Raffles Institution

ECONOMICS

Higher 1

(Syllabus 8819)

Suggested Answer Outlines and
Examiner's Comments for the
Year 6 Preliminary Examinations 2016

Overall Comments:
Most candidates were not able to complete either the case study section or the essay section. Candidates are reminded to manage their time well.

Case Study Question 1:
The Market for Onions and other Agricultural Products

(a) Referring to Figure 1, compare the trend in price of onions to that of onion production in India from 2009 to 2014. [2]

- Similarity: Both increased from 2009 to 2014. [1]
- Difference: prices remained relatively constant from 2008 to 2012 before rising sharply while production was generally rising gradually in the same period. OR % increase in prices higher compared to production between 2009 to 2014. [1]

(b) Identify the economic relationship between onions and cabbages. [1]

- Onions and cabbages are substitutes. [1]

(c) With the help of a demand and supply diagram, account for the "dramatic price rises" of onions in recent months as described in Extract 1. [5]

- Decrease in supply due to unusual weather and hoarding. [1m]
- Increase in demand due to income increase or population increase [1m]
- Shortage at original price. Explanation of the market adjustment process and how the market price increases [1m]
- Extent of price rise exaggerated by price inelastic demand and/or supply for onions [1m]
- Demand for onions is likely to be price inelastic because S-HIT and/or supply of onions is likely to be price inelastic because MIST [1]
- No diagram or incorrect diagram max 3m?
- No elasticity concepts max 4m

(d) According to Extract 1, the Indian government prefers to slash import duties on onions rather than providing subsidies on onions.

Comment on the advantages of this approach. [6]

- Explain how and why slashing import duties on onions and providing subsidies on onions will lead to a fall in the market price of onions: benefitting consumers; Lower domestic prices: improves welfare of consumers as onion is now more affordable and raises material SOL.
- Advantage(s) of slashing import duties on onions rather than providing subsidies on onions include
- Slashing import duties reduce deadweight loss while providing subsidies on onions increase deadweight loss
- Subsidies must come from government tax revenue or past savings, if any. Taxes are disincentives to work, save and invest
- Government need not spend its tax revenue on subsidies and could use the revenue more usefully on other areas e.g. education, infrastructure, etc.
- Disadvantage(s) of slashing import duties on onions rather than providing subsidies on onions include
- Hurt domestic farmers of onions
- Government doesn't get to collect tax from imports anymore
- Evaluation: CLAPPSE
    - Suggests alternative policies that overcome limitations of both the above policies and explains why

- Suggests what should be the priority of the government and explains why

Mark Scheme:

	Knowledge, Application, Understanding, Analysis	
L1	• Serious conceptual errors • Listing throughout • Lack of economic framework • No reference to case material • One-sided answer	**1 - 3**
L2	• Applies economic concepts and framework • Balanced answer with reference to case material	**4 - 5**
E	• CLAPPSE	**1**

(e) Discuss the view that the Indian government should prioritise increase in food production (Extract 1) over consideration for the environment (Extract 2). [8]

Must increase food production:

- Extract 1, "Weak growth and inflation"…."wreaks havoc on household's budgets": many poor households exist and these poverty stricken households humans lives are at stake since the need for food is a basic need, resulting in inelastic demand for food. Moreover, with the high inflation, food prices need to be kept low for poor Indian households whose budgets are badly affected by rising food prices. Total expenditure increases as PED less than 1
- Ext 2, "in many instances, harm to natural ecological systems is either unnecessary (as all or part of the ecosystem could be maintained without significant losses in food output)…". Farmers need not have to suffer a fall in output when they use ecologically friendly methods of farming

Must focus on environment:

- Ext 2, "…a wholly or partially intact ecosystem could provide more benefits in terms of local or regional food production than cultivating an extra parcel of marginal cropland". Food production will be higher if the environment is at least partially looked after. It is short sighted to focus just on short term feeding the masses as that is not economically and sustainable in the long term
- Ext 2, "agricultural intensification …..has contributed to dramatic gains in food yields….increasing evidence suggests that intensive farming systems, if not properly managed, can cause serious environmental harm.." Technological advancement in farming, government push and policies for farming industry will mean the problem of low yield is not so crucial.
- In the long term, demand for food may not increase so much as population growth slows down in India

Knowledge, Application, Understanding, Analysis		
L1	• Serious conceptual errors • Listing throughout • Lack of economic framework • No reference to case material • One-sided answer	**1 - 3**
L2	• Applies economic concepts and framework but not very well done • Lop-sided answer with little reference to case material • No explicit use of economics max 4 • Focused only on externality concept max 4	**4 - 5**
L3	• Applies economic concepts and framework with depth • Balanced answer with reference to case material	**6-7**
E	• CLAPPSE	**1**

(f) Extract 3 mentions various ways in which governments might respond to the groundwater crisis.

Evaluate the options available to the Indian government as possible responses to the groundwater crisis. [8]

- Challenges include:
  - Not enough water
  - Polluted water

- Supply side policies to solve or reduce adverse effects include
  - environmental taxation
    - this will reduce consumption and cut down on wastage
    - problems include time lag, enforcement and the amount of tax to implement
  - pollution permits
    - this will decrease the number of people tapping into the limited availability of groundwater
    - problems include enforcement, who to get the permits to tap into the water

- Demand side policies include:
  - subsidies for innovation into curtailing usage
    - R&D needs a lot of funding and results are often uncertain. Government subsidies will increase the private sector's investment into R&D
    - problems include limited availability of government funds, uncertainty of results
  - subsidies to encourage firms to recycle water
    - this will reduce the amount of groundwater used up
    - problems include the acceptance of people to using recycled water and the enforcement of the policy

Knowledge, Application, Understanding, Analysis		
L1	• Serious conceptual errors • Listing throughout • Lack of economic framework • No reference to case material • One-sided answer	**1 - 3**
L2	• Applies economic concepts and framework but not very well done • Lop-sided answer with little reference to case material • No explicit use of economics max 4	**4 - 5**
L3	• Applies economic concepts and framework with depth • Balanced answer with reference to case material • Refers to India's situation	**6-7**
E	• CLAPPSE	**1**

Case Study Question 2:
Crude Oil Prices, Trade Sanctions, Russia and The European Union

(a) (i) With reference to Figure 2, describe the trend in Russia's trade balance between August 2014 and August 2015. **[2]**

Russia's trade balance was in a surplus **[1]** and the surplus became smaller **[1]** between August 2014 and August 2015.

(ii) Explain why a "fall in crude oil prices will reduce Russian's export revenue significantly" (Extract 4). **[2]**

- The demand for oil is likely to be price inelastic in demand because oil has few close substitutes. Hence, a decrease in oil prices leads to a less than proportionate decrease in quantity demanded for oil, resulting in a fall in revenue from the sale of oil. [1]
- Oil is a major export of Russia (as seen from Extract 5 that "Russia is highly dependent on oil revenues"), hence the fall in total revenue from the sale of oil will lead to a fall in Russian's export revenue. [1]

Any lapses in explanation, maximum 1 mark.

(b) Explain one possible effect of a weaker Ruble on "the buying power of the Russian consumer" (Extract 5). **[2]**

One well-explained possible effect will gain max 2 marks.

- Assuming constant money income, a weaker ruble reduces "the buying power of the Russian consumer" because a weaker ruble means that more rubles need to be used to buy a unit of foreign currency which leads to an increase in the price of imported goods and services increase in terms of rubles.
- Assuming constant money income, a weaker ruble reduces "the buying power of the Russian consumer" because a weaker ruble means that more rubles need to be used to buy a unit of foreign currency which increases the cost of producing domestically produced goods and services because the price of imported raw materials in terms of Ruble increases (rise in cost-push inflation). An increase in the cost of production causes the aggregate supply curve to fall and this is reflected by an upward shift of the AS curve which in turn leads to an increase in the general price level when firms pass on the higher cost of production to consumers in the form of higher prices. Hence, Russians' ability to buy domestically produced goods and services fall.
- A weaker ruble means that fewer foreign currencies need to be used to buy a unit of ruble which leads to an increase in export price competitiveness which will in turn lead to an increase in the quantity demanded for exports. Hence, the demand for workers working in export oriented industries will increase because demand for labour is a derived demand and more workers will be hired to produce the increase in exports. The increase in demand for labour in the export oriented industries will lead to an increase in wage rates, ceteris paribus. Hence, the buying power of workers producing exports may increase with a weaker ruble.

