Catholic Junior College

THEME 3: THE NATIONAL AND INTERNATIONAL ECONOMY
3.2.2 & 3.2.3 MACROECONOMIC ISSUES & POLICIES
Price Instability

ENDURING UNDERSTANDING

Using the macroeconomic indicators, governments can determine whether price stability has been achieved. The failure to achieve price stability or other macroeconomic aims leads to macroeconomic issues, which will reduce the standard of living of its citizens. This will have different consequences, depending on the perspectives of the different economic agents.

ESSENTIAL QUESTIONS

- Why is price stability not achieved? What causes this problem?
- What are the consequences to the consumers, producers and government if the economy is facing this problem?
- What are the policies that can be used by the government to alleviate this problem?

UNIT SUMMARY

You have learnt about the key economic aims and indicators – high, sustainable and inclusive economic growth, price stability, full employment and favourable position of balance of payments. You have also learnt about the AD/AS framework.

When an economy is unable to achieve these key economic aims, it is an indication that the economy is not performing well.

In this unit, we will look at the ***causes*** of the macroeconomic issue of Inflation, illustrating it using the AD/AS framework.

We will also understand how the ***consequences*** of the macroeconomic issue would differ, depending on whether the perspective is taken from the *consumer*, *producer*, or *government*.

Next, we will also explore each of these macroeconomic issues in the *Singapore* context.

Lastly, you will learn more about the ***cures*** that the government can implement to solve the macroeconomic issues of inflation that often plague the modern economy.

CONTENTS

H2 9570 SYLLABUS REQUIREMENTS

Macroeconomic Issues: Causes, Consequences & Policies

High Inflation and Deflation	
Causes	Demand-pull inflation: - Excessive ad (near or at the full employment level of national output); Cost-push inflation: - Persistent increase in costs of production, for reasons not associated with increase in AD; Several possible causes of deflation, - Including a persistent fall in ad below the full employment level of national output and an increasing productive capacity of the economy.
Consequences	Consumers: - Purchasing power, employment, savings, consumption, sol etc. Producers: - Investment, production, employment, etc. Governments: - Consumer and investor confidence, impact on other macro aims
Policies (Cures)	Fiscal policy: - Government expenditure and revenue Monetary policy: - Interest rate policy - Exchange rate policy (case of singapore) Supply-side policies: - Short-run supply-side policies - Long-run supply-side policies

Students will need to understand the **causes** of these macroeconomic issues of inflation, as well as analyse the **consequences** of inflation from the perspectives of consumers, producers, and governments.

Students will then need to understand the **policies (cure)** that the government will implement to tackle the macroeconomic issues of inflation. A critical analysis of the effectiveness and limitations of the policies will be applied through the use of criteria such as root cause of the issues, and nature of the economy.

The use of AD/AS analysis to illustrate macroeconomic problems in an economy is required.

1. INFLATION

Inquiry Article: Singapore overall inflation rises to 3.2% in October, highest in more than 8 years

SINGAPORE: Singapore's overall inflation rose to a more than eight-year high in October, helped by higher car prices and housing rents, while core inflation climbed to its highest in nearly three years. Both benchmarks rose faster than economists had predicted.

Overall inflation jumped to 3.2 per cent on a year-on-year basis, up from 2.5 per cent in September. It was the highest since March 2013 and beat the 2.8 per cent median estimate of analysts surveyed by Bloomberg.

The uptick reflected stronger private transport and rental costs, in addition to the higher core inflation, said the Monetary Authority of Singapore (MAS) and the Ministry of Trade and Industry (MTI) on Tuesday (Nov 23). The increase was due to rising services and food prices, and a smaller decline in the cost of retail and other goods. It outdid the 1.3 per cent median estimate of analysts Bloomberg surveyed. The last time the core inflation rate was higher was in March 2019, when it hit 1.7 per cent.

Core inflation1, which better captures the underlying trend in consumer prices, is the measure that MAS monitors most closely in its review of Singapore's monetary policy. MAS and MTI said that rising imported and labour costs, as well as recovery in domestic economic activity, will support a steady increase in core inflation in the quarters ahead.

The cost of services rose more sharply in October – by 1.6 per cent compared with September's 1.2 per cent – mainly due to higher inflation of airfares and holiday expenses with the easing of border restrictions and establishment of vaccinated travel lanes.

Tuition and other fees, as well as prices of recreational and cultural services, also saw larger increases. Food inflation edged up to 1.7 per cent, compared with 1.6 per cent in September, as non-cooked food prices rose at a faster pace while the inflation of prepared meals remained broadly unchanged.

Private transport inflation rose to 14.3 per cent, from 10.8 per cent the previous month, on the back of a stronger increase in car prices. Accommodation inflation also rose, to 2.5 per cent compared with 1.9 per cent in September, as it was lifted by a larger increase in housing rents.

1 MAS core inflation excludes the cost of private road transport and accommodation as these are not only volatile but are largely driven by administrative policies therefore are not always indicative of underlying demand positions.
Adapted from straitstimes.com, 23 Nov 2021

Questions for Inquiry

Causes of Inflation:

a) How will the rising labour costs lead to higher prices?

b) What determines whether the rising labour costs will be able to pass on these increases in costs to consumers in the form of higher prices?

Consequences of Inflation:

c) Which parties are likely to be affected by rising prices?

d) Are all parties affected the same way? To the same extent?

Cures for Inflation: (to be explored in next chapter)

e) How will appreciating the Sing dollar 'dampen some of the imported food prices'?

1.1 Price Stability

As explained in the first set of notes, *1.2 Macroeconomic Aims*, ***Price Stability*** is one of the macroeconomic aims of the government, and it can be indicated by a *low and stable* inflation rate. The *macroeconomic issues that arise when price stability is compromised are* ***inflation*** *and* ***deflation***.

1.2 Definition and Measurement of Inflation and Deflation

Definition: Inflation is the sustained increase in the general price level (GPL) of an economy, over a period of time, usually a year.

Definition: General Price Level (GPL) is defined as the average price of goods and services in an economy.

For inflation to occur, price increases for **most,** if not all, commodities. If the prices of some commodities have risen while the prices of others have fallen, it might not cause an increase in general price level.

Furthermore, a rise in price due to a temporary increase in demand will not be considered as inflation. For example, during festive occasions like Christmas, this is a case of price fluctuations.

Inflation causes the ***purchasing power of money*** *to fall*.

- Purchasing power of money refers to the amount of goods and services that money can buy (purchasing power of money is also known as value of money).

The real value of money thus falls when inflation rises. This means that the amount of goods and services that the sum of money can purchase falls with higher inflation.

Recap: Some terms we use when talking about inflation: *Real* and *Nominal*.

- ***Real* values** are values where effects of inflation have been eliminated.
- While ***Nominal values*** are values where effects of inflation have not been eliminated. Real values often paint a more accurate picture as compared to nominal values. For example, recall that under *1.1.4 Macroeconomic Aims,* you have learnt that real GDP figures reflect changes in the *actual* quantity of goods and services produced in an economy, while nominal GDP figures can change because of both a change in prices and/or a change in quantity.

Mathematically,

$$\%\,\Delta\, Real\, Value = \%\,\Delta\, Nominal\, Value - Inflaton\, Rate\,\%$$

Example: If a country's nominal growth rate is 5% and inflation rate is 1.5%, then the real growth rate will be 3.5% (5% - 1.5% = 3.5%).

The rate of inflation measures the annual percentage increase in prices. A rise in inflation rate means general price level is increasing at a faster rate. A fall in inflation rate means general price level is increasing at a slower rate.

The converse is also true for deflation.

Definition: Deflation is the sustained decrease in the general price level (GPL) of an economy, over a period of time, usually a year.

Similarly, for deflation to occur, price decreases for **most,** if not all, commodities. If the prices of some commodities have risen while the prices of others have fallen, it might not cause a decrease in general price level also.

Year-on-year inflation or deflation rates may also be calculated using:

$$Inflation\, rate\ (\%) = \frac{CPI\ (Year\ 1) - CPI\ (Year\ 0)}{CPI\ (Year\ 0)} \times 100\%$$

Food For Thought

What is the difference between a fall in inflation rate, and a fall in prices?

1.3 Degrees of Inflation and Economic Situations

Degrees of Inflation

- **Deflation**
  - Decrease in general price level (GPL)
  - Negative inflation rate

- **Mild Inflation**
  - Slow increase in general price level (GPL)
  - Inflation rate of about 2-3% per annum

- **Moderate Inflation**
  - Modest increase in general price level (GPL)
  - Usually, single digit inflation rates of above 4% per annum
  - Inflation rate is within expectation and considered stable for both households and firms

- **High Inflation (Galloping Inflation)**
  - Large increase in general price level (GPL)
  - Usually double or even triple digits inflation rates of above 10% per annum
  - This inflation rate is out of expectation and considered unstable for both households and firms
  - Population will avoid holding money or cash other than the bare minimum.
  - Population will prefer to store wealth in the form of physical assets.

- **Hyperinflation**
  - Rapid, uncontrollable, and large increases in general price level (GPL)
  - General price level rises at uncontrollable level of 1000%, 1 million % or even 1000 million % per annum.
  - Example will include Venezuela's inflation rate was about 80,000% in 2018.
  - This could be caused by war; in the aftermath of a war; or excessive printing of money by the government.

Economic Situations

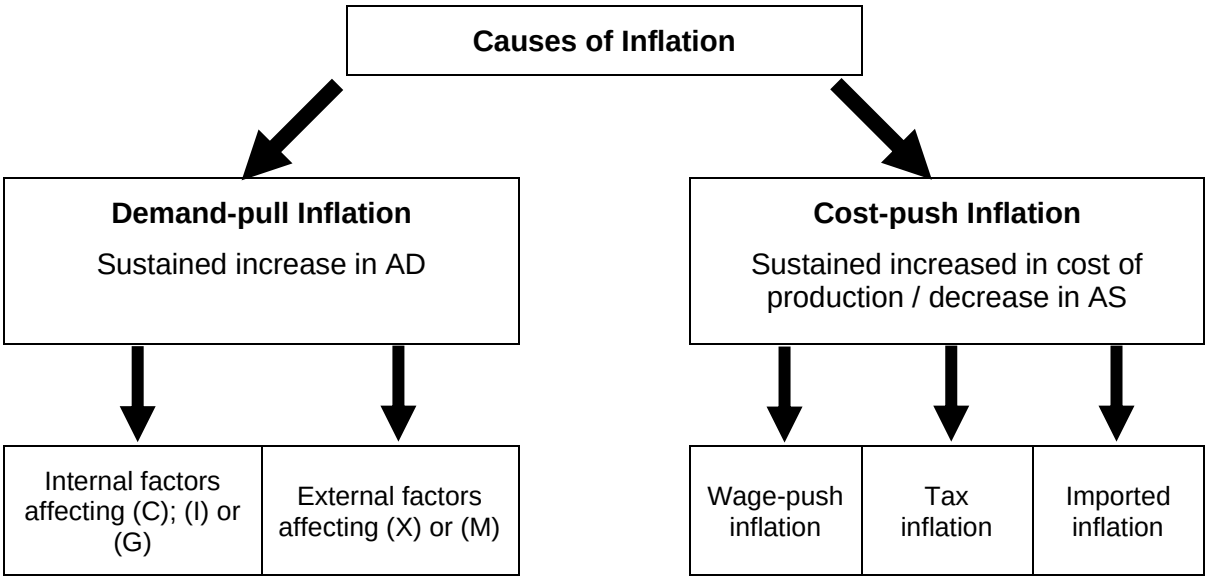
- **Stagflation**
  - Stagflation = Stagnation + Inflation
  - It's a period of slow or no economic growth (stagnation) accompanied with high level of inflation.

- **The Inflationary Spiral (or the Wage Price Spiral)**
  - A continuous increase in general price level spurred by an increase in wages and cost of production.
  - Inflation causes labour and workers to demand higher wages, assuming successful, the higher wages will increase the cost of production which lead to further inflation. The cycle will repeat again and continues.

1.4 Causes of Inflation

Inflation (and deflation) can be caused by changes in aggregate demand (AD) or aggregate supply (AS).

- Inflation is caused by an increase in aggregate demand (AD) is known as **demand-pull inflation**.
- Inflation is caused by a decrease in aggregate supply (AS) is known as **cost-push inflation**.
- When these two types of inflation can occur simultaneously, is commonly known as inflationary/wage-price spiral.



1.4.1 Demand-Pull Inflation

Definition: **Demand-pull inflation** is caused by persistent increases in aggregate demand when the economy is operating near or at the full employment level of national output.

As mentioned in the definition above, Demand-pull inflation is caused by persistent increase in Aggregate Demand. This is illustrated by a further rightward shift of the AD curve from AD_2 to AD_3 (at full employment Y_F). Price level will increase steeply from P_2 to P_3 and real output will increase from Y_2 to Y_F. We say that the price level is being *pulled upwards*.

The table below provides an analysis of how demand-pull inflation occurs given the persistent AD increase.

