

Q1 Post pandemic Singapore experience a shortage of skilled labour as formerly closed borders were slow to reopen and there was a surge in the demand for professional services. These two factors have contributed to a shortage and rapid rise in wage rates. Singapore typically strives to develop its domestic skilled labour whilst relying on the inflow of foreign skilled labour to make up for such shortfall. Singapore has recently launched a new employment pass to attract the top-tier foreign skilled labour, giving firms in Singapore access to skilled labour.

(a) Use supply and demand analysis to explain why the above factors may have led to a shortage in skilled labour and a rapid rise in their wage rate. [10]

(b) In the light of the stiff global competition for skilled labour, discuss whether the new employment pass is likely to be the most effective way the Singapore government can address the shortage of skilled labour. [15]

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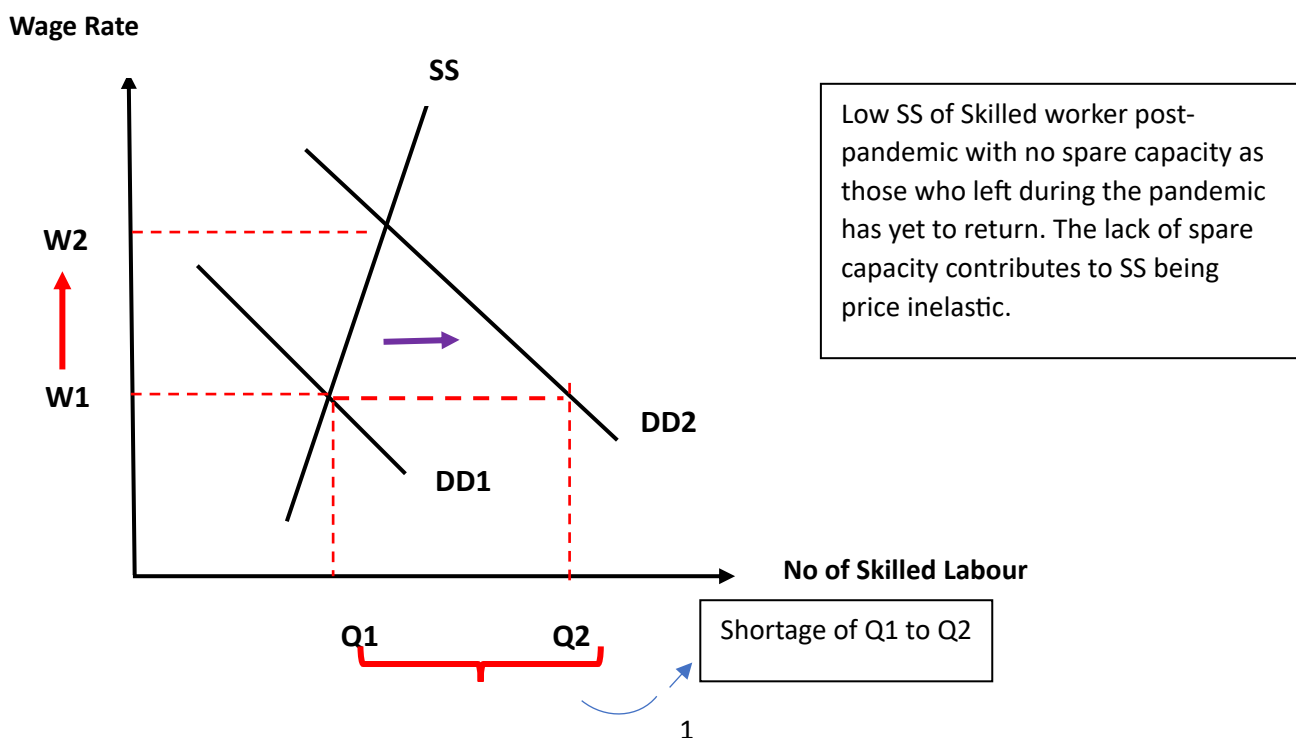
Introduction

Many countries face shortage of skilled labour and are grappling with the problem of rapid rise in their wage rate.

R1: Low SS of skilled labour as borders were slow to reopen and rise in derived dd for skilled labour caused by surge in dd for professional services

There is low supply of skilled labour as this is the aftermath of what happened in the past few years. Many skilled workers have left in the early days of the pandemic and could not return when borders closed. This, together with formerly closed borders which were slow to reopen have contributed to a low supply of skilled workers. Simultaneously, as economic activities increase in the post-Covid world, there is also an increase in demand for professional services leading to an increase in derived demand for skilled workers.

Fig 1: Impact of Low SS with a rise in demand on steep rise in wage rate of skilled labour



With reference to fig 1, the initial low supply with initial demand curve DD0 would give rise to an initial equilibrium wage rate of W1 and equilibrium quantity is Q1. In a post covid world, the surge in the demand for professional services would increase the demand of skilled labour rightwards from DD0 to DD1. This would **result in a shortage of Q2 – Q1 at the original wage of W1**. The shortage at W1 will be more severe when the extent of rise in demand is greater.

(Acceptable to explain that shortage was caused by $\uparrow SS < \uparrow DD$: the reason for slow rise in supply is due to “formerly closed borders were slow to reopen” – hence the pace of inflow of foreign skilled labour was reduced)

R2: Price Inelastic SS would cause wage rate to rise rapidly when demand rises.

Referring to Fig 1, the severe shortage of skilled labour at W1 will result in an upward pressure on price from W1 to W2. In this case, price has also **risen rapidly or more than proportionately** from W1 to W2 due to **price inelasticity of supply curve**.

Why SS of skilled labour is price inelastic

The lack of excess (capacity) skilled labour

As an aftermath of Covid-19 restrictions, supply of skilled labour, not only has fallen but has been made more price inelastic. There is a shortage of skilled labour (due to the slow reopening of international borders) which means that the **quantity supply** of skilled labour will not rise quickly in response to an increase in wage rate when demand increases after the pandemic.

The situation is illustrated by the competitive skilled labour market diagram in fig 1. As the supply for skilled labour is **price inelastic** due to the abovementioned reasons, their wage rate rises rapidly from W1 to W2 when demand for labour rises.

Note: To attain Analysis marks, there must be application of PES ie those that explain that rapid rise in wage rate is due to **large rise** in DD alone will not attain Analysis marks

Conclusion: Given that supply of skilled labour is low in post-pandemic, the shortage of skilled labour is caused by a rise in demand. While market forces have resulted in a rise in wage rate, it is the price inelasticity of supply of skilled labour that cause the rapid rise in their wage rate when demand for labour increases.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> ● Breadth & Application <ul style="list-style-type: none"> ○ Covers 2 requirements ○ Analyses with the expected theoretical scope (e.g. demand and supply factors, Price Mechanism, PES, PED and Steep rise in wage rate) ○ Analyses entire scope as suggested by the question or/& preamble ● Depth <ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories ○ Explains with rigour and detail ○ Explains and illustrates with relevant tool(s) of analysis (e.g. diagrams and examples) 	8-10
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Post pandemic Singapore experience a shortage of skilled labour as formerly closed borders were slow to reopen and there was a surge in the demand for professional services. These two factors have contributed to a shortage and rapid rise in wage rates. Singapore typically strives to develop its domestic skilled labour whilst relying on the inflow of foreign skilled labour to make up for such shortfall. Singapore has recently launched a new employment pass to attract the top-tier foreign skilled labour, giving firms in Singapore access to skilled labour.

(b) In the light of the stiff global competition for skilled labour, discuss whether the new employment pass is likely to be the most effective way the Singapore government can address the shortage of skilled labour. [15]

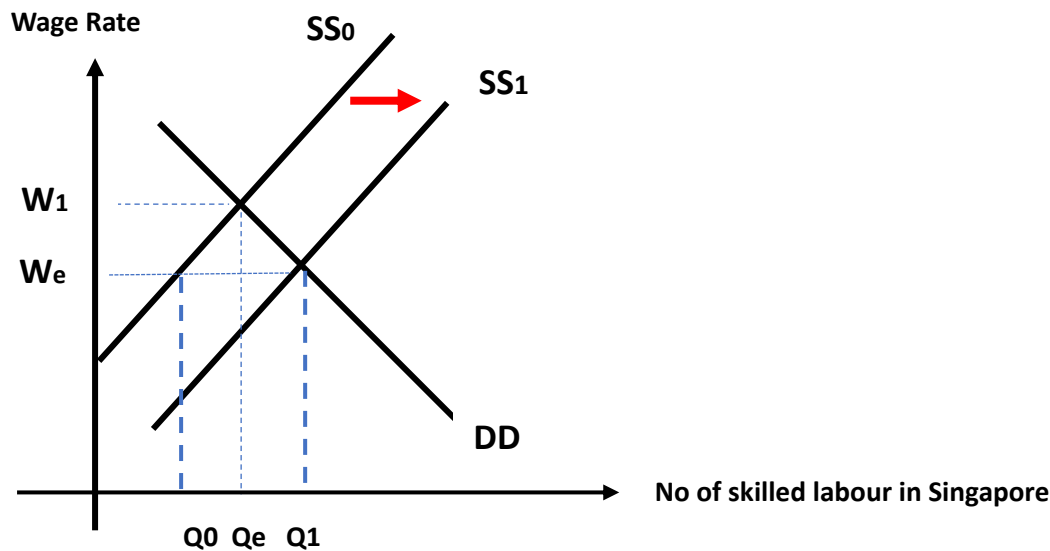
Introduction

The acute shortage of skilled labour is driving a fierce contest for talent in the post-Covid world. To be a hub of innovation, entrepreneurship and growth, Singapore needs to tackle its skilled labour shortage problem. Post Covid Singapore's inflation rate is very high and if the shortage of skilled labour is not solved, rising labour cost will result in Singapore's inflation rate surging even higher. This essay will discuss whether the new employment pass is likely to be the most effective way the Singapore government can address the shortage of skilled workers.

R1: The new employment pass can reduce the shortage of skilled workers

- Introduction of the new employment pass to attract the top-tier foreign skilled labour could attract more foreign talent to Singapore, increasing its supply of skilled worker and alleviating the shortage problem.

Fig 3: Inflow of foreign skilled labour can increase SS and eliminate the shortage



At the original wage rate of W_e , Singapore faces a shortage of $Q_1 - Q_0$ of skilled worker. The introduction of the new employment pass can cause an inflow of foreign skilled labour which can help to shift supply curve to the right from SS_0 to SS_1 , thereby eliminating the shortage at W_e .

EV1.1: Limitations of the new employment pass

Singapore has certainly taken a step in the right direction – however Singapore would face stiff competition from other cities in attracting global top skilled labour. UK, the UAE and Thailand are doing a lot to attract foreign talents as well. For example, Thailand is allowing 10 year passes for foreigners while the UK, are allowing inflow of foreign talents even without an employment guaranteed. Hence launching a new employment pass may not be sufficient. Beyond employment pass, the government could consider **grants and subsidies** to **incentivise multinationals** to base their highly skilled labour in Singapore.

EV1.2: Unintended Consequences which may make foreign skilled labour feel unwelcome.

