

NATIONAL JUNIOR COLLEGE  
SH2 Preliminary Examinations for General Certificate of Education Advanced Level  
Higher 1

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## ECONOMICS

**8819/01**

**Paper 1**

**28 August 2017**

**3 hours**

Additional Materials: Answer Paper, Cover Pages

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### READ THESE INSTRUCTIONS FIRST

Write your name and subject class on all the work you hand in.  
Write in dark blue or black pen.  
You may use an HB pencil for any diagrams or graphs.  
Do not use staples, paper clips, glue or correction fluid.  
DO **NOT** WRITE IN ANY OF THE MARGINS.

#### **Section A**

Answer **all** questions.

#### **Section B**

Answer **one** question.

Fill in the necessary information on the cover pages.

At the end of the examination, fasten all your work securely with the cover pages given.  
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **8** printed pages.



## Section A

Answer **all** questions in this section.

### Question 1

#### Challenges and Outlook of the Copper Market

##### Extract 1: Miners face challenge tapping copper opportunities

Both Rio Tinto and BHP Billiton, two of the world's top ten copper producers, believe the copper market is oversupplied now but will tighten from 2018, with growing deficits. Demand for copper is expected to be steady, given that it has a wide range of applications such as electrical wiring and pipes, and is forecast to be widely needed as China shifts towards more consumer-led growth.

But the complexity and expense of mining projects means the larger miners may not be in a position to generate a quick acceleration of copper output. Rio took a step forward in December to build Resolution, a US copper mine expected to be one of the world's largest. Rio owns 55% of the project, with BHP owning 45%. Yet obtaining all the permits for Resolution could easily take Rio another five to seven years.

Because receiving approval for mines is so laborious, Rio and others have walked away from some projects, even if the copper resources involved are substantial. Since 2013 Rio and Anglo American, another major mining company, have both given up on Pebble, a huge copper deposit in Alaska that is controversial for its potential effect on fisheries, for example.

Another challenge for miners is the expense involved in building mines. Glencore, another major copper miner, sold its Las Bambas project in 2014 to MMG, a subsidiary of China's Minmetals, for about \$7 billion. MMG said in October that the remaining 25% of construction would cost between \$2.7 billion and \$3.2 billion. BHP, which owns Olympic Dam, an Australian mine, abandoned an expansion plan in 2012 because of the likely cost.

Source: Adapted from: *The Financial Times*, James Wilson, 6 January 2015

##### Extract 2: The outlook for copper

The price of copper has fallen steadily in recent years. The sharp slowdown in industrial activity in China is disastrous for copper producers, since China consumes 45% of their output. Its attempt to shift from an investment-led economy to a consumer-led one has raised fears of a structural decline in the amount of copper it will need.

One recent disappointment has been the delay in the roll-out of electricity infrastructure in inland Chinese cities. Analysts at BHP say such infrastructure accounts for the biggest share of copper consumption in China. Yet a crackdown on corruption at state-run energy companies slowed the grid-laying projects during the first half of the year. What is more, China is increasingly using aluminium for its thick power-distribution cables, rather than copper – a cheaper option, even if aluminium is a poorer conductor and is more prone to corrosion.

Yet the outlook for China is not all pessimistic. As incomes increase, the “intensity” of copper use is likely to grow. Nascent industries such as wind and solar power and electric vehicles, all of which are copper-intensive, may also boost future demand.

Before then, supply must fall to balance the market. Some estimate that the industry will still churn out about 500,000 tonnes of excess copper this year. The oversupply will get worse: it takes several years to build a mine, so firms which had invested heavily in copper mines during the boom years now find their mines starting to come into operation. As a result big new increments of supply

have hit the market in the past year or two, just at the wrong time. Glencore, one of the five largest mining companies in the world, announced last month that it would close mines in the Democratic Republic of Congo and Zambia, cutting supply by about 400,000 tonnes over 18 months – some 2% of the world's annual output. Besides Glencore, it is reported that other mines producing a further 170,000 tonnes a year have been idled so far this year.

But only the most expensive supplies are being removed from the market. Many firms are instead slashing costs to keep production going. The industry's fragmentation makes it unlikely that producers will agree to rein in output. Investment bank, Goldman Sachs, notes that the top five copper producers have about 35% of the market. While some firms are trying to cut output to reduce costs and stem the price slide, other firms are expanding their output to increase market share. In some cases, it is cheaper over the long run to keep mines running at a loss for a while, to maintain security and retain staff, rather than to close them down.

Within a few years, however, many analysts expect natural constraints to put a floor under prices. The quality of ore in copper mines decreased during the boom. Water shortages make copper more expensive to extract. Mine depletion in Chile and Peru has driven companies towards new deposits laced with arsenic that require costly cleaning. And workers and environmentalists increasingly raise their voices against lousy pay and deteriorating environmental conditions. Higher costs make it less likely copper production will increase, which should eventually help stabilise the market. Chinese demand may also be supplemented by growth in other emerging markets, such as India, which currently consumes just 2% of the world's copper.

Source: Adapted from: *The Economist*, 1 Oct 2015

### **Extract 3: Fed move adds to pressure on commodities**

Prices of most commodities fell after the US Federal Reserve's decision to raise interest rates compounded their long term woes. Low interest rates had helped stoke the commodities boom as companies tapped cheap money to vastly expand production. Now commodities markets are suffering, with the interest rate hike adding to a multitude of industry-specific problems - a toxic combination of oversupply and weak demand from a slowing Chinese economy.

The biggest immediate effect of the Federal Reserve's decision to raise interest rates came through the strengthening US dollar. That makes internationally traded commodities from oil to copper, which are priced in US dollars, more expensive for holders of other currencies. But down the road, analysts foresee more pain from rising rates as companies struggle with increased financing costs and emerging market demand takes another hit. Investors fear that the Fed's rate increase might further sap demand from once insatiable emerging economies, such as India and China. Investors have already withdrawn a net \$500 billion from emerging markets in 2015, the first annual outflow in decades, compounding falls in their currencies as capital leaves their shores and make commodities more expensive.

Source: Adapted from *The Wall Street Journal*, 17 December 2015

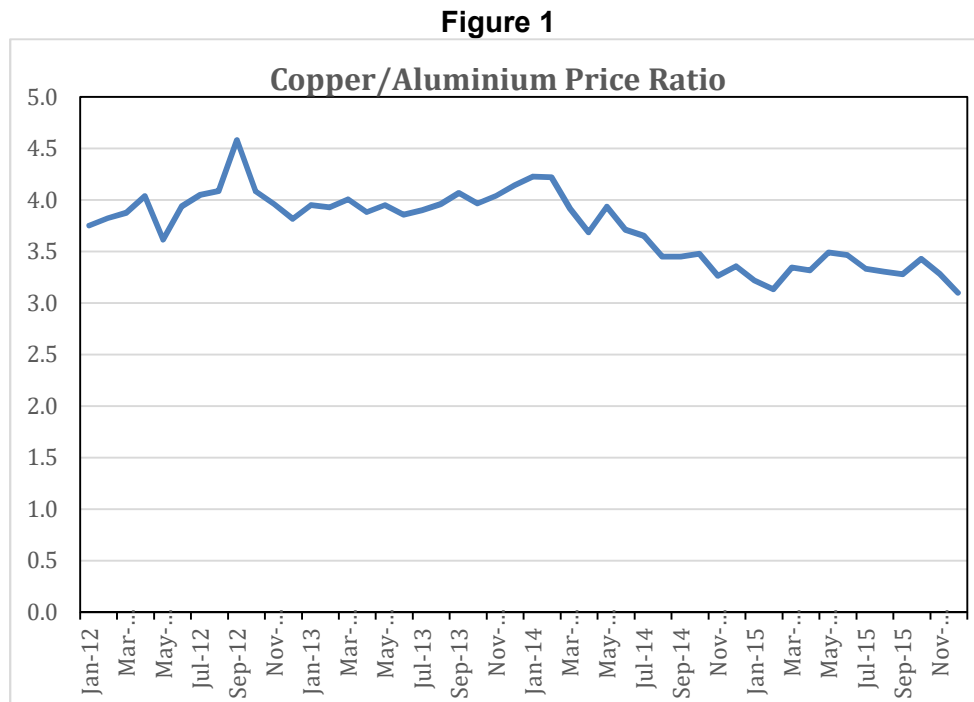
### **Extract 4: Village protest against dam built by copper miner in Chile**

Black flags hang from the doors of the one-storey red brick houses in Caimanes, a village that lies in the hills north of Santiago on the course of the Pupio stream. The banners are the sign of a bitter environmental protest against a nearby dam, which holds waste from a copper mine -- one of Chile's largest -- high up in the Andes. Last November, a group of up to 150 villagers took matters into their own hands and blocked access to the dam, which was said to pollute the village's water supply and pose an environmental threat in case of flooding or an earthquake.