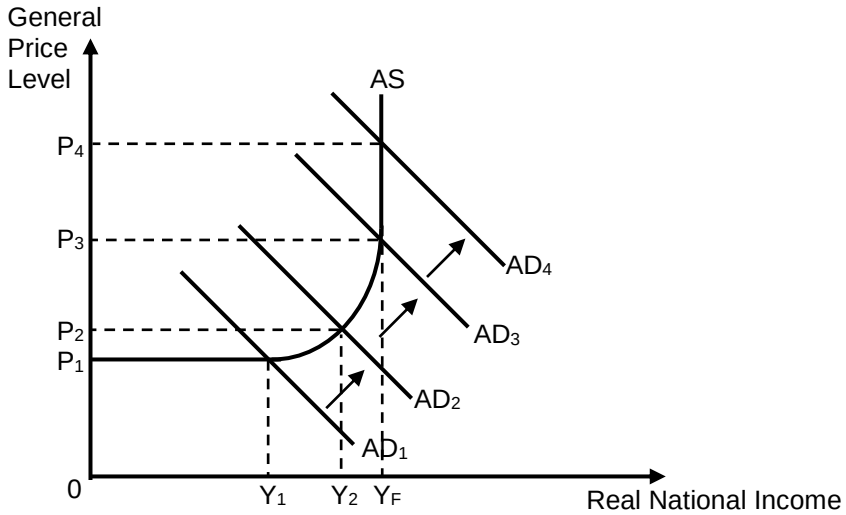


Figure 1: Demand-pull inflation

Acronym	Steps	Description
A	**1. AD/AS Factor and Component**	Any factors that caused an increase in AD. Increase in aggregate demand may be due to a rise in C, I, G, (X-M), or any combination of the four, and so, cause an increase in the general price level. If this increase is sustained, then demand-pull inflation results. Note: For detailed explanation of these factors, refer to the previous lecture set 3.1 Introduction to Macroeconomics (Section 2.2).
S	**2. SHIFT of AD/AS**	This results in AD increasing, ceteris paribus. Thus, AD shifts from AD1 to AD2.
A	**3. ADJUSTMENT process**	Assuming the economy is near full capacity, the increase in AD creates a **shortage** of goods at the initial GPL level P1. Firms will then respond to the rise in demand by increasing prices and output. **Assuming economy is close to full employment**, factors of production are now scarce. Increase in production will cause greater competition for scarce resources which **increases factor prices**. Firms would therefore be willing to sell additional units only at a higher price (shown by a movement up the AS curve). The economy re-equilibrates at **higher GPL (P2). The** persistent increase in AD from AD2 to AD3 will lead to further increases in GPL from P2 to P3 and beyond.
P	**4. END POINT**	This causes **Demand Pull Inflation.**

Note:

- As shown in Figure 1, as aggregate demand continues to rise, the AD curve will increase from AD_3 to AD_4. This will only lead to a further increase in price level

from P_3 to P_4 with no increase in real output as resources are fully employed at Y_F.

- If the economy continues to demand more goods and services ***when all resources are fully employed***, the economy is said to be "*overheated*".

Demand-pull inflation in Singapore

- Global economic recovery from 2008 Financial Crisis: The recovery of US (a major export destination for Singapore) and the rise in income of her trading partners lead to an increase in the purchasing power of US households. This in turn causes an increase in the demand for Singapore's exports. When there is a rise in net exports, AD rises, resulting in a rise in GPL. With the value of Singapore's exports twice the size of her domestic economy, this will have a significant impact on AD and hence GPL.

- An increase in Foreign Direct Investment: FDI inflows to Singapore increased 11% in 2018 and 16% in 2019. This is not only because of the higher expected rate of return of investing in Singapore when external demand rises, but also that the multi-national corporations (MNCs) which produce in Singapore tends to be export oriented. An increase in FDI will lead to an increase in AD and an upward pressure on the GPL.

- Singapore also faces demand pull inflation from domestic sources. For example, with the recovery of the Singapore economy after the financial crisis, the purchasing power of households increases, increasing domestic consumption and AD and hence GPL rises.

1.4.2 Cost Push Inflation

Definition: **Cost-push inflation** is caused by a sustained increase in the cost of production and hence a persistent fall in aggregate supply and thus increase in GPL

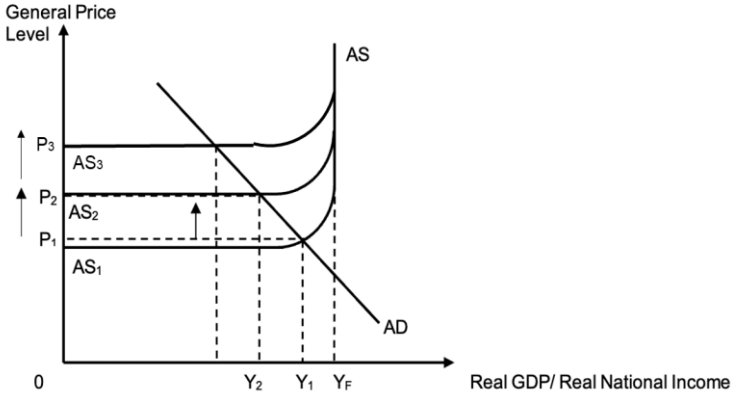


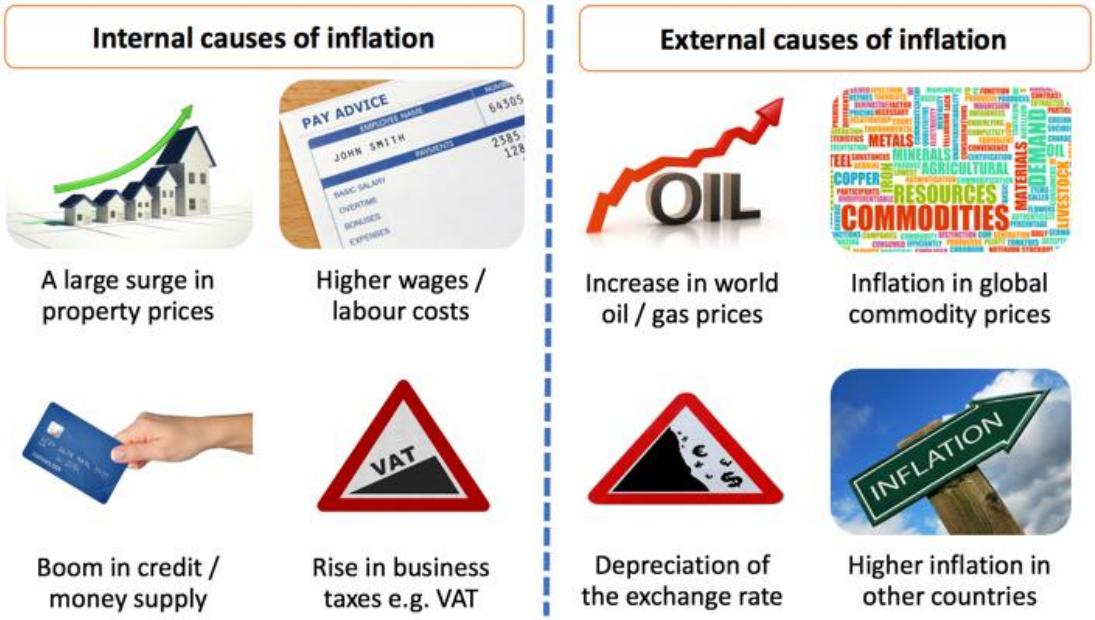
Figure 2: Cost-push Inflation

Acronym	Steps	Description
A	**1. AD/AS Factor and Component**	Any factors that caused a decrease in SRAS. For example: **1) Wage-push inflation** Rise in wages not matched by increases in labour productivity can lead to wage-push inflation Trade unions may bargain for wage increase that is not accompanied by a corresponding increase in productivity. A rise in wages could also be because of higher minimum wages and the raising of legislated social security contributions (e.g. CPF rates) from employers. To produce any given amount of output, firms need to incur higher costs of production which will cause the SRAS to fall. **2) Tax inflation** Changes in tax policies may cause cost-push inflation. Rise in indirect taxes, i.e. tax on goods and services leading to tax-push inflation. A rise in GST can lead to an increase in cost of production and a fall in SRAS. *Note: Direct taxes such as income tax and corporate tax affects AD, not AS.* **3) Imported inflation** Rise in the price of imported factor inputs leading to Imported Inflation. Countries dependent on imported factor inputs may

		experience an increase in import prices as a result of inflation in other countries or currency depreciation of the domestic country (currency becomes weaker vis-à-vis other countries). This heightens cost of production and causes a fall in SRAS For example: - In 2008, Singapore's inflation rate jumped from 2.1% in 2007, to 6.6%, (highest since 1981). Nearly half of the increase can be attributed to the escalation in global oil and food prices.
S	**2. SHIFT of AD/AS**	This results in SRAS decreasing (shifting up), ceteris paribus. Thus, SRAS shifts from AS1 to AS2 and then to AS3 since there is a persistent fall in SRAS.
A	**3. ADJUSTMENT process**	This creates a **shortage** at prevailing GPL levels, resulting in an **upward pressure on GPL** until the shortage is eliminated at a higher equilibrium GPL, P3.
P	**4. END POINT**	Thus, decrease in AS causes cost-push inflation.

Self-Assessment 1

Inflation can be caused by many factors. If we categorize the different causes, we can classify the different causes into 2 categories, internal and external. This can be seen in the infographic below.



Can you categorise the various causes of cost-push inflation?

Cause	Internal or External? (circle)
Trade unions bargaining for wage increase	Internal / External
Increase in goods and service tax	Internal / External
OPEC increases oil prices	Internal / External
Increase in cost due to speculators and profiteers stockpiling goods.	Internal / External

1.4.3 Wage-Price Spiral

Definition: The wage-price spiral is a macroeconomic theory used to explain the cause-and-effect relationship between rising wages and rising prices, or inflation.

Rising wages increase disposable income, raising the demand for goods and services, causing prices to rise. As prices increase, workers will demand higher wages to preserve the real value of their wages, resulting in higher costs of production and further upward pressure on prices, creating a vicious spiral.

According to the concept, it can start either due to high aggregate demand combined with near full employment or due to supply shocks, such as an oil price hike.

Demand-pull and cost-push inflation can occur together. Even when an inflationary process starts as either demand-pull or cost-push inflation, it is often difficult to separate the two. An initial demand-pull inflation, e.g. which may stem from persistent increase in investments and hence an increase in AD with a lack of spare capacity, may result in trade unions bargaining for higher wages as they do not want workers' purchasing power to fall, thus causing cost-push inflation.

Alternatively, an initial cost-push inflation may encourage the government to use demand management policies, e.g. expansionary fiscal policy, to expand aggregate demand to offset rises in unemployment, thus resulting in demand-pull inflation. This process is known as the wage-price spiral and it represents a vicious cycle in which firms and workers try to keep up with inflation to protect their real income.

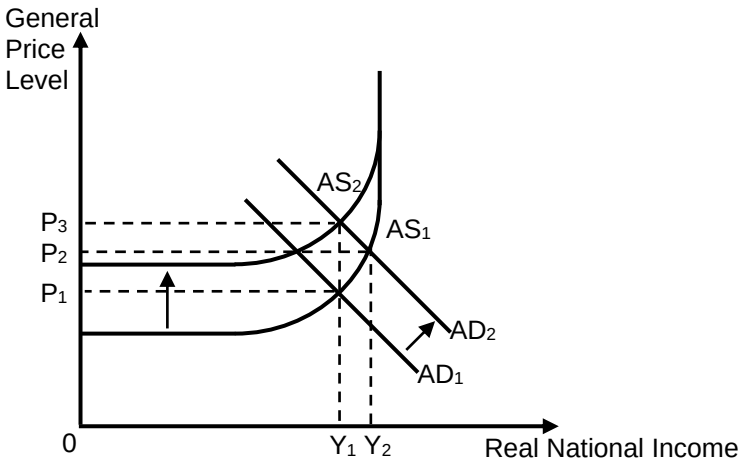


Figure 3: Wage-Price Spiral

The economy is initially at equilibrium with general price level P1 and output Y1. An increase in autonomous spending, e.g. G increases, will cause the AD to rise from AD1 to AD2 and GPL to rise from P1 to P2.

In the face of such rises in GPL, trade unions in some countries, which have considerable bargaining power, will increase their wage demands to maintain or increase the real wage of workers. This causes a fall in SRAS, and is seen as an upward shift of AS1 to AS2, which will cause the GPL to rise further from P2 to P3.

1.5 Effects of Inflation

The effects of inflation depend on the inflation rate and its causes and also on whether it is anticipated or unanticipated.

- *Anticipated inflation* means that individuals are prepared for it; hence they adjust and account for the inflation that occurs.
- *Unanticipated inflation* means that individuals are unprepared or wrongly prepared for it.

Inflation has desirable and undesirable effects on the *consumers*, *producers,* and the *government*.

1.5.1 Effects of Inflation on Consumers

In general, inflation lowers standard of living by reducing the real value of income or its purchasing power. With an increase in general price level, a given amount of income can purchase lower amount of goods and services, hence reducing material SOL. However, the effect may not be consistent across all consumers, as some people become better off at the expense of those who become worse off. In other words, inflation leads to a redistribution of income.

a) Fixed vs Variable Income Earners

With inflation, those who derive fixed income (e.g. from fixed pensions, interest securities and rents) will face a fall in ***real*** income. Workers whose percentage increase in nominal wage is less than the percentage increase in price level will also be worse off as real wage / income will fall.