Making changes to employment pass may trigger the concern of Singaporeans about the impact of large numbers of non-residents living and working here. A significant number of Singaporeans continue to feel deep anxiety about foreign competition for jobs. However, if this new employment pass is targeting at filling the top tier positions of firms eg Senior management posts, it would not affect the jobs of the majority middle income Singaporeans. Moreover, the **Dependency Ratio Ceilings (DRCs)**, which are ratios of foreign to domestic workers would ensure that the demand for local workers may not fall. The government's new employment pass will not favour expatriates over Singaporeans, but the sight of **foreigners being given plum roles** may nevertheless engender an **instinctive negative reaction**. Hence, this new initiative would be more effective if government allay fears of Singaporeans and help foreigners feel welcome. Hence, government needs to find ways to reassure citizens that this new employment pass will not put Singaporeans at a disadvantage.

EV1.3: Conditions that give Singapore a competitive edge in attracting foreign skilled labour

The launch of this new employment pass is timely as Singapore has a window of opportunity to draw the best talent now, with its **track record of tackling Covid-19**. Singapore's brand of quality, reliability and efficiency would also give us a competitive edge in the global competition for skilled labour. This is because those with special talents and skills are looking for places to move to, where they and their families feel **safe and welcome** and where they can make an impact.

R2: Addressing shortage by development & retention of domestic skilled labour.

Other than relying on inflow of foreign skilled labour, Singapore can reduce the shortage by complementing it with developing and retaining its domestic skilled labour pool. Local firms should also focus on engaging and reskilling existing employees.

As there is **stiff competition for global talent** in the post-Covid world, **other countries** are also making a special effort to **attract skilled labour from Singapore**. For instance, Germany and Britain have recently introduced a special visa for graduates from top universities globally, which include top graduates from NUS and NTU.

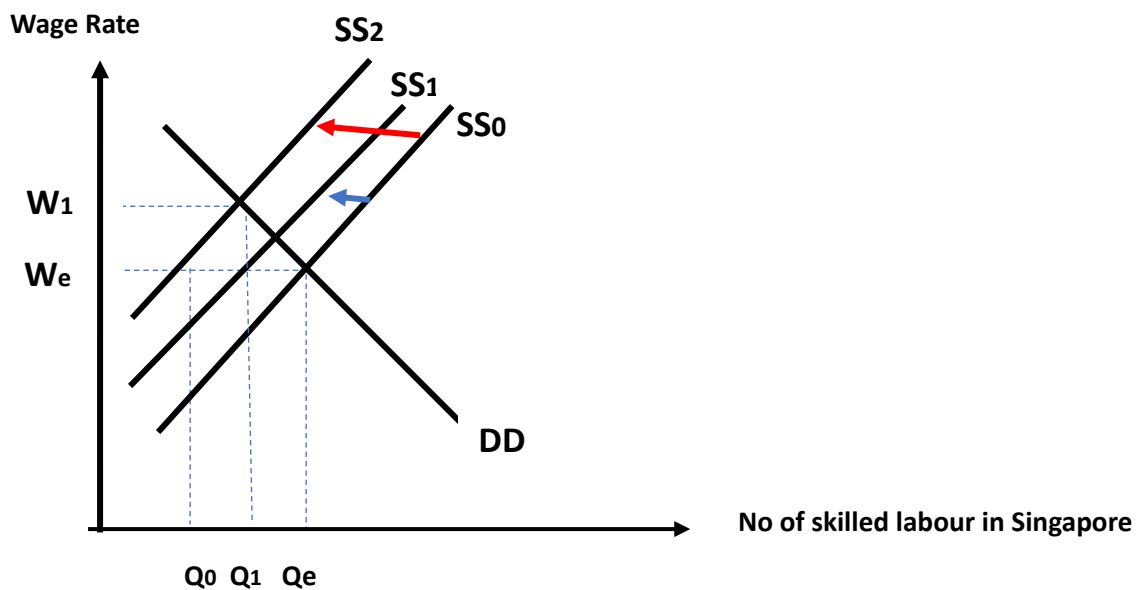
The skilled labour pool of any country consists of both **foreign and local talent**. The success of addressing Singapore's skilled labour shortage would not be as effective if it fails in developing and retaining domestic skilled labour. The effort of building a skilled labour pool in Singapore would not be sustainable if there is more outflow than inflow of skilled labour. Hence there should be policies to develop & retain Singapore's own local skilled labour as well.

Development of local skilled labour : Making education (Universities & Polytechnics, Skillfuture courses, online learning) and upgrading of skills accessible via govt subsidies & job internship programmes. A growing number of professionals in Singapore are taking advantage of government subsidies to participate in flexible online courses and boot camps conducted on weekday evenings and weekends to hone technical skills such as digital marketing, web development, and cybersecurity. The development of domestic skilled labour will also have the same effect as inflow of foreign skilled labour ie **shifting the supply curve to the right (ref fig 3)**, thereby mitigating or eliminating the shortage at the original wage W_e .

Retention of local talent: Emphasis on CCE – Character & Citizenship education in schools would encourage graduates and domestic skilled labour to continue to stay and contribute to Singapore economy. Moreover, Singapore's **home ownership policy, relatively low-income tax rates, availability of good jobs, high standard of living** together with **strong family ties** - will be good **pull factors** in retaining local skilled labour.

Fig 4 below shows reduction in shortage can be achieved by implementing policies that could mitigate the fall in supply of domestic skilled labour ie limiting the outflow of domestic skilled workers.

Fig 4: Retaining or limiting outflow of domestic skilled labour can mitigate shortage.



Despite the inflow of foreign skilled labour, shortage will persist when local skilled labour leaves for greener pastures overseas. This can result in a fall in supply of skilled labour as shown by the leftward shift of SS0 to SS2, giving rise to a shortage of $Q_e - Q_0$ at the original wage rate W_e . However, when Singapore develops domestic skilled labour and they **chose to stay on** and contribute to the domestic economy, the outflow of domestic skilled labour can be mitigated. This can be illustrated in fig 4 above - the fall in supply will not be so drastic if supply shift left by a smaller extent ie from SS0 to SS1 (instead of SS2), giving rise to a smaller shortage of Q_e to Q_1 at the original wage rate W_e .

Ev 2.1: limitations – Singapore small population size

Singapore's small population size can limit the number of domestic skilled labour. Moreover, without government intervention, there may be insufficient development of domestic skilled labour by the private sector. Employers are not investing enough in ordinary working people through their careers because most employer is mainly interested in what a worker could do in their current job expectation, rather than prepare the worker for a new technology. To correct this, government intervention is needed to nudge workers and firms in the right direction via subsidizing training and upskilling.

Ev 2.2: limitations – Incentive function of factor price mechanism

Relatively higher factor price (wage rate) abroad would provide incentives for local skilled labour to **leave Singapore** to earn more income. Hence, shortage will persist.

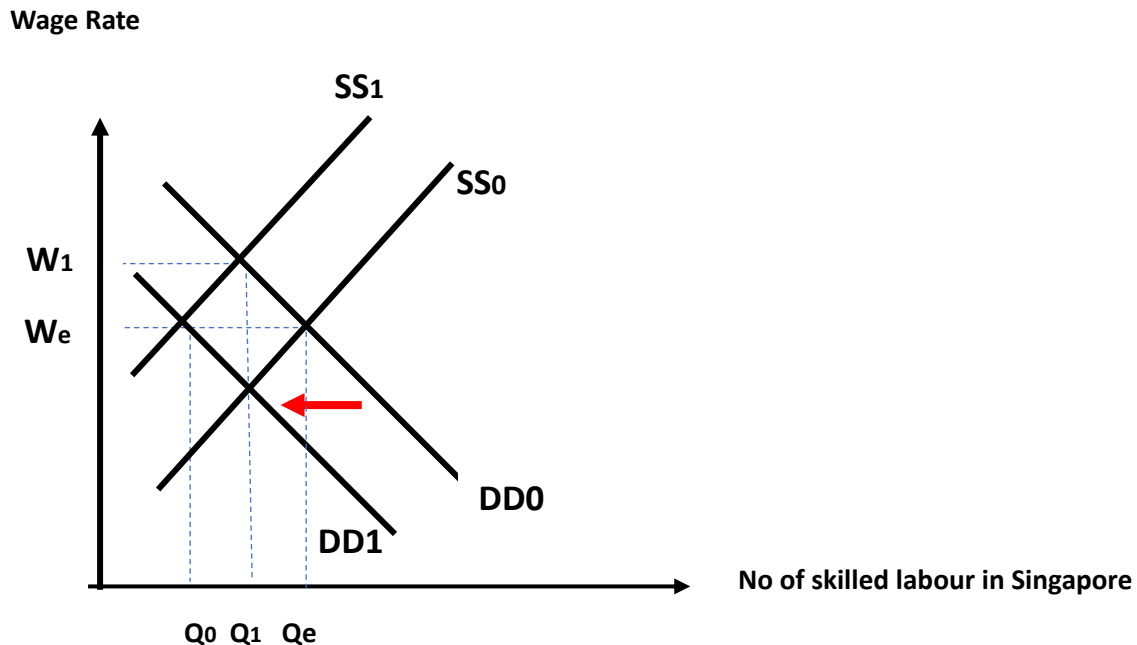
Alternative R2: Hiring foreign skilled worker remotely, can reduce DD & mitigate shortage

Local firms can switch to hiring skilled foreign workers in their own country by remote hiring, outsourcing or subcontracting work to foreign firms overseas. Lower costs and the availability of talent in developing countries such as Vietnam, Philippines and Indonesia can reduce the demand for skilled labour in Singapore.

However, this alternative way of addressing the shortage of skilled workers, would only apply to firms that are open to hiring remotely without on-site presence. For instance, Singapore firms seeking

technology/digital skilled labour can switch to employ remotely – thus reducing the demand for skilled labour who reside in Singapore. Referring to fig 5, DD for skilled workers in Singapore will shift left, eliminating shortage of labour.

Fig 5: Hiring foreign skilled worker remotely, can mitigate shortage



The shortage of $Q_e - Q_0$ at W_e , can be eliminated if demand for on-site skilled workers in Singapore is reduced as firms switched to hiring foreign skilled workers remotely.

EV2.1: Limitations

There are challenges that come with hiring remote workers: dealing with multiple time zones, for instance, or the lack of face-to-face interactions to understand an organisation's culture. Also, there are roles that still require an employee's physical presence and to be based in Singapore to attend to clients on the ground.

EV2.2: Unintended Consequences

Reliance on remote hiring, outsourcing or subcontracting work to foreign firms are tantamount to exporting jobs abroad. It may make it more difficult for firms to source for workers locally when rate of economic growth in Singapore is reduced or become negative, thereby worsening cyclical unemployment.

Summative Conclusion:

Launching a new employment pass for foreign skilled labour would be **one way** of reducing Singapore's skilled worker shortage. Nevertheless, the extent of success would depend on the net effect of both increase in supply (inflow) of foreign skilled labour, skill development of domestic population and decrease in supply (outflow) of domestic skilled labour. Hence, the **most effective** way the Singapore government can address the shortage of skilled labour is **both** to increase SS by attracting foreign skilled labour (encourage inflow) as well as development & retention of domestic skilled labour (limit outflow). In the long run, the shortage of skilled labour can only be addressed successfully if supply of skilled labour (both domestic and foreign) increases in tandem with demand.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> ● Breadth & Application <ul style="list-style-type: none"> ○ Covers 2 requirements. ○ Analyses with the expected theoretical scope (e.g.new employment pass to attract foreign talent, development of local talent) ○ Analyses entire scope as suggested by the question or/& preamble ● Depth <ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories ○ Explains with rigour and detail ○ Explains and illustrates with relevant tool(s) of analysis (e.g. diagrams and examples) 	8-10
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Level of Response Marking for EVALUATION

Evaluation		
E3	<ul style="list-style-type: none"> ● Takes a clear overall stand (a summative conclusion) that is comprehensively justified by providing convincing evaluative comments on the relative importance of the requirements covered in the body 	4-5
E2	<ul style="list-style-type: none"> ● Takes a clear overall stand which is only partially justified as <ul style="list-style-type: none"> ○ Only one of the requirements is well evaluated with supportive arguments presented in the answer and is linked to the context of the question ● Evaluates both requirements but the overall stand is unclear 	2-3
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Q2

Workers are **not** aware of the **benefits of skill upgrading** associated with lifelong learning and the importance of preparing for new job requirements as businesses transform in the digital economy. Therefore, governments subsidise training as upskilling and reskilling not only benefit workers themselves but the **wider community**.

