

2014 SRJC Preliminary Examinations – H2 Economics (9732/02)
Paper 2 Suggested Answers & Examiners' Comments

- 1** As the Singapore economy was just emerging from the recession, the Ministry of Manpower (MOM) announced that foreign worker levy rates will be gradually increased from 2012 to 2013.

Discuss how the rise in foreign worker levy rates and the emergence from recession will impact the various markets for goods and services in Singapore. [25]

Suggested Answer Outline

Introduction

- Briefly state that impact on the free market requires the analysis of how different factors will affect equilibrium price and quantity which are determined by the interaction of demand and supply forces.
This essay aims to explain how the 2 factors of a rise in foreign worker levy rates and emergence from recession will affect supply and demand of various markets respectively.

Body

Labour is an important factor of production in the market for F&B service, which is labour intensive and relies heavily on foreign workers to act as service staff. With a rise in foreign worker levy, there will be a rise in cost of production, and a fall in profits. Profit-maximising producers are less willing and able to supply F&B services that will in turn result in a fall in supply. This is represented in Figure 1 by a fall in supply shown by the leftward shift of the supply curve from SS_0 to SS_1 .

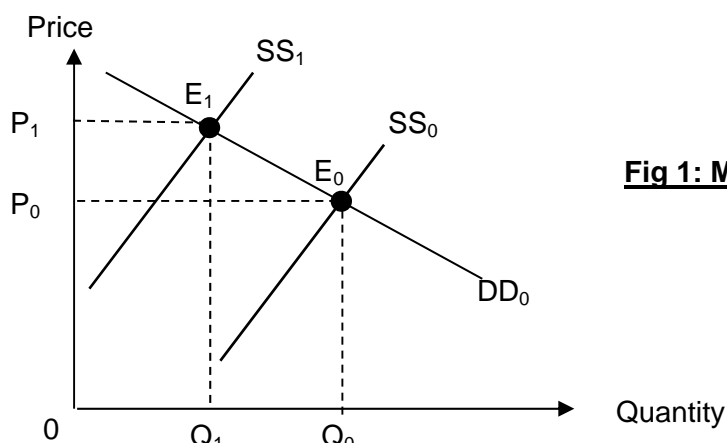
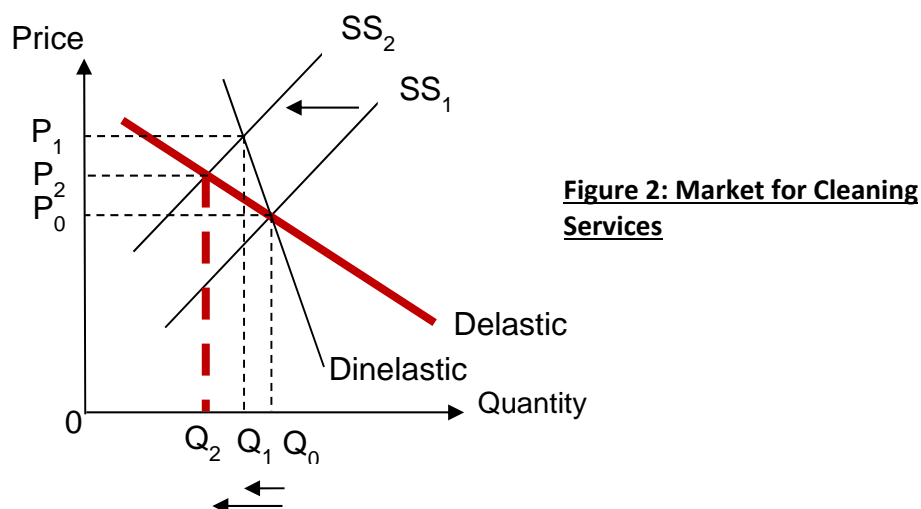


Fig 1: Market for F&B Services

With a fall in supply, this would lead to a shortage in the free market, hence consumers would bid up prices and place upward pressure on prices on F&B services, such as higher restaurant food prices. As price rises, quantity demanded falls while quantity supplied rises. Price in the free market keeps on rising until shortage is eliminated and there will be a fall in equilibrium quantity from Q_0 to Q_1 .

The impact on markets for goods and services whereby demand is more price inelastic will see a more significant rise in equilibrium prices as compared to other markets as producers will be able to pass on a larger increase in the cost of production to the consumers since they have less substitutes to turn to.



For e.g. Cleaning services, an industry that depends heavily on foreign workers will be greatly affected by the rise in foreign workers levy. Since such services is a necessity for businesses (ie. Office cleaning, HDB blocks cleaning) DD is more price inelastic (D inelastic) as compared to cleaning services for households which can be substituted by home cleaning (D elastic). Hence when there is a rise in cost of production due to the increase in foreign workers levy, producers can pass on a larger proportion of the cost increase to businesses as compared to household, causing a larger increase in price for cleaning services to businesses from P_0 to P_1 and smaller fall in quantity from Q_0 to Q_1 , as compared to households where there is a smaller rise in price of cleaning services P_0 to P_2 and larger fall in quantity from Q_0 to Q_2 .

The extent of a rise in prices depends on how much supply will fall with the rise in foreign workers levy. This in turn depends on the reliance of various markets on foreign labour. For goods and services, which are heavily reliant on unskilled foreign labour, especially labour intensive industries (ie. Service sector, cleaning services, construction sector), where a huge proportion of cost goes into the labour cost and in particular, foreign labour cost because few Singaporeans today are keen to go into the service sectors due to the long hours, will be largely affected by the rise in foreign workers levy. Compared to industries which are dependent on more skilled labour or capital intensive industries (ie. Banking services), the rise in foreign workers levy will affect these industries to a smaller extent.

With the recovery from recession, economic growth will start picking up and national income will rise for the Singapore economy. As such, consumers' purchasing power will increase demand for goods and services which varies directly with income i.e. normal goods and services will rise, ceteris paribus. Demand for normal-luxury goods like sports cars will rise. As a result, equilibrium price will rise and equilibrium quantity will also rise.

Car models with larger engines are likely to be normal-necessity like Honda Civic while luxury cars like Ferrari and Maserati will be deemed as normal-luxury goods. With a rise in income, demand for both categories of cars will rise but cars which are in the category of normal-luxury goods will see a more than proportionate increase in demand, ceteris paribus while for normal necessities, there will only be a less than proportionate increase in demand.

This is due to the fact with rising incomes, consumers are more inclined to go for better quality and more prestigious goods and services especially as a symbol of social status with rising affluence, hence affecting the equilibrium price and quantity accordingly.

