

YISHUN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS 2017

H1 ECONOMICS

8819/01

PAPER 1

23 AUGUST 2017
0800 – 1100 hrs

TIME 3 hours

Additional materials: Writing papers, cover pages



INSTRUCTIONS TO CANDIDATES

Write your name and CTG on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use highlighters, glue or correction fluid.

Answer questions **1**, **2**, and **either 3 or 4**.

Start a new question on a fresh piece of paper.

At the end of the examinations, fasten all your work securely together.
Tie a cover page to **three** separate questions:
1. Case Study Question 1,
2. Case Study Question 2, and
3. Either Essay Question 3 or 4.

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

You are reminded of the need for good English and clear presentation in your answers.

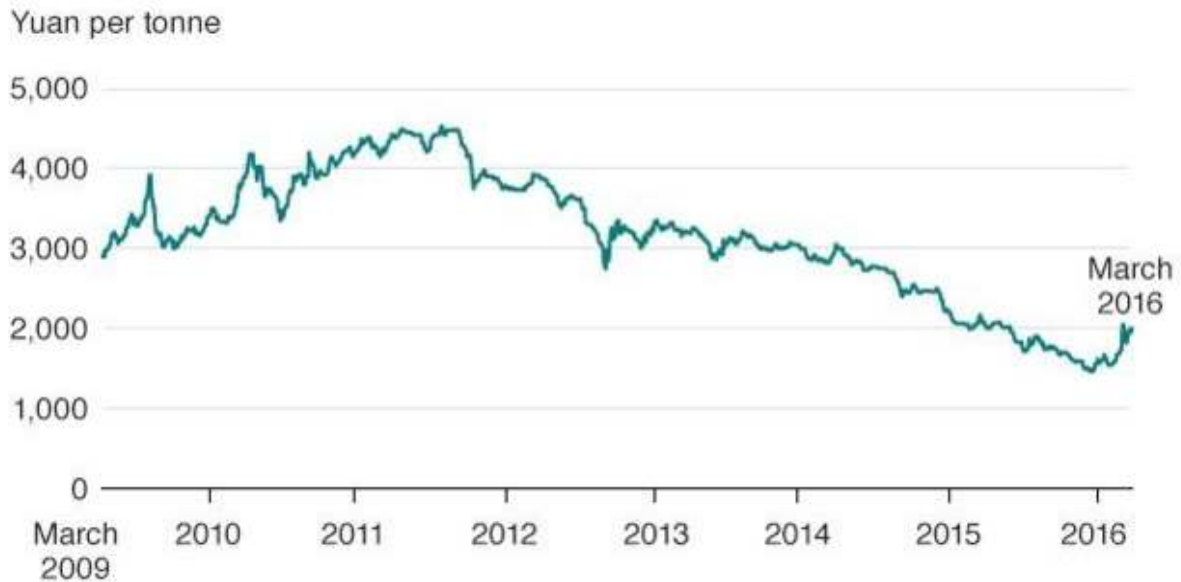
This paper consists of **8** printed pages, including this cover page

Section A

Answer **all** questions in this section.

Question 1 The Market for Steel

Figure 1: World price of steel



Source: Bloomberg

Extract 1: Global steel demand set to fall again in 2016: Worldsteel

Global steel demand will continue to fall this year before a slight pick-up in 2017, the World Steel Association forecast on Wednesday.

Falling demand has plunged the global steel market into crisis, with excess capacity taking a heavy toll on producers, including those in China - leading to plant closures and job losses.

Global apparent steel use - deliveries minus net exports of steel industry goods - is expected to fall 0.8 percent in 2016 to 1.488 billion tonnes after a 3 percent fall last year, according to Worldsteel.

China, which produces about half the world's steel, is under increasing international pressure to tackle a local supply glut that has led to accusations of China flooding markets with cheap steel. However, China is reluctant to do so as cutting industrial capacity will force China to lay off probably 1.8 million workers from steel and related sectors.

"The key to this year's figure is the decline in demand from China, which is responsible for half of the global demand, where a surplus in residential properties is a problem, but also weaker demand from Brazil and Russia," Worldsteel Director General Edwin Basson said.

Source: Reuters, 13 April 2016, the Straits Times, 8 March 2016

Extract 2: China tackles pollution woes

Worried by the social and political impact of pollution, China has vowed to crack down on lawbreaking companies and the local governments that protect them. As part of its war on pollution, China's traditionally underpowered environment ministry was granted new powers to send inspection teams to local regions without warning, and was also given the authority to summon senior provincial officials to explain their conduct.

During a nationwide investigation of 1,019 steel enterprises across the country, the Ministry of Environmental Protection inspectors found that 173 firms were found to have violated the country's environmental rules, with 62 firms involved in illegal construction and 35 exceeding state emission limits. 23 of the offending firms had been asked to cut production, while another 29 had been shut down temporarily to "rectify" their problems. Fines totaling 18.9 million yuan have been imposed and three officials have been detained.