The battle between the people of Caimanes and the owner of the Los Pelambres mine has become a symbol of social change in Chile, which produces 30% of the world's copper. The

government of Chile is committed to tackling inequality and as part of that is demanding higher standards from mine owners. But it is happening against a backdrop of slowing growth in China, the world's biggest copper market. Prices of the metal -- which makes up 13% of Chile's economic output and 50% of its exports -- fell to their lowest levels in five years just as the protesters kept guard outside the town. Copper mining made up 20% of the country's tax revenues in 2010 and employed some 1.1 million people in 2013. The shift in policy in Chile is being driven by a greater focus on the environment, in some cases, at the expense of economic growth and employment.

Source: Adapted from: *The Financial Times*, 27 April 2015



Source: London Metal Exchange

### Questions

- (a) Compare the price of copper relative to the price of aluminium over the period from September 2012 to November 2015. [2]
- (b) With reference to Extract 2, and using a demand and supply diagram, explain why the price of copper “has fallen steadily in recent years”. [6]
- (c) With reference to the data, comment on the likely PED and PES values of copper. [4]
- (d) Explain how the US Federal Reserve’s decision to raise interest rates would affect the demand for copper in the world. [2]
- (e) (i) Identify one demand factor and one supply factor that would affect the price of copper in the next 2 to 3 years. [2]
- (ii) Suppose you are an analyst with an investment bank, justify your forecast for the price of copper in the next 2 to 3 years. [6]
- (f) Using economic analysis, discuss whether the government of Chile should intervene to restrict mine production in order to achieve its economic objectives. [8]

[Total: 30]

## Question 2

## A volatile world

Figure 2: US dollars to 1 China Yuan



Source: Bloomberg

## Extract 5: China calls the shots in Asia's currency war

As fears of a global currency war grow, all eyes in Asia are on China's next move. "It's no longer inconceivable that China will go for a weaker currency," said Frederic Neumann, HSBC's co-head of Asian economics research.

The urgency with which Asian central banks are cutting interest rates is an indication of not just the deflationary forces they are seeing but also recognition that if China weakens the yuan, their policy options will be severely limited. Indonesia was the latest to surprise the world with an interest rate cut, joining Singapore, India and China, all of whom have unexpectedly eased monetary policy this year. Bank Indonesia's rate cut was in some ways a reminder of how critical China's yuan is to the region's policy making. The weakening of the Chinese Yuan, coupled with the potential rise of US interest rates could cause steep falls in the Asian currencies and a flight of foreign capital. Capital outflows can be destabilising, causing property prices to collapse further and trigger a vicious cycle of bad debts and defaults in the banking sector.

Deflationary pressures in China are stoking expectations that it could follow Japan and other European nations by easing policy to put a floor under domestic prices, he said. Such moves have triggered major weakening in the Japanese yen, euro and other currencies.

With most Asian countries either selling their exports to China or competing with the Chinese for a share of declining global demand, the race to have competitive currencies could become intense.

Still, analysts reckon things would get ugly only if China makes some kind of dramatic move, such as moving away from shadowing the dollar to tracking a broader basket of currencies. That could spark currency volatility and weakness and massive capital outflows.

"China's currency has become an anchor for the region and we just hope the Chinese will not throw the anchor overboard and cut everyone loose," said Neumann.

Source: Adapted from Vidya Ranganathan, *Reuters*, 19 February 2015

### **Extract 6: BRIC's huge impact on global sustainability**

The world's four largest developing economies, Brazil, Russia, India and China (BRICs), have a huge impact on global sustainability. These four countries, with a combined population of 3 billion people and a GDP of \$16 trillion, will have a huge direct impact on global emissions.

India's air pollution is not only far worse than any of the other BRICs, it is so intense that it is reducing plants' ability to photosynthesize sunlight, cutting crop yields in half. In addition, poverty and general lack of access to basic human needs has drawn the lion's share of attention. As a result, much of the sustainable development discussion in India has focused on inclusion and bringing the population into the 21st century. In 2014, Prime Minister Narendra Modi launched the Clean India Mission, aimed at providing access to improved sanitation, and cleanup of the River Ganges, among other targets. Corporations are also committing to invest in education for girls and adopting communities for cleanup.

Building green technology as India expands is one example of the leapfrogging potential that all developing economies can benefit from. For example, information technology company Infosys pioneered an effort to raise the profile of green building technologies among Indian firms. The resulting green building, which earned Leed Platinum certification, uses 38% less energy than its counterpart, and cost 1% less to build.

Source: Adapted from Matthew Weeland, *The Guardian*, 4 May 2015

### **Extract 7: China and Russia: the world's new superpower axis**

Russia and China have lots in common apart from a 2,500-mile border- both economies are dominated by state-run firms and oligarchies.

Both countries share a desire to limit American power; they enjoy a burgeoning trade relationship in which, in essence, hydrocarbons are swapped for cheap consumer goods. Trade has increased sixfold over the past decade. Last year they trumpeted the biggest gas deal in history that was worth \$400billion. During Chinese President Xi Jinping's visit to Moscow last month, the two leaders signed a decree on cooperation in tying the development of the Eurasian Economic Union (EAEU) with the "Silk Road Economic Belt" project. Moscow and Beijing declared a goal to coordinate the two projects in order to build a "common economic space" in Eurasia, including a Free Trade Agreement between the EAEU and China. The EAEU is a Russia-led trade bloc established in 2015. It currently has four members: Armenia, Belarus, Kazakhstan, and Russia.

"We are intensively working on combining these two projects and Russia's plans to expand its transport network in the east of the country," said Russian President Vladimir Putin.

China's President, Xi Jinping, has set his sights on a "new silk road", using China's billions to help neighbours and regional allies to develop, indirectly supporting growth at home and the expansion of Chinese soft power. Moscow is also hoping Beijing will help with finance for businesses, after western funds dried up last year. Some Chinese firms have seen the Russian economic wobble as an opportunity to make capital investments in the country.

Last year, China replaced Germany as Russia's biggest buyer of crude oil. "China is the major alternative market and is easily accessible for Russia given the location of energy reserves and the geopolitical partnership, so it's an obvious fit," said Grigory Birg, an analyst at Investcafe.

However, Russia's federal migration service is especially wary of an influx of Chinese migrants across the Russia-China border. It has stated that Chinese could become the largest ethnic group in Russia's far east by the 2020s or 2030s.

Source: Adapted from *The Guardian*, 7 July 2015 and *The BRICS Post*, 12 July 2015

### Extract 8: China watches Greece

The European Union is China's largest trading partner. "China is ready to play a constructive role," said the Chinese premier when asked about Greece at a news conference. Already struggling to keep growth steady at home with enormous volatility on stock markets over recent days, China has a lot to lose from the uncertainties that surround the eurozone drama.

It is a major investor in Greek infrastructure, in euro bonds and in the EU economy as a whole. Chinese deals rose from \$2 billion (£1.2bn) in 2010 to \$18 billion in 2014, according to research by Baker & McKenzie and the Rhodium Group.

China's vision for Eurasia is its "one belt one road" strategy, a plan to wrap its own infrastructure and influence westward by land and by sea.