For markets which are dependent on foreign workers and deemed as normal -luxury such as hotel services, the rise in demand might outweigh the fall in supply.

With the rising affluence, families in Singapore are more willing to spend on hotel stays and staycation, which are deemed as normal-luxury goods, so demand for staycations and hotel services rises more than proportionately.

On the other hand, hotels being a service-oriented industry, is also heavily dependent on foreign workers. So when foreign workers levy rises, there will be a rise in the cost of production, so supply will fall.

While labour cost contributes significantly to the cost of production in the hotel industries, there are other FOPs such as electricity bills, land rental cost, food cost. In addition, due to the strong taste and preference for hotel stays due to the rising popularity of staycations, there is likely to be a larger increase in DD and smaller fall in SS for hotel services. With these changes in the market, equilibrium price will definitely rise and equilibrium quantity will still rise.

On hindsight, for markets whereby the reliance on foreign labour is high and income elasticity is positive but less than one (normal necessity), the fall in supply is likely to be greater than the rise in demand, so equilibrium price will rise while quantity will fall.

Conclusion

The changes in demand and supply that will affect various markets in Singapore depends on how nimble the producers are in the industry to predict likely changes in the market and hence make plans to invest in areas like training of workers or development of new products to offset unfavourable changes brought about by higher foreign levies or capitalise on opportunities like rising incomes when the Singapore grows.

Level Marking Scheme

Level	Descriptor
4	<ul style="list-style-type: none"> Detailed explanation of demand and supply changes affecting at least 2-3 different markets Well-explained diagrams which are supported by clear explanations Clearly explained price adjustment process Accurate applications of at least 2 elasticity concepts (e.g. YED and PED/PES concepts) Evaluative comments which are clearly justified e.g. long run and short run considerations Sound and insightful conclusion with personal opinion
3	<ul style="list-style-type: none"> Sufficient explanation of demand and supply changes affecting at least 2 different markets Well-explained diagrams which are supported by clear explanations Clearly explained price adjustment process Sufficient applications of at least 2 elasticity concepts (e.g. YED and PED/PES concepts) Some evaluative comments though may not be sufficiently explained

	<ul style="list-style-type: none"> • Some conclusion
2	<ul style="list-style-type: none"> • Sufficient explanation of demand and supply changes affecting at least 2 different markets • Diagrams which may not be consistently explained • Some explanation of price adjustment process • Sufficient applications of at least 1 elasticity concept • Some reference to correct endpoint on equilibrium price and quantity but may not be always focused • Lacking evaluation and conclusion
1	<ul style="list-style-type: none"> • Some explanation of demand and supply changes • Diagrams but no clear explanation • Some explanation of price adjustment process • Did not focus on correct endpoint on equilibrium price and quantity • Inaccurate applications of elasticities concepts • No evaluation and conclusion

- 2 (a) Explain how the marginalist principle is applicable to the behaviour of a firm. [8]
- (b) The key strategy for firms to protect their profits in the short run and long run in the real world is through lowering prices to keep potential rivals from entering the industry. Comment. [17]

Suggested Answers:

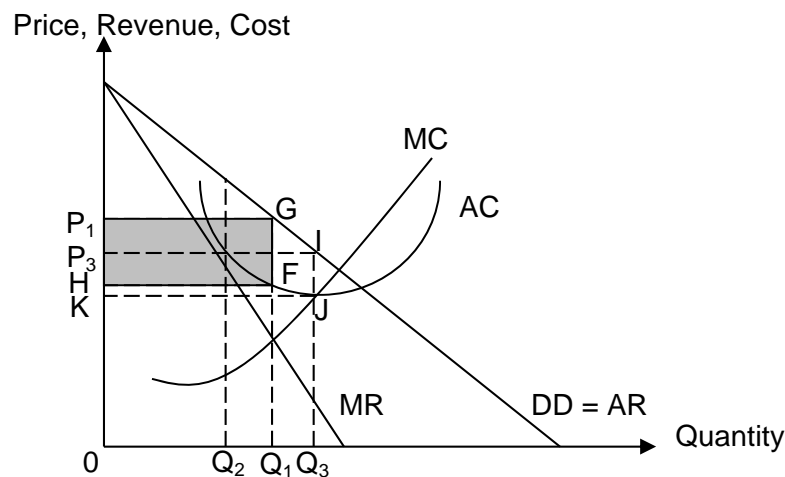
Part (a)

INTRODUCTION

The behaviour of a firm pertains to price and output determination and the manner of competition. Pricing and output decisions differ given different objectives of a firm and different levels of barriers to entry. Firms decide on price and output levels, given the cost and revenue curves facing the firms.

When a firm maximises its profits, this means that it aims to earn the highest possible level of total profits. To determine the profit-maximising output level, the firm will produce up to the level where the revenue earned from the last unit sold, i.e. marginal revenue (MR), is equal to the additional cost of producing it, i.e. marginal cost (MC). This is the marginalist principle.

BODY



Profit maximisation

- At $0Q_2$, since $MR > MC$, the addition to TR earned from the last unit of output sold > the additional cost incurred in producing it. Thus, the firm can in fact increase its total profits if it increases the production level. Hence, at the current level of output where $MR > MC$, profits is not maximised.
- This also means that $0P_2$ is not the profit-maximising price.
- At $0Q_3$, since $MR < MC$, this means that the sale of the last unit of output adds less to TR than the additional cost incurred in producing it. Thus, the last unit of output produced results in a fall in total profits. Hence, the firm should reduce its output. This also means that P_3 will not be charged by the firm if it wants to maximise profits.
- At price of $0P_1$ and output level of $0Q_1$, the firm's profits are maximised as shown by area P_1GFH .

- In this case, the firm would not want to lower its price, e.g. to OP_3 . This is because its profits would be the area P_3IJK , which is smaller than P_1GFH .

CONCLUSION

Therefore, a firm maximises its profits when its MC is equal to its MR and where MC is rising. The output and pricing decisions made by the firm would have an impact on the attainment of this objective.

Level	Descriptors
3	<ul style="list-style-type: none"> • Thorough analysis that is well-supported by a correct diagram <ul style="list-style-type: none"> ▪ Well labelled diagram referred to competently in explanation. ▪ Well-developed answer with examples. ▪ Commented also on the rising portion of MC as a necessary condition.
2	<ul style="list-style-type: none"> • Some explanation of the profit-maximising objective is evident • Explanation is not complete, e.g. incomplete diagram and/or incomplete steps that do not suggest a comprehensive explanation of the profit-maximising objective • Define MR and MC and understand the $MR = MC$ principle in profit maximizing. • Explain $MC < MR$ and $MC > MR$ implications on level of profits by adjusting output. • Diagram attempted and referred to
1	<ul style="list-style-type: none"> • Smattering answers with little economic analysis and/or glaring conceptual error

- (b) The key strategy for firms to protect their profits in the short run and long run in the real world is through lowering prices to keep potential rivals from entering the industry. Comment. [17]

INTRODUCTION

Lowering prices can be a type of barriers to entry. Barriers to entry are obstacles that prevent new rival firms from entering the industry and eroding the incumbent firm's profits. They may be either natural or created. They form the basis of monopoly power. The barriers can be classified as economic and institutional barriers.