(a) Explain **two** different reasons for the **market failure** in skills upgrading courses associated with lifelong learning. [10]

(b) Discuss whether government subsidy is the best policy to ensure skills upgrading courses are allocated efficiently. [15]

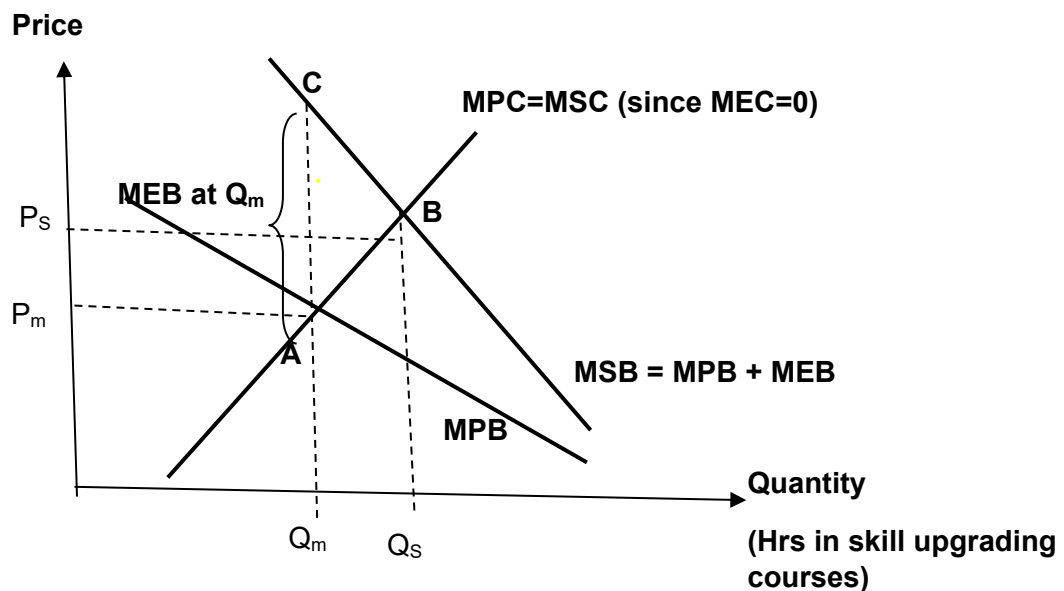
(a) Introduction

Countries can improve economic competitiveness by building up the capabilities of their people. Skilled workforce could benefit the workers themselves and society at large. Market failure occurs when free markets, operating without any government intervention, fail to allocate scarce resources efficiently and hence society's welfare is not maximised. There are two main reasons why government needs to intervene in the provision of skill training courses.

R1: Government intervenes to correct external benefit

Positive consumption externalities or external benefits occur when the consumption of a good positively affects the well-being of third parties.

Figure 1: External benefit from consumption of skill upgrading courses



With reference to Figure 1:

- Marginal Private Cost (MPC) measures the cost to producers of producing additional units of skill training services such as the cost of running a skill training centre in terms of rental and wages of trainers.
- Marginal Private Benefit (MPB) measures the benefit to consumers from consuming additional unit of skill training lesson such as their improved productivity.
- Q_m represents the free-market equilibrium output where $MPC = MPB$.

Divergence between private and social costs

- **Skill training consumption** generates **external benefits** to **third parties** who are neither skill training consumers nor producers.

For each unit of skill training consumed, **third parties such as unskilled workers** (or future employer can benefit from contributions of skilled workers) who do not undergo skill training themselves will also benefit in the form of increased job opportunities as **security guards, cleaners and gardeners due to inflow of FDI to countries with skilled workforce**.

This positively translates into a more productive workforce for the economy which benefits employers too.

- The third parties (those who do not undergo skill training and employers) **do not compensate** skill training consumers for the external benefits that they enjoy. Hence such external benefits are **unpriced** by the market and not reflected in MPB which reflects only the private benefits of consumption.
- Hence as seen in Figure 1, external benefits cause a **divergence** between private and social benefits, with **MSB** lying **above MPB as $MSB = MPB + MEB$** .
- The **market** does **not price in** the **true** benefits or **social benefits** of consuming the marginal unit of skill training. P_m reflects only the private benefits and excludes the external benefits.
- As such, the free market has “**over-priced**” the consumption of skill training relative to its true social benefits, leading to an **inefficient allocation** of resources.
- To find the socially efficient outcome, we need to consider the full costs and benefits to society of an additional unit of skill training. Hence the socially efficient quantity of skill training that maximises social welfare is at Q_s where

$$MSC = MSB$$

- However, if left to the free market, equilibrium price is P_m and output Q_m . Hence, there is **under-consumption** of $Q_s - Q_m$ units of skill training and an **under-allocation** of resources to the skill training market.

Impact on Society's Welfare

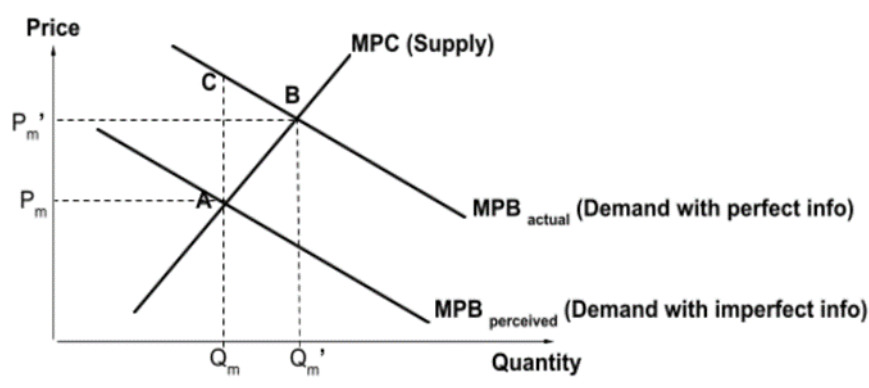
- Area $Q_m Q_s BC$ is the total social benefit gained while Area $Q_m Q_s BA$ is the total social cost incurred from the under-consumption of $Q_m - Q_s$.
- Since total social benefits gain exceeds the total social costs incurred, **area ABC** represents the **deadweight welfare loss** due to under-consumption of $Q_m - Q_s$ units of skill training.

The existence of positive externalities in the skill training market would cause distortion in the market price leading to over-pricing of skill training, and thus providing the wrong price signals resulting in under-consumption. Government intervention is needed to correct this market failure in the case of positive externalities in consumption of skill training courses.

R2: Government intervenes to correct info failure

Consumers may also underestimate their true private benefits (eg better promotion prospect) from undergoing skill training courses because they **underestimate the actual benefits** of acquiring new skills. They may also have **misinformation** about the **material and non-material benefits** that acquiring new skills may bring – eg increased earning power and self actualization.

Figure 2: Imperfect information on actual MPB of skill upgrading courses



Hence, the actual MPB lies above consumers' perceived MPB (Figure 2).

Without perfect information, consumers would consume at **Q_m** where $MPB_{perceived} = MPC$.

However, with **perfect information**, consumer demand for skill training would be higher at MPB_{actual} , and they would actually consume at Q_m' , where $MPB_{actual} = MPC$.

As a result, there is an under-consumption of skill training by the amount $(Q_m' - Q_m)$, giving rise to **deadweight welfare loss of area ABC** in Figure 2, and hence, market failure.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> Breadth & Application <ul style="list-style-type: none"> Covers 2 requirements, two different reasons for the market failure in skill upgrading associated with lifelong learning ie positive externality and information failure Analyses with the expected theoretical scope Analyses entire scope as suggested by the question or/& preamble Depth <ul style="list-style-type: none"> Applies relevant economic concepts or theories Explains with rigour and detail Explains and illustrates with relevant tool(s) of analysis (e.g. diagrams and examples) 	8-10
L2	<ul style="list-style-type: none"> Lacking in any one of the L3 criteria 	5-7
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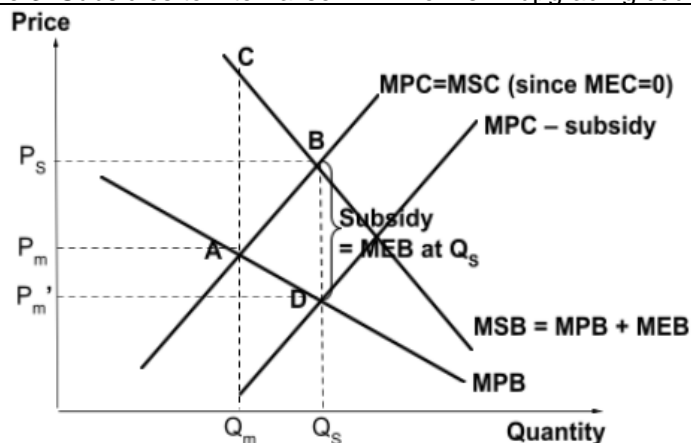
(b) Discuss whether government subsidy is the best policy to ensure skill upgrading courses are allocated efficiently. [15]

(b) Introduction

The causes of market failure as explained in part (a), are positive externalities and imperfect information. Hence governments in many countries often intervene in the market for skill training courses by providing subsidies and education/moral suasion. This essay will discuss whether government subsidy is the best policy to ensure skill training courses are allocated efficiently.

R1: Government subsidy is the best policy to correct external benefit.

Figure 3: Subsidies to internalise MEB from skill upgrading courses .



- By giving a subsidy to producers corresponding to MEB at Q_s on each unit of skill training courses, MPC will shift right to MPC - subsidy (Figure 3).
- The new market equilibrium where $MPB = MPC - \text{subsidy}$ would then coincide with the socially efficient quantity Q_s , where $MSB = MSC$.
- The externality would be internalised, removing deadweight loss to society and hence, achieving an efficient allocation of resources in the market for skill training courses.

EV1: Policy limitations

Difficulties in measuring MEB at Q_s as not easy to quantify MEB in monetary term eg Benefit of more job opportunities and security enjoyed by unskilled labour (3rd parties such as cleaners, gardeners and security guards) due to inflow of FDI which is attracted by availability of skilled labour=> difficult to measure intangibles such as job security.

R2: Use of Education & Moral Suasion to address information failure

To correct **consumers' misinformation** about the **true** private benefits of skill training courses, government can make use of public education to encourage workers to keep upskilling and reskilling regularly through their working lives. This can be in the form of **public**

talks and exhibitions to engage **workers as well as employers** to inform them about the benefits of acquiring new skills.

- As a result, consumers' **MPB_{perceived}** will shift rightwards to **MPB_{actual}** (Figure 2), shifting the market equilibrium quantity to Q_m' , and eliminating the DWL, hence correcting the market failure due to imperfect information.

