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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics

8819/1

(Higher 1)

21 September 2016

Section A Case Study

3 hours

Section B Essay

Additional Materials: Writing Papers

PLEASE READ THE FOLLOWING INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Please start on a fresh sheet of paper for a new question.

Section A

Answer **all** questions.

Section B

Answer **one** question.

At the end of the examination, fasten your work securely into three separate bundles, one for each question.

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

Section A		Section B	
Q1	Q2	Q3	Q4

This document consists of **8** printed pages including this cover page.

[Turn over

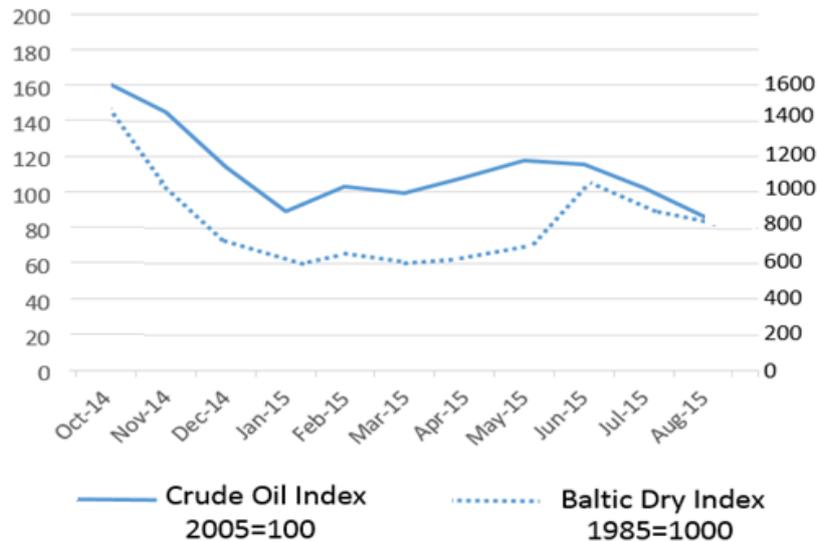
Section A

Answer **all** questions in this section

Question 1

The Maritime Sector

Figure 1: Crude Oil Index and Baltic Dry Index



Source: OPEC, CNBC

Extract 1: The falling Baltic Dry Index

The Baltic Dry Index (BDI), a measure of the prices for transporting major bulk commodities by sea, has fallen to its lowest level since 1986.

There are numerous factors which impact the BDI, not least of all the plummeting oil price.

"You're paying for the bunker fuel to transport the vessel from one place to another. With the oil price effectively halving, freight rates all around the world are coming down," UBS commodity analyst Daniel Morgan said.

In addition, slowing growth in China results in excess capacity in the industry. "The demand for cargoes are simply not there," Marc Pauchet, a shipping analyst in Braemar ACM London, said.

Sources:

- (i) Bloomberg, January 29, 2015 and
- (ii) The Sydney Morning Herald, 10 February 2015

Extract 2: Measures to reduce marine pollution

Marine litter can cause serious economic damage: losses for coastal communities, tourism, shipping and fishing. Potential cost across EU for coastal and beach cleaning was assessed at almost €630 million per year, while the cost to the fishing industry could amount to almost €60 million.

The main sources of marine litter are:

<p>Land-based activities:</p> <ul style="list-style-type: none"> • industrial discharge • untreated municipal sewerage 	<p>Marine based activities:</p> <ul style="list-style-type: none"> • shipping (e.g. transport, tourism, fishing) • illegal dumping at sea
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The shipping industry has generated several environmental issues and measures are put in place to reduce the impacts. For example,

- MarineClean is a European Union co-funded project that deals with decreasing marine litter. One of its projects was a TV show on plastics – how it evolved and how it pollutes the environment.
- The Protection of the Sea Levy is a charge by the Australian government against ships based on the 'potential polluter pays' principle. Charged at 11.25 cents per net ton, it also helps fund the government's environmental protection activities – preventing and combating ship-sourced pollution in the marine environment.

Sources: (i) <http://www.marineclean.eu> and (ii) The Guardian, 12 January 2016

Extract 3: Maritime firms opting for foreigners

Employers in the maritime sector say that foreign applicants often pip Singaporeans to the job because of a sense that they are more willing to work under the tough conditions.

As few young Singaporeans are drawn to the job, the industry also suffers from a lack of a ready pool of skilled and experienced locals to tap in recent years.

Training a worker to be a ship captain takes seven or eight years. A company can save on time and cost if it hires a foreigner who already has the skills and experience.

The Maritime and Port Authority (MPA) said it has been working with industry players to organise training programmes and career talks and fairs to encourage more Singaporeans to take up seafaring jobs.

Source: The Straits Times, 4 January 2015

Extract 4: Pasir Panjang Terminal's \$3.5b expansion kicks off

The \$3.5 billion Phase 3 and 4 development of Pasir Panjang Terminal was officially launched yesterday, further strengthening Singapore's position as a leading shipping hub.

Prime Minister Lee Hsien Loong highlighted the crucial role that the port has played in positioning Singapore globally. The maritime industry today, he said, continues to create good jobs and employs 170,000 people while contributing 7 per cent to Singapore's gross domestic product.

Source: The Straits Times, 24 June 2015

Questions

- (a) (i) Identify the relationship between Crude Oil Index and Baltic Dry Index in Figure 1. [1]
- (ii) Using Extract 1 and a demand-supply diagram, identify and explain **one** demand factor and **one** supply factor causing the fall in Baltic Dry Index. [6]
- (b) Using Extract 2,
- (i) explain how the existence of a negative externality can lead to market failure. [4]
- (ii) discuss the effectiveness of the levy on sea vessels and one other alternative policy to address the problem identified in b(i). [8]
- (c) Using Extract 3, explain how the price elasticity of supply of the maritime sector varies in the **short run** and **long run** and comment on how government policy can affect the price elasticity of supply. [6]
- (d) Using Extract 4, explain how the expansion of maritime industry contributes to the Singapore economy. [5]

[Total: 30]

Question 2

The Eurozone Economy

Table 1: Annual Unit Labour Costs[#], 2010 = 100

Country	2011	2012	2013	2014	2015
Germany	100.7	104.0	106.0	107.9	109.9
Greece	98.7	96.7	89.6	87.3	87.6
Eurozone (19 countries)	100.6	102.5	103.8	104.8	105.5

[#] Unit labour costs measure the average cost of labour per unit of output and are calculated as the ratio of total labour costs to real output.

Table 2: Net trade in goods (value), US\$ converted, seasonally adjusted (in billions)

Country	2010	2011	2012	2013	2014	2015
Germany	195.82	209.71	240.95	259.56	281.94	273.33
Greece	-39.12	-33.87	-27.75	-25.70	-28.29	-19.55
Eurozone (19 countries)	-26.28	-38.21	100.43	198.56	235.99	267.52

Source: OECD.Stat, accessed 20 August 2016

Extract 5: Is Germany's big export surplus a problem?

Germany's trade surplus – the excess in the value of its exports over its imports – hit another record in 2014. At 217 billion euros (\$236 billion), it was Germany's biggest ever. Expressed as a percentage of GDP, Germany's 2014 trade surplus was 7.5 percent.

Why is Germany's trade surplus so large? Undoubtedly, Germany makes good products that foreigners want to buy. For that reason, many point to the trade surplus as a sign of economic success. But other countries make good products without running such large surpluses. There are two more important reasons for Germany's trade surplus.

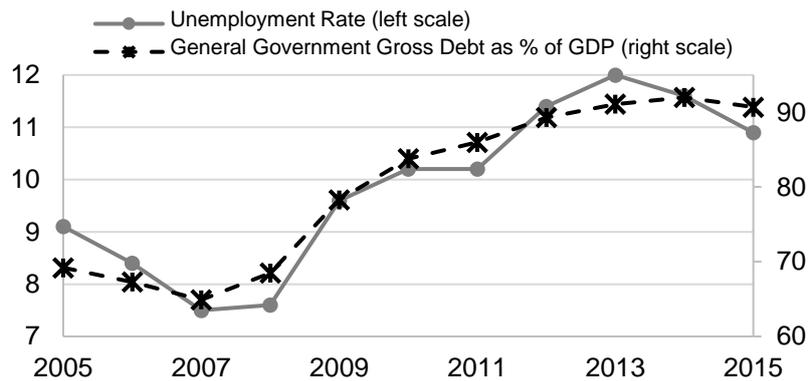
Some economists point to the euro currency as a key reason for Germany's perennial export surpluses. By sharing the euro with a larger population of mostly less competitive economies, German exporters have a built-in benefit: a currency that's permanently weaker than it should be, though it may be still too strong for less competitive economies. That provides an artificial advantage to German exporters.

Second, the German trade surplus is further increased by policies (tight fiscal policies, for example) that suppress the country's domestic spending, including spending on imports.

In a slow-growing world that is short on aggregate demand, Germany's trade surplus is a problem. Several other members of the Eurozone are in deep recession, with high unemployment and with no "fiscal space" (meaning that their fiscal situations don't allow them to raise spending or cut taxes as a way of stimulating domestic demand). The fact that Germany is selling so much more than it is buying redirects demand from its neighbours (as well as from other countries around the world), reducing output and employment outside Germany at a time at which monetary policy in many countries is reaching its limits.

Sources:

- (i) Ben Bernanke, Germany's trade surplus is a problem, Brookings Institute, April 3, 2015 and
- (ii) Nils Zimmermann, Is Germany's big export surplus a problem?, DW, April 7, 2015

Figure 2: Eurozone Debt and Unemployment

Source: Eurostat, accessed 1 September 2016

Extract 6: Reconciling fiscal consolidation with growth and equity

Fiscal consolidation is a policy aimed at reducing government deficits and debt accumulation. Fiscal consolidation complicates the task of achieving other policy goals as it weighs on demand in the short term. A number of fiscal consolidation instruments can enhance the long-term level of output.