(c) According to Extract 6, "FDI into Russia has collapsed over the last few years". **[6]**

With the aid of an AD/AS diagram, explain the likely impact of a slump in inward foreign direct investment (FDI) on Russia's macroeconomic performance in both the short run

and the long run.

- Clarify what is meant by a slump in inward FDI in Russia
    - A fall in FDI into Russia may be a result of foreign firms setting up fewer new factories in Russia. Fewer new factories mean less capital accumulation and hence, investment in Russia will fall, ceteris paribus.
    - Or a fall in FDI into Russia may be a result of foreign firms acquiring fewer companies and pouring in less funds into companies in Russia, hence these companies have less funds to buy machinery and equipment and less ability to set up new factories. Fewer machinery, equipment and new factories mean less capital accumulation and hence, investment in Russia will fall, ceteris paribus.
- Using the AD/AS diagram, the macroeconomic effects the question is concerned with are the variables in the X-axis and Y-axis:
    - Actual economic growth and inflation in the short run
    - Potential economic growth and inflation in the long run
- Short run effects on actual economic growth and inflation in Russia:
    - In the short run, fall in investments (I) leads to a fall in autonomous AD because I is a component of AD. Hence real NY will fall because there is an accumulation of unplanned inventories. RNY will also fall more than proportionately because according to the multiplier process, one person spending less is another person's loss in income and a fall in income leads to a fall in spending, hence there will be many rounds of fall in induced consumption. The multiplier process eventually stops when the cumulative fall in induced withdrawals equal the initial fall in investment. When the AD curve shifts leftwards from AD1 to AD2, real NY will fall from Y1 to Y2 (Diagram 1). The fall in real NY is also accompanied by a fall in general price level from P1 to P2 because the leftward shift of the AD curve will cause the Russian economy to operate further away from the full employment level which reduces stress on existing resources and hence, reduces the additional costs of production and enable producers to pass on the lower costs of production to consumers in the form of lower prices. According to the case evidence, Russia is experiencing a slowdown down in economic growth and high inflation. Hence, the fall in inward FDI in Russia will aggravate the slowdown in actual economic growth but dampen inflation in the short run.
- Long run effects:
    - Option 1:
        - In the long run, the fall in investment will lead to a fall in capital accumulation and in turn a fall in capital stock and hence a fall in productive capacity which in turn causes AS to fall and this is reflected by the AS curve shifting to the left from AS1 to AS2 and the full employment level falls from Yf1 to Yf2 accompanied by a rise in general price level from P2 to P3, ceteris paribus. Assuming Russia was initially experiencing potential economic growth, the fall in investment will lead to a slowdown in potential economic growth and a rise in inflation in the long run.

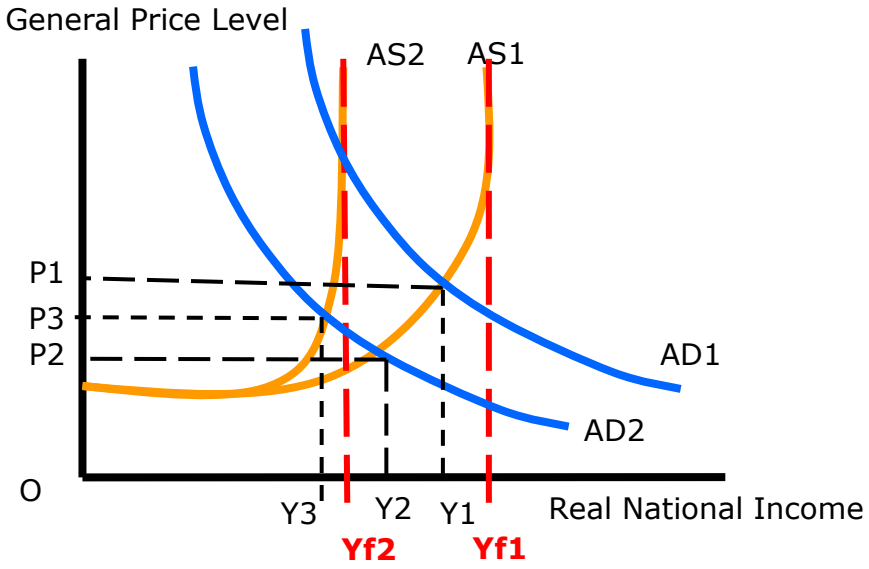


Diagram 1

Knowledge, Application, Understanding, Analysis		
L1	▪ Only SR effect(s) or only LR effect(s) ▪ Listing throughout, without any explanation on how and why at all throughout the answer ▪ Journalistic style of explanation without any application of economics framework at all	***1 - 3***
L2	▪ Analyses both SR and LR effects ▪ Applies economics framework in explanation ▪ Provides rigour in explanation; little gaps in analysis (step-by-step explanation) ▪ No diagram, maximum 4 marks	***4 - 6***

(d) (i) With reference to Figure 3, describe the trend in EU general price level between 2007 and 2013. **[2]**

- EU general price level is increasing [1] at a decreasing rate [1].

(d) (ii) Explain why there might be a cause for concern if inflation falls beneath the target rate set by the European Central Bank (Figure 3 and Extract 4). **[2]**

There might be a cause for concern if inflation rate falls beneath the target rate set by the European Central Bank because if the inflation rate continues to fall, the EU will enter a period of deflation (which means falling prices). Falling prices due to a fall in AD is a cause for concern because when consumers expect prices to continue to fall in the future, consumers will put off buying goods and services now and the fall in autonomous C will lead to a further fall in AD because C is a component of AD and in turn, a further fall in real NY, hence a further fall in actual economic growth. In addition, when firms expect sales to fall in the future, firms will also invest less and this will lead to a further fall in AD because I is a component of AD and real NY and in turn actual economic growth will fall even further.

(e) To what extent will economic sanctions on Russia hurt EU member states? [6]

- Thesis:
  - Explain why economic sanction will hurt EU member states.
    - Economics sanctions on Russia has led to a decrease in EU member states' exports to Russia (Extract 7 states that "the West responded with economic sanctions, restricting exports to Russia").
    - The fall in exports to Russia will lead to a fall in Russia's balance of trade surplus in the current account in the balance of payments, ceteris paribus.
    - Can link fall in X to AD and the other macroeconomic goals like actual economic growth, inflation and unemployment.
- Anti-thesis/Evaluation: CLAPPSE
  - Comment on the extent of negative impact on EU member states.
    - Extract 7 states that "some EU countries (like Germany whose exports to Russia is the highest in the EU) will feel the impact more than others."
    - However, it has also been mentioned that most countries were able to offset the decrease in exports to Russia because EU's X to Russia as a percentage of total X is still "quite limited for most European countries and more importantly still, European businesses have been able to find new markets for their products, both within Europe and beyond". This means that the decrease in net exports in most EU countries remains insignificant.
    - Link back to EU's BOT in the current account in the BOP and/or link back to AD and actual economic growth, unemployment and inflation.
  - Conclusion: Make a reasoned stand
    - The economic sanctions have a negative impact on EU's balance of payments, actual growth and employment levels, ceteris paribus. However, this is assuming ceteris paribus assumption. The extent to which EU is negatively affected by the economic sanctions depends on the relative importance Russia is as an export destination to each EU country and the ability of the EU countries in diversifying their export markets.