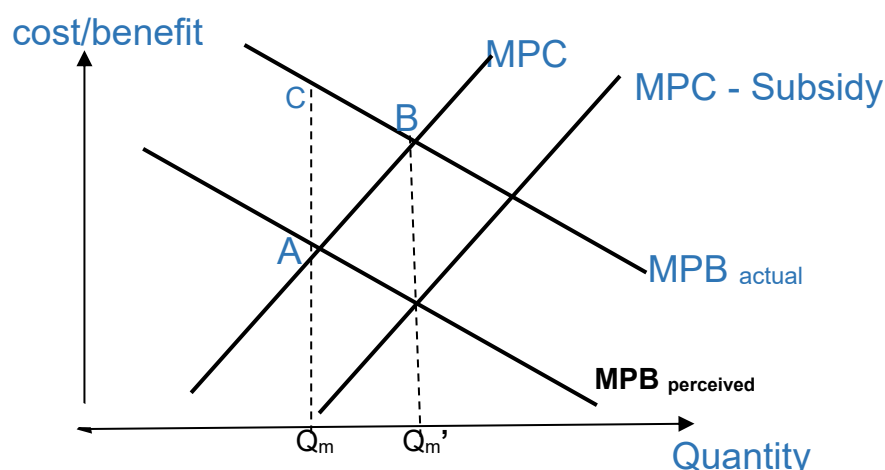
Ev2: Policy limitations

EV2.1: Lack of receptiveness towards education/ moral suasion as employees are mainly interested in what they could do today, rather than prepare themselves for a new technology or job in the future ie workers always has a **short-term lens** (post mortem – present bias – behavioural economics)

Ev2.2: Employers need to be persuaded as well because rational decision making is based on self-interest. Employer may not be willing to grant workers **time-off** to go for skill training because most employer is mainly **interested in what a worker could do today**, rather than prepare the worker for a new technology or job with another employer in the future.

Alternative policy : Can use subsidy to address under-consumption due to info failure, albeit not addressing the root cause of the problem. Subsidise education in the form of scholarship, bursaries, and financial assistance schemes to lower the cost of skill training courses for workers, shifting MPC to $MPC - \text{subsidy}$ in Figure 4. The new market outcome where $MPC - \text{subsidy} = MPB_{\text{perceived}}$ would coincide with the true private optimum quantity of Q_m' , achieving an efficient allocation of resources.

Figure 4: Use of subsidy to tackle market failure caused by Imperfect information in skill upgrading courses



EV: Limitation: Subsidy does not address the root cause of the underconsumption due to information failure. It only serves to make skill training courses more affordable.

Summative Conclusion:

Subsidy not only is able to price in the external benefit so that consumers of skill training courses can be compensated for the **positive externalities** enjoyed by 3rd parties – it can also make it more **affordable** when free market has “over-priced” the consumption of skill training.

However, subsidy could not coerce those who are **not willing** to take up skill training as they are **not aware** of its benefits. Hence subsidy must be **complemented** with **education and moral suasion** to stake-holders so that workers and employers alike are more willing to participate/support skill training. As it **takes time** for people to change their mindsets and behaviour, subsidies could be more effective in the short run as it lowers the cost for consumers/workers immediately and encourages them to take up skill training courses more readily, thus achieving allocative efficiency when information failure exists.

Hence, in the **short-run**, subsidy is the best policy to correct market failure due to positive externalities and information failure. However, to address the root cause of information failure in the long-run, government needs to implement **educational campaign and moral suasion**.

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L3	<ul style="list-style-type: none"> • Breadth & Application <ul style="list-style-type: none"> ○ Covers 2 requirements, explanation of how a subsidy and education/moral suasion can ensure skill upgrading courses are allocated efficiently. ○ Analyses with the expected theoretical scope ○ Analyses entire scope as suggested by the question or/& preamble • Depth <ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories ○ Explains with rigour and detail ○ Explains and illustrates with relevant tool(s) of analysis (e.g. diagrams and examples) 	8-10
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Q3 The grocery retail industry in Singapore is dominated by three big supermarkets - NTUC Fairprice, Dairy Farm International Holdings (operating Cold Storage, Giant and Marketplace) and Sheng Siong. With the development of e-commerce, supermarkets in Singapore facing competition from online grocery retailers have struggled with declining revenues, sometimes to the point of closure.

- (a) Explain why some firms make subnormal profits when faced with a higher level of competition but remain in the market while others shut down. [10]
- (b) Discuss the likely effects of an increase in the level of competition in Singapore's grocery retail industry on consumers. [15]

(a)

Introduction

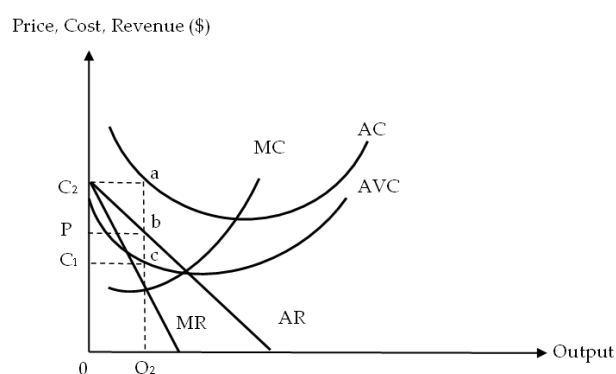
Due to competition from online retailers, most traditional firms faced a reduction in total profits and some possibly made subnormal profits, making them vulnerable to closure. In the short run, whilst some firms shut down, others continue to remain in the market even though they making subnormal profits. This essay shall explain why firms continue to operate, and explain the shutdown condition which a firm uses as a guide to whether or not to shut down when faced with competition.

Body

R1: Explain how a firm earns subnormal profits when faced with a higher level of competition

Profit of a firm is obtained from Total Revenue (TR) less (minus) Total Cost (TC). A subnormal profit is made when TR of a firm is larger than its TC.

Figure 1: Firm earns subnormal profit due to competition



With the development of e-commerce and the increase in level of competition, more retailers are expected to enter the industry to sell groceries online. An existing supermarket will be experiencing a fall in the demand or average revenue (AR) from AR_0 to AR_1 such that now it is below its average cost (AC) curve resulting in fall in supernormal profit of C_0xyP_0 to a subnormal profit of C_1abP_1 as shown in Figure 1 above.

R2: Explain why these firms remain in the market while others shut down (Explain the shutdown condition in the short run)

From Figure 1, the firm is earning subnormal profit (C_2abP) as average cost (AC) is greater than AR at the profit maximising output Q_2 . However, the firm's AR may be higher than its average variable cost (AVC).

In the short run, a firm incurs both fixed and variable costs. Fixed cost does not vary with output produced and it is incurred even when there is no production. Such costs are payable even when a firm shuts down its operation. Examples of fixed costs for a supermarket include rental payments for the shop space, payments for machines and fire insurance, etc. Variable cost varies with output produced and it is not incurred by a firm when it shuts down or ceases operation. Examples of such costs include wages and expenses for raw materials needed in production.

In the short run, even though a firm is earning subnormal profit, but if its AR exceeds its AVC ($AR > AVC$), it means that it can cover its variable cost and some of its fixed cost, it will choose to remain in production.

This is because by continuing production, the additional cost that will be incurred is AVC and not the fixed cost because fixed cost does not vary with the level of output, but nonetheless need to be paid even if it shuts down. At the same time, by continuing operation, the firm will still earn revenue from the sale of its products (TR), which can cover all of its TVC, and part of its TFC.

Conversely, in the short run, if a firm is earning subnormal profit but the firm's revenue is unable to cover its variable costs, ($AR < AVC$), it will not remain in the market and should shut down.

In the short run, if the firm is unable to earn enough revenue to even cover the AVC, the firm will shut down. Should a firm choose to shut down, it will have an operating loss that is equal to its total fixed cost, which will be incurred even if output is zero.

However, if the firm chooses to remain operating, with a $P < AVC$, the firm will suffer even greater losses of $AVC + AFC$. Hence, in order to minimise losses, the firm will choose to shut down instead.

Conclusion

In the short run, for firms earning subnormal profits, the decision to shut down or not, depends on whether the firm's AR is above the AVC, and that it can offset some parts of AFC. A firm may leave the industry after shutdown when it earns subnormal profit going forward into the long run if its P is less than AC ($AR < AC$).

Marking Scheme:

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> Breadth & Application <ul style="list-style-type: none"> R1: Explain how a firm earns subnormal profits when faced with a higher level of competition R2: Explain why these firms remain in the market while others shut down (Explain shutdown condition in the short run) Depth <ul style="list-style-type: none"> Applies relevant economic concepts or theories Explains with rigour and detail Explains and illustrates with relevant diagram(s) and example(s) 	8-10
L2	<ul style="list-style-type: none"> Lacking in any one of the L3 criteria 	5-7

L1	<ul style="list-style-type: none"> • Largely irrelevant response • Descriptive response with non-existent or minimal or application of economic concepts or theories • Serious and pervasive conceptual errors 	1-4
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(b)

Introduction

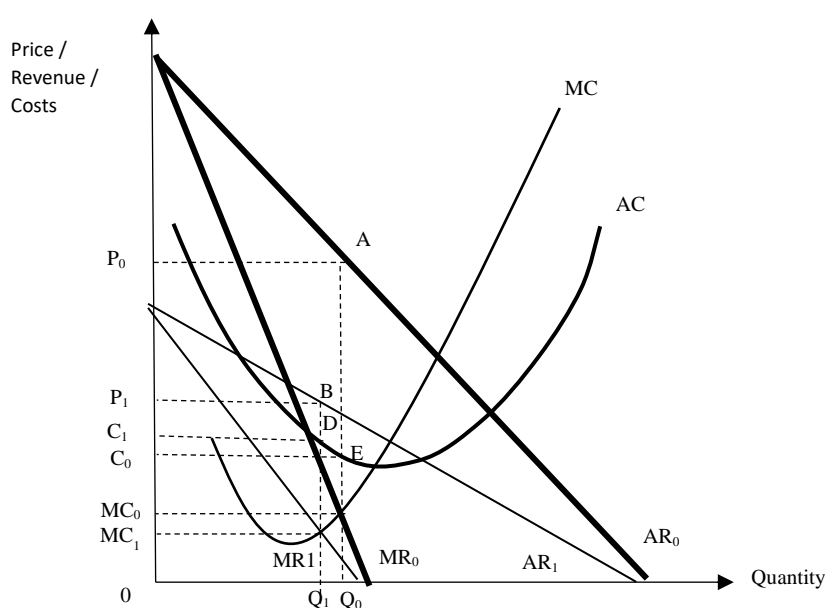
The potential benefits and costs on consumers from a higher level of competition in the grocery retail industry in Singapore shall be analysed and discussed in terms of prices that consumers pay, the quality, variety and choices available for them.

R1: Possible positive effects of an increase in the level of competition in Singapore's grocery retail industry on consumers

Lower prices and greater variety of G&S

Before increased competition from online grocery stores, each of the dominating supermarket has high market power and ability to set high prices. Each of them faces a relatively high demand curve which is also relatively price inelastic given the lack of close substitutes. Thus, under the profit maximizing condition of $MC=MR$, prices set by the existing supermarket tend to be high. With reference to figure 1, an existing supermarket with high market power will most likely charge prices at P_0 which is the profit maximizing price.

