

Suggested answers to JC2 Preliminary Exams H2 Paper 2

4. As part of the Singapore's economic restructuring plans, grants are provided to encourage companies to invest in more energy-efficient processes and adopt digital technologies. At the same time, large emitters will have to pay a higher carbon tax from 2024.

Adapted from The Straits Times, 28 Feb 2022

- (a) Explain the link between a country's economic growth, unemployment and inflation. [10]
- (b) Discuss the extent to which the above-mentioned economic plans will lead to a rise in living standards for Singapore. [15]

(a) Explain the link between a country's economic growth, unemployment and inflation. [10]

Command word	Explain the links – use economic reasoning (Students are to identify 2 causal links to explain)
Concepts	AD-AS
Context	Open context

Introduction:

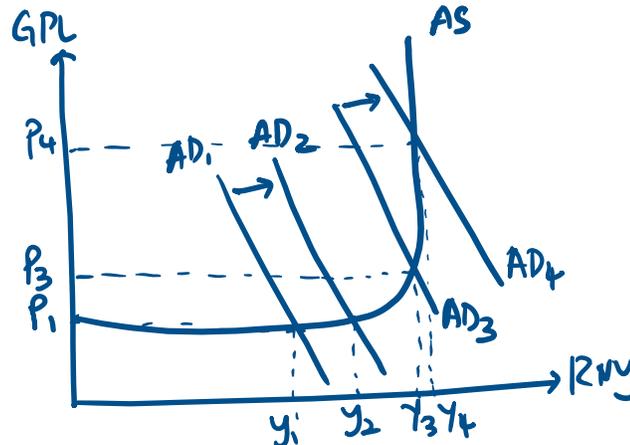
- Explain the definitions for economic growth, unemployment and inflation.
- Economic growth → measured by changes in real national income / national output. National output is the total goods and services produced within a geographical boundary of a country, within a period of time. Aim is to keep economic growth sustainable and inclusive over time.
- Unemployment is the proportion of labour force that is willing and able to work but is unemployed.
- Inflation measures the changes in general price level and the aim is to keep inflation rate low and stable.

Requirement 1: Higher economic growth is often associated with lower unemployment.

- Assuming the country is **not producing near full capacity**, a higher economic growth refers to the increase in production of goods and services. This is usually due to higher aggregate demand.
- Example: An increase in consumers' and investors' confidence can boost C and I of AD. This confidence can come from higher expected future income and higher returns on investments for firms.
- Higher AD as seen from AD1 to AD2 → firms **react by producing more goods and services seen by increase in RNY from Y1 to Y2. To produce more goods and**

services, the firms will hence utilize more available resources (FOPs) such as labour. As more labour is utilized, the unemployment could fall.

- Hence, a higher economic growth (Y1 to Y2) due to higher AD can lead to lower unemployment.



Requirement 2: Higher economic growth with lower unemployment can then lead to higher inflation.

- As AD continues to increase from AD3 to AD4, but **not accompanied with a corresponding increase in AS** (or the growth in AD is much faster than the expansion of AS), the available resources will get more limited.
- As firms continue to expand production, the **competition for the FOPs is higher**, leading to **higher cost of production** for most goods and services. As a result, the firms **pass on the higher COP** in terms of **higher general price level** as seen by P3 to P4, leading to higher inflation for the country.

(Note to students: other acceptable responses include:

- 1) **Lower unN can lead to higher EG and hence, higher inflation**
- 2) **Higher inflation can lead to slower EG and higher unN)**

Conclusion:

Overall, the macroeconomic objectives of a country are often inter-related. It is important that a country puts in place policies to achieve its various macroeconomic objectives, so as to improve the standard of living of its people.

Level	Descriptors	Marks
L3	<p>Any 2 links are well-analysed (e.g. economic growth and unN, economic growth and inflation)</p> <p>Well-analysed includes:</p>	8-10

	<ul style="list-style-type: none"> - Correct start and end point - Correct use of AD-AS framework - Diagram(s) is/are used in explanation - No major conceptual errors 	
L2	<p>Only one link is well-analysed or Two links are somewhat explained but not well-analysed</p> <p>Explanation includes:</p> <ul style="list-style-type: none"> - Some gaps in explanations - Inconsistent / inaccurate use of concepts - Diagrams drawn but are not used in explanations 	5-7
L1	<p>Major conceptual inaccuracies Irrelevant use of concepts</p>	1-4

(b) Discuss the extent to which the above-mentioned economic plans will lead to a rise in living standards for Singapore. [15]

Command word	Discuss the extent: Balanced argument – Start point: event / triggers End point: SOL of Singapore Extent: how it may lead to rise, how it may not and a summative conclusion provided on the overall extent
Concepts	Standard of living AD-AS
Context	Singapore

Introduction

Define living standards and its respective measurements:

- Material SOL measured by real GDP per capita – purchasing power
- Non-material SOL measured by various indicators such as pollution index, gini coefficient, literacy rate and life expectancy rate.

What do the economic plans entail?