The land route is the most ambitious project to integrate continental Asia and Europe since Genghis Khan 800 years ago. And the sea route is a thread of Chinese ports and bases all the way from southern China through the Indian Ocean to the Horn of Africa and the Mediterranean.

Which is where Greece matters again. It is China's great southern gateway to Europe.

Source: Adapted from Carrie Gracie, *BBC News*, 30 June 2015

### Questions

- (a) What was the estimated change in the value of the US dollars in terms of China Yuan from November 2014 to August 2015. [2]
- (b) (i) With reference to Extract 5, and using a diagram, explain the reason for the 'major weakening in the Japanese yen, euro and other currencies'. [3]
- (ii) Comment on whether major weakening of the Japanese yen could improve its net exports. [5]
- (c) Using AD-AS analysis, explain the impact of a 'flight of foreign capital' on Asian economies. [4]
- (d) Discuss the relative usefulness of trade and supply side policies to generate economic growth for China. [6]
- (e) (i) Explain the meaning of Standard of living. [2]
- (ii) To what extent are the Indian and Russian governments' efforts likely to improve the welfare of the residents in their countries in the long term. [8]

[Total: 30]

**Section B**

Answer **one** question from this section.

3. (a) Explain the main factors that determine price elasticity of demand of a demerit good such as cigarettes. [10]
- (b) Discuss the extent to which the use of taxation in the market for cigarettes alone can be effective in achieving microeconomic objectives. [15]
4. (a) Explain the main causes of inflation and how applicable they are in Singapore. [10]
- (b) With reference to Singapore, discuss the extent to which supply side policies are effective in reducing excessive inflationary pressures. [15]



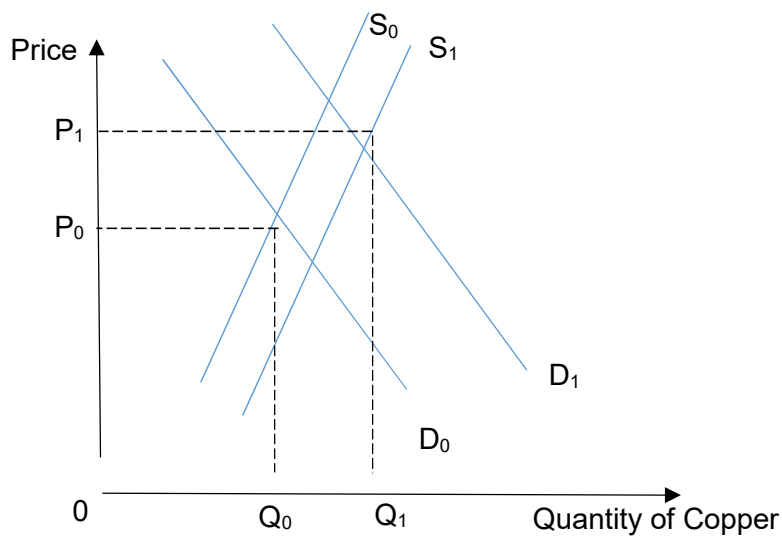


CSQ1

(a)	Compare the price of copper relative to the price of aluminium over the period from September 2012 to November 2015. [2]
	The price of copper has fallen relative to the price of aluminium. [1] The price of copper is above that of aluminium throughout the period [1]
(b)	Using a demand and supply diagram, explain why the price of copper “has fallen steadily in recent years” (Extract 2). [6]
	<p><u>Fall in Demand (2 marks)</u> There is a fall in demand due to the slowdown in the Chinese economy. As mentioned in Extract 2, “sharp slowdown in industrial activity in China is disastrous for copper producers.” Copper is used in the construction of electricity infrastructure. As China consumes 45% of the copper output, it has a significant impact on the demand for copper in the world market.</p> <p><u>Increase in Supply (2 marks)</u> There is an increase in supply as more mines have entered the market. This has resulted in the increase in supply of copper in the past 1-2 years.</p> <div data-bbox="225 943 1062 1420" data-label="Figure"> </div> <p>The fall in demand and increase in supply resulted in a surplus of copper of <math>Q_3Q_4</math> at the original price of <math>P_0</math> in the market. This created downward pressure on the price of copper, as producers reduced price in order to sell their excess stocks. As prices fall, the quantity demanded for copper increased, resulting in a new equilibrium at a lower price of <math>P_1</math>.</p>
(c)	With reference to the data, analyse the likely PED and PES values of copper. [4]
	<ul style="list-style-type: none"> <li>The price-elasticity of demand for copper is likely to be low, as it is a raw material required in many products such as electrical wiring, cables and pipes, electric cars and wind and solar power generation, and thus has high degree of necessity. There is also a lack of close substitutes as copper has high electrical conductivity, ductility and resistance to corrosion.</li> <li>The supply of copper is likely to be relative price inelastic. This is because of the fact that it takes several years to build a mine, as mentioned in Extract 2. Moreover, the laborious approval process for new mines and the high costs of building mines are significant barriers to entry which make it more difficult for new mines to be set up to increase output. Hence, it takes a relatively long time to increase the supply of copper.</li> </ul>
(d)	Explain how the US Federal Reserve’s decision to raise interest rates would affect the demand for

	copper in the world. [2]
	The increase in interest rate would <u>attract short-term capital inflow</u> into the US. This increases the demand for US dollars and results in the strengthening of the US dollar. [1 mark] The appreciation of the US dollar makes copper, which is priced in US dollar, more expensive to other countries buying copper. This would result in a fall in demand for copper (priced in US dollar). [1 mark]
(ei)	Identify one demand factor and one supply factor that would affect the price of copper in the next 2 to 3 years. [2]
	<p>Demand Factors (Any one)</p> <ul style="list-style-type: none"> <li>• Positive economic outlook of China and other emerging economies</li> <li>• More uses for copper</li> </ul> <p>Supply Factors (Any one)</p> <ul style="list-style-type: none"> <li>• Increase in the cost of producing copper</li> <li>• Concern for the environment</li> </ul>
(eii)	Suppose you are an analyst with an investment bank, justify your forecast for the price of copper in the next 2 to 3 years. [6]
	<p><b>Demand factors</b></p> <ul style="list-style-type: none"> <li>• One key demand factor is the economic outlook of China and other emerging economies. If the China economy recovers from its slowdown, there will be an increase in industrial activity as well as demand for consumer goods. The demand for copper for electrical wiring and cables will increase. Moreover, as mentioned in Extract 2, “Chinese demand may also be supplemented by growth in other emerging markets, such as India.” If other emerging economies such as India experience higher economic growth, they will also increase their demand for copper for various infrastructure projects.</li> <li>• Another demand factor is the uses of copper. (This may be linked to technology advancement and innovation). With changes in technology and new products being developed, there could be more uses for copper. For example, it is mentioned that new industries such as wind and solar power and electric cars are copper-intensive. Such new industries and products would increase the demand for copper.</li> </ul> <p><b>Supply factors</b></p> <ul style="list-style-type: none"> <li>• A key supply factor is the cost of production. As mentioned in Extract 2, water shortages are making copper more expensive to extract, and depletion of mines have driven companies to new copper deposits laced with arsenic which require costly cleaning. In addition, workers are also demanding higher wage increases. The increase in the various costs of producing copper could lead to a fall in supply in future.</li> <li>• Another factor affecting the supply of copper is the concern for the environment. As mentioned in Extract 2, people are becoming more vocal about their environmental concerns as copper production is seen to cause deteriorating environmental conditions. In Extract 3, it is also reported that villagers in Chile protested against a dam used to hold waste from a copper mine, which was said to cause pollution of their water supply. Such environmental concerns could result in more restrictions being imposed on copper production or governments withholding approval or permits for mines to be built, leading to a fall in supply.</li> </ul>

Figure 2



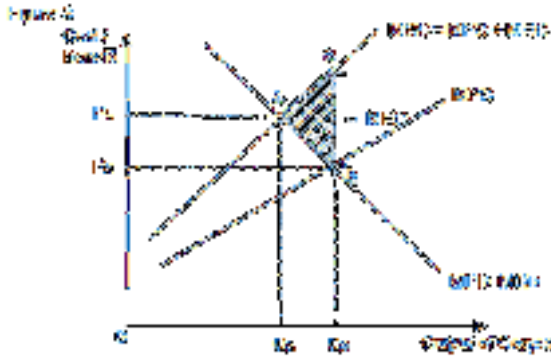
**(Conclusion)**

- As discussed above, the demand for copper can be expected to increase in the next 2-3 years as the Chinese economy recovers and emerging economies continue to grow at a faster pace. More use of copper is also likely to intensify, as new products such as electric cars requiring the use of copper are developed and gain in popularity.
- Overall, the expected increase in demand is likely to outstrip the growth in supply, as shown in Fig 2, causing the price of copper to rise in the next 2-3 years.

