# ANDERSON SERANGOON JUNIOR COLLEGE
## JC2 PRELIMINARY EXAMINATION
## Higher 2

**ECONOMICS** **9757/01**

Paper 1 **30 August 2022**

Additional Materials: Answer Booklet **2 hours 15 mins**

**READ THESE INSTRUCTIONS FIRST**

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

Please start your answer to each question on a fresh page of the answer booklet.

Answer **all** questions.

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

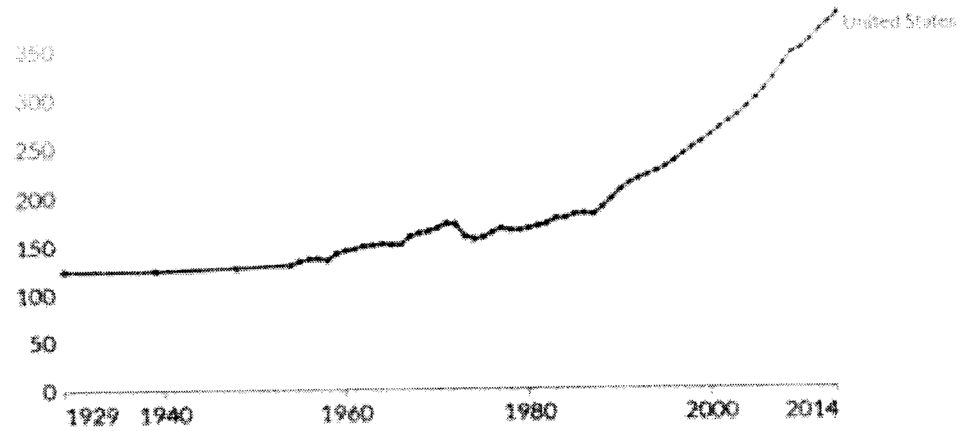
This document consists of **8** printed pages.

Answer **all** questions

## Question 1: Retail troubles

### Figure 1: Restaurant prices relative to retail prices in the United States, 1929 to 2014

*Restaurant prices of food products relative to grocery retail prices, where grocery retail prices are equal to 100 (i.e. 150 would represent a 50% margin on retail prices).*




*Source: https://ourworldindata.org*

### Extract 1: Cost of government regulation will mean higher food prices for consumers

The Food and Drink Federation (FDF) has today warned that consumers will inevitably face higher food and drink prices if manufacturers are forced to absorb the cost of proposed government policies during the next few years. The FDF has estimated that if the cost of forthcoming government policies were passed on directly to consumers, it would increase the price of food and drink per household. According to estimates, the government's proposals could lead to an increase in food and drink spending of nearly 7%.

The FDF calculates that the cost to the food and drink industry of proposed UK government policies around public health and sustainability is at least £8 billion. The FDF is calling on the government to reconsider these policies and their unintended consequences, as well as fundamental reforms to the UK's regulatory architecture, in order to ensure future policy is effective and well-targeted. It also argues that in the long-term any additional costs will likely increase indebtedness, reduce competitiveness, and see investment decline, particularly at a time when businesses are seeking to recover from a difficult period of economic uncertainty.

*Source: Food and Drink Federation, 20 July 2021*

### Extract 2: Aldi may drop prices to compete with Tesco's new budget venture Jack's

Low-cost supermarket chain Aldi "will never be beaten on price" and could even drop them in response to Tesco's new low-cost venture Jack's, it said today. UK and Ireland chief executive Giles Hurley said Aldi welcomes competition from new players such as Jack's, adding: "If we need to reduce retail prices we will." Aldi, he said, is not worried about its new competitor, as "imitation is the highest form of flattery" and "it has taken us 25 years to perfect our business model." Tesco boss Dave Lewis opened the first two Jack's stores in Chatteris, Cambridgeshire and Immingham, Lincolnshire, last month, with a focus on budget British produce. But its plan to open 10 to 15 stores over the next six months, often next to existing

Tesco stores, pales in comparison to Aldi's decision today to add 400 new stores by 2025, bringing its total to 1,200. "Customers will always pay the lowest price at Aldi," Hurley said, stressing a mix between quality and affordability. That expansion could grow even bigger, with Hurley admitting that Aldi may consider buying Asda or Sainsbury's stores, should the two be forced to divest in some areas following their planned merger. Aldi said it will hire 20,000 new members of staff to fuel its expansion, with 225 of its new stores set to open by 2022. Britain's fifth largest supermarket grew sales by 16.4% year-on-year to £10.2bn in the UK and Ireland last year, it revealed today, an increase from 13.5 per cent growth in 2016. This means Aldi is growing more than five times faster than the overall grocery market, the company said. It also attracted 1.1m new customers, and operating profit grew 26% to £266m.

*Source: CityA.M, August Graham, 01 October 2018*

**Extract 3: The retail's evolution great acceleration**

If we've learned anything from previous recessions, it's that they expose existing weaknesses, accelerate emerging trends, and force organisations to make structural changes faster than they had planned. This is particularly true in retail. During the great recession of 2008–2009, e-commerce grew, and brick-and-mortar retail declined. As the economic recovery took hold, that trend continued while off-price, discount, and emerging players succeeded by appealing to new consumer demands.

There has been an acceleration of digital retail and online shopping. Retailers with strong platforms and sophisticated data analysis have succeeded in connecting with consumers and offering them additional services and value. Consumers are willing to embrace and explore new digital experiences due to public health concerns - telemedicine, online learning, virtual payments, and online grocery ordering and delivery. As the convenience of these experiences increases, we expect these trends to accelerate.

What is clear: Retail orthodoxies will be challenged, and the industry will likely look much different than when we entered this crisis. For now, the picture may appear bleak. But retailers who grasp the challenge and join the gathering trends could well emerge stronger and provide a brighter future for employees, customers, and stakeholders alike.

*Source: Deloitte, accessed 10 August 2022*

**Extract 4: Government intervention in the retail sector**

The retail sector is of paramount importance across OECD countries. It operates as a gateway to consumers from upstream sectors, accounts for almost 5% of GDP, and employs about 1 in 12 workers. COVID-19 has dramatically disrupted the sector, with the shock differing massively between brick-and-mortar versus online shops, essential versus non-essential stores, and small versus large retailers.

Government subsidies to struggling firms may be particularly important in the current economic climate. Examples of these subsidies include wage subsidies to companies for part of the monthly wages paid to employees and rental subsidies and waivers. Such subsidies provide aid for struggling firms to reduce their costs in order to survive in the longer term as well as to preserve jobs in the sector. Their survival and continued operations will also ensure that competition in the sector remains sufficient.

But there are also significant risks to competition from this type of intervention. Recessions allow the economy to scale down or cease inefficient and wasteful activities and allow resources and skills to be redirected to other activities that have greater potential for growth. By not allowing this process to take place, Government may be rewarding inefficient firms and dampening competition. Financially sound firms are not rewarded for their efficiency and are likely to perform worse than if the failing firms were allowed to exit the market. Unsubsidised market participants will find it hard to compete with the inefficiently low prices supported by a subsidy.

*Source: OECD 16 June 2020 and Office of Fair Trading, accessed 13 August 2022*

**Questions**

**(a)** With reference to Figure 1:

**(i)** Compare restaurant prices relative to grocery retail prices in the United States from 1960 to 2014. [1]

**(ii)** Using the concept of income elasticity of demand, account for the above observation. [2]

**(b)** With reference to Extract 1:

**(i)** Identify and explain the evidence that indicates the likely price elasticity of demand for food for households. [3]

**(ii)** Explain one unintended consequence of the proposed 'UK government policies around public health and sustainability'. [2]

**(c)** Extract 2 states that low-cost supermarket chain Aldi 'will never be beaten on price'.

With the aid of a diagram, explain how the strategy of opening many more stores than Tesco enabled Aldi and Lidl to increase their price competitiveness. [4]

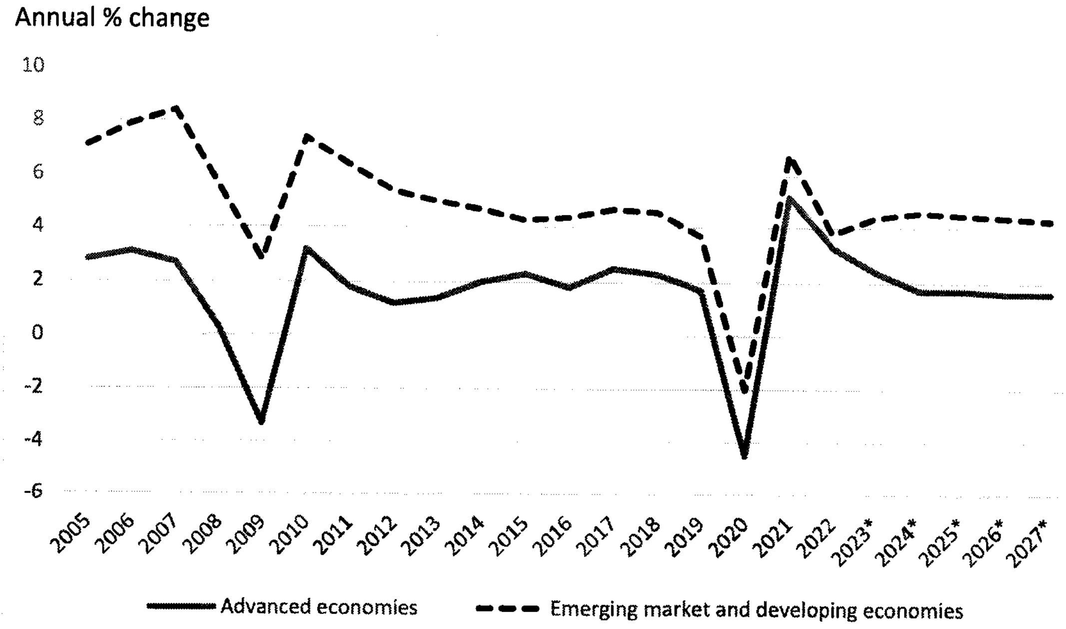
**(d)** Discuss whether going digital will help firms make supernormal profits. [8]

**(e)** Discuss whether government policies such as subsidies to support the retail sector are justified on grounds of efficiency and employment. [10]

**[Total: 30]**

**Question 2: Emerging from the COVID-19 pandemic**

**Figure 2: Annual real GDP growth (% change) for advanced and emerging and developing economies**




**Forecast real GDP growth rates for 2023-2027*

*Source: World Economic Outlook, accessed 22 August 2022*

**Extract 5: Lasting scars of the COVID-19 pandemic**

The COVID-19 pandemic has struck a devastating blow to an already-fragile global economy. Lockdowns and other restrictions needed to address the public health crisis, together with spontaneous reductions in economic activity by many consumers and producers, constitute an unprecedented combination of adverse shocks causing deep recessions in many advanced economies and emerging market and developing economies. Beyond its short-term impact, deep recessions triggered by the pandemic will likely leave lasting scars through multiple channels, including lower investment and innovation, erosion of the human capital of the unemployed; and disintegration of global trade and supply linkages.

*Source: The World Bank, accessed 16 August 2022*

**Extract 6: Emerging from the great lockdown**

For more than six months, the world has grappled with the severe health and economic consequences of the COVID-19 pandemic. Global economic activity collapsed in the second quarter of 2020, when about 85% of the global economy was in lockdown for several weeks. As the International Monetary Fund first stated in its April World Economic Outlook, this is without historical parallel.

However, equally unique has been the sharp rebound of output, consumption, and employment. With more than 80% of countries easing lockdown restrictions, the global economy has begun to recover from the depths of the downturn. The ongoing recovery is the result of the easing of lockdown restrictions as well as the rapid implementation and unprecedented scale of supportive policies by the world's central banks and governments.

This crisis, however, is far from over. The recovery remains very fragile and uneven across countries and sectors. Many countries, including the US and UK, will face daunting fiscal challenges in trying to reconcile the spending required to fight the crisis with rising debt levels that could trigger debt distress.

*Source: www.foreignpolicy.com, 9 September 2020*

**Extract 7: Reimagining emerging ASEAN in the wake of COVID-19**

No nation has escaped widespread disruption from COVID-19. But while the pandemic has affected nearly every country, its timing, the degree of its disruption, and the ability of countries to respond have varied significantly. In its recent forecast, the International Monetary Fund (IMF) projected that countries would recover at different speeds, reflecting the extent of policy support, differences in the pace of vaccinations, and various structural conditions, such as the role of tourism in the economy.

Larger, advanced economies have generally had the resources and infrastructure to weather the pandemic and provide a solid foundation for recovery. Governments from some of these countries more than made up for people's lost labour income by sending them vast amounts of money. That was the US's strategy. Although unemployment soared as the economy locked down, households received more than $2 trillion in government transfers in 2020 and 2021, in the form of topped-up unemployment benefits and stimulus cheques. The European Union (EU) also took an unprecedented decision to mount a $900 billion stimulus programme. Unemployment benefits and easy access to credit enabled consumers in these countries to sustain their consumption activities.

The advanced and more affluent countries also had quicker access to vaccines, making strides in vaccinating growing shares of their populations, raising prospects of opening up their economies earlier.

Less-developed countries, including emerging ASEAN, which is an Economic Union of the 10 member states in the Southeast Asia, including Indonesia, Malaysia, Philippines, Thailand, and Vietnam, began the crisis at a disadvantage, and COVID-19 exposed and heightened their challenges. Governments in emerging ASEAN generally were not able to mount the same magnitude of stimulus programmes as developed nations to cushion the pandemic's blow.

What the region had done relatively better was in terms of containing the spread of the pandemic in the early days. Although the pandemic hit the Asian region first, its countries, including emerging ASEAN, have recorded significantly lower transmission and fatality rates per capita than other regions, much lower than the US and the EU countries. If this trend holds, ASEAN countries could emerge from the COVID-19 pandemic with a significantly lower toll on lives compared with other regions, which would have positive impact on its recovery.

The pandemic had accelerated the trends towards green infrastructure and digital technology. Advanced economies with the resources would be better able to ride on these trends for sustained economic growth. For example, Singapore provided financial incentives to boost digital adoption through $350 million in digital transformation grants for businesses to support e-payments and advanced digital-solution adoption.

Emerging and developing economies too have an opportunity to unlock economic growth by doubling down on green infrastructure as well as addressing basic infrastructure gaps. Emerging and developing economies have more room to grow than advanced economies. Firstly, there is much scope for infrastructure development. It is indeed common knowledge that developing countries lack access to electricity, water, telecommunication facilities as well as common transport infrastructures such as roads and ports. Infrastructure investment is a potential engine for long-term economic growth.

Secondly, the productivity of an economy is dependent on four important factors: physical capital, human capital, natural resources, and technological knowledge of workers. The amount of capital available to workers in emerging and developing economies is much lower compared to the advanced economies. Any investment in physical capital would increase labour productivity in the emerging and developing economies much more significantly.

The COVID-19 pandemic is a story of lives and livelihoods. It remains to be seen whether the advanced economies or the emerging and developing economies would emerge stronger from the COVID-19 pandemic, recovering back to pre-COVID-19 growth and employment levels and building its productive capacity.

To spur an enduring economic recovery, policy makers would need to identify and activate the right levers, and invest in job-creating policies and technologies that could position them well in the years to come.