On the other hand, workers earning income that varies with prices, such as salesmen whose incomes are a percentage of their sales revenue, will not see an erosion to their real income as a result of inflation. Similarly, income earners can also choose indexing agreements – where the nominal values of their wages, savings, tax payments, interest on loans etc. can be adjusted upwards according to the inflation rate – so that their real values remain unchanged.

b) Debtors vs Creditors

Depending on whether inflation is anticipated, there may be a redistribution of income from creditors to debtors.

In an ***unanticipated*** inflation, debtors gain and creditors lose. The debtors gain because the real value of their debt is reduced by the price increase. They end up paying less than what they owe in terms of the real value of money as the money they borrowed earlier had greater purchasing power. Thus, wealth is redistributed from creditors to debtors.

In an ***anticipated*** inflation, lenders will increase money rate of interest (or nominal) to maintain real rate of interest. (Real rate of interest = money rate of interest – inflation rate).Creditors can also use indexing agreements on their interest rate, to ensure that in unanticipated inflation, they do not lose out.

c) Savings

During inflation, savings decline as the value of money erodes over time. Therefore, people prefer to store their wealth in tangible assets, the value of which often appreciate in tandem with inflation, to better withstand the impacts of inflation. For example, gold and real estate property are viewed as assets that hold value over time. This also means that inflation harms people with cash savings more than people who hold assets.

Therefore, inflation worsens inequality as the higher income group are more likely to have their wealth stored in such assets, shielding their purchasing power from the erosion of inflation.

1.5.2 Effects of Inflation on Producers

a) Income Redistribution between Employers and Employees

The effects on income derived from profits largely depend on the kind of inflation being experienced.

During ***mild demand-pull inflation***, profits tend to rise. The businessmen gain because while product prices are rising, production costs usually lag behind. Costs such as wages and salaries are usually fixed by agreements, which take time to revise. Income distribution becomes more unequal as employers gain while workers lose.

Conversely, when there is ***cost-push inflation***, profits may be squeezed due to rising cost of production. When there is no excess demand, some firms may find it rather difficult to pass on the full effects of rising costs in the form of higher prices to consumers, reducing profits.

b) Investment

During ***mild demand-pull inflation***, profits tend to rise as production costs lag behind increases in product prices. The prospects of higher returns stimulate production and investment. Furthermore, when inflation is low, producers are better able to anticipate and plan for production and investment which tend to be long term.

Conversely, when there is ***cost-push inflation****, p*rofits may be badly affected if prices cannot rise to match the increase in costs. Firms may react to increasing production costs by decreasing output and investment, and retrenchment of labour. Economic growth is lowered.

Unanticipated inflation or fluctuations in inflation rate results in uncertainty. When firms are uncertain about the future costs and prices of their products, and hence the rates of return on their investments, they will be less willing to take risks and invest, especially in long term projects. Two types of costs are identified below to explain why investments fall during periods of unanticipated and high inflation:

Menu Costs: When inflation is high, firms have to frequently adjust the prices of goods or services that they sell. As a result, they incur costs in changing price tags, bar codes, slot machines, menus and advertisements. Costs are also incurred in reprinting and reissuing their product catalogues.

1.5.3 Effect of Inflation on Government

a) Impact on Economic Growth

Mild demand-pull inflation of around 2% is generally indicative of a healthy economy which is growing and prices are stable and expected to increase gradually. However, high inflation often causes economic contraction in the long term. High and persistent inflation leads to uncertainty about the future costs and prices of their products, and hence the rates of return on their investments, causing firms to be less willing to take risks and invest, especially in long-term projects. Investments may fall leading to a fall in aggregate demand, ceteris paribus, resulting in a fall in real GDP via the reverse multiplier effect, causing a recession.

In addition, relatively higher inflation compared trading partners will reduce export competitiveness, leading to a fall in net exports and a fall in aggregate demand, ceteris paribus. This results in a fall in real GDP via the reverse multiplier effect, causing a recession.

b) Impact on Balance of Payments

When there is relatively high domestic inflation, exports are less attractive as higher export prices relative to prices of exports from other countries cause quantity demanded of exports to fall. Assuming demand for exports to be price elastic, higher export prices bring about a more than proportionate fall in quantity demanded, ceteris paribus. Hence, export revenue fall.

On the other hand, demand for imports rises as the prices of imports becomes relatively cheaper compared with locally produced import-substitutes. Assuming that imports and domestic products are close substitutes, the rise in the price of domestic products leads to a more than proportionate increase in the quantity demanded of imports, ceteris paribus. Import expenditure thus rises.

In short, during inflation, payment for imports rises while receipts from exports fall. This leads to a worsening balance of trade, and hence current account, assuming ceteris paribus. As a result, it may also have adverse effect on the balance of payment.

c) Impact on a country's exchange rate

Galloping and hyperinflation could have adverse effects on the balance of payment which will result in a significant depreciation of the country's exchange rate as demand for our currency will fall from the fall in export revenue and the supply of our currency will increase from the rise in import expenditures. This may in turn cause financial investors to lose confidence in the future value of the currency and thus move their financial capital out of the country, leading to outflow of hot money. If the outflow is extensive, capital flight may occur, putting further pressure on the balance of payment and exchange rate. Eg. during the 1997 Asian Financial crisis.
When capital flight takes place, there will be less funds in the country for investment and infrastructure development. Moreover, the trading conditions may become so uncertain such that the conduct of business is impaired.

d) Social Discontent

As explained earlier, inflation could cause a redistribution of income from employees to employers and from creditors to debtors. Increased cost of living results in poverty and hardship for these groups of people whose income increases more slowly, affecting their standard of living and resulting in social discontent.

The social discontent, if not adequately addressed, may degenerate into social disorder causing disruption to production and fall in investment as people take to the streets. In fact, hyperinflation can cause the downfall of governments due to disruption to the economy and people's lives. For example, Argentina (1975-1991); Bolivia (1984-1986); Germany (1923-1924 and 1945-1948).

Self-Assessment 2
Read the article below and answer the questions that follow:

How Venezuela's crisis developed and drove out millions of people

What's wrong with Venezuela?
Arguably the biggest problem facing Venezuelans in their day-to-day lives is hyperinflation. The annual inflation rate reached 83,000% in July, according to a recent study by the opposition-controlled National Assembly.

Prices have been doubling every 26 days on average. This has resulted in many Venezuelans struggling to afford basic items such as food and toiletries. With small items like a cup of coffee costing a whopping 2.5m bolivars until recently, it also became increasingly difficult to pay for goods in cash.

To avoid going shopping with rucksacks full of cash, Venezuelans increasingly started using electronic transfers for even the smallest transactions.

How did hyperinflation come about?
On the most basic level, there are more people wanting to purchase goods than the number of goods available.

Venezuela is rich in oil, and has the largest proven reserves in the world. But arguably it's this exact wealth that underpins many of its economic problems. Because it has so much oil, Venezuela has never bothered to produce much else. It sells oil to other countries, and with the dollars it earns, imports the goods Venezuelans want and need from abroad.

Its oil revenues account for about 95% of its export earnings. But when the oil price plummeted in 2014, Venezuela was faced with a shortfall of foreign currency. This in turn made it difficult to import goods at the same level as before, and imported items became scarcer. The result: businesses increased prices and inflation rose.

Add to that the government's willingness to print extra money and regularly hike the minimum wage in an effort to regain popularity with Venezuela's poor, and you get money which loses its worth rapidly.

The government is also increasingly struggling to get credit after it defaulted on some of its government bonds. With creditors less likely to take the risk of investing in Venezuela, the government has again taken to printing more money, further undermining its value and stoking inflation.

How are people reacting?
Many people have been voting with their feet and leaving Venezuela. According to United Nations figures, 2.3 million Venezuelans have left the country since 2014 when the economic crisis started to bite.

The majority have crossed into neighbouring Colombia, from where some move on to Ecuador, Peru and Chile. Others have gone south to Brazil.

The mass migration is one of the largest forced displacement in the western hemisphere.

What faces those staying in Venezuela?
While the new currency is likely to make cash transactions easier for a while, its introduction caused confusion. Some Venezuelans managed to get hold of the new bills, but others reported long queues when banks opened.

Some economists have also warned that the new currency could soon face the same problems as the old one unless the root causes of hyperinflation are tackled. They say that within months its worth could be decimated by rising prices.

Employers have also said that they do not know how they will pay for the 34-fold rise in the minimum wage. Meanwhile, shoppers still face empty shelves in supermarkets, and in some cities there have been water shortages and power cuts caused by a lack of investment in Venezuela's crumbling infrastructure.

But while the power cuts and lack of running water are a problem for households and businesses, they have proven deadly in Venezuela's already run-down public hospitals. Many of those fleeing the country say they are doing so because they cannot get the operations and medical care they need.

Guiding Questions

1) What were the causes of inflation?

2) What were some effects of inflation on Venezuelan consumers, producers (businesses) and the government?

1.6 Causes of Deflation

Some countries have experienced periods of deflation in recent years, perhaps the most well-known example is Japan during the late 1990s and in the current decade. Japan's inflation rate was -0.11 in 2016, 0.47 in 2017, 0.98 in 2018 and 0.5 in 2019. In Japan, the root cause of deflation is slow growth and a high level of spare capacity that is driving prices lower. Greece and a number of EU countries are also experiencing deflation. In 2015, Switzerland inflation rate was -1.08% and Denmark 0.45%, a decline of 0.11% from 2014.

As with inflation, the causes of deflation can be either demand-side and/or supply-side. Some of these causes are of a relatively greater cause for concern (generally the demand-side reasons, such as a persistent fall in AD below the full employment level of national output) as compared to others (such as increasing the productive capacity of the economy).

1.6.1 Demand-side Reasons

(a) Cyclical price changes

Deflation can take place during economic downturns (business cycle 'slump'), as prices adjust to the fall in aggregate demand. Such cyclical price declines are temporary and prices would be expected to rise when economic activity picks up again. In Singapore, these have occurred during the recession years of 1985-87, 1997-98 and 2002-03.

A large fall in AD causing a persistent recession results in a large negative output gap, i.e. high level of spare capacity and thus a large fall in GPL leading to deflation.

(b) Loss of confidence amongst consumers and investors

Deflation may also be the result of loss of confidence in consumers and investors. During a recession, when prices are falling, households and businesses delay their purchases and investments in anticipation of further price decreases. Consumers and investors may also delay their consumption and investment due to negative sentiments, therefore causing AD to fall. Hence, this will prolong the recession. A downward deflationary spiral results, as depressed demand conditions force businesses to slash prices of their goods and services further.

(c) Fiscal austerity

Governments faced with growing debts and persistent budget deficits may resort to fiscal austerity which often involve cutting government spending, raising taxation. If the government cut spending, government expenditure will decrease, causing AD to decrease. Cutting of transfer payments and raising of direct taxes will also reduce consumption and investment. This occurred in southern Europe in the Eurozone Crisis of 2012 -2016.

(d) Credit crunch

A credit crunch is an economic scenario in which banks tighten lending requirements and do not easily extend loans, reducing access to credit by individuals and businesses.

Banks may not lend for several reasons. They may need to hold onto reserves in order repair the damages after suffering loses, which happened to Japanese banks that had invested heavily in real estate that crashed in the late 1980s, causing losses to banks. Banks may also be pulling back from risk-taking, which happened in the United States in 2007 and 2008 as financial institutions that initially suffered losses related to subprime mortgage lending pulled back in all types of lending, as they sought to reduce their levels of risk in all areas.

A credit crunch is also conducive to deflation as banks are unwilling to lend, and therefore consumers and businesses are unable to spend, causing AD and therefore prices to fall.

(e) The Paradox of Thrift

In a serious recession, people become pessimistic about the future. Therefore, they are likely to increase their personal savings and cut back on consumption. Firms will also cut back on investment. This reduces AD and firms may need to try to cut prices to encourage sales. In Japan in the 2000s there were periods of deflation because consumers were unwilling to spend.

1.6.2 Supply-side Reasons

Structural factors can lead to a permanent fall in general price levels as well. This could arise if the fall in prices is driven by supply-side improvements, such as:

Effect on SRAS

(a) Strong Exchange rate

A strong exchange rate cause imported input prices to fall, this reduces cost of production and increases SRAS. This should be viewed favourably as it enables producers to produce goods and services more cheaply, thus passing on the cost savings to consumers in the form of lower prices.

(b) A fall in wage rate

When there's an increase to labour productivity due to skills upgrading or productivity-enhancing equipment, wage rate falls as the wage per unit of output decreases. Lower wages lead to lower cost of production and higher SRAS. Therefore, producers can produce goods and services more cheaply, thus passing on the cost savings to consumers, resulting in a fall in prices.

(c) Globalisation

Globalisation enabled firms to source for cheaper inputs from around the world. It is widely regarded as one of the main factors that has caused prices to fall steadily in recent years.

