

2022 H2 A-Level Paper 2 Essay Question 4

During the pandemic, there was a fall in investment and a rise in employment. Innovation-based investment is a good way to stimulate the economy but, unless appropriate government policy action is taken, this might lead to another type of unemployment.

- (a) Explain how a fall in investment might lead to one type of unemployment while a rise in innovation-based investment might lead to a different type of unemployment [10]
- (b) Discuss the extent to which a rise in Singapore government spending on investment in major capital projects and in human capital are both required to reduce unemployment in a post-pandemic world.

Suggested Response

Part (a) (Question Analysis)

Approach	Command Word	Explain how - Process
	Question Type	Causes
	Start point	Factors – fall in investment, rise in innovation-based investment
	End Point	Types of unemployment
Content and Context	Content	<ul style="list-style-type: none">• Demand-deficient Unemployment• Structural Unemployment
	Context	Generic/Singapore

(I) Introduction

State essay approach: Unemployment refers to the situation where people are unable to find employment, even though they are of legal working age and are both capable and willing to work at the current wage rates. There are two types of unemployment, namely demand-deficient unemployment and structural unemployment. This essay seeks to explore the causes of these two types of unemployment.

(II) Body

Point 1: A fall in investment might lead to demand-deficient unemployment

Demand-deficient unemployment arises from insufficient aggregate demand (AD), which may be caused by business cycles or economic shocks. During the COVID pandemic, with the closure of national borders and pessimism over economic outlook, it has adversely affected the business confidence of investors. This has led to a fall in their investment spending. Given that I is a component of aggregate demand [where $AD = C + I + G + (X - M)$], a fall in investment spending leads to a fall in AD.

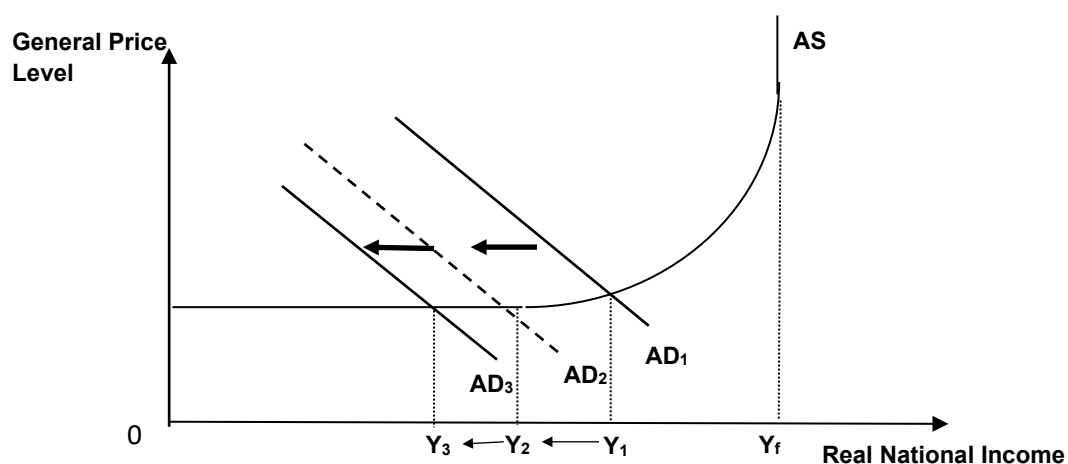


Figure 1: Demand-deficient unemployment due to fall in AD

With reference to Figure 1, the initial equilibrium national income is at Y_1 , where AD is equal to aggregate supply (AS). With a fall in AD from AD_1 to AD_2 , firms find that they are unable to sell their current level of output, hence stocks of unsold goods accumulate. Firms will thus reduce production and decrease the derived demand for factors of production, including labour, hence leading to a rise in demand-deficient unemployment. As less labour is employed, less factor income is earned. The initial fall in national income will lead to a further fall in income-induced consumption due to the reverse multiplier effect. The economy moves into recession represented by a further fall in AD from AD_2 to AD_3 , it is now at a much lower level of equilibrium national income from Y_1 to Y_3 . The economy is said to be operating with spare/excess capacity or unemployed resources. When the equilibrium national income (Y_3) is below the full-employment level of national income (Y_f), the gap ($Y_f - Y_3$) represents the **presence** of demand-deficient unemployment.