It can be argued that firms can deter the entry of new firms through strategies such as anti-competitive pricing, specifically limit pricing or predatory pricing. On the other hand, firms can protect their short run and long run profits using non-pricing strategies.

BODY

THESIS

Predatory or limit pricing involves lowering prices by the incumbent firm to below its short-run profit-maximising price, i.e. $P < AC$. This would lead to the sacrificing of some short-term profits for the incumbent firm. But, limit pricing will dissuade potential new firms from entering the market as they will operate at a loss. But, this is only in the short run when the firm's profit is not protected. As long as its TR is at least able to cover all its total variable cost (TVC), the firm will continue production in the short run.

However, when potential new firms are kept out of the market, the incumbent firm will raise the price. Assuming there is no price war between the incumbent and the new firms, the incumbent firm will be able to protect its profits in the long run.

ANTI-THESIS

Non-pricing strategies can include advertising. The major aim of advertising is to sell the product. This can be achieved not only by informing the consumer of the product's existence and availability, but also by deliberately trying to persuade consumers to purchase the good. Successful advertising will not only increase demand, but also make the demand for the good or service less price elastic since it stresses the specific quantities of this product over its rivals'.

Product development can also be done. The major aims of product development are to produce a product that will sell well (i.e. one in high or potentially high demand) and that is different from rivals' products, which means that it has a relatively price inelastic demand due to lack of close substitutes. For firms providing a service, product development takes the form of attempting to provide a service which is better than, at least different from, that of rivals, e.g. personal service, late closing time, certain lines stocked.

Though the non-pricing strategies could cause a fall in profits in the short run due to the higher TC, we can expect the firm to earn more profits, and hence protect its profits, in the long run if the strategies are successful.

Governments could support the creation of monopolies by giving patents and licences to certain firms only. Patents granted by the government give the inventor the exclusive right to produce a commodity or to use a specific process to produce a commodity for a period of time. This protection is aimed at promoting invention and development of new ideas. In Singapore, patents can be filed with the Intellectual Property Office of Singapore (IPOS) which is a statutory board under the Ministry of Law. Such actions of the government can then allow for the existence of monopolies since such firms are given substantial market power. A government may give a licence to operate a certain service, for example, in radio and T.V. broadcasting, public transport. In so doing, the government prevents entry of new firms.

CONCLUSION

In summary, the strategy of lowering prices to deter entry of new firms may be used by a firm in an imperfect market structure to protect its profits. As there is a possibility that a price war can be ignited that will erode all firms' profits, the strategy of lowering prices could at best be a short-run measure.

Level	Descriptors
4	<ul style="list-style-type: none"> Thorough discussion of thesis and anti-thesis (two other strategies must be discussed) is evident Relevant diagrams are correctly drawn and well-explained
3	<ul style="list-style-type: none"> Thesis, e.g. predatory/limit pricing, and anti-thesis, i.e. non-pricing strategies such as product differentiation are sufficiently discussed Analysis is not consistently rigorous Diagram(s) is drawn and explained to add technical details to the analysis
2	<ul style="list-style-type: none"> Some understanding of pricing and non-pricing strategies is evident Diagrams are not drawn to illustrate the impact of these strategies on a firm's

	profits
1	Smattering answers that are descriptive and/or show weak understanding of the various strategies a firm can adopt to protect profits

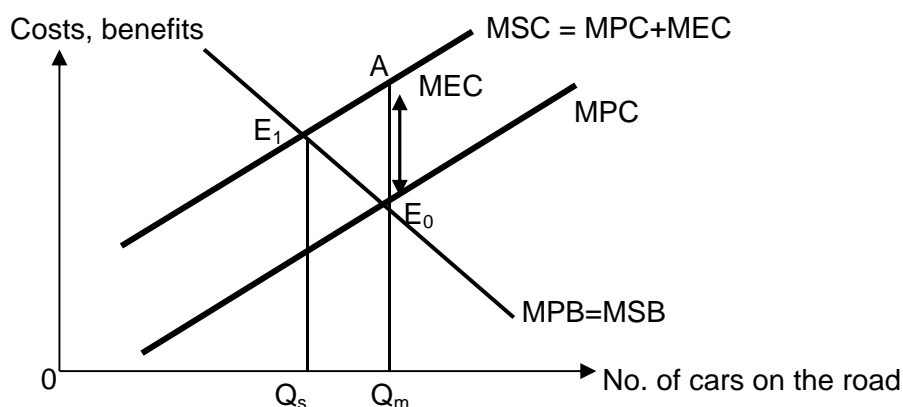
- 3 (a) Using a cost-benefit approach in the context of externalities, explain why the free market may not function efficiently. [10]
- (b) Discuss whether the Singapore government should prioritise the above problem over other sources of market failure. [15]

INTRODN

Given society's limited resources and unlimited wants, the free market through the demand and supply forces decide what, how much, how and for whom to produce. The free market functions efficiently when scarce resources are allocated such that production, consumption occur at the socially optimal level where there is no under or overproduction/consumption of goods and services. Hence no one can be made better off without someone being worse off.

BODY

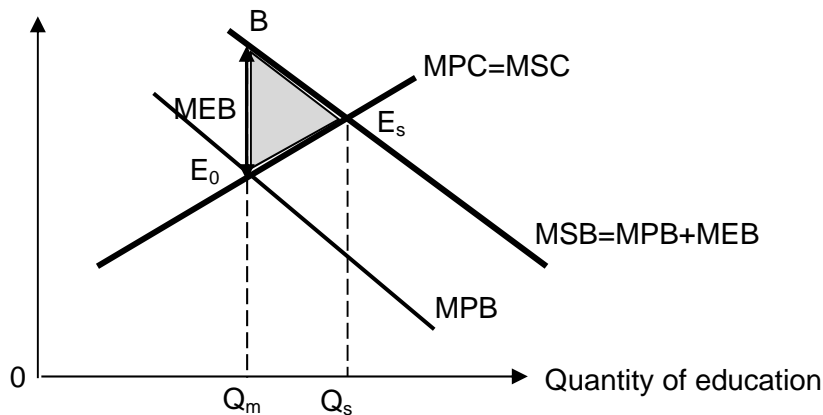
The demand or marginal private benefit (MPB) curve shows the price consumers are willing to pay for an additional unit of a good consumed. Using the example of car usage, the price is equal to MPB for example, the convenience one gets from an additional trip made. The supply or marginal private cost (MPC) curve shows the cost borne by the motorists for example, the petrol cost of making an additional trip.