However, with the development of e-commerce and the increase in level of competition, more retailers are expected to enter the industry to sell groceries online. The existing supermarkets will be experiencing a fall in their respective demand from AR_0 to AR_1 as their market share is carved out and facing the emergence of more close substitutes, the demand for their goods will also become more price elastic. As a result, an existing supermarket will be producing less at Q_1 and also charges a lower price at P_1 . The increase in level of competition in the grocery retail market have therefore led to **lower prices** as well as a **greater variety of G&S** provided by the greater number of firms in the industry.



Better quality of service

Prior to increased competition, cost controls of the dominant firms may be lax due to low degree of competition or they may be complacent. For example, there may be overstaffing. With the increase in competition, they will be incentivised to minimise its cost.

Prior to increased competition, the low degree of competition may mean that the 3 main players do not have much incentive to engage in R&D, as they can still earn supernormal profits without undertaking R&D. With greater degree in competition, the 3 main players may now be motivated to devote more effort to lower costs through process innovation, and come up with new and improved products for consumers through product innovation. For instance, major players continue to invest in their online platforms to ride on the e-commerce wave and employ new technologies to connect the online and in-store shopping experience. They may offer click-and-collect services, where customers can order online and pick up their groceries at a physical store, or provide a seamless shopping experience by allowing customers to switch between online and in-store shopping. This product or service innovation benefits consumers with **increased options and better quality** shopping experience, **enhancing consumer welfare**. Furthermore, with lower costs, it may translate to **lower prices** for consumers, further benefitting consumers.

***Ev1 Extent of positive effects** on consumers may be greater if firms engage in stricter cost control and engage in R&D for product and process innovation e.g. to lower costs and to invest in online platforms to ride on e-commerce wave due to more contestable market. These would benefit the consumers if the lower costs translate to lower prices or when there are increased options and better quality shopping experience for the consumers. This is evident in the Singapore grocery retail industry where prices across different supermarket outlets are very competitive with supermarket outlets such as FairPrice and Sheng Shiong offering regular promotions and discounts of items. Supermarkets are also more focused on customer experience as they constantly improve their store designs and layouts to enhance shopping experience.*

However, costs of such innovation and technologies may be high and outweigh the expected gain in revenue. In some cases, such costs may be passed on to consumers in terms of higher prices, hence consumers are actually paying more for better quality goods or services, which may or may not increase overall consumer welfare.

R2: Possible negative effects of an increase in the level of competition in Singapore's grocery retail industry on consumers

Higher prices

With entry of online grocery retailers, each incumbent dominant firm is likely to enjoy less extensive iEOS now, especially with the limited size of the Singapore market. Prior to increased competition, each supermarket produces a large share of the industry output. As such, it is likely to produce at a large scale of production and reap extensive internal economies of scale. Internal economies of scale are cost savings that arise when a firm increases its scale of production. For example, large firms tend to have bargaining advantage and are given preferential treatment by their suppliers because they buy their supplies in bulk from farmers and other suppliers. This enables them to obtain their goods at lower costs and better terms, thereby lowering their unit costs.

However, with an increase in number of firms, each firm now produces a smaller output. As such, it is likely to produce at a smaller scale of production, and may reap less internal economies of scale than before. This is especially true for Singapore's limited market size. This implies that with an increase in competition, the main players may not experience as

much internal economies of scale as before, and hence incur higher average cost. *<Illustrate with higher AC/MC curves due to smaller scale of production>*

If higher costs above are passed on to consumers in terms of **higher prices**, consumers will experience **lower consumer surplus**.

Lower variety and quality of goods and services

Moreover, as new firms enter the industry, the amount of supernormal profit experienced by each firm decreases. Supernormal profits provide funds for the firms to conduct Research and Development (R&D). Thus, firms now have lower ability to engage in R&D and conduct product innovation. In the long run, with lower degree of product innovation, consumers may experience **lower variety and quality of services** than what they would have enjoyed in an industry with lower degree of competition.

Ev2 Extent of negative effects

The Singapore market still has a significant demand for supermarkets with physical storefront, and they continue to dominate the industry due to their established presence, wide variety of products and personalised customer experiences. Consumers generally prefer the ability to physically inspect products, check expiry dates, and assess the freshness of perishable items. Hence, market share of these supermarkets still remain significant and they continue to gain iEOS and cost savings could still be passed on to consumers.

Summative Conclusion:

It is important to note that the impact of competition on consumers can vary depending on the specific circumstances and characteristics of the industry. While competition generally encourages efficiency, innovation, and consumer welfare, firms may experience different outcomes based on their market position and adopt strategies in response to the increased competition. These responses of firms largely affect consumers. In the grocery retail industry, there is room for increased competition to spur innovation, encourage creativity, and drive firms to find new ways to meet evolving consumer needs. This is evident by the strong competition seen in the local supermarkets with regular promotions and customer loyalty programs offering competitive pricing for house brands, etc. Supermarkets also invest in constant upgrading of store designs and layout to enhance customer shopping experience. As long as incumbent supermarkets perceive the market to be contestable, they are unlikely to pass on any cost increase to consumers and are very likely to be spurred on to continue their innovation and cost efficiency to survive and remain profitable in the industry. **Hence, consumers can expect to benefit in view of rising competition and contestability of market in the grocery retail industry of Singapore.**

Marking Scheme:

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> Breadth & Application <ul style="list-style-type: none"> R1: Discussed possible positive effects on consumers due to increased level of competition in Singapore's grocery retail market R2: Discussed possible negative effects on consumers due to increased level of competition in Singapore's grocery retail market <i>Each requirement should cover impact on consumers in terms of price and quality/variety (non-price impact)</i> Depth 	8-10

	<ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories ○ Explains with rigour and detail ○ Explains and illustrates with relevant examples (Singapore's grocery retail market) 	
L2	<ul style="list-style-type: none"> ● Lacking in any one of the L3 criteria 	5-7
L1	<ul style="list-style-type: none"> ● Largely irrelevant response ● Descriptive response with non-existent or minimal or application of economic concepts or theories ● Serious and pervasive conceptual errors 	1-4
Evaluation		
E3	<ul style="list-style-type: none"> ● Takes a clear overall stand (a summative conclusion) that is comprehensively justified by providing convincing evaluative comments on the relative importance of the requirements covered in the body 	4-5
E2	<ul style="list-style-type: none"> ● Takes a clear overall stand which is only partially justified as <ul style="list-style-type: none"> ○ Only one of the requirements is well evaluated with supportive arguments presented in the answer and is linked to the context of the question ● Evaluates both requirements but the overall stand is unclear 	2-3
E1	<ul style="list-style-type: none"> ● Provides an evaluative statement for 1 requirement <p>Note: An opinion is NOT a STATEMENT (Tips: Use normative words: best, more, less, large/small extent)</p>	1

Q4

Technological advancement has resulted in the adoption of labour-saving technology and capital intensive production techniques and this has affected the income gaps of different groups of workers and between urban and rural communities.

(a) Explain how labour immobility may cause unemployment and income inequality to rise.

(b) Discuss whether improving labour mobility alone is the best policy to achieve inclusive growth.

Part (a)

Introduction

Unemployment refers to people in the labour force, who are willing and able to work, but are unable to find employment. Income inequality refers to the uneven distribution of income within the population. The Gini coefficient is used as an indicator of income distribution within an economy which ranges from 0 to 1.

R1: Explain how labour immobility may cause unemployment to rise

[What is labour immobility]

Unemployment can arise from a mismatch of skills, where job seekers do not have the necessary skills required by the employers, for example, low-skilled workers in Singapore would find it hard to secure

employment in the high-end manufacturing sector, such as the biomedical industries, which requires highly skilled workers. The mismatch of skills between those possessed by the job seeking labour and what employers are looking for is a form of occupational immobility, a type of labour immobility.

[Increasing occupational immobility causes unemployment to rise]

In recent years, globalisation has driven many countries to transform their economic structures. Countries like Singapore have to continuously restructure in the face of competition. She has developed new areas of comparative advantage which are relevant and competitive so as to differentiate her products from rivals. She has also shifted her focus from exporting electronics to biomedical products to ensure that she does not face head-on competition with countries whose comparative advantage lies in electronics production such as China. This continuous restructuring has led to higher chances of occupational immobility as workers who are laid off from the sunset electronics industry lack the necessary skills to gain employment in the sunrise biomedical sector and more will become structurally unemployed.

[Increasing geographical immobility causes unemployment to rise]

If it is difficult for a job seeker in the rural area to leave home to find work in the cities as transport, accommodation and other reasons may deter the move. This is the phenomenon of geographically immobility.

Often more economic progress is seen in the cities. Recent years in large countries, there is a growing concentration of firms engaging in innovation and R&D in cities. More job opportunities are available in the cities, and if rural job seekers could not move to the cities when the job situation in the rural areas is deteriorating, this will increase the geographical immobility as well as increase the unemployment rate for the country.

R2: Explain how labour immobility may cause income inequality to rise

Employment in some industries may expand while in others it contracts. This is because advancements in technology implies automation, digitalization and the use of robots (labour saving technology) and as such has transformed work processes making certain occupations specialising in routine tasks less in demand. Not every worker is equally affected when technological changes are introduced into the workplace. Those workers that have the new technology complementing the work they do (more capital intensive production techniques), the productivity of these workers increases and they each earn a greater proportion of the income than before. On the other hand, some parts of the work of lower-skilled workers may be substituted. Each low skilled worker now contributes relatively little and so their share of income they receive has also fallen. The technological advancement is skill-biased and those workers who are unable to move to secure higher and right skills, would exacerbate greater the income inequality.

It is also often said that the rich often have the means to attend training and have greater access to more sophisticated capital to work with and hence able to receive higher incomes whilst the poor might be unable to do so.

[Recent examples] There are also events that have struck those labour who are less mobile to suffer more as their incomes increase slower than others. In the recent Covid-19 pandemic, structural

change in the labour market is seen as more people work from home, shifting new job demands from jobs in retail, catering and cleaning to jobs that require workers' proficiency in digital skills. For those who cannot catch up on the skills acquisition and switch to work in the growing sectors, may find themselves lacking in demand by employers, hence earning a lower wage in the job market.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> • Breadth <ul style="list-style-type: none"> ○ Cover both (R1) on how rising labour immobility causes unemployment to rise and (R2) on how rising labour immobility causes income inequality to increase. ○ Provide sound reasons in R1 and R2 for the reasons why unemployment and income rises. ○ No diagram is expected as part of analysis. • Depth <ul style="list-style-type: none"> ○ Apply AD/AS analysis using relevant economic concepts or theories. ○ Explain with rigour and in depth. 	8-10
L2	Lacking in any one of the L3 criteria	5-7
L1	<ul style="list-style-type: none"> • Largely irrelevant response • Descriptive response with non-existent or minimal or application of economic concepts or theories • Serious and pervasive conceptual errors 	1-4

(b) Discuss whether improving labour mobility alone is the best policy to achieve inclusive growth.

Introduction

Inclusive growth indicates a rate of growth that is broad-based across economic sectors and creates productive employment opportunities for the majority of the country's population. Everyone should gain from growth as the benefits should be distributed fairly and equitably to everyone in the economy.

R1: Explain how supply side measures such as spending on skills training and upgrading and improvement in transportation can improve labour mobility and help achieve inclusive growth

The extent of inclusive growth is often seen from the improvement in income inequality measured by the Gini coefficient. The Gini coefficient is an indicator of income distribution within an economy, and it ranges from 0, indicating perfect equality (where everyone receives an equal income share), to 1, perfect inequality (where only one recipient or group of recipients receives all the income).