Effect on LRAS

(a) Improved productivity

- Productivity is a measure of the **efficiency** with which a country combines capital and labour to produce more with the same level of factor inputs. We commonly focus on labour productivity measured by output per person employed or output per person hour.
- Higher productivity leads to increase in efficiency of labour and capital and this will result in fall in unit cost of production. SRAS and LRAS will increase and if the increase in AS is greater than increase in AD, GPL will fall and if this is persistent deflation would result.

(b) Technological advances

Advances in technology or rapid application of new technologies in production can cause an increase in LRAS. Technological advances will allow producers to increase efficiency and to innovate to find low cost production methods to lower costs. Thus, the prices of products will likely go down. For example: development of computer chips which enable price of manufactured goods to fall.

1.7 Effects of Deflation

The *converse effects of inflation* (on consumers, producers and government) applies to deflation as well *(see Section 1.5 on Effects of Inflation).* For instance, deflation increases the real burden of debts, hence benefiting the creditors and disadvantages the debtors.

Similar to inflation, the effects of deflation depend on its causes. Deflation caused by *cyclical price changes* and *supply-side improvements* (e.g. fall in price of oil) are not a concern. Cyclical price changes are *transitory* as prices change with business cycles and will increase eventually when economic boom returns. On the other hand, supply-side improvement usually bring about economic growth along with deflation, especially when economy was originally operating at or near productive capacity, because the economy's productive capacity expands to accommodate high level of AD, real national income increases.

However, deflation can be especially worrying if it is due to a *prolonged fall in AD*, and consumers and producers come to expect prices to fall even further.

1.7.1 Effects of Prolonged Deflation on Consumers

Recall that in prolonged recession with falling general price levels, consumers delay their purchases in anticipation of further price cuts, causing general price levels to fall further. This leads to a downward spiral of prices for consumers. While this increases their real purchasing power, ceteris paribus, the **weak consumer sentiments continue to cause consumers to delay their consumption.**

1.7.2 Effects of Prolonged Deflation on Producers

Lower prices mean reduced revenues and profits for businesses -firms will scale back production and investment. This causes unemployment to rise and further worsen consumer sentiments. Producers also delay their investments as they anticipate lower demand, leading to an even lower output.

The increased real burden of debt from deflation could also lead to bankruptcy of producers, thus possibly increases the risk of bank failures if the financial system is already fragile.

1.7.3 Effects of Prolonged Deflation on Governments

(a) Expectations that prices fall further reduces growth and employment:

Deflation can lead to a vicious cycle of decreased spending. Households may hold back their consumption if they expect prices to fall further in the future. This causes demand for firms' goods and services to fall, reducing revenues and therefore, profits for firms. If firms expect demand and prices to fall further in the future, reducing their profitability, they may hold back their investment. The fall in consumption and investment will dampen AD, lowering the general price level and real output level, further prolonging and worsening deflation and recession. With less production, fewer factors of production (eg. workers) are needed, so unemployment rises. As incomes falls, the material standard of living also decreases.

(b) Higher real interest rates affects actual and potential growth

Recall that the rate of interest affects the level of consumption and investment (see 3.1 Introduction to Macroeconomics Lecture Notes Section 2.2). To be precise, it is the real

rate of interest that determine these levels. Real interest rate = Nominal interest rate – inflation rate.

In times of recessions, central banks can lower their nominal interest rates close to 0% in order to stimulate consumption and investment. However, with deflation, even 0% nominal interest rates mean that real interest rates are still positive and may even be relatively high. Thus, low nominal interest rates may still discourage investment and hiring.

A deflationary trap is a state of persistent deflation that can spiral downward in the face of zero percent interest (nominal interest rate). Deflation may become a trap because conventional measures of cutting interest rates no longer work. This is because the nominal interest rate cannot be lowered beyond 0% and real interest rate may remain high with deflation, discouraging borrowing, consumption and investment. The fall in I reduces AD and dampens the rise in the LRAS which negatively reduces the economy's potential growth.

1.8 Inflation in the context of Singapore

Table: Singapore's CPI and Inflation Rate

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Consumer Price Index (Base Year 2019)	96.2	98.5	99.5	90.0	98.4	99.0	99.4	100.0	99.8	102.1
Inflation rate (%)	4.6	2.4	1.0	-0.5	-0.5	0.6	0.4	0.6	-0.2	2.3

Source: *Singapore Department of Statistics*

Throughout history, Singapore has relied on trade for survival, because of her geographical location, small size and also lack of natural resources. Till today, Singapore still imports large amounts of raw materials for her industrial needs and re-exports them. Singapore continues to rely heavily on trade as well as foreign investments as key players for economic growth.

Because of this, the economy might be subjected to demand-pull inflation led by rises in aggregate demand due to mainly exports and investments. She would also be particularly vulnerable to imported cost push inflation, as a result of her reliance on imported resources.

From the above data, we can conclude that Singapore did not have very high inflation rates over the years.

This is **because Singapore uses exchange rate to control its main source of inflation i.e. imported inflation**.

- Given our scarce resources, we have had to import even the most basic necessities. Domestic prices are thus largely determined by **changes in world prices** and the **exchange rate**.
- A stronger exchange rate would lower the cost of intermediate (imported) inputs and capital goods, this results in an increase in SRAS (SRAS shifts down), thus translates to **lower price of our domestically produced goods and services, and thus lower inflation.**
- However, there is a trade-off between cheaper imports and short-term economic growth. Recall that a stronger Singapore dollar would cause net exports to fall,
- assuming PEDx and PEDm >1, hence AD falls, negatively affecting economic growth, ceteris paribus.
- Given the **high import content of our exports,** the prices of exports are also influenced by prices of imported factors inputs. Hence, **in the medium to long run, a gradually appreciating Singapore dollar is conducive for economic growth if the external demand for Singapore's exports is booming.**

Demand Side Factors:

a) Rise in World Demand for Exports

Being an export-oriented economy, when the world increases its demand for our goods; this increases our export revenue, ceteris paribus, and hence aggregate demand, pushing general price levels in Singapore up. The effect of exports on aggregate demand will be enhanced if a country is very dependent on trade. Singapore's key exports are in oil, chemicals and chemical products, and manufacturing especially machinery and transport equipment.

b) Foreign Direct Investment

Due to Singapore's well-developed infrastructure and strong social-political stability, coupled with favourable government policies to attract FDI (i.e. one of the world's lowest corporate tax rate at 17%), the influx of FDI is the other significant factor that boosts our levels of aggregate demand.

Net FDI for 2013 amounted to $345.4 billion. FDI into Singapore amounted to $848.9 billion. United States, Netherlands, Japan, British Virgin Islands and United Kingdom remained the top five investor countries in Singapore. FDI out of Singapore for the same period amounted to $503.5 billion. China, United Kingdom, Australia and Indonesia were the major destinations of Singapore's investment overseas.

Note: When a country has not reached full employment, increase in investments will lead to mild inflation, but it will also lead to economic growth and creation of employment (use AD/AS to show this!).

Supply Side Factors:

a) Imported Inflation [Key source of inflation in Singapore]

Due to lack of natural resources, Singapore imports resources for production purposes and also imports consumer goods to meet consumption needs in the country.

As Singapore is largely import-dependent on raw materials and food for production needs, she is therefore very vulnerable to imported inflation. Demand for imports is said to be highly price inelastic. **The more *import price inelastic*, the greater the risk of imported inflation occurring in the country due to the *lack of substitutes* found locally**. When prices of oil and food rise in other countries, importers will face higher costs, and will pass on the cost to the consumers in Singapore in the form of higher prices. Rising costs will cause SRAS to fall, causing the SRAS curve to shift upwards and GPL to increase.

b) Domestic Changes in Cost of Production

Although imported inflation does play an important role in increasing business costs thus contributing to Singapore's inflation, the domestic costs of doing business e.g. labour costs, rental, storage fees and government fees and charges, do contribute to inflation as well. For example, as a result of Singapore's falling birth rates over the past two decades, rapidly aging population, as well as a tighter foreign worker policy, this has contributed to rising rates domestically. In this case, both SRAS and LRAS will fall, causing GPL to increase.

Example of Cost-Push inflation in Singapore

A source of cost-push inflation in Singapore would be the increase in global demand for raw materials or commodities such as food and oil. This increases the unit cost of production as these raw materials are the important factor of production causing the SRAS to decrease (SRAS curve shifts upwards) and therefore increasing the GPL in Singapore resulting in cost push inflation.

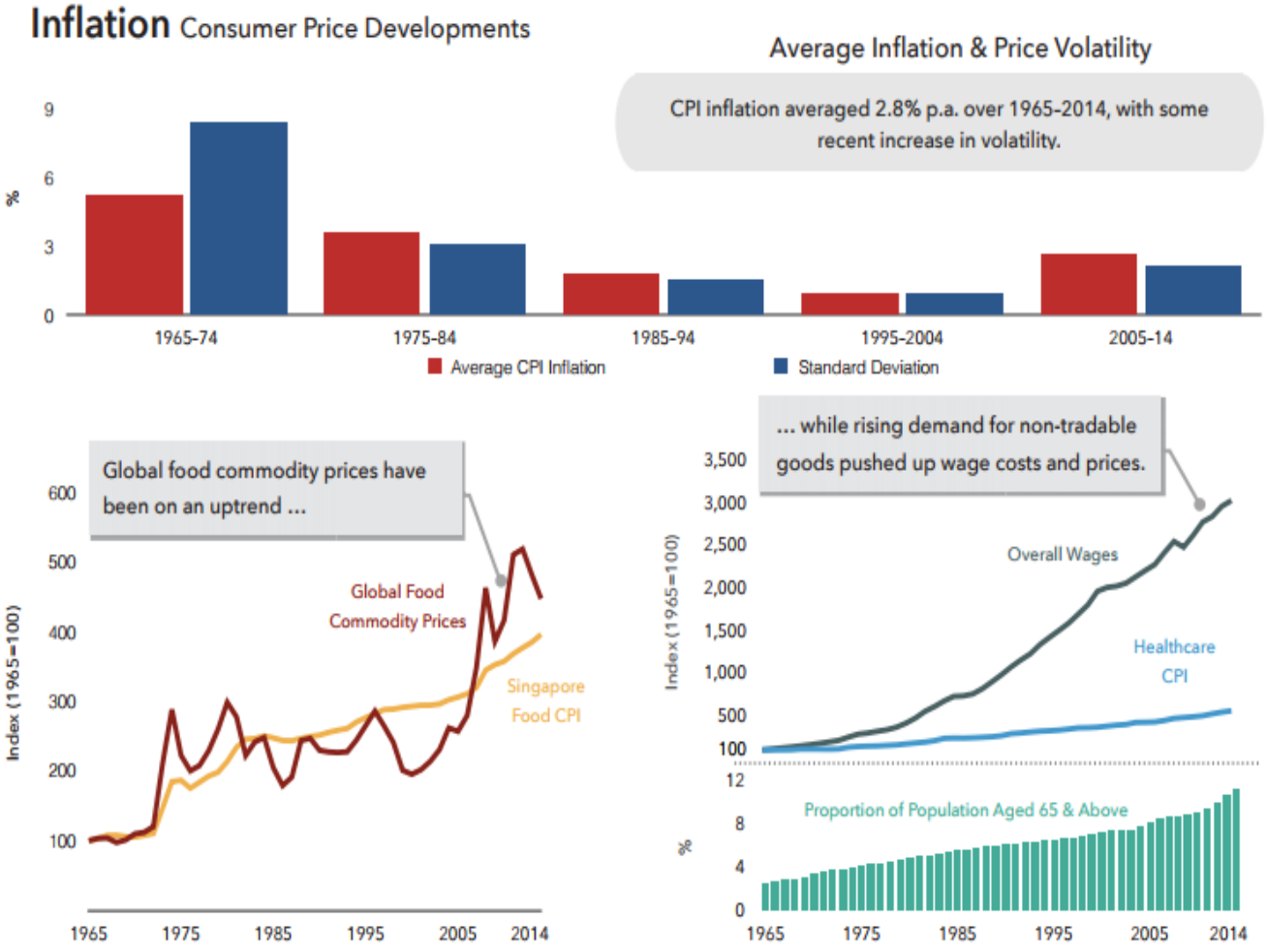
For example, in 2012, the average crude oil price was at historically high levels as OPEC restricted their oil production. This was an important contributing factor to Singapore's high inflation rate that year as with little or no substitutes to the imported raw materials like oil, demand for her imports are price inelastic therefore GPL rises.

Another cause of Singapore's cost push inflation could be the government's efforts to reduce the inflow of foreign workers. Tightening of foreign labour policies has led to the overall labour force to rise slower than demand for labour. This leads to labour shortage. With increase in wage rate and productivity growth lagging behind, unit cost rises. Hence SRAS decreases (SRAS curve shifts upwards), leading to cost push inflation.