- Car usage can give rise to negative externality, an external cost to third parties who are not directly involved in using the car, and they are not compensated for the harm inflicted on them. For example, traffic congestion generates noise and air pollution that adversely affect the quality of living for residents living near the congested roads. It may lead to long term health problems which incur medical costs.
- Due to presence of negative externalities, there is a divergence between MPC and MSC by the extent of MEC, hence true/ social cost is higher than private cost. In figure 1, MSC curve is derived by adding MEC to MPC.
- Assuming there is no external benefit, MPB therefore equals MSB. When left to the free market, the satisfaction-maximizing motorists only consider their own private benefit and cost, ignoring the external costs incurred in using their car. Hence they will use their cars/ road to where $MPB = MPC$ at point E_0 . Thus $0Q_m$ is the market equilibrium quantity of car usage whereas $0Q_s$ is the social optimum when $MSC = MSB$ at point E_1 where the true benefits equal the true cost of car usage.
- Thus the free market through the price mechanism will bring about a level of car usage $0Q_m$ that is higher than $0Q_s$, level which is deemed to be socially desirable. There is overusage of cars/ roads by $Q_s Q_m$ leading to an inefficient allocation of resources thus resulting in market failure.
- Positive externalities are third party benefits on someone not directly involved in the consumption and production of for example, educational services, and did not pay to enjoy the benefits, can occur thus resulting in partial market failure.

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Costs, benefits



- Market equilibrium amount of education services is $0Q_m$, given by the intersection at point E_0 where producer's MPC of production and patient's MPB in consumption meet.
- MPC comprises for example, the course fees, cost of textbooks while MPB would include better career prospects and earnings for the person who has consumed it. Its consumption/ production has the external benefit of increasing productivity of the Singapore workforce and boosting long term economic growth.
- However, as education is deemed a merit good that confers benefits to society, the market equilibrium level $0Q_m$ represents an underproduction/ consumption as the social optimum is at $0Q_s$. The underconsumption of $Q_s - Q_m$ brings about a total welfare loss of E_0BE_s .

Conclusion: Therefore, the free market through the price mechanism works efficiently only when there are no externalities and market imperfections.

Level	Descriptor
L3	<ul style="list-style-type: none"> Good, succinct explanation of how price mechanism works efficiently as an allocative device. Also, clear explanation of its inefficiency by linking to externalities Explained positive & negative externalities with good use of examples and diagrams
L2	<ul style="list-style-type: none"> Some explanation of efficient vs inefficient functioning of price mechanism Used externalities to explain inefficiency of price mechanism Evidence of some conceptual errors in analysis
L1	<ul style="list-style-type: none"> Cursory answer with limited understanding of efficient versus inefficient functioning of price mechanism Smattering of ideas about role of price mechanism

Part (b)

INTRODN

Define market failure: situation where resource allocation concerning what, how, how much and for whom to produce using the market mechanism fails to achieve efficiency in allocation of resources and equity among various income groups.

In Singapore, market failure can occur due to presence of externalities, public goods, income inequity, immobility of labour and market dominance.

BODY

As human capital is Singapore's only resource, the government believes that investment in human capital is an important source of economic growth. Huge emphasis is placed on education as a key part in its human resource development as evident in the government's annual budget where education takes second place after defence.

Secondly, the government is also aware of the benefits that education confers to society. An educated workforce would lead to higher levels of productivity to maintain Singapore's attractiveness to foreign investors. It promotes long term economic growth, employment as well as a higher standard of living.

At the workplace, firms and workers tend to underestimate the true benefits of training in raising their profits and productivity respectively. Thus Singapore government has substantially increased its subsidies for lifelong education and training to ensure the workers are equipped with the necessary skills for the knowledge-based economy due to fast changing technology and new production methods.

Singapore's Gini coefficient was 0.412 in 2013. Closer the Gini coefficient is to the value 1, greater the income inequality.

1. Globalization. (a) As Singapore becomes highly globalised, the emergence of new products and technology tends to favour the skilled labour. There is a rise in demand for their expertise leading to higher wages as they are more able to take advantage of the opportunities that globalization brings. (b) The rise of globalization caused Singapore to face more competition from low wage countries who have flooded the world market with their cheap, labour intensive exports which directly threaten the exports of developed countries like Singapore. As a result, low value added jobs are increasingly being outsourced to low wage countries while Singapore focuses on producing high value goods.

All the above developments have driven down the wages of displaced workers in the industries which have lost their comparative advantage as demand for their services falls. The result is a widening income gap between the less and more skilled.

- Income inequity results in inefficiency in the product market. This is because the price mechanism will allocate resources to produce goods and services for those with the ability to pay instead of responding to the needs of those with insufficient dollar votes. This difference in purchasing power will in therefore determine what is actually produced and for whom the goods are produced.
- If this social divide is left unattended, it may lead to social unrest which will impede production, employment and eventually economic growth of Singapore. Therefore, government has and continues to implement policies such as transfers through handouts, subsidies, making income taxes more progressive, increase social spending etc. The Workfare Income Supplement Scheme actually tops up the wages of the low income workers to help them meet the challenges of an increasingly competitive environment. Training programmes are also heavily subsidised to ensure its workforce have skills that match business needs.

As with all countries, Singapore government is also concerned with intervening in the provision of public goods.

- Public goods such as national defence possess the characteristics of non-rivalry and non-excludability which the market would completely fail to produce.
- In the free market, the non-rivalry and non-excludability nature causes the price mechanism to dictate there should be zero production of public goods. Thus there is

complete market failure. Under such situation, government will have to step in to provide public goods completely, financing the provision by taxes. For example, the Singapore government builds roads, put up traffic lights and sets up the Singapore Arm Forces (SAF).

Though these public goods are already well in place in Singapore, government has to constantly upgrade them to ensure the efficient working of the economy. It is also to ensure Singapore's survival in the world especially when it comes to national defence. By providing the essential public goods, government increases firms' confidence in the viability of future profits if they invest in Singapore.

Conclusion: Due to its detrimental effects, market failure is of great concern to the Singapore government. To ensure the efficient working of the economy, the government has to weigh the relative significance of the different types of market failure so as to decide which source(s) deserve greater priority amid rapid changes in a highly globalized world.