Table 3: Instruments of Consolidation

Expenditure Cuts	Revenue Increases
Public consumption: education	Personal income taxes
Public consumption: health	Corporate income taxes
Cash transfers: unemployment benefits	Environmental taxes
Subsidies	Consumption taxes (non-environmental)
Public investment	Sales of goods and services

Some revenue measures can also contribute positively to long-term output when they promote more efficient use or allocation of services or resources that were previously inadequately priced. Better pricing the use of environmental services through taxation can lead to welfare gains through improved environmental amenities that are not measured in GDP.

However, spending reductions can bring about potentially large long-term losses in output when they cut into areas such as public goods or growth-enhancing services that are insufficiently produced by market forces. Cuts in health care can also reduce output per capita by reducing productivity. Through its contribution to well-being, health spending is most likely to have additional positive welfare effects that are not measured in GDP.

Most fiscal consolidation instruments are harmful for growth in the short run and aggravate income inequality. In fiscal-crisis countries, the absence of consolidation could translate into a massive loss of confidence triggering economic collapse. If it helps to avoid such extreme scenarios, consolidation may be highly expansionary.

Source: OECD Economic Studies, 05 Feb 2014

Extract 7: The Eurozone economy – frost in spring

The once-sickly Eurozone is undergoing recovery which, though feeble, has nonetheless been sustained. More importantly, there are signs that the pace may be accelerating this year.

Despite these promising developments, there is still a concern that the recovery may have come too late and be too weak to avert the onset of deflation. Consumer prices are falling in several peripheral countries, notably Cyprus and Greece, but also now in Spain.

The development has prompted the European Central Bank (ECB) to cut its key interest rate to 0.05%, a new record low.

Sources:

- (i) The Economist, 5 April 2014 and
- (ii) The Telegraph, 4 September 2014

Questions

- (a) (i) Using Table 1, compare the trends in the annual unit labour costs in Germany and Greece. [1]
- (ii) Explain how the above trends in the annual unit labour costs and one other factor from Extract 5 influenced the countries' trade balance as shown in Table 2. [6]
- (b) Identify and explain the relationship between unemployment rate and general government debt as seen in Figure 2. [3]
- (c) With reference to Extract 6, discuss the impact of fiscal consolidation on living standards in a country. [8]
- (d) Extract 7 suggests that the European Central Bank (ECB) has cut its key interest rate to 0.05%.
- (i) With the aid of a diagram, explain why such a cut in interest rate will cause the euro to depreciate in value. [4]
- (ii) Using the circular flow of income diagram, discuss how such a cut in interest rate may affect the equilibrium level of national income of the countries in the Eurozone. [8]

[Total: 30]

Section B

Answer **one** question from this section.

- 3 (a)** Explain how resources can be efficiently allocated through the price mechanism. [10]
- (b)** Discuss whether government intervention in markets should be restricted to the provision of public goods. [15]
- 4 (a)** Explain the benefits of globalisation. [10]
- (b)** Discuss whether supply-side policies is the best policy to adopt in order to achieve economic growth in times of a recession. [15]

End of Paper



DUNMAN HIGH SCHOOL Prelim Examination 2016

Year 6 H1 Economics 8819 Paper 1

Answer and Mark Schemes



DUNMAN HIGH SCHOOL
Preliminary Examination
8819 / H1 Economics Paper 1 CSQ
Suggested Answer and Mark Scheme

Case Study Q1: The Maritime Sector

- (a) (i) Identify the relationship between Crude Oil Index and Baltic Dry Index in Figure 1. [1]

Direct relationship or positive relationship → As oil price index fell, Baltic Dry Index fell too.

(The explanation is unnecessary.)

- (ii) Using Extract 1 and a demand-supply diagram, identify and explain **one** demand factor and **one** supply factor causing the fall in Baltic Dry Index. [6]

Demand factor: slower economic growth in China has led to consumers → slower increase in demand (explain through changes in purchasing power)

Supply factor: falling oil prices will enable firms to produce more output with the same amount of FOP. This will lower marginal COP and increase supply.

Given the slower increase in demand and increase in supply are happening simultaneously, the equilibrium quantity will increase. However, the impact on equilibrium price depends on the magnitude of increase in demand relative to increase in supply.

Diagram + market adjustment process

Mark scheme

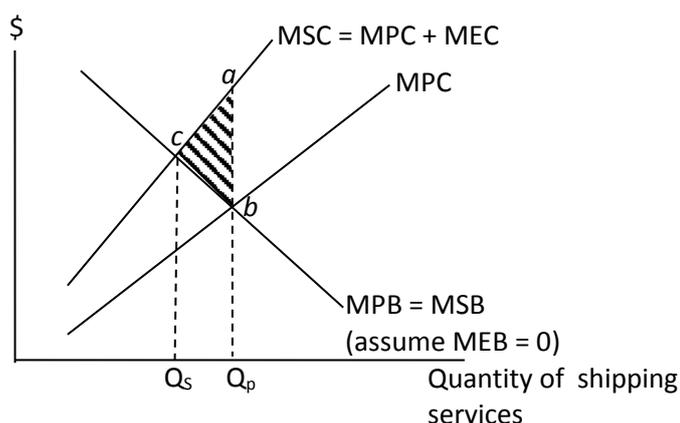
Level	
L1 [1-3]	<ul style="list-style-type: none"> • Not answering question • Identified the correct points, however, explanations given were incomplete or demonstrate conceptual errors • Attempts at incorporating framework in the answer, however, did not make reference to diagrams
L2 [4-6]	<ul style="list-style-type: none"> • Answering question • Identified the correct points, and correct explanations were given and supported with the good use of framework

(b) Using Extract 2,

(i) explain how the existence of a negative externality can lead to market failure. [4]

Negative externalities are third party effects resulting from the over-production or over-consumption of a good. Third party refers to the other people in the society who are not directly involved in the transaction of the good.

Private optimal output is determined when consumers maximised their welfare by equating $MPB = MPC$ @ Q_p . Shipping firms only consider their MPC of extra fuel cost of shipping and MPB of extra revenue earned. However, the production of shipping services by the shipping industry inflicts negative externality on the society, as such there is a divergence of MSC away from MPC due to existence of MEC. $MEC \rightarrow$ serious economic damage: losses for fishing industry due to the fall in no. of fishes available/ losses for tourism industry due to pollution of beaches decreasing demand for beach vacation/ etc. Socially optimal output is determined when society maximised its welfare by equating $MSB = MSC$ @ Q_s . Since $Q_p > Q_s \rightarrow$ over production of shipping services has led to deadweight loss of area abc because the extra cost to society (area Q_scaQ_p) outweighs the extra benefit (area Q_scmQ_p) to society.



Mark scheme

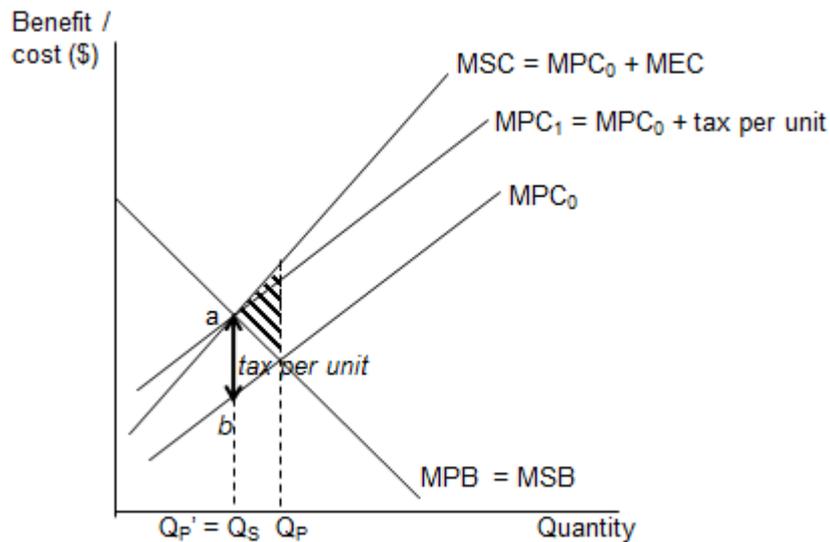
Level	
L1 [1-2]	<ul style="list-style-type: none"> • Not answering question • Identified the correct market failure, however, explanations given were incomplete or demonstrate conceptual errors • Attempts at incorporating framework in the answer, however, did not make reference to diagrams
L2 [3-4]	<ul style="list-style-type: none"> • Answering question • Identified the correct market failure, and correct explanations (MPB, MPC, MEC) were given and supported with the good use of framework

- (ii) discuss the effectiveness of the levy on sea vessels and one other alternative policy to address the problem identified in b(i). [8]

Thesis for Levy

When faced with negative externalities, a government may choose to impose an indirect specific tax that is equivalent to the value of the marginal external costs (MEC) generated at the socially optimum level of output, given by the divergence between MSC and MPC_0 at Q_S . This will force firms to internalise the MEC they had previously ignored and cut back its production from Q_P to the socially optimal level Q_S .

A levy is also good because it provides the government a source of tax revenue which can be used to clean up the pollution caused by shipping industry.



Anti-thesis for levy

Existence of imperfect information prevents the government from correctly estimating and monetising the MEC. As such, the amount of tax levied is incorrect and unable to correct over-production of shipping services to Q_S .

Alternative policies can include:

- Regulations, education to modify behaviour

Evaluation

A combination of policies is required to more effectively solve the current over-production of shipping services. However, levy might be a better policy than education. Moral suasion through education does not appear to lead to significant changes in behaviour when the activity (e.g illegal dumping into the sea) is already widely practised.

