3.3 Macroeconomic objectives (includes HL only calculations)

Learning objectives

3.3 Macroeconomic objectives	Depth	Diagrams and calculations

Economic growth
• Short-term growth
  • Actual growth in the PPC model
  • Role of AD in the AD/AS model
• Long-term growth
  • Shifts of the PPC (growth in production possibilities)
  • Role of LRAS in the AD/AS model
• Measurement of economic growth
	AO2
	AO4
		Diagram: PPC model showing actual growth and growth in production possibilities
		Diagram: AD increases showing increases in real output
		Diagram: LRAS increases showing increases in full employment output
		Calculation: the rate of economic growth from a set of data

• Consequences of economic growth, including:
  • impact on living standards
  • impact on the environment
  • impact on income distribution
	AO3	

Learning objectives

3.3 Macroeconomic objectives	Depth	Diagrams and calculations
Low unemployment • Measurement of unemployment and the unemployment rate • Difficulties of measuring unemployment • Causes of unemployment – cyclical (demand deficient), structural, seasonal, frictional • Natural rate of unemployment – sum of the structural, seasonal, frictional unemployment • Costs of unemployment – personal costs, social costs, economic costs	AO2 AO4	Calculation: the unemployment rate from a set of data Diagram: minimum wage to show unemployment Diagram: showing a fall in the demand for labour for a particular market or geographical area Diagram: deflationary gap to show cyclical unemployment

Learning objectives

3.3 Macroeconomic objectives	Depth	Diagrams and calculations
Low and stable rate of inflation • Measuring the inflation rate, using consumer price index (CPI) data • The limitations of the CPI in measuring inflation • Causes of inflation – demand-pull and cost-push • Costs of a high inflation rate – uncertainty, redistributive effects, effects on saving, damage to export competitiveness, impact on economic growth, inefficient resource allocation • Causes of deflation – changes in AD or SRAS • Disinflation and deflation	AO2 AO4	**Calculation (HL only): a weighted price index, using a set of data provided** Calculation: the inflation rate from a set of data using quantities purchased as weights in the CPI Diagram: demand-pull inflation Diagram: cost-push inflation Diagrams: deflation

Learning objectives

3.3 Macroeconomic objectives	Depth	Diagrams and calculations
Low and stable rate of inflation • Costs of deflation – uncertainty, redistributive effects, deferred consumption, association with high levels of cyclical unemployment and bankruptcies, increase in the real value of debt, inefficient resource allocation, policy Ineffectiveness	AO2 AO4	**Calculation (HL only): a weighted price index, using a set of data provided** Calculation: the inflation rate from a set of data using quantities purchased as weights in the CPI Diagram: demand-pull inflation Diagram: cost-push inflation Diagrams: deflation

Learning objectives

3.3 Macroeconomic objectives	Depth	Diagrams and calculations
Relative costs of unemployment versus inflation	AO3	
Sustainable level of government (national) debt (HL only) • **Measurement of government (national) debt as a percentage of GDP** • **Relationship between a budget deficit and government (national) debt** • **Costs of a high government (national) debt—debt servicing costs, credit ratings, impacts on future taxation and government spending**	**AO2**	

Learning objectives

3.3 Macroeconomic objectives	Depth	Diagrams and calculations

• Potential conflict between macroeconomic objectives
  • Low unemployment and low inflation
  • **Trade-off between unemployment and inflation (HL only)**
  • **Short-run and long-run Phillips curve**
	AO3	

	AO3 **AO4**	**Diagram (HL only): AD/AS curves** **Diagram (HL only): Phillips curve showing the short-run and long-run relationship between inflation and unemployment**
• High economic growth and low inflation • High economic growth and environmental sustainability • High economic growth and equity in income distribution	AO3	

Starter

Suppose you are part of a new government administration in your economy. Brainstorm a list of objectives that your government may aim to pursue to create an ideal economy.

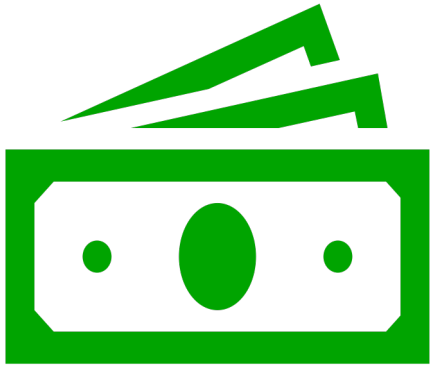
Macroeconomic objectives – Economic growth

What is economic growth?

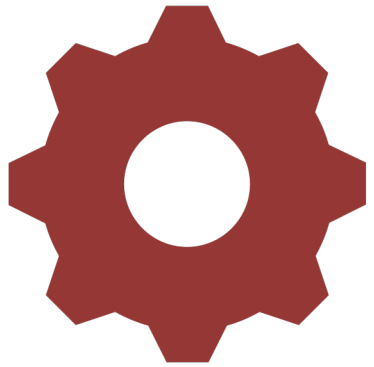
Economic growth refers to an increase in real GDP over time.

Recall that real GDP can be measured in three ways:

Total expenditure

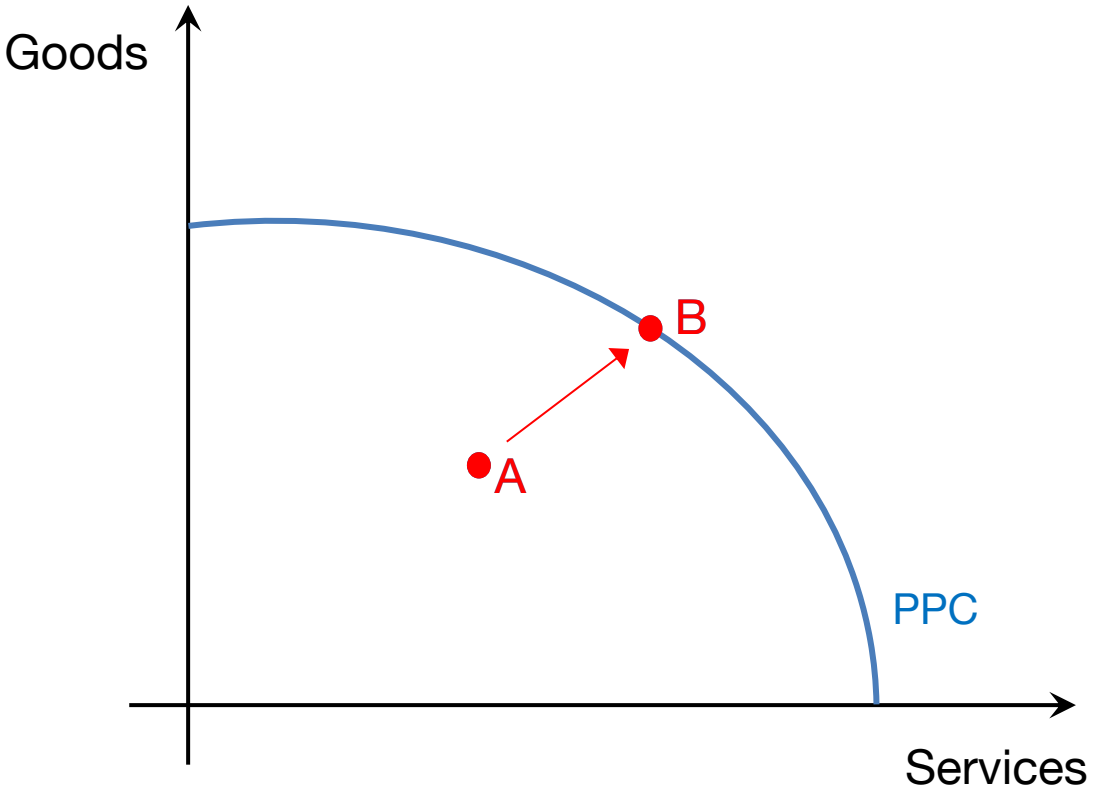


Total income



Total output of goods and services

Short-term growth

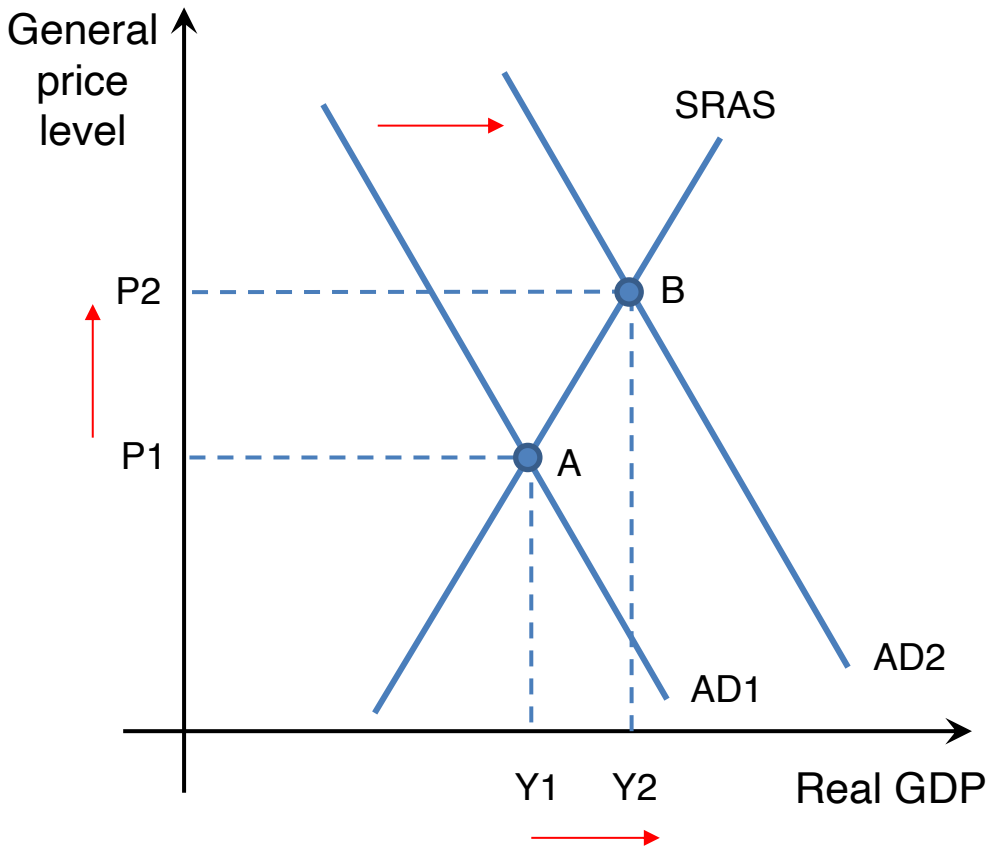


Actual output refers to the current level of real GDP in the economy.

