Explain the domestic and international factors that could cause deflation. [10]

Introduction:

Definition: Deflation is a sustained decrease in the general price level of an economy, or negative inflation rate.
Direction of essay: This essay aims to explain how deflation occur due to a persistent fall in AD and/or persistent increase in AS that arises due to domestic factors and/or international events that is beyond a country's control.

P1: Deflation could be due a decrease in the components of AD that results from domestic factors.
E/E: A decrease in AD can be caused by a decrease in any of the components of AD – consumption expenditure (C), investment expenditure (I), government expenditure (G) and/or net exports (X-M) that arises due to domestic situation in the country. For example, when an economy experiences a recession, consumers would probably reduce their consumption expenditure (C) as the risk of losing their jobs increases.

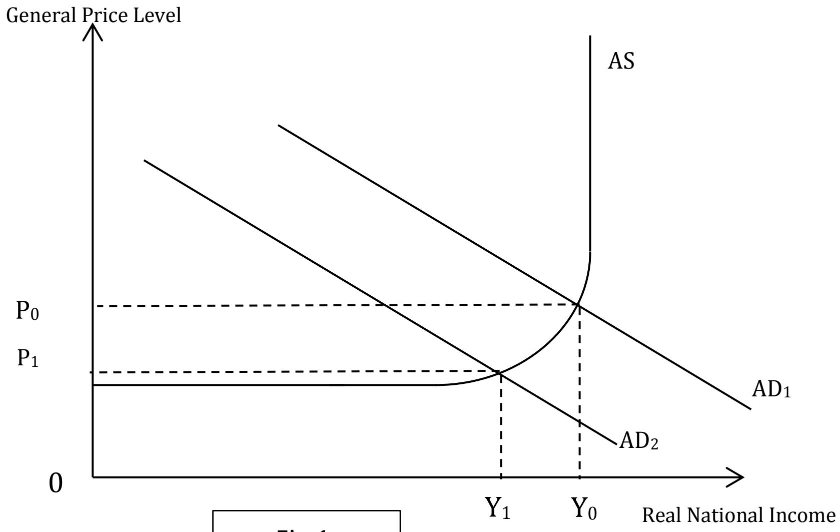


Fig 1.

There will also be a fall in investment as recession usually result in lower business confidence as investors are uncertain about their future returns on their investment. As both investor and consumers demand lesser quantity of products at each given price level during recession, there will be a leftward shift of AD from AD_0 to AD_1, resulting in a surplus at the original general price level. Due to the surplus, there will be a downward pressure on the general price level from P_0 to P_1.

L1: However, if consumers expect a further fall in general price level in the future, they will start to hoard money, delaying consumption in anticipation of lower price in the next period. Business would see it as a fall in demand and will postpone investment. This will further decrease AD, which will bring about a further fall in general price level, hence resulting in a deflationary spiral, whereby the economy cannot recover, leading to even lower prices in a vicious cycle.

P2: Deflation could be due a decrease in the components of AS that arises from domestic factors.

E/E: An increase in AS can be caused by a fall in cost of production due to increase in labour productivity within the country. As Singapore is shifting towards a more technology-enabled operation due to subsidy given to firms to engage in R&D. With greater use of capital goods, it means an increase in efficiency as it will help to increase labour productivity as more output could be produced within the same man/hr.

Moreover, during the period 2004 to 2014, Singapore relaxed her immigration policy to attract foreign workers and immigrants. The increase in the supply of foreign workers in Singapore have resulted in an increase in labour productivity and productive capacity, causing a rightward shift of LRAS.