Source: Reuters, 10 Oct 2016, South China Morning Post, 2 Apr 2017, FORES Study 2012:1

Extract 3: UK and EU urged to act on Chinese steel dumping after US raises duty on imports

Britain's steel trade body and unions have called on the UK and the EU to take urgent action to stop Chinese steel dumping, after the US government increased tariffs on imports of cold rolled steel from China to 522% from 266%. A spokesman for the Community trade union said that unfairly traded Chinese steel was hurting UK and European steel producers.

China's steel exports reached a record 112.4 million tonnes last year, up by 19% – but their value fell 10.5% to \$62.8bn (£43.2bn) as a result of falling prices. This has led to a global steel glut, which has plunged European steel producers into crisis. UK steel factories have also been put up for sale, putting thousands of jobs at risk across the country.

In defiance of the US move, China, the world's largest steel producer, said it would push on with controversial tax rebates to steel exporters to support the sector's restructuring after a slowdown in demand at home.

China's ministry of finance said that the tax rebate policy on steel exports was to fund a costly capacity closure plan which it plans to eliminate 100 to 150 million tonnes of annual production – more than the amount US produces every year – over the next five years.

The US commerce department said that Chinese-made steel products, which totalled \$272.3m in 2015 were being sold in the US at below cost with unfair subsidies. China, however, denies that its mills have been dumping their products in other countries, arguing that its steelmakers are more efficient.

Source: The Guardian, 18 May 2016

Questions

- (a) i) With reference to Figure 1, describe the trend in the world price of steel [2]
between March 2009 and March 2016.
- ii) With reference to the case material and use of a diagram, explain the [5]
change in world price of steel in 2015.
- (b) i) Explain one example of negative externality which could result from steel [2]
production.
- ii) With the use of a diagram, explain how negative externality in steel [5]
production could lead to market failure.
- iii) Explain the measure undertaken by the Chinese government (from Extract [8]
3) in tackling the negative externalities associated with steel production
and discuss an alternative policy option the Chinese government could
consider.
- (c) Discuss if UK and EU should adopt protectionist measures against [8]
Chinese steel in circumstances described in the case material.

[Total: 30]

Question 2 Economic Growth of China and Japan

Table 1: Annual real GDP growth rates (%) for China and Japan

	2010	2011	2012	2013	2014	2015
China	10.6	9.5	7.9	7.8	7.3	6.9
Japan	4.2	-0.1	1.5	2.0	0.4	1.2

Table 2: Annual inflation rates (%) for China and Japan

	2010	2011	2012	2013	2014	2015
China	3.3	5.4	2.6	2.6	2.0	1.4
Japan	-0.7	-0.2	-0.1	0.4	2.8	0.8

Table 3: Components of GDP for China and Japan, 2015

	China	Japan
Private Consumption Expenditure (% of GDP)	38	56
Gross Fixed Capital Formation (% of GDP)	45	23
Government Consumption Expenditure (% of GDP)	14	20
Exports of goods and services (% of GDP)	21	18
Imports of goods and services (% of GDP)	18	17

Source: Worldbank.org

Extract 4: China economic growth slowest in 25 years

After experiencing rapid growth for more than a decade, China's economy has experienced a painful slowdown in the last two years.

It has come as the central government wants to move towards an economy led by domestic consumption, rather than one driven by exports and investment. Those two aspects now make up 50.5% of the economy, up from 48.5% in 2014. But managing that transition has been challenging.

Some argue that China's focus on creating an economy driven by consumption is misplaced. They say as the country attempts to rebalance its economy, it should focus on productivity in order to sustain high growth.

China's headline annual economic growth numbers are important, but so too are other economic data, as they can provide a more in-depth look at the economy and where it's heading.

"The health of the labour market, retail sales and industrial production data are all key indicators for growth," said Catherine Yeung from Fidelity International in a note.

Adapted from BBC News, 19 January 2016

Extract 5: Japan hit by weaker economic growth in the Second Quarter

Between April and June, economic growth slowed by 0.4% compared with the first three months of the year.

Lagging exports and sluggish consumer spending were the biggest contributors to the drop in growth. Japanese Economics Minister Akira Amari said the slowdown in GDP growth was due to weak export growth to China and the US, as well as poor consumer spending.

The disappointing economic growth follows a recent run of weak data including exports and factory output, raising doubts about the outlook for the rest of the year.

Adapted from BBC News, 17 Aug 2015

Extract 6: Japan announces more stimulus measures as economy struggles

In the three and a half years since he won the Japanese prime minister's office on a pledge to rekindle economic growth, Shinzo Abe has tried many tactics to coax the economy into expanding. Tokyo's reform efforts, dubbed Abenomics, were kicked off in 2012. He persuaded the central bank to flood the country with cheap money. He sanctioned a sharp fall in the value of the yen, a boon for big exporters like Toyota and Panasonic. And he increased government spending, pouring cash into areas as varied as day care and defense.

The stimulus effort faces several obstacles. The government has struggled to implement policies to deregulate the job market and open up some of the country's very protected industry sectors, such as the farming and pharmaceutical sectors. Another bigger problem is the yen, which has strengthened over the years, cutting into the profits of Japanese exporters.