Knowledge, Application, Understanding, Analysis		
L1	▪ Answer that is one-sided EITHER on benefits OR costs. ▪ A theoretical regurgitation of macro-goals with no reference to case study at all. ▪ Journalistic style of writing throughout without any application of economics framework ▪ Glaring conceptual errors throughout	***1 –3***
L2	▪ Answer shows balance (TAS) in the discussion of how EU will be affected in terms of the macro goal(s) by the economic sanctions on Russia. ▪ Points are well-developed with examples specific to the case study material. ▪ Answer must have a reasoned conclusion to score max of 6m.	***4 – 6***

(f) Discuss whether Russia should consider reducing its interest rates to solve its macroeconomic problems. [8]

- Clarify Russia's macro-economic problems: Identify at least 2. For e.g.
  - Falling oil prices have led to export revenue has led to a decrease in X-M. Given

that oil forms a significant component of the country's net exports ("hydrocarbons contribute over two-thirds of exports"). This decrease in X-M is likely to be very significant. This would cause a decrease in AD, and decreasing real national income.
    - High and rising inflation (Extract 5: "Inflation is currently at 10% but is expected to accelerate rapidly)
    - Extract 5 states that "Russia is in the middle of a currency crisis" which means that the ruble is depreciating rapidly.

- Russia should hence adopt expansionary demand management policies like reducing its interest rates. Reducing interest rates is a contractionary monetary policy aimed at increasing autonomous C and I and in turn AD because C and I are components of AD (demand-side policy).
    - How it works and pros of interest rates policy:
        - Explain how and why it works to achieve its intended aims of increasing actual economic growth
            - E.g. A fall in interest rates will reduce the cost of borrowing especially on big-ticket items and hence, autonomous C will increase, ceteris paribus.
            - E.g. According to the MEI theory, the number of investment projects that yield a rate of return that is at least equal to or higher than the costs of borrowing will increase and hence, firms will have more incentive to invest and I will increase, ceteris paribus.
    - Limitations/cons of interest rates policy:
        - Russia should consider unintended consequences (impact on other macro goals)
            - A fall in Russia's interest rates will also worsen the currency crisis (Extract 5) because when Russia's interest rates fall relative to interest rates overseas, this will lead to "hot money" flowing out of Russia as financial investors seek higher returns overseas. "Hot money" outflow will lead to an increase in supply of rubles in the exchange rate market which will lead to a depreciation of rubles.
            - A fall in Russia's interest rates relative to other countries interests will worsen capital inflow that already happening in the economy, worsening her financial account and BOP position. This is likely to be significant for Russia, who already has "to use part of its foreign exchange reserves to shore up government agencies".
            - An increase in AD, triggered by the decrease in interest rates may lead to worsening inflation because the increase in AD will move the economy closer to full employment and this will exert more pressure on existing scarce resources as firms compete for and bid up the prices of these resources which in turn will lead to an increase in costs of producing additional units of output, hence the general price level will increase as firms pass on the higher costs of production to consumers in the form of higher prices. As mentioned in the Extract, Russia's inflation rates are already high at 10% and is expected to accelerate. The fall in interest rates will aggravate existing inflationary pressures in Russia (Extract 5).
            - Interest elasticity of MEI
            - "Animal spirits" in Russia

- Evaluation: CLAPPSE
    - At least one other alternative policy: (for example expansionary fiscal policy, supply-side policies like R&D to find a new area of comparative advantage, trade policies like diversification, ER policy to prevent further depreciation of the currency)
        - Explain how the alternative policy works to reduce the problems in Russia
        - Explain the pros and cons of the policy
    - Reasoned conclusion. E.g.

- Combination of policies
- Feasibility of restoring ties with the EU and US or mending political differences with the EU and US

Knowledge, Application, Understanding, Analysis		
L1	• Totally journalistic style of writing throughout; Answer contains no economic framework at all • No application of examples relevant to the case at all	**1– 3**
L2	There is both balanced, scope and depth in the answer: • Identifies at least 2 macroeconomic problems that Russia was facing • Answer is balanced (TAS structure) and uses relevant economic framework to explain how and why reducing interest rates can solve Russia macroeconomic problems and evaluates the effectiveness, desirability and feasibility of using interest rates to solve these problems • Rigour in explaining how and why • Good application of case data in evaluating the interest rates policy	**4 - 6**
Evaluation		
E	CLAPPSE • Alternative policies • A well-reasoned conclusion	**1 - 2**

[Total:30]

Essays:

Question 3

The 2013 transboundary haze in Singapore costs the economy US$1 billion a week. The Singapore government decided to fine oil palm plantation owners and paper pulp companies causing pollution. The government has also issued advisories on the use of N95 masks.

a. Explain why the government needs to intervene in the following markets:
i) Oil palm or paper pulp market;
ii) N95 masks market. [10]
b. Discuss which policies are likely to be appropriate in reducing air pollution in Singapore. [15]

<u>Suggested content</u>

Introduction
State that the government needs to intervene in free markets when unregulated free markets fail to achieve an efficient allocation of resources and/or fails to achieve social goals.

Body
Part a i)
Define externalities:
An externality occurs when some of the costs of benefits associated with the production or consumption of a good 'spills over' onto third parties, that is, to parties other than the immediate buyer and seller. The private decision-maker does not take into account these external costs and/or benefits.

In the case of the Indonesian oil palm and paper pulp companies, they generate negative externalities in production. To produce oil palm and paper pulp, in the pursuit of self-interest, these firms only consider their own private costs (e.g. electricity, manpower costs) and the (free market) price they receive for their product and ignore the external costs. They do not care that the forest fires they started cause the

general public, including those that lives in Singapore and Malaysia, to breathe in the air pollutants (haze particles) from the forest fires. Short term exposure (i.e. continuous exposure to unhealthy daily average PSI levels over a period of a few days) to these air pollutants can cause respiratory symptoms and aggravate existing heart or lung disease. Exposure to the haze particles may also cause irritation of the eyes, nose and throat in healthy individuals. As such, these external costs create a divergence between the marginal private costs (MPC) and marginal social costs (MSC) of producing the oil palm and paper pulp.

MSC = MPC + MEC
When MEC > 0, then MSC > MPC

Figure 1 shows the market demand and market supply curves for oil palm. The supply curve for chemicals reflects the marginal private cost (MPC) of producing oil palm. The production of oil palm generates negative externalities. Hence, the presence of marginal external costs (MEC) in production leads to a divergence between the marginal private costs (MPC) and marginal social costs (MSC) curves.

The marginal external costs (MEC) increase as output increases. At low levels of oil palm output, the haze particle produced is negligible. As more forests are burned to produce more oil palm, so will the amount of haze particles and the costs of pollution rise sharply. Singaporeans must worry about breathing in haze particles affecting their health and buy more air purifiers and switch on their air conditioners.

The demand curve for oil palm is represented by the marginal private benefit curve (MPB) and it shows the additional satisfaction/benefit from each additional unit of oil palm consumed. In this instance, we assume that it is also the social benefit curve for the whole of society, i.e. MPB = MSB (marginal social benefit).

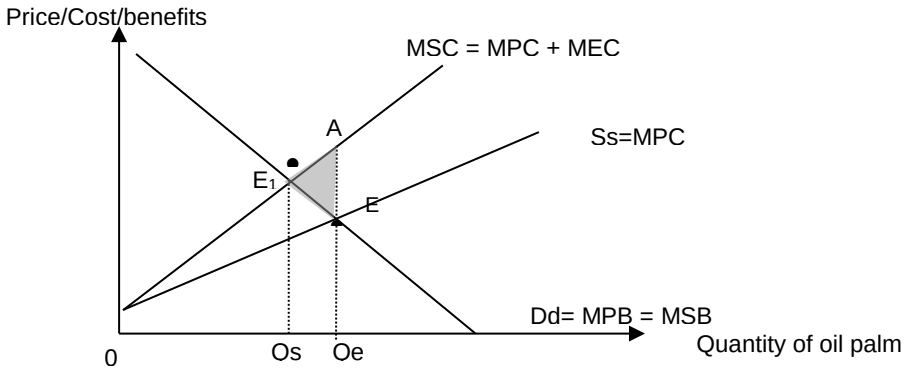


Figure 1: Negative Extenality in Production

Assuming perfect competition, the free market equilibrium output of the industry is OQ_e units where **MPC of production (or supply curve) =MPB of consumption (or demand curve).** However, at this output OQ_e, MSC (AQ_e) exceeds the MSB of oil palm, given by the height of the demand curve (EQ_e). Thus, output Q_e is **allocatively inefficient**.