An increase in actual output (actual growth) can be illustrated by a movement from one point within the PPC to another point closer to the PPC, e.g., from Point A → Point B.

This may be due to a reduction in unemployment or an increase in productive efficiency.

Short-term growth



Alternatively, actual economic growth can be illustrated by the AD/AS model, where the AD curve shifts outwards, e.g., AD1 → AD2.

- The equilibrium moves from Point A → Point B.
- The price level increases from P1 → P2.
- Real GDP increases from Y1 → Y2.

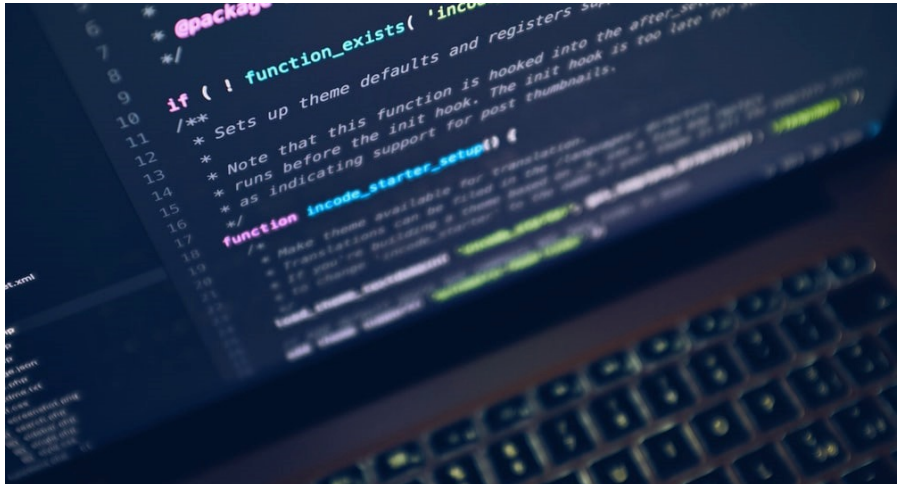
Recall that AD = C + I + G + (X – M). The higher the level of AD, the higher the GDP tends to be.

Long-term growth

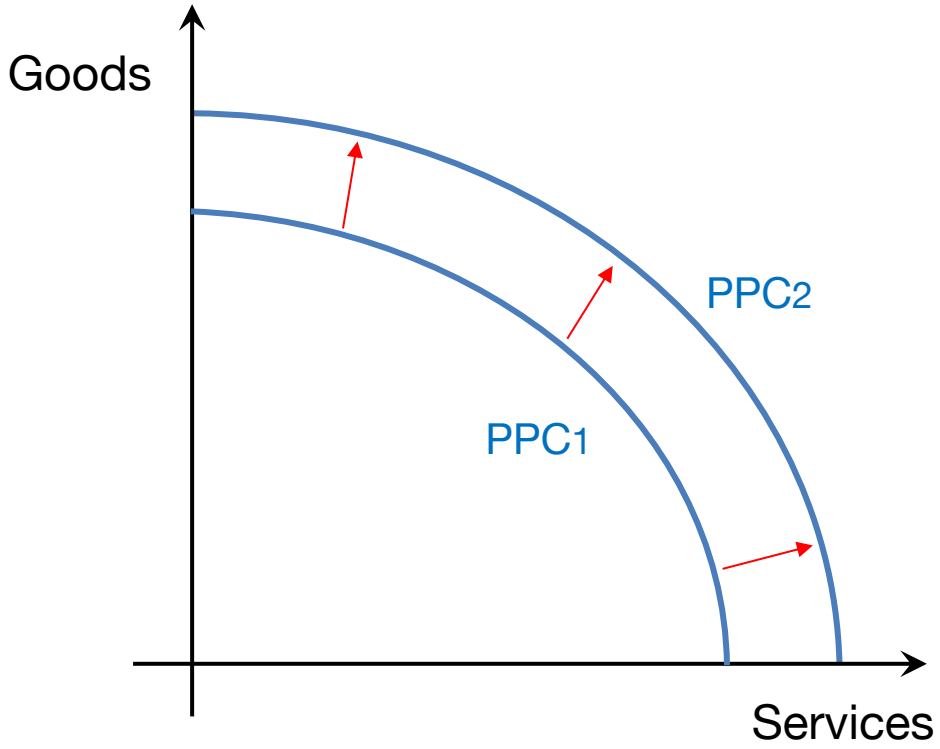
Potential output is the level of real GDP that an economy can reach at the natural rate of unemployment.

Potential growth (long-term growth) occurs when there is an improvement in the quantity and/or quality of a country's factors of production, illustrated by an outward shift of the PPC.

For example, an improvement in technology or the skills of the labour force may lead to long-term economic growth, as the quality of resources has improved.



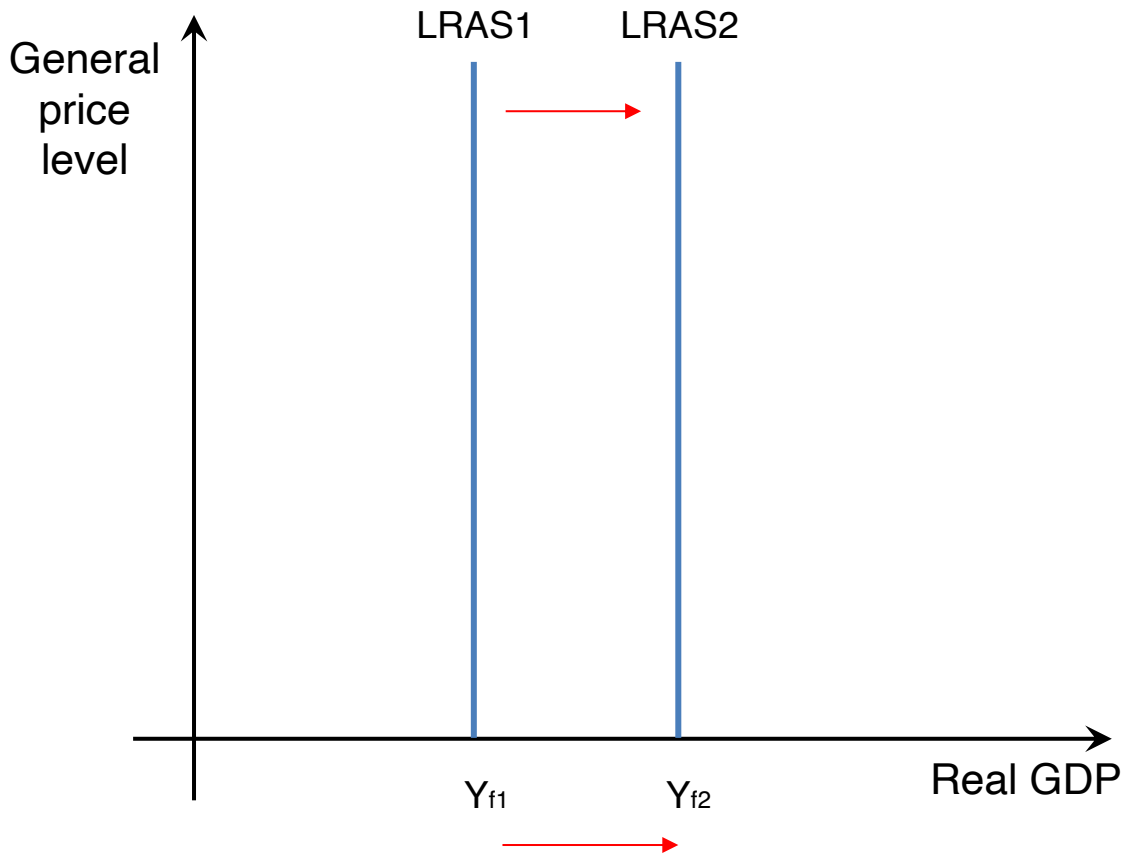
Long-term growth



Long-term growth or an increase in potential output can be illustrated by an outward shift of the PPC, e.g., from PPC1 → PPC2.

This means that the country's productive capacity has increased.