**Mark Scheme**

Level	Descriptors
Level 2 3-4	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <ul style="list-style-type: none"> <li>➤ EXCELLENT <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>➤ EXCELLENT <b>depth</b> in economic analysis that reflects the following in ALL explanations.                             <ul style="list-style-type: none"> <li>• <b>Accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing.</li> </ul> </li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>➤ Well-labelled and well-referred to diagram(s) drawn with <b>precision</b> (where appropriate).</li> <li>➤ <b>Relevant</b> examples and <b>accurate</b> use of facts.</li> <li>➤ <b>Logical</b> structure.</li> </ul>

<p><b>Level 1 1-2</b></p>	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <ul style="list-style-type: none"> <li>➤ <b>GOOD breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>➤ <b>GOOD depth</b> in economic analysis that reflects the following in ALL explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>➤ Example(s).</li> <li>➤ <b>Logical</b> structure.</li> </ul>							
<table border="1"> <thead> <tr> <th>Level</th> <th>Descriptors</th> </tr> </thead> <tbody> <tr> <td><b>E2 2</b></td> <td>For an evaluation that contains <ul style="list-style-type: none"> <li>• A <b>clear judgement</b> on the price forecast for the next 2-3 years</li> <li>• <b>Good justification</b> of the price forecast <b>supported by analysis</b></li> </ul> </td> </tr> <tr> <td><b>E1 1</b></td> <td>For an evaluation that contains <ul style="list-style-type: none"> <li>• Relevant judgement on the price forecast for the next 2-3 years.</li> <li>• Justification of the forecast may lack <b>depth, clarity, and logic</b>.</li> </ul> </td> </tr> </tbody> </table>	Level	Descriptors	<b>E2 2</b>	For an evaluation that contains <ul style="list-style-type: none"> <li>• A <b>clear judgement</b> on the price forecast for the next 2-3 years</li> <li>• <b>Good justification</b> of the price forecast <b>supported by analysis</b></li> </ul>	<b>E1 1</b>	For an evaluation that contains <ul style="list-style-type: none"> <li>• Relevant judgement on the price forecast for the next 2-3 years.</li> <li>• Justification of the forecast may lack <b>depth, clarity, and logic</b>.</li> </ul>		
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<p><b>(f)</b></p>	<p>Using economic analysis, discuss whether the government of Chile should intervene to restrict mine production in order to achieve its economic objectives. [8]</p>							
	<p>Introduction:</p> <ul style="list-style-type: none"> <li>• A government's economic objectives include the 4 macroeconomic objectives of sustained economic growth, low inflation, low unemployment and healthy balance of payments, as well as the microeconomic objectives of efficiency and social welfare.</li> </ul> <p>Thesis:</p> <p>Explain the need for government intervention to correct market failure of negative externalities and achieve the economic objectives of allocative efficiency and welfare</p> <ul style="list-style-type: none"> <li>• Mine production results in deterioration of environmental conditions which affect third parties such as villagers in the nearby community. For example, the building of a dam to hold the waste from a copper mine in Chile led to pollution of the water supply of a nearby village, and led to protest by the villagers. Such third party effects known as negative externalities impose an external cost to society, resulting in a divergence between the marginal private cost (MPC) and the marginal social cost (MSC) of producing copper.</li> <li>• Referring to Figure 3, the free market equilibrium output is <math>Q_M</math> where the marginal private cost is equal to marginal private benefit (<math>MPC=MPB</math>). Assuming no positive externality, the marginal private benefit is also the marginal social benefit (<math>MPB=MSB</math>). Due to the divergence between MSC and MPC, the social optimal output is <math>Q_S</math> where <math>MSB=MSC</math>. Hence, there is an overproduction of <math>Q_SQ_M</math> of copper.</li> <li>• The additional cost to society of producing <math>Q_SQ_M</math> is <math>Q_ScaQ_M</math> while the additional benefit of producing <math>Q_SQ_M</math> is <math>Q_ScbQ_M</math>. This results in a deadweight loss of abc, representing a net welfare loss to society.</li> <li>• The government should therefore intervene to restrict output to <math>Q_S</math> in order to achieve allocative efficiency and maximise the welfare to society.</li> </ul>							

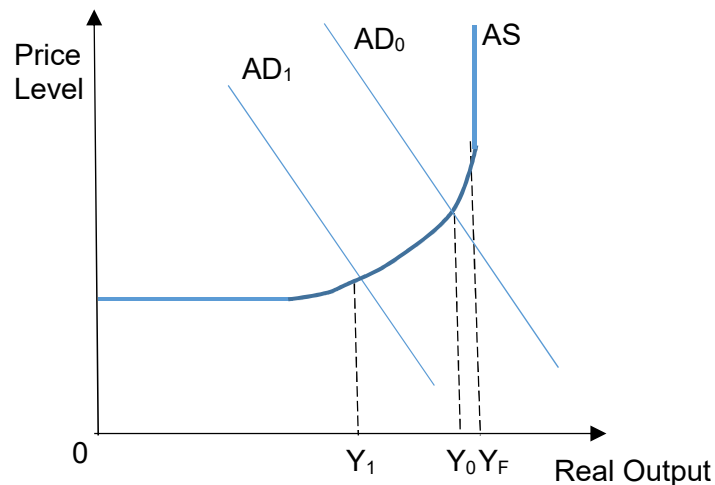


Anti-thesis:

Explain that restricting mine production could conflict with the macroeconomic objectives of economic growth and low unemployment

- Chile is highly dependent on copper production, which accounts for 13% of Chile's economic output and 50% of its exports.
- Restricting mine production could mean a significant reduction of Chile's GDP as its export of copper will be reduced. This means a fall in Chile's export revenue, which will lead to a fall in AD and a worsening of the balance of trade, ceteris paribus.
- The fall in AD will cause a more than proportionate fall in real output and national income via the reverse multiplier effect, thus conflicting with the macroeconomic objective of sustained economic growth. As shown in Fig 4, the fall in AD due to a decrease in  $(X-M)$  would result in a fall in real output from  $Y_0$  to  $Y_1$ .

Figure 4



Conclusion:

- It can be seen from the above discussion that there is a conflict between different economic objectives if the government of Chile were to restrict mine production.
- In the context of Chile, the importance of mine production to the Chilean economy means that the negative consequences of unemployment and economic decline may outweigh the benefits of allocative efficiency. It could be argued that priority should first be given to the material well-being of the population by ensuring they are employed and earning an income (in view of the inequality and poverty that exists in Chile), before the government takes into consideration the non-material aspect of standard of living such as the environment.