The **socially ideal output level** is at OQ_s units, where **MSC of production = MSB of consumption**. The free market equilibrium results in an overproduction of the good by Q_eQ_s units. The welfare loss to society, also known as the deadweight loss (measured in monetary terms), equals the sum of the excess of MSC over MSB for the amount of good overproduced. The deadweight loss is represented by area AEE_1 as the amount of resources used to produce an additional Q_eQ_s units exceed the gain in benefit from consuming Q_eQ_s from society's point of view.

Money value of benefits derived from output QeQs	= Area E_1EQsQe
Money value of resources used in producing output QeQs	= Area E_1AQeQs
Deadweight loss in producing output QeQs	= Area AEE_1

The free market equilibrium is thus not allocatively efficient when externalities are present. If the government intervenes and reduce the output of oil palm, society saves more in social cost than it loses in social benefit.

Part a ii)
The government issued advisories on N95 masks as the masks are considered as merit goods. The defining characteristic of merit goods is that merit goods are **good or beneficial to consumers** themselves but due to **imperfect information** regarding the marginal private benefits from consuming the good, consumers undervalue and underestimate their personal benefits of these masks **(personal well-being argument)** and consume too little of them.

The argument concerning imperfect information is an important one. Parents with relatively poor educational qualifications may be unaware of long-term problems that their children might suffer from inhaling haze particles. Because of the lack of knowledge of the private benefits of masks, individuals themselves will tend to underestimate the long term gains from them too.

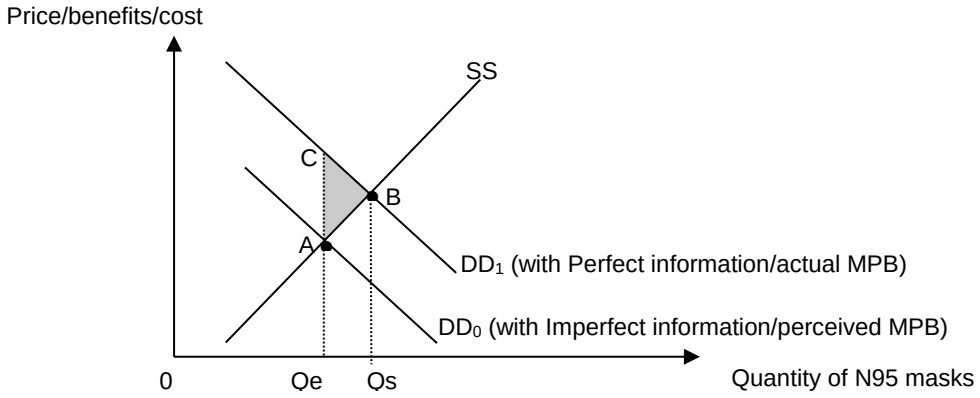


Figure 2: Market for N95 Masks

According to figure 2, free market equilibrium (under imperfect information, DD_0) occurs at output Qe. However, the socially optimal level of consumption and production is at output OQs (with perfect information). Hence, with imperfect information, too little resources will be diverted to the consumption and production of N95 masks. A welfare cost represented by area ABC arises from imperfect information as the benefits lost in not consuming QeQs number of masks exceeds the resources saved in not producing QeQs masks.

Hence, when left to the free market, merit goods will be under-consumed and under-provided from society's point of view. In other words, too little resources are allocated to the production and consumption of the merit goods from society's point of view. Market failure results as there is allocative inefficiency under an unregulated free market system. Thus, government intervention may be necessary to bring about allocative efficiency.

Knowledge, Application, Understanding, Analysis		
L1	• Totally journalistic style of writing throughout; Answer contains no economic framework at all • No application of examples relevant to the case at all	**1 - 5**
L2	• Answer is lacking in some aspect: • Addresses the question but has tendency to be superficial and lacks depth	**6 - 8**
L3	There is both balanced, scope and depth in the answer: • Answer is balanced (TAS structure) and uses relevant economic framework to	**9 - 11**

	explain how and why … • Rigour in explaining how and why • Good examples	
Evaluation		
E	CLAPPSE • E.g. Alternative policies • A well-reasoned conclusion	**1 - 4**

Part b)

Introduction

The Singapore government can influence the price of goods produced by factories that spew pollutants into the air. Alternatively, it can fix the quantity of goods or even influence the behavior of producers and consumers ("People respond to incentives") with respect to the good or the pollution directly itself. In addition, the government could also influence the price and or usage of vehicles which also generate pollution. The solution to domestic sources of pollution is varied and the most effective ones try to target the source of the pollution. With regard to transboundary haze problem, the solution must involve co-operation among the countries involved.

i. Impose tax on firms that pollute the air from their factories during production or tax the usage of vehicles that generate pollution

In the case of negative production externalities, the government can levy an indirect tax (e.g. specific tax) equivalent to the monetary value of the marginal external cost at the socially optimal output level, OQs. This is a monetary valuation of the harm imposed on society due to the negative externality, brought about by production per unit of output produced by the firms. Through this indirect tax, the government attempts to compel the polluting firm to internalize the external costs. For example, in Figure 8 below, a specific tax of E1B which is equal to marginal external cost (MEC) at the socially optimal output level (OQs) will raise the firm's marginal private cost of production, shifting it from MPC to MPC + Tax, i.e. MSC. This leads to an after-tax equilibrium quantity of Qs units, given by the intersection of MPC + tax and the Marginal Private Benefit (MPB) curve. The tax has resulted in a lower equilibrium quantity, which is also the optimal quantity. At this equilibrium, Marginal Social Benefit (MSB) equals Marginal Social Cost (MSC). The over-allocation of resources is corrected as there will not be over-production of the good. This eliminates the deadweight loss (AE1E) arising from over-production prior to the imposition of the tax. Allocative efficiency is achieved.

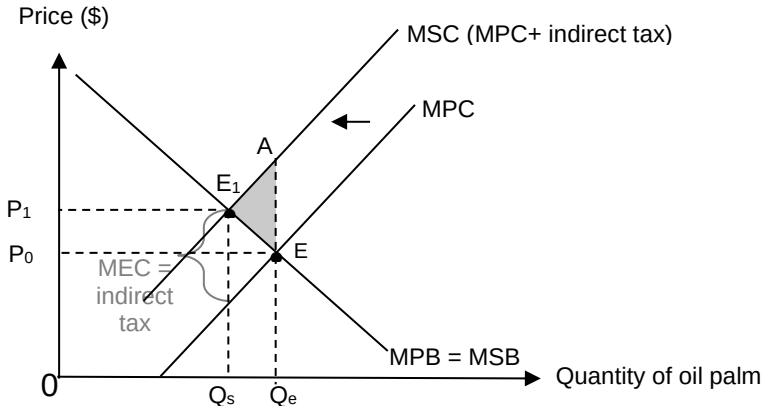


Figure 3: Correcting Negative Production Externality

For example, in Figure 3 above, a specific tax of E1B which is equal to marginal external cost (MEC) at OQs will raise the firms' marginal private cost, shifting it from MPC to MPC + Tax, i.e. MSC. This leads to an after-tax equilibrium quantity of 0Qs units, given by the intersection of MPC + tax and the Marginal Private Benefit (MPB) curve. The tax has resulted in a lower equilibrium quantity, which is also the optimal quantity. This is because the indirect tax has caused the price that consumers actually pay to increase from P0 to P1 hence consumers' ability to buy falls from Qe to Qs. The indirect tax has also caused the price that producers actually retain after passing the tax to the government to fall from P0 to P2 hence quantity supplied falls from Qe to Qs. At this equilibrium, Marginal Social Benefit (MSB)

equals Marginal Social Cost (MSC). The over-allocation of resources is corrected as there will not be over-production. This eliminates the deadweight loss (AE1E) arising from over-production prior to the imposition of the tax. Allocative efficiency is achieved at the output of OQs.