The result has therefore been well short of the renaissance Mr. Abe promised. Now his government is embarking on what may be its biggest spending program yet. About ¥3.5 trillion will be spent on social items like wage subsidies for people who leave work to care for children or aging relatives. But more will be spent on infrastructure, including the maglev train, which the government wants to help build between Tokyo and Osaka by as early as 2037, eight years earlier than a previous timetable.

Mr. Abe is not only betting that Japan can spend its way to growth, but that economic expansion will help the country claw its way out of a canyon of debt. Japan's government debt is bigger than that of any other country, relative to the size of its economy.

Adapted from the New York Times, 2 Aug 2016

Questions

- a) Compare the economic growth of China and Japan between 2010 and 2015. [2]
- b) Explain how any **two** of the following data can be key indicators of economic growth: [4]
- Health of the labour market,
 - Retail sales, or
 - Industrial production.
- c) Assess the possible costs and benefits of switching from “relying on external demand to domestic demand in generating growth” (Extract 4). [6]
- d) With reference to Extract 5, explain why Japan has been experiencing slowing growth in the second quarter of 2015. [4]
- e) Identify and explain two pieces of evidence you would need to determine the appropriateness of fiscal policy. [6]
- f) With reference to the data where appropriate, discuss how current and future living standards are affected by Tokyo’s reform efforts. [8]

[Total: 30]

Section B

Answer **one** question from this section.

- 3 (a)** Explain, with the help of examples, the concepts of price elasticity of demand and supply. [10]
- (b)** Discuss the view that the best way for the Singapore government to respond to the existence of positive externalities is to implement a subsidy. [15]
- 4 (a)** Explain why Singapore trades with both developed as well as developing countries. [10]
- (b)** Comment on the impact of globalisation on a small and open economy, like Singapore. [15]

END OF PAPER



**Yishun Junior College
2017 JC2 H1 Economics
Paper 1
Preliminary Examination
Suggested Answers, Marking Schemes & Markers' Comments**

Question 1

(a) i) With reference to Figure 1, describe the trend in the world price of steel between March 2009 and March 2016. [2]

Suggested answer:

World price of steel generally rose between Mar 2009 to end 2011 before decreasing generally until Mar 2016.

ii) With reference to the case material and use of a diagram, explain the change in world price of steel in 2015. [5]

Suggested answer:

World price of steel generally fell in 2015.

A fall in price could be due to decrease in demand and/or increase in supply.

Reason for the decrease in DD:

- 1) The decrease in global demand for steel stems from the fall in demand for steel from China, Brazil and Russia. And since China is responsible for nearly half the global metals demand, a decrease in demand from China due to slow-down in the construction industry will lead to a large (extent) fall in global demand.

Reasons for the increase in SS:

- 1) Overcapacity in China (Ext 1 P3) could have led to increase in SS or over-supply of steel to the world market. This can be seen from Ext 3 P4 that China government is aiming to shut down facilities producing 100 to 150 million tonnes annually by 2020.
- 2) China could also be dumping their steel into the global market. This will increase in SS of steel in the world market at low prices. This can be seen from Ext 3 P2 and 5 where China's steel exports reached a record 112.4m tonnes (19% increase) but value fell by 10.5% (prices would have decreased by approximately 30%)

(b) i) Explain one example of negative externality which could result from steel production. [2]

Suggested answer:

- 1) Greenhouse gases emissions causing global warming

2) Air pollution affecting the health of population and visibility in country.

ii) With the use of a diagram, explain how negative externality in steel production could lead to market failure. [5]

Suggested answer:

- 1) Greenhouse gases emissions and air pollution are negative externalities which are negative spill-over effects on 3rd parties → $MEC > 0$. $MSC = MPC + MEC \rightarrow MSC > MPC$
- 2) Since individuals only consider marginal private cost and benefit in their decision-making, market/private equilibrium will be when $MPC = MPB \rightarrow E_p \rightarrow Q_p$
- 3) However, society welfare is maximised when $MSB = MSC \rightarrow E_s \rightarrow Q_s$
- 4) Since $Q_p > Q_s \rightarrow$ over-production of $Q_s Q_p$ units. Between $Q_s Q_p$, $MSC > MSB$, summing up the whole area will give the deadweight loss.

iii) Explain the measure undertaken by the Chinese government (from Extract 3) in tackling the negative externalities associated with steel production and discuss an alternative policy option the Chinese government could consider. [8]

Suggested answer:

Measure undertaken = regulation (setting standards, emission limits or environmental rules)

Explanation of how measure work to tackle negative externalities:

- The Chinese government probably have ‘calculated’ the optimal level of emissions and in turn set emission limits for firms.
- Firms are supposed to abide by these limits and reduce their emissions through reduction in production or adopting cleaner methods of production.
- This will reduce the amount of negative externalities to the socially optimal level.