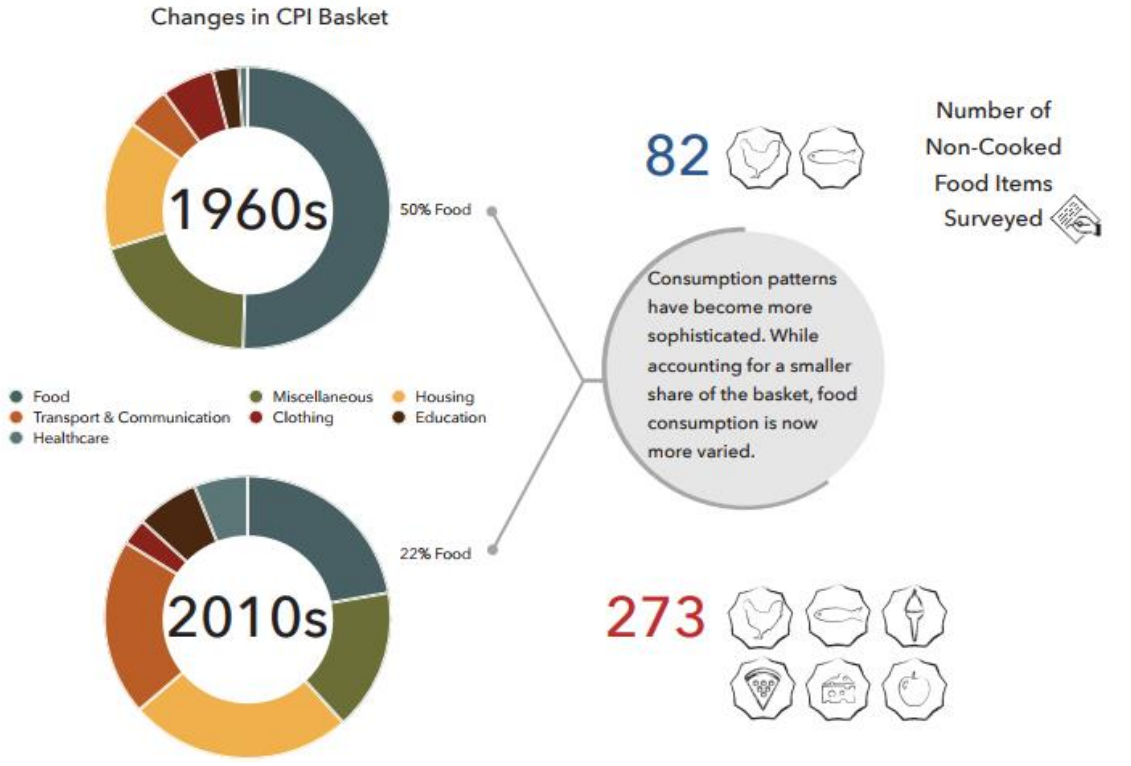
Imported Inflation in Singapore

Singapore is susceptible to imported inflation as it is dependent on oil and natural resources imported from other countries. Singapore's Core Inflation, which excludes the costs of accommodation and private road transport, rose to 2.2% in 2011. This was up from 1.5% in 2010, mainly due to the sharp rise in global commodity prices. Oil prices spiked during the Middle East and the North African crisis, and food prices climbed due to adverse weather conditions.

What does this mean for Singaporeans? Electricity tariffs in Singapore are reviewed quarterly by the Energy Market Authority so a rise in crude oil prices will have a delayed impact on the utilities bill several months later. However, petrol pump prices tend to track crude oil prices more closely, with petrol retailers adjusting prices in tandem with costs. This means that consumers and businesses had to pay higher pump prices and subsequently higher utility. The higher transportation costs for businesses result in costlier manufactured goods from food, medicine to clothing. Core inflation rose from 2.4 per cent in Q4 2011 to 3.2 per cent in the first two months of 2012.
Source: MAS



& INFLATION DEVELOPMENTS



Singapore: What does deflation mean to us?

Singapore experiences its first deflation in 5 years when consumer prices fell 0.3% in November on a year-to-year basis. Deflation, in economics is defined the decrease in average price level of good and services.

While it may be good news to the consumers as their purchasing power increases with more money in their pocket for other things, investors and the government get cautious over a sustained decrease in the price level.

'Decrease? I am still paying the same for my food, public transport and medical bills.'

Prices of food, healthcare and education amongst other items has in fact, avoided the drop and in fact rise by 2.9%, 1.8% and 2.7% respectively. For the average consumers, there is nothing to cheer about besides a drop of 2.1% in clothing and footwear.

What led to the overall fell in prices is mainly due to the fall in the price of private road transport – a decline of 7% as compared to last year. This is attributed to the decrease in the price of COE premiums from almost $100,000 in January 2013 to around $76,094 for Cat E in the first round of bidding in December 2014. With over 100,000 cars hitting 10 years old next year, these decade old cars is due for de-registration and thus expect an influx of COE supply and prices to fall further.

The fall in Brent crude oil from US$115 a barrel in June to the current price of US$61 a barrel has caused downward pressure to the average price level of good and services. With the advent of better technology such as hydraulic drilling in the US and the use of alternative fuel, coupled with a slow growth in China and OPEC's price war, it is unlikely that prices will hit the US$100 mark in the near future.

What does it means to the consumers?

If there is sustained deflation, there will be a downward deflationary spiral where aggregate demands will fall and companies cut down on production. Consumers will put off spending knowing that future prices will be cheaper and this hurts the economy and increases unemployment. With lower wage, the problem exacerbates and price declines further – something you witness in Japan over two decades.

Fortunately, Singapore seems poised to be able to resist the deflationary pressure due to a tight labour market and increasing population. The fall in the general price level is unlikely to be passed on to the consumers as companies face high rental cost and sticky wages. So don't expect the price of your groceries, MRT and Bus fares and other necessities to fall.

Source: https://www.money digest.sg

Food For Thought

How would changes in the CPI basket potentially affect Singapore's inflation rate in the future?

Self-Assessment 3

Can you describe the trend of inflation in Singapore over the past 50 years?

What were some events in Singapore's history that could have accounted for the average inflation rates observed?

Illustrate, using an AD/AS diagram, the impact of one such event on Singapore's economy.

Conclusion

In the real world, the causes of inflation and deflation are not clearly identifiable and can occur simultaneously. For example, when excessive aggregate demand in a specific industry brings about increases in prices, structural inflation can occur as supply cannot adjust to the new situation. The resulting demand for higher wages by workers can cause cost-push inflation to creep in.

2. MACROECONOMIC POLICIES TO ADDRESS INFLATION AND DEFLATION

2.1 Use of Contractionary Fiscal Policy in Controlling Demand-Pull Inflation

1) Mechanism

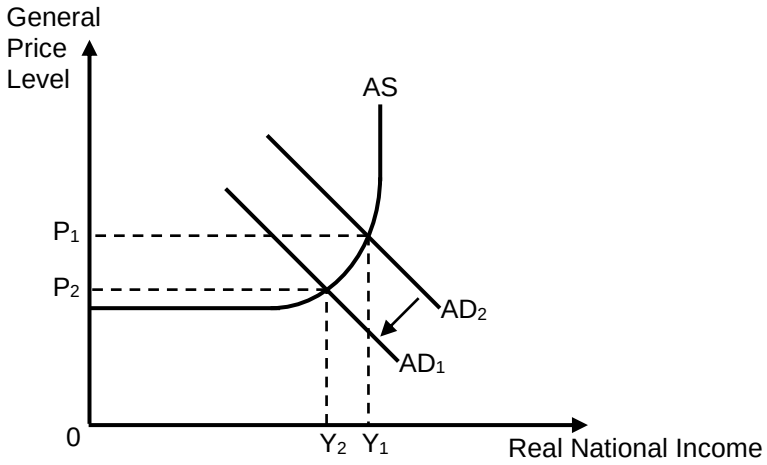


Figure 4: Effect of Contractionary Fiscal Policy

Acronym	Steps	Description
A	**1. AD/AS Factor and Component**	• **Reducing government spending:** A factor of aggregate demand is government expenditure (G). By reducing that component, aggregate demand will be reduced, thus reducing demand pull inflation. For example, governments can cut spending on public projects when the economy shows signs of over-heating. • **Increasing direct taxes:** Income tax affects consumers' ability to purchase goods. By increasing such taxes, it will reduce consumers' disposable income and curtail private spending (C), which in turn reduces aggregate demand, ceteris paribus. An increase in corporate taxes would reduce funds available for firms to invest in capital goods (I), reducing aggregate demand, ceteris paribus. The figure below explains how Fiscal Policy can be used to address demand pull inflation.
S	**2. SHIFT of AD/AS**	This results in AD decreasing, ceteris paribus. Thus, AD shifts leftwards from AD1 to AD2.
A	**3. ADJUSTMENT process**	This creates a surplus of goods at the initial GPL (P1), thus creating a downward pressure on price. Firms decrease production, where factors of production are now no longer scarce. A decrease production results in less competition for scarce resources, **reducing factor prices**. Firms would therefore be willing to sell additional units at a lower price (shown by a movement down

		along the AS curve). Thus, the economy re-equilibrates at **lower GPL, P2**.
P	**4. END POINT**	Thus, demand-pull inflation is mitigated, achieving price stability.

2) Evaluation of policy

State of Economy	• If the state of economy is such that spare capacity exists in the economy, but prices are rising (i.e. AD cuts the AS at the intermediate range), then contractionary fiscal policy would cause AD to fall and real national income to fall while curbing inflation, leading to negative economic growth. In fact, all demand-side management policies that are contractionary in nature will have this undesirable side-effect. A more appropriate policy would be supply-side policy to expand productive capacity (increase LRAS and shift LRAS rightwards) to ease the upward pressure on GPL, which will be explained in greater detail in section 2.4. • Contractionary fiscal policy would also be inappropriate to use to reduce demand-pull inflation if consumers and producers have a **positive outlook of the economy**. Even though there is a tax increase, firms may be willing to undertake investment due to higher expected returns (profits) from investment. Similarly, consumers may expect future income to increase or employment opportunities to improve, causing them to consume more in the current period. • Consumption and investment largely depend on **permanent expectations of future income.** Increase in taxes temporarily will not have the desired effects on consumption and investment. People may base their consumption decision on their permanent income, not current disposable income. If they perceive tax increase to be temporary, it will have less effect on their wealth.
Urgency of Issue	**Government Priority i.e. whether economic growth or low inflation is more significant in a government's macroeconomic objective.** • From mid-2014 to 2016, Brazil experienced a a facing recession, cost push inflation and a high-accumulated debt to GDP simultaneously. Which issues should Brazil address first? It depends on the **urgency of the issues**. By 2015, Brazil was in its deepest recession in decades with unemployment rate doubled to more than 11 percent. Politically, Brazil's long-standing issues of corruption and state intervention are hitting growth, investment and social cohesion. G, I, X and C are all decreasing in Brazil and these are all components of AD. This has resulted in Brazil experiencing the deepest recession in decades. Given the seriousness of the recession, addressing the recession and high government debt is arguably the priority rather than the high inflation.

Unintended Consequences	Contractionary fiscal policies are politically unpopular as it involves raising taxes and spending cuts. As a result, many governments resort to interest rate policy to control inflation. • Increases in taxes aimed at reducing aggregate demand may have unfavourable effects on the incentives to work and make the economy less attractive for foreign investors to invest (FDIs fall). Lower FDIs would mean lower productive capacity in the long term, LRAS decreases and this could impede potential economic growth. • The Singapore economy is highly dependent on foreign talents and foreign direct investments, the Singapore government does not favour increasing income taxes. • The contractionary fiscal policy may be overly effective and could cause not a more-than-intended fall in AD, such that AD cuts the AS along the intermediate or horizontal range. As a result, while inflation is controlled, there could be a contraction of the economy as real national income falls and unemployment increases. • In addition, if government spending cuts concern essential services such as healthcare, education and maintenance of public facilities, then non-material standard of living of people will be compromised. In particular, spending cuts are challenging for economy with ageing population like Singapore, where one in five people will be aged 65 and older by 2030. • Income distribution may also be worsened if increase in taxes affect the poor more than the rich. As the poor spend a larger proportion of their income on consumption of essentials such as food, healthcare & transport, a 5% increase in tax of the poor will cause their material standard of living to fall considerably whereas the rich are less affected.
Nature of the economy	**<u>Significance of domestic sources of AD</u>** • A fiscal policy would be effective if the economy is dependent on domestic consumption, investment and government expenditure, e.g. large economies like USA and Japan. If instead an economy was trade-dependent, e.g. Singapore and Hong Kong, C, I and G would form a small proportion of AD. Thus, the fiscal policy would have little impact on the overall AD if net exports remained unchanged. Hence demand-pull inflation could persist. **<u>Size of Multiplier</u>** • The impact of fiscal policy, like all demand-management policies, works through the multiplier effect (K). Fiscal policy will be more effective for large economies with a bigger K, e.g. USA, and less effective for small and open economies with a smaller K, e.g. Singapore. • A small multiplier reduces the effectiveness of fiscal policy. If the multiplier is small, the government may need to cut expenditure or to increase taxes by a significant amount for an effective correction of the demand pull inflation.