Taxation provides revenue for the government to finance other projects such as social and community development projects. For example, projects to help the poor Indonesian farmers whose livelihood is affected by less production from the big oil palm producers.

Although the imposition of a tax on the production of a good distorts market forces, the indirect tax still allows the market to continue to operate according to market forces and reach a state of equilibrium. Hence, consumer sovereignty is still present. [This is unlike a quota which displaces the price mechanism and which does not allow the consumer to choose their consumption level.]

Limitations of taxation

The policy requires accurate valuation of the external cost which in practice is difficult. An over-valuation of external cost means that output is reduced to a level that is below social optimum. An under-valuation of external cost implies that although output is lowered by the tax, it is not enough to bring output down to the socially optimal level. With the lack of precision, society's welfare cannot be maximized. In addition, it is very difficult for the Singapore government to tax or fine Indonesian firms unless the Indonesian government is also

The ability of using tax in reducing road usage is constrained by the price elasticity of demand. If demand is highly price inelastic, to achieve the desired reduction in output, a higher tax will be required as compared to a good with relatively price elastic demand. For instance, a small tax imposed on usage of the roads will have little effect in reducing pollution on the roads if there are no viable substitutes of transport.

ii. Regulate factories that pollute the air in their production or implement rules that restrict the usage of vehicles that generate pollution

Government legislation and regulation is a powerful tool to correct market failures arising from the presence of significant **externalities and information failure (merit and demerit goods)**. The market provides the good but government regulation **through laws and administrative rules** provides the process of **controlling its production or consumption activities.**

For instance, the government can pass legislation to prohibit or regulate behaviour that imposes an external cost. Laws can be used to force potential polluters to bear the costs of more proper disposal of air pollutants. Such action forces potential offenders, under the threat of legal action, to bear all the costs associated with their production. For example, the Singapore government initiated a new set of legislation including the compulsory installation of catalytic converters in vehicles' engines that reduce the amount of pollutants released into the atmosphere. In addition, Singapore is vigilant in getting vehicles owners to go for inspections to ensure that their vehicles meet toxic emissions guidelines. Vehicle owners that were unable to meet the standards were punished.

Limitations of regulation – e.g. costs of monitoring can be high

iii. Implement tradable permits that firms need to have to allow their factories to pollute the air in their production or the COE system that restrict the ownership of vehicles that generate pollution when these vehicles are used on the roads

Tradable permits are permits to pollute usually issued to firms by a government or an international body and that can be traded (bought and sold) in a market.

In the case of air pollutants, each firm is granted by the government a particular number of permits (or rights) to discharge a defined quantity of pollutants into the atmosphere over a period of time. The permits to pollute can be bought and sold among interested firms, with the price of permits being determined by the market demand and supply. If a firm can produce its product by emitting a lower level of pollutants than the level set by permits issued to it, it can sell its unused permits in the market. If a firm needs to emit more pollutants than the level set by its permits, it can buy more permits in the market, failing which it will face heavy penalties.

In effect, this system penalizes the buyer (of permits) for polluting, and rewards the seller (of the permits) for having reduced emissions. There are currently several trading systems in place with the largest being in the European Union. The carbon market makes up the bulk of these and is growing in popularity. There is none in the ASEAN region yet.

Merits / Advantages of a tradable permit system (any 1 advantage suffices)

- By setting a limit or a cap on the level of permissible pollution, a socially optimal level of emissions can be targeted and a reduction in overall pollution level is highly possible. By imposing a quota on the level of emission, the government can achieve its desired level much more effectively than using taxes and subsidies. Every year, the government can progressively reduce the number of permits issued according to the magnitude of the current pollution problem. As a result, total pollution in the affected industry will reduce over time. This is unlike a tax on pollution, which requires an accurate valuation of the external costs.

- Tradable Permits System is more cost-effective than regulation.
  If firms can cut back on their emissions at a relatively low cost (low abatement cost), it is in their interests to do so and sell their excess permits for a profit. Firms that can only reduce pollution at high cost (high abatement cost) will be forced to buy additional permits. In this way, most of the greenhouse gases are reduced by firms that can reduce emissions using relatively low cost procedures. This allows pollution to be reduced at a lower cost to society than using regulation.

- The system encourages the promotion of cleaner and greener technology to reduce pollution as it provides firms with the incentives to reduce their emissions further since they can sell any their excess permits for a price.

Demerits / Disadvantages (any 1 suffices)

- Tradable permits, like pollution taxes, pose problems of implementation. Some of these involve technical difficulties, high cost in measuring pollution, and high cost in setting up a mechanism of monitoring and verifying actual emissions as noted below.

- If the government is too generous in the number of permits issued, the desired level of emissions level will not be achieved. Tradable permits also require the government to determine not only the amount of pollutants emitted but also to set a maximum level for each type of pollutant for which permits will be distributed to the polluting firms. The latter task involves having technical information on how much of each pollutant is acceptable from an environmental point of view which is often debatable. Up to today, there is much controversy among scientists over the extent of harm done by each type of pollutant. It will also not lead to efficient level of emissions unless the efficient level of total emissions is known to start with but it is difficult to measure the emissions level.

- Fines for non-compliance will need to be high enough to ensure that firms do not try to cheat the system; otherwise, firms may attempt to deceive the regulators rather than pay for the permits. The greater the number of firms, the more difficult it is to enforce the policy, and hence the higher the number of regulators needed to be employed to enforce the policy. This will result in high administration costs.

- A method must be found to distribute permits to polluting firms in a fair way. Issues of political favouritism may come into play as governments give preferential treatment to their supporters.

Conclusion

Domestic sources of air pollution are easier to tackle that transboundary haze. The Singapore government has to use diplomacy and try to work with the other neigbouring governments to try to reduce the burning. Perhaps only improvement in technology will help mitigate the adverse effects of the transboundary haze problem.

Knowledge, Application, Understanding, Analysis		
L1	• Totally journalistic style of writing throughout; Answer contains no economic framework at all • No application of examples relevant to the case at all	**1 - 5**
L2	• Answer is lacking in some aspect: • Addresses the question but has tendency to be superficial and lacks depth	**6 - 8**
L3	There is both balanced, scope and depth in the answer: • Answer is balanced (TAS structure) and uses relevant economic framework to explain how and why … • Rigour in explaining how and why • Good examples	**9 - 11**
Evaluation		
E	CLAPPSE • E.g. Alternative policies • A well-reasoned conclusion	**1 - 4**

4 **Brexit may be part of the first wave of anti-globalisation. The message from Brexit and similar movements is clear: economic growth may have to take a back seat while political leaders work to address the anger of those who believe that globalisation has left them behind. Many countries are considering adopting anti-globalisation measures such as import tariffs, tighter rules governing inward foreign direct investment and stricter immigration policies.** **[10]**

Source: https://www.theguardian.com/commentisfree/2016/jul/28

(a) **Explain how countries can benefit from specialization and trade.** **[10]**

(b) **Discuss whether there is room for anti-globalisation measures to be adopted to manage the challenges of globalisation.** **[15]**

Part a:

- Clarify what is meant by specialization and trade
- Explain the benefits of specialization and trade by using the numerical illustration of the theory of CA

Approach 1: Numercial or Diagrammatic Illustration of Theory of Comparative Advantage

Specialisation means that each country devotes all or a greater proportion of its resources to the good in which it is specializing in. Can refer to full specialization or partial specialization. Trade here refers to exchange of goods and services between countries.

The **Theory of Comparative Advantage** states that, under certain conditions, **countries would gain from specialisation and trade** if there are differences in the opportunity costs of producing specific goods among them. They benefit from specializing and exporting products in which they incur a **lower opportunity costs in producing** and from importing products in which they incur a higher opportunity costs in producing. These gains include

- an improvement in global allocation of resources, that is improvement in global productive efficiency which will result in greater global output and in turn,
- greater global consumption. If the terms of trade are mutually beneficial, each country can consume outside of its PPC.