Mark scheme

L1	<ul style="list-style-type: none"> • Conceptual errors or incomplete answers were observed with little use of framework. • One-sided answer. 	1-3
L2	<ul style="list-style-type: none"> • Answers the question, little conceptual errors was observed with good use of framework. • Balanced answer. 	4-6
E	<ul style="list-style-type: none"> • A well-explained judgment on the issue 	1-2

- (c) Using Extract 3, explain how the price elasticity of supply of the maritime sector varies in the **short run** and **long run** and comment on how government policy can affect the price elasticity of supply. [6]

Explain

Define PES: The price elasticity of supply (PES) is a measure of the responsiveness of the quantity of a good supplied to changes in its price, ceteris paribus.

PES in short run is more price inelastic: a given change in the price of a good results in a less than proportionate change in quantity supplied in the same direction, ceteris paribus. This is because of the long time-taken to train a worker equipped with the relevant skills for the shipping industry. Also, the availability of labour with the relevant skills in the short run is very limited.

PES in long run is more price elastic: a given change in the price of a good results in a more than proportionate change in quantity supplied in the same direction, ceteris paribus. This is because sufficient time has been invested into the training of workers with the relevant skills and thus the availability of skilled labour has increased.

Comment

Thesis: training programmes and career talks and fairs → increase in supply and makes supply more price elastic

The provision of education and training by the MPA is able to successfully encourage and attract more Singaporeans into the industry. With more information and provision of subsidised courses, it hopes to encourage and attract more Singaporeans into the maritime sector. As such, with time, the PES of the maritime sector becomes more price elastic.

Anti-thesis: Singaporeans less willing to work in tough conditions, limited impact

There are other factors affecting the PES of maritime sector. Even with the provision of more education (subsidised courses) and information, Singaporeans might not want to work in the maritime sector. They might not want to learn the relevant skills required by the maritime sector because of the relatively tougher working conditions than other industries. As such, the supply of skilled labour in the maritime sector remains low and does not increase significantly with time.

Judgment

Overall: depends on the effectiveness of government policies in increasing the PES of maritime sector depends on how successful it is in changing the mindsets on Singaporeans.

Mark scheme

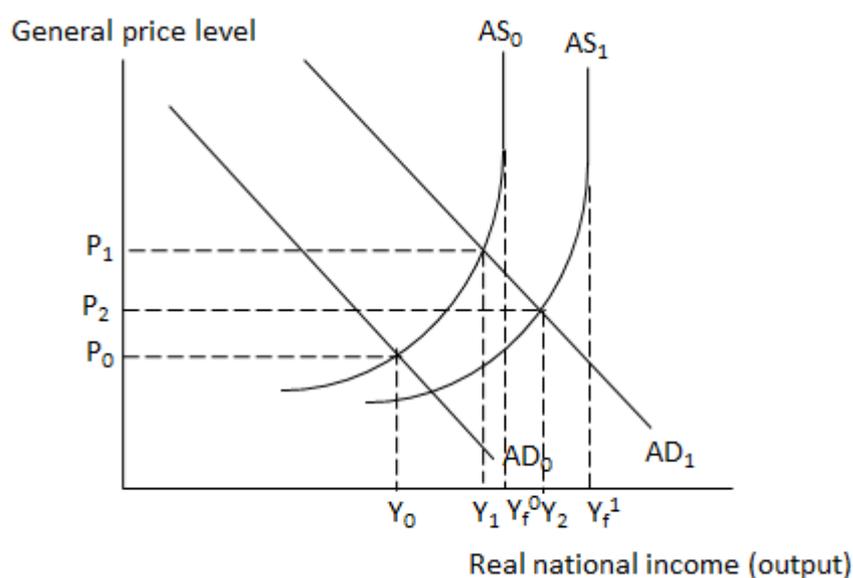
Level	
L1 [1-3]	<ul style="list-style-type: none"> • Not answering question: unable to explain the differences in PES in SR vs LR. • Attempts to answer the question, however, conceptual errors were identified or incomplete explanations were given. • Did not attempt to give judgment on the issue.
L2 [4-6]	<ul style="list-style-type: none"> • Answering question. • Contains minor conceptual errors. • Provided an explained judgment on the issue.

- (d) Using Extract 4, explain how the expansion of maritime industry contributes to Singapore economy. [5]

The expansion of the maritime industry will increase the expected rate of returns from investments relative to cost of borrowing. The expansion will lead to firms anticipating an improved future market conditions, thus they would be more willing to invest. Since investment is a component of AD, there increase in AD will lead to an unplanned disinvestment, and assuming existence of spare capacity, both real NY and GPL will increase. In response to the unplanned disinvestment, firms will increase output in the next production cycle in attempt to restore their inventories to their optimal level. Firms enter the factor market to demand for more factors of production, including labour, paying out more factor income. Income-induced consumption also increases, causing another round of increase in AD (C_d , being a component of AD), adding to the circular flow of income, setting off the **multiplier effect** where additional spending creates additional income which induces more spending. At each successive round, the increase in income and AD gets smaller and smaller because of the leakages in the form of saving, taxes and imports. Eventually the multiplier process will end and a new equilibrium national income is attained when the withdrawals balances the initial injection.

Evidence from case: higher growth (contributing to 7% of GDP), creating more employment opportunities (170,000 jobs)

The accumulation of capital goods will add to the capital stock and will increase the quality of FOP, enhanced by the acquisition of improvements in technology. The improvements will also bring about an expansion of the economy's productive capacity (shifting AS to the right) and lowers unit cost of production (shifting AS downwards). The expansion of the productive capacity enables the economy to expand output to meet increase in AD, relieving the situation of shortages bidding up prices, allowing for inflation rate to fall, whilst sustaining further increase in real output. It helps Singapore to keep its inflation low and stable. GPL increases from P_0 to P_2 instead of P_0 to P_1 .



The expansion of the maritime industry can also improve Singapore's BOP position via the invisible trade balance. As the quality and prices of shipping services

produced by Singapore improves, more ships might prefer to use our port relative to our competitors as they pass through the Straits of Malacca.

Mark scheme

Level	
L1 [1-2]	<ul style="list-style-type: none">• Not answering question: unable to explain how the expansion can impact the different macro goals• Attempts to answer the question, however, conceptual errors were identified or incomplete explanations were given.
L2 [3-5]	<ul style="list-style-type: none">• Answering question: able to explain correctly how the expansion can affect at least 2 different macro goals in both SR and LR.• Contains minor conceptual errors.

Case Study Q2: The Eurozone Economy

- (a) (i) Using Table 1, compare the trends in the annual unit labour costs in Germany and Greece. [1]

In general, from Table 1, annual unit labour costs rose in Germany but fell in Greece.

- (ii) Explain how the above trends in the annual unit labour costs and one other factor from Extract 5 influenced the countries' trade balance as shown in Table 2. [6]

How above trends in annual unit labour costs influenced countries' trade balance

By economic theory, there should be an inverse relationship between changes in annual unit labour costs and the corresponding effect on trade balance.

- \uparrow (\downarrow) in unit labour costs \rightarrow \downarrow (\uparrow) profit margins of firms in Germany (Greece) \rightarrow partially pass on the \uparrow unit COP / cost savings as \uparrow (\downarrow) prices to consumers respectively. Assuming trading partners' unit labour costs remain unchanged, \uparrow (\downarrow) price of Germany's (Greece's) exports relative to trading partners
- Price of domestically produced goods in Germany (Greece) also \uparrow (\downarrow) relative to imports
- Assume demand for exports is price elastic \rightarrow more than proportionate \downarrow (\uparrow) in quantity demanded for Germany's (Greece's) exports \rightarrow \downarrow (\uparrow) in X revenue for Germany (Greece)
- Assume domestic goods and imports are close substitutes \rightarrow large \uparrow (\downarrow) in demand for imports into Germany (Greece) \rightarrow \uparrow (\downarrow) in import expenditure in Germany (Greece)
- As such, trade balance should worsen (improve) for Germany (Greece)
- Table 2 generally supports this economic theory for the case of Greece, where its annual unit labour costs fell and trade balance improved over the years, except 2014 and 2015.
- However, for the case of Germany, the Table 2 does not support this economic theory, which could be due to reasons analysed below.

1 other factor from Extract 5 that influenced countries' trade balance

- Annual unit labour costs only affect price competitiveness of goods, but fail to consider **non-price competitiveness** of goods that also affects trade balance. If firms in Germany engage in product innovation, as seen from 'Germany makes good products that foreigners want to buy' in Ext 5 \rightarrow **new products** created and/or **quality improvements** of products via such R&D \rightarrow caters to consumers' tastes and preferences \rightarrow \uparrow DD for Germany's exports by foreigners and \downarrow DD for imports by Germans as consumers switch towards Germany's goods \rightarrow Germany's trade balance improves
- From Ext 5, a **shared euro currency** that is permanently weaker than it should be provides an artificial advantage to German exporters \rightarrow Germany's perennial X surpluses
- From Ext 5, implementation of '**tight fiscal policies**' \rightarrow \downarrow AD \rightarrow fall in NY \rightarrow \downarrow purchasing power \rightarrow 'suppress the country's domestic spending, including spending on imports' \rightarrow Germany's trade balance improves, ceteris paribus.