*Sources: McKinsey & Company, 2 September 2020 and Global Economic Effects of COVID-19, 10 November 2021*

**Extract 8: Trade - will COVID-19 drive further protectionism?**

Protectionism seems to be undergoing something of a renaissance, most noticeably in President Trump's approach towards China in trade talks. The World Trade Organisation (WTO) recently criticised the US for imposing levies on more than $200 billion of Chinese goods since the start of the US-China "trade war", arguing that the US has breached global trading rules by doing so. In response, US trade representative Robert Lighthizer described the WTO as "completely inadequate."

Should we be concerned about the apparent push towards more protectionism? The World Economic Forum (WEF) does not pull its punches, arguing that tariffs (the most common form of protectionism) reduce productivity and output, increase unemployment and raise inequality. "These effects are robustly and statistically significant," the WEF says, "and are large enough in an economic sense to merit the attention of policymakers." The pros of protectionism are largely temporary: creating jobs and buying time to develop competitive advantage being perhaps the most significant.

If protectionism is widely discredited as harming the macro-economy, such as here, here, and here, why do it? "In times of economic uncertainty, it's common for politicians to threaten protectionism to look after industries or sectors of strategic importance," says Nick Levine, a Chartered Accountant and adviser to small-medium enterprises. The rise in protectionism globally has contributed to countries trading less and focusing on domestic industries, something which is expected to continue accelerating after the pandemic.

Perhaps the reason protectionism won't go away is that the benefits of free trade take time and are harder to measure effectively. Not all gains from trade are immediate, the WEF points out, "and not every worker benefits." So, "governments can feel pressure to implement protectionist policies and measures – including tariffs, quotas and various forms of subsidies – as a way of 'saving' domestic jobs and enterprises."

*Source: The Institute of Chartered Accountants in England and Wales, 29 September 2020, accessed on 24 August 2022*

**Questions**

(a) Compare the real GDP growth rate between the advanced economies and the emerging and developing economies from 2005 to 2020. [2]

(b) With reference to Extract 5, explain how the impact caused by the pandemic will leave 'lasting scars' on an economy in the long run. [3]

(c) Using a production possibility curve diagram, explain how the 'easing of lockdown restrictions' might help a country achieve better resource utilisation. [3]

(d) Explain how rising government debt levels might make it difficult for a country to achieve inclusive and sustainable growth. [4]

(e) Discuss whether advanced or emerging and developing economies would emerge stronger from the COVID-19 pandemic. [8]

(f) With reference to Extract 8, discuss whether the use of protectionist measures can ever be justified due to the economic damage caused by the COVID-19 pandemic. [10]

**[Total: 30]**

# ANDERSON SERANGOON JUNIOR COLLEGE
## JC2 PRELIMINARY EXAMINATION
**Higher 2**

**ECONOMICS** **9757/02**

Paper 2 **13 September 2022**

Additional Materials: Answer Booklet **2 hours 15 mins**

**READ THESE INSTRUCTIONS FIRST**

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

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from either Section A or Section B.

Begin your answer to each question on a fresh page of the answer booklet.

Answer **all** questions.

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

This document consists of **3** printed pages and **1** blank page.

Answer **three** questions in total.

**Section A**

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

1. Global electricity prices surged in 2021, driven by the rapid economic rebound and colder winters and warmer summers. Policymakers should be taking action to soften the impacts on the most vulnerable and to address the underlying causes.

Source: IEA.org, accessed August 2022

**(a)** Using demand and supply analysis, explain how rapid economic rebound and colder winters and warmer summers may have led to the surge in electricity prices. [10]

**(b)** Discuss the policies that might be used by a government to alleviate the sharp increase in electricity prices. [15]

2. Individuals should get vaccinated to protect themselves from COVID-19 infection. This would also provide better protection for the whole society.

Adapted from CNA, 30 December 2020

**(a)** Explain what needs to be considered when a government decides to provide vaccination for its people. [10]

**(b)** Discuss whether free provision of vaccination is the best policy to achieve the microeconomic objectives of a government. [15]

3. The Land Transport Authority of Singapore's Bus Contracting Model offers a tendering process that drives competition in the bus industry and encourages the existing bus operators to become more responsive to changes in ridership and commuter needs. The largest public bus operator in Singapore, SBS Transit also ventures into other businesses such as leasing commercial space at their bus interchanges.

Source: lta.gov.sg, accessed August 2022

**(a)** Explain the potential benefits and costs to a consumer when there is more competition in the bus industry. [10]

**(b)** Discuss whether product differentiation or diversification is a more appropriate strategy for firms in different industries when faced with more competition. [15]

## Section B

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

**4.** In order to achieve the macroeconomic objectives of a country, governments may put in place policy measures to influence economic conditions.

**(a)** Explain why Singapore chooses exchange rates rather than interest rates as its main tool of monetary policy. [10]

**(b)** Discuss the extent to which the openness of an economy limits the scope for the use of fiscal policy and supply-side policies to achieve low unemployment. [15]

**5.** The following data relate to the two stated economies in 2021.

| | Singapore | Thailand |
|---|---|---|
| GDP/ capita (PPP USD) | 116,486 | 19,209 |
| Unemployment rate (%) | 3.6 | 1.4 |
| Consumer Price Index (% change) | 2.3 | 1.2 |
| Balance of Trade (current USD) (billions) | 124.50 | -1.21 |

Source: various

**(a)** Explain how economists could use the above data to compare the economic performance of Singapore and Thailand. [10]

**(b)** Discuss whether higher economic growth rate is the main cause of higher living standards in a country. [15]

**6.** Globalisation powered the surge of international trade since 1990s, and the world trade to GDP ratio has tripled to 52.1% by 2020. Its effects on economies are multi-faceted, ranging from higher vulnerability to external shocks and making supply chain more global, where production is broken into activities and tasks carried out in different countries. However, in recent years, there seems to be signs of slowing down of globalisation.

Discuss whether globalisation is always a victim of its own success. [25]

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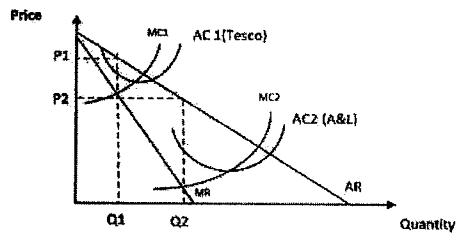
**Anderson Serangoon Junior College**
**2022 JC2 H2 Economics**
**Preliminary Examination Paper 1**
**Suggested answers**

**Question 1: Retail troubles**

| | | |
|---|---|---|
| **(a)(i)** | **With reference to Figure 1:**<br>**Compare restaurant prices relative to grocery retail prices in the United States from 1960 to 2014.** | [1] |
| | Restaurant prices increased by 350% **relative** to grocery retail prices. | |
| **(ii)** | **Using the concept of income elasticity of demand, account for the above observation.** | [2] |
| | • Restaurant food has YED > 1 whereas YED for grocery retail is 0 < YED <1<br>• Increase in income leads to increase in demand for restaurant food by more than proportionately as compared to retail food where demand increase by less than proportionately. Hence there is greater increase in price for restaurant food relative to grocery retail prices. | |
| **(b)** | **With reference to Extract 1:** | |
| **(i)** | **Identify and explain the evidence that indicates the likely price elasticity of demand for food for households.** | [3] |
| | • Evidence: "increase in food and drink spending of nearly 7%"<br>• Inference: Demand for food is price inelastic → PED <1<br>• This is because when price of food increase, expenditure would increase if quantity demanded falls less than proportionately. The increase in expenditure due to price increase is greater than the fall in expenditure due to the fall in quantity demanded, causing overall total expenditure to increase. | |
| **(ii)** | **Explain one unintended consequence of the proposed 'UK government policies around public health and sustainability'.** | [2] |
| | • Rise in inequity → The poor spend a bigger proportion of their income on food than the rich. With rising prices and with nominal income unchanged, their real income falls. The poor are worse off compared to the rich. This then increases inequity.<br>• Rise in debt → With rising costs due to having to comply with the new government regulations on public health and sustainability, firms will have lower profits and some may suffer losses, assuming no change in total revenue. Firms may resort to borrowing to finance their current operating costs. Thus, debt increased.<br>• Loss of competitiveness → Rising costs due to the new government regulations will increase price of domestically produced food and drinks. This will reduce their price competitiveness as compared to imported food and drinks, resulting in fall in demand for domestically produced food and drinks as consumers switched to imported goods. Domestic firms will suffer from losses and some may exit the industry resulting in increase in unemployment in the food and drinks industry. | |
| **(c)** | **Extract 2 states that low-cost supermarket chain Aldi 'will never be beaten on price'.** | [4] |
| | **With the aid of a diagram, explain how the strategy of opening many more stores than Tesco enabled Aldi and Lidl to increase their price competitiveness.** | |
| | 'Opening of many more stores' represents expansion of the firm, which enables Aldi and Lidl to reap internal economies of scale (EOS) and enjoy cost advantages. Internal EOS refers to the fall in long run average cost that accrues to a firm as it increases its own output level.<br><br>Some examples include marketing and technical EOS. For example, with larger scale of operation, Aldi and Lidl will be buying larger quantities of inputs compared to its competitors and so are in a stronger position to negotiate discounts from its suppliers and enjoy lower cost for their inputs. It could also enjoy technical EOS gained through specialisation of labour. "Aldi said it will hire 20,000 new members of staff to fuel its expansion". As its scale of operation increases, it becomes more efficient to allow workers to specialise in their tasks as it saves time to repeat the same task rather than move from one task to another. Thus more output can be produced in a given time because of the increase in workers' productivity. Division of labour thus increases the productivity of labour, resulting in lower unit cost of production.<br><br>Thus because of the ability to reap larger internal EOS, the marginal and average cost of Aldi and Lidl, represented as $MC_2$ and $AC_2$, are significantly lower than the marginal and average cost of its competitors such as Tesco, represented as $MC_1$ and $AC_1$ shown in the diagram below.<br><br><br>Assuming profit-maximisation objective, both firms would be producing at the output level where their respective marginal cost equal their respective marginal revenue. Assuming the same demand (AR), Tesco would be producing at $Q_1$ and charging price $P_1$. On the other hand, Aldi and Lidl would be producing a larger quantity at $Q_2$ and charging lower price at $P_2$, thereby increasing its price competitiveness. | |
| **(d)** | **Discuss whether going digital will help firms make supernormal profits.** | [8] |
| | P1: Going digital can help firms make supernormal profits if it increases demand and lower costs. | |

Profits is the difference between total revenue and total costs. Extract 3 said that 'online shopping will continue to accelerate'. Consumers increasingly are making their purchases online rather than buying from brick and mortar stores. Firms can increase demand for their goods due to this change in taste and preference, by also selling online to complement their brick and mortar stores. Online shopping also expands demand for the firms' goods as the firms can sell beyond their own locality and can even go international.

Figure 1 shows a rightward shift of the AR and MR curve from $AR_0$ to $AR_1$. At the profit-maximizing output of $Q_0$, where MC=MR, the firm is making normal profits as TR is equal to TC, $OP_0GQ_0$. Assuming no change in costs, the rise in demand increases the equilibrium output to $Q_1$ where MC cuts $MR_1$ and the price is higher at $P_1$ instead of $P_0$. TR ($OP_1AQ_1$) is now higher than TC ($OPBQ_1$) and the supernormal profits is area $P_1APB$.

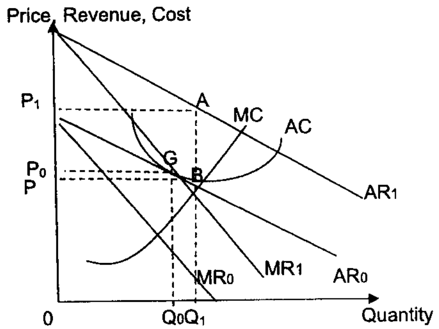



Figure 1

In addition, going digital can also help a firm to cut costs. For brick and mortar stores, they can cut down the number of physical stores and reduce the number of employees as well as the amount of inventories. As both rent and wages take up a big proportion of a retailing firm's total costs, their cost savings can be significant. This will reduce both their fixed and variable costs which then shifts their AC and MC curves downwards. As seen from Figure 2, the profit-maximizing output increases from $Q_0$ to $Q_1$ and the firm's TR revenue is unchanged but TC is reduced from $OP_0GQ_0$ to OPBQ. The firm is now making supernormal profits of $PP_1AB$.

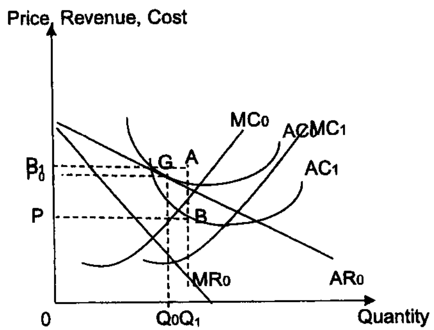



Figure 2

P2: However, going digital may not necessarily increase a firm's profits. Demand may not increase, nor cost be lower.

Extract 3 mentioned that only 'retailers with strong platforms and sophisticated data analysis have succeeded in connecting with consumers'. Firstly, the retail sector is very much a monopolistically competitive market. There are many other sellers - some small like hair dressing but there are large sellers like Tesco. It may not be too costly for a firm to set up an online platform especially when there is a lot of information from the internet as well as many web developers offering their services online. However, only the best online platforms which have both convenience, security, and other attractive features based on their data analysis of consumer preferences that are best able to get consumers to make purchases from their online stores. It may be very costly to be able to set up an online platform that is way better than others.

Likewise, demand may not increase if the platform is not user friendly, where payment security is an issue or where delivery is not prompt or charges too high. It is similar to the idea of advertising. Not every firm that advertises is bound to be able to increase demand significantly, not to mention the high costs of advertising. Thus, if the increase in demand is lesser than the increase in cost or vice-versa, a firm that goes digital may not make supernormal profits.

Even for those firms that earned supernormal profits in the short run, their ability to continue to earn supernormal profits in the long run would depend on whether they are able to strengthen their online presence such that it becomes a high barrier to entry.

In conclusion, given that there is the shift of consumers shopping habits to online shopping, it is a huge disadvantage for firms not to recognise this and act accordingly. But it is no guarantee that a firm will necessarily make supernormal profits by just going online. As seen from above, it depends on whether their online platform is able to increase demand as well as their ability to manage the cost of setting up and maintaining this platform. Besides the quality of the online platform, the nature and quality of the firm's products as well as the firm's customer base would also influence its ability to make supernormal profits.

**(e) Discuss whether government policies such as subsidies to support the retail sector are justified on grounds of efficiency and employment.** [10]

P1: Government policy such as subsidies for the retail sector during the COVID-19 pandemic will reduce the problem of rising unemployment in the retail sector as well as reducing productive inefficiency.