Long-term growth

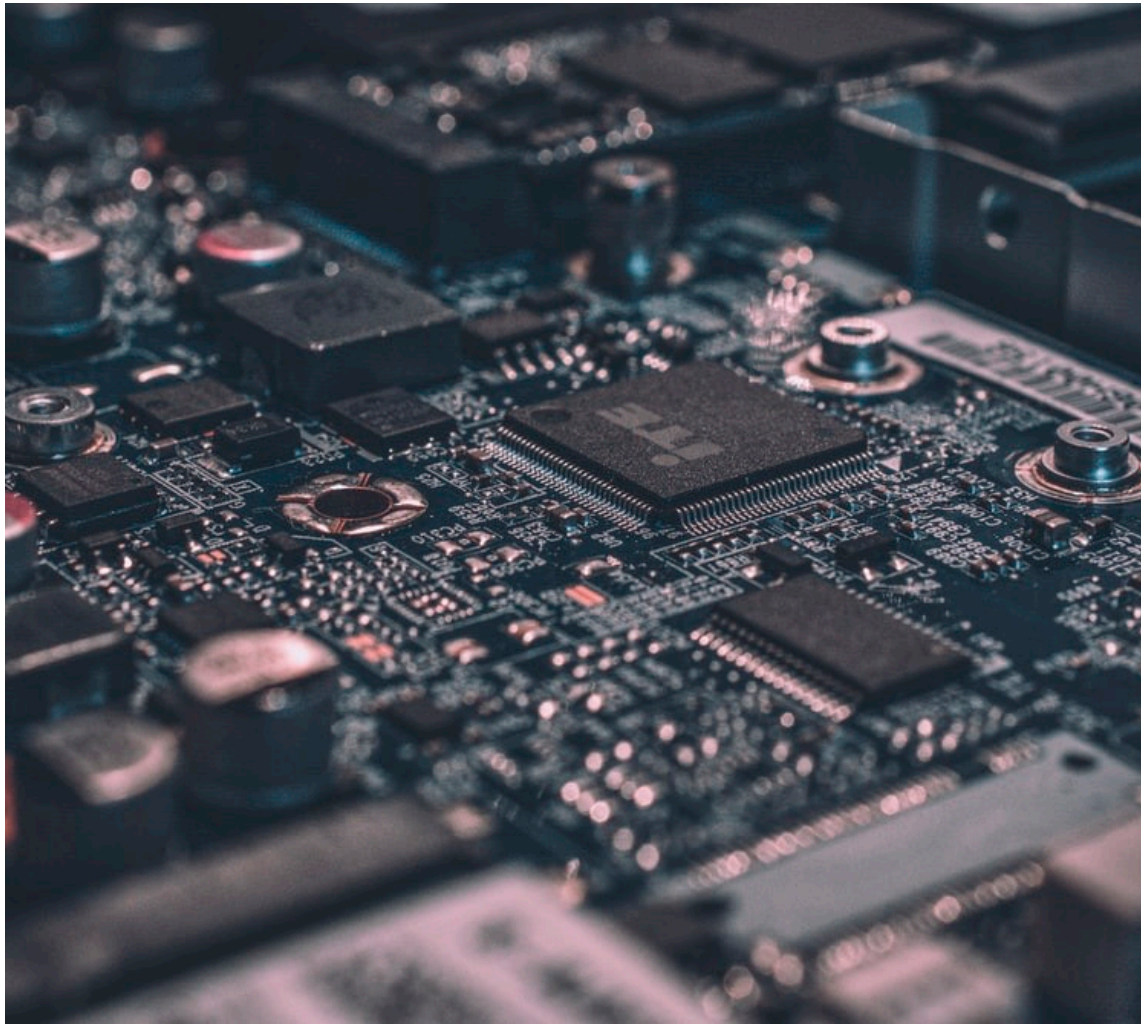


Alternatively, **long-term growth** or an increase in potential output can also be illustrated by the AD/AS model, where the LRAS curve shifts outwards, e.g., from LRAS1 → LRAS2.

- The full employment level of output increases from Y_{f1} → Y_{f2}.

Real world example 1

Article: China has gone ‘too far’ in clamping down on big tech — that will hurt economic growth, says analyst



Explain how the regulatory crackdown affects:

1. China’s investment level
2. China’s actual growth
3. China’s potential growth

Real world example 2 (supplementary)

Video: Japan: The Fading Economy

(0:00 – 5:00)

1. What were the major factors that led to Japan's economic growth in the 1960s?

2. What were the causes of the slowdown of the economy in the past 30 years?

Factors affecting economic growth (supplementary)

Factor endowments

This refers to the quantity and quality of a country's factors of production.

Each country possesses different factors of production; the more resources a country owns, the more likely it is to achieve economic growth. For example, Saudi Arabia has a high supply of oil, while Australia has a high supply of natural resources favoring the agricultural industry.

Factors affecting economic growth (supplementary)

Size and skills of the labour force

The large labour force in China, India, and the US and the highly-skilled labour force in Switzerland have contributed to the significant economic growth of these countries.

Investment expenditure

Investment in physical and human capital improves the productive capacity of an economy, which is essential to long term economic growth. Countries that invest high levels of national income on improving capital and encouraging foreign direct investment (FDI) are more likely to achieve high levels of economic growth.

Factors affecting economic growth (supplementary)

Discovery of raw materials

If a country discovers any tradable commodities or natural resources (such as oil and minerals), its productive capacity will be boosted and the PPC will shift outwards.

Labour productivity

Labour productivity refers to the output produced in each time period, and is affected by factors such as the experience, health, skills and abilities of the workforce. Countries that invest high levels of national income on improving education and training are more likely to achieve long-term economic growth.

Factors affecting economic growth (supplementary)

Labour mobility

Occupational mobility: The ease at which workers can move in between jobs in different fields.

Geographical mobility: The ease at which workers can move between different physical locations. The more mobile workers there are, the higher the level of economic growth tends to be.

Measurement of economic growth

Nominal GDP expresses output in **current prices**. It measures the annual rate of change of the monetary value of GDP.

Real GDP is expressed at **constant prices**. It measures the annual rate of change of nominal GDP after considering the effects of inflation.

- Changes in **real GDP values** are expressed at constant prices as it adjusts for the effects of inflation, thus allowing for comparisons of real changes over time.

Measurement of economic growth

In order to measure a country's real GDP, we need to use a **GDP deflator**. The GDP deflator is an index number which converts nominal GDP to real GDP, by adjusting for the effects of inflation.

Real GDP can be calculated using the following formula:

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP deflator}} \times 100$$

Measurement of economic growth

Consider the data in the following table.

Year	Nominal GDP ($bn)	GDP deflator	Real GDP ($bn)
2018	155.21	100.0	155.21
2019	164.03	102.6	159.87
2020	168.35	104.1	161.72

1. The base year is 2018 where the GDP deflator = 100. This means that the real GDP calculated should be based on the prices in 2018.
2. Calculate the real GDP each year using the GDP deflator.

e.g., real GDP in 2019 = $\frac{164.03}{102.6} \times 100$ = $159.87 bn

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP deflator}} \times 100$$

Measurement of economic growth

Consider the data in the following table.

Year	Nominal GDP ($bn)	GDP deflator	Real GDP ($bn)	Real growth rate (%)
2018	155.21	100.0	155.21	-
2019	164.03	102.6	159.87	3.00
2020	168.35	104.1	161.72	1.16

3. Calculate the growth rate (percentage change of real GDP) using the year-on-year real GDP values.

$$\text{Growth rate in 2019} = \frac{(159.87 - 155.21)}{155.21} \times 100\% = 3.00\%$$

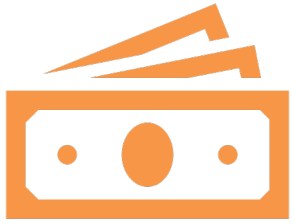
$$\text{Growth rate in 2020} = \frac{(161.72 - 159.87)}{159.87} \times 100\% = 1.16\%$$

GDP per capita

GDP per capita refers to the value of GDP per person in the country.

Countries like the US and China have a high GDP, partially because of their large population sizes. Dividing a country's nominal GDP by its population will provide a more accurate indication of living standards as it reveals the average value of output produced per person in the country.

This is a key measure of a country's economic growth and living standard per person.



Real world example – data analysis

Visit Trading Economics: GDP Growth Rate Data and examine the change in GDP growth rate of your country within the past 10 years.

Data Analysis Questions

1. What do you notice from the data?
2. What questions do you wonder about the data?
3. Research information that may help you answer your questions from Q2.
4. What conclusions can you make from Q1, Q2, and Q3?