- (b) Identify and explain the relationship between unemployment rate and general government debt as seen in Figure 2. [3]

- Direct or positive relationship [1]
- As the unemployment level in Eurozone \uparrow (2008 – 2014), more workers faced \downarrow factor incomes. More households' incomes end up falling below a minimum level, which qualifies them to receive unemployment benefits and/or some form of transfer payments from the govt \rightarrow \uparrow in govt spending. [1]

- Simultaneously, due to progressive income tax \Rightarrow households' nominal incomes fall to a low income tax bracket, thus they pay a lower % of income tax now \rightarrow \downarrow govt tax revenue. [1]
- More govt transfer payments and lower income tax paid due to \uparrow UN \rightarrow \uparrow in govt debt \rightarrow exhibits direct relationship
- The converse holds true when the economy faced \downarrow unemployment rate (2005 – 2008) and \downarrow govt debt (exhibits direct relationship)

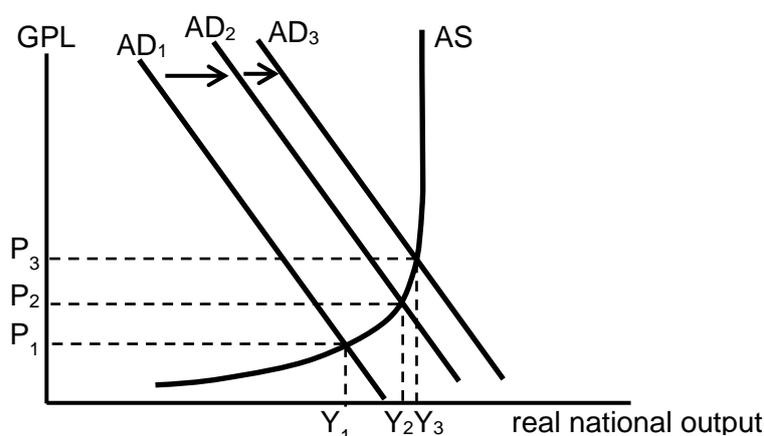
(c) With reference to Extract 6, discuss the impact of fiscal consolidation on living standards in a country. [8]

- From Ext 6, fiscal consolidation is a policy aimed at reducing government deficits and debt accumulation \rightarrow likely to be austerity \rightarrow contractionary fiscal policy (F/P) of govt expenditure cuts and tax increases as seen from Table 3
- Living standards \rightarrow refer to material and non-material SOL; current vs future SOL

Thesis: fiscal consolidation raises living standards in a country

T1: fiscal consolidation helps to restore confidence, thus stimulating EG and reducing UN \rightarrow **improves material SOL in the medium term**

- From Ext 6, fiscal consolidation is necessary in fiscal-crisis countries (which is the case for many countries in Eurozone), as it can help to avoid a massive loss of confidence triggering economic collapse \rightarrow may thus be highly expansionary on the economy in the medium-term.
- Such contractionary F/P \rightarrow \downarrow govt deficit and debt to more sustainable levels \rightarrow in the medium term, restores investors' and consumers' confidence as govt is able to control its debt level. In contrast, high unsustainable govt debt level \rightarrow firms and HHs may expect austerity measures in future to repay debt \rightarrow withhold current investment and spending.
- Thus, in the medium term, fiscal consolidation helps \uparrow AD \rightarrow \uparrow actual EG and \downarrow demand-deficient UN via k effect \rightarrow <explain with use of AD/AS diagram> \uparrow AD from AD₁ to AD₂ \rightarrow firms deplete inventories (unplanned disinvestments) and then step up production in the next production cycle \rightarrow employ more FOPs, including labour \rightarrow workers receive factor incomes \rightarrow \uparrow income-induced consumption due to \uparrow purchasing power \rightarrow via this multiplier effect, workers in Eurozone who purchase more g&s derive greater utility \rightarrow enjoy \uparrow material SOL.



- EV: without existence of spare capacity, i.e. as the economy reaches full employment, real output can \uparrow only by a smaller extent (Y₂ to Y₃) \rightarrow limits economy's ability to \uparrow output to satisfy wants and needs to \uparrow material SOL

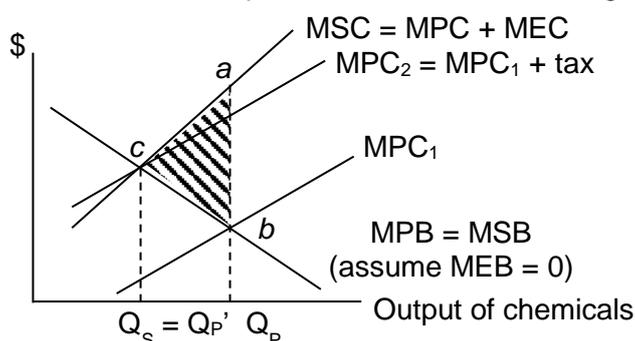
- EV: difficult to find any strong evidence of the direct correlation between investors' + consumers' confidence levels and govt debt levels. Their confidence levels may be based on more immediate factors, like short-term EG rates, real wages etc. than govt debt levels.

T2: fiscal consolidation helps to **improve future SOL**

- Furthermore, as $I \uparrow \rightarrow$ expansion of productive capacity in the LR due to greater capital accumulation due to \uparrow quantity and quality of resources \rightarrow non-inflationary EG
- From Ext 6, fiscal consolidation can enhance the long-term level of output by promoting more efficient use or allocation of resources. Via environmental taxes and/or cut subsidies (Table 3) \rightarrow firms' COP $\uparrow \rightarrow$ firms' profits $\downarrow \rightarrow$ existing firms have to ensure that they produce at minimum costs and boost productivity levels to maintain profit margins $\rightarrow \downarrow$ wastage of economic resources and \uparrow productive capacity when these firms engage in R&D and/or training of workers \rightarrow non-inflationary EG
- Also, inefficient firms that continue to make losses due to environmental taxes and/or lack of subsidies cannot survive and hence exit the industry \rightarrow frees up resources that can be utilised for more productive uses, e.g. R&D, training \rightarrow boosts productivity and output \rightarrow non-inflationary EG
- Cuts in UN benefits and transfer payments to households $\rightarrow \uparrow$ incentive to work harder and $\rightarrow \uparrow$ productivity $\rightarrow \uparrow$ competitiveness and stimulate non-inflationary EG
- As the countries in Eurozone attain non-inflationary EG \rightarrow able to produce more consumer goods in the future to satisfy wants and needs $\rightarrow \uparrow$ future SOL <can explain using PPC>
- Furthermore, as country sustains EG and \downarrow UN \rightarrow govt debt \downarrow (explained in b) \rightarrow less burden on future generation to repay a smaller debt \rightarrow future SOL improves

T3: fiscal consolidation helps to **prevent over-production of g&s through the use of environmental taxes, thus improving non-material SOL**

- From Ext 6, 'better pricing the use of environmental services through taxation can lead to welfare gains through improved environmental amenities that are not measured in GDP'
- For e.g. when chemical producing firms that dispose their chemical waste into rivers are imposed pigouvian taxes $\rightarrow \uparrow$ firms' MPC $\rightarrow \downarrow$ profit margins \rightarrow to maintain profitability, they partially cut back on production and/or find cleaner methods of production e.g. proper disposal of chemical waste or treatment of chemical waste before disposal $\rightarrow \downarrow$ MEC when firms cut back production to socially optimal output level or does not suffer from water pollution \rightarrow society benefits from cleaner environment and thus improvement in health $\rightarrow \uparrow$ non-material SOL <students should explain with market failure diagram>



- Assume chemical production has no MEB i.e. $MSB = MPB$. Chemical production confers MEC on third parties \rightarrow improper disposal of chemical waste into rivers \rightarrow water pollution and residents living near these rivers consume the poisoned fish or contaminated water fall sick \rightarrow incur medical costs of treating their illness. MEC creates divergence between MSC & MPC such that $MSC > MPC$.
- Rational firms only consider MPB (revenue earned from the sale of chemicals) against MPC (marginal costs of manufacturing chemicals) and ignore MEC \rightarrow produce up to Q_p , where $MPB = MPC$.

- However, socially optimal output of chemical production should occur at quantity Q_S , where $MSB = MSC \rightarrow$ over-production of chemicals by $Q_S Q_P$ amount \rightarrow deadweight loss of area abc as the MSC of producing $Q_S Q_P$ (area $CAQ_P Q_S$) exceed the MSB (area $CBQ_P Q_S$).
- An environmental tax is imposed on the firm $\rightarrow \uparrow MPC$ to $MPC_2 \rightarrow$ firm produces at Q_P' where $MPB = MPC_2 \rightarrow$ aligns to $Q_S \rightarrow$ eliminates DWL \rightarrow improves non-material SOL

AT: fiscal consolidation lowers living standards in a country

AT1: fiscal consolidation worsens EG, $\uparrow UN \rightarrow \downarrow$ **current material SOL**

- From Ext 6, 'most fiscal consolidation instruments are harmful for growth in the short run as it weighs on demand in the short term' \rightarrow contractionary effects on the economy
 - \triangleright <Explain how fiscal consolidation brings about contractionary effects> \downarrow G expenditure on infrastructure e.g. schools and hospitals and \downarrow public investment $\rightarrow \downarrow AD$
 - \triangleright \downarrow govt spending on UN benefits and transfer payments $\rightarrow \downarrow$ disposable income of unemployed and low income households $\rightarrow \downarrow$ consumption $\rightarrow \downarrow AD$ and \downarrow material SOL especially for the unemployed and low income households
 - \triangleright \uparrow personal income taxes $\rightarrow \downarrow$ disposable income $\rightarrow \downarrow$ consumption $\rightarrow \downarrow AD$
 - \triangleright \uparrow corporate income taxes $\rightarrow \downarrow$ post-tax profits \rightarrow disincentive to invest $\rightarrow \downarrow I \rightarrow \downarrow AD$
 - \triangleright \uparrow environmental taxes $\rightarrow \uparrow$ firms' COP $\rightarrow \downarrow$ firms' profits $\rightarrow \downarrow I \rightarrow \downarrow AD$
 - \triangleright With the $\downarrow AD \rightarrow \downarrow$ actual EG and \uparrow demand-deficient UN via k effect $\rightarrow \downarrow$ current material SOL due to \downarrow purchasing power to buy g&s