With reference to Figure 1 below, firms are making subnormal profits as demand has fallen drastically due to the pandemic and now $AR_0$ is less than AC at the profit-maximizing output of $Q_0$ where $MC_0=MR_0$ and price $OP_0$ is less than AVC, $OC_0$. Most of the variable costs incurred by retailing firms would be cost of labour because retailing is basically a labour intensive industry where 1 in 12 workers is in this sector. Thus, most retailers would have to shut down as their losses will be smaller as they only need to incur fixed costs like rental. When these firms shut down, all workers will be retrenched, and the level of unemployment would increase significantly. Because of the severity on unemployment, governments in most countries, offer support in the form of wage subsides. The effect of this is to reduce the cost of labour to the firms and so the AVC curve shifts downwards as now the government pays part of the wages of the firms which is equivalent to a fall in total wage costs. Since the variable cost is reduced, the MC curve shifts to the right as well. Now the new equilibrium output is at $OQ_0$ and the price is at $OP_1$ which is higher than the AVC of $OC_1$. In this case, the loss from shutting down which is the total fixed costs plus total variable costs is greater than the loss from continuing production which is just the loss from part of total variable costs as TR can cover all of TFC and part of TVC. As such, the firm can continue production and there is no need to retrench workers, thus achieving the government's objective of 'preserving employment'.

It is also justified in terms of productive efficiency. As mentioned earlier, large scale unemployment in the retail sector when firms close down would mean that the economy will be operating inside the production possibility curve. There will be substantial under-utilisation of resources and not just labour alone because as firms close down, labour and capital goods are not utilised. Thus, with government support, the economy would not be moving further away from the PPC.

At the firm level, although there is no productive efficiency, i.e firms do not produce at minimum LRAC in a monopolistic and oligopolistic market, the preservation of the number of firms in the industry would help to maintain competition in the market and therefore not increase productive inefficiency. Existing firms can use the interim period to consolidate and find ways to lower cost of production once the government support is withdrawn when the Covid situation improves.

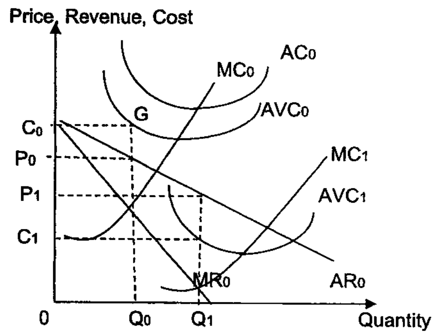


Figure 1: Changes in AVC due to wage subsidy

P2: Government support will enable firms to **sustain** their innovation which will lead to dynamic efficiency in the long run.

R&D is costly and when firms make losses, they would have to cut R&D expenditure and channel whatever funds available to pay wages to workers so that the firm can continue production. But with government wage support, firms need not cut spending on R&D. With uninterrupted R&D, firms can improve production processes to cut costs as well as to develop new products or services which can improve their competitiveness in the future. Thus, government support is justified in terms of dynamic efficiency.

P3: However, government support of the retail sector can create problems of productive and allocative inefficiency.

As mentioned in Extract 4, subsidies are given to struggling retailers but not all of them are due to the pandemic. It is mentioned that the pandemic accelerated their decline. Under normal circumstances, market forces would result in inefficient firms closing down and the unemployed resources are reallocated to firms that are experiencing rising demand which are able to pay higher wages and rentals to obtain the workers and shop space. This ensures that the right type and right quantity of goods are produced. Thus, when government supports these inefficient struggling firms from closing down, resources are not utilised efficiently as they are not reallocated to other uses. *However, given that almost the entire retail sector experienced fall in demand due to the pandemic, unlike a recession caused by the normal business cycle, there are not many firms that experienced rising demand and therefore in need of more resources. As such the allocative inefficiency may be reduced because of this.*

There can be greater productive inefficiency as well. As inefficient firms are supported by wage subsidies, there is less incentive for them to cut cost for example firms may be overstaffed. There is also less urgency to find the least cost method of production and so X-inefficiency may worsen i.e producing a given output at an even higher LRAC. *However, government support is only temporary as the government made it known that it was due to the entire retail sector that suffered from the pandemic that necessitated government support. No intervention will lead to even greater productive inefficiency as there will be greater unemployment. Firms also cannot afford to be complacent even with subsidies because of the severity of the fall in demand. Firms also may choose to be overstaff in anticipation that in the future there can be a rise in demand and therefore they will not face a staff shortage.*

With regard to employment, the success of government support would depend on the amount of the subsidy given, the duration of the support as well as whether the policies to address the pandemic are removed or whether they are prolonged. Too little subsidies for too short a time period would not help struggling firms to survive and there will still be substantial rise in unemployment.

Conclusion:
Whether government support of the retail sector is justified or not would depend on the time period, the severity of the unemployment problem at that point in time and whether the benefits outweigh the costs of intervention. Government support is only temporary to help all retailers to tide over a very difficult period brought about by the COVID-19 pandemic and so the risk of complacency is not as great. The adverse impact on the retail sector is very great and if no assistance is rendered, large-scale exit of firms from the retail sector would cause more harm than the opportunity cost of subsidies to support them. Consider the harm from the extensive shortages of goods when the economy recovers from the pandemic due to the disappearance of retail firms as well as the difficulties of reestablishing a thriving retail sector, the conclusion is clear that government intervention is justified as benefits outweigh the costs. As mentioned in Extract 4, the retail sector is of 'paramount importance' as it is the 'gateway to consumers from upstream sectors'. The collapse of the retail sector would have adverse repercussions on the rest of the economy as there are many other industries that have close linkages to the retail sector such as tourism, the transport sector etc. The complacency mentioned above is not likely to be prolonged as the market will eventually drive out inefficient firms once the subsidies are removed, and it is likely the government will do so because it is a strain on the government budget to prolong the support. Thus, the retail sector must be supported for both employment and efficiency reasons in the context of the pandemic.

**Question 2: Emerging from the COVID-19 Pandemic**

**(a) Compare the real GDP growth rate between the advanced economies and the emerging and developing economies from 2005 to 2020.** **[2]**

Any 2 of these 3:
- Real GDP growth rate for both advanced economies and emerging and developing economies generally fell between 2005 to 2020.
- Real GDP growth rate for advanced economies fell to negative in 2008-2009 and again in 2020 while real GDP growth rate for emerging and developing economies were positive in 2008-2009 and only negative in 2020.
- Real GDP growth rate for emerging and developing economies was always higher than the growth rate for advanced economies.

**(b) With reference to Extract 5, explain how the impact caused by the pandemic will leave 'lasting scars' on an economy in the long run.** **[3]**

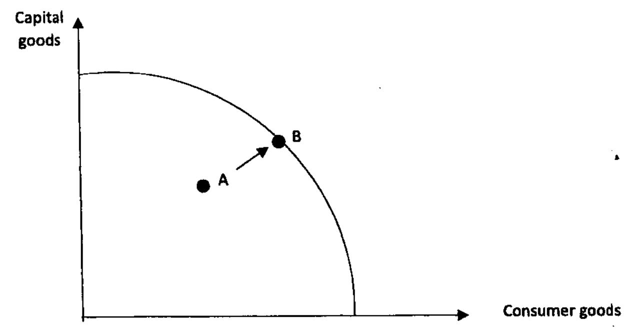
Extract 1 states that the pandemic led to 'lower investment and innovation'. The fall in investment will lead to a fall in the level of capital stock in the economy, lowering both the quantity and quality of factors of production in the economy while less innovation would lead to less efficient production of goods and services.

Extract 1 also states that the pandemic will lead to 'erosion of the human capital of the unemployed'. Prolonged unemployment will lead to erosion of skills where workers become less familiar and efficient in their jobs, leading to a loss of productivity.

The above will lead to a fall in the productive capacity of the economy, fall in LRAS and fall in the maximum level of potential output, impeding potential growth.

**(c) Using a production possibility curve diagram, explain how the 'easing of lockdown restrictions' might help a country achieve better resource utilisation.** **[3]**

During the lockdown, many workers were unemployed or unable to work. The economy will be operating at point A, which is within the PPC, indicating inefficient utilisation of resources.



The easing of lockdown restrictions would increase economic activity and increase the hiring of workers. When idle resources are being utilised, there is increase in the production of both consumer and capital goods, shown by the movement from point A to point B on the PPC, where resources are fully utilised.

**(d) Explain how rising government debt levels might make it difficult for a country to achieve inclusive and sustainable growth.** [4]

**Inclusive growth** refers to a sustained rate of economic growth that is broad-based across economic sectors, and creates productive employment opportunities for the majority of the country's population. It takes income distribution into consideration and does not contribute to worsening income inequality.

One way to achieve inclusive growth is for governments to subsidise reskilling and skills upgrading to help workers find productive employment opportunities or higher-paying jobs. Governments could also provide transfer payments to the lower income group to raise their disposable income and purchasing power in the form of vouchers for necessity and subsidies for education of the children.

However, rising government debt means that the government would have less funds to implement such policies which would make it more difficult to achieve inclusive growth.

[Alternative point]
Rising government debt means less funds for development of transport infrastructure that can connect rural to urban areas to increase physical access to work, potentially helping to increase job opportunities for workers living in the rural areas to alleviate poverty and achieve inclusive growth.

**Sustainable growth** refers to a rate of economic growth that can be maintained without creating other significant economic problems (such as depletion of resources and environmental problems), particularly for future generations.

It requires deliberate government policy to support research and development efforts to develop renewable resources and to build sustainable infrastructure for water, energy, transportation and waste management. The Singapore government for example, provides funding for businesses to improve the energy efficiency of industrial facilities and adoption of energy efficient technologies. Rising government debts means less funds and capacity to support these initiatives, making it more difficult to achieve sustainable growth.

[Alternative point]
Extract 6 states that "rising debt levels could trigger debt distress". This could lead to a fall in the credit rating of the country, leading to fall in investors' confidence and a fall in FDI into the country. This would impede the transfer of technology and knowledge and collaboration with established multi-national corporations in the area of clean energy development, making it difficult to achieve sustainable growth.

**(e) Discuss whether advanced or emerging and developing economies would emerge stronger from the COVID-19 pandemic.** [8]

As stated in Extract 7, emerging stronger refers to recovering back to pre-COVID-19 growth and employment level faster and greater ability in building productive capacity

**P1: Advanced economies are likely to emerge stronger**

<u>Size of stimulus programmes</u>
Extract 7 states that advanced economies generally had the resources and infrastructure to weather the pandemic and provide a solid foundation for recovery. Countries such as the US and the EU mounted huge stimulus programmes to protect jobs and to boost household income. Households and workers who lost their jobs received transfer payments and unemployment benefits respectively which allowed them to sustain some level of consumption and reduced the extent of the fall in consumption expenditure. This in turn reduced the extent of fall in aggregate demand (AD) and economic growth, which would make recovery easier.

In contrast, emerging economies such as those in ASEAN were unable to "mount the same magnitude of stimulus programmes". Thus there was greater loss of jobs and income, which led to fall in induced consumption and large multiplied fall in real national income and further contraction of the economy.

<u>Access to vaccines</u>
Furthermore, advanced economies had the resources to gain 'quicker access to vaccines' and many of these countries eased lockdown restrictions earlier than the emerging and developing countries where the rate of vaccination was slower as they lacked the resources to vaccinate their population quickly.

Hence, the advanced economies could resume economic activity more quickly, leading to a faster rebound in consumption and production. Increase in consumption expenditure will increase AD, leading to unplanned stock depletion and firms will increase production. Output and income increase, activating the multiplier process, leading to multiplied increase in real GDP and economic growth. As firms increase production, the derived demand for labour will also increase, reducing demand deficient unemployment. As these advanced economies start to experience economic growth and increase in employment, they will make quicker recovery back to pre-COVID levels and are poised to emerge stronger.

Whereas the developing economies took a longer time to reopen the economy, and the job losses that were sustained over a longer period of time would lead to erosion of skills, fall in productivity and fall in productivity capacity of the economy, impedes long-term growth.

<u>Ability to capitalise on the trends that were accelerated by the pandemic.</u>
Extract 7 states that the pandemic had accelerated the trend towards green infrastructure and digital technology. These are new growth sectors and advanced economies have the resources 'to ride on these trends for sustained economic growth'. For example, the Singapore government provides financial

incentives to SMEs and businesses to boost digital adoption; stimulus package includes support for reskilling and redeployment. These policies protect jobs and prepare the economy ready for new growth areas such as advanced digital-solutions. Such government expenditure not only increase AD and actual growth, it also improves the quality of resources in the economy and increase its productive capacity, increasing LRAS and potential growth. Emerging and developing economies on the other hand, lack the resources to capitalise on such trends to reap faster rates of economic growth.

**P2: Emerging and developing economies could emerge stronger**

On the other hand, it is possible for emerging and developing economies to emerge stronger. Extract 7 states that countries in the Asian region, including the emerging ASEAN economies, experienced lower death rates from the pandemic compared to the advanced economies in Europe and US. Thus this means that the extent of fall in quantity of human capital is lower and their productive capacity was less severely affected as the developed economies. Thus they may have greater potential for growth and could achieve higher growth rates in future.

As explained, there is huge potential for growth in green infrastructure and digital technology. While governments in emerging and developing economies are unable to provide huge amount of support grants to their domestic firms, there is much greater scope to improve their basic infrastructure and build green infrastructure. They lack even basic infrastructure so there are definitely more opportunities for infrastructure spending and development, and more scope for increase in AD and economic growth. Whereas infrastructure development is already mostly matured and fulfilled in advanced economies so these is less scope for these economies to grow through this source.

Furthermore, emerging and developing economies are generally operating way below their full employment. Increases in FDI and government spending would increase AD and bring about the full multiplier effect and larger multiplied increase in real national income.

In the long run, the improvement in infrastructure will increase productive capacity and increase LRAS and help these developing economies achieve potential growth too. In contrast, advanced economies mostly do not have such gaps in infrastructure and thus less scope to tap on this opportunity. In this regard, emerging and developing economies have greater potential to emerge stronger in terms of potential growth.

**EV**
Overall, advanced economies are in a better position to grow stronger as they have more resources and better technology. In the context of the pandemic, the pivot towards digitalisation and automation is significant due to the lockdowns and supply chain disruptions. Such technology is still better developed in the advanced economies and therefore advanced economies are better able to capitalise on these trends and enjoy faster rates of economic growth.

And although some of the emerging and developing economies were able to contain the spread of the pandemic in the early days, the advanced economies had quicker access to vaccines for their population and were eventually able to lessen the impact of the pandemic and protect the productive capacity of their economies.

**OR**
Figure 1 shows that emerging economies have been registering higher rates of economic growth. Also, despite not being able to mount huge stimulus programmes, Fig 1 shows that their fall in real GDP growth was less severe than that experienced by the advanced economies. Forecast growth was also higher. Thus if these economies could capitalise on the growth opportunities accelerated by the pandemic, they could recover more quickly and enjoy higher rates of economic growth. To do this, the governments need to put in place policies to support growth in these areas.

**Mark Scheme**

| Level | Knowledge, Application, Understanding and Analysis | Marks |
|---|---|---|
| L2 | Balanced and well-developed analysis of why advanced and emerging and developing economies could possibly emerge stronger. Good reference to context. | 4 – 6 |
| L1 | One-sided answer that only explains either advanced economies would emerge stronger, or emerging and developing economies would emerge stronger. Reasons given are cursory.<br><br>Or a balanced answer that only lifts from extracts without any explanation. | 1 – 3 |
| EV | For an evaluative judgment on which economies might emerge stronger from the pandemic. | 1 – 2 |

**(f) With reference to Extract 8, discuss whether the use of protectionist measures can ever be justified due to the economic damage caused by the COVID-19 pandemic.** **[10]**

The COVID-19 pandemic had led to significant fall in all economic activities, including consumption, investment and trade. These had led to significant fall in economic growth and employment.