Over to you…

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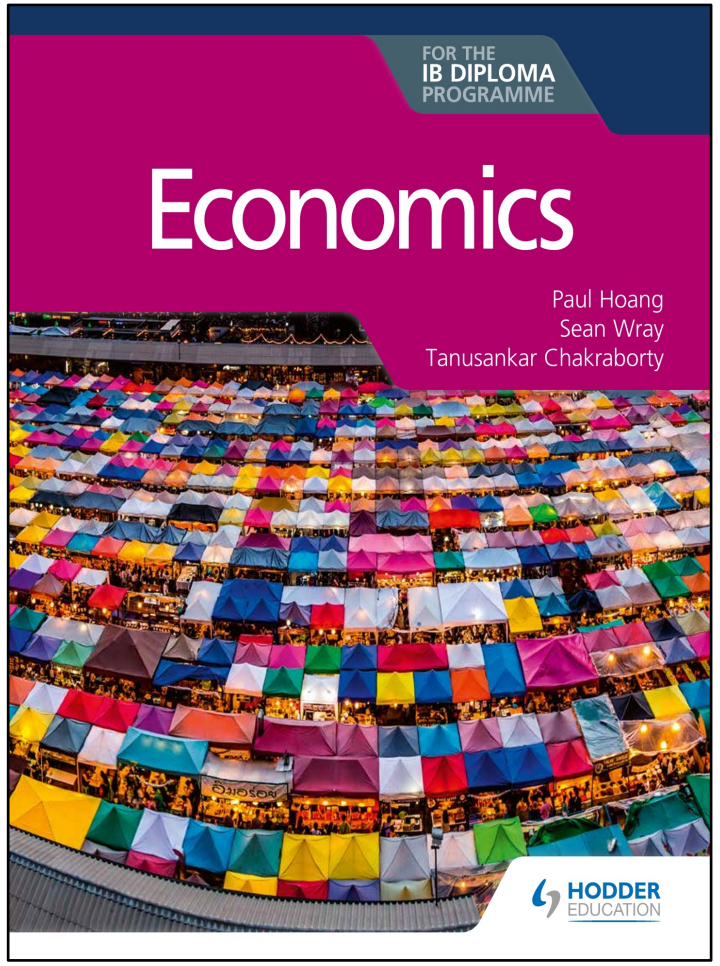
- Page 270
- Paper 2 and 3 Exam Practice Question 18.1
- [4 marks]
- Paper 2 and 3 Exam Practice Question 18.2
- [7 marks]

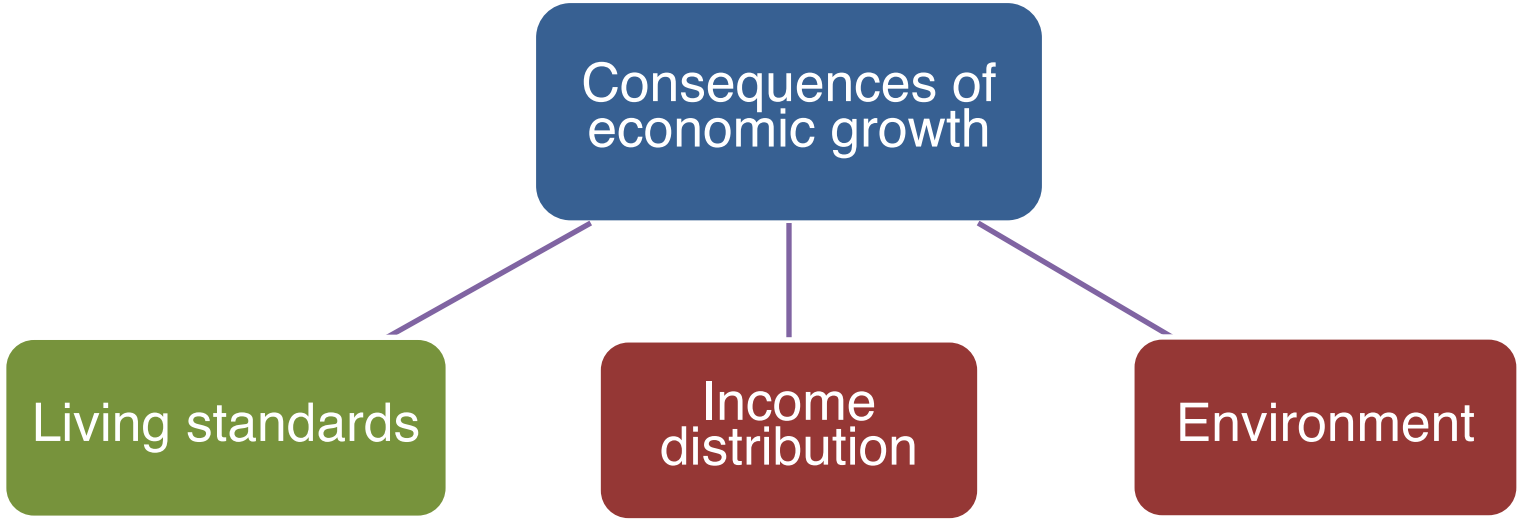


Economic growth

In what scenarios would economic growth lead to negative impacts to the economy?

Consequences of economic growth

There are both positive and negative consequences of economic growth.



Impact on living standards

Generally, economic growth leads to **higher living standards** for people as higher incomes represents an increased ability to meet needs and wants.

With economic growth, there is:

- A reduction in absolute poverty due to a higher level of income per person
- A reduction in unemployment due to higher levels of consumption and investment, thus boosting economic growth
- An increase in tax revenue from indirect taxes (imposed on consumption) and direct taxes (imposed on incomes and profits).

Impact on living standards

- Higher consumption means higher revenues and profits for firms. This encourages investments made by firms and increases the productive capacity of the country.
- An increase in the amount spent on merit goods, which improves the social welfare of the economy.

However, …

- There is a **risk of inflation** due to excessive AD in the country. Demand-pull inflation may lead to higher prices of goods and services which raises the cost of living and leads to other negative consequences (more details later in the chapter).

Impact on the environment

1. To what extent does GDP reflect the living standards of people?
2. How does economic growth create environmental problems?

Impact on the environment

Economic growth may lead to **negative externalities** such as environmental pollution, climate change, resource depletion, road congestion, etc.

For example, rising levels of production leads to increasing levels of air pollution which damages the quality of life of people and wildlife.

GDP does not consider negative externalities such as environmental pollution, which would have significant effects on living standards.

Impact on the environment

Economic growth should be achieved through environmentally sustainable methods for the social and economic wellbeing of a country.

Some countries use the **green GDP** to measure economic growth as it takes into account the environmental costs associated with economic growth.

Green GDP = GDP - Environmental costs of production

Impact on income distribution

Economic growth may create **greater disparities in income distribution**, where the rich get richer while the poor get poorer. An economy may experience economic growth, but this does not mean that all individuals benefit in the same way.

However, economic growth **increases the tax revenue** received by the government. The government may spend this revenue on supporting those on lower incomes and may also use a progressive tax system to **redistribute income** in the economy.

Over to you…

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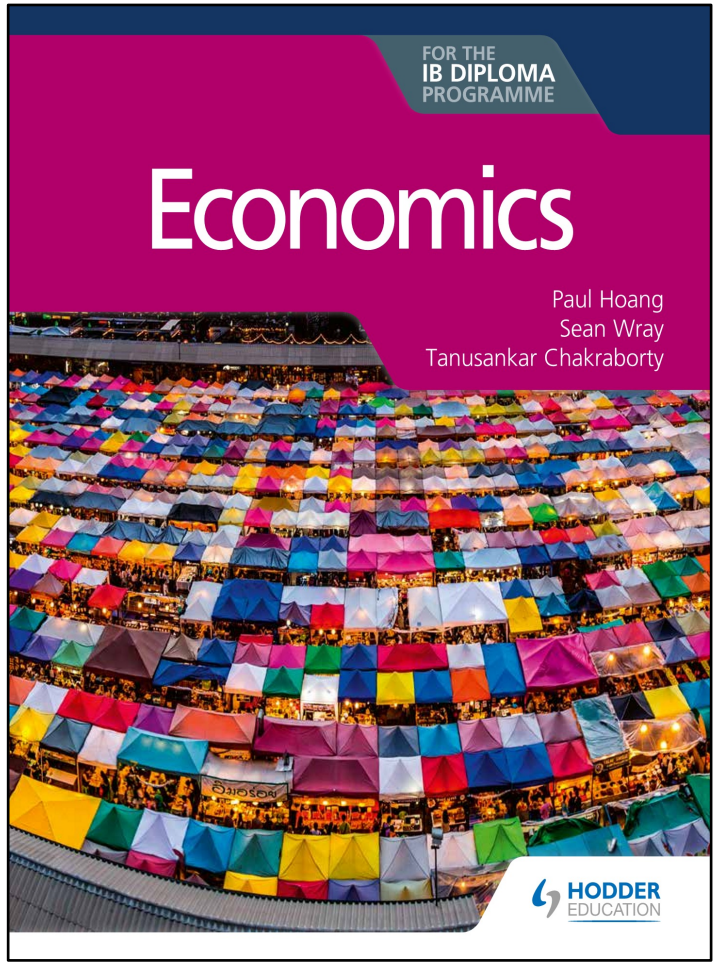
- Page 273
- Paper 2 and 3 Exam Practice Question 18.3
- [6 marks]



Test your knowledge on this unit: Kahoot!