Root Cause	Depends on the root causes of inflation. If inflation is caused by demand pull-inflation then contractionary fiscal policy which is a demand management policy could be effective. If inflation is due to cost push inflation the contractionary fiscal policy will not be appropriate; governments should use policies like supply-side policies to reduce cost of production. Dealing with the root causes will help to resolve the problem effectively.
Time Period	**Time lags** may occur in the form of • Recognition lag: Identification of the problem by the government and the collection of reliable statistics may take time. • Implementation lag: This is especially so in a democratic system whereby any changes in the budget needs to go through the congress/parliament and debated on, before it can be implemented. • The time needed for the full impact of the fiscal policy to work through the entire economy may not be an instantaneous process. By the time the policy is implemented, the economy may have gone into a recession and implementing the contractionary policy to reduce inflation may harm the economy.

OVERALL EFFECTIVENESS OF FISCAL POLICY IN CONTROLLING INFLATION

As before, always assess the advantages and disadvantages according to the given context of question. *Make an overall assessment that is a reasoned stand relevant to the question.*

Fiscal policy is appropriate for dealing with demand-pull inflation and not cost-push inflation. It would be appropriate if the sources of increase in AD arise internally. In cases where increase in external demand for exports is driving up prices, tax increase and spending cuts are less effective as these target the domestic consumers and investors. Similarly, in the case of imported inflation, contractionary fiscal policy is less effective than exchange rate policy.

In addition, there are unintended consequences to contractionary fiscal policy that the government must be prepared to mitigate. The conflict of goals in the pursuit of price stability means that government may need to prioritize the most pressing and important one. Lastly, government spending cuts is a short-term strategy because there is a limit to how much spending cuts can be pursued without compromising the essential functions of governments. To begin with, contractionary fiscal policy is politically unpopular as it involves spending cuts and tax increase, which may steer government towards contractionary monetary policy instead.

2.2 Use of Contractionary Monetary Policy in Controlling Demand Pull Inflation.

1) Mechanism (refer to the Fiscal Policy section for the Diagram)

Acronym	Steps	Description
A	**1. AD/AS Factor and Component**	**Internal Effects** Such a policy can involve the central bank **increasing the rate of interest** or **reducing the**

		<u>supply of loanable funds</u>. Higher interest rates mean higher cost of borrowing and less will be borrowed for consumption and investment. Also, by reducing the lending capacity of commercial banks, the central bank seeks to reduce the commercial banks' ability to give loans. This may result in a fall in consumption and investment expenditure (C & I). **External Effects** The rise in interest rates will lead to an inflow of hot money in search for higher returns. This will then lead to an increase in demand of the currency in the forex market. Thus, there will be an appreciation of the exchange rate. With a stronger exchange rate, exports are more expensive in foreign currency terms. This will lead to a fall in demand for our exports. Imports will be cheaper in local currency terms. This will lead to a rise in quantity demanded of the imports, thus leading to a fall in X and a rise in M. (X-M) will then fall.
S	**2. SHIFT of AD/AS**	This results in AD decreasing, ceteris paribus. Thus, AD shifts leftwards from AD1 to AD2. (Refer to Figure 4 above)
A	**3. ADJUSTMENT process**	This creates a surplus of goods at the initial GPL (P1), thus creating a downward pressure on price. Firms' decrease production, where factors of production are now no longer scarce. Decrease production results in less competition for scarce resources, **reducing factor prices**. Firms would therefore be willing to sell additional units at a lower price (shown by a movement down along the AS curve). Thus, the economy re-equilibrates at **lower GPL, P2**.
P	**4. END POINT**	Thus, demand-pull inflation is mitigated, achieving price stability.

<u>Self-Assessment 4</u>
Use the AD-AS framework to explain the effects of contractionary monetary policy on the economy in times of inflation.

2) ***Evaluation of policy***

State of Economy	Insensitivity of investment/consumption to increase in interest rate during a boom. . • Contractionary Monetary policy and higher interest rates may not be effective in reducing consumption during a boom when consumers expect income to increase and unemployment to fall. • Positive sentiments of firms may also mean that high interest therefore may not deter businesses from borrowing if the prospects of profits are promising therefore investments do not fall. • Business and consumer confidence can be high in good times. They are willing to go into debt to finance consumption despite higher interest rates. This is called "**irrational exuberance"** syndrome during an economic boom.
Unintended Consequences	**<u>Conflict in Objectives</u>** **Effect on investment and potential economic growth** • Raising interest rate may deter firms from investments and spending on capital goods. While the government seeks to reduce investment and AD to reduce demand-pull inflation in the short run, the fall in investments could have a long term negative impact. Once companies cut down back on spending on capital goods, such as machines and tools, it can take years to build up productive capacity again. This could impede potential economic growth in the long term. • If the contractionary monetary policy tightens the economy more severely than intended, companies can cut down production and planned expansions. Consumption falls as unemployment increases and prospects of future income worsen. As a result, while inflation is controlled, there could be a fall in real national income as AD intersects AS along the horizontal range. **Effect on government** • Since the government is also a borrower, raising interest rates means that governments have to pay higher interest on loans should the government borrow to finance expenditure on developmental projects. Interest payments to service existing debts will also increase, further straining government's budget. This will have a spill over effect on the long-term fiscal health of the government. There could be a need to implement austerity measures in future to reduce public debt, and the resultant fall in government expenditure and increase in tax could cause AD to fall and cause the economy to slip into recession. **Conflicts with other macroeconomic objectives** • Just as contractionary fiscal policy discourages FDI, raising interest rates could lead to unintended and undesirable consequences. Raising interest rates attract short-term capital inflows (hot money) in an economy which allows free

	international capital mobility. If the currency is freely floating, the currency will appreciate which would worsen its balance of trade. The central bank is then faced with a conflict in objectives as it has to manage the country's inflation at the expense of its trade balance • Furthermore, contractionary monetary policy can result in an increase in unemployment if it the fall in AD is more than intended. Increased unemployment results from the slowing production and increasing interest rates. As companies slow their growth rates, they hire fewer employees.
Nature of the economy	**Small and Open economy (SOE) vs Large and Less Open Economy (LLOE) affecting the proportion of FDI**. • An increase in interest rates may not reduce the level of long-term investment substantially especially in context of a small and open **economy** like Singapore where there is a large proportion of foreign direct investments (FDI). Multinational companies (MNCs) are relatively less affected by changes in local interest rate as they often rely on their own sources of funds and need not borrow from local banks. Thus, the impact of interest rates changes may be limited at best. • Therefore, just like fiscal policy, monetary policy is domestically oriented, i.e. it works by changing the level of investment and consumption of local economic agents. Hence, monetary policy works better in large economies than small and open economies. **SOE vs LLOE - Command and control issues in open economy** • As explained in the earlier topic on Economic Growth, according to the *Open-Economy Trilemma*, an economy cannot simultaneously manipulate exchange rate, have free capital mobility and control interest rate. Therefore, due to the small size of Singapore's economy and hence its high dependence on external demand, Singapore uses a managed float exchange rate regime to spur growth. As a result, the Monetary Authority of Singapore (MAS) is unable to use interest rate without enforcing tight capital control. In the case of Singapore where free capital flows are allowed, any attempts to control the interest rates would lead to large capital inflow/outflow which would destabilise the exchange rate. As a result, a small and open economy (SOE) like Singapore focuses on the exchange rate rather than the interest rates. Whereas China, which manages its interest rate and exchange rate, has to enforce tight control over capital flows in and out of the economy. • However, a **large and less open economy (LLOE)** such as the USA which depends primarily on internal demand, namely C & I, may be able to more effectively use interest rate policy. **Developed vs Developing Country; and hence the Level of influence of Central Bank.** • In most **developed** countries, the banking system is highly organised and developed and is thus amenable to control by the Central Bank. In less developed countries, the bulk of the lending activities is confined to money lenders who operate beyond the control of the Central Bank.

	• The more open the economy, the harder it is for the central bank to control credit creation by commercial banks, since commercial banks may have alternative (foreign) sources of credit. In these open economies such as Singapore, monetary policy tends to be ineffective. The control also depends on the number of foreign banks and the extent of development of the banking system. **<u>Autonomous vs Non-Autonomous decision-making</u>** • While most countries have a choice of policy tools to tackle their economic problems, countries belonging to monetary unions have no autonomy over monetary policy. An example would be members of the European Union (EU) which also adopt the common currency, the Euro, forming the "Eurozone". Countries in the Eurozone lose financial independence because the European Central Bank (ECB) sets monetary policy act as central supervisor of financial Institutions in the euro area. As a result, governments of these countries only have fiscal policies at their disposal.
Root Cause	Like contractionary fiscal policy, contractionary monetary policy works best to achieve price stability when used against demand pull inflation. While it can generally help to fight demand pull inflation, it might not be effective to address cost push inflation. Thus, contractionary monetary policy does **<u>not directly tackling the root cause of cost push inflation</u>**.
Time Period	**<u>Time Lag</u>** The implementation lag for monetary policy often differs from fiscal policies. Monetary policies can be adjusted quickly, unlike fiscal policy. Unlike fiscal policy which requires the policy makers to debate on governments pending or raising of taxes, monetary policy can be easily changed by the central bank.

Note: Singapore does not use interest rate policy. When answering question on policies to control inflation, do not include interest rate policy if the question is in the context of Singapore.

OVERALL EFFECTIVENESS OF MONETARY POLICY IN CONTROLLING INFLATION/COUNTERING DEFLATION

- Contractionary Monetary policy works best to achieve price stability when used against demand pull inflation. It is especially appropriate for large economies dealing with domestic sources of demand pull inflation. For many small and open economies, interest rate policy is simply not an option without enforcing capital controls, as they rely on a managed exchange rate regime for stability and growth.

- While it can generally help to fight inflation, it can also have side-effects of appreciating the domestic currency and hence worsening trade balance.

- Compared to fiscal policy, monetary policy is seen as a quicker solution with fewer side effects which are often associated with the fall in public spending. Therefore, monetary policy is more often used as a more politically acceptable policy.

- As before, always assess the advantages and disadvantages according to the given context of question. *Make an overall assessment that is a reasoned stand relevant to the question.*

Japan shifts to long-term strategy in battle to end deflation: The Japan News

In its editorial on Sep 23 2016, the paper says a joint effort will be needed to ensure increase in prices. To tenaciously push ahead with monetary easing to overcome deflation, it is necessary to thoroughly monitor the effectiveness of policy and its side effects. The Bank of Japan (BOJ) has hammered out a new policy framework for monetary easing that focuses on the long-term interest rate

After assuming his current post in spring 2013, BOJ Governor Haruhiko Kuroda launched "a new dimension of monetary easing," laying out a goal of "realising 2 per cent inflation in two years."
The bank will raise ultra-long-term interest rates, which have dropped excessively because of the bank's negative interest rate policy. The bank also clarified its policy of continuing monetary easing for the long term, without setting a deadline, until the 2 per cent inflation target is stably realised.

Why don't prices increase? The biggest reason, as the central bank pointed out after examining the effectiveness of its past policies, is that expectations that prices will increase are not growing among companies and households. Because deflation has persisted for two decades, the perception that "prices won't increase anyway" has spread and persisted in the country. It is not easy to get out of this situation in a short period of time. Needless to say, monetary policy alone will not realise price increases. The government needs to boost the potential growth rate by pushing through its growth strategy, and companies need to strive to divert their internal reserves to investment and pay increases. Ending deflation is only possible when the public and private sectors jointly tackle it.

Source: Japan News Sept 23rd 2016

2.3 Use of Exchange Rate Policy to control inflation

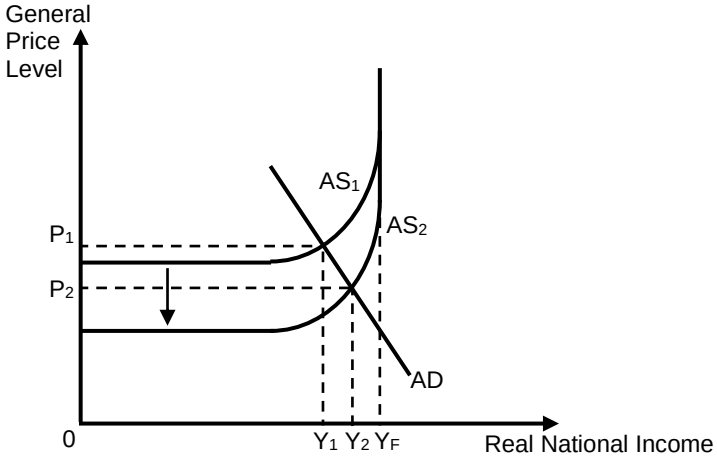
1) Mechanism (For Demand Pull Inflation diagram, refer to FP section)

The government may use exchange rate policy (revaluation) to manage demand-pull as well as imported cost-push inflation, in order to achieve price stability.

The Singapore government tends to adopt a Gradual and Modest Appreciation (GRAMA) to achieve price stability. **Overall, the MAS generally maintains an appreciating exchange rate to reduce inflation and promote price stability because this will also encourage economic growth.**

Singapore's use of GRAMA can also be explained by the transmission mechanism of Exchange Rate-Based Monetary Policy listed in the table below.