L3	For an answer that <ul style="list-style-type: none"> demonstrates ability to explain underlying reasons for 2 more cases of mkt failure assess the differing significance/ prioritisation of 3 forms of market failure justify clearly which form of market failure is a more serious issue today in S'pore consistently link to S'pore context [Can accept an excellent explanation of both positive & negative externalities + 2 nd type of market failure]
High L2	For an answer that displays <ul style="list-style-type: none"> good thorough knowledge of only 2 forms [include positive or negative externality] of market failure able to justify the significance/ prioritisation consistent link to Spore context
Low L2	For an answer that <ul style="list-style-type: none"> explains well at least 1 form of market failure regurgitation of content with little/ weak attempt at relative importance prioritisation lacks sufficient breadth some gaps/ conceptual errors in analysis
L1	<ul style="list-style-type: none"> Smattering of points with glaring conceptual errors No reference to their relative importance/ prioritisation Thrust of question has not been grasped

- 4 Singapore's labour productivity growth averaged about 1% per annum, a rate on par with that of other developed countries. Productivity gains have declined in recent years due to heavier reliance on labour inputs, especially inputs of foreign manpower.
Source: ESC Subcommittee Report on Fostering Inclusive Growth
- (a) Explain how the Singapore government can increase labour productivity in the economy. [8]
- (b) Discuss whether improving labour productivity is the most appropriate measure to improve the economic performance in Singapore. [17]

Part a

Introduction:

Labour productivity measures output per unit of labour input. Given the small and open nature of Singapore economy, labour productivity plays an important role in promoting sustained economic growth, low unemployment, low inflation and healthy balance of payment.

Body:

Singapore's labour force is aging as a result of its aging population. To mitigate the negative impact of an aging labour force on labour productivity growth, it is important for the government to continue to focus on life-long learning and re-training of older and less educated workers, as this will help the workers to remain relevant and productive especially when the economy is experiencing rapid structural changes. For example, The Ministry of Manpower (MOM) has embarked on a comprehensive 10-year Continuing Education and Training (CET) Masterplan to help workers acquire new skills.

Over the past decade, the Singapore economy grew by an average of 5% per annum. Singapore's productivity growth over the same period averaged about 1% per annum, a rate on par with that of other developed countries. Nonetheless, productivity gains have declined in recent years due to heavier reliance on labour inputs, especially inputs of foreign manpower. Hence, foreign worker levy has been raised so as to force the firms to reduce its reliance on cheap foreign workers and speed up its efforts to mechanise and innovate.

The Singapore government has implemented a new broad-based tax incentive called the Productivity and Innovation Credit (PIC). The PIC provides significant tax deductions for investments in a range of activities along the innovation value chain. One of activities is the investment in fixed capital goods such as spending on equipment and software aimed at automating process. Tax cuts will incentivise firms to increase investment in physical capital goods. This will help to improve labour productivity.

Conclusion:

With increasing globalisation, the Singapore government faces many challenges such as competition from other countries. The government needs to implement a combination of different measures to raise labour productivity in Singapore so as to improve economic performance.

Marking Scheme:

Level	Descriptors
L3	<ul style="list-style-type: none"> Answer shows good knowledge how government increase labour productivity in Singapore. Good examples are highlighted.

	<ul style="list-style-type: none"> • 2 well-elaborated examples would be sufficient to be awarded L3.
L2	<ul style="list-style-type: none"> • Answer shows some knowledge how government increase labour productivity in Singapore. • Examples are highlighted but not explained. • Underdeveloped explanation in some areas.
L1	<ul style="list-style-type: none"> • Smattering of a few valid points and briefly mentioned how government increase labour productivity in Singapore. • Little or no reference to the Singapore economy.

- (b) Discuss whether improving labour productivity is the most appropriate measure to improve the economic performance in Singapore. [17]

Introduction:

Improving labour productivity is considered a long-term strategy to improve economic performance. A strong economic performance is characterised by sustained economic growth, low inflation, low unemployment and a healthy balance of payments (BOP).

Body:

Thesis:

By raising labour productivity, AS and AD will rise in the long run. Raising labour productivity enables more output to be produced with the same amount of labour resources, hence increasing the country's productive capacity. This causes Singapore's AS curve to shift rightwards. At the same time, higher labour productivity in the long run helps to attract more foreign direct investment (FDI) to Singapore as firms are able to enjoy a higher expected rate of return for their investment. This enables the AD curve to shift rightwards as well. With a simultaneous shift of both AD and AS curve, higher potential output and employment is achieved.

Increase in labour productivity → lower cost of production → fall in general price level. This will reduce the prices of goods including price of exports. Since Singapore's exports is price elastic due to the availability of close substitutes produced by other countries, with a fall in price of exports, it will result in a more than proportionate increase in quantity demand for exports, ceteris paribus. There will be an increase in total revenue of exports. On the other hand, imports are now relatively more expensive as compared to the domestically produced substitutes due to the fall in cost-push inflation in Singapore. This will reduce the demand for imports, leading to a fall in total expenditure on imports. With an increase in net exports, ceteris paribus, it will lead to an improvement of Singapore's current account.

Anti-Thesis:

Firstly, the measure to raise labour productivity through promoting innovation is long-term, costly and has uncertain effects. The success of measures to invest in people depends on the willingness of the workers to undergo retraining and pick up new skills.

It is also more difficult to raise labour productivity in some sectors such as the retail and construction sectors where it is harder to replace labour with machinery. As such, firms in these sectors have been very dependent on labour-intensive method of production encouraged by the cheap foreign labour due to the liberal foreign labour policy in the past. However, with the introduction of foreign workers levy, firms are forced to cut down on the use of labour and use more capital-intensive method of production to cut down the cost of production. However, in the short run, it may not be possible to substitute machines for

labour and hence the use of more costly foreign workers will lead to higher cost of production resulting in higher cost-push inflation in Singapore. Higher inflation may not bode well for Singapore's export competitiveness and may affect Singapore's growth and employment.

Additionally, falling world national income due to the eurozone debt crisis would cause a decline in trade and demand for Singapore's exports. As export revenue falls, there would be a drop in net exports. Since $(X-M)$ constitutes 32% of Singapore's GDP, there would be a significant fall in AE and hence national income in Singapore. This would stifle economic growth and employment in the short run. In this case, boosting labour productivity alone would not be enough to boost exports and attract FDI with weak business expectations.