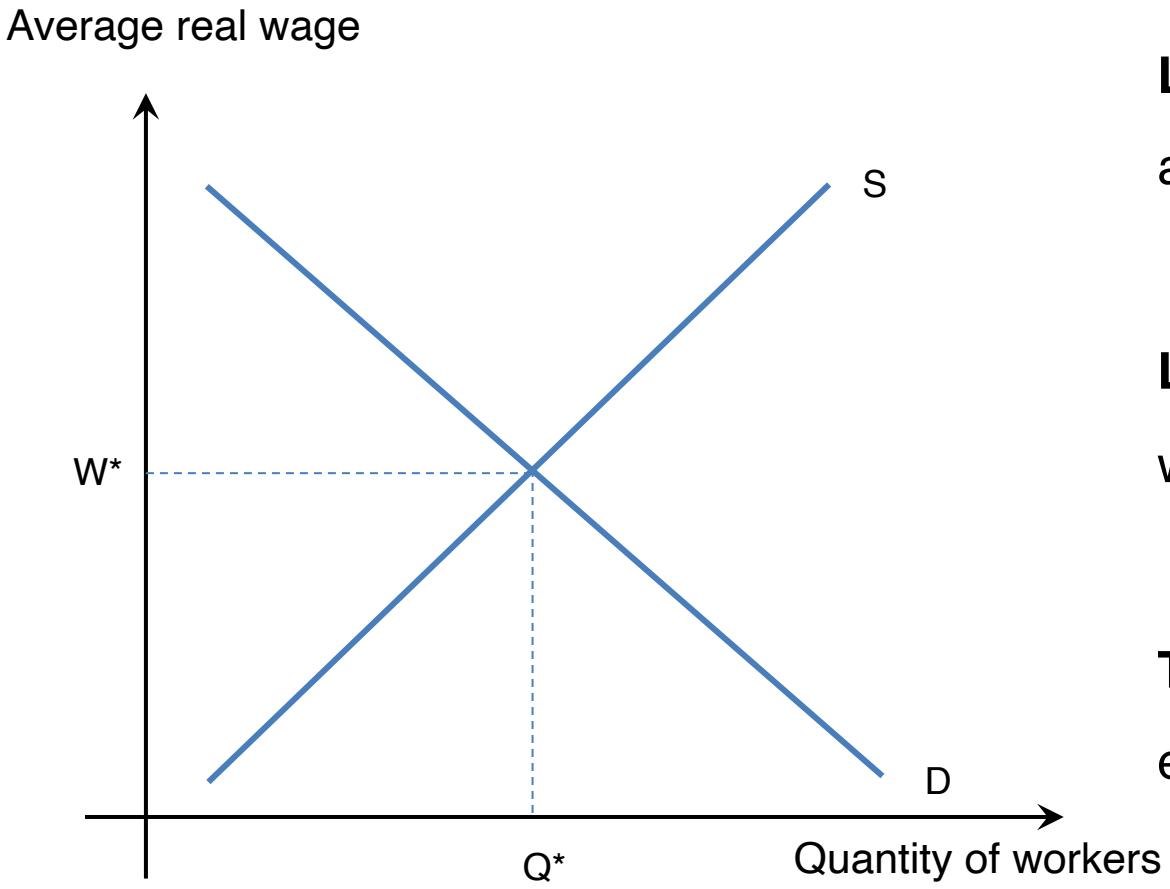
Macroeconomic objectives – Low Unemployment

Employment and unemployment

Employment refers to the use of factors of production in the production process, usually applied on labour resources.

Unemployment refers to people who are willing and able to work, actively seeking work, but cannot find work at the current wage rate. This means that resources are not being fully utilized in the economy.

Labour market diagram



Labour supply is the number of people willing and able to work at the various wages.

Labour demand represents the employers who are willing and able to hire workers at various wages

The labour market equilibrium results in the equilibrium wage and the level of employment.

Brainstorming Activity

Why might low unemployment be desirable for the economy? Alternatively, why might high unemployment be undesirable for the economy?

Low unemployment as a macroeconomic objective

Why do governments aim to achieve low unemployment?

- A higher employment rate means greater national income, output, and expenditure which increases the economic well-being and standards of living in the economy.

Recall that National Expenditure = National Income = National Output.

- Greater tax revenue from indirect taxes e.g. custom duties, sales taxes, VAT (higher consumption) and direct taxes e.g. income and corporate taxes (higher employment).
- Lower financial burden on the government to support unemployed individuals.

Research activity – unemployment rate

1. Go to https://tradingeconomics.com/countries and select an economy.
2. Click on the ***Labour*** economic indicator.
3. Using the figures from ***Employed persons*** and ***Unemployed persons*** in the ***Previous*** column, calculate the unemployment rate of your chosen country.
4. Check if your calculation is correct by referring to the ***Unemployment rate*** value (provided in the first row).
5. Research the unemployment rate of your country in the past 5 years. Discuss and explain your observations found on the graph.

Measurement of unemployment and unemployment rate

The unemployment rate of a country measures the number of unemployed people as a percentage of the labour force.

This can be calculated by the formula:

$$\text{Unemployment rate} = \frac{\text{No. of unemployed people}}{\text{labour force}} \times 100\%$$

$$= \frac{\text{No. of unemployed people}}{\text{no. of unemployed people + no. of employed people}} \times 100\%$$

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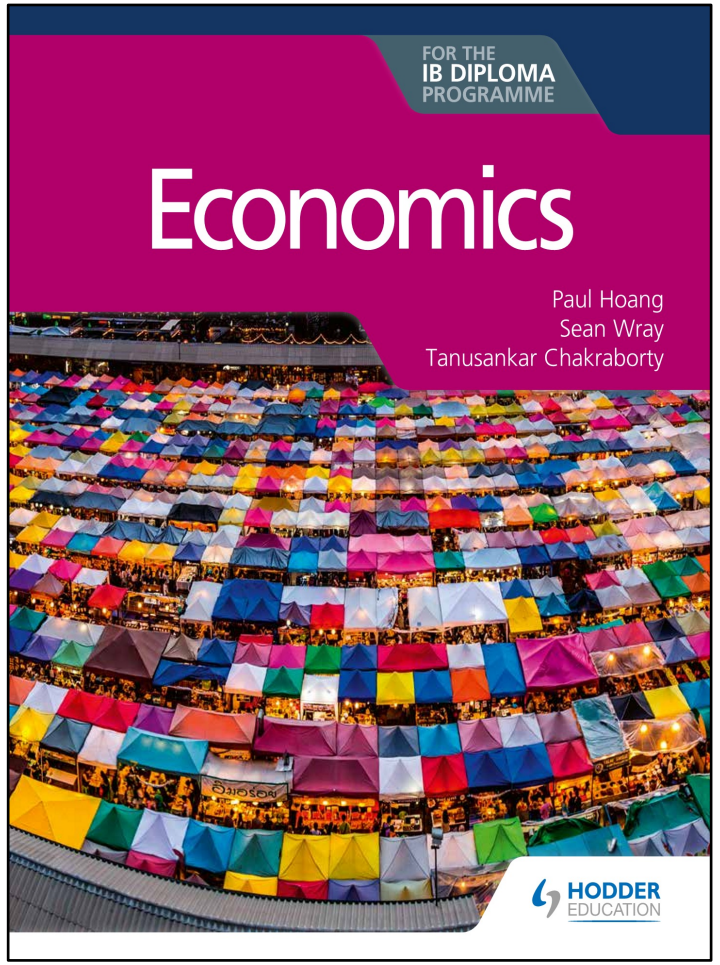
- Page 278
- Paper 2 and 3 Exam Practice Question 19.1
- [2 marks]



Over to you… (HL only)

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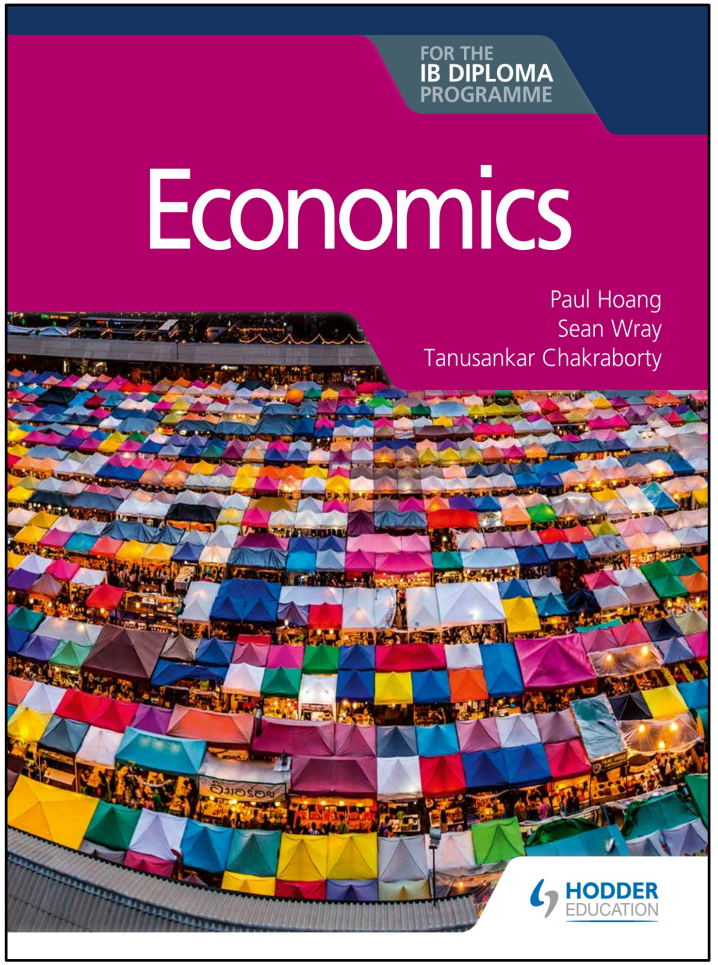
- Page 278
- Paper 3 Exam Practice Question 19.2
- [4 marks]



Measurement of unemployment

The International Labour Organization (ILO) measures **unemployment** based on the following criteria:

- Willing and able to work but unable to find employment
- Been actively looking for work for the past 4 weeks
- Able to start working in the next 2 weeks
- Waiting to start a new job in the next 2 weeks.

Measurement of unemployment

Alternatively, countries measure unemployment using the **claimant count**. This includes people who are actively seeking employment but are without work and claiming unemployment benefits.

However, it is believed that claimant count underestimates the actual unemployment rate. Some people may be deterred from claiming the unemployment benefits as they cannot prove that they are actively seeking employment (e.g., part-time workers). In addition, some people make fraudulent claims to qualify for the unemployment benefits.

Real world example

Podcast: A Brutal Jobs Report

1. How has the pandemic affected employment opportunities in different industries?
2. How has the black-to-white unemployment ratio changed due to the pandemic?
3. Why were some unemployed workers not captured by the official unemployment rate?

