2023 A-Level P2 Question 5

Residents in densely populated, rapidly growing cities expect annual improvements in standards of living but whether this is achievable or sustainable in the long term is uncertain.

(a) Explain how improvements in a country's material and non-material standard of living can be measured. [10]

(b) Discuss whether increases in the living standards of residents in densely populated, rapidly growing cities are achievable and sustainable in the long term. [15]

Part (a) - Question Analysis

Approach	**Command Word**	Explain
	Question Type	Key Economic Indicators (KEI)
	Start point	KEI
	End Point	Standard of Living (Material & Non-Material) over time
Content and Context	**Content**	KEI, SOL
	Context	Any

Introduction

- The concept of SOL includes both material and non-material aspects.
- Material SOL refers to the quantity and quality of goods and services available for consumption by residents in a country.
- Non-material SOL refers to qualitative and intangible aspects which enables residents in a country to live an enjoyable and fulfilling life.
- KEI such as Real GDP per capita growth rates can be used to measure the improvement of a country's material SOL and non-material SOL to a certain extent.
- Composite indicators such as the human development index (HDI) provides a greater insight into a country's SOL as its components look into both the material and non-material aspects of SOL.

R1: Real GDP per capita growth rates can be used to measure the improvement of a country's material SOL and non-material SOL to a certain extent.

- Gross Domestic Product (GDP) is defined as the total market value of all final goods and services newly produced within the geographical boundaries of an economy in a given period (usually a year).
- A rise in GDP indicates a rise in income as more factor income is paid to households due to a rise in the production of goods and services. Material SOL improves as residents may be able to buy more clothes, food, electronic gadgets, cars, etc due to a rise in purchasing power. Furthermore, with higher income, the quality of goods and services consumed also

increases, as residents can afford better quality clothes, more nutritious food, the latest model mobile phones, a bigger car, etc.

- A rise in nominal GDP does not mean that purchasing power has increased as the increase may be due to changes in general price levels (GPL) and not output. In some cases, the rise in GPL may be higher than the rise in nominal income. Real GDP growth rate therefore is more useful to compare material SOL because it considers changes in general price level over time. One way is to adjust the nominal GDP with the "GDP deflator" to obtain real GDP as the "deflator" uses GPL as a proxy.
- If real GDP doubles, it does not necessarily mean that the *average citizen* is able to enjoy twice as many goods and services. The amount available to the average person requires the real GDP to be divided across the population size. A more relevant measure of improvement in material SOL would be **real GDP per capita growth rates.**
- A rise in real GDP per capita may also indicate an improvement in non-material SOL. When a country experienced growth in national income, the government will be able to receive a higher income tax revenue. This allows them to provide better healthcare and education to the residents. This would lead to an improvement in non-material SOL which will be explained later in this essay.
- An increase in real national income over time does not mean that all individuals benefit equally from economic growth. This is because the growth in real national income may be unevenly distributed within the population, leading to a larger disparity between the rich and poor. Thus, to make meaningful comparisons of material SOL over a period of time, we have to use the Gini coefficient and monitor how it changes over time.
- The Gini coefficient is an indicator to reflect income distribution. It measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A low Gini coefficient coupled with high **real GDP per capita growth rates** would therefore serve as a better indicator that the SOL of an average citizen has improved.

R2: Composite indicators such as the human development index (HDI) provides a greater insight into a country's SOL.

- A rise in real GDP per capita may not indicate an improvement in non-material SOL. For example, in a developed country like Singapore, rising income may be tied to longer working hours and higher levels of stress to workers causing health problems which affects non-material SOL.
- The quality of and access to education and healthcare are also important aspects of non-material SOL. However, national income statistics do not reveal the standards of education or healthcare of a country. While some countries may experience a rise in real national income over time, many residents still have little access to education and healthcare. This is especially so for developing countries or for rural parts of certain large countries.
- The HDI is a composite measure designed by the United Nations to consider a broader view of standard of living. The HDI is a summary measure that provides greater insight into the progress of the key dimensions of human development: a decent **material** standard of living based on **income** (GNI per capita), and **non-material** standard of living related indicators such as **number of schooling years** as well as **life expectancy** that inform of the level of literacy as well as the access to quality healthcare respectively.
- Having better education and good health will result in an improvement in non-material SOL as citizens are now able to live a fulfilling and enjoyable life without any worries.

Conclusion

- Both real GDP per capita growth rates (taking into consideration the Gini coefficient) and HDI can be used to measure the improvement in the SOL of a country.
- The HDI was created to emphasize that expanding human choices should be the ultimate criteria for assessing development results, which will affect both material and non-material standard of living. Economic growth is a means to that process but is not an end. Hence, there is a need to use a composite indicator to measure improvement in standard of living.