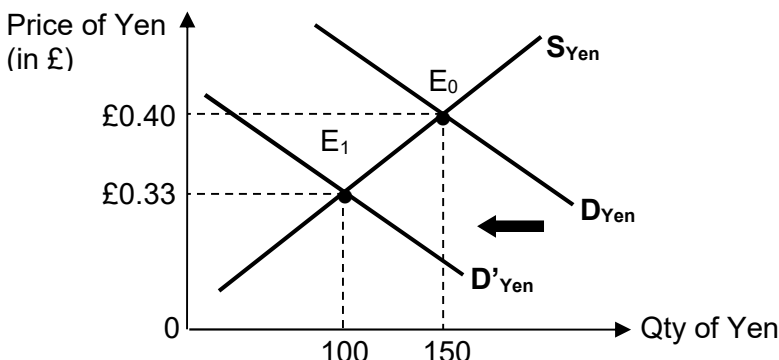
### Mark Scheme

Level	Descriptors
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<p><b>Level 2</b> <b>4-6</b></p>	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <ul style="list-style-type: none"> <li>➤ GOOD <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>➤ GOOD <b>depth</b> in economic analysis that reflects the following in ALL explanations. <ul style="list-style-type: none"> <li>✓ <b>Accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing.</li> </ul> </li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>➤ Well-labelled and well-referred to diagram(s) drawn with <b>precision</b> (where appropriate).</li> <li>➤ <b>Relevant</b> examples in context and <b>accurate</b> use of facts.</li> <li>➤ <b>Logical</b> structure.</li> </ul>
<p><b>Level 1</b> <b>1 – 3</b></p>	<p>For an answer that demonstrates some knowledge but lacks understanding, application and analysis:</p> <ul style="list-style-type: none"> <li>➤ INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</li> <li>➤ INSUFFICIENT <b>depth</b> in economic analysis that may reflect the following: <ul style="list-style-type: none"> <li>✓ May lack <b>accurate</b> use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing.</li> </ul> </li> </ul>
<p><b>Level</b></p>	<p><b>Descriptors</b></p>
<p><b>E2</b> <b>2</b></p>	<p>For an evaluation that contains</p> <ul style="list-style-type: none"> <li>• A synthesis of earlier economic arguments to arrive at <b>relevant</b> judgements/decisions (i.e. answer the question).</li> <li>• Evaluative comments supported by <b>accurate, logical</b> and <b>clear</b> analysis</li> <li>• The use of context to arrive at the conclusion is evident.</li> </ul>
<p><b>E1</b> <b>1</b></p>	<p>For an evaluation that contains</p> <ul style="list-style-type: none"> <li>• <b>Relevant</b> judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</li> <li>• Comment (s) may lack <b>depth, clarity, and logic</b>.</li> </ul>

[Total: 30]

CSQ2

(a)	<p><b>What was the estimated change in the value of the US dollars in terms of China Yuan from November 2014 to August 2015.</b></p>	[2]
	<p>The US dollar generally appreciated against the Yuan (1m), by approximately 3.6% (1m).</p>	
(bi)	<p><b>With the aid of a diagram, explain the reason for the ‘major weakening in the Japanese yen, euro and other currencies (Extract 1)’.</b></p>	[3]
	<ul style="list-style-type: none"> <li>• Easing of Monetary policy in extract 1 implies that there is a fall in interest rates of the country.</li> <li>• This leads to short term capital outflow, leading to an increase in supply for the country’s currency which will result in depreciation of the currency.</li> </ul> <p style="text-align: center;"><u>Weakening of the Japanese yen</u></p> 	
(bii)	<p><b>Comment on whether the major weakening of the Japanese yen could improve its net exports.</b></p>	[5]
	<ul style="list-style-type: none"> <li>• Exports: Depreciation of Japanese yen means that exports in foreign currency becomes cheaper and hence <u>demand</u> for exports will increase, resulting in increase in export revenue</li> <li>• Marshall Learner Condition: Since M-L condition of <math>IPED_x + PED_{ml} &gt; 1</math>, net exports increases for Japan</li> <li>• Major countries are facing a fall in the value of currency and with most Asian countries either selling their exports to China or competing with the Chinese for a share of declining global demand, the weakening in Jap Yen may not give Jap exports a competitive edge in terms of export price competitiveness, this means that export revenue may not increase significantly.</li> </ul>	
(c)	<p><b>Using AD-AS analysis, explain the impact of a ‘flight of foreign capital’ on Asian economies.</b></p>	[4]
	<ul style="list-style-type: none"> <li>• Capital outflows are destabilizing as ‘it could lead to bad defaults in the banking sector’, leading to fall in investments</li> <li>• Hence, there will be a decrease in <u>AD</u></li> <li>• National income falls, hurting economic growth and decreasing employment</li> </ul>	
(d)	<p><b>Discuss the relative usefulness of trade and supply side policies to generate economic growth for China.</b></p>	[6]
	<p><u>Introduction</u> Economic growth refers to both actual and potential economic growth. China embarked on different strategies but these policies have its usefulness, but some may be more useful given the context and nature of China’s economy.</p> <p><u>Body</u> <u>Trade and Globalisation policies</u></p>	



- China and Russia has declared a goal to coordinate the two projects in order to build a “common economic space” in Eurasia, including a Free Trade Agreement between the EAEU and China. Assuming that PED for China’s exports is price elastic, there will be a more than proportionate increase in the quantity demanded for China’s exports and again leading to an increase in export revenues. .
- China is also actively investing overseas. Some Chinese firms have seen the Russian economic wobble as an opportunity to make capital investments in the country. Having a wider market allows for substantial economies of scale to be enjoyed and the cost savings can be passed down in terms of lowered prices of Chinese goods, boosting exports for China, ceteris paribus.

#### Supply side policies

- Chinese government is actively and directly intervening to **development China’s infrastructure with other nations**.
- This will allow for greater flow of trade, increasing China’s export revenue and actual economic growth.
- The cost of obtaining raw materials may also be lowered due to cheaper imports coming into China, hence reducing imported inflation and cost push inflation, leading to increase of SRAS and hence NY increases.

#### Evaluative Conclusion

- In conclusion, the trade and supply side strategies have its usefulness and its shortcomings.

#### **Mark Scheme**

<b>Level</b>	<b>Descriptors</b>
<b>Level</b> <b>2</b> <b>3-4</b>	For an answer that demonstrates knowledge, understanding, application and analysis: ➤ <b>GOOD breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question. ➤ <b>GOOD depth</b> in economic analysis that reflects the following in ALL explanations. <b>Accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing. The answer should also be supported by: ➤ Well-labelled and well-referred to diagram(s) drawn with <b>precision</b> (where appropriate). ➤ <b>Relevant</b> examples and <b>accurate</b> use of facts. ➤ <b>Logical</b> structure.
<b>Level</b> <b>1</b> <b>1-2</b>	For an answer that demonstrates knowledge, understanding, application and analysis: • <b>INSUFFICIENT breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question. • <b>INSUFFICIENT depth</b> in economic analysis that reflects the following in ALL explanations. <b>May lack accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing. • The answer should also be supported by:

- ✓ Diagram(s) that may not be well-labelled may not be well-referred to and may not be drawn with precision (where appropriate).
- ✓ Example(s).
- ✓ **Logical** structure.

<b>Level</b>	<b>Descriptors</b>
<b>E2</b> <b>2</b>	For an evaluation that contains <ul style="list-style-type: none"> <li>• A synthesis of earlier economic arguments to arrive at <b>relevant</b> judgements/decisions (i.e. answer the question).</li> <li>• Evaluative comments supported by <b>accurate, logical</b> and <b>clear</b> analysis</li> <li>• The use of context to arrive at the conclusion is evident.</li> </ul>
<b>E1</b> <b>1</b>	For an evaluation that contains <ul style="list-style-type: none"> <li>• <b>Relevant</b> judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</li> <li>• Comment (s) may lack <b>depth, clarity, and logic</b>.</li> </ul>

(ei) **Explain the meaning of Standard of living.** [2]

Standard of Living comprised of both material and non-material SOL.

(eii) **To what extent are the Indian and Russian governments' efforts likely to improve the welfare of the residents in their countries in the long term.** [8]

**Introduction**

- The Indian and Russian governments have certain efforts to improve the standard of living of their residents. The efforts could lead to improvements in both the material and non-material standard of living in the long term but there could be certain drawbacks of their efforts.