Hence one reason for the use of protectionist measures is to protect domestic industries and employment. As stated in Extract 8, tariffs is a common protectionist measure.

In the short run, protectionist policies can be justified as the pandemic had affected almost all the sectors across the economy. These major sectors are likely to account for a large percentage of employment in the country. In particular, retrenchment and unemployment is likely to be significant in export-led industries due to the fall in global demand and consequent fall in production.

Hence countries might turn to protectionist measures such as tariffs to shift consumption away from imports to domestically produced goods, so that there is increase in domestic production and employment of workers.

Figure 1 below illustrates the case of a good that is partly home produced and partly imported. Domestic demand and supply curves are $DD_{dom}$ and $SS_{dom}$ respectively. Pw is the world price where the country can buy all it wants and $SS_{world}$, the world supply curve, is perfectly price elastic. At price Pw the quantity demanded is M. Of this, OJ is produced locally and JM is imported.

Assume the government imposes a tariff T. This shifts the world supply curve to the country by the amount of the tariff. The effective horizontal world supply curve thus shifts up to $SS_{world + tariff}$ and price rises to Pw+T. At this price, domestic consumption falls to L and domestic production rises to K. As firms increase production, they would hire more workers and thus increase the level of employment in the country, helping to reduce the unemployment caused by the pandemic.

From Figure 1, government revenue has increased due to the tax collected as shown in area C. Producers also gain as their producer surplus increased by area A. Thus, the use of tariffs help to provide more government revenue in terms of tax collected, which could help fund their expansionary fiscal policies; and also increase revenue for producers.

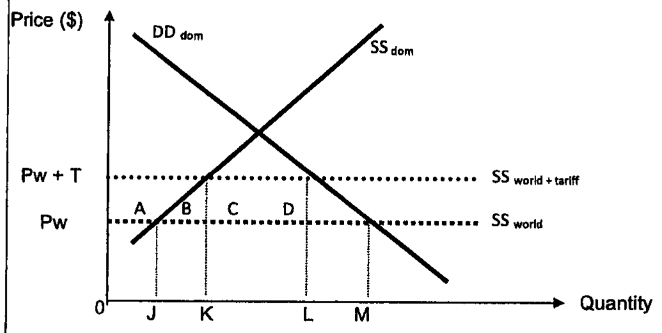



**Figure 1: Effects of a Tariff on Domestic Production**

Protectionism can also be justified to protect infant industries amidst the pandemic. Given the poor economic outlook, investors' confidence in infant industries are likely to be lowered globally. Furthermore because of the fall in global demand, these infant industries, which may have potential comparative advantage that has not been fully developed, do not even have the chance to realise their potential. Thus, through protectionism, it prevents these infant industries from collapsing and provide them some time to develop their CA and bring about new source of growth for the country, which is even more critical as economies strive to recover from the pandemic.

**Costs of protectionism**

The use of protectionist policies cannot be justified in the long run as it will cause a loss in consumer surplus and deadweight loss for the society. From figure 1, the loss in consumer surplus is shown from area A,B,C and D. Loss to society is shown in area B and D as deadweight loss, leading to inefficient allocation of resources.

Therefore, use of protectionist measures are not justifiable as consumers and society lose out with the use of tariffs. Also it could lead to losses suffered by other producers in the country if the tariff is imposed on factor of production, it might worsen the bad situation as now domestic producers would have to produce at a higher cost, making their goods less price competitive. In this case, both domestic producers and consumers are worse off.

Protectionist measures may also result in the other country retaliating. With retaliation, global trade will suffer as exports are reduced and countries lose an important source of growth, which would slow down their recovery from the pandemic. Protectionist measures also goes against the idea of free trade on the basis of comparative advantage.

Overall, protectionism at best can only be justified in the short run if it is introduced to help reduce the negative impact of the pandemic. In the long run, countries should embrace free trade so as to realise the gains from specialisation and free trade which would boost employment in industries that a country has a comparative advantage in. Free trade would also enable consumers to enjoy lower prices and greater variety of goods and services. The pandemic has exerted economic damage on every country. It is even more critical for countries to use free trade to bring the global economic damage to an end as shown by the use of comparative advantage.

**Mark Scheme**

| Level | Knowledge, Application, Understanding and Analysis | Marks |
|---|---|---|
| L2 | Balanced discussion of reasons and costs of protectionist measures, with use of tariff diagram to support the reason. Reasons are clearly linked the context of the economic damage caused by the pandemic. | 5 – 7 |
| L1 | High L1 – 1 reason relevant to the context and 1 cost. Cursory explanation of how protectionist measure could reduce the negative impact of the pandemic. | 1 – 4 |
| EV | A well explained judgement on whether protectionist measures can ever be justified. (2-3)<br><br>Under-developed judgment - 1 mark | 1 – 3 |

Markers comments

| | |
|---|---|
| **QA** | Students were able to present various costs and benefits for protectionism. However, many did not link their answers to the context (Covid-19 pandemic). |
| **AR** | • Some answers did not provide examples of protectionism such as a tariff to support the reason(s) and demonstrate analytical rigour of the benefits and costs of a tariff.<br>• For example, rather than just provide a statement to say that protectionism is justified to protect infant industries, students should go on to elaborate why it is so crucial to protect the infant industries in light of the pandemic. |
| **CK** | No major content issues as students seem to be familiar with the possible costs and benefits. |

**Anderson Serangoon Junior College**
**2022 JC2 H2 Economics Prelims**
**Suggested answers**

**PAPER 2**

**Question 1**

**1.** Global electricity prices surged in 2021, driven by the rapid economic rebound and colder winters and warmer summers. Policymakers should be taking action to soften the impacts on the most vulnerable and to address the underlying causes.

Source: IEA.org, accessed August 2022

**(a)** Using demand and supply analysis, explain how rapid economic rebound and colder winters and warmer summers may have led to the surge in electricity prices. [10]

**(b)** Discuss the policies that might be used by a government to alleviate the sharp increase in electricity prices. [15]

**Suggested answer:**

**Part (a)**

Rapid economic rebound and colder winters and warmer summers are both contributing demand factors which led to a surge in electricity prices. The surge in prices could also be due to the supply of electricity being price inelastic.

Electricity is central to modern life and clean electricity is pivotal to energy transitions, but in the absence of faster structural change in the sector, rising demand over the recent years could result in volatility in electricity prices.

The rapid economic rebound has led to an increase in income for many households. The increase in income results in an increase in purchasing power and increase in ability and willingness to consume normal goods. Normal goods are goods where a rise in income would lead to a rise in its demand. Conversely, a fall in income would lead to a fall in the demand for a normal good such as electrical appliances. Normal goods comprise of necessities and luxury goods. Electrical appliances and electricity are complement goods, as use of electricity is essential to ensure their proper functioning of the electrical appliances. Hence the increase in income will lead to an increase in the demand for electricity by households. The increase in demand will lead to a shortage of electricity in the market and upward pressure on equilibrium price and increase in quantity.

In addition, when there is a rapid economic rebound, to meet the demand for normal goods, firms would tend to increase production of goods. If the production of these goods requires the use of electricity as a factor of production, there would be an increase in the derived demand for electricity.

Next, with more extreme weather conditions in 2021, such as colder winters, warmer summers and droughts across the globe in countries such as United States, Mexico, China and Iraq, there would be an increase in the demand for electricity by households as demand for heating purposes such as the use of heaters during colder winters and also air-conditioners to tide the people through the hot summers increase exponentially.



The rise in demand for electricity from D0 to D2 will lead to a shortage of electricity Q0Q3 at the original price, P0. This exerts the upward pressure on the market price. As price increases, quantity demanded falls and quantity supplied rise. As supply is price inelastic the rise in price leads to less than proportionate rise in quantity supplied. This means that for the market to clear and reach a new equilibrium, the rise in price is greater in order for the increase in quantity supplied to clear the shortage. Thus, the overall rise in electricity prices has surged.

The PES concept can be used to explain the surge in prices while the demand factors mentioned above explained the increase in the prices. Supply of electricity is likely to be price inelastic due to the length and complexity of production process and the availability of resources to produce electricity is limited, given shortages in coal and natural gas, thus it is difficult for firms producing electricity to respond to the rise in demand. In addition, there is also limited availability of storage facilities. Thus, a rise in price in electricity is likely to lead to a less than proportionate rise in quantity supplied. At the same time, it takes a few years to build the power plants to generate electricity.

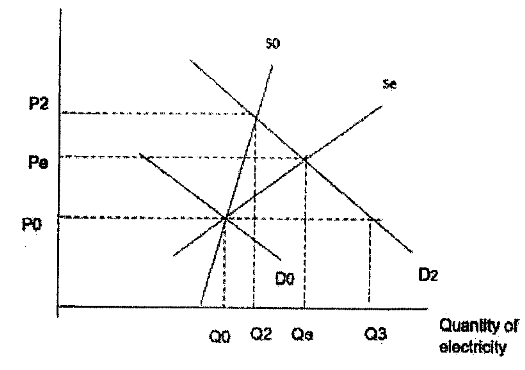



Fig 1.

As shown in figure 1, If the supply of electricity is price elastic, the rise in price will be slower from P0 to Pe. If the supply is price inelastic, the rise in price will be much faster from P0 to P2. In this case, for the same increase in demand from D0 to D2, the increase in price is more significant from P0 to P2 instead of P0 to P1 since the supply for electricity is price inelastic.

From the above discussion, rapid economic rebound and more extreme weather conditions have led to the surge in electricity prices. In reality, there may be other factors such as rise in population which increases demand for electricity further as well as increase in the cost of production in the generation of electricity.

| Level | Knowledge/Application/Understanding and Analysis | Mark |
|---|---|---|
| L3 | An answer that provides a clear and thorough explanation of both factors given in the preamble. A clear elaboration on the application of PES (elasticity concept). | 8 – 10 |
| L2 | An answer that provides a good explanation of both factors in the preamble. Some elaboration on the application of PES (elasticity concept). | 5 – 7 |
| L1 | An answer that demonstrates weak knowledge and application of the characteristics of market, possibly with multiple conceptual errors. | 1 |

**Part (b)**

**Introduction**
Given that electricity is used to operate many of our equipment in households, commercial services and industrial needs, it is important for the government to intervene through a variety of policies to address the sharp increase in electricity prices.

**Policy: Subsidies to develop alternative more sustainable sources of energy**

To address the rising electricity prices, the government can intervene by providing a subsidy to encourage technology and innovation to develop alternative more sustainable sources of energy. For example, in the US, as the government recognises the economic and environmental benefits of using renewable energy to meet the electricity demands, the US government issued US$12 billion worth of subsidy in 2012, where a record of 6,700 wind turbines were installed and US$25 billion of private capital was invested. This brings wind capacity to about 3.5% of the country's electricity supply which is enough to power 15 million homes. And by 2030, 20% of America's electricity demand can be met by wind energy.

Progressively, more countries are generating electricity from renewables such as hydropower, wind and solar energy instead of electricity generated from coal plants. Thus, governments can provide subsidies to produce renewable energy. By providing a subsidy, it lowers the cost of production of renewable energy and hence more profitable for the producers, ceteris paribus. Producers are more willing and able to supply, leading to an increase in supply for electricity. Supply curve shifts to the right, from $SS_0$ to $SS_1$, as shown in the figure below. The increase in supply leads to a surplus and hence downward pressure on price from $P_0$ to $P_1$. Thus, equilibrium price falls.



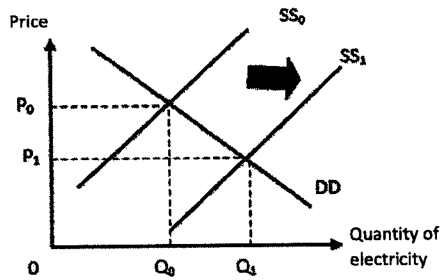



Figure : Market for electricity

**Limitation:**

However, providing subsidies may put a strain on government's budget. This may result in resources being diverted from other areas such as education and healthcare in order to accommodate the provision of subsidies. Furthermore, it takes time for this research and development of using alternative energy sources to generate electricity extensively. Hence this may not be able to address the current problem of rising electricity prices in the short run. Also, the cost of generating electricity from renewable energy sources is higher than from burning coal, thus many governments may not be willing to provide subsidies for renewable energy sources to generate electricity and continue to use coal-fired electricity powered plants.

**Policy: Promote the use solar panels to generate own electricity via solar power**

The Singapore government could encourage more households to install solar panels in their homes to generate their own electricity via solar power rather than reliance on natural gas which is used to generate 95% of Singapore's electricity supply. This can be done by organising campaigns or create advertisements to increase awareness of generating your own electricity.

The solar panels can be used to fuel the house's electricity needs when the sun is out in the day while on rainy days and at night, it will rely on the national energy grid. Through the use of these solar panels, it reduces the demand and dependency for electricity on the grid (external sources), which can lower the electricity prices in the market. In addition, as the homes are not able to store the excess electricity that is generated, it can be sold to private retailers of electricity. When there is an increase in the supply of electricity, prices may be lowered.

The decrease in demand has led to a surplus of $Q_2Q_0$ at the original price $P_0$. Producers will find that they are unable to sell all of their output at $P_0$ and compete to sell their excess stock by lowering prices. As price decreases, consumers seeking to maximise satisfaction will increase quantity demanded. This downward pressure on price causes a movement along the demand curve ($DD_1$) as well a movement along the supply curve (SS). The process continues until the surplus is eliminated with a new market equilibrium at $E_1$. Thus equilibrium price has decreased to $P_1$ and equilibrium quantity has increased to $Q_1$.

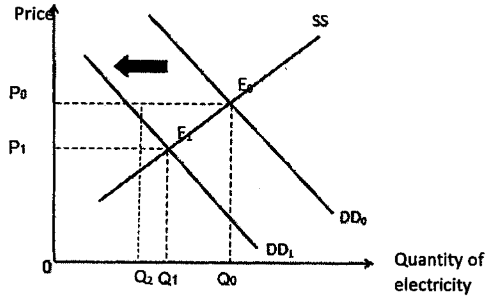


Figure : Market for electricity from external source

**Limitation:**

However, it may take a long time to change the mindset of consumers to install their own solar panels because there is an upfront cost required for the purchase of the solar panels. If this is the case, there is minimal impact on the demand for electricity and hence the prices. Moreover, the installation is only for landed properties rather than for individual HDB dwellers and a large percentage of the Singapore population stays in HDBs. The cross elasticity of demand for electricity will be weak as there is limited substitutes available.

**Policy: Imposition of price ceiling on electricity**

To address the rising electricity prices, the government could intervene through imposing a price ceiling on electricity so as to keep the price of electricity affordable. A price ceiling is a legal maximum on the price at which the good can be sold. The market price is not allowed to rise above this level. As shown in Figure 5, the government could impose a price ceiling at $P_c$ which is lower than the equilibrium price.

