|
| In addition, Singapore being a small economy, her domestic marke small. Therefore, domestic consumption constitute an insignificant sh of GDP, hence any increase in C is not expected to have a huge import on reducing inflation. Because of Singapore's openness to capital flows, it is difficult for W to influence interest rates. Small changes in the difference betwe domestic and foreign interest rates can cause large, quick movements capital. This may have destabilising effects of the exchange rate. He interest rates are determined not by the MAS, but by foreign rates a expected movements in the S\$. Hence, the Singapore economy is interest rate taker . However, there are some possible downsides of having a depreciation the Singapore exchange rate in tackling deflation. As the Marshall-Ler condition may not hold in the short run (as consumers require time to s alternatives), a depreciation of the S\$ may instead decrease net expect AD and the general price level. This instead worsens deflation. Given the Open Economy Trilemma, Singapore cannot have free cap mobility while controlling both interest rates & exchange rate. Since chooses free capital mobility and a managed exchange rate, it must g up control over interest rates. Given the nature of the Singapore econo the choice is clear to opt for exchange rate policy instead of interest ra- policy. As global oil prices are falling, Singapore is less likely to suffer fi- imported inflation. Therefore, the merits of choosing a depreciation to c deflation are significant. Mark scheme: Level Knowledge, Application, Understanding and Marks L2 For an answer with well-balanced approach, 4-6 sufficiently developed analysis and good reference to case material. L1 Very superficial analysis. Mere listing of points. In-3 Inaccurate knowledge of concepts. One-sided answer. Up to 2 marks for an evaluative comment for evaluative comments with with set of the set o | likely to of long-t decrease | be more important to foreign investors. The latter ten erm projects and hence, it is not likely to be influe e in interest rate. | d to consi enced by | |
| Because of Singapore's openness to capital flows, it is difficult for N to influence interest rates. Small changes in the difference betw. domestic and foreign interest rates can cause large, quick movement: capital. This may have destabilising effects of the exchange rate. He interest rates are determined not by the MAS, but by foreign rates is expected movements in the S\$. Hence, the Singapore economy is interest rate taker. However, there are some possible downsides of having a depreciation the Singapore exchange rate in tackling deflation. As the Marshall-Ler condition may not hold in the short run (as consumers require time to s alternatives), a depreciation of the S\$ may instead decrease net expected. AD and the general price level. This instead worsens deflation. Given the Open Economy Trilemma, Singapore cannot have free cap mobility while controlling both interest rates & exchange rate. Sinc chooses free capital mobility and a managed exchange rate, it must g up control over interest rates. Given the nature of the Singapore econot the choice is clear to opt for exchange rate policy instead of interest r policy. As global oil prices are falling, Singapore is less likely to suffer fi imported inflation. Therefore, the merits of choosing a depreciation to c deflation are significant. Mark scheme: L2 For an answer with well-bal | In additi small. Th of GDP, on reduc | on, Singapore being a small economy, her domesti nerefore, domestic consumption constitute an insignif hence any increase in C is not expected to have a h ing inflation. | c market icant sha nuge impa | |
| However, there are some possible downsides of having a depreciation the Singapore exchange rate in tackling deflation. As the Marshall-Lei condition may not hold in the short run (as consumers require time to s alternatives), a depreciation of the S\$ may instead decrease net expo AD and the general price level. This instead worsens deflation.Given the Open Economy Trilemma, Singapore cannot have free cap mobility while controlling both interest rates & exchange rate. Sinc chooses free capital mobility and a managed exchange rate, it must g up control over interest rates. Given the nature of the Singapore econo the choice is clear to opt for exchange rate policy instead of interest r policy. As global oil prices are falling, Singapore is less likely to suffer fr imported inflation. Therefore, the merits of choosing a depreciation to c deflation are significant.Mark scheme:LevelKnowledge, Application, Understanding and AnalysisL2For an answer with well-balanced approach, sufficiently developed analysis and good reference to case material.L1Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer.Up to 2 marks for an evaluative comment for evaluative comments with with entition. | Because to influe domestic capital. interest expected interest | a of Singapore's openness to capital flows, it is difficu- ence interest rates . Small changes in the difference c and foreign interest rates can cause large, quick mo This may have destabilising effects of the exchange rates are determined not by the MAS, but by foreign d movements in the S\$. Hence, the Singapore econ rate taker. | ult for MA ce betwee ovements rate. Henc n rates ar nomy is a | |