Mark Scheme

Level	Knowledge, Understanding, Application, Analysis	Marks
L3	Full display of AO1, AO2 and AO3 skills: For an answer that shows well-developed explanation of how various KEI can be used to measure the improvement of BOTH material and non-material SOL of a country over time. Explanation of a composite indicator such as HDI is a requirement.	8-10
L2	Uneven display of AO1, AO2 and AO3 skills: For an answer that shows under-developed explanation of how various KEI can be used to measure the improvement of BOTH material and/or non-material SOL of a country over time. • Lacks depth of analysis (i.e., limited explanation of why real GDP data or per capita data needs to be used) • Use of a composite indicator not well explained	5-7
L1	Limited display of AO1 and AO2 skills: For an answer that shows limited knowledge of how various KEI can be used to measure the improvement of BOTH material and/or non-material SOL of a country over time. • listing of points, unexplained statements, or descriptive response • many conceptual errors • irrelevant response • smattering of points • mere definition of relevant concepts	1-4

(b) Discuss whether increases in the living standards of residents in densely populated, rapidly growing cities are achievable and sustainable in the long term. [15]

Part (b) - Question Analysis

Approach	**Command Word**	Discuss whether: provide relevant arguments based on different perspectives and a reasoned judgement
	Question Type	Factors affecting SOL
	Start point	Economic growth & Population growth
	End Point	SOL (Material & Non-Material)
Content and Context	**Content**	Impacts on SOL
	Context	Densely populated, rapidly growing economy

Introduction

- A densely populated, rapidly growing economy will in general experience an increase in SOL.
- The extent to which such an increase in SOL is achievable and sustainable in the long term depends on the characteristics of the economy as well as the policies in place by the government.

R1: An increase in SOL of a densely populated, rapidly growing economy is achievable and sustainable in the long term.

- A growing economy would mean that its real national output and income is increasing. Such an increase will lead to improvements in purchasing power as well as better quality of life due to the availability of government funding in providing facilities enhance the lifestyles of its citizens as mentioned in part A. This will lead to an increase in both material and non-material SOL of the country.
- A growing economy would also lead to lower unemployment which could affect SOL. With an increase in real national output, firms will be hiring more factors of production such as labour. The rise in demand for labour will lead to a fall in unemployment. Material standard of living improves more households will be earning income, thereby increasing their ability to consume. Non-material standard of living will also be higher when there is low unemployment (as opposed to high unemployment) since there is less anxiety over job prospects or social unrest.
- The increase in SOL can also be sustainable in the long run if there is also potential growth. The increase in full employment level due to the rise in quantity and quality of resources as well as improvements in technology allows the economy to produce more goods and services. A densely populated economy creates a large pool of labour enabling potential growth to occur. This allows the economy to produce more goods and services allowing more room for material SOL to increase.
- The increase in non-material SOL can also be sustainable if the rapid growth is driven by green technology. Such form of technology ensures environmental sustainability ensuring resources don't get depleted quickly and at the same time prevents pollution which will have a negative impact on health, affecting non-material SOL.

IEV1:

The extent to which the increase in SOL of such an economy is dependent on a few factors.

Firstly, growth be driven by the various components of AD (C, I, G, X-M). Should growth be driven mainly by a rise in consumption expenditure, the increase in SOL might not be as sustainable as one that is driven mainly by investment expenditure. Channeling more resources in the production of consumer goods (C) could lead to an increase in SOL in the short run as more goods & services are being made available for consumption. However, the production of capital goods (I) is required to ensure that there is a rise in productive capacity so that more goods and services can be produced in the future. Therefore, having a forward-looking and stable government such as Singapore is a crucial factor.

Secondly, the quality of labour is also important. In a densely populated country, there is a limit to the rise in quantity of labour. The rise in quality of labour through skills upgrading is therefore crucial in ensuring that the productive capacity of the country continues to increase to achieve potential growth which ensures that the increase in SOL is not only achievable but also sustainable.

R2: An increase in SOL of a densely populated, rapidly growing economy may not be achievable and sustainable in the long term.

- If growth is caused by a rise in AD, there might be a situation whereby there will be a large increase in GPL resulting in high inflation. This could happen if the economy is operating near full employment level.