Point 2: A rise in innovation-based investment might lead to structural unemployment

On the other hand, a rise in innovation-based investment might lead to structural unemployment which arises from a mismatch of skills between the unemployed and employers. This is because the unemployed might not possess the right skills to fill the existing job vacancies.

In an increasingly digital economy where there is a rise innovation-based investment in the use of new and advanced information technology, it has resulted in a relentless change in industries, jobs and skills. As new industries develop around emerging technologies, they give rise to jobs requiring new skills, while making other jobs obsolete. For example, labour-saving technological advancement through automation and robotisation has led to the replacement of labour by machinery and the mismatch of skills due to a requirement for an enhanced skill set to operate the new machinery. Hence, as capital is increasingly being used to substitute labour. Coupled with occupational immobility where workers who are less proficient in handling the more advanced equipment and are unable to upgrade themselves, these workers may find their skills obsolete and become **structurally unemployed** for a long period of time.

(III) Conclusion

Link to part (b): Hence a fall in investment might lead to demand-deficient unemployment while a rise in innovation-based investment might lead to structural unemployment. Understanding

the causes of the different types of unemployment would be useful for governments to implement appropriate policies to reduce unemployment in the economy.

Mark Scheme

Band	Knowledge, Understanding, Application, Analysis	Marks
L3	For an answer that shows well-developed explanation of the causes of demand-deficient from a fall in investment and structural unemployment from a rise in innovation-based investment <ul style="list-style-type: none"> • clear and accurate explanation of the causes of the above types of unemployment with appropriate AS/AS diagrams • appropriate examples of the causes of the above types of unemployment 	8-10
L2	For an answer that shows under-developed explanation of the causes of demand-deficient and/or structural unemployment <ul style="list-style-type: none"> • lacks depth of analysis (i.e., limited effective use of relevant economic analysis or gaps in diagrammatic analysis) • lacks appropriate examples 	5-7
L1	For an answer that shows limited knowledge of the causes of demand-deficient and/or structural unemployment <ul style="list-style-type: none"> • with listing of points, unexplained statements, or descriptive response • major conceptual errors • smattering of points 	1-4

- (b) Discuss the extent to which a rise in Singapore government spending on investment in major capital projects and in human capital are **both** required to reduce unemployment in a post-pandemic world. [15]

Suggested Response

(Part b) Question Analysis

Approach	Command Word	Discuss the extent – Balanced answer + evaluation
	Question Type	Policy Evaluation (HAL)
	Start point	Increase in Govt Spending on both forms of investment <ul style="list-style-type: none"> • Investment in major capital projects (mainly Demand-side Policy) • Investment in human capital (mainly Supply-side Policy)
	End Point	Reduce types of unemployment (Demand-deficient and structural)
Content and Context	Content	How policies work + Limitations
	Context	In Post-Pandemic Singapore

(I) Introduction

State Essay Approach: To reduce unemployment in post-pandemic Singapore, the Singapore government can implement policies which include a rise in its spending on different forms of investment, namely increased investment in major capital projects to tackle demand-deficient unemployment directly and increased investment in human capital to tackle structural

unemployment directly. Whether the government's spending on **both** of these investments are required to reduce unemployment in post-pandemic Singapore will also be explored in this essay.

(II) Body

Point 1: A rise in Singapore government spending on investment in major capital projects can help to directly reduce demand-deficient unemployment in a post-pandemic world.

In a post-pandemic world where there is slow economic recovery globally, demand-deficient unemployment would likely be high given the poor economic outlook which leads to low consumers, investors and exports spending. Hence an expansionary fiscal policy through a rise in government spending on large capital projects can help to boost domestic spending and raise aggregate demand, thus reducing demand-deficient unemployment directly.

Such government spending on large capital projects includes the mega construction of the Changi Airport Terminal 5, which has resumed after work was suspended for two years due to the Covid Pandemic. Additionally to further improve the quality and quantity of transport networks, the Singapore government has begun the development of major capital projects such as the Cross Island Line – Punggol extension which is expected to complete by 2031.

Since government expenditure (G) is a component of AD , an increase in G would lead to an increase in AD , shifting the AD curve rightwards from AD_1 to AD_2 .