Difficulties in measuring unemployment

1. Hidden unemployment (disguised unemployment)

Some people are technically unemployed but are excluded from the official measure of unemployment, which results in an **underestimation** of the actual unemployment rate.

Difficulties in measuring unemployment

1. Hidden unemployment (disguised unemployment)

A major reason behind hidden unemployment is due to people being **discouraged** from seeking work.

These people have given up looking for jobs as they have been rejected by prospective employers too many times. Since the ILO and claimant count only consider people **actively seeking** work as unemployed, the existence of discouraged workers results in an underestimation of the unemployment rate.

Difficulties in measuring unemployment

2. Voluntary unemployment

Voluntarily unemployed people refer to those of working age who choose not to actively seek employment.

This includes people who choose not to work full-time to take care of the elderly or children, as well as people who choose to retire early. They are considered economically inactive, but not unemployed.

Only those who are of working age and are **actively seeking work** are included in the labour force.

Difficulties in measuring unemployment

3. Underemployment

Underemployment occurs when the labour resources in an economy are being underutilized, which hinders the economy's productivity and efficiency.

For example:

- Highly skilled or qualified people working in low-skilled occupations
- Involuntary part-time workers who wish to work full-time

Part-time workers are considered employed; there is no distinction between part-time and full-time workers when calculating the unemployment rate.

Difficulties in measuring unemployment

4. Disparities

The unemployment rate is a measure for the entire economy, which ignores certain disparities.

For example:

- Regional disparities
- Ethnic disparities
- Age disparities – unemployment rates of the young and older people are generally higher
- Gender disparities – the unemployment rate for women is generally higher than that for men.

Real world example

1. Why were women hit harder than men during the pandemic?
2. How are the unemployment rates different between women of different races?

Over to you…

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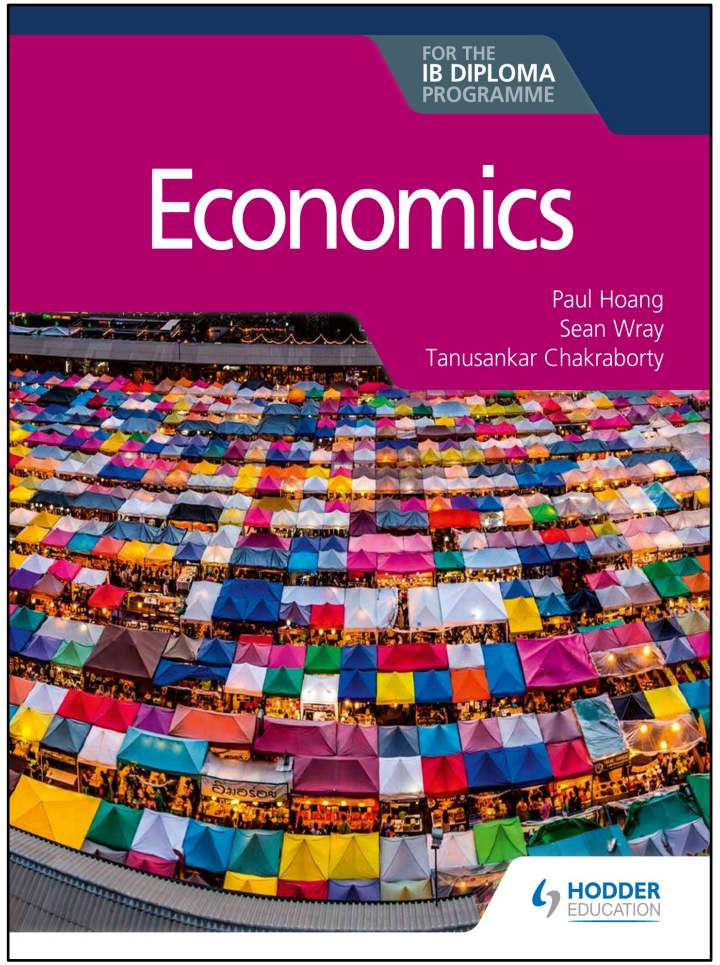
- Page 281
- Paper 2 and 3 Exam Practice Question 19.3
- [8 marks]



Causes of unemployment – cyclical unemployment

Cyclical unemployment occurs during the downturn of the business cycle, when the economy is in a recessionary gap; it is also known as **demand-deficient unemployment** as it results from a deficiency in aggregate demand.

Causes of unemployment – cyclical unemployment

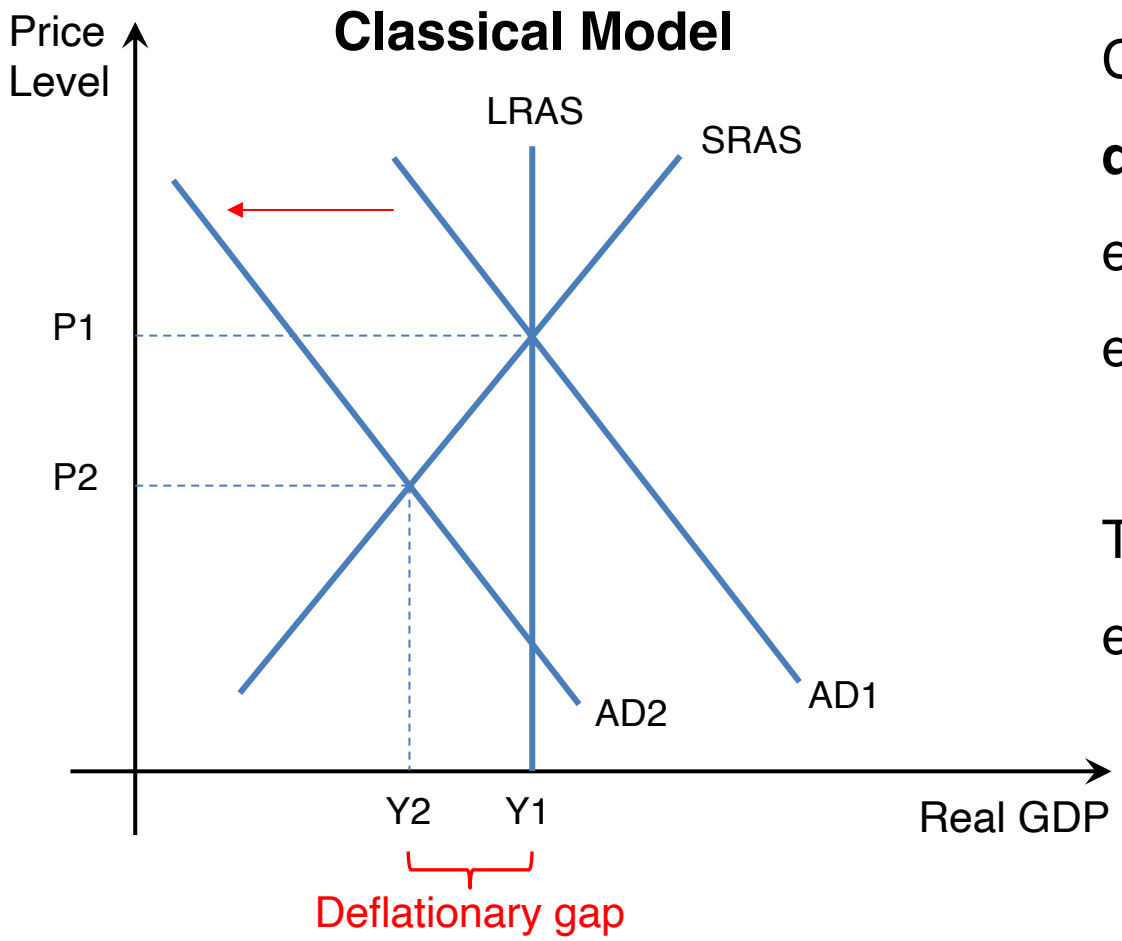
1. Cyclical unemployment (demand-deficient unemployment)

When the demand for goods and services across industries fall during a recession, the demand for labour also falls as firms no longer need to hire so many workers.

Cyclical unemployment leads to large job losses as firms aim to cut costs and prevent business failure during recessions.