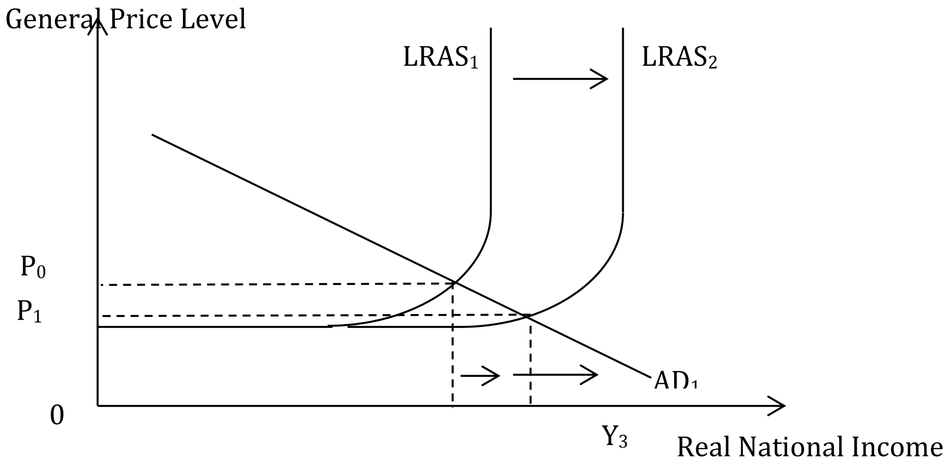


Fig 2.

L2: Deflation will only occur if the both domestic policies such as R&D and relaxation of immigration policies are long-term and effective. This will brings about persistent increase in LRAS (fig2) → rightward shift of LRAS curve → fall in cost of production→ downward pressure on price from P_0-P_1.

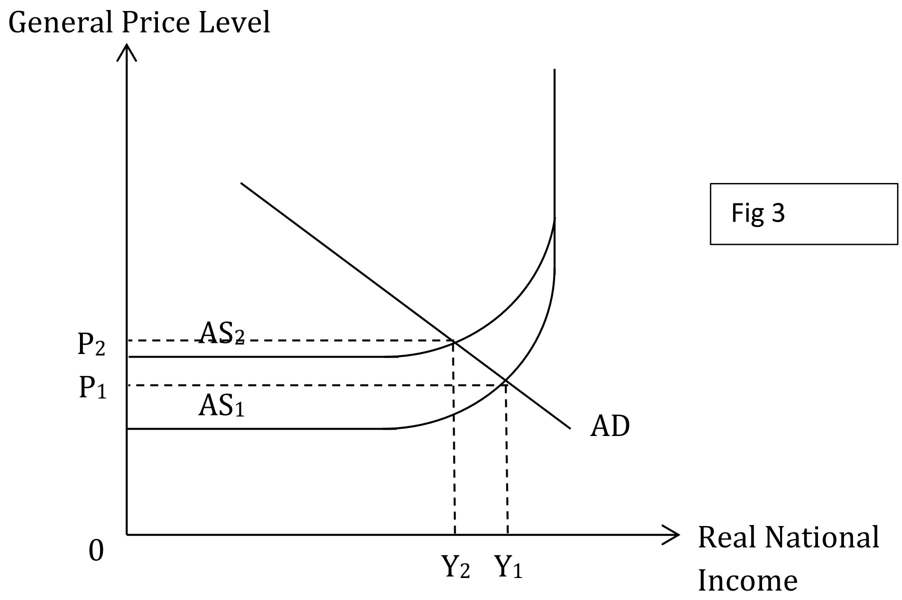
Deflation could be due a decrease in the components of AD and increase in AS that results from international factors.

P3: One of the international factors that cause a fall in general price level is due to recession faced by trading partners resulting in a decrease in AD.

E/E: When Singapore's trading partners such a USA is facing recession arising from subprime crisis, there will be a fall in US purchasing power resulting in a fall in demand for Singapore exports. This will cause a fall in Singapore net exports revenue especially when USA is Singapore major trading partner. The fall in AD would be expected to be large, shifting AD curve to shift left as seen in Fig 1. At the original general price level, there was a surplus causing a downward pressure on the general price level from P_0 to P_1.

L3: Deflation would occur when the fall in general price level is persistent. This would most likely to occur when USA is entrenched in a recession that would take a long time for her to recover.

P4: One of the international factors that cause a fall in general price level is due to recession faced by trading partners resulting in a decrease in AS.