As technological advancement permeates into the economy, skills upgrading and training would help workers pick up more high tech jobs that are better paid jobs, narrowing the income gap. For example, the Continuing Education and Training (CET) Masterplan was also developed to enable workers to find their niches, seize opportunities in new growth areas and remain relevant and employable in Singapore.

By upgrading the skills of workers, they become more productive and will be more attractive to firms, which will be more willing to pay higher wages to these better skilled workers. This will contribute to the reduction of the income gap and also reduces occupational immobility as people are more able to pick up new jobs when the old ones are lost or switch to the growing job sector. For those workers

who are unemployed, helping them pick up a new skill for the next job would enable them to earn an income and narrow the income disparity.

For geographical immobility, when there is improvement in the transport system, more connection between the rural and urban areas are built, providing job seekers the ease of travel from the countryside to cities would help reduce unemployment in the rural communities and also improve geographical immobility. In this way, this can help more people to earn a higher income and narrow the income gap and move closer to inclusive growth.

Ev1: Limitations of skills training and upgrading and building of more connecting transport system

Effectiveness of skills upgrading to narrow income gap depends on the mindset as well as receptivity of workers. Hence such sponsorship spending by the government may not necessarily achieve the intended effects of increasing the skills levels of such workers.

It takes time to acquire new skills and to be adept at them, hence the policy may not be as effective in addressing the issue of income gap in the short run as results will only be realised in the long run.

For the case of geographical immobility, the provision of a better transport system does help in movement from rural areas to the cities, but geographical immobility may involve deeper issues involved than just the mere obstacle of transportation. Culture differences and the availability of accommodation in the cities would also be the other reasons for why job seekers are reluctant to move and remain geographically immobile.

R2: Explain the use of policy other than training and skills upgrading to achieve inclusive growth - a more progressive income tax structure and transfer payments

One other policy is a more progressive income tax. Progressive income tax works where an additional dollar on the income is taxed at a higher rate than the last. The government can increase the tax rate of the higher income groups. This helps to narrow the income gap since the after-tax income (disposable income) of high-income earners is now lower after-tax and the tax revenues raised can be used to finance transfers to lower income earners, facilitating the reduction of after-tax income gap between the higher and lower income groups.

Though the disposable income of higher income group earners might fall from progressive income tax, this is compensated by higher disposable income for the lower income group and the total consumption in the economy could rise. This is because the marginal propensity to consume for the lower income groups are generally higher, resulting in an overall increase in consumption. The increase in consumption will kick off the multiplier effect and lead to a more than proportionate increase in real national output and actual growth is achieved.

Another related policy is increase in transfer payments. Transfer payment is the assistance to lower income families for those unable to work and with little means of subsistence. This scheme does not directly address the income gap but helps to alleviate the effects of income inequalities on the underprivileged by ensuring that they are able to afford basic necessities, and thus nonetheless help to achieve inclusive growth.

Ev2: Limitations of progressive income taxes and transfer payments

The burden of financing transfers on the part of the government and the question of sustainability in the long run has to be considered. There is possibility that low income workers and their employers

may become reliant on these transfers and hence lack the incentive to upgrade their skills to raise their productivity and move on to higher paying jobs to raise their incomes and lower the income gap.

SC: Which measure is the best

Both the supply side policy of spending on skills training and upgrading and the provision of transfer payment and making income taxes more progressive complement one another as in the short run, unforeseen events such as Covid-19 crisis may hit the lower income households harder due to lack of savings and hence need to maintain a basic standard of living and access to key services, the government transfers are required.

However, in the long run, supply side spending on training are key. In a world where technological change is increasing productivity and mechanising jobs, raising skill levels is critical for reducing the dispersion of earnings. Improving skills and education is necessary.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> ● Breadth & Application <ul style="list-style-type: none"> ○ Covers both aspects on how improving labour immobility can help to attain inclusive growth and the other policies that can also be used to improve inclusive growth. ○ Notably supply side policies on training and the two other fiscal policy including progressive income tax and transfer payments. ○ Analyses with the expected theoretical breadth and scope ○ Provide two reason for R1 and at least two for R2 analysis. ● Depth <ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories ○ Explains with rigour and detail ○ Explains and illustrates with relevant tool(s) of analysis (<i>e.g. diagrams and examples</i>) 	8-10
L2	<ul style="list-style-type: none"> ● Lacking in any one of the L3 criterions 	5-7
L1	<ul style="list-style-type: none"> ● Largely irrelevant response (meaning of question not properly grasped) ● Descriptive response with non-existent or minimal or application of economic concepts or theories ● Serious and pervasive conceptual errors 	1-4
Evaluation		
E3	<ul style="list-style-type: none"> ● Takes a clear overall stand (a summative conclusion) that is comprehensively justified by providing convincing evaluative comments on the relative importance of the requirements covered in the body 	4-5
E2	<ul style="list-style-type: none"> ● Takes a clear overall stand which is only partially justified as <ul style="list-style-type: none"> ○ Only some of the requirements is well evaluated with supportive arguments presented in the answer and is linked to the context of the question ● Evaluates both requirements but the overall stand is unclear 	2-3
E1	<ul style="list-style-type: none"> ● Provides evaluative statement for 1 requirement 	1

Q5

- (a) Explain why a small and open economy may allow its currency to appreciate and how it may lead to an unintended consequence on its balance of trade. [10]
- (b) Discuss to what extent conflict between macroeconomic objectives is the main reason why governments pursue a mix of policies to achieve these objectives. [15]

Part (a)**Introduction**

A small and open economy refers to a country that is small in geographical size but is open to cross borders flow of goods & services, capital and labour. An example of a small and open economy is Singapore, where her small size belies the insufficient endowment of resources and hence the need to depend on foreign supplies and also markets for her exports to achieve high economic growth. This essay shall explain how by appreciating its currency, a small and open economy would benefit from price stability and possibly positive economic growth but the trade-off is the unintended consequence of a worsening balance of trade.

R1: Explain how an appreciation of the exchange rate might positively contribute to price stability

A small economy's lack of natural resources causes it to import most of the raw materials it needed for producing goods & services and also import final consumer goods and services. This makes the economy very susceptible to imported inflation. Not only will this adversely affect the cost of living for households but also severely affects the country's export competitiveness if most of the exports require substantial imported inputs to manufacture. As appreciation of the exchange rate is able to target and curb imported inflation.

[Analysis: Impact on AS]

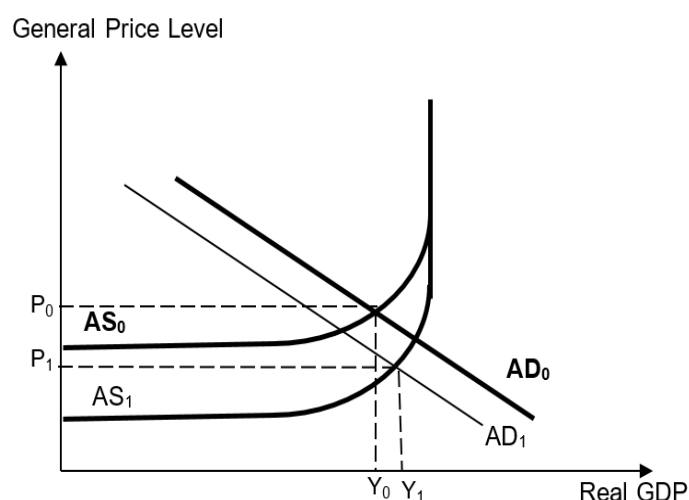
With appreciation, prices of imported inputs become cheaper, thus cost of production falls, leading to an increase in the aggregate supply (AS) which causes a downward shift of the AS curve in Figure 1, from AS_0 to AS_1 . When firms pass on cost savings to consumers, the General Price Level (GPL) falls as well.

[Impact on AD]

The domestic price of imported goods will fall with appreciation and thus the volume of imports increases. On the other hand, export prices in foreign currency will rise and this will cause a fall in the volume of exports. A fall in exports volume together with a rise in import volume will cause net export, the component of AD, to fall, shifting from AD_0 to AD_1 in Fig 1.

The combined effect of rise in AS and fall in AD will lead to a fall in general price level from P_0 to P_1 . Moreover, if the fall in the horizontal portion of AS is more than the reduction in AD, as shown in Fig 1, there will be positive economic growth from Y_0 to Y_1 .

Figure 1: How appreciation affects price stability



By managing exchange rates through appreciation, an economy is thus able to directly influence the costs of imported inputs, as well as mitigating any higher imported prices of consumer goods, hence preventing or reducing the adverse impact of imported inflation. This policy is especially useful for a small and open economy because its external sector is likely to be a more predominant sector as it comprises a larger proportion of the GDP.

In the event of externally led demand-pull inflation during a global economic boom where net exports increase shifts AD too much to the right, GPL could rise. With appreciation of the currency, prices of exports in foreign currency would rise further and this will help to buffer the economy from excessive expansion of the external demand and thus moderate the demand-pull inflation.

R2: Explain how an appreciation might adversely affect the country's balance of trade

Balance of trade (BOT) measures the difference between export revenue and import spending of goods and services which a country trades with the rest of the world.

When the domestic country's currency appreciates, *ceteris paribus*, exports become more expensive in foreign currency causing export volume (Q_x) to fall. As export prices in domestic currency remain unchanged, the fall in demand means that export revenue in domestic currency will fall. A small and open economy is trade dependent; appreciation will further aggravate export demand due to relatively more expensive in foreign currencies, this will reduce the demand for exports drastically resulting in a corresponding greater fall in export revenue. Imports, on the other hand, become cheaper in domestic currency causing import volume (Q_m) to rise. If demand for imports (PED_m) is price elastic, i.e. $PED_m > 1$, the rise in Q_m in domestic currency is more than proportionate than the fall in import price leading to an increase in import expenditure. As export revenue falls and import expenditure increases, a balance of trade surplus in the current account will be reduced, or the trade balance worsens.

Conclusion

For a small and open economy lacking in resources and susceptible to imported cost-push inflation, exchange rate appreciation would be very appropriate to help reduce inflation. This is often the intended goal.

However, since the economy is also trade dependent, appreciation could cause the fall in export competitiveness, worsening its trade balance. Though the balance of trade is worsened due to appreciation, imported raw materials and intermediate inputs will be cheaper, reducing the cost of production of its exports. This helps to partially offset the increase in export prices and to partially reduce the fall in the balance of trade.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> • Breadth <ul style="list-style-type: none"> ○ Cover both (R1) on the intended impact of appreciation on mitigating inflation and possibly generating economic growth and (R2) the unintended impact on BOT. ○ Explanation includes the characteristics and nature of a small and open economy. • Depth <ul style="list-style-type: none"> ○ Apply macro analysis and use PED for imports in explanation of balance of trade, citing relevant economic concepts or theories. ○ Analyse and explain with the tools of analysis of an AD/AS diagram, to illustrate the shifts in AS and AS. ○ Explain with rigour and in depth. 	8-10
L2	Lacking in any one of the L3 criteria	5-7
L1	<ul style="list-style-type: none"> • Largely irrelevant response • Descriptive response with non-existent or minimal or application of economic concepts or theories • Serious and pervasive conceptual errors 	1-4

(b) Discuss to what extent conflict between macroeconomic objectives is the main reason why governments pursue a mix of policies to achieve these objectives. [15]

Introduction

Macroeconomic objectives comprise price stability, low unemployment rate, stable economic growth and favourable external balance (e.g. healthy BOT). Governments generally face conflicts when attempting to achieve one of these coveted macroeconomic objectives, they will probably have to give up attaining another. Some of the potential pairs of conflicts include low inflation and higher unemployment (or low inflation and lower economic growth), low inflation and the falling balance of trade or between supply side generated growth and increase in structural unemployment.