Acronym	Steps	Description
A	**1. AD/AS Factor and Component**	**(i) Demand-Pull Inflation:** The Central Bank, for example, the Monetary Authority of Singapore, seeks to raise the exchange rate of the Singapore dollar by purchasing domestic currency on the foreign exchange market (FOREX) to revalue the Singapore dollar. With the revaluation, the price of exports in terms of foreign currency will be more expensive and this leads to a fall in demand for exports (note that Px in local currency terms remains the same). Thus, X falls. At the same time, the price of imports in terms of local currency will fall, leading to an increase in quantity demanded of imports. Thus, M rises. Thus, the revaluation will lead to a fall in X-M. **(ii) Imported Cost-Push Inflation:** With the price of imports in terms of local currency falling, this directly lowers the cost of imported factor inputs / factors of production (FOP).
S	**2. SHIFT of AD/AS**	**(i) Demand-Pull Inflation:** With a decrease in (X – M), this results in AD decreasing, ceteris paribus. Thus, AD shifts leftwards from AD1 to AD2. (Refer to Figure 4 above) **(ii) Imported Cost-Push Inflation:** This results in an increase in SRAS, as seen by the downward shift of the SRAS from AS1 to AS2.

		 **Figure 5: Increase in SRAS**
A	**3. ADJUSTMENT process**	**(i) Demand-Pull Inflation:** This creates a surplus of goods at the initial GPL (P1), thus creating a downward pressure on price. Firms decrease production, where factors of production are now no longer scarce. Decrease production results in less competition for scarce resources, **reducing factor prices**. Firms would therefore be willing to sell additional units at a lower price (shown by a movement down along the AS curve). Thus, the economy re-equilibrates at **lower GPL, P2**. **(ii) Imported Cost-Push Inflation:** Firms are now willing and able to sell each level of output at lower prices, creating surplus at prevailing GPL (P1). This leads to downward pressure on GPL as firms decrease prices, where GPL decreases until the surplus is eliminated at a lower equilibrium GPL, P2.
P	**4. END POINT**	(i) Thus, demand-pull inflation is mitigated, achieving price stability. (ii) Thus, imported cost-push inflation is mitigated, achieving greater price stability (this is especially important for a country like Singapore, who is very dependent on imported factor inputs as well as imported goods and services).

2) Evaluation of Policy

State of Economy	**Consumers & Investors' Confidence and Expectation of Future Income** • As explained under Section 2.1 on the effectiveness of contractionary fiscal policy, demand management policies including appreciation of exchange rate, are inappropriate if AD is at the intermediate range of AS and spare capacity exists, as they lead to negative economic growth or reduced national income. • On the other hand, if an economy is enjoying an economic boom with high economic growth with little spare capacity, an appreciation can be beneficial as this policy would lead to a reduction in inflationary pressure but high growth is maintained.
Unintended Consequences	**Actual Economic Growth:** Reducing inflation through appreciation can result in actual economic growth due to a fall in cost of production. • For countries that are dependent on imports as factor of production may use exchange rate policy to affect Aggregate Supply as well. This is especially true for Singapore which depends on imports of raw materials. Appreciation results in a lower import expenditure on these raw materials, and hence a lower cost of production, thus increasing SRAS (SRAS curve shifts downwards). Thus Appreciation to achieve low imported inflation can result in an increase in SRAS and hence actual growth. **Export Competitiveness** However, should there be very high levels of imported inflation, the required appreciation of the Singapore dollar will mean that export competitiveness is compromised due to the increase in price of exports in foreign currency. If PEDx>1, this could lead to a more than proportionate fall in Qd and hence a fall in export revenue, worsening export revenue and economic growth in the long run. The erosion of our export competitiveness may more than offset any cost advantages that we may have had through lower domestic price of imported FOP.
Nature of the economy	**Significance of external AD to SOE vs LLOE** • Singapore is a small and open economy that is highly dependent on external demand with net exports (X-M) accounting for a large proportion of the aggregate demand. • Domestic sources of AD, e.g. consumption expenditure and investment expenditure on domestic goods and services, are small relative to the net exports. Therefore, it is more effective to manage the economy by using exchange rate policy to adjust import and export prices rather than consumption expenditure and investment expenditure.

	▪ Therefore, it is important for Singapore to use exchange rate policy through **<u>gradual and modest appreciation</u>** to control imported inflation and maintain export competitiveness. ▪ In contrast, USA is a large and less open economy depending on consumption as a key driver of Growth. (C/GDP makes up two-thirds of AD) Thus, when the country's proportion of net exports relative to GDP is very small, given a change in exchange rate, the impact on net exports and hence AD would be minimal. Such economies use interest rates, rather than exchange rates, as their monetary policy.
Root Cause	• Exchange rates policy is effective to control external source of inflation (e.g. imported cost-push inflation or demand-pull inflation due to rising net exports) which is the root cause of inflation in Singapore. • However, it might not be able to control domestic cost push inflation caused by increase in wages (greater than productivity growth) and rising prices of housing.

<u>OVERALL EFFECTIVENESS OF EXCHANGE RATE POLICY IN CONTROLLING INFLATION/</u>

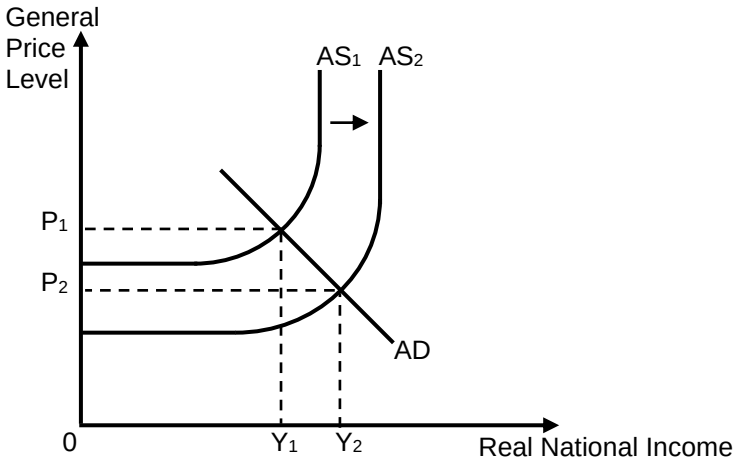
Overall, whether or not exchange rate policy is effective is heavily dependent on the ***country*** and ***situation***. For some small and open economies like Singapore which is small and lacking in resources, exchange rate policy is indeed the best policy as we import most of our goods and raw materials and our exports also have high import content. Exchange rate policy would be more appropriate for small and open economies to address inflation caused by external factors. On the other hand, large and less open economies would find domestic-oriented policies like fiscal and monetary policies more appropriate to address domestic AD factors.
However, Singapore is mindful that appreciation to maintain price stability has to be gradual and modest to avoid excessively raising external price of exports that would hurt the main engine of growth for Singapore, i.e. exports.

As before, always assess the advantages and disadvantages according to the given context of question. Make an overall assessment that is a reasoned stand relevant to the question.

Use of <u>Supply-side policies</u> to control inflation

1) <u>Mechanism</u>

Supply side policy aim to combat inflation in order to achieve price stability in the economy, through productivity growth and expansion of productive capacity. Supply side policies work by improving the productivity of Singapore and making Singapore attractive to foreign direct investments as MNCs which are seeking out low cost or 'best sourcing' areas to produce goods. This can be done by Market-Oriented Policies and Interventionist Policies.



<u>Figure 6: Increase in SRAS and LRAS</u>

<u>Acronym</u>	<u>Steps</u>	<u>Description</u>
A	**1. AD/AS Factor and Component**	**<u>(i) Market-Oriented Policies</u>** **Deregulation [Only for H2 Economics]** Reduce market dominance and lower prices. Governments can reduce or ban monopolies to encourage competition. Such policies encourage firms to use cost efficient production methods and thus reduce the cost of production. **Labour Market Reform** Reduce power of trade unions to prevent excessive wage demands so as not to raise wage cost. Keeping labour costs low help to reduce cost of production for firms. **Reduce Taxes** Indirect taxes can be cut to reduce costs of production. **<u>(ii) Interventionist Policies</u>** **Improving labour mobility** To improve labour mobility, relevant agencies can provide education and training to equip workers with relevant skills, so that labour can move from declining industries to rising industries, reducing the strain in the labour supply and thus reducing wage rates in the rising industries, thereby reducing firms' cost of production.

		Increase productivity To encourage productivity growth, government can provide training, subsidies for investments in capital goods, grants for research and development (R&D) projects and for firms to invest in up-to-date equipment. As a result, when productivity increases faster than wage increases, cost of production falls. As labour productivity increases, quality of labour resource improves and quantity of resources increase as more goods and services can be produced with the same amount of labour.
S	**2. SHIFT of AD/AS**	**(i) Market-Orientation Policies:** • SRAS increases, shifting downwards from AS1 to AS2 (refer to Figure 6 as above) **(ii) Interventionist Policies:** • The economy's productive capacity increases, where LRAS increases from AS1 to AS2 (shifts rightwards). • As cost of production falls and this will increase SRAS, shifting downwards from AS1 to AS2. Both LRAS and SRAS increases. The former shifts right and the latter shifts down.
A	**3. ADJUSTMENT process**	Firms are now willing and able to sell each level of output at lower prices. This creates a surplus at prevailing GPL P1. This results in downward pressure on GPL as firms decrease prices, until the surplus is eliminated at a lower equilibrium GPL, P2.
P	**4. END POINT**	The impact will be a fall in GPL from P_1 to P_2 as shown in Figure 4, thus curbing cost-push inflation and achieving price stability. (*Note that increase in productive capacity to increase in AS will result in long run consequences, and such a policy can also combat demand-pull inflation in the long run)*

Singapore context

- Interventionist policy to improve labour mobility and reduce wage costs: Singapore government provides subsidies for professional conversion programmes under Workforce Singapore to promote re-skilling, in addition to SkillsFuture.

- Interventionist policy to improve productivity:
    - For example, under the Productivity and Innovation Credit Scheme (PIC) in Singapore, businesses are able to enjoy 400% tax deductions and up to 60% cash payments in investments on productivity and innovation improvements.
    - The Singapore government has set up the Institute of Technical Education, polytechnics and Continuing Education and Training campuses to provide education and training. It also spends on research and development which will lead to technological advancement and hence increase the efficiency of capital in the economy.

*Note: Government expenditures on productivity growth is thus considered **fiscal policy with supply-side effect.***

2) ***Evaluation of policy***

***Note**: When evaluating supply-side policies remember to take care to choose and apply the relevant points according to the given contexts. The best marks are given to **contextualised evaluation** –when explaining the supply side policies, choose the best limitation(s) that could cause the policy to fail.*

State of Economy	• If the economy has reached full employment with no spare capacity to meet the increase in AD, supply-side interventionist policies through promotion of R&D, education and training, and upgrading of skills can lead to an increase in productive capacity and hence lead to potential growth and reduce GPL and inflation. • Supply-side policies can help reduce inflationary pressure in the long term because of efficiency and productivity gains in the product and labour mart.
Unintended Consequences	• Interventionist supply-side policies, e.g. grants to promote R&D and training require active participation from firms and workers – firms need to actively conduct R&D projects and workers need to be willing to take up skills-upgrading opportunities. Other circumstances, such as poor expectations may limit the effectiveness of supply side policies. • The effects of supply-side policies can be uncertain. Investments in R&D and training may not reap the expected benefits such as reduced cost of production.
Nature of the economy	**Political Situation** • Restricting the power of labour unions to reduce cost of production of firms, as part of market-oriented supply-side policies, may be politically unacceptable especially in countries with strong unions such as France.

Ability	• To implement interventionist supply-side policies and spending on infrastructure and upgrading skills (e.g. SkillsFuture) means higher expenditure incurred by the government. This could translate to a heavier tax burden on future generations of the workforce if the government currently runs a budget deficit, or in some cases, the government may need to prioritise investment projects and hence the rate of economic growth may be limited. • The Singapore Constitution requires each term of Government to keep a balanced budget. Years of prudent management this has led to high levels of national reserves. Therefore, Singapore has the means to adopt supply-side policies. This cannot be said for countries with high fiscal debt.
Root Cause	• Supply-side policies are designed to increase LRAS, also known as full employment level of output. It is appropriate for both demand-pull and cost-push inflation. By increasing productivity through R&D, education and training and upgrading of skills, supply side policies will increase productive capacity of economy, increasing LRAS. Therefore, the policy can alleviate demand-pull inflation by creating more capacity. • Supply-side policies aim at increasing long-term competitiveness, e.g. privatisation and deregulation may reduce costs of businesses. By increasing productivity of labour and capital efficiency of factors will increase and this will reduce cost of production, causing SRAS to increase and GPL to fall. Therefore, supply-side policies is appropriate in controlling cost-push inflation.
Time Period	**<u>Time Lags</u> (Risk of DD-pull inflation due to AD Side Effects)** • Supply-side policies require time to take effect. Training labour requires several months before workers are trained, and education policies may take years before the students graduate and work. • Similarly, investment into capital goods may take a while before they become productive. A capital good which may be a complicated machinery would take time to be built once it has been ordered to be made • Supply-side policy can take a *long time* to work its way through the economy and therefore is unlikely to yield quick results

OVERALL EFFECTIVENESS OF SUPPLY SIDE POLICY IN ACHIEVING LOW INFLATION

Supply-side policies are long term strategies that works through increasing productive capacity of the economy, therefore achieving sustained economic growth without inflationary pressure. As the policies do not affect external demand, they can be appropriate for both small and open economies (SOE) as well as large and less open

economies (LLOE). There are few negative side effects to supply-side policies though the positive effects would take time to manifest.