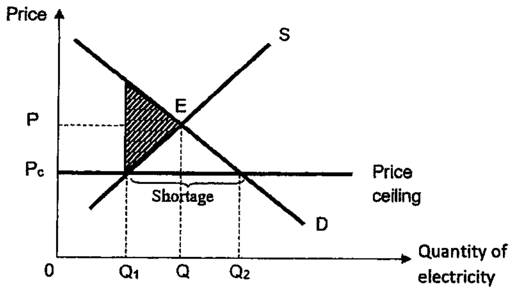


Figure : Market for electricity



**Limitation:**

However, there is a shortage of $Q_2Q_1$ of the good as the quantity demanded is $0Q_2$ but the quantity supplied is only $0Q_1$. This shortage will persist because the market is prevented from adjusting itself. The shortage will cause queues, waiting lists or the restriction of sales by firms to favoured customers. This may hurt the group of low-income people the policy of price ceiling is intended to help, especially this is an essential good for survival given that almost everything one uses requires the use of electricity. Moreover, at $Q_1$, society values each additional unit of the good more than what it would cause society to produce it. More resources should have been allocated to the production of electricity for consumption by society. The shaded area (in the above Figure) illustrates the total monetary value of deadweight loss to society because it was not produced. Furthermore, this may not address the root cause especially for countries such as Singapore which imports most of its electricity. They will still have to pay the high current market price when they import the electricity.

**Evaluation:**

Overall, in the short run, providing a subsidy or introducing a price ceiling is an immediate solution to reduce the price of electricity especially in view of current weather conditions and a rapid economic rebound. However, such solutions are not sustainable. Therefore, a long term solutionis required. By diversifying the energy sources and increase local production, the more secure and predictable will be the energy costs and hence electricity prices. The investment in technology and infrastructure may bring more benefits to the countries in the long run. For example, there will be incorporation of sustainable energy sources as coal is being depleted. Also, having energy production within the country to generate electricity also cuts transport costs and carbon emissions, and may improve environmental sustainability. In addition, consumers will be able to better understand how electricity is generated with the production in the home country.

Also, since most of the policies proposed requires huge government spending, governments can consider the application of nudge theory - a concept in behavioral economics, that proposes adaptive designs of the decision environment ways to influence the behavior and decision-making of groups or individuals so as to reduce the use of government funds. Government could encourage firms to include bar and line graphs to reflect the household's monthly electricity consumption with that of the neighbours and the national average where the average consumption of the neighbour is computed based on the average usage of similar housing types within a block or street for landed premises. Studies have shown that such move can create incentive for consumers to reduce their consumption of electricity.

*Note: Other policies such as campaigns to educate people on reducing electricity wastage, direct provision, rationing is also acceptable*

| Knowledge, Application, Understanding and Analysis | | |
|---|---|---|
| L3 | A balanced and well-developed answer on the policies used by the governments to address rising electricity prices, with use of examples. | 8 – 10 |

| | | |
|---|---|---|
| L2 | An under-developed, balanced answer on polices deal with rising electricity prices, with inconsistent use of examples and gaps in analyses. | 5 – 7 |
| L1 | May have many and/or serious conceptual errors. May have relevant points that were made incidentally. | 1 – 4 |
| | **Evaluation** | |
| E3 | For an answer that arrives at an analytically well-reasoned judgement about government decisions to implement policies to address rising electricity prices. Might also question any unstated assumptions to arrive at this well-reasoned judgement. | 4 – 5 |
| E2 | For an answer that makes some attempt at evaluation, but does not explain adequately their judgement or base it in analysis, about their judgement on government policies to deal with rising electricity prices. | 2 – 3 |
| E1 | For an answer that gives an unexplained, unsupported evaluative statement on government policies to deal with rising electricity prices. | 1 |



**Question 2**
Individuals should get vaccinated to protect themselves from COVID-19 infection. This would also provide better protection for the whole society.

Adapted from CNA, 30 December 2020

**(a)** Explain what needs to be considered when a government decides to provide vaccination for its people. [10]

**(b)** Discuss whether free provision of vaccination is the best policy to achieve the microeconomic objectives of a government. [15]

---

**Suggested answer:**

**Part (a)**

In deciding on providing vaccination for its people, the government will choose to maximise social welfare by considering various factors such as the constraints faced, the costs and benefits of the decision, various information and the perspectives of different stakeholders.

The government has to consider the financial **constraints** such as whether there is sufficient tax revenue to pay for it which may limit its available choices. If the government does not have sufficient tax revenues to pay for the vaccination doses, they will not be able to provide vaccination for the entire population. Moreover, another major constraint is the difficulty of obtaining accurate information such as the potential benefits and costs of the vaccination such as the long-term side-effects of the vaccination. If the side-effects of the vaccination could be potentially harmful for certain groups with underlying condition, then the government may not make it compulsory for all.

Next, the government will have to consider the costs and benefits of providing vaccination to its people. For example, provision of vaccination reaps **benefits** as the consumption of it generates significant external benefits which are benefits to third parties who are not directly involved in the production and consumption of the good and for which they are not compensated. When one consumes the vaccination, he/she will be healthier and be more productive. His employers will benefit when the vaccinated employees take lesser sick leave and raise the productivity of the workforce, hence contributing to more profits to the employers.

With a more productive labour force, it could attract investors and lead to an increase in investment expenditure and thus AD. This leads to a multiplied increase in real national income, achieving actual growth. With a productive labour force, it could also mean that there is increase in productive capacity, leading to increase in LRAS and thus potential growth.

In addition, the government will have to weigh benefits against costs. Costs can be **both explicit and implicit.** One explicit cost is a major consideration as the decision to provide vaccination must be financed using tax revenue. For example, the government must calculate the cost of vaccination doses and even manpower cost to administer the doses.

Moreover, the government will need to consider **opportunity costs**, which is known as the value of the next best alternative forgone. By spending to buy the vaccination doses, the government would have to give up the societal welfare that could have been gained, should the funds be allocated to another use, for example, to build another hospital to meet the demands of Singapore's ageing population.

Looking at the above costs and benefits, the government also has to take into account the **perspectives** of various stakeholders affected so as to better ascertain the benefits and costs of the decision. For example, the government needs to consider the perspective of different consumers groups such as people who are not ineligible to take the vaccination or even elderly who may be more prone to side-effects/ more at risk of getting sick, so as to minimise the negative impact of vaccination on such groups.

Lastly, the government has to **gather information** to better make an informed decision. For example, they have to estimate the potential gain in productivity of its labour force due to better health from the vaccination and the potential impacts the healthier labour force has on the economy.

In conclusion, with all the knowledge of the above, the government can then **weigh the marginal costs of such decisions against marginal benefits**. Should the marginal benefits exceed marginal costs, this means that the additional benefit of providing one more unit of vaccine is more than the additional cost of providing one more unit of vaccine, in this case, the government ought to go ahead with the decision to provide vaccination for its people; should the reverse be true, the government ought not to go ahead with the decision.

| | Knowledge/Application/Understanding and Analysis | |
|---|---|---|
| L3 | For an answer using analysis to explain the various factors considered by the government when it decides to provide vaccination for its people. | 8 – 10 |
| L2 | For an answer that gives a descriptive explanation of the various factors considered by the government when it decides to provide vaccination for its people. | 5 – 7 |
| L1 | For an answer that shows unexplained knowledge of the various factors considered by the government when it decides to provide vaccination for its people. | 1 – 4 |





**Part (b)**

The government intervenes at the microeconomics level to achieve efficiency and equity. Allocative efficiency is achieved when society produces a combination of goods and services that maximises its welfare. Equity refers to how equitably resources are distributed. Consumption of vaccination generates significant positive externality as explained in part (a).

**Free provision of vaccination may be the best policy to achieve the microeconomic objectives of a government.** As explained in part (a), there is significant positive externalities from consumption of vaccination, leading to healthier and more productive labour force, thus benefitting employers, and leading to achievement of macroeconomics objectives like economic growth.

Thus, charging a price can be socially inefficient as it would discourage people from consuming up to the socially optimal level (Qs). According to economic theory, a rational consumer will consume a good up to the point where MPB = MPC. As shown in Figure 1, when a full subsidy (equal to MEB) is given, the MPC curve shifts to $MPC_{with\ subsidy}$. This means that the market equilibrium will be reached when MPB = $MPC_{with\ subsidy}$. Hence, the large subsidy effectively means that vaccination is provided at zero price in order for the amount of vaccination provided to be at a socially optimal level (at Qs). Thus, achieving the microeconomic objective of **efficiency**.

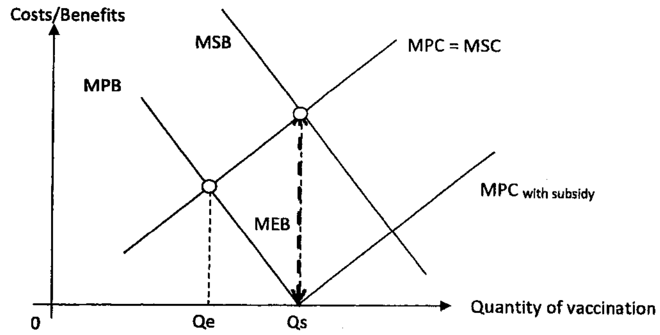


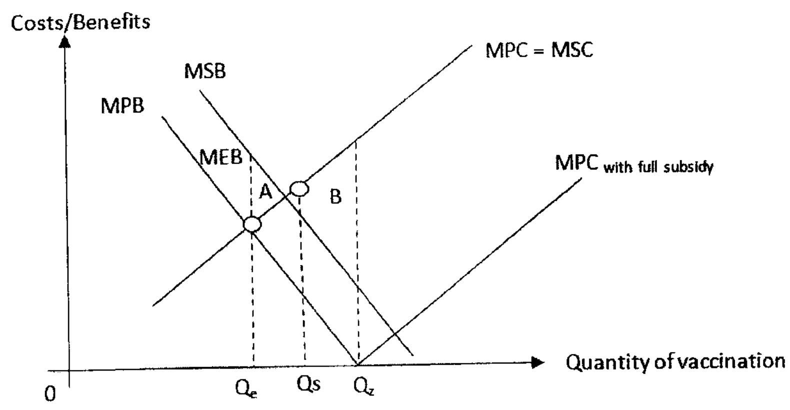

**Figure 1: Subsidy to achieve Qs, at P=0**

In addition, the price may be high if it is left to the free market, making it inaccessible for the lower income group. Under the free market, people with effective demand will be able to send a price signal to the producers to produce more of the goods they want for them. In this way, the lower income group may be priced out of the market. Therefore, the government makes the vaccination accessible to its people by providing free vaccination, especially to the lower income sector, thus achieving the other microeconomic objective of **equity**.

**However, free provision of vaccination may not be the best policy to achieve the microeconomic objectives of a government.**

In addition, providing full subsidy for vaccination may also put a bigger strain on a government's budget, especially when the government is already running a budget deficit. As shown in the diagram, in the event where the divergence between MSB and MPM is minimal, free provision of vaccination might result in a greater deadweight loss Area B as compare to Area A before the subsidy, leading to a more inefficient allocation of resources in the market for vaccination. The depletion of government reserves also means that resources being diverted from other areas in order to accommodate the provision of subsidies such as education. As education is a good that generates positive externalities, less education subsidies will lead to underconsumption of education available thus worsening **efficiency** in this market.

**Figure 2: Over-subsidy**




Moreover, consumers also suffer from imperfect information in the consumption of vaccination. They may underestimate the true benefits of vaccination as they might be unaware of the long term benefits on being vaccinated. Making vaccination free does not address the root cause of the problem and there is an over reliance to use funding as a way to increase consumption of vaccines.

Furthermore, it is not equitable to give a common subsidy rate as consumer's positive externality may differ. However, to grant each consumer a subsidy that matches its externality would be costly for the government as it would require more manpower, time and paperwork, resulting in an **inefficient** use of resources.

**Other policy may be the best policy to achieve the microeconomic objectives of a government.** Provision of information may be the best policy to achieve the microeconomic



objective due to the presence of imperfect information. Consumers who consume vaccination may underestimate their future benefits (i.e. longer lifespan, potential earning from being more productive) as they may not have complete information about the full longer-term benefits from consuming vaccination, leading to a divergence between their perceived Marginal Private Benefit ($MPB_{perceived}$) and the actual Marginal Private Benefit ($MPB_{actual}$) as shown in Figure 3.

Consumers will consume vaccination up to $Q_e$, where $MPB_{perceived}$ = MPC but the socially optimal output level is at $Q_s$, where $MPB_{actual}$ = MSB = MSC. Hence, consumers' imperfect information has led to an inefficient allocation of vaccination. Thus, provision of information may be the best policy to achieve efficiency due to this reason. By raising the awareness of the actual benefits of vaccination through campaigns or printed materials, consumers' perceived benefit of vaccination is increased, leading to higher consumption. The divergence between perceived and actual benefit of consuming vaccination will be removed (i.e., $MPB_{perceived}$ shifted to $MPB_{actual}$ in Figure 3). The socially optimal quantity of vaccination consumed will then be achieved. Thus, achieving the microeconomic objective of **efficiency**.

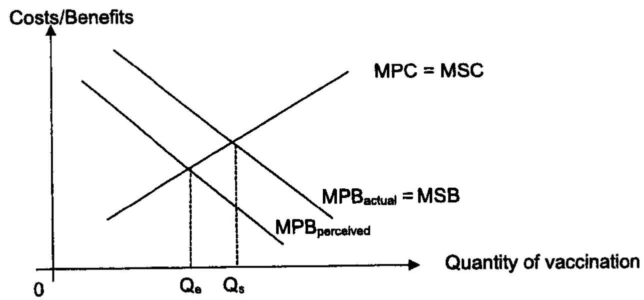



**Figure 3: Imperfect Information**

All in all, whether free provision of vaccination is the best policy to achieve the microeconomic objectives of a government depends on the government's budget and the types of vaccination. If the government is limited by the financial constraint, it will not be able to purchase sufficient vaccination for its people to achieve efficiency and equity. For example, Singapore is able to provide free vaccination as she can tap on her past budget surpluses to do so. In this case, free provision may be the best policy to achieve the microeconomic aims.

Moreover, it also depends on the type of vaccination and the target size. If it is of top urgency for such vaccination to be available to the entire population, then it may be the best for the government to provide for free. For example, the impact of covid-19 virus and the worldwide outbreak were quite significant in 2020, thus it was of upmost importance to vaccinate the entire population at that point in time. In this case, it may be the best policy for the government to provide for free to ensure that everyone has access to it.

| | Knowledge, Application/Understanding and Analysis | |
|---|---|---|
| L3 | For an answer using analysis to give a clear discussion on free provision of vaccination versus other policy to achieve the microeconomic objectives of a government | 8 – 10 |
| L2 | For an answer that gives a largely descriptive discussion on free provision of vaccination versus other policy to achieve the microeconomic objectives of a government | 5 – 7 |
| L1 | For an answer that shows some knowledge of free provision of vaccination versus other policy to achieve the microeconomic objectives of a government | 1 – 4 |
| | **Evaluation** | |
| E3 | For an answer that arrives at an analytically well-reasoned judgement about whether free provision of vaccination is the best policy to achieve the microeconomic objectives of a government | 4 – 5 |
| E2 | For an answer that makes some attempt at judgement about whether free provision of vaccination is the best policy to achieve the microeconomic objectives of a government | 2 – 3 |
| E1 | For an answer that gives an unsupported evaluative statement(s) about whether free provision of vaccination is the best policy to achieve the microeconomic objectives of a government | 1 |





**Question 3**

3. The Land Transport Authority of Singapore's Bus Contracting Model offers a tendering process that drives competition in the bus industry and encourages the existing bus operators to become more responsive to changes in ridership and commuter needs. The largest public bus operator in Singapore, SBS Transit also ventures into other businesses such as leasing commercial space at their bus interchanges.