Alternative options = subsidy into R&D for cleaner production methods, taxation on emissions/production or others

- Explanation of how measure work to tackle negative externalities
- Evaluation of effectiveness of measure in tackling negative externalities
- Overall judgement

L1	Able to describe how both measures work or state some limitations or unintended consequences or able to explain clearly how existing measure work	1 – 2
L2	Able to explain clearly how both measures work only (1-sided) Or Able to explain how existing measure work and explain how alternative measure could be limited in effectiveness or unintended consequences (1-sided)	3 – 4
L3	Able to explain how existing measure work and explain and evaluate how alternative measure may or may not tackle the negative externalities	5 – 6
E	Able to provide value judgement on the overall effectiveness of alternative measure	1 – 2

(c) Discuss if UK and EU should adopt protectionist measures against Chinese steel in circumstances described in the case material. [8]

Suggested answer:

UK and EU governments should adopt protectionist measures against Chinese steel:

- There is a possibility of China dumping steel into UK and EU.

As highlighted in Ext 4, China's steel exports reached a record 112.4m tonnes (up 19%) but their value fell 10.5% as a result of falling prices. This has led to European and UK steel factories to close down and putting thousands of jobs at risk. The same could be said to have happened to US as well. Therefore, UK and EU government should adopt protectionist measures to protect their own producers from being driven out by foreign (unfair) competition.

In fact, Ext 4 further highlighted that Chinese-made steel exports enjoyed a tax rebate policy or the Chinese-made steel products have enjoyed unfair subsidies from the government.

- Protection jobs in the home industries

Regardless of whether there is fair competition (cheap imports due to CA) or unfair competition (cheap imports due to government subsidies). UK and EU governments should adopt protectionist measures to protect the jobs and incomes of workers in the steel industries. By ensuring that the local firms can withstand the foreign competition, production will continue and that will provide jobs and income for UK and EU steel workers.

- Environmental concerns (can accept, but this wasn't presented in the notes)

UK and EU governments may adopt protectionist measures against Chinese steel for environmental reasons. It is quite clear from Ext 2 and 3 that Chinese steel firms are highly pollutive. Some more argue that the low prices could be the result of lack of adoption of cleaner but expensive production methods. Therefore, by putting (for example) a tariff on Chinese steel, the quantity demanded for Chinese steel will fall and lesser pollution will be created.

UK and EU governments should not adopt protectionist measures against Chinese steel:

- China may have the comparative advantage in steel production or UK and EU do not have the comparative advantage

Ext 2 mentioned that there is overcapacity of steel output in country. This could be due to China's factor endowment in cheap low-skilled workers or low-cost land which has resulted in lower opp cost of production. As mentioned above, the older (but dirtier) production methods could also be cheaper. Therefore, China may indeed have the comparative advantage in steel production.

What more, if US should impose 522% tariff on Chinese steel, clearly the opp cost for producing steel in US is way higher than China. And since UK and EU are similar in the stage of economic development as US, UK and EU are not likely to have the comparative advantage in the production of steel.

Overall judgement

- It is probably true that China indeed has the comparative advantage in steel production and importing the cheaper steel into UK and EU will benefit the steel users or importers.
- Also, the argument that China is dumping their steel is difficult to ascertain due to lack of information on the actual marginal cost of production.
- And if UK and EU should protect against Chinese steel, it could invite retaliation by China which will adversely impact UK's and EU's exports to China.
- Therefore, EU and UK should not adopt protectionist measures against Chinese steel.

L1	able to describe the case for and against protectionism	1 – 2
L2	Able to explain clearly the case for OR against protectionism (1-sided)	3 – 4
L3	Able to explain clearly the case for AND against protectionism (2-sided)	5 – 6
E	Able to provide value judgement on whether protectionism should be implemented	1 – 2

Question 2

a Compare the economic growth of China and Japan between 2010 and 2015. [2]

Suggested Answer

- Direction: Both generally decreased (similarity)
- Sign: Both countries generally experienced positive growth, except Japan in 2011 (difference)
- Level: China has higher economic growth than Japan throughout/always (difference)
- Volatility: China's experienced a steady decrease in economic growth whereas Japan's economic growth tended to fluctuate (difference)

b Explain how any two of the following data can be key indicators of economic growth: [4]

- Health of the labour market,
- Retail sales, or
- Industrial production.

Suggested Answer

Shows link of indicator to economic growth

- Health of the labour market
 - employment rate - increase in employment, increase household income and purchasing power and hence consumption, indicating stronger economic growth
 - with stronger economic growth, there is more production. As firms increase production, the demand for factors of production would increase, resulting in higher employment rates
- Retail sales
 - strong retail sales signals strong consumer confidence - in turn give rise to investor confidence - suggest higher C and I, higher AD and hence economic growth
 - with stronger economic growth, there is more production. As firms increase production, the demand for factors of production would increase, resulting in higher employment rates and increase in purchasing power, leading to higher retail sales
- Industrial production
 - strong industrial production signals strong consumer demand, leading to stronger economic growth
 - with stronger economic growth, there is more production. As firms increase production, industrial production increase

c Assess the possible costs and benefits of switching from "relying on external demand to domestic demand in generating growth". [6]

Suggested Answer

Switching from relying on external demand to domestic demand refers to China adjusting the driver of economic growth from export revenue to domestic consumption.