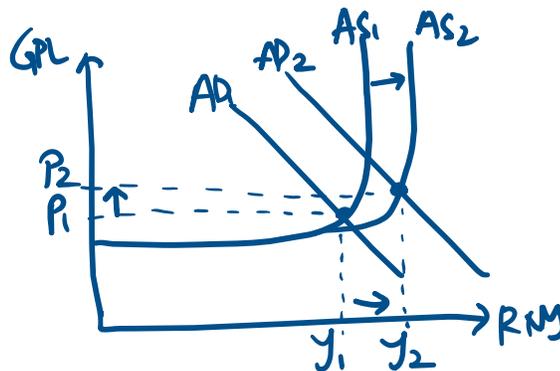
- More funding to restructure economy including more investment in carbon-lite production process, adopt digital technologies
- Higher carbon tax

Requirement 1: The economic plans can lead to a rise in SOL for Singapore in terms of higher economic growth, lower GPL and hence, better access to education and healthcare

Grants from the govt to encourage more innovation and adoption of digital technologies can be used to **absorb part of the firms' investment costs** → lower costs for investments means likely to **have greater rates of returns to investments** → increase Investment spending (I) → higher AD as it increases from AD1 to AD2 → actual growth

Increase LRAS from AS1 to AS2 from higher investment spending (I) and investing in technology ⇒ quantity and quality of resources improve → potential growth.

As the **country experienced both actual and potential growth** → **RNY increases from Y1 to Y2**. As the firms get more productive, the increase in output is likely to be greater than the increase in the total cost, hence the **average cost per unit of output produced is lower** → which means the price of each output can be kept low and stable, seen by the **smaller increase in price from P1 to P2**.



With higher RNY from Y_1 to Y_2 → more production of output → greater job opportunities → **reduce demand-deficient unN** → more people with jobs and earning income higher national income, **coupled with smaller increase in GPL** → greater purchasing power → better material SOL

With more income and higher purchasing power → able to access **better quality education / healthcare** → **improve literacy rate and reduce mortality rate** → improve non-material SOL

Requirement 2: May not lead to a rise in SOL for selected workers and part of the economy due to structural unN and higher COP for some companies – short term cost-push inflation; rising income inequality

As economy restructure towards the use of more digital technologies → rely on these rather than manual labour for the production → **lesser demand for the low-skilled workers** as their jobs are being replaced by the technology (e.g. cashiers)

As they are laid off, they also lack the skills to be employed in the available jobs as they are all requiring specific higher skills set → **Structural unN for some (low-skilled workers)** as industry transforms to adopt more digital solutions.

(Part of Evaluation) (*In-para ev: this can be worse off for **certain sectors that can transform themselves away from manual labour towards digitalization** → e.g. banking/finance/retail sectors → the no. of employees laid off from this sector could be higher compared to the other sectors.*)

For these group of low-skilled workers → they do not receive the benefits of economic growth as they will see their **wages falling** (due to lower demand) and hence, if the fall in wage growth is higher than the fall in GPL → they face lower purchasing power → lower m. SOL

At the same time, higher demand for high skilled workers → higher wages for this groups of workers → poor gets poorer, rich gets richer → **rising income inequality** → **non-material SOL is worse off for Singapore**

Higher carbon tax ⇒ higher COP ⇒ especially for those who are more reliant on coal/fuel, e.g. electricity generators companies → **pass on the carbon tax as higher prices of these goods such as electricity prices, transport prices** etc → higher prices for these essential goods.

(Part of Evaluation) (*In-para ev: lower-income families will be more affected by rising cost of living,*

as they tend to have a higher proportion of their income spent on transport, electricity and other necessities. **Coupled with the falling income for the low-skilled workers** → they may face even lower purchasing power. **High-income earners are less impacted** due to their higher income growth, as long as it is higher than the rise in prices for these goods.)

(Part of Evaluation) **Overall extent:**

Whether there is an overall increase in standard of livings is depending on:

- 1) whether / what the govt is doing to **overcome the undesirable effects**: cash vouchers to offset the rising GPL, upskilling/ retraining to help the low-skilled workers and expand productive capacity. Government could make use of the extra revenue collected from the carbon tax to fund these expenditures.
- 2) **Time frame:**
 - **Short-run in the transition phase:** for certain sectors e.g. service industry that relies mostly on manual labour is likely to see a drop in SOL for its workers
 - **Long run** when the restructuring is **successful** coupled with the intervention by government (e.g. use tax revenue collected to subsidise labour training), should lead to overall higher SOL for all in the long term.

(Note: An alternative structure to this Question is also acceptable)

Req 1: The plans may lead to an improvement in material SOL

(focus is on how the RNY increase more than the increase in GPL due to both the increase in AD and LRAS, therefore leading to higher purchasing power and greater ability to purchase better and more goods and services)

Req 2: The plans may lead to an improvement in non-material SOL

(Focus can be on: 1) reduction in pollution level, 2) more job opportunities created hence more employment and less stress, 3) closing of income gaps if the job opportunities are more broad-based)

Evaluation / Conclusion: How the plans may not bring about a rise in SOL:

- Structural unN and widening income gap
- Higher COP, higher cost-push inflation (in the short run)

Level	Descriptors	Marks
L3	<p>Both requirements are well-analysed Either 1) may lead to AND may not lead to OR 2) improve both M. and non-M. SOL)</p> <p>Well-analysed includes:</p> <ul style="list-style-type: none"> - Correct start and end point - Correct use of AD-AS framework - Diagram(s) is/are used in explanation - No major conceptual errors 	8-10

	Answers is applied to Singapore's context and preamble	
L2	<p>Only one requirement is well-analysed or Two links are somewhat explained but not well-analysed</p> <p><u>Cursory explanations refer to:</u></p> <ul style="list-style-type: none"> - Some gaps in explanations - Inconsistent / inaccurate use of concepts - Diagrams drawn but are not used in explanations 	5-7
L1	Major conceptual inaccuracies Irrelevant use of concepts	1-4
Evaluation		
E3	Both requirements are well evaluated and a summative conclusion on the overall extent is provided	4-5
E2	Evaluating both requirements but only one requirement is supported with reasoning AND NO summative conclusion on the overall extent is provided.	2-3
E1	A brief attempt at evaluating but no supporting reasons given	1