Source: lta.gov.sg, accessed August 2022

**(a)** Explain the potential benefits and costs to a consumer when there is more competition in the bus industry. [10]

**(b)** Discuss whether product differentiation or diversification is a more appropriate strategy for firms in different industries when faced with more competition. [15]

**Suggested answer:**

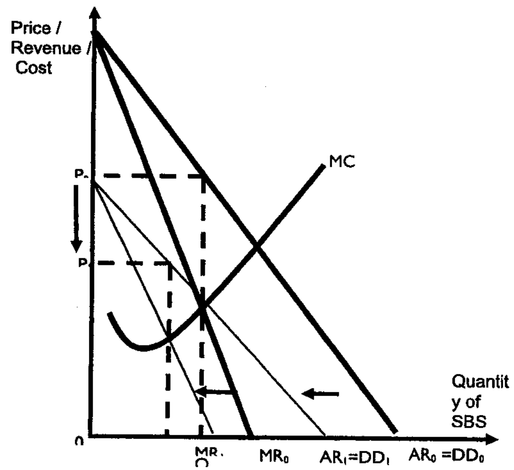
**Part (a)**

**Introduction:**

The increase in competition will lead to a loss of revenue and cost advantages that the bus operators used to enjoy. These have both positive and negative implications in terms of consumer welfare. Consumer welfare can be measured in terms of prices of goods and services, quality and variety of goods and services provided. In this case, the bus services taken by the commuters.

*__Requirement 1- Benefits__*

With more competition, there will be less market share among the existing bus operators. Since there are more substitutes available, the AR, MR of each firm is now less price inelastic and the demand curve of the firm will shift to the left from AR0 to AR1 and MR0 to MR1. Assuming that firms' objective is to maximising profit where MR=MC, there is a fall in price from P0 to P1 and an increase in output from Q0 to Q1. Also, it is also likely that the firms will engage in a price war with the short-term aim to establish greater market share. This means a fall in price leading to higher consumer surplus for the commuter.

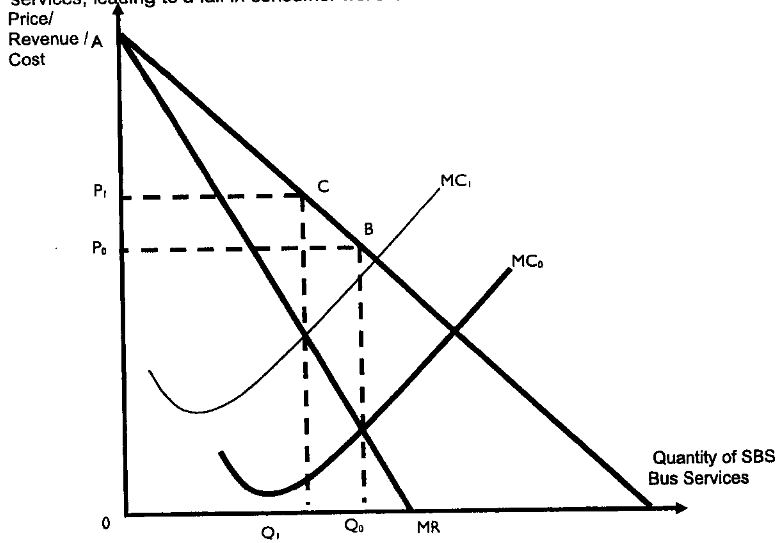


Additionally, allowing more competition means that consumer have more choices as other bus operators enter the market given a lower barrier to entry. As the bus industry in Singapore is likely to be oligopolistic by nature, the increase in competition and the mutually interdependent nature of the bus operators will mean that the action of one firm will affect the actions of other rivals. This imply that when one firm (eg. SBS) engages in innovation to improve the bus service experience of the commuters, other firms such as SMRT will follow suit. To maintain their barrier of entry – the license provided by LTA, firms will also have the incentive to innovate, they will tap on their supernormal profit (due to high barrier of entry) to bring about better quality of their bus services. All in all, bringing about an increase in consumer welfare.

*Requirement 2- Costs*

However, there might be a fall in consumer welfare as an increase in competition may bring about a loss of cost advantages. Technical economies of scale (EOS) is a main type of internal EOS enjoyed by bus operators. This can be in a form of the cost savings a firm makes as it grows larger, arising from the increased use of large scale mechanical processes and machinery such as double decker buses. With more competition means that each bus operator is likely to suffer a fall in bus ridership especially in a small economy such as Singapore, where there is a limited domestic demand, a fall in quantity leads to less internal EOS, as they will employ less buses, leading a higher MC since a higher AC also means a higher MC. Thus, the fall in EOS will shift the MC to the left from MC0 to MC1. The bus operator is likely to pass the increase in cost to the consumers causing an increase in prices and therefore, a loss of consumer surplus of area P0P1BC since initial consumer surplus was shown by the area ABP0, with new area P1AC after the loss of internal EOS, resulting in a fall in consumer welfare.

Also, the fall in revenue and cost advantages might result in a fall in their supernormal profits, as such, firms might not have the sufficient funds to innovate and improve the quality of the bus services, leading to a fall in consumer welfare.






| Level | Knowledge, Application/Understanding and Analysis | Marks |
|---|---|---|
| L3 | For a well-developed answer that uses analysis (making reference to changes in AR and costs curves to link to price and/or consumer surplus) to explain both benefits and costs of more competition in the bus industry. | 8 – 10 |
| L2 | Under– developed explanation on increased competition in the bus industry may have both positive and negative impacts; or one that uses analysis to explain only one possible impact. | 5 – 7 |
| L1 | Knowledge of impacts of an increase competition in the bus industry will impact consumers e.g. unexplained statements. | 1 – 4 |

**Part b**

**Introduction:**

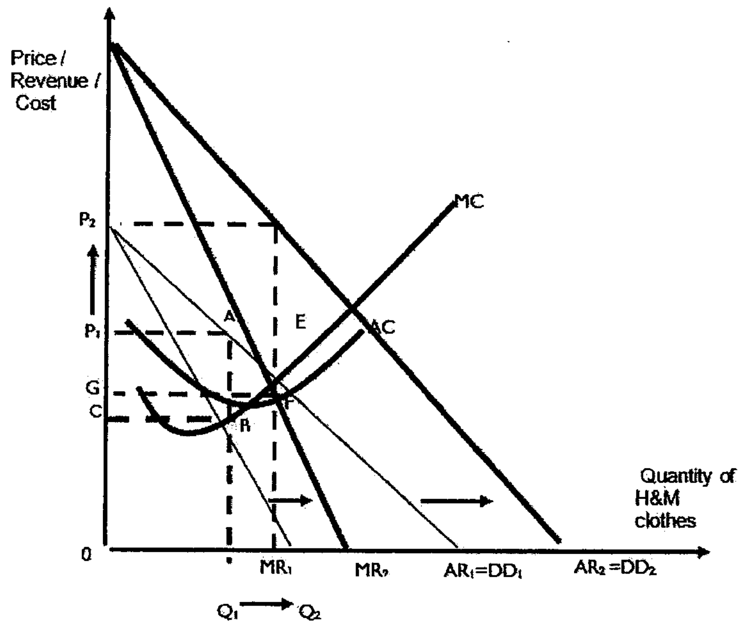
Product differentiation refers to the process of distinguishing a product or service from rivals while diversification is a practice of firm introducing new product into the firm's supply chain in order to increase profits. There are four types of diversification: concentric, horizontal, vertical and conglomerate. Concentric diversification refers to the development of new products and services that are similar to the one the firm is already selling. In horizontal diversification, a company adds new products to its operation. These products or services are entirely new but will bear some relation to the original product, offering an expanded set of options to the customer. For example, a gaming company getting into the virtual reality business is a horizontal diversification. In vertical diversification, also known as vertical integration, a company expands to include different portions of the manufacturing process under one corporate structure, usually by moving up or down the supply chain. When a company diversifies by acquiring a different company in an entirely unrelated field or new industry it is called it's known as conglomerate diversification. This essay will discuss on whether product differentiation or diversification is a better strategy for oligopolistic and monopolistic competitive firms.

***Thesis: Product differentiation is a better strategy than diversification to increase profits for some firms.***

In a monopolistic competitive industry where there is many sellers and low barriers to entry, the level of competition is high. The AR and MR of these firms are relatively flatter than those in other imperfect markets since there are many substitutes available in a monopolistic competitive industry. In view of competition, it is important for these firms to engage in product differentiation leading to more imperfect information so as to maintain some control over price via a downward sloping demand curve where AR>MR. As such, At the same time, production differentiation in the form of advertising (eg H&M clothing) can create changes in taste and preferences leading to an increase in demand for their good. This strategy allows a firm like H&M to increase their profits from area P1ABC to area P2EFG when AR and MR becomes steeper and shift to the right from AR1 to AR2 and from MR1 to MR2. In addition, by making the demand for the good to be less price elastic, the firm does not have to engage in a price war indefinitely with her rivals.

Product differentiation can also cause brand loyalty as the line of clothing in H&M is perceived to be different from others such as those in Uniqlo, making the **demand less cross elastic.** When Uniqlo engage in price competition - reduce their prices of their clothing, it will lead to a less than proportionate fall in the demand for H&M's clothing. This allows the firm to reduce the negative impact of a price competition on her profits.

Product differentiation is more advantageous for monopolistic competitive firms as they cannot infinitely engage in a price war. It is easier to implement this strategy than diversification as the latter requires time to explore new markets and gather resources such as labour, machinery so as to add a new product line and the outcome is more immediate than that of diversification.




However, due to the low barriers to entry, product differentiation strategies conducted monopolistic competitive firms is unlikely to sustain in the long run as rivals will be able to obtain information and produce similar product and branding. As such, they are unlikely to retain their supernormal profit in the long run. Even in the case of oligopoly, due to the mutually interdependent relationship, when one firm engage in product differentiation, it is likely that the other firm will follow suit, making this strategy less useful to increase their profit in the long run.

***Antithesis:***
***<u>Diversification may be a better strategy than product differentiation to increase profits for some firms.</u>***



As mentioned earlier, it is better for large firms to engage in diversification in the long run to explore new markets. As this will bring about new demand, leading to an increase in their revenue since PXQ=TR. For example, bus operators can diversify to other commercial services (vertical diversification) such as renting space for businesses in their bus interchange as well as lease advertising spaces in their buses for producers of other goods to advertise their product in the buses.

It is also more advantageous for oligopoly to engage in diversification as compared to monopolistic competitive firms. This is because due to high barriers to entry, oligopolies can retain their supernormal profits which gives them the financial resources to explore new markets. For example, Samsung follows a conglomerate diversification strategy as she expanded into unrelated industries, from food processing to manufacturing of electronic component parts and products.

However, compared to product differentiation which might not require as much financial resources, diversification strategy is considered high risk not only because of the inherent risks associated with developing new products, but also because of the firm's lack of experience working within the new market. For example, during the Covid 19 period, horizontal diversification – development of some products or services related to original line engaged by SBS was badly affected. SBS took a hit because of the lockdown leading to a significant fall in demand for leasing space for advertising and for businesses. Additionally, diversification often requires significant expansion of human and financial resources, which can sometimes have a detrimental effect on the allocation of resources in the core industries.

In conclusion, whether firms to engage in product differentiation or diversification depends on the nature of the market structure. It is more feasible for monopolistic competitive firms to engage in product differentiation due to the lack of market share and low barriers of entry, they might not have the financial and the labour resources to venture into new markets. On the other hand, large firms have more ability to engage in diversification. In an increasingly globalised world where market are more contested, large firms should consider diversification especially when existing markets no longer offer opportunity for further growth while diversification can allows them to enjoy risk bearing economies of scale. Moreover, in view competition, if the existing market is saturated, firms with large financial resources – they should consider diversification as the opportunity cost is low (product differentiation might not be able to gain more substantial revenue when the market is saturated).

*Other evaluation – suggest the need to also consider cost conditions as a strategy to increase profits.*

| Level | Knowledge/Application/Understanding and Analysis | Marks |
|---|---|---|
| L3 | For a well-developed answer that uses analysis to compare the cost and benefits of both the product differentiation and diversification strategies taken by different firms. | 8 – 10 |
| L2 | For an answer that gives an underdeveloped explanation on the cost and/ benefits of both the product differentiation and diversification strategies taken by different firms. | 5 – 7 |





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| | | |
|---|---|---|
| L1 | For an answer that shows knowledge of product differentiation and diversification strategies taken by different firms. | 1 – 4 |
| **Level** | **Evaluation** | **Marks** |
| E3 | For an answer that arrives at an analytically well-reasoned judgment about whether product differentiation or diversification is a better strategy to increase profits among firms. | 4-5 |
| E2 | For an answer that makes some attempt at a judgment about whether product differentiation or diversification is a better strategy to increase profits among firms. | 2-3 |
| E1 | For an answer that gives an unsupported judgment about whether product differentiation or diversification is a better strategy to increase profits among firms. | 1 |



**Question 4**
**In order to achieve the macroeconomic objectives of a country, governments may put in place policy measures to influence economic conditions.**

**(a) Explain why Singapore chooses exchange rates rather than interest rates as its main tool of monetary policy. [10]**

**(b) Discuss the extent to which the openness of an economy limits the scope for the use of fiscal policy and supply-side policies to achieve low unemployment. [15]**

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**Suggested answer:**

**Part (a)**

Monetary policy instruments, such as interest rates or exchange rates are used to achieve macroeconomic objectives in terms of price stability and/or Gross Domestic Product (GDP) growth outcomes. Monetary policy in Singapore has been centred upon management of the exchange rate since 1981, with the primary objective of promoting price stability as a sound basis for economic growth.

The choice of the exchange rate as the preferred instrument of monetary policy in Singapore is predicated on the openness of the Singapore economy to trade and capital flows. Indeed, the small size and high degree of openness of the economy is evidenced by the high ratio of its international trade relative to GDP. "Gross exports and imports of goods and services are more than 300% of GDP and almost 40 cents of every dollar spent domestically is on imports." Consequently, changes in the value of the trade-weighted Singapore dollar have a significant influence on domestic inflation and GDP outcomes.

Thus, exchange rate policy rather than interest rate policy is more appropriate to address inflation in Singapore. A gradual and modest appreciation will lead to a fall in the domestic price of imported raw materials, this will lead to a fall in cost of production of goods and services in Singapore, resulting in an increase in profitability and thus a rise in SRAS from AS0 to AS1 (Figure 1). This will help to alleviate imported cost-push inflation as Singapore is a small economy that lacks natural resources and is import reliant.

Appreciation of SGD will also tackle demand pull inflation. Appreciation of SGD will mean that the price of Singapore exports will rise in foreign currency while price of imported goods and services will fall in SGD. Price elasticity of demand for export (PEDx) is likely to be more than one due to availability of substitutes from other countries, thus Marshall-Lerner condition holds where the sum of price elasticity of demand for exports and imports is more than one. Appreciation will lead to worsening in balance of trade which may mean that net exports (X-M) may fall. Fall in X-M will lead to a fall in AD to AD1 as AD=C+I+G+(X-M). The fall in AD will lead to a surplus of goods and services, leading to a fall in general price level as firms reduce prices to clear excess stocks.