Costs:

- Slower growth in the short run as producers change production outputs to suit local tastes – the increase in domestic consumption may be slow as household income are still low in many China cities, while export revenue may not increase as rapidly as before. This may lead to a slower increase in AD, leading to slower actual growth in the short run as the

economy adjusts.

- May need to restructure the economy due to different taste and preferences between domestic and foreign demand, leading to structural unemployment
- In the short run, the balance of payments may deteriorate as the export revenue may rise more slowly now (compared to before the switch) or even fall, leading to a deterioration of the current account in the short run.

Benefits of focusing on domestic demand:

- More stable economic growth/Less cyclical unemployment: less vulnerable to external shocks in the long run: China has large domestic market, or domestic market consumption (C) tends to be more stable compared to external demands and FDI.
- Less structural unemployment: Domestic taste and preferences more stable than demand patterns of export markets - less structural changes needed
- Potential for future actual growth: Current C/GDP in China is 38%, hence there is potential for increase in this ratio to bring about greater economic growth

Overall assessment

The costs of adjustment are likely to occur in the short run, but the benefits of adjustment are more likely to be seen in the long run. Overall, the impact on the economy is likely to be positive in the long run, if China is able to make the switch successfully.

d With reference to Extract 2, explain why Japan has been experiencing [4] slowing growth in the second quarter of 2015.

Suggested Answer

1. Slow increase in X or C (extract 6) – weak exports, poor consumer spending or Slow increase in I – raising doubts of outlook (for identifying the component that is affected)
2. AD increases slower than before
3. Adjustment process –
 - a) unplanned running down of stocks → firms increase production but at a slower rate → employment, factor income increases at a slower rate
 - b) national income increases at a slower rate, hence slowing actual growth via the multiplier process

e Identify and explain two pieces of evidence you would need to determine [6] the appropriateness of fiscal policy.

Suggested Answer

Effectiveness

- Size of multiplier
- Size of C, I, G as a proportion of GDP
- Crowding out effect
- Time lag
- Root cause of problem
- Business / consumer outlook

Feasibility

- Size of government debt
- Unintended consequences

f With reference to the data where appropriate, discuss how current and [8] future living standards are affected by Tokyo's reform efforts.

Suggested Answer

Tokyo's reform efforts include expansionary monetary policy, devaluation of the Yen, increased government expenditure, and supply-side policies to deregulate the job market and open up some industries.

Material:

- Wage subsidies for work leavers – increases household income of the group – increase purchasing power – able to consume more goods and services
- Increase in factor income for factor owners of construction and other firms who received infrastructure construction projects from the government. Induced consumption leads to multiple rounds of income expansion via multiplier effect.
- The devaluation of the yen may lead to increased NX, increase in AD and hence increased national income – higher purchasing power of households and therefore an improvement in material SOL. On the other hand, the devaluation will also increase import prices in Yen and would reduce the ability of Japanese to purchase imports, reducing the material well-being of the Japanese.
- <LT> Increase in productive capacity – possible for economy to produce more goods and services in the future - extent of this depends on suitability of current investment <e.g. usefulness of maglev train?> and how much capacity can be taken up in the future
- <LT> Increase in debt burden may lead to increase in taxation – if increase in tax is more than increase in income (assuming policy is successful), households' disposable income may instead fall

Non-material:

- Children and aging relatives who received care from work leavers
- Negative externalities – noise/air pollution from construction <construction brought forward by 8 years>
- <LT> Improvement in social infrastructure – ease of living

L1 (1-2)	Give an account of the reform efforts, and a listing of either: <ul style="list-style-type: none"> • the impact on current or the future only • the positive or negative impact
L2 (3-4)	For an explanation of either: <ul style="list-style-type: none"> • the impact on current or the future only • the positive or negative impact
L3 (5-6)	For a balanced explanation of both the positive and negative impact on standard of living in the short and long run.
E (1-2)	For an overall judgement of the impact on standard of living.

Question 3

- a) Explain with the help of examples the concepts of price elasticity of demand [10] and supply.
- b) Discuss the view that the best way for the Singapore government to respond [15] to existence of positive externalities is to implement a subsidy.

Part a)

Suggested Answer

Introduction

Define the concepts of price elasticity of demand (PED), price elasticity of supply (PES)

- [Definition] PED – measures the responsiveness of quantity demanded of a good to a change in its price, ceteris paribus.
- [Definition] PES - measures the responsiveness of quantity supplied of a good to a change in its price, ceteris paribus.