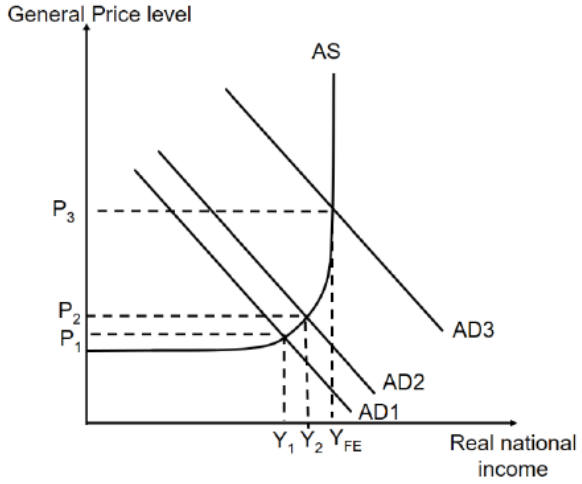

Figure 1: Demand-pull Inflation

Referring to Figure 1, the initial equilibrium in the economy is close to full employment (i.e., little spare capacity). AD1 is close to the vertical section of AS, i.e., LRAS. When AD increases from AD1 to AD2 to AD3, firms face an unplanned decrease in stocks/inventories at the original general price level P1. Firms will increase their production to meet the rising demand, as long the prices of their goods are rising faster than the prices of inputs they use in production. To increase production, they will hire more

resources (i.e., factors of production) thereby competing with other producers for the same resources. This leads to an increase in unit cost of production, which firms will pass on to consumers in the form of higher prices. Overall, general price level rises from P1 to P3 resulting in demand-pull inflation.

- Despite the rise in RNY, the rise in GPL might decrease the purchasing power of some households especially fixed income earners. This might decrease the material SOL of these people.
- Additionally, the rise in GPL could also add on to the strain faced by households due to high costs of healthcare and education in a densely populated country due to high demand. This could lead to inaccessibility to such goods and services, decreasing the quality of life and therefore the non-material SOL of these households.
- The aggressive production of goods and service to achieve rapid growth could also lead to depletion of natural resources as well as environmental degradation. Unsustainable economic growth occurs when the economy grows in a manner that does not sustain natural resources and the environment for future generations. A country's economic growth may be unsustainable due to weak environmental protection, uncontrolled growth of motor vehicles, reliance on more polluting fuels (e.g., coal) for power generation, and specialisation in highly polluting industries as part of her industralisation strategies. Since the environment provides the factors of production that generate economic growth, the depletion of these resources (i.e., minerals, forests) will not only mean less resources for future generations to utilise, but also causes climate change which is irreversible, causing the non-material standard of living to be unsustainable.

IEV2:

Policies implemented by the government to achieve growth is important in ensuring that the increase in SOL is achievable and sustainable.

To avoid inflation, supply-side policies are required to increase the AS to increase the full employment level and to reduce the GPL. This can be achieved through the construction of infrastructure as well as healthcare and education facilities as seen in Singapore. Such spendings could also help meet the high demand in these sectors in the densely populated economy.

Traffic congestions could also affect the SOL for densely populated countries and transport infrastructures such the building of expressways and subway lines could ensure that the increase in non-material SOL is achievable. An example would be the expansion of MRT subway lines and the construction of expressways in the case of densely populated Singapore.

SEV

- The SOL of a densely populated and rapidly growing economy will increase in the short run. Whether such an increase is sustainable is dependent on various factors.
- Having a stable government which will stay in power a long period of time (such as Singapore) in my opinion is the most important factor that would ensure that SOL increase in the long run. Such a government will be more forward-looking and will not sacrifice long term goals for short-term benefits to secure votes given the fact that they will be governing the country for a long period of time.

Mark Scheme

Levels	Descriptors	Marks
L3	Displays full slew of skills across AO1, AO2 and AO3: • A balanced and well-developed answer • Correct application of the consequences of rapid growth on a densely populated economy's SOL (Material & Non-material) • Accurate and fully labeled diagrams • Use good examples to support analysis	8-10
L2	Displays AO1, AO2 and AO3 skills: • An under-developed response • Inconsistent of application of the consequences of rapid growth on a densely populated economy's SOL (Material & Non-material) • Incorrect diagrams drawn • No relevant examples given	5-7
L1	Uneven display of AO1 and AO2 skills: • Many conceptual errors • No economic framework in analysis • Superficial explanation • Question requirement is not addressed	1-4
	Evaluation	
E3	Well-reasoned judgements: • A well-reasoned judgement on how significant the consequences of rapid growth have on a densely populated economy's SOL. • Question any unstated assumptions to arrive at this well-reasoned judgement. Good explanation of the limitations of the analysis	4-5
E2	Largely unexplained judgements: • Some attempt to explain their judgement on the significance of the consequences of rapid growth on a densely populated economy's SOL.	2-3
E1	An unsupported judgement: • Mere evaluative statements or judgements that are neither supported nor relevant to any specific context	1