From part (a), we have analysed how the use of appreciation to counter imported inflation could lead to an unintended consequence of worsening BOT. When exchange rate appreciation policy is used to mitigate imported inflation, this could also result in worsening balance of trade. Hence there is a conflict here, and thus another policy is required to resolve the worsening BOT, resulting in a mix of policies to be applied jointly to achieve the macroeconomic objectives.

[Alternatively, we can also discuss other pairs of macro conflicts (other than attempts to reduce imported inflation and resulting in weakening BOT), and see how important macro conflicts are the reason that calls for a mix of policies to achieve macro objectives].

R1: Explain how a mix of policy is required to mitigate the conflict between reducing imported inflation and worsening trade balance

The use of appreciation to shift horizontal AS downward to mitigate imported inflation may conflict with the aim of maintaining a favourable BOT position as price of exports become more expensive and hence reduces export competitiveness. To mitigate the price competitiveness, the governments could adopt supply-side policies (SSP) to boost quality of exports and improve workers' productivity to also regain price competitiveness. Hence SSP is used to complement appreciation. The government provides subsidies to encourage local export-oriented firms to invest in R&D or fund training of workers to achieve higher productivity in the export industries. This could lead to lower unit cost of production and increase price competitiveness of the country's exports. If more volume of exports is sold due to improved quality

and higher productivity, this could boost export price revenue, mitigating the worsening of BOT from the appreciation of the currency.

Ev1: Limitations of the effectiveness of supply side policies or appreciation in mitigating the conflict

Supply side policies usually have a long gestation period and are typically a longer-term measure. It may be more suitable for a small and open economy, but not a larger and less open economy. For economies that are less open, and rely less on external demand, the pace of restructuring could be slower because competition level at the domestic industries is usually not so rigorously, hence less need of the interventionist supply side policy.

In the case of appreciation, although it may worsen export price competitiveness, but for countries that rely a lot of foreign resources to manufacture export products, the higher exchange rate will help to reduce the costs of production so that the export price increases may not rise by a large extent.

[Alternatively, we can also illustrate another pair of conflict, for example, increase actual growth and inflation, and how mix of policies addresses the conflict].

Explain how conflict of macroeconomic objectives between actual growth and price stability may require a mix of policies

A government may adopt expansionary policies (e.g. fiscal or monetary policy) to stimulate actual growth in the short term. However, the increase in AD, if excessive, could hit the vertical portion of the AS curve. This may result in demand-pull inflation, thus conflicting with the objective of price stability.

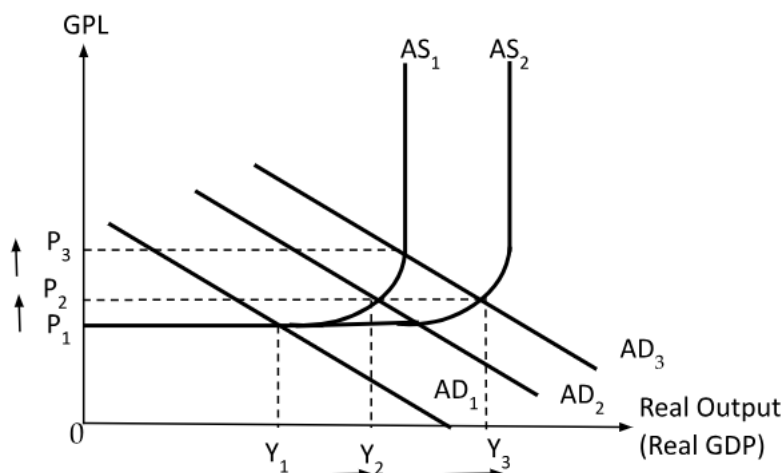
[Analysis]

A government may adopt expansionary fiscal policy to increase AD in the economy by increasing government expenditure. In Figure 1, the resultant increase in AD from AD_1 to AD_2 causes national income to increase by a multiplied amount from Y_1 to Y_2 due to the multiplier process, thus achieving actual growth.

However, if AD continues to increase while the economy approaches full employment, the general price level may rise persistently (i.e. from P_1 to P_2 to P_3), leading to a situation of demand-pull inflation. This conflicts with the objective of price stability.

To address the conflict with price stability, governments could complement the expansionary demand-management policies with supply-side policies to boost the country's productive capacity such as training of workers to improve productivity. As the economy's AS increases and shifts to the right, inflationary pressures are dampened as GPL falls from P_3 to P_2 .

Figure 2: Policies to manage the conflict of macroeconomic objectives



[Alternate Ev1 (for conflict between growth and price stability) : Effectiveness of using expansionary fiscal policy alone is sufficient - no need for mix of policies to achieve macro objectives]

The use of expansionary fiscal policy to promote growth can be in the form of increasing spending on infrastructure such as building more MRT lines in Singapore, as this would increase the capital stock and increase productive capacity in the long run. This could reduce any inflationary pressures that the country may face in the long run. Just a single fiscal policy with supply side effects could help to increase AD and extend AS outward, there might not be another policy to increase AS to offset demand pull inflation.

R2: Explain why the use of a mix of policies to achieve macroeconomic objectives may be due to other reasons and not macroeconomic conflicts

Out of the 4 macro objectives, governments tend to prioritise the objectives to satisfy and will not attempt to satisfy all of them at the same time equally. Often it depends on the prevailing state of the economy. For example, if there is global inflation prevailing due to global economic boom, the policy of appreciation will be taken up by the small and open economy to counter imported inflation, and although this might have adverse impact on BOT theoretically, supply side policies may not be implemented at the same time because large fall in BOT is less likely to occur as strong exports demand could still be prevailing. As such, supply side policies spending on innovation and training to improve export competitiveness as a policy mix with appreciation to cushion the fall in BOT might not be implemented together as a policy mix.

For the use of fiscal policy with a supply side policy mix, this also depends on the constraints faced by the governments, and not necessarily due to the conflicts between actual growth and inflation. Such constraints include budget constraints and the level of interest rate prevailing in the country then.

There may be limited scope to implement expansionary fiscal policy to stimulate growth in times of recession. Hence, governments could use expansionary monetary policy (i.e. reduce interest rates or depreciate the exchange rate) to increase AD. On the other hand, in times of deep recessions, when interest rates are already very low, the economy may be facing a liquidity trap. Expansionary monetary policy through reducing interest rates may no longer be effective. Any rise in money supply to reduce interest rates will only result in extra liquidity being kept in idle balances as firms and households are unwilling to spend. Thus the choice of policy mix is not entirely due to conflicts of objectives, but the constraints governments faced and the prevailing state of economy.

Ev2: Evaluative comments on the other reasons for using a mix of policy to achieve macro objectives

Although the reason for using a mix of policy can be attributed to conflicts of objectives whereby when one objective is achieved, it will adversely affect the attainment of another objective, invariably it is also important to consider the constraints of the government and the state of economy. It is noted that conflicts in macroeconomic objectives could be a strong reason when the economy is producing near/at full employment and if the economy has a high degree of openness. For example, if the economy is producing below the full employment output level, increasing AD to stimulate growth will not give rise to inflationary pressures. Hence, it doesn't warrant to have a policy mix to mitigate the expected problem that is likely to be created, but when the economy is at points like near/at full employment there is a need for a mix of policies required due to macroeconomic conflicts that would likely cause severe problems.

Summative conclusion

When governments implement policies to achieve the macroeconomic objectives, they tend to implement a mix of policies to achieve these objectives. The conflicts of objectives may not be the most important reason that will prompt governments to pursue a mix of policies. Rather, a combination of policies is more likely to be adopted to ensure the chances of success in achieving these objectives, and this is the reason for the call to use a mix of policies. Moreover, constraints like the state and nature of the economy play a more important role in the decision to use a mix of policies in an attempt to achieve the macroeconomic objectives.

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> ● Breadth & Application <ul style="list-style-type: none"> ○ Covers both factors: related to conflict of macroeconomic objectives and non-related to conflicts. ○ One pair of conflicts explained and illustrated (up to 9m), more than 1 pair (can reach max 10m) for R1 ○ Provide two reasons, for non-related to conflicts factors for R2 analysis. ● Depth <ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories ○ Explains with rigour and detail ○ Explains and illustrates with relevant tool(s) of analysis (<i>e.g. diagrams and examples</i>) 	8-10
L2	<ul style="list-style-type: none"> ● Lacking in any one of the L3 criteria 	5-7
L1	<ul style="list-style-type: none"> ● Largely irrelevant response (meaning of question not properly grasped) ● Descriptive response with non-existent or minimal or application of economic concepts or theories ● Serious and pervasive conceptual errors 	1-4
Evaluation		
E3	<ul style="list-style-type: none"> ● Takes a clear overall stand (a summative conclusion) that is comprehensively justified by providing convincing evaluative comments on the relative importance of the requirements covered in the body 	4-5
E2	<ul style="list-style-type: none"> ● Takes a clear overall stand which is only partially justified as <ul style="list-style-type: none"> ○ Only some of the requirements is well evaluated with supportive arguments presented in the answer and is linked to the context of the question ● Evaluates both requirements but the overall stand is unclear 	2-3
E1	<ul style="list-style-type: none"> ● Provides evaluative statement for 1 requirement 	1

Q6

(a) Explain the benefits and costs of globalisation to consumers and workers. [10]

(b) Discuss the extent to which policies aimed to attract foreign direct investments (FDIs) in Singapore would ensure that the benefits of globalisation to consumers can be obtained while minimising the costs of globalisation to workers. [15]

(a)

Introduction

Globalisation refers to the integration or inter-connectedness of national economies through trade of goods and services, foreign direct investment, capital flows, spread of technology and labour migration. This essay will explain the benefits and costs to consumers in terms of consumer welfare, workers in terms of wages and employment and producers in terms of profits.

R1 Benefits of globalisation to consumers and workers

1. Benefits to consumers

As more countries engage in free trade in this age of globalisation, consumer welfare will increase. According to the theory of comparative advantage, countries will gain from trade if each specialises in the production of the good in which she has the **comparative advantage** and trade with each other. For example, given the differences in resource endowment, a developing country such as India with abundance of land and unskilled labour would have a lower opportunity cost in producing agricultural products which are land and labour intensive since she needs to give up less of another good e.g. high-end value-added manufactures to produce 1 more unit of agricultural product. In comparison, a developed country such as Singapore would have to give up more units of the high-end value-added manufactures to produce 1 more unit of agricultural product due to a lack of relevant resources. Instead, she has a relatively low opportunity cost in producing high-end value-added manufactures like aircraft engines since it has skilled labour and capital. Hence, developing countries have comparative advantage in producing agricultural products while developed countries have comparative advantage in producing high-end value-added manufactures. Developed countries can gain by specialising in high-end value-added manufactures, trade them for agricultural products while developing countries can gain by specialising in agricultural products, and trade them for high-end value-added manufactures. Such specialisation and trade according to comparative advantage enable countries to **consume more** than what they could if under autarky. With freer trade, there will be an increase in world output, consumers will be able to consume beyond the PPC.

With **freer trade**, consumers all over the world are also able to enjoy a **greater variety of goods & services** to suit every taste. For instance, consumers in tropical countries can enjoy imports from temperate countries in addition to their own domestically produced goods.