Body

Explain PED with the help of examples

- [Sign] PED is always negative because the law of demand states that the quantity demanded of a good or service is inversely related to its price. An increase in price will lead to a fall in the quantity demanded, ceteris paribus.
- [Magnitude] The magnitude of the coefficient of PED is dependent on factors like availability and closeness of substitutes and proportion of income spent on the good.
- [Factors affecting PED / Example] For goods with few or no close substitutes and take up a relatively small proportion of income, demand for salt / water is relatively price inelastic. Even when the price of water rises, consumers will not be able to switch to another alternative, hence the quantity demanded will fall less than proportionately.
- [Factors affecting PED / Example] Demand for cars is generally price elastic. As cars take up a large proportion of income and there is a low need for the good, if the price of a car increases by 50%, it is more likely to affect a consumer's spending ability by a large extent as the expenditure on car takes up a large proportion of their income spent. Thus, he will more likely respond to changes in price of cars as compared to salt.

Explain PES with the help of examples

- [Sign] PES is always positive because the law of supply states that the quantity supplied of a good or service is directly related to its price. An increase in price will lead to a rise in the quantity supplied, ceteris paribus.
- [Magnitude] The magnitude of the coefficient of PES is dependent on factors such as availability of spare capacity and factor mobility.
- [Factors affecting PES / Example] If producers of manufactured products such as tyres, canned food, frozen poultry and stationery are able to keep finished goods as unsold stocks (i.e. inventories in the warehouse), the quantity supplied will be more responsive to changes in price as the producers can draw down on the inventories to meet the increased demand. The greater the availability and durability of unsold stocks, the more price elastic the supply of the good will be.

- [Factors affecting PES / Example] Producer of goods which are not so durable in nature are unable and unwilling to keep too much unsold stocks in their warehouse and hence the supply is less price elastic. For example, fresh produce (e.g. vegetables turn yellow, fresh poultry turns bad after a few days) and computer chips or electronic gadgets (may become obsolete after a few months).
- Or
- [Factors affecting PES / Example] The greater the factor mobility or the ease of switching factors inputs away from producing alternative products, the more price elastic the supply of the good. This is because many producers usually produce a range of products and if they are able to switch factor inputs such as machines and labour from one type of production to another, the quantity supplied of the good will be more responsive to changes in price.
 - For example, sewing machines and labour can switch from sewing clothes to sewing curtains.
 - [Factors affecting PES / Example] However, if the factors inputs are not mobile, producers will not be able to transfer factors input (away from other production) to increase quantity supplied of the good (whose price has increased). For example, a factory plant producing steel cannot be used to produce copper.

Marking Scheme

L3	For a thorough and well-developed explanation on the concepts of price elasticity of demand AND price elasticity of supply with appropriate examples provided and explained. For full L3 marks, answer must have defined and explained, with the use of examples, the respective signs (positive / negative) and magnitudes of price elasticity of demand AND price elasticity of supply (i.e. explanation of $PED < 1$, $PED > 1$, $PES < 1$ and $PES > 1$).	7 – 10
L2	For an under-developed explanation on concepts of price elasticity of demand AND price elasticity of supply. May contain some conceptual errors but appropriate economic concepts used. Some examples provided but not well-elaborated, i.e. did not make use of the examples to explain the determinants / factors affecting the magnitude of price elasticity demand and / or supply. Or Well-developed explanation with the use of relevant examples of EITHER price elasticity of demand OR price elasticity of supply.	5 – 6
L1	Question requirements are interpreted inaccurately with inappropriate application of economic concepts, theories and principles. Economic analysis is inaccurate and diagrams used are inappropriate or wrong. There is no attempt to support analysis by illustration with examples or illustration with examples is inaccurate.	1 – 4

Part b)

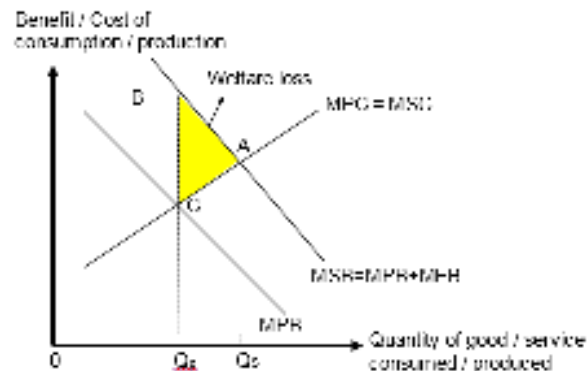
Suggested Answer

Introduction

Explain positive externalities and the need for government intervention in a market where positive externalities exist.

Body

Briefly explain how the existence of positive externalities arising from the consumption of medical services may lead to market failure



- Economic agents maximise their own self-interest. As consumers only take into consideration the MPB (i.e. the medical expenses saved, stronger health, etc.) and MPC (cost of the vaccination, etc.) when consuming medical services (e.g. vaccination against tuberculosis), consumption will be at the private optimum level $0Q_p$ where $MPB = MPC$.
- However, when a person consumes medical services, in addition to the MPB, his / her consumption may bring benefits to others. Third parties like family members and neighbours staying with or near this consumer may enjoy benefits such as saved medical expenses or healthier community which may bring about economic growth as the vaccination may prevent them from contracting tuberculosis. Hence, the existence of MEB will result in a divergence between MPB and MSB.
- At the private optimum level of output $0Q_p$ where $MPB = MPC$, society values an additional unit of the good consumed more than what it would cost the society to produce it. As such, more medical services should be consumed. The socially optimal level of output is at $0Q_s$ where $MSC = MSB$, where net social benefit is maximized.
- Thus, if left to the free market, there will be an under-consumption of medical services, by $Q_p Q_s$. Between Q_p and Q_s , MSB is greater than MSC. Hence, the economy will reap additional benefit or welfare if it increases its consumption by $Q_p Q_s$. By summing the excess of MSB over MSC for the units $Q_p Q_s$, we arrive at a monetary measure of welfare loss of area ABC to the society. There is an under-allocation of resources in the market for medical services.