The Singapore's central bank could depreciate the Sing dollar (SGD). This means that it lowers the external value of SGD. When domestic currency depreciates, the foreign currency price of Singapore exports will fall. Assuming the demand for its exports is price elastic, this will lead to a more than proportionate increase in quantity demanded for exports, *ceteris paribus*, and hence a rise in its export earnings. Currency depreciation will also increase the domestic currency price of imports. If the demand for imports is price elastic, a rise in price will result in a more than proportionate fall in quantity demanded for imports, *ceteris paribus*, leading to a fall in import expenditure. Since Singapore's export earnings rise while its import expenditure falls, there will be a rise in its net exports $(X-M)$. This would improve current account. Assuming that capital account remains constant, overall, there would be an improvement in balance of payment.

Since net exports increase, AE also increases, *ceteris paribus*. The multiplier process continues until the economy reaches a new equilibrium national income at a higher level. Hence, there would be a multiple rise in national income and employment.

In addition, expansionary fiscal policy in the form of higher government spending (e.g. improving infrastructure) and Job Credit Scheme are also used to improve economic performance.

By raising government spending, AE would rise and there would be multiple rise in national income and employment as long as the economy is not operating near full employment. The Job Credit Scheme was implemented when Singapore was hit by the US subprime crisis. It aimed to encourage firms to retain its workers and prevent rising unemployment by providing them with a wage subsidy. This scheme was necessary as given the global economic slowdown, firms experienced a fall in the demand for their goods and were likely to retrench workers to cut cost and stay afloat.

Conclusion

In conclusion, raising labour productivity plays an important role in improving economic performance in Singapore in the long run given the characteristics of the Singapore economy where labour resource is scarce and exports take up a large proportion of our national income. However, it is only useful to the extent that the Singapore government also complements it with short-term policies such as exchange rate and fiscal policies to manage short-term macroeconomic economic fluctuations.

Marking Scheme:

Level	Descriptors
L4	<ul style="list-style-type: none"> • Answer shows excellent knowledge of how sustained economic growth, low unemployment, low inflation and healthy balance of payment can be achieved by increasing labour productivity in Singapore. • Candidates are able to justify that raising labour productivity may not be effective in helping Singapore to achieve these aims due to certain limitations. • Candidates are able to justify the importance of short term macroeconomic policies to complement policies to raise labour productivity in the context of Singapore. • Good use of examples.
L3	<ul style="list-style-type: none"> • Answer shows good knowledge of how sustained economic growth, low unemployment, low inflation and healthy balance of payment can be achieved by increasing labour productivity in Singapore. • Candidates attempt to justify that raising labour productivity may not be effective in helping Singapore to achieve these aims due to certain limitations. • Candidates attempt to justify the importance of short term macroeconomic policies to complement policies to raise labour productivity in the context of Singapore. • Some examples are highlighted.
L2	<ul style="list-style-type: none"> • Answer shows some knowledge of how sustained economic growth and full employment can be achieved by increasing labour productivity in Singapore. • Underdeveloped explanation in some areas. • Explanation has some reference to the AD-AS model and the Singapore economy.
L1	<ul style="list-style-type: none"> • Smattering of a few valid points and briefly mentioned how a rise in labour productivity affects an economy. • Briefly explain how a rise in labour productivity affects macro-goals. • Several errors and inconsistencies occur in the explanation. • Little or no reference to the Singapore economy.

- 5 China's growth slows to 7.6%, the slowest in three years.

Source: *The Straits Times*, 14 July 2012

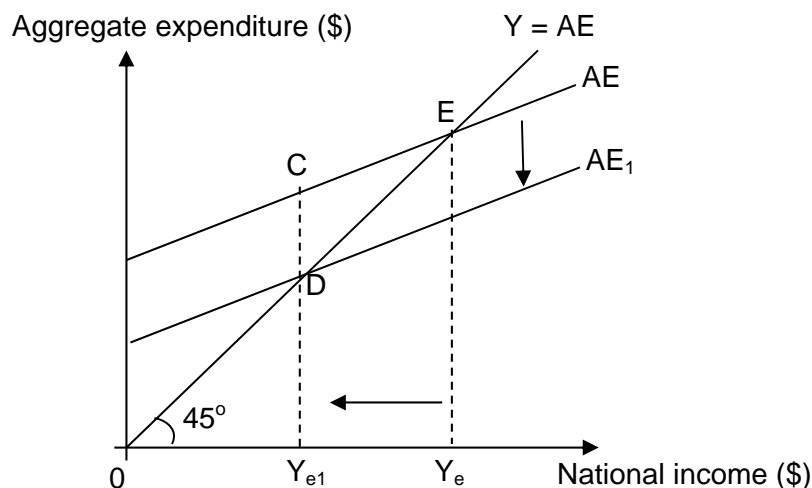
To what extent does the slower economic growth in China affect the economies of Singapore and the USA? [25]

Introduction

China has been experiencing phenomenal double digit growth for the past two decades, increasing its influence over global trade and providing the engine for growth for many economies when the industrialised economies stagnate.

Body

As China's growth slows and the economy's output increases at a slower rate, so does the income of the Chinese. Thus the demand for imports slows and that means that the other countries such as the USA and Singapore would see a smaller increase in demand for their goods and services by the Chinese. In the event that the slow down continues and causes pessimism in the economy, the Chinese consumers might increase their precautionary savings and thus reduce their spending. If that is the case, the export earnings of Singapore's and the USA's firms would fall, resulting in a fall in $(X-M)$, ceteris paribus. This worsens Singapore and the USA's current account, ceteris paribus. At the same time, their aggregate expenditure (AE) would also fall.



- When AE falls, the AE curve shifts downwards from AE to AE_1 . At Y_e , there is a surplus of goods and services. [Condensed k process] Hence, the economy reaches a new equilibrium national income at a lower level, i.e. Y_{e1} .

Evaluation:

I. Size of k

Extent of impact depends on size of k. Singapore's K is small at 1.3 due to high MPW arising from high MPS and MPM.

- The high MPS arises from compulsory savings through CPF contribution where 20% of gross income is saved. In addition, households save another proportion for precautionary and other purposes.
- The high MPM is due to Singapore's limited resources. Hence, we import virtually all final goods and services and raw materials.

Hence, the contractionary effect of the fall in net exports is limited. In contrast, the size of k of the US economy is much greater given their smaller leakage. Although tax rates in US are generally higher than that in Singapore, their greater self-sufficiency and consumerism

culture results in a much lower MPM and MPS, and thus a much greater multiplier. The fall in export revenue from China would have a greater impact on their national income.

That said, the impact of China's slowing down might not reduce US and Singapore's exports at all given the low income elasticity of demand by the Chinese for the 2 countries' goods.