| Given the Open Economy Trilemma, Singapore cannot have free cap mobility while controlling both interest rates & exchange rate. Sinc chooses free capital mobility and a managed exchange rate, it must g up control over interest rates. Given the nature of the Singapore econo the choice is clear to opt for exchange rate policy instead of interest r policy. As global oil prices are falling, Singapore is less likely to suffer fi imported inflation. Therefore, the merits of choosing a depreciation to c deflation are significant. Mark scheme: Level Knowledge, Application, Understanding and L2 For an answer with well-balanced approach, sufficiently developed analysis and good reference to case material. L1 Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer. Up to 2 marks for an evaluative comment for evaluative comments with instification. | However the Sing condition alternativ AD and | r, there are some possible downsides of having a dep apore exchange rate in tackling deflation. As the Mar a may not hold in the short run (as consumers require to ves), a depreciation of the S\$ may instead decrease the general price level. This instead worsens deflation. | preciation c irshall-Lerne time to see net exports | |
| Mark scheme: Knowledge, Application, Understanding and Analysis Marks L2 For an answer with well-balanced approach, sufficiently developed analysis and good reference to case material. 4-6 L1 Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer. 1-3 Evaluative comment Up to 2 marks for an evaluative comment for evaluative comments with inatification | Given th mobility chooses up contro the choic policy. A imported deflation | e Open Economy Trilemma, Singapore cannot have while controlling both interest rates & exchange ra free capital mobility and a managed exchange rate, of over interest rates. Given the nature of the Singapor ce is clear to opt for exchange rate policy instead of it s global oil prices are falling, Singapore is less likely to inflation. Therefore, the merits of choosing a deprecia are significant. | free capit ite. Since it must giv re econom interest ra o suffer fro ation to cu | |
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| L2 For an answer with well-balanced approach, sufficiently developed analysis and good reference to case material. 4-6 L1 Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer. 1-3 Evaluative comment Up to 2 marks for an evaluative comment for evaluative comments with inatification | Level | Analysis | Marks | |
| L1 Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer. 1-3 Evaluative comment Up to 2 marks for an evaluative comment for evaluative comments with justification | L2 | For an answer with well-balanced approach, sufficiently developed analysis and good reference to case material. | 4-6 | |
| Evaluative comment Up to 2 marks for an evaluative comment for evaluative comments with instification | L1 | Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer. | 1-3 | |
| Up to 2 marks for an evaluative comment for evaluative comments | | Evaluative comment | | |
| | | | | |

| (e) | Discuss the reasons why the Singapore government seeks to achieve innovation-driven and inclusive growth. | [7] |
|-----|---|-----|
| | Singapore government seeks to achieve innovative driven and inclusive growth as it helps Singapore maintain a competitive edge and helps ensure equity. | |
| | Inclusive economic growth involves actual growth and potential growth. In addition, it involves government policies to ensure that gains from economic growth are equitably distributed across society. | |
| | Innovation helps to achieve both actual and potential growth: | |
| | Process innovation can help improve the quality of resources to improve the production process, hence increasing productive capacity of the economy. Thus, LRAS increases, shifting the LRAS curve to the right. | |
| | Increase productivity \rightarrow knock on effects \rightarrow unit COP decreases \rightarrow increase in SRAS and shift to the right. | |
| | Any 2 points with EV | |
| | Reason 1: Innovation-driven and inclusive growth can lead to higher employment and productive efficiency Innovation-drive and Inclusive growth means sustainable growth by creating job opportunities for all. This means reducing both demand deficient unemployment and structural unemployment. An increase in actual growth due to inclusive growth indicates an increase in aggregate demand (AD). In order to meet the increase in AD, firms will have to employ more factors of production including labour. This leads to an increase in demand for labour and a fall in demand deficient unemployment. In the pursuit of inclusive growth, the government focuses on investing in human capital so as to create opportunities for all segments of the population, reducing structural unemployment. Extract 10: "It helps workers who face dislocation in the market; it leads to skills accumulation across society; everyone benefits". The government will also subsidise programmes to upgrade the skills of the workers so as to create a more productive workforce and retrain workers who skills are redundant so that they can take up jobs in other sectors. By ensuring that there is productive employment for all, this means that scarce resources are fully utilized, allowing the economy to operate closer to the maximum output it can achieve, leading to productive efficiency. | |