Discuss how subsidies (e.g. cash grants, vouchers, etc.) work to correct market failure due to the existence of positive externalities from the consumption of medical services

- How policy works
 - The government can implement a subsidy that is equal to the MEB at the socially optimal output level, $0Q_s$.

- The subsidy given will decrease the MPC of consumption of medical services which will lead to the consumers internalise the external benefits.
- The subsidy will shift the MPC curve parallel downwards by the full amount of the tax, until it coincides with MSC. The socially optimal output Q_s is achieved.
- Examples: National Childhood Immunisation Programme (NCIP), Community Health Assist Scheme (CHAS) to help provide accessible and affordable medical care to Singapore Citizens
- Evaluation of policy
 - Advantages - Allow markets to operate according to market forces and allows for flexibility in that the level of subsidy can be changed according to the level of externalities. Certain vaccinations, e.g. tuberculosis, hepatitis B, etc. are fully subsidised while other vaccinations, e.g. influenza are only partially subsidised.
 - Disadvantages – (Lack of information) Many effects of the positive externalities are not measurable and hence it is difficult and impossible to find the ‘right’ amount of subsidy which will enable the market to consume the socially optimal output. Government intervention may distort market mechanism. Subsidies may allow inefficient firms to survive and regulation such as price floor or ceiling may lead to persistent shortages or surpluses.
 - Consequences / side effects - Providing subsidies translates into government expenditure, which may be a drain on government resources. By subsidising the consumption of medical services, the government has to direct resources away from other areas of concern.

Discuss how legislation / direct provision works to correct market failure due to the existence of positive externalities from the consumption of medical services

- How legislation works
 - The government can require citizens to consume medical services like vaccinations. If the legislation is passed such that consumption is at level Q_s , then socially optimal level of output will be achieved.
 - The National Childhood Immunisation Programme (NCIP) in Singapore covers vaccination against tuberculosis; hepatitis B
- Evaluation of legislation
 - Advantages - Legislation are clear and easier to implement as well as easy to administer
 - Disadvantages – Administrative cost in the form of law enforcement and monitoring to ensure consumers abide by the legislation
- How direct provision works
 - The government may directly provide medical services to supplement the amount provided by the market. The government may provide at no charge (direct provision) or at subsidised rates (joint provision) to the consumers. The local community other than the consumers can benefit substantially. If a person decides to get a vaccination against tuberculosis, others benefit by not being infected. A free or affordable medical service provided by the government thus helps to combat the spread of diseases. If not, there may be an under-consumption of such healthcare services.
- Evaluation of direct provision
 - Advantages - This is a direct way of intervening and ensuring that consumption level will be increased to be at/closer to the socially optimum level, Q_s . Direct provision by the government may also result in better quality of goods and services since the

- government is able to closely monitor the service and production standards.
- Disadvantages - May result in inefficiency as the government may be subject to government failures as well. Government provision is often plagued by bureaucracy and red tapes, which cause them to be inflexible and inefficient. Furthermore, government provision may not be accountable to shareholders and hence tend to be less concerned with minimising cost and maximising efficiency. Once again, public provision which is financed by taxes may undermine efficiency.

Evaluative conclusion:

Implementation of a subsidy is / is not the best way for the Singapore government to respond to existence of positive externalities.

Possible evaluation points:

- Feasibility of implementation of subsidy depends on the health of the government budget
- Effectiveness of subsidies depends on the nature of the good / service, i.e. price elasticity of demand more / less than 1
- Sustainability of subsidising
- Other considerations: equity
- Possibility of government failure due to administrative costs, information gaps and time lags resulting from red tape and bureaucracies

Marking Scheme

L3	<p>Developed analysis on how an implementation of subsidies can correct market failure due to the existence of positive externalities. Answer also adequately evaluated the advantages and disadvantages of subsidies, explained and evaluation one other policy (legislation / direct provision) that may be better in correcting the market failure due to the existence of positive externalities.</p> <p>For full L3 marks, answer must have:</p> <ul style="list-style-type: none"> - Explained how subsidies work - Evaluated both the advantages and disadvantages of an implementation of subsidies - Explained how legislation / direct provision work - Evaluated both the advantages and disadvantages of legislation / direct provision 	9 – 11
L2	<p>For an answer that explained at least 2 policies and the advantages/disadvantages, with one being subsidies but lacking in depth of analysis (i.e. limited reference to the cost-benefit framework and no use of examples).</p> <p>OR</p> <p>For an answer that explains how subsidies work to correct market failure, including its advantages and disadvantages.</p> <p>For L2 - 8m, answer must have at least:</p> <ul style="list-style-type: none"> - Explained subsidies and alternative policy as well as explained 	6 – 8