**Body**

**Thesis: Indian and Russian governments' efforts are likely to improve the welfare of the residents in the long term**

**India:**

- India is facing severe air pollution to the extent that crops are affected by the lack of sunlight..
- Hence, the governments' efforts of raising the profile of green building technologies among Indian firms to lessen air pollution will allow crops to survive, allowing farmers/producers to earn and be employed, thus improving their material and non-material SOL in the long term.
- In addition, the Indian government is also embarking on inclusive growth strategy of advocating education for girls in India. This allows them to earn an income and be employed in future, improving both their material and non-material aspect of SOL in the long run.

**Russia:**

- China and Russian have signed a decree on cooperation in tying the development of the Eurasian Economic Union (EAEU) with the "Silk Road Economic Belt" project.
- With more opportunities for trade for Russia, this will allow them to export more of the Russian goods to China and EAEU. Hence, with the increase in net exports (X-M) and investments (I), it will lead to AD increasing and national income increasing via the multiplier effect.

**Anti-thesis:**

- India: Government spending will have to increase for the various efforts by the government such as education, reducing poverty and improving sanitation. This

may affect the SOL of Indian residents in the long term as less could be spent on them in future.

- Russia: Being open to trade and investments makes Russia more vulnerable to external conditions.

### Conclusion

- While there are shortcomings of the governments' efforts, both Indian and Russians will benefit in the long term due to the far-reaching effects of education, technology transfers, investments and trade on the SOL of their residents.

### Mark Scheme

Level	Descriptors
Level 2 4-6	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <ul style="list-style-type: none"> <li>➤ EXCELLENT <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>➤ EXCELLENT <b>depth</b> in economic analysis that reflects the following in ALL explanations. <b>Accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>➤ Well-labelled and well-referred to diagram(s) drawn with <b>precision</b> (where appropriate).</li> <li>➤ <b>Relevant</b> examples and <b>accurate</b> use of facts.</li> <li>➤ <b>Logical</b> structure.</li> </ul>
Level 1 1-3	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <ul style="list-style-type: none"> <li>➤ GOOD <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>➤ GOOD <b>depth</b> in economic analysis that reflects the following in ALL explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>➤ Diagram(s) that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate).</li> <li>➤ Example(s).</li> <li>➤ <b>Logical</b> structure.</li> </ul>

Level	Descriptors
E2 2	<p>For an evaluation that contains</p> <ul style="list-style-type: none"> <li>• Evaluative comments supported by <b>accurate, logical</b> and <b>clear</b> analysis</li> <li>• The use of context to arrive at the conclusion is evident.</li> </ul>
E1 1	<p>For an evaluation that contains</p> <ul style="list-style-type: none"> <li>• <b>Relevant</b> judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</li> <li>• Comment (s) may lack <b>depth, clarity, and logic</b>.</li> </ul>

(a) Explain the main factors that determine price elasticity of demand of a demerit good such as cigarettes. [15]

<p><u>Introduction:</u></p> <ul style="list-style-type: none"> <li>- Price Elasticity of Demand (PED) measures the degree of responsiveness of the quantity demanded of a good to a change in its price, ceteris paribus. PED thus measures the extent of movement along a given demand curve.</li> </ul>
<p><u>Body 1: Availability and closeness of Substitutes</u></p> <ul style="list-style-type: none"> <li>- For a demerit good like cigarettes, there is no availability of close substitute. Substitutes such as nicotine replacement products such as nicotine patches or gum are not able to replace smokers' physical habit of hand to hand holding and puffing of cigarettes. Smokers in general feel like there is something missing once they begin to cut down on smoking.</li> <li>- Hence, the demand for cigarettes in general is deemed to be relatively price inelastic for consumers.</li> </ul>
<p><u>Body 2: Proportion of income spent on the product</u></p> <ul style="list-style-type: none"> <li>- The demand for cigarettes tends to be relatively price inelastic especially for consumers in rich countries as compared to poor countries as it forms a lower proportion of their income spent on cigarettes.</li> <li>- However, for a demerit good such as gambling in SG, the \$100 admission price could be considered a high proportion of income for average Singaporeans. This could mean that the demand for gambling to be relatively fewer price inelastic as compared to cigarettes.</li> </ul>
<p><u>Body 3: Degree of necessity/ Tastes and Preferences</u></p> <ul style="list-style-type: none"> <li>- Cigarettes may be viewed as one with a high degree of need as it is highly addictive; people must buy cigarettes to consume even if the prices increase.</li> <li>- Hence, the demand for cigarettes tends to be relatively price inelastic especially for consumers in poor countries as compared to rich countries as cigarettes are treated as necessities of every-day life.</li> </ul>
<p><u>Conclusion:</u></p> <ul style="list-style-type: none"> <li>- In general, demerit goods such as cigarettes, alcohol and gambling are considered to be price inelastic in demand although the value could vary among the demerit goods.</li> </ul>

Levels	Description
L3 (8-10)	<ul style="list-style-type: none"> <li>• EXCELLENT <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>• EXCELLENT <b>depth</b> in economic analysis that reflects the following in <b>ALL</b> explanations. There was an accurate use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>ALL</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>• Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with <b>precision</b> (where appropriate).</li> <li>• <b>Relevant</b> examples and <b>accurate</b> use of facts.</li> <li>• <b>Logical</b> structure.</li> </ul>
L2 (5-7)	<ul style="list-style-type: none"> <li>• GOOD <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>• GOOD <b>depth</b> in economic analysis that reflects the following in <b>MOST</b> explanations. There an <b>accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>most</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>• Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate).</li> </ul>

	<ul style="list-style-type: none"> <li>• Example(s).</li> <li>• <b>Logical</b> structure.</li> </ul>
L1 (1-4)	<ul style="list-style-type: none"> <li>➤ INSUFFICIENT <b>breadth</b> that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</li> <li>➤ INSUFFICIENT depth in economic analysis that may reflect the following: <ul style="list-style-type: none"> <li>• Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.</li> </ul> </li> </ul>

(b) Discuss the extent to which the use of taxation in the market for cigarettes alone can be effective in achieving microeconomic objectives.

Introduction:

- Demerit goods are goods and services, which consumption is considered to be socially undesirable, usually possess negative externalities and that the government feels people will overconsume, possibly due to information failure on the true costs the good imposes.
- Define indirect tax: A sales tax, a specific tax, value added tax (VAT), or goods and services tax (GST) collected by an intermediary (such as a retail store) from the consumers who bear the ultimate economic burden of the tax.

Body 1: Use of Taxation is effective in achieving micro aims

- Negative externalities are spillover costs on 3<sup>rd</sup> parties who are not directly involved in the production or consumption of the good.
- Consumption of cigarettes is deemed to have negative externalities. Identify the MPB and MPC of smoking cigarettes. MPB includes the benefits to the individual from the utility derived from smoking. This will enable smokers the ability to work normally. MPC includes the cost of purchasing cigarettes.
- Identify MEC: MEC is the external cost on 3<sup>rd</sup> parties such as passive-smokers who need to incur additional healthcare costs due to breathing difficulties.
- Explain that individuals, acting in pursuit of their self-interest, disregard the external cost and in consequence consume only up to  $Q_P$ , a case of over-consumption.  $Q_P$  ( $MPB=MPC$ ) is the private output maximizing utility of private individuals while  $Q_S$  ( $MSB=MSC$ ) is the socially desired output maximizing welfare of society. The fact that  $Q_P > Q_S$  was over-consumed results in the additional benefit to society ( $Q_S Q_P ac$ ) be less than additional cost to society ( $Q_S Q_P bc$ ). The over-consumption results a welfare loss or deadweight loss of area  $abc$ .