AT2: fiscal consolidation may **worsen future SOL**

- If the govt cuts spending and/or raises taxes in the wrong areas such as 'public goods or growth-enhancing services that are insufficiently produced by market forces' \rightarrow can undermine long-term growth
 - \triangleright Cuts in essential health care services e.g. \downarrow vaccination services $\rightarrow \downarrow$ productivity (Ext 6) as workforce fall sick more easily $\rightarrow \downarrow$ output per capita and slowdown in growth of productive capacity as quality of resources $\downarrow \rightarrow$ undermine potential EG. Also, cut in health spending $\rightarrow \downarrow$ non-material SOL, which is supported by Ext 6 'through its contribution to well-being, health spending is most likely to have additional positive welfare effects that are not measured in GDP'
 - \triangleright \downarrow G expenditure on education $\rightarrow \downarrow$ workforce productivity \rightarrow undermine potential EG
 - \triangleright \uparrow personal income tax \rightarrow disincentive to work harder especially for higher income workers $\rightarrow \downarrow$ workforce productivity \rightarrow undermine potential EG
 - \triangleright \uparrow corporate income taxes $\rightarrow \downarrow I \rightarrow$ hinders potential EG due to \downarrow capital accumulation
- As the countries in Eurozone experience slower potential EG \rightarrow 'potentially large long-term losses in output' \rightarrow able to produce less consumer goods in the future to satisfy wants and needs $\rightarrow \downarrow$ future SOL

Evaluation: whether fiscal consolidation improves or worsens SOL depends on:

- how fiscal consolidation is being carried out, i.e. the specific areas / aspects that the govt cuts spending and raises taxes on \rightarrow e.g. cuts in UN benefits, transfer payments to households and cuts in firms' subsidies \rightarrow stimulate EG into the long term $\rightarrow \uparrow$ SOL. However, cuts in healthcare, education \rightarrow undermine potential EG $\rightarrow \downarrow$ SOL.
- timing of the fiscal consolidation plans, which in turn depends on prevailing economic conditions of the different countries in the Eurozone \rightarrow fiscal consolidation implemented on countries that are performing relatively worse than counterparts, i.e. with more economic challenges of deeper severity may end up being detrimental and self-defeating, since the austerity measures are likely to further worsen the gloomy economic outlook / impede the feeble recovery of Eurozone (Ext 7) $\rightarrow \downarrow$ govt tax revenue and \uparrow govt spending on UN benefits / transfer payments \rightarrow fail to achieve aim of fiscal consolidation & \downarrow SOL. It is better to aim for actual EG in the short term, but in

the long-term review govt spending commitments and \downarrow govt debt as % of GDP to sustainable levels, so as to \uparrow SOL.

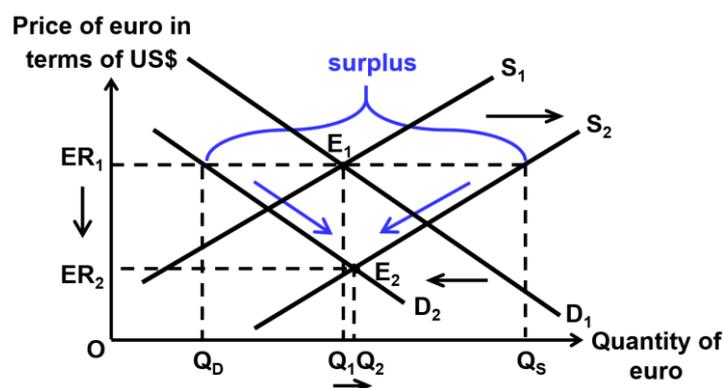
- (c) magnitude of govt debt as % of GDP \rightarrow for countries with debt of unsustainable levels, it is much more difficult to \downarrow govt debt and likely takes a much longer time as well as a combination of policies / multi-pronged approach to contain govt debt to sustainable level, so as to restore investors' and consumers' confidence $\rightarrow \uparrow$ SOL.

L3 (6 – 7)	<ul style="list-style-type: none"> - Balanced approach, with sufficient breadth and depth <ul style="list-style-type: none"> o Clear discussion of how fiscal consolidation helps to improve and worsen SOL \rightarrow must cover material and non-material SOL, without future SOL max 6m - Rigorous economic analysis with the use of at least 1 economics framework \rightarrow AD/AS or PPC or market failure diagram. - Good reference to case evidence.
L2 (4 – 5)	<ul style="list-style-type: none"> - Balanced answer. - Insufficient breadth or depth \rightarrow covers only material OR non-material SOL or uses economic framework but lacks rigour in explanation - Some reference to case evidence.
L1 (1 – 3)	<ul style="list-style-type: none"> - One-sided answer that is largely descriptive and/or contains substantial conceptual flaws. - Insufficient breadth and depth. - Lacks economics framework in analysis. - No reference to case evidence at all \rightarrow theoretical arguments only
EV (1m)	<ul style="list-style-type: none"> - Reasoned judgement as to whether fiscal consolidation improves or worsens SOL, supported by economic analysis.

- (d) Extract 7 suggests that the European Central Bank (ECB) has cut its key interest rate to 0.05%.

- (i) With the aid of a diagram, explain why such a cut in interest rate will cause the euro to depreciate in value. [4]

- From Ext 7, ECB cut its interest rate to 0.05%. As $i/r \downarrow$ and assuming it is now lower than i/r of other countries e.g. US $\rightarrow \uparrow$ hot money outflows and \downarrow hot money inflows, because speculators often seek for highest yields on their assets \rightarrow prefer to \uparrow holdings of assets of other countries e.g. USA and \downarrow assets of countries in the Eurozone
- As such, this will \uparrow SS of and \downarrow DD for euro currency in the forex market respectively.
- SS \uparrow to S_2 and DD \downarrow to $D_2 \rightarrow$ at original exchange rate $ER_1 \rightarrow$ surplus of $Q_D Q_S \rightarrow$ exerts a downward pressure on euro currency to $ER_2 \rightarrow$ euro depreciates against foreign \$ e.g. US\$

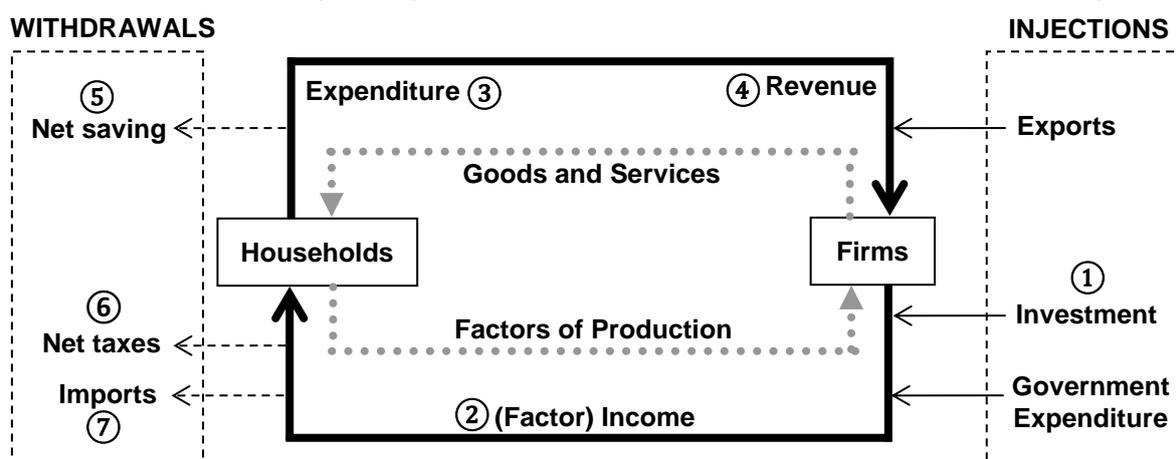


- (ii) Using the circular flow of income diagram, discuss how such a cut in interest rate may affect the equilibrium level of national income of the countries in the Eurozone. [8]

Circular flow of income represents the sources of spending flow and the uses of income generated by the spending flow in a four-sector economy consisting of households, firms, government and the foreign sector.

From Ext 7, ECB cut its interest rate to 0.05%. As i/r falls, this reduces:

- cost of borrowing relative to expected ROR on $I \rightarrow$ incentivises firms to $\uparrow I$ level \rightarrow injection into the circular flow of income
- cost of borrowing for big-ticket items $\rightarrow \uparrow C$ of domestically produced g&s
- opportunity cost of using savings for consumption $\rightarrow \uparrow C$ of domestically produced g&s



- Injections (J) refer to any payment of income to domestic firms that do not arise from domestic households. The 3 forms of injections are investment (I_d), government expenditure (G_d) and export expenditure (X_d).
- Withdrawals (W) refer to any part of households' income that is not spent on domestically produced goods and services. The 3 forms of withdrawals are saving (S), taxes (T) and import expenditure (M).

Thesis: cut in $i/r \rightarrow \uparrow$ equilibrium level of NY of the countries in the Eurozone

- As $I \uparrow \rightarrow$ injection into circular flow of income (1), and together with the \uparrow consumption of domestically produced g&s due to the $\downarrow i/r \rightarrow$ create shortage \rightarrow firms deplete inventories (unplanned disinvestment) \rightarrow induces firms to step up production in the next production cycle $\rightarrow \uparrow$ employment of workers, who receive factor incomes (2) $\rightarrow \uparrow$ expenditure on domestic g&s (3) (\uparrow income-induced C) $\rightarrow \uparrow$ revenue earned by firms (4) \rightarrow NY \uparrow
- Since households will not spend all of their \uparrow in income, choosing to save some of it (5), having to pay taxes (6) and spend some on imports (7) (collectively known as withdrawals \rightarrow leakage out of the circular flow of income).
- The \uparrow income-induced C further creates a shortage and firms continue to expand production $\rightarrow \uparrow$ NY further. This is the multiplier effect, which works on the basis that one group's spending becomes another group's income, which further induces more spending and income. The cycle repeats itself until initial $\uparrow J =$ total \uparrow in W.
- In total, the \uparrow in equilibrium level of NY will be $>$ initial $\uparrow J$.