The theory of CA is based on the following assumptions which include no transport costs or trade restrictions, 2 countries – China and USA, 2 goods - wheat and cloth, labour is the only factor of production, and labour is perfectly mobile within a country but perfectly immobile between countries and constant opportunity costs of production i.e. constant returns to scale between sectors within the country.

Numerical illustration

Table 1: Production pattern before specialization

	Wheat	**Cloth**
USA	100	60
China	5	10
World Total	105	70

Assume each country devotes half her resource to the production of each good. Also assume USA has *absolute advantage* over China in the production of both goods because it is able to produce more of both goods with the same amount of resources. However, the margin of advantage differs in the two products. As reflected in table 2, the US can produce 20 times more wheat than the China, but only 6 times more for cloth. The US gives up less cloth to produce one unit of wheat but gives up more wheat to produce one unit of cloth, thus the US incurs a lower opportunity costs in producing wheat and a higher opportunity costs in producing cloth. The US hence is relatively more efficient in wheat production and has a comparative advantage in wheat production. On the other hand, China is said to incur a lower opportunity costs in cloth production because to produce one unit of cloth, China gives up less wheat. Hence China is relatively more efficient in producing cloth and thus has a comparative advantage in cloth production.

Table 2: The opportunity cost of producing (wheat & cloth production within a country)

USA	1 unit of Wheat to 0.6 unit of Cloth	1 unit of Cloth to 1.67 unit of Wheat
China	1 unit of wheat to 2 unit of Cloth	1 unit of cloth to 0.5 unit of Wheat

Table 3: Production pattern with specialization

	Wheat	**Cloth**
USA (Partial specialization, transfer 1/10 of resources from cloth to wheat)	110	54
China (Complete Specialization)	0	20
World Total	110	74

Assuming that USA decides to transfer 1/10 of her resources from cloth production to wheat production and then trade with China, who will completely specialise, the production with specialisation pattern will be as shown in Table 3. When both countries specialize in producing the good that they incur a lower opportunity costs in producing, this will lead to an improvement in global allocation of resources and hence, global productive efficiency will increase which can result in greater global output and in turn, greater global consumption. Comparing tables 1 and 3, world output has increased from 105 units to 110 units for wheat and world output has increased from 70 units to 74 units for cloth.

Table 4: Consumption after trade

	Wheat	**Cloth**
USA	100	64
China	10	10
World Total	110	74

If the terms of trade are mutually beneficial, each country can consume more and outside of its PPC, hence achieving a higher material standard of living. For the terms of trade to be mutually beneficial, it should lie between the opportunity costs of production between countries because USA will only gain if USA exports wheat to China for more than 0.6 units of cloth while China will only gain if China imports wheat for less than 2.0 units of cloth.

Assuming the terms of trade or rate of exchange is 1 wheat: 1 cloth in the international market, the US can export 10 units of wheat to China in exchange for 10 units of imported cloth. Assuming the consumption level after trade is as Table 4 above, it can be seen that USA gains 4 units of cloth while China gains 5 units of wheat after specialization and trade. Both countries benefit from a higher level of total output consumed, thus allowing them to consume beyond their production possibility curve (PPC).

OR Diagrammatic illustration

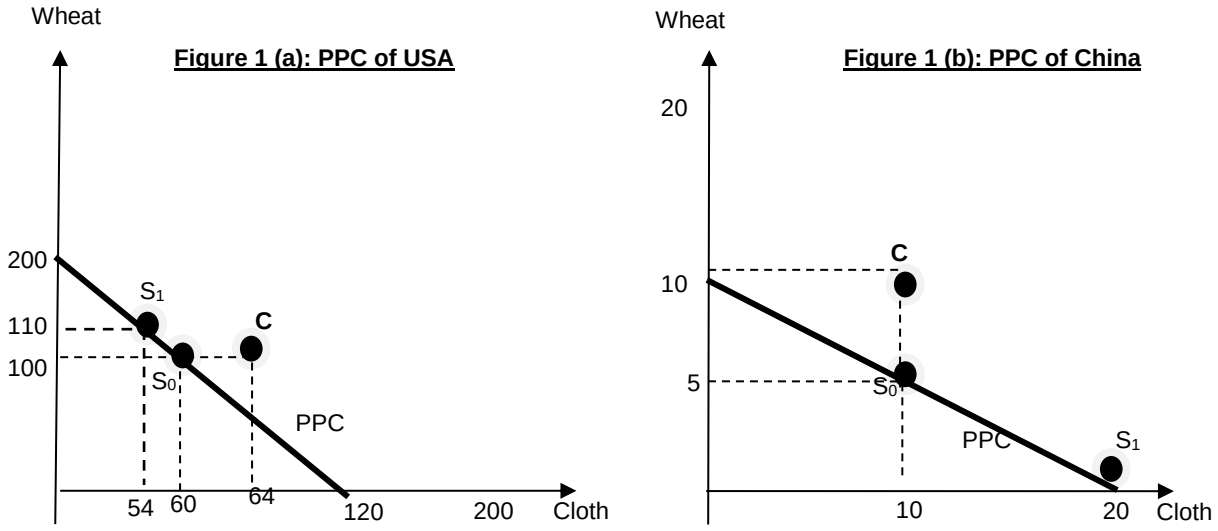


Figure 1 (a): PPC of USA

Figure 1 (b): PPC of China

Figure 1a shows the PPC of USA. Assume that by devoting all its resources to the production of either wheat or cloth, USA can produce maximum 200 units of wheat or maximum 120 units of cloth. Assume that initially USA devotes half of its resources to wheat production and half of its resources to cloth production and assume international trade does not take place, USA will produce and consume 100 units of wheat and 60 units of cloth.

Figure 1b shows the PPC of China. Assume that by devoting all its resources to the production of either wheat or cloth, China can produce maximum 10 units of wheat or maximum 20 units of cloth. Assume that initially China devotes half of its resources to wheat production and half of its resources to cloth production and assume international trade does not take place, China will produce and consume 5 units of wheat and 10 units of cloth.

Without specialisation and trade, each country's consumption is limited by its ability to produce so that consumption occurs at a point like S_0 in each country.

With free trade, if each country specialises (partially or completely) in producing the good that they incur a lower opportunity costs in producing, China will specialise completely in cloth and produce at S1. This is because China's opportunity costs of producing cloth is lower than USA because China gives up less wheat to produce cloth than USA (China gives up 0.5 units of wheat to produce 1 unit of cloth while USA gives up 5/3 units of wheat to produce 1 unit of cloth). USA incurs a lower opportunity cost in wheat production than China and hence will specialise in wheat production (USA gives up 0.6 units of cloth to produce 1 unit of wheat while China gives up 2 units of cloth to produce 1 unit of wheat). USA

will specialise partially in wheat because USA is assumed to be more efficient in producing both goods in absolute terms but relatively more efficient in producing wheat and produce at S_1.

Assuming terms of trade between them is at an exchange ratio of 1 unit of wheat: 1 unit of cloth and 10 units of wheat are exchanged for 10 units of cloth, both countries will be better off, consuming more at point C, beyond its PPC, hence enjoying a higher material standard of living than before specialisation and trade. Both countries will gain from trade as long as the terms of trade is mutually beneficial for both countries which means that the exchange ratio must lie in between the two countries' opportunity costs of producing the wheat because USA will only benefit from exporting wheat to China if USA can sell wheat to China at a price higher than USA's opportunity cost of producing wheat and China will only benefit from importing wheat from USA if China buys wheat from USA at a price lower than China's opportunity cost of producing wheat. Likewise cloth. For each country, specialising and trading makes it possible to consume more of both goods at C, relative to a no-trade point like S_0 on the PPC.

Without trade, production and consumption can only occur at any point on the PPC for each country. With trade, while production will still be constrained by the PPC. Consumption is, however, possible at previously unattainable levels. This means it is possible for countries to achieve higher levels of consumer welfare – higher material standard of living.