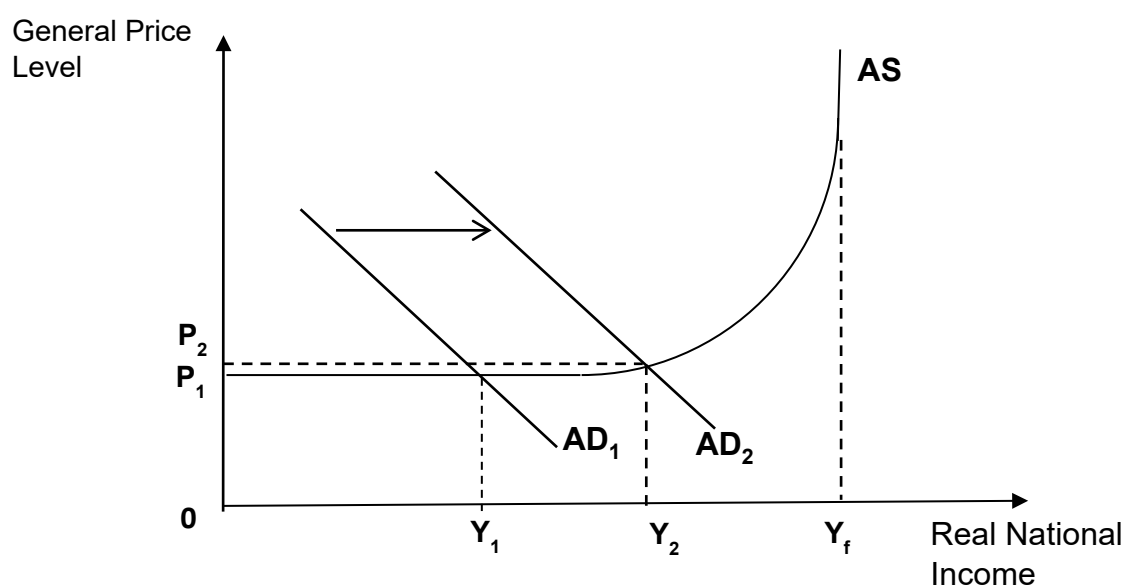


Figure 2: Fall in Demand-deficient unemployment due to rise in Government spending

Referring to Figure 2, the rise in aggregate demand from AD_1 to AD_2 causes a fall in unplanned inventories and firms will increase production which eventually lead to a multiplied increase in the real national income via the multiplier effect, from Y_1 to Y_2 . To increase production of goods and services from Y_1 to Y_2 , firms need to hire more factors of production, such as labour. This is because demand for labour is derived from the demand to produce goods and services. Hence, **demand-deficient unemployment is reduced.**

Therefore, a rise in Singapore government spending on investment in major capital projects can help to reduce demand-deficient unemployment directly in a post-pandemic world.

Evaluation of Limitation for Point 1 (any one point)

- **Size of the Multiplier.** The effectiveness of the expansionary fiscal policy hinges on the size of the multiplier effect. Expansionary fiscal policy in a small and open economy like Singapore may be less effective. Singapore has a small domestic consumer base and a heavy reliance on imports. With a large MPM (due to heavy reliance on imports given its resource constraints) and high MPS (due to compulsory savings via the Central Provident Fund Scheme), Singapore's size of multiplier is small, hence limiting the effectiveness of expansionary fiscal policy to stimulate its economy and reduce demand-deficient unemployment in post-pandemic Singapore. The Singapore government would have to increase G by a much larger amount as compared to a large and relatively import-dependent country such as the USA which has a larger multiplier size.
- **Feasibility.** The massive spending by the rise in government spending on such investment can be very costly. However the Singapore government can tap on the past accumulated fiscal reserves due to fiscal prudence over the years. As such it is essential for the Singapore government to maintain its fiscal sustainability in order to realise her plans to reduce the demand-deficient unemployment.

Point 2: A rise in Singapore government spending on investment in human can help reduce structural unemployment in a post-pandemic world.

The COVID pandemic has helped to accelerate the digital transformation and created a landscape that has continued to encourage innovation and technological adoption moving forward in a post-pandemic world. However, such technological shift may result in **structural unemployment** in Singapore.

Hence the Singapore government has **increased its spending on investment in human capital** to help reduce structural unemployment in the economy. This is especially important as Singapore is a small economy with a lack of natural resources and its most valued resource has been its people.

For example, the Singapore government has stepped up the Skills-Future programme which promotes growing more future-ready workers with higher productivity, through forward-looking educational system as well as ongoing incentives for upskilling and reskilling for existing workers. The government also set aside \$100 million to scale up efforts to help companies implement concrete training and transformation programmes. This will allow companies to be proactive in their plans to reskill and upgrade workers with industry-relevant skills and facilitate job-matching, especially in light of structural unemployment faced by older workers in industries that are likely to be affected by innovation and technological shifts in post-pandemic Singapore.