Anti-Thesis: cut in i/r may have limited impact on equilibrium level of NY of the countries in the Eurozone

AT1: Countries in the Eurozone still face **various economic challenges that limits the impact** of a cut in i/r on the equilibrium level of NY of the countries in the Eurozone

- Fig 2: generally moderately high and rising unemployment rate (although it fell slightly after 2013) as well as high and rising general govt gross debt as a % of GDP
- Ext 5: several other Eurozone members are in deep recession, with high unemployment
 ⇒ Thus, there is still weak economic sentiments / poor consumer and investor confidence in the Eurozone
- Furthermore, from Ext 7, consumer prices are falling in several peripheral countries → onset of deflation as recovery came too late and too weak → consumers are likely to postpone / delay C → in turn ↓ I
- Hence, the cut in i/r may still bring about an insignificant ↑ in C and I → ineffective in raising equilibrium level of national income of the countries in the Eurozone, and ↑ NY by a small extent due to the smaller k size.

AT2: Countries in the Eurozone area still face **various economic challenges** → ↓ k size → limits impact of a cut in i/r on the equilibrium level of NY of the countries in the Eurozone

- From AT1, due to the various economic challenges → weak economic sentiments → ↑ MPS / ↓ MPC → ↓ k size → any ↑ in C & I due to the cut in i/r leads to a much smaller ↑ NY

AT3: if **C and I take up a small proportion of NY** → cut in i/r leads to a limited impact on the equilibrium level of NY of the countries in the Eurozone

Evaluation: whether a cut in interest rate leads to a rise in eqm NY or a limited impact on the equilibrium level of national income of the countries in the Eurozone depends on:

- magnitude of the cut in i/r → the larger the cut in i/r, the greater the ↑ C & I, and hence the greater the ↑ in equilibrium level of NY
- timing of the cut in i/r, which in turn depends on prevailing economic conditions of the different countries in the Eurozone → cut in i/r implemented on countries that are performing relatively worse than counterparts, i.e. with more economic challenges of deeper severity may have limited impact on equilibrium level of NY
- characteristics of the economy which affects its size and openness → cut in i/r implemented in euro member countries that are larger and less open are likely to have a greater impact on equilibrium level of NY, since C and I usually take up a larger proportion of NY

L2 (4 – 6)	<ul style="list-style-type: none"> - Balanced approach, with sufficient breadth and depth <ul style="list-style-type: none"> o Clear explanation of how a cut in i/r will ↑ C and ↑ I o Clear discussion of how a cut in i/r will ↑ equilibrium level of NY and have a limited impact on equilibrium level of NY - Rigorous economic analysis with the use of circular flow diagram. - Good reference to case evidence. - Max 4m if insufficient breadth or depth OR some reference to case evidence.
L1 (1 – 3)	<ul style="list-style-type: none"> - One-sided answer that is largely descriptive and/or contains substantial conceptual flaws. - Insufficient breadth and depth. - Lacks economics framework in analysis. - No reference to case evidence at all → theoretical arguments only
EV (1m)	- Unexplained judgement as to how far equilibrium level of NY will be affected due to a cut in i/r.
EV (1m)	- Reasoned judgement as to how far equilibrium level of NY will be affected due to a

	cut in i/r , supported by economic analysis.
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Section B – Essay

- 3 (a) Explain how resources can be efficiently allocated through the price mechanism. [10]
- (b) Discuss whether government intervention in markets should be restricted to the provision of public goods. [15]

Suggested Answer for part (a)

Any economy faces the central economic problem where human wants are unlimited but resources are limited. It is thus important for an economy to allocate its resources such that the maximum amount of wants can be satisfied. This allocation can be done through central planning or the free market system.

Assumption: Free market economy

In a free market economy factors of production are privately owned. Individuals enjoy freedom of choice and enterprise. Consumers are free to buy any good or service and firms are free to decide on the type of goods they want to produce and the price to charge in pursuit of their own self-interests. In such an economic system, resources are allocated through the use of prices in the price mechanism. Resources are generally categorised as capital, land, labour and entrepreneurship.

Development

Price mechanism

Consumers signal their preferences for goods by the prices they are willing to offer. Producers respond to the prices of final goods and services offered by consumers through adjusting their level of production. In order to fulfil the quantity of goods and services signalled by the consumers, producers will then allocate resources either through diverting resources from other production or to employ idle resources.

The interaction between buyers and sellers results in the market achieving equilibrium; therefore fulfilling the role of resource allocation.

As resources are scarce relative to the insatiable demands of human wants, economies are concerned with basic questions of allocation:

1. What and how much to produce?
2. How to produce?
3. For whom to produce?

What and how much to produce?

There are many goods and services that consumers desire to consume. To communicate to producers what they want produced for them, they send out price signals for the goods they want. The higher satisfaction derived from the good, the higher the price signals they are willing to offer. In addition, price signals allow consumers to show their preference over different goods. If they prefer a good A over good B, they will send out a higher price signal for good A than good B. This allows the producer to have an idea on what good to produce and also when to stop production if the price signals start to fall below their own cost of production.

Producers would only produce goods which consumers demand so as to maximize their profits.

Thus, the **price acts as a signal** telling the producers what to produce and how much of the good to produce.

How to produce?

Upon receiving price signals on what to produce, producers will have to make choices on how to use their resources to produce the specified goods and services, i.e. the method of production. The method of production employed refers to using the scarce resources to produce the desired combination of goods/services as efficiently as possible. The aim is to find the least cost combination of the various scarce resources guided by relative factor prices that is best suited to produce the goods and services. For example, a manufactured good can either be produced by capital intensive methods (where there is little use of labour and greater use of machines) or labour intensive methods (where greater use is made of labour).

For whom to produce?

Economies need to decide on the distribution of a country's national income/output among the members of the society. Prices serve the following functions:

- (i) signalling device for consumers to signal to producers what goods they want.
- (ii) rationing mechanism in a market economy and distributes the output only to people who are able and willing to pay for the good
- (iii) incentivising tool for producers to decide on what to produce in order to maximise profits
- (iv) allocative device where resources with varying uses are diverted to the production of specified goods and services

Explanation of demand and supply analysis with the help of a diagram

Diagram + market adjustment process

For the market outcome to be efficient, key conditions need to be present (explain)

Knowledge, Application, Understanding and Analysis	
L3 (7 – 10)	Clear explanation of all 3 basic questions of allocation and demand-supply analysis Able to explain the various roles which prices play in the market Sufficient depth/ scope Clearly illustrated diagram Vague inference to various roles of prices (cap at 7-8m)
L2 (5 – 6)	Insufficient depth/scope in addressing the basic questions of allocation. Some attempt in addressing the demand-supply analysis Some errors in explanation No economic framework and market adjustment process (cap at 5m)
L1 (1 - 4)	Conceptual errors with little understanding of how the price mechanism allocates resources

Suggested Answer for part (b)

Introduction: Define market failure and state government objectives to justify the need for government's intervention

Explain how public goods lead to market failure and the need for govt to intervene

Public goods have two characteristics:

- Non-rivalry: This means that when a good is consumed, it doesn't reduce the amount available for others.
– E.g. benefiting from a street light doesn't reduce light for others.
- Non-excludability: This occurs when it is not possible to provide a good without it being possible for others to enjoy. E.g erecting a dam to stop flooding, or providing law and order.
- As a result of these two characteristics, the ability to free-ride arises. Non-payers are able to enjoy the benefits of a good that payers have paid for due to non-excludability, i.e. public goods confer positive externality. The non-rivalry nature of the good also implies that non-payers can continue to free-ride on payers because the good does not get used up. This is known as the free-ridership problem.
- When every consumer knows that he or she has the ability to free-ride on another consumer, everyone will wait for someone else to pay for it and hope to benefit from the good without having to pay for it. In other words, there is no expression of demand for the good even when consumers gain satisfaction from the good (since consumers are unwilling to pay for a good that they can free-ride on). In such an instance, the rational decision for firms is not to even enter the market to supply the good. If public goods were left to private firms, they would not be provided at all. There is hence a missing market for public goods. The market has failed because no resources will be allocated to their production (a case of total or complete market failure).
- Furthermore, given the property of non-rivalry, the marginal cost to the society of supplying the good *to another user* is zero. The cost of providing the street lighting to 100 people is the same as the cost of lighting up the street for 101 people. In fact, given zero marginal cost of supplying the good to an additional user, the good should be made available to anyone who derives positive marginal benefit from its consumption as it can only increase society's welfare. The allocative efficient price to charge is therefore zero ($P = MC$). As a result, no rational producer will be willing to produce the good if the price charged is zero.
- However, such public goods like street lighting and defence are essential services to the economy and yield valuable benefits to society. Thus there is a need for government to intervene and provide for public goods in order to maximise societal benefits or achieve allocative efficiency whereby where no one can be made better off without making someone else worse off.

Explain how public can be provided via direct provision by the government & its limitations (eg

- One common solution for the problem of public goods is for the government to be directly involved in the provision of these goods. By imposing a tax on its citizens, a government can thus use the tax revenue collected to pay for public goods such as street lighting and bring into existence these public goods that everyone enjoys but which no one will express a demand for.
- The government will make an estimate of the social cost and social benefit of producing and consuming the good and provide an amount equivalent to the socially optimal level ($MSB = MSC$).

Limitation: Inefficiency of state-owned enterprises

- State-owned enterprises (SOEs) tend to be inefficient given the absence of profit motive and competition. A SOE producing a public good may operate with a higher cost than necessary, i.e. X-inefficient. Taxpayers are the ones to bear any losses made by SOEs and public sector managers have few incentives to minimise costs for producing a given level of output. Since the firm is also not subjected to market competition, the rate of innovation and quality of the product or services provided may also be lower, i.e. less dynamic efficient.
- Countries are turning to public-private partnerships in an attempt to deliver these services more efficiently.