Or Approach 2:

Explain the benefits of specialization and the benefits of trade without referring to the theory of CA. Ideas can include:

- Specialisation
    - Internal economies of scale (IEOS) → cost savings arising from large scale production. For instance, by operating on a larger scale of production made possible by exporting to external markets, domestic firms can have greater bargaining power and obtain bigger discounts when purchasing factors of production and hence, they are able to exploit more fully available marketing economies of scale. When firms enjoy cost savings arising from large scale production, they may pass on the lower costs to domestic consumers who might be able to buy the goods at lower prices.
- And trade
    - More choices/Greater variety/Product differentiation
    - Bigger markets (external sources of growth overcome the limits arising from domestic sources of growth)
    - Country can achieve higher actual economic growth by exporting to other countries instead of relying only on its domestic market; lower unemployment; reduce BOP deficit on the current account
    - Country can achieve lower cost-push inflation and costs of living by having access to cheaper imported raw materials and imported goods and services
    - Domestic firms become more cost-efficient or less X-inefficient because of increased competition with the entry when foreign producers enter the domestic market; domestic firms have less monopoly power → less allocatively inefficient
    - Trade creation occurs when production shifts from relatively less efficient domestic producers to relatively more efficient foreign producers
        - Increase in society's welfare because
            - → production effect: Resources are diverted away from relatively less efficient domestic producers to relatively more efficient foreign producers according to the theory of comparative advantage
            - → consumption effect: Consumers in the importing country gain they buy the good at a lower price and hence have the ability to consume more of the good which leads to a gain in consumer surplus
- Candidates may end up explaining only the benefits of specialization or benefits of trade but not both. If candidates do not address all aspects of the question, they will only gain maximum L2 marks.

Knowledge, Application, Understanding, Analysis

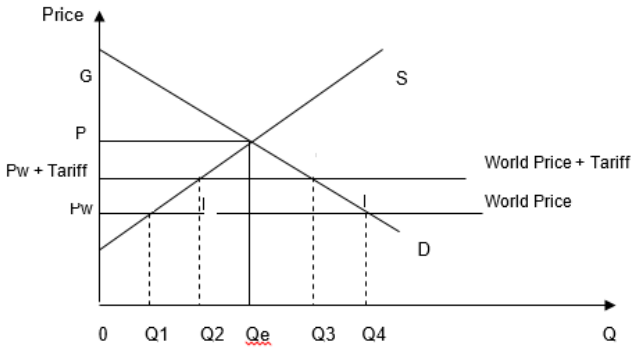
L1	• Totally journalistic style of writing throughout; Answer contains no economic framework at all • No application of examples relevant to the case at all	1 - 4
L2	• Answer is lacking in some aspect • Addresses the question but has tendency to be superficial and lacks depth	5 - 7
L3	There is both balanced, scope and depth in the answer: • Answer is balanced (TAS structure) and uses relevant economic framework to explain how and why … • Rigour in explaining how and why • Good examples	8 - 10

Part b:

- Clarify what globalization is: 3 aspects
    - Define globalization
        - Facilitated by improvement in technology and breaking down of artificial barriers, there is an
            - increase in international trade of goods and services
            - increase in international flow of foreign direct investment/technology
            - increase in international movement of labour
    - Despite the obvious economic benefits that globalization bring about to countries around the world, the adverse consequences associated with globalization have been used by governments to justify the use of anti-globalization policies such as import tariffs, restriction on capital and labour flows. Hence, there is room for the use of anti-globalisation measures in managing the challenges of globalisation.

- Clarify one challenge of globalisation
    - Globalization (trade) can lead to worsening of current account from trade imbalances. This is because (any 1 point suffices): For example
        - Given the differences in factor endowment between countries, the opportunity cost of producing labour-intensive goods and services in developing countries (abundance of low-skilled workers hence low wages) is lower than developed countries. Based on the Theory of Comparative Advantage (TCA), developing countries should specialise in the production of labour-intensive goods and services and trade with developed countries. With freer trade as a result of globalization, the cheaper labour-intensive goods and services from developing countries will be imported into developed countries → increase in M expenditure in developed countries → ceteris paribus, fall in NX hence worsening of CA.
        - Or Unfair trade practices such as undervaluation of currency and government subsidies to boost export price competitiveness worsens global trade imbalances. The economic consequence is worsened in the midst of weak global recovery on the economic growth rates of countries on the receiving end of unfair trade practices.
        - Or explain why structural unemployment can increase.
        - Or explain why infant industries cannot develop

- Explain why there is room to adopt anti-globalisation measures.
    - Anti-globalization policies can address the adverse consequences of globalization mentioned above:
        - Trade barriers (***import tariffs, quotas*** etc.)
            - E.g. Tariff restrictions are custom duties or taxes imposed on imports of goods or services by the government.



- The objective of the tariff is to raise the price of the imports as shown in the diagram above. Given that the price of imports is higher, the quantity demanded of imports falls from (Q4-Q1) to (Q3-Q2). This will cause a fall in M expenditure and hence improves the CA position.
- Or The objective of the tariff is to raise the price of the imports as shown in the diagram above which compensates for the unfair trade practices used by exporting countries to boost the price competitiveness of their exports since the price of exports into countries imposing tariffs will no longer be more competitive compared to domestically-produced goods and services.
- Or the import tariff also reduces structural unemployment in import-substituting industries since the quantity demanded of domestically-produced goods and services will increase from Q1 to Q2 because when the price increases from Pw to Pw + tariff, domestic producers will find previously unprofitable units now profitable at the higher price. Hence, when domestic production increases, more workers will be hired and structural unemployment will fall.

- Quotas can also be used to correct CA position by restricting physical quantities or values of goods imported into a country. The effects are similar to that of a tariff.
- Subsidising import-substituting industries to help them lower their costs of production. Infant industries, hopefully, develop comparative advantage over time and compete on more equal footing with foreign competitors → boosts future export price competitiveness → increase X hence NX ceteris paribus → increases AD and real NY over time.

- Anti-globalization policies are limited in effectiveness or may not be desirable in addressing the above adverse consequences of freer trade:
  - Use of trade barriers such as tariff brings about allocative inefficient use of resources due the deadweight loss incurred by society in the form of the underproduction of imports that society derives more benefit than the cost incurred. With reference to the tariff diagram, identify the areas of the deadweight loss and explain why the areas represent the deadweight loss.
  - Possible trade retaliations should countries decide to impose trade barriers
    - Brought about by 'beggar-thy-neighbour' effect on other countries hence this may trigger potential trade wars (mutual retaliations) among countries. This may bring about fall in global trade volume and hence will put countries in a 'lose-lose' situation since no one is better off as a result of retaliations in the long run → fall in global NX → fall in global AD hence slower (or negative) global economic growth which will hinder global economic recovery further

- Suggest and explain another challenge of globalisation and an anti-globalisation measure to address the challenge and explain how and why they work to manage the challenge of globalization
  - Adverse consequences of globalization (FDI) include (any 1 point):
    - Structural unemployment due to trade imbalances and outflow of FDI (any one point):
      - Since FDIs in the form of multinational companies (MNCs) operate on large scale hence are able to reap internal economics of scale (iEOS) in the form of

technical economics of scale etc., they can lower the cost of production and translate this in the form of lower prices of goods and services. These cheaper import prices will result in import-substitution effect in the importing country as domestic consumers switch from domestically-produced goods and services to cheaper imported goods and services (assuming they are perfect substitutes).

- This increases the quantity demanded of imports and thus causes a fall in demand for domestically-produced goods and services. This may lead to structural unemployment in import-substitution industries when these industries decline and workers are subsequently laid-off. Due to skills mismatch, they may not be able to find alternative employment opportunities.

- Due to the footloose nature of MNCs, freer flow of capital across nation borders means that MNCs can relocate to another country with lower cost of production (COP) hence representing outflow of FDI from the original recipient country.
  - Similarly, when MNCs relocate to another country, there will be structural unemployment in the original recipient country. For example, when the labour-intensive manufacturing industry in Singapore relocated to nearby countries with lower COP in the late 1980s, Singapore saw periodic structural unemployment due to skills mismatch between workers and employment opportunities available in the job market.