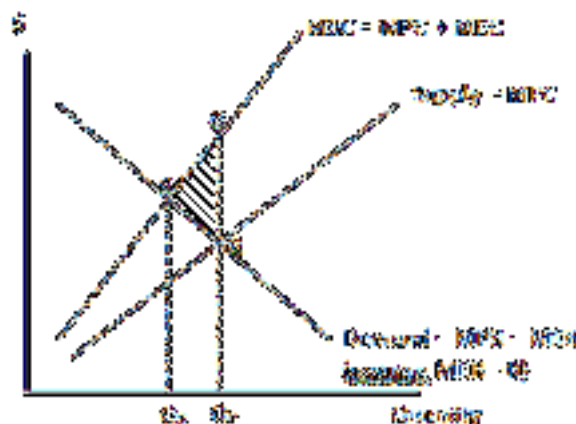


Figure 1: Over-consumption of goods with negative externalities

Taxation can correct the market failure resulting from the existence of negative externality

- Imposition of indirect tax to force consumers of cigarettes to internalise the 3<sup>rd</sup> parties cost. 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 generated at the socially optimum level of output, given by the divergence between MSC and  $MPC_0$  at  $Q_s$ . The cost that was previously 'external' to the firm, through the indirect tax, now becomes part of the firm's private cost, aligning MPC with MSC. In other words, the pigouvian tax gets firms to "internalise" the external cost.

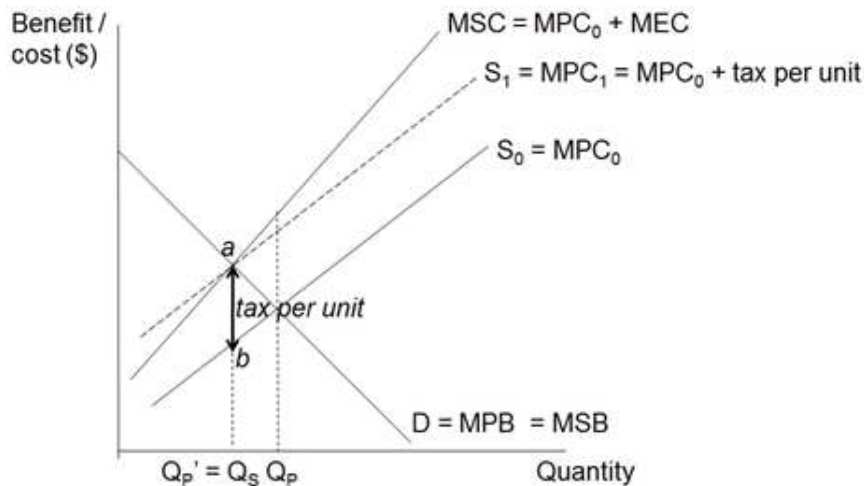


Figure 2| Indirect tax to correct negative externality

- In Figure above, an indirect specific tax equal to  $ab$  per unit of output will increase the firm's marginal cost, shifting the marginal private costs (MPC) upwards to  $MPC_1$ . The new private optimum level of output occurs at  $Q_p'$  where  $MPC_1 = MPB$ , down from the original private equilibrium output  $Q_p$  where  $MPC_0 = MPB$ . Notice that the new private optimal output  $Q_p'$ ,  $MSC = MSB$ . In other words, by taxing an amount equivalent to the MEC at  $Q_s$ , the pigouvian tax aligns firms' marginal private cost with the marginal social cost. Faced with the full cost of production, the firm will therefore cut back its production to the socially optimal level.

Taxation can correct the market failure resulting from the existence of equity

- Government can also improve the equity of outcomes thru indirect taxation via the redistribution of income. The government is able to use the tax revenue to fund transfer payment schemes such as GST voucher or low wage supplements for the lower-income Singaporeans..

Body 2: Limitations in the use of taxation in achieving micro aims

- It is difficult for the government to correctly estimate the amount of indirect tax to be imposed on smokers. It is difficult to quantify the negative externalities. Negative externalities are un-priced effect. The indirect tax imposed might be too much or too little to correct the negative externality. The problem of too little indirect tax being levied is the problem of over-consumption remains and DWL remains unsolved.

Body 3: Education is effective in achieving microeconomic aim of allocative efficiency

- The government can carry out anti-smoking campaigns via education in schools and TV advertisements to send out information to smokers and prospective smokers.
- As a result of the increase in awareness in external cost to third parties, this reduces the demand and therefore quantity transacted of cigarettes. It is considered to be effective in improve the allocation of resources as less cigarettes are being produced and consumed.

Limitations of education

- Depends on the effectiveness of the campaigns in changing the mind-sets of the smokers. Such a measure takes a long time and therefore it is difficult to see changes in the short run.

Body 4: Legislation (ban on smoking in public places) is effective in achieving microeconomic aim of allocative efficiency

- Singapore has imposed a ban on smoking in restaurants and other public places.

<ul style="list-style-type: none"> <li>- It is considered to be effective in improve the allocation of resources as less cigarettes are being produced and consumed.</li> </ul> <p><u>Limitations of legislation (ban on smoking in public places)</u></p> <ul style="list-style-type: none"> <li>- However, the ban might not be effective after all. It really depends upon how the checks are conducted and whether the penalties are harsh enough to deter smoking at public places.</li> </ul>
<p><u>Overall Evaluative Conclusion:</u></p> <ul style="list-style-type: none"> <li>- A mixture of market and non-market based policies are required to bring about optimal outcomes on efficiency and equity due to the merits and limitations of each policy in achieving both microeconomic aims of efficiency and equity..</li> </ul>

Levels	Description
L3 (9-11)	<ul style="list-style-type: none"> <li>• EXCELLENT <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>• EXCELLENT <b>depth</b> in economic analysis that reflects the following in <b>ALL</b> explanations. There was an accurate use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>ALL</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>• Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with <b>precision</b> (where appropriate).</li> <li>• <b>Relevant</b> examples and <b>accurate</b> use of facts.</li> <li>• <b>Logical</b> structure.</li> </ul>
L2 (5-8)	<ul style="list-style-type: none"> <li>• GOOD <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>• GOOD <b>depth</b> in economic analysis that reflects the following in <b>MOST</b> explanations. There an <b>accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>most</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>• Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate).</li> <li>• Example(s).</li> <li>• <b>Logical</b> structure.</li> </ul>
L1 (1-4)	<ul style="list-style-type: none"> <li>➤ INSUFFICIENT <b>breadth</b> that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question. <ul style="list-style-type: none"> <li>○ May not have consider at least 2 sources of market failure in the market of cigarettes (negative externalities and imperfect information)</li> <li>○ May not have consider at least 2 policies to solve these sources of market failure in the market of cigarettes</li> <li>○ May not have consider at least the limitations of these 2 policies</li> <li>○ May not have consider the microeconomic aims of efficiency OR equity</li> </ul> </li> <li>➤ INSUFFICIENT depth in economic analysis that may reflect the following: <ul style="list-style-type: none"> <li>○ Some explanation on at least 1 source of market failure in the market of cigarettes (negative externalities and imperfect information quity)</li> <li>○ Some explanation on at least 1 policy to solve these sources of market failure in the market of cigarettes and at least 1 limitation in achieving efficiency <b>OR</b> equity</li> </ul> </li> <li>➤ Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.</li> </ul>

<b>E2 (3-4)</b>	<ul style="list-style-type: none"> <li>• There is a good summative conclusion.</li> <li>• There is a synthesis of earlier economic arguments to arrive at <b>relevant</b> judgements/decisions (i.e. answer the question).</li> <li>• Use of well-explained criteria-based evaluative comments supported by <b>accurate</b> and <b>clear</b> analysis to provide <b>fairness</b> in views to form a judgement.</li> </ul>
<b>E1 (1-2)</b>	<ul style="list-style-type: none"> <li>• Unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis.</li> </ul>

(a)	Explain the main causes of inflation and how applicable they are in Singapore.	[10]
(b)	With reference to Singapore, discuss the extent to which supply side policies are effective in reducing excessive inflationary pressures.	[15]

(a) Explain the main causes of inflation and how applicable they are in Singapore. [10]

Introduction:

- Briefly explain the nature of Singapore's economy as a small, open economy where the country's inflationary pressure may stem from **domestic factors** but is largely influenced by changes in **external** demand and supply.