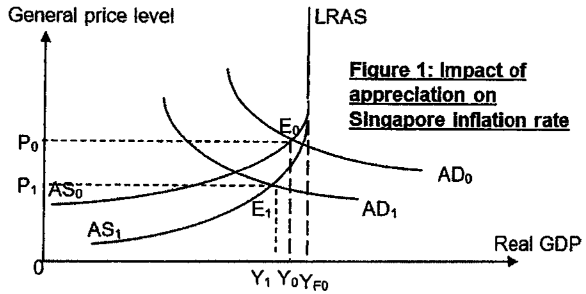


**Figure 1: Impact of appreciation on Singapore inflation rate**

Overall, appreciation can be a very effective tool for Singapore to achieve price stability as there is a significant fall in general price level from $P_0$ to $P_1$.

On the other hand, an increase in interest rate, leading to an increase in the cost of borrowing will lead to a fall in consumption of big tickets items. At the same time, an increase interest rate will also lead to an increase in the cost of borrowing to invest, given the same rate of return from investment, it is now less profitable to invest leading to a fall in I. The fall in C and I will lead to a fall in AD and therefore reducing demand pull inflation. However, it is less effective than exchange rate policy as Singapore's export is more than 2/3 of total demand and interest rate does not tackle imported cost-push inflation. Interest rates policy targets at C and I to increase AD, however since Singapore is a small economy with a small and domestic market, the impact of interest rates on C and I is less significant on AD as compared to (x-m).

Thus, in view of Singapore characteristic, as a small and open economy, exchange rate is a better policy for Singapore to achieve price stability.

On the other hand, MAS does not choose interest rates as a choice of monetary instrument as the nature of the economy makes it an interest rate taker in the world market i.e. Singapore's interest rates are heavily influenced by the interest rates of its major trading partners. This is because Singapore promotes itself as an international financial centre that emphasizes open and free capital flows, making it impossible for MAS to independently determine the domestic interest rates. For example, if MAS decides to lower domestic interest rates, short term capital flows ('hot money') will leave Singapore to other countries to seek higher interest rates and returns. Due to the relatively small domestic sources of loanable funds, this will reduce the supply of loanable funds in Singapore significantly and create an upward pressure on interest rates until they are comparable to foreign interest rates. Therefore, there cannot be any reliance on interest rates to influence C and I and it is difficult for the MAS to independently set interest rates.

Demand for investment in Singapore is also interest inelastic. This means that demand for investment in Singapore is less responsive to the changes in interest rates. This is because, due to the openness of the Singapore economy, FDI makes up a large percentage of GDP, and domestic interest rates does not affect FDI.



| | Knowledge, Application/Understanding and Analysis | |
|---|---|---|
| L3 | For an answer using analysis to explain the preferred tool of monetary policy for Singapore | 8 – 10 |
| L2 | For an answer that gives a descriptive explanation on the preferred tool of monetary policy for Singapore | 5 – 7 |
| L1 | For an answer that shows unexplained knowledge of the preferred tool of monetary policy for Singapore | 1 – 4 |

**Part (b)**
In order to achieve the macroeconomic objectives of a country, governments may put in place policy measures to influence economic conditions. They do this by influencing either aggregate demand through demand-management policies like fiscal policy and/or aggregate supply through supply-side policies. When a government aims to achieve low unemployment through fiscal policy and supply-side policies, it may be limited by various factors such as openness of the economy. Openness of an economy may refer to the openness to trade, labour flow, capital flow and competition.

When an economy is faced with demand-deficient unemployment during worldwide recession, a government may implement expansionary fiscal policy through increasing government expenditure (G) and lowering tax rates. With a decrease in personal income tax, consumers' disposable income increases, leading to increase in purchasing power and thus consumption expenditure (C). With a decrease in corporate tax, producers' after-tax profit increases, leading to an increase in investment expenditure (I). With the increase in G, C, I, there will be an increase in AD. This leads to unplanned stock depletion and as firms step up production, there will be an increase in derived demand for labour, addressing the demand-deficient unemployment.

However, **openness of an economy can limit the scope of fiscal policy in achieving low unemployment**. When the economy is open to trade, this means that there is high marginal propensity to import which will lead to a small multiplier value as multiplier is computed by 1/(marginal propensity to tax + marginal propensity to save + marginal propensity to import). The more open an economy is, the higher the marginal propensity to import is and thus the smaller the multiplier value will be, this means that there are more leakages out of the circular flow of income. Hence the value of the multiplier will determine the total change in national income when government expenditure changes. For example, an open economy like Singapore will have a small multiplier value due to high marginal propensity to import. Thus, any increase in injections will lead to a smaller increase in real national income and thus smaller increase in employment, limiting the scope of fiscal policy.

When an economy is faced with structural unemployment, a government may implement supply-side policies to provide training and upgrading of skills to improve the quality of labour. For example, there could be structural changes in the economy as the economy transits and develops her comparative advantage, leading to fall in demand for labour in sunset industry and rise in demand for labour in the sunrise industry. Those who are unemployed may not be able to find jobs in the sunrise industry due to mismatch of skills. Thus, supply-side policies such as training and upgrading of skills aim to address such structural unemployment. For example, the SkillsFuture Career Transition Programme in Singapore aims to support mid-career individuals to acquire industry-relevant skills to improve employability and pivot to new sectors. With the training, those who were unemployed due to mismatch of skills would be able to acquire the relevant skills to improve labour mobility and thus take on jobs in the sunrise industry.

Also, **openness of an economy can limit the scope of supply-side policy in achieving low unemployment**. When the economy is open to competition, they will need to constantly explore new niche areas to remain competitive. Also, when an economy is open, there is a freer mobility of capital, foreign firms might shift their production line elsewhere more frequently when they deemed that costs are lower elsewhere. This will then result in changes in the structure of the economy to adjust to the new niche areas which may result in increase in demand for labour with skills different from the current market. The government may provide support for such labour but the pace of restructuring may be faster than the pace of retraining. In this case, the dynamic



environment due to the openness may not be on par with the training scheme. For example, it takes time to train people for a specific skill but that skill may be redundant after a while due to the fast changing trends/ economic needs.

**However, the openness of an economy does not limit but instead, enhance the scope of fiscal and supply side policies.** Supply side policy such as providing a more skilled workforce can help to attract more investment not only domestic investment but also foreign direct investment since a more open economy allows a freer mobility of capital. An increase in FDI is likely to bring in their foreign talent expertise which will turn help to train the workers in the economy to take up jobs in the sunrise industry, reducing structural unemployment. At the same time FDI may increase investment in capital goods bringing about an increase in AD and a fall in demand deficient unemployment. The reduction in corporate tax rate via fiscal policy might also attract more investment as foreign firm would consider the relative tax rate across countries to decide on where to invest. Openness of the economy enable foreign firms to shift their production to the country is the government offers a more competitive corporate tax rate. Therefore, to a large extent, when the economy stay competitive in tax rates and in workforce, to a large extent, the openness of an economy does not limit the scope of her policies.

In addition, **there are other factors which limit the scope of fiscal and supply-side policies** such as crowding-out effect. Crowding-out effect occurs when an increase in government spending due to an expansionary fiscal policy reduces other types of spending such as investment spending by firms and consumer spending such that overall AD does not increase at all (full crowding-out effect) or might increase in a limited way (partial crowding-out effect). Discretionary fiscal policy therefore, becomes less effective at reducing unemployment. Crowding-out effect can happen when government finances an expansionary fiscal policy via borrowing from the financial market (ie. banks). This is because an increase in government spending might take up scarce financial and real resources from firms and households, leaving them with fewer resources to make use of. For example, if the government competes with firms or/and households for a fixed pool of loanable funds, interest rates may be driven up. The higher cost of borrowing loans reduces borrowing by firms/households leading to reduced investment spending and consumer spending respectively. This dampens the expansionary effect of the initial rise in government expenditure on the economy.

All in all, whether openness of an economy may limit the scope for the use of fiscal policy and supply-side policies to achieve low unemployment depends on the characteristics/ nature of the economy. For example, when an economy like Singapore is small and very open, openness may be a significant factor as she has less control on the external factors and lacks the domestic capacity to buffer any external shocks as compared to a big and open economy like USA. For USA, they have a bigger domestic market and can switch to their domestic components as buffer more easily. In this case, the extent to which Singapore can use fiscal policy to achieve low unemployment will be more limited as compared to the bigger economy.

However, Singapore can also reap benefits from being very open. For example, when Singapore faced structural unemployment as explained above, she could actually tap on the openness to enhance her policy option by allowing inflow of skilled labour more easily. In this way, the pool of foreign skilled labour would be able to address the gap in the skills demanded and thus addressing the structural unemployment. Therefore, this also attributes to the government's ability to adopt the right policy to tap on the opportunity that openness can bring.

**Mark Scheme**

| | Knowledge, Application/Understanding and Analysis | |
|---|---|---|
| L3 | For an answer using analysis to give a clear discussion on the extent to which openness limits the scope for the use of fiscal and supply-side policies to achieve low unemployment. | 8 – 10 |
| L2 | For an answer that gives a largely descriptive on the extent to which openness limits the scope for the use of fiscal and supply-side policies to achieve low unemployment. | 5 – 7 |
| L1 | For an answer that shows some knowledge on the extent to which openness limits the scope for the use of fiscal and supply-side policies to achieve low unemployment. | 1 – 4 |
| | Evaluation | |
| E3 | For an answer that arrives at an analytically well-reasoned judgement about the extent to which openness limits the scope for the use of fiscal and supply-side policies to achieve low unemployment. | 4 – 5 |
| E2 | For an answer that makes some attempt at judgement about the extent to which openness limits the scope for the use of fiscal and supply-side policies to achieve low unemployment. | 2 – 3 |
| E1 | For an answer that gives an unsupported evaluative statement(s) about the extent to which openness limits the scope for the use of fiscal and supply-side policies to achieve low unemployment. | 1 |



**Question 5**

The following data relate to the two stated economies in 2021.

| | Singapore | Thailand |
|---|---|---|
| GDP/ capita (PPP USD) | 116,486 | 19,209 |
| Unemployment rate (%) | 3.6 | 1.4 |
| Consumer Price Index (% change) | 2.3 | 1.2 |
| Balance of Trade (current USD) (billions) | 124.50 | -1.21 |

Source: various

**(a)** Explain how economists could use the above data to compare the economic performance of Singapore and Thailand. [10]

**(b)** Discuss whether higher economic growth rate is the main cause of higher living standards in a country. [15]

**Suggested answer:**
**Part (a)**

Economic performance of a country is measured by its ability to achieve the various macroeconomic objectives. These are sustained economic growth, low unemployment, low inflation and healthy balance of payments. One of the key macroeconomic objectives that is looked at to ascertain economic performance of a country is economic growth, the main indicator of this being Gross Domestic Product (GDP). To compare economic performance across countries, however, it is not enough to just look at the absolute value of GDP. Because of different demography, economic conditions and characteristics across countries, there's a need to factor in these differences for a better comparison of economic performance across countries.

Gross Domestic Product is defined as the sum of the money value of all final goods and services produced within the domestic territory of the country during a specific period of time and sold at organized markets. Looking at GDP value alone however, may overstate the economic performance of a country as high GDP value of a country may be a result of high prices of goods and services and not necessarily due to high quantity of actual output produced.

Therefore, based on the data provided, PPP adjusted GDP per capita is a good way to compare economic performance across different countries as it factors in the relative cost of living in respective countries. GDP is converted into a common currency at a purchasing-power parity rate. This is the rate of exchange that would allow a given amount of money in one country to buy the same amount of goods in another country after exchanging it into the currency of the other country. Based on the above data, Singapore's PPP adjusted GDP per capita is USD116,486 which is about 6times higher than Thailand's USD19,209, which means that based on this indicator, Singapore has performed better than Thailand in 2021 as there is more output produced. This is better than if we compared GDP per capita of different countries, measured in the local currency and converted into a common currency at the current exchange rate as the exchange rate may be a poor indicator of the purchasing power of the currency at home. For example, S$10 may exchange for, say, 250 Thai Baht but S$10 may not buy the same amount of goods in Singapore as 250 Thai Baht in Thailand.

In order to better analyse the economic performance of countries, it would be even better if the previous year PPP adjusted GDP per capita is included so as to compute the economic growth rate.

Other than the usual key indicator raised above, another measure that can indicate economic performance of a country is also its unemployment rate. Based on the above data, Singapore's unemployment rate in 2021 was at 3.6% which was higher than that of Thailand's 1.4%, which could possibly indicate that Thailand could possibly be performing better than Singapore in 2021 as lower unemployment rate in Thailand suggests most of the labour resource in the country have been effectively mobilised/utilised to produce a given level of output. Therefore, even though PPP-adjusted GDP per capita is a good indicator to use to compare economic performance, it may not be holistic. Although a country may be generating high output levels, it may be short of its potential. Another country that may not be producing that high a level of output may be fully utilising its resources. Hence, the spread of the economic activity in the country may also be important in determining performance of the economy.

In addition, when economists compare economic performance across countries, it may also be in their interest to find out whether countries that record high growth are growing at a sustainable rate or whether the growth rates registered are rapid but unsustainable growth rates. For this, economists may turn to look at percentage changes in inflation rate to determine whether a country is overheating and the possible outcome of this on future growth. Based on the above data, both countries inflation rates were considered relatively low, 2.3% for Singapore and 1.2% for Thailand, which suggests that the increase in the cost of living is lower for Thailand compared to Singapore, therefore in based on this aspect, Thailand may be seen as performing better than Singapore.

Balance of Trade (BOT) position can also provide an indication of different countries' external economic performance. Based on the above data, Thailand has a balance of trade deficit of 1.21billion whereas Singapore has a trade surplus of 124.5billion, which likely suggest that Singapore is performing better as it is likely that Singapore is better export competitiveness than Thailand.

In conclusion, when economists compare economic performance across countries, the indicators mentioned in the table can be used. Thus, based on the 4 indicators, Singapore is likely to perform better than Thailand in 2021 because of its higher PPP adjusted GDP per capita and balance of trade. Even though Singapore's inflation rate and unemployment rate are slightly higher than Thailand, they are still considered in the low and stable range and thus overall, Singapore is likely to perform better. In addition, it also may be necessary for economists to know at which stage of economic development a country is in as it may be an important factor determining growth rates. For instance, developing countries tend to register high growth rates compared to developed countries because the potential for growth may be so much more when a country is at its early stages of Industrialisation. Hence, lower growth rates of developed countries compared to developing countries may not necessarily mean that the economic performance of developing countries is always better. Many other considerations have to be taken into account to come to an accurate conclusion regarding the economic performance of different countries.



| Level | Knowledge, Application/ Understanding and Analysis | Mark |
|---|---|---|
| L3 | An answer that provides a clear and thorough explanation of all the data in the table, with PPP adjusted GDP per capita being well explained. | 8 – 10 |
| L2 | An answer that provides a good explanation of some of the data in the table. | 5 – 7 |
| L1 | An answer that demonstrates weak knowledge and application of the indicators in the table, possibly with multiple conceptual errors. | 1 – 4 |

**Part b**

**Thesis:**

Standard of living (SOL) refers to the well-being of an average citizen in a country. A country's standard of living (SOL) can be determined by both material and non-material aspects. Material SOL measures the amount of goods and services that individuals within the country have available for consumption while non-material SOL refers to the quality of life and is influenced by environmental and socio-economic factors such as stress levels and life expectancy. Economic growth rates, which is typically computed using the changes in real Gross Domestic Product (GDP) figures over a given time period, may be the main cause of higher living standards in a country when there are higher economic growth rates. With a higher economic growth rate, it would mean that more goods and services are produced and at the same time, employment levels will increase as more factors of production are needed to produce the increase in goods and services. Therefore, one gets to enjoy more goods and services for consumption. This likely translates to higher material SOL in the country over time.