Such increased investment in human capital through education and training aim to equip workers with the relevant skills **i.e. reduce the mismatch of skills** to become employed in industries where labour is in demand, hence improving the mobility of the workers. By encouraging and subsidising education and training programmes, structurally unemployed workers can pick up new skills like information technological which is vital in post-pandemic Singapore.

Evaluation of Limitation for Point 2

- **Impediments.** A key determinant of the effectiveness of investment in education and training to adopt advanced technologies is dependent on the **attitude and aptitude** of the unemployed (or in-employment workers) towards learning and transferring these new skills and knowledge to stay relevant to changing skills required. With Singapore's increasing ageing population where the older workers may be less receptive towards learning new skills or adopting new technologies in their new workplace due to prior experience and mindsets, this may impede the ease to rectify structural unemployment through a rise in government spending on investment in human capital.

(III) Summative EV

[Stand] In conclusion, to a large extent, a **multi-pronged approach** using a rise in government spending on both forms of investment - in major capital projects and in human capital – is highly recommended to reduce unemployment in post-pandemic Singapore. This is especially so as the post-pandemic world looks set to face a worsening global outlook coupled with the relentless pace of technological advancement that has given rise to a marked shift in the heavy reliance on information communication technology and automation.

[Justify] With a high possibility that exports-driven Singapore could face a deeper economic slowdown this year amid higher risks to global growth, the substantial government spending on investment in major capital projects in Singapore can play a significant role in pump-priming its economy, rebuild confidence to stimulate consumers' and investors' spending in order to drive domestic spending and buffer to a certain extent the impact of anticipated shortfall in export revenue on the aggregate demand, hence averting an even sharper rise in demand-deficient unemployment in the **short run**. At the same time, continued increase in human capital investment coupled with intensifying efforts to persuade more workers to come on-board upskilling programme can enable Singapore to be ready and to keep pace with the demand for increasingly complex new job-skills and future-proof their employability in order to tackle structural unemployment more quickly in the **long run**. As such, in a post-pandemic world, to make the Singapore economy more resilient in employability of its people, both in the short and long run, it necessitates the adoption of fiscal government spending on both forms of investment.

Mark Scheme

Band	Knowledge, Understanding, Application, Analysis	Marks
L3	For an answer that shows well-developed and well-balanced explanation of how govt spending on both forms of investment (one demand-side and one supply-side policy) can reduce demand-deficient unemployment and structural unemployment respectively. <ul style="list-style-type: none"> • clear, accurate explanation on the two policies that the Singapore government could implement to reduce unemployment • well-supported with diagrammatic analysis • well-contextualised to Singapore 	8-10
L2	For an answer that shows under-developed explanation or one-sided explanation of how govt spending on both forms of investment can reduce demand-deficient unemployment and structural unemployment respectively. <ul style="list-style-type: none"> • lacks depth of analysis (i.e. limited effective use of relevant economic analysis or gaps in diagrammatic analysis) • lacks scope in explaining government intervention • lacks appropriate examples 	5-7

L1	For an answer that shows limited knowledge of how demand side policy and supply side policy can reduce unemployment. <ul style="list-style-type: none"> • with listing of points, unexplained statements, or descriptive response • major conceptual errors • Smattering of points 	1-4
-----------	---	-----

Band	Evaluation	Marks
E3	For an answer that arrives at a well-explained evaluative judgements about the extent in which the two policies could reduce unemployment in post-pandemic Singapore, with a summative conclusion about whether both forms of investment are required.	5
E2	For an answer that make some attempts at a judgement about the extent in which the two policies could reduce unemployment in post-pandemic Singapore. <ul style="list-style-type: none"> • Well-explained evaluative judgements about the two policies • A well-explained evaluative judgement about one policy and an evaluative statement for the second policy plus a summative conclusion • A well-explained evaluative judgement about one policy and an evaluative statement for the second policy 	3-4
E1	For an unsupported statement about the extent in which the policies could reduce unemployment in post-pandemic Singapore. <ul style="list-style-type: none"> • A well-explained evaluative judgement about one policy or evaluative statements for the two policies • An evaluative statement for one policy 	1-2