| | Reason 2: Innovation-driven and inclusive growth can lead to low inflation Innovation-driven and Inclusive growth leads to non-inflationary growth, which includes both actual and potential growth. Inflation refers to a sustained increase in general price level. As inclusive growth focus on the pace of growth, the increase in AD is in tandem with the increase in aggregate supply (AS). As the increase in general price level is now matched with an increase in | |

| real national income, inflation rate remains low as there is spare capacity to produce more goods and services in the economy. To achieve inclusive growth, the government focuses on policies to increase labour productivity. This will mean a fall in the unit cost of labour, an increase in short-run AS (SRAS), bringing about a fall in wage push inflation in the country. | |
|--|--|
| Reason 3: Innovation-driven and inclusive growth can lead to high standard of living and more equitable distribution of income | |
| Innovation-driven and inclusive growth helps to create opportunities for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society. Economic growth is defined as an increase in Gross Domestic Product (GDP), which is the total monetary value of the final goods and services that is domestically produced within a year. An increase in real GDP means more goods and services are produced. At the same time, there is an increase in households' income leading to higher purchasing power and more consumption of goods and services leading to a higher material standard of living. By providing training for all Singaporean, there will be "greater skills proficiency, knowledge and expertise". This makes Singapore to be an attractive investment destination and thus attract foreign investment → Higher I → Higher AD→ Higher RNY → higher economic growth. With higher economic growth, the government is able to generate more tax revenue. By aiming to achieve inclusive growth, the government is likely to spend more on education subsidies as a means to create productive employment and more on healthcare programs so as to redistribute wealth by making these merit goods more affordable to lower-income households. This contributes to a higher literacy rate and life expectancy, leading to a higher nonmaterial standard of living. At the same time, the distribution of increased prosperity means that the standard of living for every individual is likely to increase and the value of the Gini coefficient falls. | |
| Conclusion/EV | |
| The most important reason for innovation-driven and inclusive growth is to enable a higher SOL for all Singaporeans. Due to the nature of SG economy → small and open → labor is our only resources → need to focus on productivity growth to increase SOL across segment → criteria especially productivity growth range from 0 to -1.5% from table 1 → supported by extract 9: "by enabling a highly-skilled and competitive workforce, it has allowed Singaporeans to secure better jobs, higher incomes and enjoy higher standards of living". The heart of the Inclusive Growth Programme is to enable a broadbased growth in most sectors, enabling a higher SOL for all citizens. | |
| Or | |
| • Nature of SG economy \rightarrow small country with tight labor market \rightarrow | |

| | neec to er that grow • As adva upgr com | I to continuously innovate to gain an edge over other neure that X stays competitive \rightarrow and to stay relevant is filled with technological disruption \rightarrow so as to achieve th evident in extract 9 "With the fast pace of te ncements and stronger global competition for ading and deepening are essential for Singaporeans to betitive edge". | countries → at in this era e export-led echnological jobs, skills o maintain a | |
|-----|--|--|---|------|
| | Sing to a Rely our gove | apore has already moved from a phase of rapid catc phase of trend growth (predicted to be 2% growt ing solely on adopting technology is no longer suffici economic growth. To maintain trend growth, rnment must focus on innovation. | h up growth h till 2030). ent to boost Singapore | |
| | More incre facin decre drive | eover, SG economy \rightarrow Nation faced a tight labour mata ase the size of labour force to boost growth> be g ageing population \rightarrow if nothing is done \rightarrow Potentia ease \rightarrow Therefore enhancing productivity through n growth \rightarrow the way to go to ensure a sustained growt | rket so can't esides, also I growth will innovation- th for SG. | |