**Anti-thesis:**

However, the main cause of higher living standards in the country could be due to the **government policies** that are implemented. For example, in Singapore, the government collects the tax revenue through corporate income tax, personal income tax and goods and services tax. Some of the revenue collected are being redistributed to the lower-income group in the form of GST vouchers, utility rebates, top-ups for children's education, CDC vouchers. These policies would help majority of the population to be able to consume more goods and services, thus increasing their SOL. In addition, the Singapore government also spends huge amount on initiatives such as Skills Future, which focuses on education and training to counter the increasing burdens of shrinking workforce and declining productivity growth. These initiatives help to create employment opportunities and also increase the wages of Singaporeans as their productivity increases. As such, this can increase the amount of goods and services that Singaporeans can afford and thus, improve their material SOL. As workers' productivity increases, they might spend less time on work to produce the same amount of output. This frees up more time for leisure, which improve their non-material SOL in the future too. Thus, the policies and the active pursuit of government spending on these areas could be the main cause of higher living standards in the country.

Another possible main cause of higher living standards in a country could be due to **changes in the size of population** (population growth rate). Take for instance, the economic growth rate may be higher than the rate of increase in population size because of falling birth rates and shrinking workforce in countries such as Singapore. As such, the real GDP per capita would have increased. As SOL refers to the well-being of an average citizen, the changes in population size to calculate per capita data will hence be seen as a main cause of higher standard of living.

Next, **distribution of income** could be the main cause of higher living standards in a country. This is because an increase in GDP per capita may be interpreted as an increase in material SOL. However, the benefits of an increase in GDP may be concentrated in a minority of the population while the majority of the population doesn't see an improvement in their income. This implies that the average citizen's well-being has not improved as they don't get to share the benefits of the increase in GDP. Therefore, if the income distribution is more even, which is measured using the GINI coefficient, it would suggest that the average citizen enjoys an increase in SOL. For example, given Singapore's real GDP per capita experiences increases and it's GINI coefficient is falling (moving closer to 0) over the past few years, then it is likely that there is higher SOL experienced by majority of Singaporeans and the main cause would be from the more even distribution of income within the country.

In addition, the GDP per capita is limited in use to compare the change in non-material SOL within the country as it does not serve to measure the intangible aspects of SOL. Therefore, the **greater amount of leisure time** one has could be the main cause of higher living standards in a country. A slower increase in real output could be due to citizens putting in less hours at work. As such, there is greater ability to enjoy leisure hours and reduced stress levels which increases the non-material SOL. Another example would be during the Covid-19 pandemic where many employees had to work from home, with many saying that the balance between work and leisure had been blurred and had to work even on weekends at home, hence reducing the amount of leisure time. This reduces the non-material SOL and possibly the overall SOL.

Another possible main cause could be the **quality of the environment**. For example, there may be large scale production in China over the years but it is also emitting large amount of greenhouse gases and face severe air pollution issues. Economic growth is achieved at the expense of the environment. As such, the non-material SOL could be reduced significantly, thus reducing the overall health and welfare of the citizens and the overall SOL of the country may not increase. We could also look at another country and see how it's living standards has changed over time. Denmark is ranked as the most environmentally friendly country, with adoption of environmentally friendly policies with production still taking place in the country. This reduces damage to the country's environment and ecosystems. As such, given the better quality of the environment in Denmark, it could have a higher standard of living. Another example would be Bhutan which is becoming carbon-negative, where the government makes a commitment to preserve the environment. As such, the better quality environment could be the main cause of higher living standards in the country.

In conclusion, higher economic growth rate could possibly be the main cause of higher living standards in a country. However, it may also differ for different countries and other factors could be the main cause instead depending a variety of reasons such as on the country's distinct culture, composition of goods produced as well as time period of analysis. For example, in Bhutan, with environmental sustainability at the forefront of the political agenda, the government puts in place a comprehensive plan to reach zero net greenhouse gas emissions such as increasing reliance on renewable energy sources. Thus, In Bhutan, it is likely that the quality of environment would be the main cause of higher living standards. In addition, a higher economic growth rate may not lead to an increase in higher current SOL if the increase in real GDP is due to an increase in the production of capital goods such as technological advanced machinery and equipment. This is because there is no increase in the amount of goods and services available for current



consumption for an average citizen. Also, there are times when higher living standards may not be due to only one cause but a combination of factors where there is sustained economic growth and at the same time policies are put in place to ensure improvement in productivity, more equitable income distribution and prevention of environmental degradation. This would then ensure that both material and non-material SOL will be higher.

| | Knowledge, Application/ Understanding and Analysis | |
|---|---|---|
| L3 | For a well-developed discussion where economic growth is the main cause of the standard of living in a country, with at least 3 other factors as the main cause(s).<br>material and non-material SOL aspects included.<br>Substantiate with good use of examples. | 8-10 |
| L2 | For an undeveloped discussion where economic growth is the main cause of the standard of living in a country, with at least 1 other factor as the main cause.<br>Substantiated with some examples. | 5-7 |
| L1 | For an answer that shows some knowledge of how economic growth improves both material and non-material SOL.<br>Answers on indicators of SOL. | 1-4 |

| | Evaluation | |
|---|---|---|
| E3 | For an answer that uses analysis to support an evaluative judgment to determine the extent to which economic growth is the main cause of SOL. | 4-5 |
| E2 | For an answer that makes some attempt at an evaluative judgment to determine the extent to which economic growth is the main cause of SOL. | 2-3 |
| E1 | For an unexplained evaluative statement(s). | 1 |

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## Question 6

Globalisation powered the surge of international trade since 1990s, and the world trade to GDP ratio has tripled to 52.1% by 2020. Its effects on economies are multi-faceted, ranging from higher vulnerability to external shocks and making supply chain more global, where production is broken into activities and tasks carried out in different countries. However, in recent years, there seems to be signs of slowing down of globalisation.

Discuss whether globalisation is always a victim of its own success. [25]

**Suggested answer:**

Globalisation is the process through which an increasingly free flow of goods and services, capital and labour results in closer integration of economies in the world. The success of globalisation is driven by the greater awareness of governments that enabling the free movement of goods and services, investment capital and labour, across national borders raises the standard of living over time more quickly than to restrict their movements. However, in recent years, the costs of globalisation have led to governments to reduce its' reliance on external sources for growth, focusing more on internal sources instead. As such, globalisation may be a victim of its success.

The economic concept behind the success of globalisation is the countries' greater awareness of the benefits of trade explained in the theory of comparative advantage. A country is said to have comparative advantage in producing a particular good if it can produce it at a lower opportunity cost (giving up less of another good) than other countries. This concept is embodied in trade theory (also known as the theory of comparative advantage). In its simplest form, the theory predicts that in a two-country two-good world, if each country specialises in the good in which it has a comparative advantage and then trade some of it for the other good on the basis of a terms of trade (TOT) that lies between the domestic opportunity cost prevailing in each country, then consumption of both goods will be greater for each country than if each of them tried to produce the two goods themselves without trade.

The reason for the increased consumption for each country is that by specialising according to the principle of comparative advantage, a more efficient allocation and use of resources of the two countries have resulted: each country will produce the good where its relative efficiency is greatest. The insight of this economic concept is that every country has a comparative advantage in at least one good and therefore it should exploit that comparative advantage and produce more of that good than it needs and trade the extra units for other goods that it requires from another country. By being willing to import goods that it has a comparative disadvantage, the country will enjoy a higher consumption level, hence a higher material standard of living.

This realisation of the benefits of trade according to the principle of comparative advantage has led many governments to seek trade opportunities. And in this regard, they have been helped by the World Trade Organisation (WTO) whose purpose is to provide a forum for countries to meet and negotiate for reduction of obstacles to international trade. Since its inception in 1995, the WTO has organised several rounds of talks among countries to hasten the removal/reduction of



barriers to trade. Thus, the willingness of governments to reduce trade barriers together with the work of the WTO is one reason that accounts for the trend towards globalisation.

Also, the progress of technology has also highlighted the success of globalisation. Through improvement in technology, costs of communicating information have fallen dramatically since the post-war period. In particular, the rapid spread of IT and communications lowers barriers to entry that enabled large economies like India and China to open their economies and tap on booming IT and manufacturing markets.

Another reason for the trend towards globalisation is the dramatic fall in transport costs over time. For example, shipping costs today have fallen by half while air transport costs have fallen to one-sixth of costs in the 1930s. This fall in transport costs have removed a major barrier to trade where in the past, high transport costs used to prevent trade even when differences in comparative advantages exist among countries: the high transport costs would have made the imported goods more expensive to buy than to make domestically. Hence, fall in transport costs account for a part of the trend towards more trade which is an aspect of globalization.

In some cases, globalisation is a victim of its own success. As the globe becomes increasingly more integrated and interconnected, economies are now more vulnerable to external shocks especially in terms of supply chain disruptions. As supply chain becomes more global- the implication of this success may lead to an increase in cost push inflation. For example, in the case of a breakdown in one part of the global supply chain such as the Fukushima earthquake and lockdown due to the Covid 19- pandemic, the whole network is impacted leading to delays and disruptions in the transport and movement of goods. This can push up the prices of the factors of production leading to an increase in cost of production causing a fall in the SRAS from AS1 to AS2, resulting in cost push inflation as shown by an increase in general price level from P1 to P2 (Fig.1) . At the same time, firms faced an increase in costs which will reduce profits or resulting in greater losses. These costs of globalisation have propelled firms and governments to make their supply base more resilient by increasing their domestic production, grow employment in their home countries, to reduce their dependence on sources. Furthermore, commodity exporting countries such as India and Egypt are starting to restrict food exports in order to meet the domestic demand of their local firms, resulting in a slowdown in globalisation.

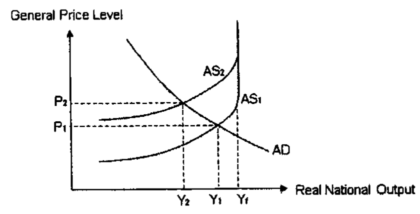

Fig. 1: Cost Push Inflation

Globalisation may lead to higher level of structural unemployment and an increase in inequity. This is felt more severely in developed nations such as the United States (US) and EU where jobs in more labour intensive and lower value-added industries were lost to developing countries like China and India. This is because the success of globalisation brings about transfer of technology at a fast pace. This leads to changing factor endowments among economies as emerging economies such as China and India develop new areas of comparative advantage such as manufactured goods while developed countries like the US and EU loses their comparative advantage in the production of these type of manufactured goods. With freer mobility of capital, firms are likely to shift their production line from the US to China. This will lead to a fall in demand for labour in the sunset industry in the developed countries, since there is occupational immobility, workers in the sunset industries do not have the relevant skills to take up jobs in the sunrise industries, leading to structural unemployment.

The fall in demand for workers in the sunset industry also leads to a downward pressure on wages leading to lower wages in this sector while the rise in demand in the sunrise industries leads to higher wages due to a shortage of workers with relevant skills. This ultimately leading to a widening of income gap. This leads to more governments in the advanced economies to protect their declining industries in order to reduce massive unemployment in the short run. Such actions may lead to retaliation and therefore less trading activities- moving towards a trend of deglobalisation.

Also, the higher levels of competition and higher trade volumes among countries induced by increasing globalisation led to more unfair trade practice such as dumping. The dumping of solar panel and textile products in the developed countries led to tensions and resentment among people who lost their jobs. This pressurised governments to reduce the extent of the openness of their economies, slowing down the pace of globalisation. One example is the trade war between major economies such as US and China.

Despite major global economic crisis throughout the decades - the world trade to GDP ratio tripled to 52.1% by 2020. This indicates that the significant net benefits of globalisation might have induced most countries to continue to embrace the phenomenon. Therefore, globalisation may not be a victim of its success and continue to thrive in recent years.

The transfer of technology and freer mobility of capital due to globalisation brings about many benefits to both advanced and developing economies in terms of macroeconomics objectives. In particular, an increase in FDI in the developing countries such as China and Vietnam may lead to an increase in I leads to an increase in AD. This leads to an unplanned depletion of stock, where firms will produce more the next year. Assuming the economy is operating below full employment level, via the multiplier will lead to a multiple increase in real national income. At the same time, an increase in investment in technology leads to an increase in the quality of factor of production resulting in higher productivity and therefore, an increase in productive capacity resulting in an increase LRAS, causing an increase in potential growth. This encourages these economies to continue to drive globalisation.

On the other hand, advanced economies could also benefit from the off shoring in terms of investment income as profit made in the developing countries can be repatriate back to the advanced economies in terms of investment income, bringing an increase in current account surplus in the future. Also, the greater interconnectedness between countries have enabled the



rapid growth of the developing countries which in turn, create more global demand to help western economies to recover from their economic crisis. Higher incomes in China had led to higher purchasing power and therefore an increase in consumption of goods and services leading to an increase in demand for imports. This leads to an increase in demand for US's exports leading to an increase in total revenue of export and an increase in US's (X-M). Since (X-M) is a component of AD, there will be an increase in real national income and a fall in demand deficient unemployment. This helped the US economy to recover faster during the subprime mortgage crisis in 2008. As such, the advanced economies that had limited fiscal and monetary tools continue to rely on external demand to mitigate the negative impact of recession caused by domestic factors.

Overall, globalisation is not a victim on its own success as long as firms and governments adjust their policies to achieve their objectives. This is likely the case, as rational decision makers are driven by their respective objectives. Despite the global supply chain disruptions has raise doubts about globalisation, profit motivated firms are still outsourcing – diversifying their supply base instead. In particular, the U.S.-China trade war has motivated some firms to shift to a "China plus one" strategy of spreading production between China and a Southeast Asian country with potential comparative advantage such as Vietnam, Indonesia, or Thailand. In view of the many challenges caused by increasing trend towards globalisation such as higher level of structural employment and widening of income gap, governments should follow firms adjusts it policies to minimise the costs of globalisation and maximise the benefits. For instance, government could implement supply side policies to create new CA, reduce occupational immobility and increase labour productivity to bring about productive employment for all.

| Level | Knowledge/Application/Understanding and Analysis | Marks |
|---|---|---|
| L3 | For a well-developed answer that uses analysis to explain and compare the cost and benefits of the success of globalisation and therefore leading to trends towards globalisation / deglobalisation . Full range marks for an answer that considered the factors leading to the success of globalisation. | 15–20 (18) |
| L2 | For an answer that gives an underdeveloped explanation on the cost and/ benefits of the success of globalisation. | 9 – 14 (12) |
| L1 | For an answer that shows knowledge of effects of globalisation. | 1 – 8 (5) |
| **Level** | **Evaluation** | **Marks** |
| E3 | For an answer that arrives at an analytically well-reasoned judgment about whether globalisation is a victim of its own success. | 4-5 |
| E2 | For an answer that makes some attempt at a judgment about whether globalisation is a victim of its own success | 2-3 |
| E1 | For an answer that gives an unsupported judgment about globalisation is a victim of its own success. | 1 |