However, government intervention should not be restricted to public goods but also in markets whereby reallocation of resources enables increased level of allocative efficiency and welfare in the society: (i) Externalities, (ii) merit / demerit goods

Any 2 relevant evaluation: possibility of gov failure, trade-offs, how can the problem be minimised

Knowledge, Application, Understanding and Analysis	
L3 9-11	For an answer which <ul style="list-style-type: none"> • analyses at least 1 policy to correct each of the 2 sources of market failure identified with its limitations • well exemplified relevant examples • well labelled and explained diagram • may contain minor conceptual errors
L2 6-8	For an answer which <ul style="list-style-type: none"> • provides scope, i.e. discuss 2 sources of market failure, 1st being public goods and another source of market failure • contains some economic analysis though not consistently applied • No or lack of relevant examples • contains some conceptual errors
L1 1-5	For an answer which <ul style="list-style-type: none"> • is largely irrelevant with no indication that the meaning of the question has been properly grasped • is largely descriptive or lacking in the use of economic analysis • contains major conceptual errors
E2 3 – 4	For a reasoned judgement
E1 1 – 2	For an unexplained judgement

- 4 (a) Explain the benefits of globalisation. [10]
- (b) Discuss whether supply-side policies is the best policy to adopt in order to achieve the economic growth in view of a gloomy outlook. [15]

Suggested Answer for (a)

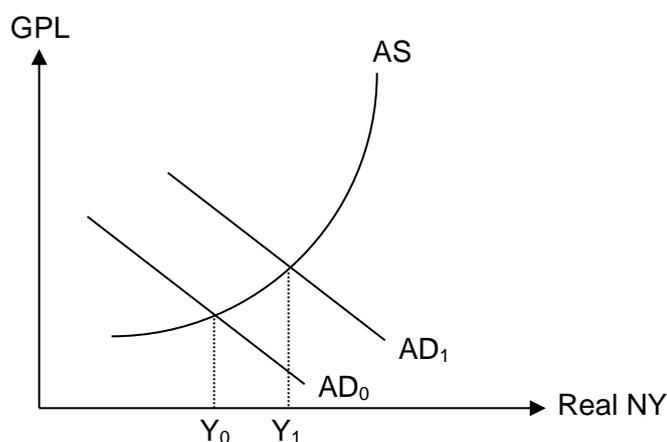
Introduction

Definition of globalisation: Globalisation is the increasing integration of economies around the world, particularly through the movement of goods, services, capital, people (labour) and knowledge (technology) across international borders.

- Increase in international trade at a much faster rate
- Increase in international flow of capital including foreign direct investment
- An increase in movement of labour across boundaries
- An increase in international outsourcing and offshoring by multinational corporations (MNCs)

Body

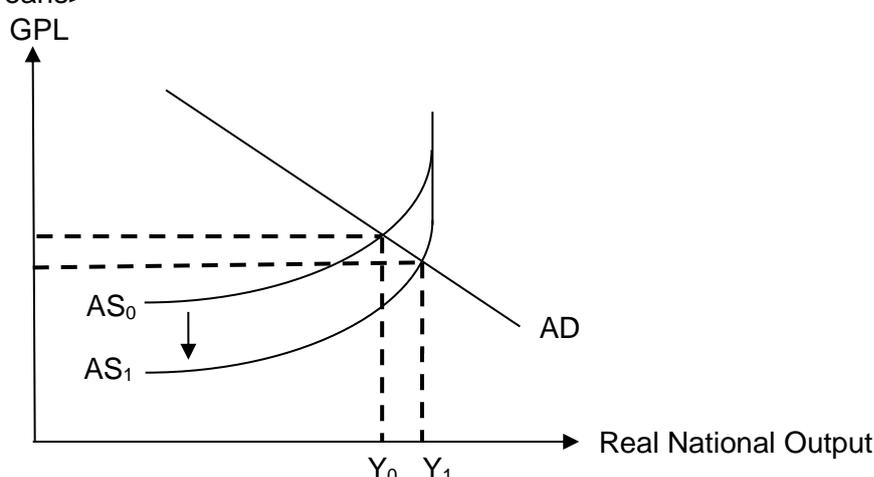
- (i) Freer flow of trade in goods and services
- The reduction / removal of trade barriers enables Singapore to specialise and trade in line with the Theory of Comparative Advantage. As Singapore divert resources to produce goods and services that they can produce at lower opportunity cost than other countries (i.e. in which they enjoy comparative advantage) and using these goods and services to exchange for others which they can only produce at higher opportunity cost, the total quantity of good and services available for consumption increases. The goods and services are produced in countries which opportunity cost is lowest. This means that the world can produce more output with its given resources. With a mutually beneficial TOT, Singapore and her trading countries can consume outside their PPC, \uparrow material SOL. <benefit to Singaporeans>
 - Removal of trade barriers across countries allow Singapore to specialise and export goods that it has comparative advantage in. These include products such as semiconductor chips, pharmaceuticals and petrochemicals. On the other hand, Singapore imports low value added manufactured goods such as textiles from emerging economies such as China and India. \uparrow in DD for exports in petrochemical, pharmaceutical sectors \rightarrow \uparrow in export revenue and rise in net X, ceteris paribus, rise in AD, NY and actual growth, employment (please explain with the aid of AD-AS diagram, including the multiplier effect).



- The increase in X will lead to an increase in AD from AD_0 to AD_1 . There will be excess demand at the given level of NY at Y_0 . As firms drawn down inventories to

meet the excess demand, unplanned disinvestment occurs. Firms will receive signal to produce more. They will employ more factors of production (FOP), including more units of labour. <benefit to Singaporeans> The increase in employment of FOP will lead to increase household income, and they will spend part of their additional income earned on domestically produced goods and services, which would be reflected as an increase in C_d , the extent of which depends on the size of MPC_d . However, the increase in C is lesser than the increase in additional income due to the presence of leakages, where part of the additional income is spent on imports, used to pay tax or kept as savings. The increase in C_d will lead to further increase in AD and subsequently excess demand. The firms will again employ more FOPs to expand production. This process continues and multiple increases in C ensue. Note however that this process does not continue indefinitely due to the existence of leakages (S , M , T) that does not feedback into the circular flow of income.

- Trade also allows Singapore to import semi-finished goods and raw materials from other countries, thus allowing Singapore to enjoy low unit cost of production (COP), reducing AS . <benefit to domestic firms and lower price of goods, benefit to Singaporeans>



- Rise in NX also improves BOT, ceteris paribus, improves current a/c and BOP. This is assuming that the increase in X revenue is larger than the increase in M expenditure.
- Other benefits of \uparrow competition: (i) there will be greater variety of goods and services available to consumers, <benefit to Singaporeans> (ii) there will be economies of scale to be gained where producers/firms experience fall in unit COP as they produce more output due to specialisation based on comparative advantage theory to serve both the export and domestic markets. (explain and exemplify, relate to gains to different groups of stakeholders) <benefit to domestic firms>

(ii) Freer flow of capital

- Freer capital flow will lead to FDI inflows. MNCs may outsource their production process into Singapore to take advantage of the cheaper high-skilled labour and other resources to lower their production costs. <benefit to Singaporeans> This will lead to increase in investments in Singapore. The net inflow of FDI \rightarrow AD increases \rightarrow NY increases (through the k -process) \rightarrow EG (actual growth), lower UN rate. There will also be to an improvement in the capital account and BOP in the short run.
- FDI inflow will help Singapore to develop its physical infrastructure and benefit from technology transfer at a faster rate. <benefit to domestic firms> This will help accelerate its rate of sustaining economic growth over time (increase $AS \rightarrow$ non-

inflationary growth), especially in view that Singapore is already operating very near full employment and needs to expand its AS. [include a well-referenced diagram]

(iii) Freer movement of labour

- Augment talent pool as increase in the supply of skilled and talented labour in Singapore if MNCs send skilled professionals to manage the local business activities. Influx of foreign talent → enhances quality of labour → Increase in productive capacity → increase in AS → potential growth
- Influx of foreign talent allows Singapore to develop new niche areas especially in diversifying the economy by allowing the economy to move up the higher value-added manufacturing ladder, or move into the services sectors. <benefit to domestic firms and Singaporeans>
- The influx of low skilled labour will also help Singapore manage its labour force and allow jobs that locals normally shun to be filled up. This helps to ensure that firm operations can be managed and completed at a low cost, contributing to the overall competitiveness of the economy. <benefit to domestic firms>

Conclusion

Not all economies are the same and hence would benefit from globalisation to different degrees:

- Small and open economies like Singapore benefit from globalisation more than large and less open economies as they are less likely to be able to be self-sufficient in goods and services in the event of no trade. <benefit to Singaporeans> The small domestic markets will restrict the growth of local firms and it will be beneficial for firms to be able to outsource or expand their operations into other countries. <benefit to domestic firms>
- Whether there are policies to (i) manage the costs of globalisation, (ii) ensure that the benefits of growth is distributed to the wider population, (iii) maintain the growth in the LR

Knowledge, application, understanding, analysis		
L3	<ul style="list-style-type: none"> • Good use of economic framework/concepts in analysis → AD-AS diagram • Good scope of coverage • 2-3 aspects of globalisation discussed • Ability to link to both macroeconomic and microeconomic effects • Good depth of analysis • Good application to Singapore context. 	7-10
L2	<ul style="list-style-type: none"> • Use of appropriate economic framework/concepts in analysis → AD-AS diagram • Sufficient scope of coverage <ul style="list-style-type: none"> → At least 2 aspects of globalization discussed → If only 1 aspect of globalization well explained – Max 5 marks → Ability to link to at least 2 macroeconomic effects • Sufficient depth of analysis • Some application to Singapore • Lacks application to Singapore context – Max 6 marks 	5-6
L1	<ul style="list-style-type: none"> • For an answer that is descriptive and lacks the use of economic framework/concepts in analysis • Glaring conceptual errors • Lacks application to Singapore context 	1-4

Suggested Answer for (b)

Introduction

- Identify the side effects of a gloomy outlook: Gloomy outlook → lower investors' confidence and consumers' spending in anticipation of falling income → Fall in I and C → falling AD + AD song → falling real national output and economic slowdown
- Identify the different policies which government can possibly adopt to achieve economic growth in such a condition

Body

Thesis: Supply-side policies enable economies to attain economic growth

There are two broad categories of supply-side policies:

- (i) market-oriented policies
e.g. fiscal reforms, privatisation, deregulation, trade liberalisation and trade union reforms
- (ii) interventionist policies
e.g. infrastructure development, human capital development and enhancing productivity and innovation

Improve incentives through fiscal reform (ie lowering personal and corporate income taxes)

- Lowering personal income taxes gives rise to higher after-tax incomes and the expectation of increased income is an incentive for people to provide more work: this can happen through an increase in the number of hours worked per week; an increase in the number of people interested in finding work and workers will seek to increase their productivity to avoid retrenchment in midst of gloomy outlook. This increases the quantity and quality of labour, thus shifting AS curve to the right.
- Lowering corporate taxes increases net rate of return and shift MEI upward. Investors will be more willing to increase investment spending such as purchase more capital goods. At the same time, this increases productive capacity and give rise to greater potential output growth.