Causes of unemployment – cyclical unemployment

1. Cyclical unemployment (demand-deficient unemployment)

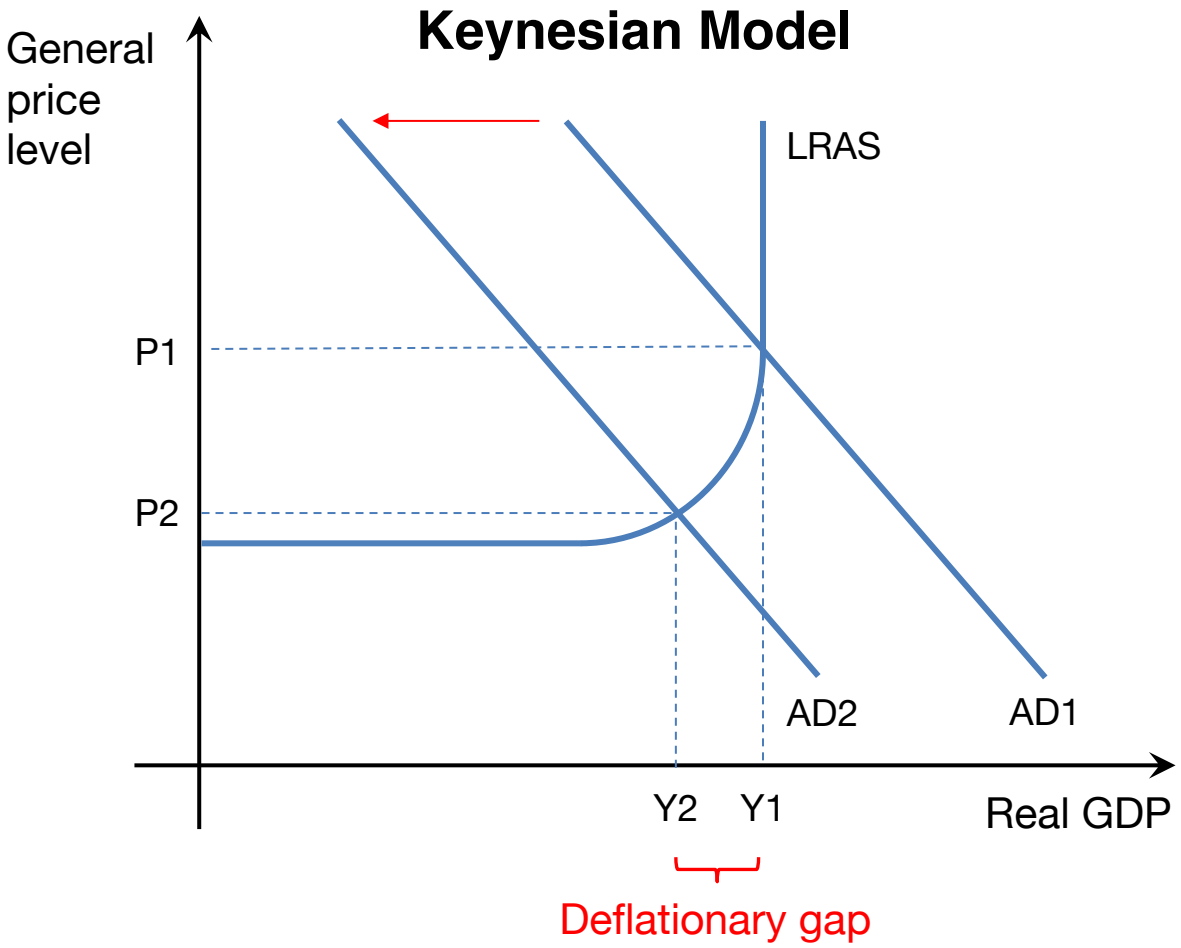


Cyclical unemployment may be represented by a **deflationary gap**, which occurs when the economy operates at a level lower than the full employment level.

This means that the labour resources in the economy are not being fully employed.

Causes of unemployment – cyclical unemployment

1. Cyclical unemployment (demand-deficient unemployment)



Cyclical unemployment may be represented by a **deflationary gap**, which occurs when the economy operates at a level lower than the full employment level.

This means that the labour resources in the economy are not being fully employed.

Causes of unemployment – cyclical unemployment

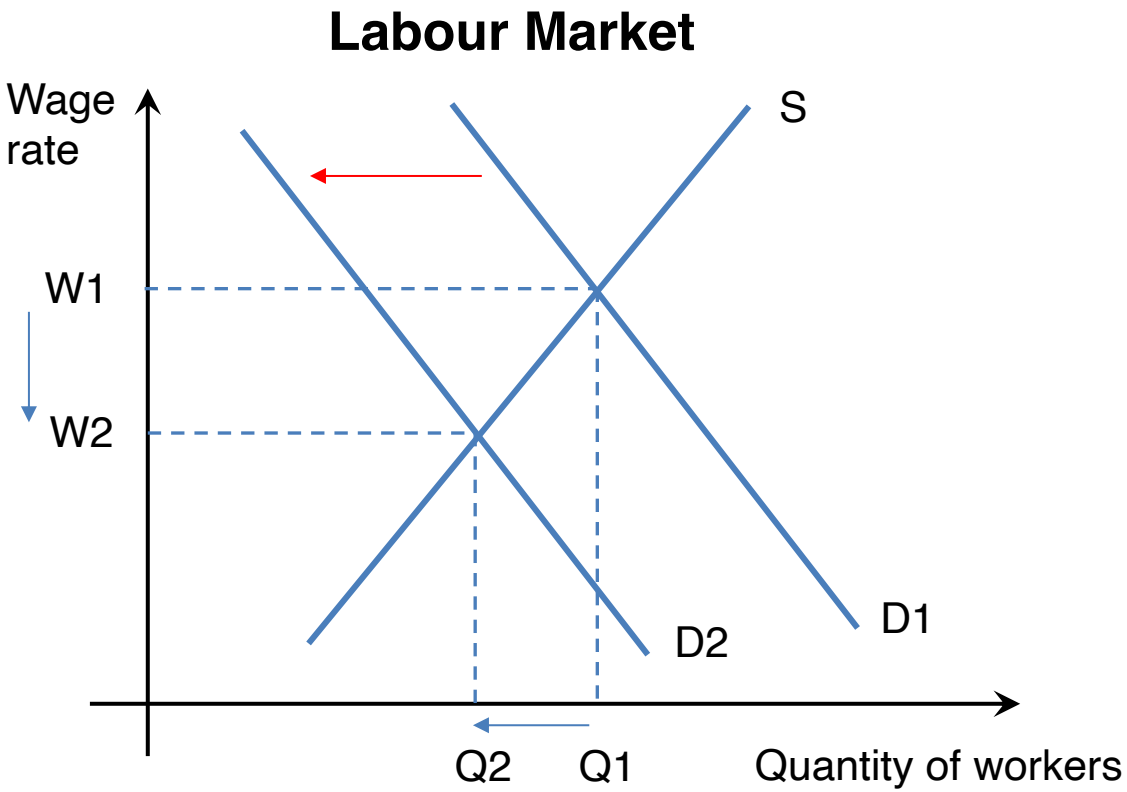
1. Cyclical unemployment (demand-deficient unemployment)

To reduce cyclical unemployment, the government may use demand-side policies to boost aggregate demand and close the deflationary gap.

Causes of unemployment – structural unemployment

2. Structural unemployment

Structural unemployment is caused by changes in a sector or the structure of the economy.



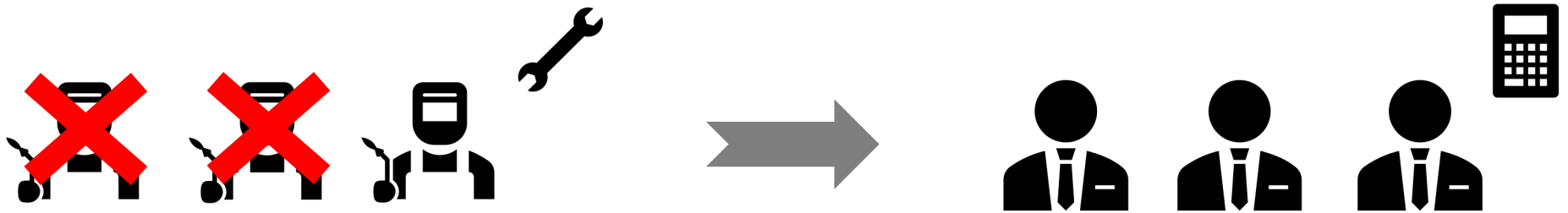
This exists when there is a mismatch between the jobs available in the market and the skills that workers can offer, i.e., when workers are unable to fill jobs as they lack the skills which are required.

Causes of unemployment – structural unemployment

2. Structural unemployment

It occurs when there is a long-term decline in the demand for labour in a specific industry.

For example, Hong Kong's manufacturing industry declined in the 2000s as the financial and service sectors dominated the economy. Workers who only possessed skills fit for the manufacturing industry became structurally unemployed as there was a mismatch between the skills demanded and supplied in the economy.



Causes of unemployment – structural unemployment

2. Structural unemployment

This type of unemployment may also arise due to changes in the **geographical location** of industries and jobs.

Some firms may hire workers from other developing countries where wages are generally lower. As a result, some local workers may become structurally unemployed as the demand for domestic labour falls.