E/E: An increase in AS can be due to a fall in cost of production that arises from international events that is beyond the country's control. For example, Singapore is a small and open economy that are heavily dependent on the import of key factor inputs. For example, American has been increasing global supply of oil due to its shale production boom. Due to this increasing global supply of oil, there has been an increasing fall in the global price of oil. Given that oil is a major factor of production → the falling price of oil will cause a fall in COP→ increase AS→ a downward pressure on GPL. Moreover, given that oil is a major component in the computation of CPI, a falling price of oil will also indicates a falling CPI, hence illustrating **a persistent fall in GPL.**

Conclusion:

Deflation spiral could arise with both domestic and international factors occurring together. In an interconnected economy together, it is often difficult to distinguish which is the main trigger that result in deflation. Even when deflation starts with either a fall in AD or an increase in AS, it is often challenging to separate the two, the moment deflation spiral downwards.

Marking scheme

Level	**Descriptors**
3	Thorough explanation of at least **one** domestic and **one** international factors causing deflation. Students have to explain the factors that cause a fall in AD and an increase in AS. To achieve 9m and above, students must be able to link to persistent fall in GPL. Usage of relevant examples.
2	Adequate explanation of how domestic and/or international factors cause demand-pull and cost-push inflation in Singapore Explanation of one type of inflation only [Max 5m for both domestic and international factors] Explanation of only 1 source of factors, either domestic or international factors. [max 5m]
1	Smattering of ideas. Listing rather than explanation of how deflation occurs.

	Substantial conceptual errors. Generally weak answer. Limited application of economic analysis.

Discuss the alternative policies that a government could adopt to address deflation. [15]
Introduction:

If deflation is caused by a persistent increase in AS, there will be an increase in material standard of living as there is an increase in real income together with falling prices. It brings about higher purchasing power, hence greater consumption of goods and services.

However, if the cause of deflation is due to a persistent fall in AD, it will bring about undesirable consequences such as lower material standard of living as consumers would delay consumption in anticipation of lower price in the next period. This results in lower consumption of goods and services and thus, lower material standard of living.

Hence, Government would have to intervene by implementing expansionary demand management policies to address the cause of persistent decrease in AD rather than the increase in AS.

Body:
P1: A government could pursue expansionary fiscal policy to address deflation.
E/E: When deflation is caused by persistent decrease in AD, the government could increase the level of government expenditure and/or reducing corporate and personal income tax. The increase in government expenditure, for example on infrastructure such as roads and ports would increase AD.

Furthermore, by reducing taxes such as the personal income tax, there will be an increase in disposable incomes. This will result in a rise in consumption. Reducing corporate taxes will result in a rise in post-tax profits which will induce more investments on capital goods by firms. Together with a rise in government, consumer and firm spending, there will be an increase in AD. The increases in induced consumption spending that result from an initial increase in an autonomous component of AD will cause an increase in general price level such that it will help to mitigate the extent of the fall in prices due to deflation, bringing about price stability.

EV1: For countries such as Japan that is running high on budget deficit (Japan's gross government debt is 226% of GDP) for many years. The government may need to borrow money from the commercial bank to fund the expansionary fiscal policy. However, when government competes with the firms for the limited supply of funds in the bank, it will lead to an increase in interest rates. This will increase the cost of borrowing for firms and households, which will cause a fall in investment and consumption. This will crowd out the initial increase in AD due to the increase in government expenditure.

P2: A government could implement expansionary monetary policy to address deflation.

E/E: When deflation is caused by persistent decrease in AD, the government could implement expansionary monetary policy such as increasing money supply to reduce interest rates. A reduction in interest rates will reduce the cost of borrowing for both investment and consumption. Investors are more incentivise to borrow and invest more due to greater increase in the rate of returns. Similarly, there will also be an increase in consumption.

Furthermore, a fall in interest rates will result in an outflow of hot money. This will increase the supply of domestic currency in the foreign exchange market causing depreciation of the country's currency against other currencies. Depreciation will cause the price of exports to be lower in terms of foreign currency and price of imports to be higher in terms of domestic currency. This will incentivise consumers to switch to consume domestically produced goods over imports. With depreciation, there will be an increase exports revenue and consumption expenditure.