- Anti-globalization policies can address the adverse consequences of globalization mentioned above:
  - Reaction against FDIs
    - The government can impose a quota and issue fewer licenses to MNCs to operate in the host country or provide subsidies to domestic firms to help the domestic firms lower their costs of production so that they can survive and compete with the MNCs.
    - ***Capital controls*** can be employed to prevent FDIs from withdrawing capital within a given time period so as to curb capital outflow that comes together with FDI relocating to other countries. For example, China implemented restrictions on the amount of capital repatriation outflow by FDIs so as to raise the barriers to exit during relocation of investments to other countries.
      - This will allow the country to prevent unforeseen structural unemployment resulting from the abrupt relocation of FDIs by engaging in relevant supply-side policies such as skills upgrading and retraining so as to increase structural mobility of the labour force??? Isn't this a supply side policy?

      **Note: knowledge of this point is not assumed so candidates are not required to elaborate using specific government policies such as capital controls. However, candidates should demonstrate understanding that governments will impose regulations and legislations on FDIs so as to minimize the ease of relocation to other countries.*

- Anti-globalization policies are limited in effectiveness or may not be desirable in addressing the above adverse consequences of FDI:
  - Reactions against FDIs will also mean that this makes the country less attractive in the eyes of potential investors
    - This will reduce inflow of FDIs in the long run should the strict regulations on capital flow be placed on FDIs → worsen FA in the long run should inflow of FDIs < outflow of FDIs
    - Fall in inward FDIs may also lead to fewer new factories being set up or MNCs pouring in less funds into the host countries and hence, less funds available to buy machinery and equipment, which will lead to a fall in investments
      - Fall in I → fall in AD because I is a component of AD →via reverse multiplier process, this will have a more than proportionate fall on real NY, ceteris paribus → assuming that there was growth initially, this will

lead to slower economic growth → there will be increase in cyclical unemployment as well since labour is a derived demand → fall in both current material and non-material standard of living in the

- Fall in I may cause a fall in capital accumulation hence there may be a fall in productive capacity in the long run → fall in potential economic growth → fall in future material and non-material SOL

- Adverse consequences of globalization (labour) include (any 1 point suffices):
  - Increased income inequality
    - Industries with comparative advantage will experience increase in demand for their goods and services. This translates to an increase in demand for labour in these industries causing wages to increase. Non-comparative advantage sunset industries will lag behind or experience a fall in demand for their goods and services. This results in lower wage or slower wage growth in these industries. Structural unemployment may also arise when the workers who are retrenched lack the skills to gain employment in another sector. Hence, income inequality worsens. This creates inequitable outcomes which create social tension. For example, wages in financial, pharmaceutical sectors have been rising at faster rates relative to non-comparative advantage industries. This is in fact one of the main concerns of populace hence it is politically unpopular to encourage freer flow of labour as this will exert greater downward pressure on wages given the increase in labour supply from immigration.

- Anti-globalization policies can address the adverse consequences of globalization mentioned above:
  - Policies favouring domestic firms and workers (any 1 specific policy)
    - Anti-immigration policies
      - Restrictions imposed to limit the inflow of labour (both skilled and unskilled) in the form of ***labour quota*** so as to protect domestic workers (especially low-skilled workers) from lower wage rates due to the increase of labour supply → reduces income inequality. This also eases the political and social pressure brought about by inflow of immigrants in recent years in many developed countries → reduces social unrest
      - ***Foreign worker levy*** can also be used to increase the cost of hiring foreign labour so as to reduce to wage differential between domestic labour and foreign labour. This will due likelihood of firms hiring foreign labour solely on the basis of cost of production differences from wages hence increase the hiring of domestic labour over foreign labour → lower unemployment rates
    - Government ***subsidies for domestic firms***, especially infant industries, to lower their COP and hence boost price competitiveness of their goods and services. (*Note: Candidates should be specific about the type of subsidies given by the government as some form of subsidies for example, subsidies on R&D, are considered as supply-side policy rather than an anti-globalization policy*)
      - This reduces the extent of import-substitution effects since price of domestically-produced goods and services are lower (or as low as) than imported goods and services → prevents structural unemployment in import-substitution industries
    - Labour legislations favouring the hiring of domestic workers such as ***tax rebates*** for firms that hire domestic workers.

- Anti-globalization policies are limited in effectiveness or may not be desirable in addressing the above adverse consequences of labour flows:
  - Policies favouring domestic firms and workers may not bring about the desired results on the adverse consequences of globalization

- Anti-immigration policies may be cause adverse consequences on job markets in the country hence hinder growth
    - Restriction on inflow of labour may mean that certain types of jobs will be left unfilled due to a lack of supply labour in the domestic labour market
        - This may be due to certain social stigma attached to certain occupations hence locals may not wish to take up such jobs → hinders the smooth functioning of economy in the long run
        - Lack of supply of low-skilled labour from domestic labour market may cause the upward pressure on wage rates hence this will cause increase in COP to firms which will act as a disincentive for FDIs to invest in the country (wage-push inflation) → fall in I (assuming investment on tangible assets) hence fall in AD → fall in real NY (slower economic growth) → trigger adverse effects on all sectors of the economy via reverse multiplier effect in the long run.
- Government subsidies on production processes to boost export price competitiveness will mean that trade partners potentially view this as a form of dumping should the price of exports fall below the marginal cost of production → this may again cause possible trade retaliations
    - Also, government subsidies act as burden on government budget. Depending on budget positions, this may not be sustainable in the long run given the high opportunity cost incurred from the best alternative forgone (such as spending on public goods and education etc.).
- Government subsidies to infant industries does not guarantee these industries will eventually 'mature' and develop comparative advantage.
    - Possibility of perpetual infancy of these industries due to the lack of competition hence incentive to develop and 'mature'.

- Evaluation (additional insight which can be provided in the body and in the conclusion). Each evaluative point must be explained (maximum 4 marks): E.g.
    - There seems to be a possibility that anti-globalisation policies will worsen the current state of the global economy as the trend towards protectionism may bring about economic benefits to countries in the short run but the long run consequences will eventually outweigh these benefits. Hence, anti-globalisation policies should only be a temporary measure because according to the theory of comparative advantage, they reduce the gains from specialisation and trade. In the long run, supply-side policies should be implemented. Explain one specific supply-side policy and how and why it is able to reduce or minimise the adverse effects arising from globalisation.
    - Given the current dire economic climate amidst weak growth, it seems that the anti-globalization policies suggested by governments will not fully address the adverse consequences of globalization. Demand-management policies like expansionary fiscal policy and expansionary monetary policy should or can also be implemented given the weak global economy. Explain one demand-management policy and how and why it is able to address the adverse consequences of globalisation.
    - Hence, countries should in fact encourage freer trade and encourage labour and capital mobility so as to reap the economic rewards in the long run. However, it is worth noting that given the social and political pressure in many economies in recent years, such an embrace of globalization may seem too hopeful and optimistic.

**Note: Candidates who discussed the benefits of globalization will be credited under evaluation (E max. 2m) instead of under level (L).*

Knowledge, Application, Understanding, Analysis		
L1	• Totally journalistic style of writing throughout; Answer contains no economic framework at all • No application of examples relevant to the case at all	**1 - 5**
L2	• Addresses the question but has tendency to be superficial and lacks depth	**6 - 8**
L3	There is both balanced, scope and depth in the answer: • Answer is balanced (TAS structure) and uses relevant economic framework to explain how and why there is room for anti-globalisation policies but why they are limited and/or may not be desirable in addressing the challenges of globalization o 2 challenges covering 2 aspects of globalization can secure full range of marks (15 marks) • Rigour in explaining how and why • Good examples	**9 - 11**
Evaluation		
E1	*An unexplained judgement ➔ An unexplained evaluative conclusion/comment*	***1 – 2***
E2	*Evaluative comments are insightful and substantiated. Includes a well-reasoned conclusion.*	***3 - 4***