Macron's Labour Market Changes begin to bear fruit

Oct 29, 2019, Financial Times

Thanks to a serious of labour reform in the past few years, the French economy is proving more resistant to the global economic slowdown than more trade-dependent nations such as Germany, and economists expect its third-quarter gross domestic product to show a 0.2 per cent expansion.

That is reflected in France's labour market. The level of joblessness, while still the highest in the EU after Italy, Spain and Greece, fell to its lowest in a decade in the second quarter of 2019: 8.5 per cent of the workforce. In another hopeful sign, the previously pervasive use of temporary contracts has been declining since early 2018.

France's president, Mr Macron, has made long-term contracts less onerous for employers by capping the cost of unfair dismissal, and reformed taxes and benefits to make low-wage work more attractive. These reforms were met with much resistance from the workers.

He is also making short-term contracts more costly for some employers, accelerating training and skills initiatives including a five-year, €15bn scheme to train long-term and young unemployed, tightening unemployment insurance with reduced payouts for high earners and requiring a longer work history to claim benefits. He plans to replace 42 pension schemes with a single system and push the French to work beyond the retirement age of 62.

While an OECD report published earlier this year said it was too soon to conclude that Mr Macron's reforms were responsible for the drop in unemployment, they have led to changes in the French labour market.

France now has a more flexible market for permanent workers in terms of the rigidity of their employment protection than Germany, Italy and Sweden, according to the OECD, and the second-lowest effective tax rate at the minimum wage level in the OECD after Japan.

The result, France's labour minister Muriel Pénicaud said, is that "many jobs, particularly permanent ones, have been created because companies, especially small ones, are no longer afraid to hire".

2.4 Short run supply-side policies

Definition: Short-run supply-side policies are policies that are reducing the GPL in the short-run using controls on prices and income/wages.

Short run supply-side policies include: (Refer to Figure 5 for details)

2.4.1 Income Policy:

This is where the government takes measures to restrict the increase in wages (incomes). It tries to ensure that wages and other incomes do not rise faster than the increase in productivity in the economy (when wages rise faster than productivity, cost of production per unit output increases).

This can at the same time help to lower the consumption expenditure, thus lowering the pressure on aggregate demand and hence **lower demand-pull inflation**.

There are **two types of Income Policy**:

1) **Statutory** – This occurs when the government passes legislation to limit or to freeze wages.

2) **Voluntary** – This occurs when the government tries through argument and persuasion to impose a wages policy. E.g. Singapore uses the National Wage Council (NWC) to recommend guidelines on wages and pay increases. For example, during the 2008-2009 global financial crisis which caused Singapore to slip into a recession in 2009, the NWC released guidelines urging Singapore firms to 'cut costs to save jobs.

2.4.2 Price Control:

This means fixing maximum prices or fixing the range of permissible prices. Price controls on important commodities merely suppress inflation without eliminating it.

- To cope with the likely shortages, rationing is often necessary, so that there is some control in the distribution of scarce commodities. Rationing of essential commodities enables people to have a fair share of the available goods and services.

- The retail price watch group (RPWG) also keeps close watch on prices to ensure that there are no excessive price increases and anti-competitive measures. While not exactly a price control, it helps to ensure that prices move in tandem with market forces and not because of market power.

Evaluation of short run Supply Side Policies

These supply-side policies each has its unique limitations:

Unintended Consequences	• **Income policies** are effective only when they are in operation. Once they are relaxed, unions could bargain for higher wages to make up for the loss in the past, starting a new round of wage push inflation. • **Imposing price controls** may also lead to black market activities. Recall that price ceilings lead to shortages. If governments do not practice rationing, people may engage in illegal activities and sell on the black market.

	• **Enforced savings policies** may not work if people don't have enough money for day to day needs. Increased in savings may lead to decrease in interest rates, which may encourage more borrowing by people.
Nature of the economy	**<u>Developing vs developed OR SOE vs LLOE</u>** • **Income Policies:** In a small country like Singapore lacking in resources, statutory income policies prevent market forces from working freely. Where shortage of labour occurs, firms are unable to raise wages beyond the wage limit set by the government to clear the market of the shortage. • A better solution is to link wage rise to productivity rises. • In a small and open economy like Singapore, inflation is caused mainly by increase in prices of housing due to shortage of land and increase in population, increase in wages due to labour shortage and stagnating of productivity and rising commodity prices such as energy and car prices due to high COE which increase the cost of living and doing businesses in Singapore. • For the above reasons wage control to link productivity to wage increase may be effective. Also pricing policies by subsidising HDB flats could make them affordable for most people. Consumption can be reduced through forced savings (CPF) to reduce disposable income and thus AD and demand pull inflation. • Overall, income policy and price control is effective in an economy like Singapore which has one of the highest cost of living countries in the world. • Countries with highly centralised methods of setting wages tend to have the greatest degree of public or collective regulation of wage and price levels. In the Netherlands, wage settlements are subject to government approval and price increases are investigated by the Ministry of Economic Affairs.
Root Cause	Whether policies are effective or not will depend on the root cause of inflation. Price and incomes policies might not solve the underlying problems and merely hide the problem.
Time Period	• The effects of Short run supply-side policies can only be used in the short run but ineffective in the long run due to its inability to create productive capacity expansion. This limits the ability to achieve price stability across time. • Price and incomes policies might not solve the underlying problems and merely hide the problem

Conclusion

Stand & Justification:

- Short run supply side polices can be used to complement other macroeconomic policies.
- If the inflation in Singapore is due to both demand pull inflation (and hence in absence of low demand/recession) and imported inflation, monetary policy in the form of an appreciation of our exchange rate appears to be more appropriate, since it reduces cost-push imported inflation directly, and offsets the AD pressures to reduce demand pull inflation due to external demand.

Recommendation:

- However, if the root cause of the inflation is due to domestic sources of AD, then contractionary fiscal policy or interest rate policy will be more appropriate in reducing inflation.

2.5 Policies to Address Deflation (Mechanism and Evaluation of Policy steps largely similar to Policies to combat inflation. It may be useful to use the ASAP and SUNART tables as consolidation tools for this section):

In general, countries are concerned when deflation is caused by demand-side factors where the deflation is accompanied by economic stagnation. Deflation due to an increase in AS is not a cause for concern for the government as this is often accompanied by positive economic growth and possibly a more favourable BOP position.

Expansionary monetary policy and expansionary fiscal policy can be used to counter deflation caused by a fall in AD. **As these have already been covered previously, please refer to expansionary fiscal policy, expansionary monetary policy, and exchange rate policies under economic growth lecture notes for full explanations and evaluations. (Note that under ADJUSTMENT PROCESS, you should explain the price adjustment process instead of the multiplier process)**

Expansionary Fiscal Policy:

- Fiscal policy through increase in public expenditure and reduction in taxes tends to raise national income, employment, output, and prices. An increase in public expenditure during deflation increases the aggregate demand for goods and services and leads to a large increase in income via the multiplier process, while a reduction in taxes has the effect of raising disposable income thereby increasing consumption and investment expenditures, increasing AD and increasing GPL.
- Expenditure on public works creates demand for the products of private construction industries and helps in reviving them while expenditure on relief measures stimulates the demand for consumer goods industries. Reduction in such taxes as corporate profits tax, income tax, and excise taxes tends to leave more income for spending and investment
- When dealing with deflation, the increase in government expenditure to stimulate economic activity may not be effective due to inflation expectations. If consumers and producers expect deflation to continue, they will continue to defer consumption and investment.

Expansionary Monetary Policy

- Expansionary Monetary policy such as fall in interest rates result in cheaper loans for increase in investments and consumption resulting in an increase in AD and thus GPL and demand-pull inflation.

- Expanding the supply of credit in the banking system will result in loans available for consumption and investment. Quantitative Easing (QE) programme is used to influence inflation expectations by many central banks including the Bank of England and the European Central Bank which stimulate economic activities.
- Deflation makes monetary policy much less effective. In fact, deflation can cause a liquidity trap which implies a cut in rates will have no effect on boosting demand.
- Firstly, deflation can increase the real interest rate. Suppose we have deflation of -2%. Interest rates cannot fall below 0%. Therefore, the real interest rate is effectively 2%. This will discourage borrowing and investment.
- Deflation discourages consumer spending because consumers expect prices to be cheaper in the future, therefore, they delay purchasing leading to lower aggregate demand. The evidence of Japan suggests this is a real problem.

Depreciation or devaluation of the currency

- By depreciating the exchange rate, foreign price of exports fall and domestic price of imports increase. Assuming PEDx >1, a fall in foreign price of exports will lead to a more than proportionate increase in quantity demanded in exports leading to an increase in exports revenue. Assuming PEDm >1, an increase in domestic price of imports will lead to a more than proportionate decrease in quantity demanded of imports. This leads to a decrease in import expenditure. Hence net exports (X-M) increases, leading to an improvement in AD thus helping to increase general price levels and fight deflation.
- The difficulty is that in an era of general deflation, many countries may be trying to do the same thing, thus leading to competitive devaluation. Also, it will reduce living standards by making imports more expensive.

Glossary

Inflation is the sustained increase in the general price level (GPL) of an economy, over a period of time, usually a year.

General Price Level (GPL) is defined as the average price of goods and services in an economy.

Deflation is the sustained decrease in the general price level (GPL) of an economy, over a period of time, usually a year.

Demand-pull inflation is caused by persistent increases in aggregate demand when the economy is operating near or at the full employment level of national output.

Cost-push inflation is caused by a sustained increase in the cost of production and hence a persistent fall in aggregate supply and thus increase in GPL

Selected Past Year A Level Essay Questions:

Note: Many questions in the A level for Macroeconomic Policies involve content from previous topics (Macroeconomic Aims & Indicators Macroeconomic Issues & Problems) as well as future topics (Monetary Policy, Supply Side Policy and Interconnectedness of Problems & Policies). The questions presented here are no exceptions. You may not be able to provide a complete answer with merely the content knowledge in this set of notes.

Question 1: 2013 - H2 Paper 2

On 1 September 2011 the Monetary Authority of Singapore (MAS) reported that inflationary pressures remained strong because of the tight domestic labour market, high consumer spending and rising global commodity prices.

(a) Explain how the factors mentioned above will lead to inflationary pressures remaining strong in Singapore. [10]

(b) Discuss alternative economic policies that the Singapore government might consider adopting to alleviate these inflationary pressures. [15]

Question 2: 2015 - H2 Paper 2

In its September 2013 Recent Economic Developments Statement, the Monetary Authority of Singapore noted that inflation was expected to rise moderately. Strong GDP growth in Q2 2013 was mainly due to increased output in the manufacturing and trade-related service sectors with a slowing of growth in private consumption. There was expected to be continued strong wage pressure from persistent tightness in the labour market caused by shortages in labour supply accompanied by steady expansion in demand for goods and services from the US, Japan and the Eurozone.

Source: Recent Economic Developments in Singapore, MAS, 5 September 2013

(a) Explain how the above mentioned factors might have caused the rate of inflation to rise in Singapore. [10]

(b) Discuss whether exchange rate appreciation should remain the most important policy instrument in controlling the rate of inflation in the Singapore economy. [15]

Question 3: 2017 - H2 Paper 2

Falling interest rates, continued income growth and other factors contributed to a period of rapid residential property price inflation in Singapore from the middle of 2009. However, the government has successfully pursued policies to restrict this rise to the extent that residential property prices actually fell in 2014 and 2015.

(a) Use demand and supply analysis to explain why falling interest rates and continued income growth may have led to a rapid rise in residential property prices. [10]

(b) Discuss the policies that might be used by the Singapore government to reduce residential property price inflation. [15]

Question 4: 2019 - H2 Paper 2

In 2017, the annual rate of inflation in Singapore was significantly lower than the average rate for Southeast Asia.

(a) Explain a possible demand side reason and a possible supply side reason for a rise in the rate of inflation. [10]

(b) Assess whether policies designed to prevent a large and continuing rise in inflation in Singapore are the most appropriate policies for all economies. [15]

Question 5: 2020 - H2 Paper 2

Singapore experienced a price deflation with the general price level falling from 2014 to 2016. In Japan, the general price level fell in 11 of the 14 years from 1998 to 2012.
Source: OECD data, accessed 21 June 2019.

(a) Explain one possible demand-side cause and one possible supply-side cause of price deflation for an economy such as that of Singapore or Japan. [10]

(b) Discuss whether deflation or inflation is more damaging for an economy. [15]

Question 6: 2021 - H2 Paper 2

Singapore currently has a low rate of inflation and a persistent surplus on the current account of its balance of payments. However, unexpected external developments such as the outbreak of disease, natural disasters or increases in global raw material prices always represent potential risks to Singapore's economy.

(a) Explain how a modest and gradual appreciation in Singapore's exchange rate might affect Singapore's rate of inflation and its current account balance. [10]

(b) Discuss whether the modest and gradual appreciation in Singapore's exchange rate is likely to be the best policy to manage the effects of unexpected external developments. [15]