Body 1: Demand-Pull Inflation

- Demand-pull Inflation: an excess of aggregate demand in a period close to or at full employment.
- Demand-pull inflation could originate with an autonomous increase in the components of Aggregate Demand (AD) such as high export earnings (X)
- High export earnings due to increase in demand for **capital intensive goods**.
- The autonomous increase in aggregate demand shifts the aggregate demand curve rightwards.
- Demand-pull inflation, arising from high export earnings is a significant contributor to inflation in Singapore as the economy is operating near the full employment level of output (vertical AS)
- Explain why the increase in AD leads to rise in price level when economy is at or near full employment

**Figure 1: Demand-Pull Inflation**

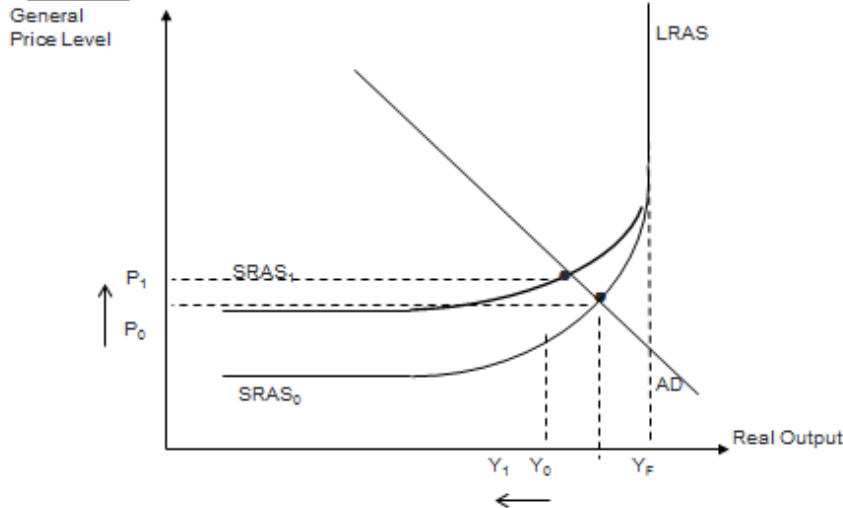
Body 2: Rising global commodity prices

- **Rising global commodity prices**, possibly as a result of increasing demand for commodities due to global recovery from the financial crisis and increasing affluence, will result in the prices



of imported raw materials as well as imported basic necessities and this will lead to **high costs of production** in Singapore especially since SG is import reliant. (import price-push inflation leading to imported inflation)

**Figure 2: Supply side or Cost-push Inflation (with a fall in SRAS)**



Levels	Description
L3 (8-10)	<ul style="list-style-type: none"> <li>EXCELLENT <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>EXCELLENT <b>depth</b> in economic analysis that reflects the following in <b>ALL</b> explanations. There was an accurate use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>ALL</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with <b>precision</b> (where appropriate).</li> <li><b>Relevant</b> examples and <b>accurate</b> use of facts.</li> <li><b>Logical</b> structure.</li> </ul>
L2 (5-7)	<ul style="list-style-type: none"> <li>GOOD <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>GOOD <b>depth</b> in economic analysis that reflects the following in <b>MOST</b> explanations. There an <b>accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>most</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate).</li> <li>Example(s).</li> <li><b>Logical</b> structure.</li> </ul>
L1 (1-4)	<ul style="list-style-type: none"> <li>INSUFFICIENT <b>breadth</b> that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question. <ul style="list-style-type: none"> <li>Only one DD-pull factor OR cost-push factor</li> </ul> </li> <li>INSUFFICIENT depth in economic analysis that may reflect the following:</li> <li>Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of</li> </ul>

precision in the use of economic terminologies, language and phrasing.

- (b) With reference to Singapore, discuss the extent to which supply side policies are effective in reducing excessive inflationary pressures. [15]

Introduction:

- Inflation in Singapore is influenced by both internal and external pressures.

Body 1: Supply-side policies are effective

- Supply-side policies to deal specifically with the increasing cost of labour (due to labour restrictions) can be carried out.
- For instance, firms can be encouraged to substitute labour for capital as well as innovate to make use of labour-saving technology to reduce the use of labour as well as increasing labour productivity thus increasing SRAS and LRAS.
- The measure will thus be able to deal with the inflationary pressure arising from the cost side of the market but will also help to increase productive capacity that will alleviate demand-pull inflation as well.

Limitations:

- Additional government spending is often needed. While government fiscal position is currently healthy and may be able to afford the spending, there is the question of the opportunity cost of spending the funds on subsidies that may be better spent elsewhere.

Currency appreciation

- Singapore government traditionally resorts to the use of currency appreciation as a solution to reduce the excessive inflationary pressures in Singapore stemming from external sources.
- Briefly mention the effects of currency appreciation on imported inflation:
- Explain the effects of currency appreciation on demand-pull inflation
- Singapore is a small and open economy and is vulnerable to changes in the international demand and supply conditions. An increase in external demand for our exports and increase in price in imported goods, services and factor of production will have significant impact on our price stability, creating excessive inflationary pressures given that the imports and exports made up more than 400% of our GDP.
- Exchange rate appreciation in SG is easy to implement and is effective in reducing excessive inflationary pressures.

Limitations:

- There is a need for alternative economic policies that are appropriate to the causes of inflation, i.e. they deal with the root causes of inflation and are capable of reducing overall inflationary pressure on the economy.

Trade Policy

- The signing of free trade agreements which will reduce/remove trade barriers for goods and services (e.g. in banking) and investment flows will result in the increase in the openness of the economy and diversification of trade links between Singapore and the rest of the world will help to alleviate inflationary pressures.

Limitations

- Signing an FTA tends to take a long time (years) in order to be concluded and thus the policy tends to be ineffective in the short-run and will not serve as a good solution in the short-run.

Overall Evaluative Conclusion:

- Complementary nature of policies: The policies, differing in terms of their effectiveness at dealing with the different sources of inflation should thus be introduced together.
- Root cause or source of the inflation – Excessive inflationary pressures most likely stems from external sources (excessive export earnings and imported inflation) rather than internal sources (wage increases).

Levels	Description
L3 (9-11)	<ul style="list-style-type: none"> <li>EXCELLENT <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>EXCELLENT <b>depth</b> in economic analysis that reflects the following in <b>ALL</b> explanations. There was an accurate use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>ALL</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with <b>precision</b> (where appropriate).</li> <li><b>Relevant</b> examples and <b>accurate</b> use of facts.</li> <li><b>Logical</b> structure.</li> </ul>
L2 (5-8)	<ul style="list-style-type: none"> <li>GOOD <b>breadth</b> that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of <b>relevance</b> and <b>significance</b> in answering the question.</li> <li>GOOD <b>depth</b> in economic analysis that reflects the following in <b>MOST</b> explanations. There an <b>accurate</b> use of economic concepts, <b>clear</b> elaboration, and <b>precise</b> use of economic terminologies, language and phrasing in <b>most</b> explanations.</li> </ul> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> <li>Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate).</li> <li>Example(s).</li> <li><b>Logical</b> structure.</li> </ul>
L1 (1-4)	<ul style="list-style-type: none"> <li>➤ INSUFFICIENT <b>breadth</b> that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</li> <li>➤ May or may not consider the limitations of supply-side policies</li> <li>➤ INSUFFICIENT depth in economic analysis that may reflect the following:</li> <li>➤ Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.</li> </ul>

E2 (3-4)	<ul style="list-style-type: none"> <li>There is a good summative conclusion.</li> <li>There is a synthesis of earlier economic arguments to arrive at <b>relevant</b> judgements/decisions (i.e. answer the question).</li> <li>Use of well-explained criteria-based evaluative comments supported by <b>accurate</b> and <b>clear</b> analysis to provide <b>fairness</b> in views to form a judgement.</li> </ul>
E1 (1-2)	<ul style="list-style-type: none"> <li>Unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis.</li> </ul>