L2: If the increase in consumption, investment expenditure and export revenue is long term due to the implementation of expansionary monetary policy, it will counter the problem of the persistent fall in AD, hence, addressing the problem of deflation.

E2: One of the main limitations lies with the responsiveness of investment and consumption to changes in the prevailing interest rates in the economy. This means the extent of change in AD would depend on the interest elasticity of C and I. Changes in C and I are greatly influenced by consumers and investors' economic outlook. Generally during deflation, if the **root cause** of deflation is due to economic recession, whether if it is domestic or international factors, the outlook is generally pessimistic. Even if interest rate is kept low, consumers and investors might not be keen to consume or invest due to poor economic performance. Fear of retrenchment and falling business confidence may cause consumers to save more, firms to downsize despite the fall in interest rates.

P3: To address deflation, Government could adopt depreciation of the exchange rate.

E/E: Government could depreciate her currency by intervening in the foreign exchange market via buying more of foreign currency. This is similar to what Japan's Prime Minister Shinzo Abe's is doing in addressing deflation. The depreciation of Yen will cause the price of exports to be lower in terms of foreign currency and price of imports to be higher in terms of domestic currency. Assuming that demand for both imports and exports are price elastic, Qdd for exports would ↑ more than proportionately while Qdd for imports would ↑more than proportionately. Thus, ↑TRx while ↓TEM. Net exports would increase, assuming if Marshall-Lerner condition (i.e.: sum of price elasticity of demand for exports and imports greater than one) holds, depreciation would lead to an increase in net export revenue (X-M).

L3: The increase in net exports (X-M) would lead to an increase in AD, hence an increase in general price level, which help to mitigate the fall in prices due to deflation.

EV3: However, a weaken currency does not necessary means that there will be an increase in net exports. The country would to consider the **current economic condition** of their trading partners. If their trading partners are experiencing recession, even with depreciation, net exports might not necessary increase. Furthermore, their trading partners might see it as a form of protectionist measures and might retaliate.

Moreover, it is important to consider the **characteristics of the country**, whether if it is heavily reliant on imports. Japan depends heavily on imported raw material. It is more reliant than it was before the Fukushima disaster since nuclear power has been sharply curtailed. Depreciation would only increase the import expenditure as demand for imports is price inelastic. Thus, the increase in net export via depreciation is limited, reducing the effectiveness of exchange rate policy in addressing deflation.

Conclusion

Even if there is an increase in GPL due to the implementation of the above policies, wages have to keep in pace to ensure that the increase in consumption is in tandem with the increase in exports and investment to bring about a persistent increase in GPL. However, increase in wages is seldom in tandem with an increase in exports and investment. This will resulting in worsening of domestic demand. Hence, limiting the effectiveness of the policies of addressing deflation. Therefore, to achieve price stability, the government would have to look into increasing wages to ensure that the increase in consumption is in tandem with the increase in exports and investment. Moreover, the government must also be able to respond quickly in terms of the implementation of policies taking into account of the root cause of deflation, the characteristics of the country and also the current economic conditions.

Marking scheme

Level	Knowledge, Application, Understanding and Analysis
3	There must be explanation of the reasons for **why** certain policies were chosen to tackle different sources of deflation. Eg, cause of the deflation and other factors.
2	Undeveloped analysis at least 2 policies to tackle deflation without or limited reference to source of deflation.
1	Answer shows some knowledge of the policies to tackle deflation but lacks analysis Good explanation of policies but focus on inflation instead of deflation.
E3	Synthesises economic arguments to arrive at well-reasoned judgements and decisions such as in a good summative conclusion. For this question, a lot of the evaluation would be done in the body of the answer. So the conclusion is mainly a synthesis of their argument which may also include some fresh insights or observations
E2	Largely unexplained judgements. Some attempt at evaluation or a summative conclusion Relevant to the question but does not explain the judgement or base it on relevant analysis
E1	Mainly unexplained judgement.