II. income elasticity of demand

Ten years ago China could produce on its own because they were focusing on the low end of consumer goods without much technology. But now technology is a necessity because they are trying to go up the value-added chain. Given the exports to China from the USA and to a smaller extent, Singapore, are high technology goods, the demand for these goods might be income inelastic. Thus the slowing down of China might lead to a less than proportionate fall in demand for USA's and Singapore's exports. In fact, China's demand for some of the top exports from the USA such as airplanes and high-tech computer goods has remained relatively strong despite the slow-down.

With China's slower growth, investment flow from China into Singapore and the USA might fall, compromising BOP and long term growth.

- With the foreign reserves accumulated over the years, China has been increasing its investment in other countries through its state-owned companies. This source of investment in physical assets increases the quantity of resources in the recipient economy and together with the transfer of technology, increases the productive capacity of the economy. The slowing down of the Chinese economy if persistent might see a lot of these investments being halted as funds run low.
- This fall in direct investment from China could adversely affect the productive capacity causing a fall in AS as shown by the leftward shift of the AS curve from AS_0 to AS_1 if the fall in investment brings investment below the replacement rate.
- The fall in the ability of the economy to produce would reduce the long term growth of economies such as Singapore and the USA, as seen in the fall in the potential output.
- The fall in long-term capital flows would negatively impact the capital account and together with the fall in net exports, Singapore's and the USA's BOP is likely to deteriorate.

Evaluation:

The extent of the impact depends on:

I. China's importance as a source of investment

- Unlike Africa where domestic investment is limited and FDI from China provides the important physical assets that is necessary for long-term growth, Singapore and the USA are not as dependent on China for investment. Although the lack of domestic investment in Singapore means that Singapore is highly reliant on foreign sources of investment, FDI from China to Singapore only makes up a small proportion of total FDI in Singapore.

The slowing down of the Chinese economy could bring about lower prices of goods and services and commodities and thus lower world inflation which could instead boost growth in the other economies.

- The lower demand from China for goods such as cars and electronic products would reduce the overall global demand, thus resulting in cheaper final goods for the rest of the world.

- China, the second largest economy in the world, is also the largest importer of several major commodities such as copper, rubber and crude oil. A slowdown in growth when expected to persist, would result in firms cutting production due to lower expected rate of returns. This reduces the country's demand for resources and thus the global prices. The cheaper imported commodities would lower the cost of production of firms in the USA and Singapore, increasing their willingness and ability to produce.

Evaluation:

Extent of impact depends on:

- I. Reliance on imported commodities
 - Given that both Singapore and the USA are importers and reliant on these commodities and goods and services, the lower world prices would benefit both economies to a large extent.
 - Singapore's lack of natural resources means that she imports virtually everything. The USA, on the other hand, is rich with resources. But these resources are insufficient to satisfy domestic wants as well as the production for exports.

Conclusion

All in all, the direct effect of China's slowdown on the economies of Singapore and the USA is not likely to be significant as yet, partly because the growth rate of China although slowing down, remains relatively high at 7.8%.

Marking Scheme:

Level	Descriptors
5	<ul style="list-style-type: none"> • Thorough analysis on the impact of China's slower growth on the 2 economies of US and Singapore <ul style="list-style-type: none"> ◦ Although China is not a very significant trading partner of Singapore and US, students need to understand that China is the 2nd largest economy and its growth has impact on many economies and thus there might be significant secondary spill over effect on Singapore and US • Thorough evaluation of the extent of the impact with clear understanding of the factors affecting the extent of impact • Convincing stand that shows clearly the key considerations that affect how student came to the stand • Well-structured with clear flow • Excellent use of examples to show application e.g. link to clear characteristics and statistics
4	<ul style="list-style-type: none"> • Good analysis on the impact of China's slower growth on the 2 economies of US and Singapore <ul style="list-style-type: none"> ◦ No depth in analysis but with sound evaluation – cap at 14m • Good evaluation of the extent of the impact with clear understanding of the factors affecting the extent of impact • No consistent use of relevant examples to show application • Understand the difference between slower growth and negative growth • Some scope e.g. <ul style="list-style-type: none"> ◦ Covered BOP, both actual and potential growth but did not cover inflation ◦ covered BOP, actual growth and inflation but did not cover potential growth

3	<ul style="list-style-type: none"> • Some analysis on the impact of China's slower growth on the 2 economies of US and Singapore • Some evaluation of the extent of the impact <u>though not rigorously explained</u> • <i>Limited scope e.g. constrain discussion to BOP and actual growth</i>
2	<ul style="list-style-type: none"> • Some explanation, though weak, on the effects of China's slower growth on the macroeconomic goals of Singapore and US • No / vague attempts to discuss the extent of impact
1	<ul style="list-style-type: none"> • Smattering of points that shows weak understanding of question requirements • Poor content with several conceptual errors

- 6 (a) Using the principle of comparative advantage and real-world examples, explain why you would support free trade. [10]
- (b) 'The main concern of globalisation is that it brings about cyclical fluctuations to an economy's circular flow of income.' Discuss. [15]

Part (a): suggested answer

INTRODUCTION

Free trade occurs when a government does not impose tariffs and non tariff barriers to shield local industries from foreign competition.

According to the principle of comparative advantage, if countries specialise and trade according to the product in which they have lower opportunity cost in production, trade is mutually beneficial.

BODY

According to the theory of comparative advantage, even if one country has *absolute advantage* over others in the production of all goods, trade is still mutually beneficial as long as there is comparative advantage (CA) in the production of these goods. A country is said to have a CA in the production of a good if it can produce that commodity at a lower opportunity cost than another country, *i.e.* less amount of another good is given up in order to produce it.

Countries are now able to consume beyond their production possibility curve after specialisation and trade based on CA. Each combination lies outside the PPC. Before trade, it is a desirable but unattainable combination. However, after free trade based on comparative advantage, countries are now able to consume beyond what their own PPC.

These benefits are born out in reality where different countries have different factor endowments. Singapore's strength lies in her technological superiority due to the large amount of investments pumped into R&D. In contrast, due to her scarcity of land, lack of natural resources and a small population size, there is a lack of CA in the production of labour-intensive goods such as agricultural produce and textiles. This means the opportunity cost of diverting land to the production of agricultural goods is high given its limited land space. Hence, there is a benefit of importing these items at a cheaper price, e.g. rice and meat from land abundant countries like China, Thailand and Australia which can produce them at a lower opportunity cost.

Free trade helps to increase Singapore's export earnings where this initial injection into its circular flow of income means an immediate rise in its national output and income. This rise in income in turns activates the multiplier process, raising standard of living of Singaporeans.