| | Mark sc | neme: Knowledge, Application, Understanding and | Maalaa | |
| | Level | Analysis | warks | |
| | L2 | For an answer with well-balanced approach, sufficiently developed analysis and good reference to case material. | 3-5 | |
| | L1 | Very superficial analysis. Mere listing of points. Inaccurate knowledge of concepts. One-sided answer. | 1-2 | |
| | | Evaluative comment | | |
| | Up to 2 most si driven a | marks for an evaluative comment on which reasons a gnificant for the Singapore government to achieve inno and inclusive growth | re the ovation- | |
| (f) | Using effective use of fi | the extract and/or your own knowledge, di eness of achieving inclusive growth in Singapore t scal policy and supply side policy. | iscuss the through the | [12] |
| | Introduce Inclusive and crea | ction growth is economic growth that is distributed fairly ac ites opportunities for all. | ross society | |
| | How Fis FP → Sp growth) | cal Policy works to achieve inclusive growth. Dending on infrastructure \rightarrow increase AD \rightarrow increase R | NY (actual | |
| | Better in growth. | frastructure \rightarrow increase productivity \rightarrow increase LRAS | \rightarrow potential | |
| | lower ir educatio | ner RINT, govt collects more income tax revenue \rightarrow relation for a subsidies on healthcare n. Extract 10 mentioned providing more targeted s | and school ubsidies for | |

| those who require it most. \rightarrow Inclusive growth Based on a progressive tax system, tax revenue generated from the high income earners can be redistributed to those in the lower income earners. | |
|--|--|
| Effectiveness Correlation between trend in budget balance in Singapore and the Gini coefficient (Table 1). Increasing government spending in terms of education, housing and healthcare subsidies might have resulted in a smaller value of the Gini coefficient, which means a more equitable distribution of income. Also, Gini coefficient after accounting for government transfers & taxes are lower than that of Gini coefficient before government transfers and taxes. This clearly shows that fiscal policy is effective in achieving a more inclusive growth. | |
| Limitations However, deciding on the right amount of subsidies and how the subsidies should be channelled is administratively costly and will put a further strain on the government budget. Singapore's budget balance was in deficit and the deficit was constant in 2015-2016. | |
| How SS side policies work to achieve inclusive growth Ss-side policy like tax credits and subsidies for upskilling are another example of a policy that supports equity as well as innovation and growth, as mentioned in the last extract. Upskilling improves productivity \rightarrow increase LRAS and potential growth. | |
| Also, SS side policy helps to reduce occupational immobility of the workers in the sunset industries, low wage workers can now take up jobs in other sectors where wages are higher. Therefore, attending retraining courses will also help low-wage workers receive higher income in future, achieving inclusive growth. | |
| Effectiveness As shown Table 1, the negative productivity growth rate has fallen in 2016, this implies that existing SS side policies to boost productivity is somewhat effective. | |
| Limitations However, it is difficult to change the mindset of workers and encourage them to go for retraining. It is also difficult to forecast the future economic needs and hence come up with appropriate and relevant courses. | |
| In conclusion, both fiscal and supply-side policies are required to achieve inclusive growth. Fiscal is better and more immediate than SS side policies to reduce income gap but SS side policies solutions are more sustainable. Particularly, supply-side policies such as subsidies for upskilling are the more effective measure to help low-wage workers in the long run. However, sustained effort is needed to continue to promote upskilling as it takes time to change people's mindset. Property and income taxes are still needed nevertheless to provide the budget for the subsidies. | |
| Optional: | |

Property taxes mentioned in the last extract also helps to achieve equity

| However, there're other issues with this measure as it has been that some of those who own large property are asset-rich but c | | | | |
|---|--|----------------------|--|--|
| Level | Knowledge, Application, Understanding and Analysis | Mar | | |
| L3 | For a well-developed answer with good scope and depth of how fiscal policy and supply side policies help to achieve inclusive growth in Singapore | 6-9 | | |
| L2 | For an underdeveloped answer that contains some analysis of how fiscal policy and supply side policies help to achieve inclusive growth in Singapore | 3-5 | | |
| L1 | For an answer that shows some consideration of how inclusive growth can be addressed but answer is lacking in scope and/or rigour. | 1-2 | | |
| | Evaluative comment | | | |
| Up to 3 approp | marks for an evaluative comment on which policy is the iate for Singapore in achieving inclusive growth | e m <mark>ost</mark> | | |