Limitation

Tax cuts also have demand-side effects that causes AD increase. If the impacts of tax cuts on AD is greater than AS, this give rise to rising inflation. This increases the prices of the domestically produced goods and services in both absolute and relative terms. Assuming the rising inflation is greater than other countries, this means that there is a loss in price competitiveness on domestically produced goods.

Assuming demand for the country's exports to be price elastic, an increase in export prices will bring about a more than proportionate fall in quantity demanded, reducing the export revenue. Assuming imports and domestically produced goods and services to be substitutes, an increase in the prices of domestically produced goods and services will induce locals to switch to imports, causing an increase in import spending.

This will mean a worsening net exports and worse enough, it will lower AD and slow down economic growth even further in view of gloomy economic outlook.

Promote free trade and capital movements through liberalisation

The opening up of international trade and investment in midst of gloomy outlook allows countries to acquire needed resources at a lower price, making exports more price competitive or resources which are previously not available in the production of goods and services required for exports; it also enable new ideas and technologies and skills to be transferred from one country to the other and expand the market for domestically produced goods. The increased in quality and quantity of resources increase AS and increase in domestic output.

Limitation

Increased competition due to liberalisation may impose a risk to domestic markets, worsening economic growth. Consumption of domestic goods and services may fall due to availability of substitutes (imports from other countries) and emergence of low cost competitors also cause existing consumers switching away from consuming domestically produced goods and services causing net exports to fall.

Introduce competition through privatisation

Privatisation, involving a transfer of ownership of a firm from the public to the private sector, can give rise to increased efficiency due to improved management and operation of the privatised firm. This is based on argument that private sector is more efficient than the public sector because of the profit motive to reduce costs of production. If the privatisation also leads to increased willingness to engage in innovation, research and development, achieving long term productivity gains. This increases the economy's productive capacity with rightward shift of AS and higher actual and potential economic growth.

Limitation

Incentive driven firms, in view of cutting costs of production to increase profits, may increase efficiency by improving work processes and replaces labour with automation. This results in jobs loss and increased in structural unemployment. If this privatisation involves a firm with high stake in the economy, this may cause a fall in income-induced consumption and worsen current economic growth.

Engage in human capital development to spur economic growth

Training and education programmes can provide skills to workers in specialisation in areas for which there is high demand, thereby assisting them to be more employable. More educated workers can also be more productive but also a more efficient utilisation of capital goods, leading to an improvement in quality of labour resources. This not only helps to shift AS to the right but also aids in attracting foreign investments due to quality labour resources. Hence, I and AD increases, along with economic growth.

Limitation

However, the gestation period for productivity gains through training and education is long whereas the gloomy economic outlook is short term. So the measure is ineffective in achieving economic growth.

Anti-Thesis: Other policies such as demand-management policies can also help to achieve economic growth

Use of Expansionary Fiscal Policy to expand aggregate demand and the level of economic activity

This can be done through

- An increase in govt spending increases in AD (Higher G) (eg Jurong Innovation District)
- Lower personal income taxes leads to a rise in disposable income and consumption spending (Higher C)
- Cuts in corporate taxes cause after tax profits to increase and possible lead to higher investment spending (Higher I)

These lead to an increase in AD and derived demand for FOP. Real national income increases via the multiplier effect, achieving actual economic growth.

Limitation

This can be done only in the short term as increasing G and lower tax revenues may eventually create a budget deficit which may further deters economic growth as it deters consumers and investors to spend and invest respectively.

In the midst of gloomy economic outlook, tax cuts may not be as effective in increasing AD as increases in govt spending because part of the increases in after-tax income is saved. If the proportion of income saved rises due to pessimism about the future, the impacts of tax cuts on aggregate demand will be even weaker. Increase in govt spending is likely to be more effective because they work in entirety to increase in AD.

If the govt pursues an expansionary fiscal policy involving spending in the absence of a corresponding increase in revenues, it must borrow to make up the excess of spending over its revenue. Govt borrowing involves an increase in the demand for money and leads to an increase in interest rate. A higher interest rate can lead to lower investment spending by private firms, a “crowding out” investment. This means a less effective expansionary fiscal policy in achieve higher economic growth is weaken.

Use of Expansionary Monetary Policy to expand aggregate demand and the level of economic activity

In view of gloomy economic outlook, government may drop the interest rate by increasing money supply to fuel increase in economic activity.

The drop in interest rate means a lower opportunity cost of borrowing and therefore consumers and firms are likely to borrow more and spend more, The result is that consumption and investment spending 9ncrease. The effect will be increase in AD and cause a rightward shift of AD curve.

This leads to an increase in actual real national income and economic growth.

Limitation

However, the effect on AD will depend on the elasticity of investment and consumption with respect to a drop in interest rate. If the elasticity is high, the increase in I and C will increase by a larger extent. However, if the economic gloomy outlook is expected to last for an extended period of time, rational firms and consumers to maximise their utility may avoid taking new loans and may even reduce I & C, limiting the effectiveness of this policy.

Even though changes in interest rates can be implemented and changed according to needs of the govt relatively quickly, however, there is a time lag effect including a lag until the economic slowdown is identified to the time when the policy takes place. Changes in interest rates can take several month to have an impact on AD and real output. By then, economic conditions may have change and this limits the effect of this policy.

Use of Exchange Rate Monetary Policy to expand aggregate demand and the level of economic activity

For country like Singapore who has a managed float, govt can depreciate S\$ against the major trading partners increases price competitiveness of SG exports relative to other foreign goods.

As a country's currency depreciates against foreign currencies, the price of its exports will become less expensive in foreign currency terms and the price of imports will become more expensive in domestic currency terms, causing the quantity demanded for the country's exports to rise and the quantity demanded of imports into the country to fall. Assuming demand for both exports and imports to be sufficiently elastic, specifically the sum of the price elasticities of demand for exports and imports must exceed 1, the price changes in X and M will induce large enough changes in Qd to cause an improvement of the goods and services balance. If the Marshall-Lerner condition holds, which states that a depreciation will improve the goods and services balance if $|PED_X| + |PED_M| > 1$. When net export revenue increases, AD and economic growth increases despite a gloomy outlook.

Limitation

However, if $|PED_X| + |PED_M| < 1$, a depreciation of S\$ will worsen the goods and services balance of the current account and economic growth.

However, frequent changes in ER may cause uncertainty for traders and investors as they are not sure what the value of the currencies in which they deal will be in the future. Uncertainty leads to the instability to plan for the future, which adversely affects trade and investment flows.

Use of Protectionism - tariff to achieve economic growth

Assuming a country imposes tariff to restrict imports and increase domestic consumption such that AD will increase together with an increase in C, this leads to an increase in real national income.

Limitation

However, protectionism may give rise further negative effects on a country's export competitiveness. Some domestically produced goods that are protected may be used as in the production of other goods that are exported. For example, a fertiliser industry is protected from imports of fertiliser, then the domestic price of these imported fertiliser will increased. Farmers who use the fertiliser must pay a higher price for it, with the result that the final agricultural goods must also sell at a higher price due to increased marginal cost of production. This results in lower competitiveness in export markets, hurting the economic conditions in domestic economy.

Also, protectionism may give rise to trade retaliation from trading countries.

Eg In September 2009, U.S. President Obama imposed a 35% duty on Chinese tires imported to the U.S. after determining that the Chinese disrupted the market for tires in U.S. A week later, China levied duties of up to 36% on certain nylon products imported from the U.S, hurting U.S. exports industry.

2 relevant evaluation

L3 9 – 11	<ul style="list-style-type: none"> - Well-developed discussion of all 3 types of policies to spur EG - Analysis is supported with the use and explanation of economic framework - Use of relevant real world examples - Application to the context of gloomy outlook
L2 6 – 8	<ul style="list-style-type: none"> - Balanced approach → thesis and anti-thesis - Lacks breadth (addresses only 2 types of policies) or lacks depth (undeveloped explanation / lacks rigour in analysis despite some use of economic framework) - Max 8m – if answer discusses only 2 types of policies → 1 must be SS-side policies - Some use of relevant examples - Limitations of policies may go off-track e.g. side effects / trade-offs in other goals instead of focussing on EG - Limited application to the context of gloomy outlook
L1 1 – 5	<ul style="list-style-type: none"> - Mere descriptive knowledge of SS-side policies or largely irrelevant answer that focuses on other macroeconomic goals instead of EG - Does not consider other types of policies - Limited use of relevant examples
E2 3 – 4	<ul style="list-style-type: none"> - Reasoned judgement on the best policy to spur EG in view of a gloomy outlook, supported with economic analysis → e.g. shows some comparison of the different types of policies or any other relevant evaluative argument
E1 1 – 2	<ul style="list-style-type: none"> - Unsubstantiated stand on the best policy to spur EG in view of a gloomy outlook