In addition, free trade and specialisation increases efficiency and enables firms to enjoy economies of scale as they operate larger scale of production and also improve the quality of goods and services that consumers can get to enjoy. Hence, free trade increases the consumer welfare through access to cheaper and better-quality goods and services and a greater variety of goods and services.

Conclusion

Hence, I would support free trade as both theory and practice bears evidence that the world economy has grown tremendously when free trade is practised with opportunities for both poor and rich countries to experience a higher standard of living.

L 3	• Competent understanding of how free trade based on CA brings about mutually beneficial outcomes for all countries.
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	<ul style="list-style-type: none"> Explained successfully effects on output, consumption, standard of living. Real world examples are used.
L2	<ul style="list-style-type: none"> Good understanding of CA, pattern of trade and benefits of free trade for all countries. Explained sufficiently at least 2 clear benefits.eg output and consumption with links to comparative advantage and real world examples based on different factor endowments. Tables may or may not have been used.(e.g. alternative: $AE=Y$, AD/AS effects of trade).
L1	<ul style="list-style-type: none"> Smattering of points. Cursory understanding of the principle of comparative advantage and benefits of free trade.

(b) 'The main concern of globalisation is that it brings about cyclical fluctuations to an economy's circular flow of income.' Discuss. [15]

Suggested answer

Introduction

Globalisation is the process of continuing integration of the countries in the world where national markets become increasingly interlinked through greater mobility of goods and services, capital, labour and technological know-how amongst countries.

BODY

A main concern of globalisation is that it brings about cyclical fluctuations and instability to a country's circular flow of income.

A country's circular flow of income in a 2 sector economy refers to the income received by households in return for the output produced for firms. In an open economy, the national income calculated by the expenditure method may be represented as the summation of consumption, investment and government expenditure and net exports, i.e., the aggregate demand or expenditure (AE) on domestically produced goods and services. An injection or withdrawal into this circular flow of income can either expand or shrink its circular flow and hence its level of national income.

The initial equilibrium national income is OY_e . A fall in net exports causes a fall in the AE as illustrated by a downward shift of the aggregate expenditure curve from AE_0 to AE_1 , bringing about a new but lower equilibrium national income of OY_1 .

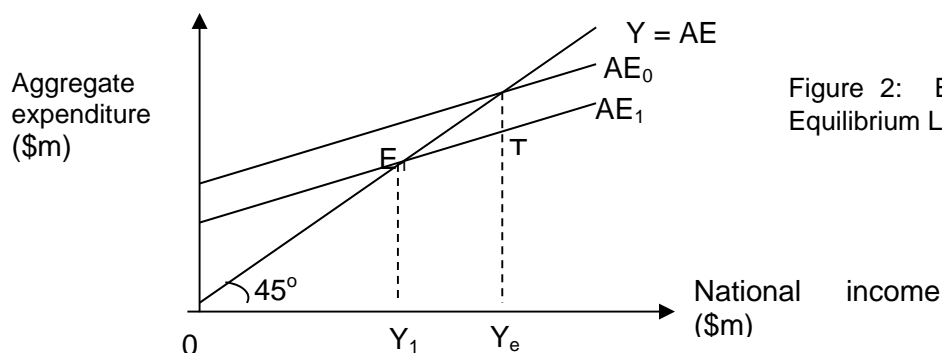


Figure 2: Effect of a Fall in AE on Equilibrium Level of National Income

Conversely, a period of robust growth in the world economy with huge injections into a country's circular flow of income can bring about rapid economic growth beyond full

employment level. This upswing cause inflationary pressure on general prices of goods and services for its citizens.

Hence, cyclical fluctuations is a main concern and likely to be the main concern especially for a very open economy as the more open an economy is to trade and capital flows, the more vulnerable it will be to changes in the level of economic activity in the rest of the world. This increased interdependence results in greater risk and severity of an economic instability.

However, it is less of a concern for countries such as China which have a huge domestic market that it can turn inwards to sustain growth and escape somewhat any severe impact of global recession. Effective domestic growth policies can be used to counter cyclical fluctuations arising from external demand

Anti-thesis

Another *equally* real concern is the re-structuring and unemployment woes that a country has to undergo as it opens itself to the challenges of globalisation.

This applies especially to more developed countries where globalisation can transfer jobs from developed countries to less developed countries. Globalization levels the playing field, in a way that makes it hard for developed countries to compete. With increased globalisation, there is the emergence of lower-cost producers such as China and India and increased competition. Hence, industries in Singapore that compete directly with the exports of these countries will be forced to shut down or relocate to lower-cost countries, resulting in unemployment.

Nevertheless, structural unemployment may be argued to be an inevitable adjustment for an economy if it seeks to benefit from the trade opportunities presented by globalisation and is thus not the most critical concern.

With globalization, countries could import cheap unskilled workers from abroad to replace expensive local workers. Thus the unskilled workers could suffer from stagnant or falling earnings. On the other hand, the supply of skilled workers is more limited. With globalization, there is increase demand for skilled workers and this will push up wages.

However, if countries can implement effective policies to narrow the income gap through, for example, progressive tax system and redistribute the income through subsidies on education and other basic necessities, this would not be a key concern compared to the unpredictable and severe recession that can hit a country when the whole world goes into a recession.

CONCLUSION

Hence, we can see globalisation poses some challenges to every country. There is no denying that cyclical fluctuations will always be expected and as long as a country is very open to trade, it is one of the main concerns especially if it is severe and prolonged. However, a country should also look at other important concerns such as sustainable growth and environmental issues and equity.

L4	(i) Thorough explanation and discussion of globalisation impacts on cyclical fluctuations and at least 2 other valid concerns. (ii) Good use of diagrams and examples. (iii) Evaluation and insightful conclusion based on clear criteria.
L3	(i) Good explanation and discussion of globalisation impacts of cyclical fluctuations on a country's circular flow with reference to the $AE=Y$ model and multiplier effects. (ii) Good explanation at least 2 other valid concerns.

	(iii) Some evaluation of which may be a more critical concern with clear criteria. (iv) Good use of diagrams
L2	(i) Some explanation of globalisation impacts of cyclical fluctuations on a country's circular flow of income with reference to the $AE=Y$ or AD/AS model. (ii) Some recognition and sufficient explanation of at least 1 other valid concern. (iii) Brief mention of whether cyclical fluctuation is the main concern and why (iii) Diagrams may not have been used.
L1	Smattering of points. cursory understanding of globalisation and cyclical fluctuations on the circular flow of income as a concern. Some mention of other concerns.