Globalisation also enables countries with resource constraints to tap on foreign resources such as raw materials and inputs. The increase in competition also lower the barriers to entry and markets are more contested. The firms now have more incentive to engage in R&D which will improve the **quality** of the product. In view of potential rivals, firms might also pass cost savings from iEOS due to greater access to foreign markets to the consumers, resulting in a **fall in prices of goods and services** and therefore higher consumer surplus. As such, **consumer welfare is likely to increase**.

2. Benefits to workers

Increased trade and capital imply an increase in (X-M) and FDI leading to rise in AD from AD_0 to AD_1 as shown in Figure 1, leading to a rise in national output from Y_0 to Y_1 via the multiplier effect, hence actual growth and firms will employ more factors of production, since labour is a derived demand. Workers will **gain employment** and **higher wages**

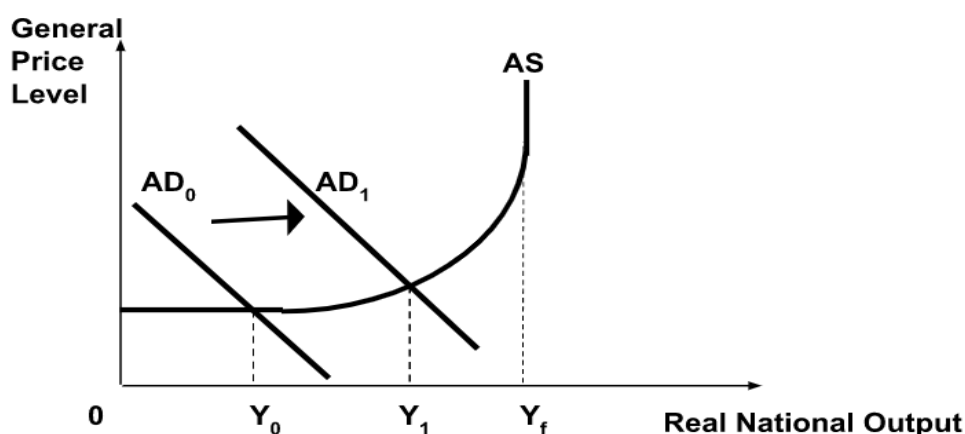


Figure 1

R2 Costs of globalisation to consumers and workers

1. Costs to consumers

Increased trade flows also leads to unfair competition and dumping with the objective to drive out rival producers in the importing country and eventually monopolise the market. Though consumers benefit from lower prices in the short run, they suffer with higher prices in the long run with increased market concentration and the emergence of multinational corporations with significant market power. These companies may be able to set higher prices for their products or services, which can lead to higher costs for consumers. Global supply chains can be vulnerable to disruptions, such as natural disasters, geopolitical tensions, or global health crises (as seen with the COVID-19 pandemic). These disruptions can lead to shortages of certain goods and, in turn, drive up prices.

2. Costs to workers

Globalisation allows the transfer of technology which leads to changes in factor endowments of different countries. This makes a small and open economy such as Singapore to gain and lose comparative advantage more frequently since CA is a dynamic concept. MNCs being footloose might shift their production line elsewhere in search of cheaper cost of production (**increased international capital mobility**). When the emerging economies such as China and India open up in the 2000s, Singapore faced a structural shift which resulted in structural unemployment. The fall in FDI in the sunset industries in Singapore led to a fall in demand for workers in the sunset industries. Due to occupational immobility, these workers' skills are now obsolete and cannot take up jobs in other industries. At the existing wage, the quantity demanded is less than the quantity supplied of workers which resulted in a surplus of these workers, causing a downward pressure on their wages, hence increasing the income gap between the workers in the sunset industries and those in the sunrise industries. As such, workers in these industries **suffer in terms of wages and employment**.

Increased international mobility also causes **structural unemployment** and **depresses wages** of low-skilled workers in developed countries as they prefer to hire cheaper labour from developing countries.

Marking Scheme:

Level	Descriptors	Marks
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L3	<ul style="list-style-type: none"> • Breadth & Application <ul style="list-style-type: none"> ○ R1: Explained benefits of globalisation to consumers AND workers. ○ R2: Explained costs of globalisation to consumers AND workers. <p>Alternatively:</p> ○ R1: Explained costs AND benefits of globalisation to consumers ○ R2: Explained costs AND benefits of globalisation to workers. <ul style="list-style-type: none"> • Depth <ul style="list-style-type: none"> ○ Applies relevant economic concepts or theories – need to consider the impact of all features of globalisation i.e. increased trade, labour and capital in answer ○ Explains with rigour and detail ○ Explains and illustrates with relevant diagram(s) and example(s) 	8-10
L2	<ul style="list-style-type: none"> • Lacking in any one of the L3 criteria 	5-7
L1	<ul style="list-style-type: none"> • Largely irrelevant response • Descriptive response with non-existent or minimal or application of economic concepts or theories • Serious and pervasive conceptual errors 	1-4

(b)

Introduction

Globalisation is characterised by the increasing interconnectedness of economies, and FDI is a manifestation of this interconnectedness. The extent to which such policies would ensure the benefits of globalisation to consumers can be obtained while minimising the costs to workers would be discussed.

R1 Policies aimed to attract FDIs such as signing of FTAs would ensure that benefits of globalisation to consumers can be obtained and/ or minimise costs to workers

A Free Trade Agreements (FTA) is an agreement between member countries to remove barriers to trade (and often also barriers to investments) amongst themselves while each member retains its own trade (and investment) barriers against other non-member countries. **FTAs can attract foreign investment to Singapore** as it provides investors with greater access to regional markets. Singapore has forged an extensive network of 27 implemented agreements.

(From MTI website) *With FTAs, Singapore-based exporters and investors stand to enjoy a myriad of benefits like tariff concessions, preferential access to certain sectors, faster entry into markets and Intellectual Property protection.*

The extensive network of FTAs facilitating more trade and investment can ensure that consumers can benefit from lower prices of goods as well as greater variety and better quality of goods and services. Signing more Free trade agreements (FTAs) can help companies based in Singapore to expand and leverage on their comparative advantage more easily without the obstacle of protectionist tariffs. In addition, the threat from potential foreign competition also raises the degree of contestability of import competing markets. Overall, lower production costs, reduced monopoly power, and large scale of production translate to **lower prices** hence benefitting domestic consumers.

FTAs aimed to attract FDIs could help create jobs for workers and reduce demand-deficient unemployment due to external shocks. Forging a network of FTAs with other trade partners including those non-traditional areas like the Middle East and Central Asia allows Singapore to diversify our export markets away from trading partners such as the US (decoupling) and reduce risk of contagion effect/ externally induced unemployment.

Ev1 Extent of effectiveness of FTAs

Pandemic-induced trade protectionism might limit the effectiveness of FTAs in promoting free trade and investment. Protectionist measures can limit domestic firms' access to foreign markets, making it harder for them to compete and limiting the benefits of increased market access that FTAs provide, limiting its effectiveness. FTAs could help with externally induced demand deficient unemployment but the extent to which such unemployment could be reduced is limited if global demand is weak due to poor economic outlook.

R2 Policies aimed to increase FDIs such as SSPs would ensure that benefits of globalisation to consumers can be obtained and/ or minimise costs to workers

SSPs that focus on increasing labour productivity and maintain a highly-skilled workforce to attract FDIs will **enable the workforce to be competitive and occupationally mobile so that should workers lose their jobs they can easily switch to other sectors where jobs can be found.** The government works closely with educational institutions and industries to ensure that the workforce is equipped with the skills needed **to meet the demands of a rapidly changing global economy.** Lifelong learning initiatives and skills upgrading programs are common. Examples of upgrading courses include those provided by the Continuing Education and Training Centres. Initiatives such as the Skills Development Fund, as well as the Lifelong Learning Endowment Fund and Workfare Training Support Scheme provide subsidies to firms who send their workers for re-training or upgrading courses to retain their employability. SkillsFuture Credit has also been introduced to encourage individuals to take ownership of their skills development and lifelong learning, where all Singaporeans aged 25 and above will receive an opening credit of S\$500 and this amount will be topped up periodically.

More productive workforce would also translate to lower unit COP and lower prices for consumers in general. Also, with more FDIs attracted to Singapore, consumers can access greater variety of and possibly higher quality goods. For example, Singapore has attracted FDIs from major automobile manufacturers and dealerships. This has led to a wider variety of car models and brands available in the country, along with improved servicing and maintenance facilities. Consumers now have access to a broader range of vehicles, from affordable models to high-end luxury cars.

Ev2 Extent to which SSPs can minimise costs to workers

Retraining takes time and it will not directly translate to employability in the short term, depending on the type of skills learnt. Preparing the workforce for sunrise industries typically requires education and training. This can take years or even decades to produce a skilled workforce capable of driving growth in new sectors. For example, jobs like data analysts, cybersecurity-related jobs, healthcare, supply chain management takes a long time in order to be qualified. Hence, structural unemployment may not be reduced within a short frame of time. Retraining programs may not always align with the evolving demands of the job market, resulting in a skills mismatch. Workers may receive training in fields with limited job prospects, leading to continued unemployment or underemployment. In turn, this would mean that funding for retraining by the government is required over a prolonged period. Another point for consideration is the employers' willingness to send their employees for retraining, which could

involve both explicit cost like training cost and opportunity cost in terms of revenue that could be earned.

Increasing skills and productivity of workers would not help if the root cause of unemployment is due to lack of demand arising from external shocks, such as economic recessions, natural disasters, or global crises (like the COVID-19 pandemic).

Summative Conclusion

Policies aimed to attract FDIs in Singapore would largely ensure that the benefits of globalisation to consumers can be obtained while minimising the costs to workers since these policies align with the principles of globalisation. However, it is crucial to note that the effectiveness of these policies are constrained by external shocks and the proficiency with which they are executed. Additional measures should supplement the above to achieve better outcomes for the consumers and workers. Ensuring that benefits to consumers are realised requires a balance of effective policies, regulations, and collaboration between governments, businesses, and consumer organisations while minimising costs to workers would require the implementation of active labor market policies, such as job matching services, career counseling, and wage subsidies, to facilitate smoother transitions for job seekers.

Marking Scheme:

Level	Descriptors	Marks
L3	<ul style="list-style-type: none"> Breadth & Application <ul style="list-style-type: none"> R1: Identify at least 1 policy aimed at attracting FDIs and discuss how this policy could increase benefits of globalisation to consumers and/ or reduce costs of globalisation to workers R2: Identify at least 1 other policy aimed at attracting FDI and discuss how this policy could increase benefits of globalisation to consumers and/ or minimise costs of globalisation to workers Depth <ul style="list-style-type: none"> Applies relevant economic concepts or theories Explains with rigour and detail Explains and illustrates with relevant examples – diagrams are not required but explanation should be clear 	8-10
L2	<ul style="list-style-type: none"> Lacking in any one of the L3 criteria 	5-7
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Evaluation		
E3	<ul style="list-style-type: none"> Takes a clear overall stand (a summative conclusion) that is comprehensively justified by providing convincing evaluative comments on the relative importance of the requirements covered in the body 	4-5

E2	<ul style="list-style-type: none"> • Takes a clear overall stand which is only partially justified as <ul style="list-style-type: none"> ◦ Only one of the requirements is well evaluated with supportive arguments presented in the answer and is linked to the context of the question • Evaluates both requirements but the overall stand is unclear 	2-3
E1	<ul style="list-style-type: none"> • Provides an evaluative statement for 1 requirement <p>Note: An opinion is NOT a STATEMENT (Tips: Use normative words: best, more, less, large/small extent)</p>	1