	<p>either at least 1 advantage / disadvantage for both policies or only the advantages and disadvantages of any one policy.</p> <p>OR</p> <p>- Explained subsidies and both advantages and disadvantages</p>		
L1	<p>Answer lacks depth / is descriptive, and/or contains too many errors.</p> <p>For an answer that only explains how the market fails with the existence of positive externalities.</p>	1 – 5	
E2	<p>Evaluative comments are well-explained and supported by economic analysis.</p>	3 – 4	
E1	<p>Evaluative comments are unexplained or not supported by economic analysis. E.g. superficial conclusion based on the analysis by merely repeating or summarising.</p>	1 – 2	

Question 4

- a) Explain why Singapore trades with both developed as well as developing [10] countries.
- b) Comment on the impact of globalisation on developing and developed [15] countries.

Part a)

Suggested Answer

The Theory of Comparative Advantage

- Countries relatively rich in land and natural resources (usually the developing countries) have a lower opportunity cost in the production of goods and services that require such raw materials and thus, tend to specialise in the production of agricultural products for trade
- On the other hand, countries rich in capital and skilled labour (e.g. Singapore and the developed countries) have a lower opportunity cost in the production of goods and services that require such raw materials thus, tend to specialisation in industries that are capital intensive, such as as aeroplanes and industrial machinery
- Based on the theory of comparative advantage, if a country specialises in the production of a good where they have a lower opportunity cost, and export this in exchange for a good where they produce at a higher opportunity cost, then there will be an increase in economic welfare for both economies.
- This is because Singapore is a country with a relatively skilled workforce but scarce land resources, and thus the economy is largely centred on capital and knowledge intensive production.

Benefits that can be derived from economies of scale

- Production for a larger market would also allow producers to enjoy economies of scale (internal/external) leading to lower unit cost.
- Singapore trades with countries like China and the United States because of their larger population size, and hence we are better able to enjoy the benefits of economies of scale
- The result is lower prices and larger volume of goods for both local and foreign consumption.
- Signing of more FTAs – govt policies to open up the economy → enables more trade with both countries → developing countries have growing income, while developed countries are at a stronger income level and more able to purchase goods and services → stimulates X as an engine for growth

Variety

- Brand names and other forms of product differentiation with real or imagined differences in quality may prompt exchange of goods between countries.
- For example, Singapore may trade with countries like Japan and the United States for consumer electronics in order to increase the variety of goods available in Singapore.
- With trade, there is greater consumer choice and greater satisfaction of wants.

Marking Scheme

L1	Answer has many conceptual errors or is very brief	1-4
L2	A general explanation that does not link back to developing or developed countries	5-6
L3	A well-explained answer which differentiates between developing and developed countries, with good examples	7-10

Part b)

Suggested Answer

In goods and services

- globalisation encourages international specialisation based on comparative advantage and thus, a higher material SOL
- However, with globalization, the economies are now more vulnerable to external shocks e.g. a global recession affects the countries' level of net exports and hence, their economic growth
- Rapid growth may also lead to the lowering of environmental standards as there is more pollution accompanying the increased production → this may result in the fall of non-material SOL

International capital flows

- countries have benefited from the inflow of technology especially from developed countries.
- These foreign investors bring their technology and capital equipment with them when they decide to set up production plants in other countries
- this allowed the countries to speed up the pace of economic growth.
- They will eventually require labour to begin and sustain production, hence helping to increase the level of employment in these countries.
- However, should foreign investors decide to shift production over to another countries, there could be massive unemployment.

International movement of labour

- Exporters may have lost their competitive edge against many emerging countries where labour costs are substantially lower.
- Workers who are displaced from these industries may be unable to gain employment in industries with comparative advantage because of the lack of necessary skills.
- Hence, structural unemployment result.
- With international labour mobility, there is an increase in demand for skilled workers and increase in supply for lower skilled workers.
- The result is higher wages for those with relevant skills while lower wages for those who are displaced → leads to widening income gap.

Conclusion

- As a small and open economy, while Singapore may benefit from a larger external market to grow our economy, there are also associated problems such as the relocation of MNCs overseas

- As such, the government should implement supply-side policies to ensure that the benefits would outweigh the cost of globalisation

Marking Scheme

L1	Answer with many conceptual errors or is very brief, without explicit link to economic aims or economic framework.	1-5
L2	An explanation that addresses only one aspect of globalisation (goods and services, capital or labour) and is one-sided.	6-8
L3	An explanation that addresses at least two aspects of globalisation (goods and services, capital or labour) and is balanced.	9-11
E1	Some attempt to come to a judgement	1-2
E2	Judgment is well-explained e.g. discussion on the extent of impact on an SOE	3-4