Causes of unemployment – structural unemployment

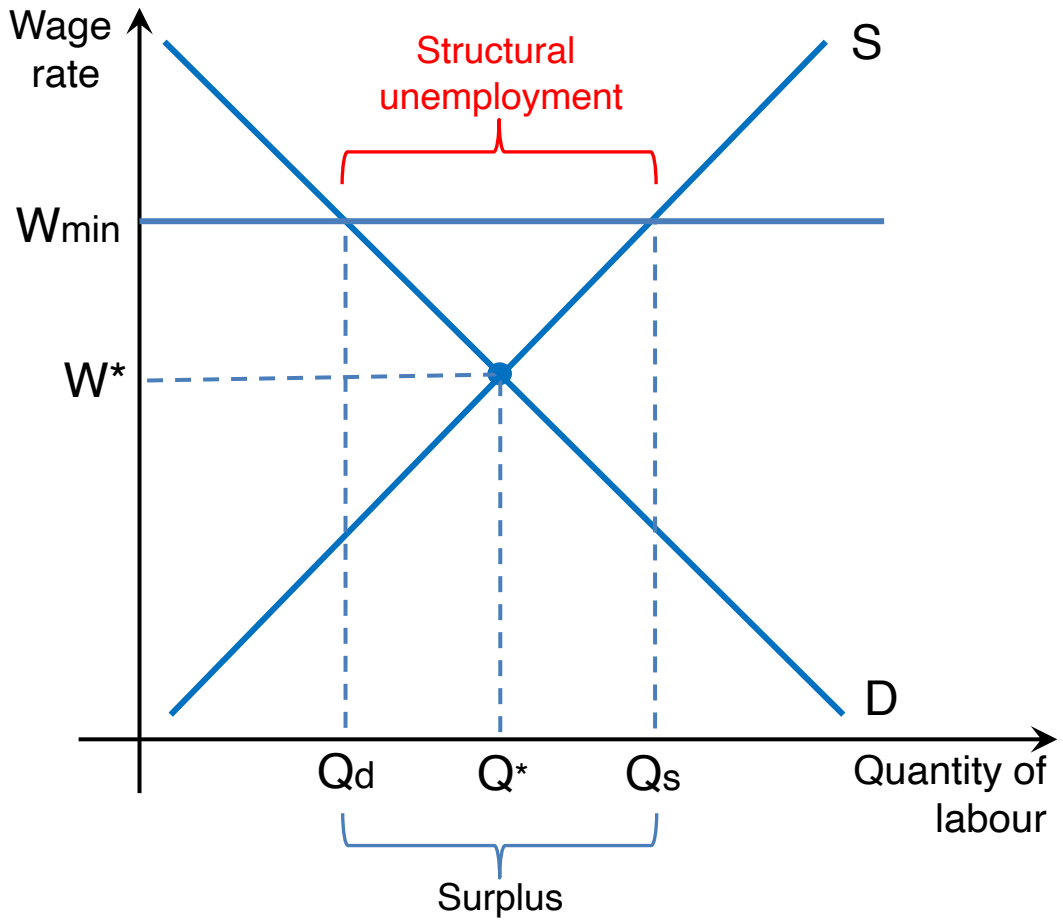
2. Structural unemployment

Another cause of structural unemployment is **labour market rigidities,** such as minimum wage legislations, trade union powers, generous unemployment benefits etc.

These rigidities prevent wage rates from falling to clear the surplus in the labour market.

Causes of unemployment – structural unemployment

2. Structural unemployment



For instance, the minimum wage legislation sets the minimum wage (Wmin) above the wage equilibrium (W*).

The quantity supplied for labour (Qs) is greater than the quantity demanded (Qd), which leads to a surplus of labour, resulting in **structural unemployment** of (Qs-Qd).

Causes of unemployment – structural unemployment

2. Structural unemployment

Possible solutions to reduce structural unemployment:

- Provide education and retraining programs to equip workers with new skills and finding alternative jobs
- Reduce unemployment benefits to create incentives for individuals to seek employment
- Provide incentives for firms to hire those who are structurally unemployed.

Causes of unemployment – seasonal unemployment

3. Seasonal unemployment

Seasonal unemployment is caused by changes in the demand for labour during particular times of the year.

Examples:

- Ski instructors suffer from seasonal unemployment during the summer.
- School bus drivers are out of work during the summer/ school holidays.

Can you think of other examples of seasonal unemployment?

Causes of unemployment – seasonal unemployment

3. Seasonal unemployment

Certain areas that suffer from high seasonal unemployment drive local workers to relocate to other regions to seek better employment opportunities.

Official unemployment statistics may also be adjusted to account for the usual seasonal changes in demand for goods and services.

How might the government reduce seasonal unemployment?

Causes of unemployment – seasonal unemployment

3. Seasonal unemployment

Possible solutions to reduce seasonal unemployment:

- Diversify the economy to produce goods and services irrespective of the seasons
- Provide retraining programs to improve the occupational or geographical mobility of workers
- Reduce unemployment benefits to create incentives for individuals to seek employment
- Improve information flow of job vacancies.

Causes of unemployment – frictional unemployment

4. Frictional unemployment

Frictional unemployment occurs when people are temporarily unemployed as they move between jobs. This happens as time is needed for the labour market to match the demand and supply of appropriate jobs.

Is frictional unemployment avoidable?

Examples include:

- People who get fired by their employers
- People who take time off to look after their family
- People who quit their jobs in search of a more rewarding job.

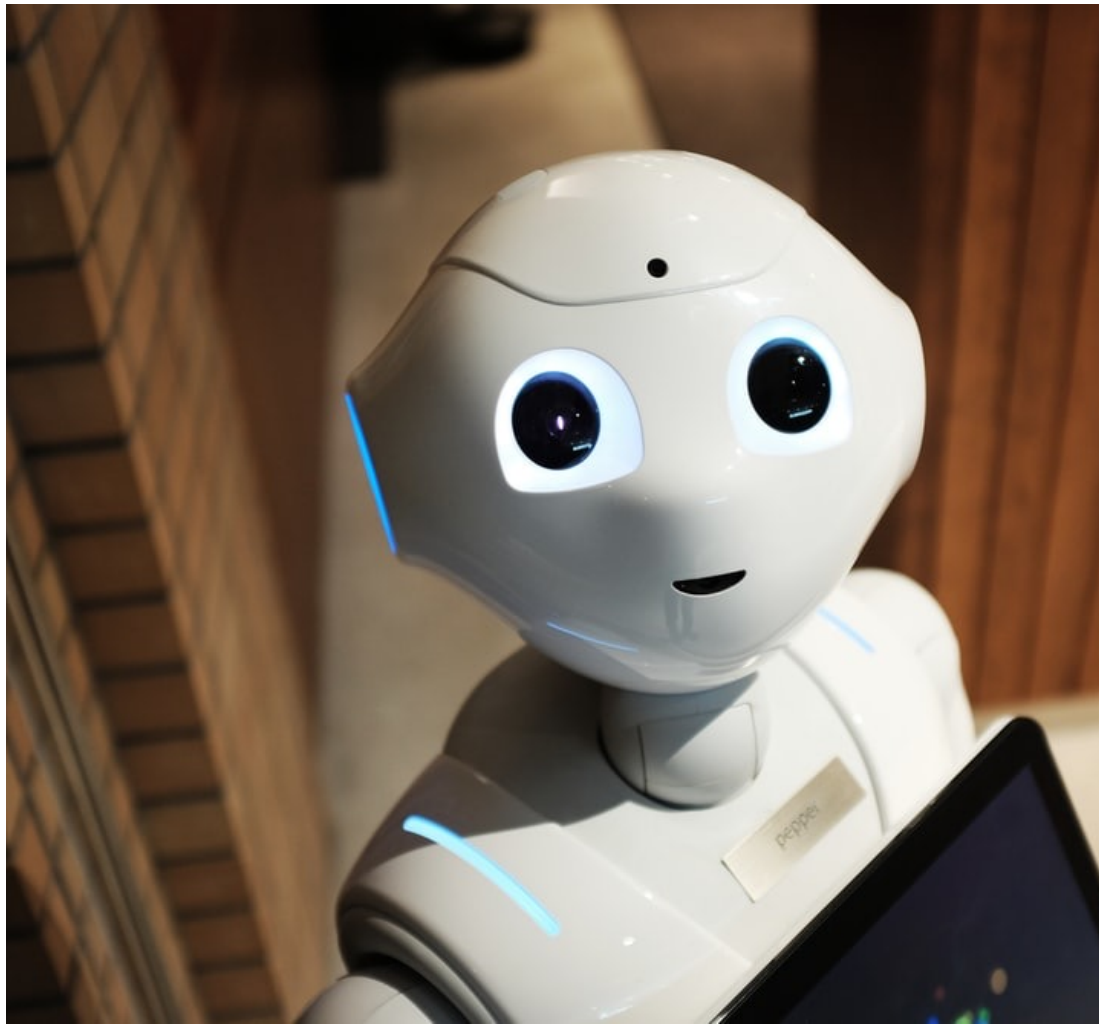
Causes of unemployment – frictional unemployment

4. Frictional unemployment

Frictional unemployment is unavoidable due to imperfect market information. However, it can be a good sign for the labour market as workers are potentially switching to more rewarding jobs.

In a recession, frictional unemployment tends to fall as workers are less confident in finding alternative employment.

Case study



Article: Pandemic Wave of Automation May Be Bad News for Workers

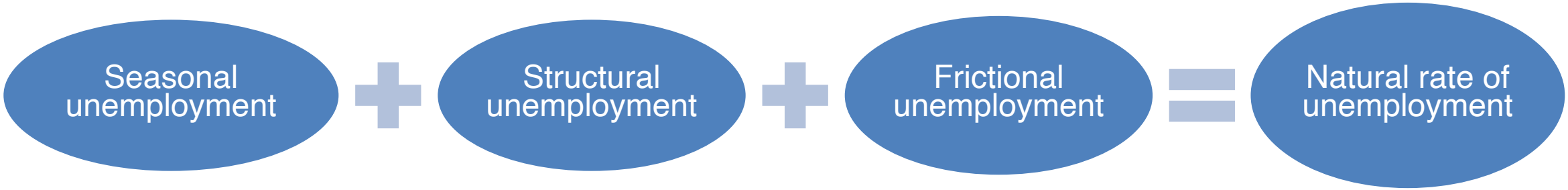
1. What type of unemployment does automation cause?
2. How does automation lead to this type of unemployment?
3. Illustrate the increase in structural unemployment using an AD/AS diagram.

The natural rate of unemployment (NRU)

The natural rate of unemployment (NRU) refers to the unemployment rate when the economy is producing at the full employment level of output.

Natural rate of unemployment (NRU)

Seasonal, structural, and frictional unemployment are unavoidable in any given economy. Therefore, the natural rate of unemployment is equal to the sum of frictional, structural and seasonal unemployment.



Cyclical unemployment is **not included** in the natural rate of unemployment. There is no cyclical unemployment if the economy is producing at potential level of output.

Case study

Video: How Unemployment Impacted Millennials During Coronavirus (5:40 - 12:00)

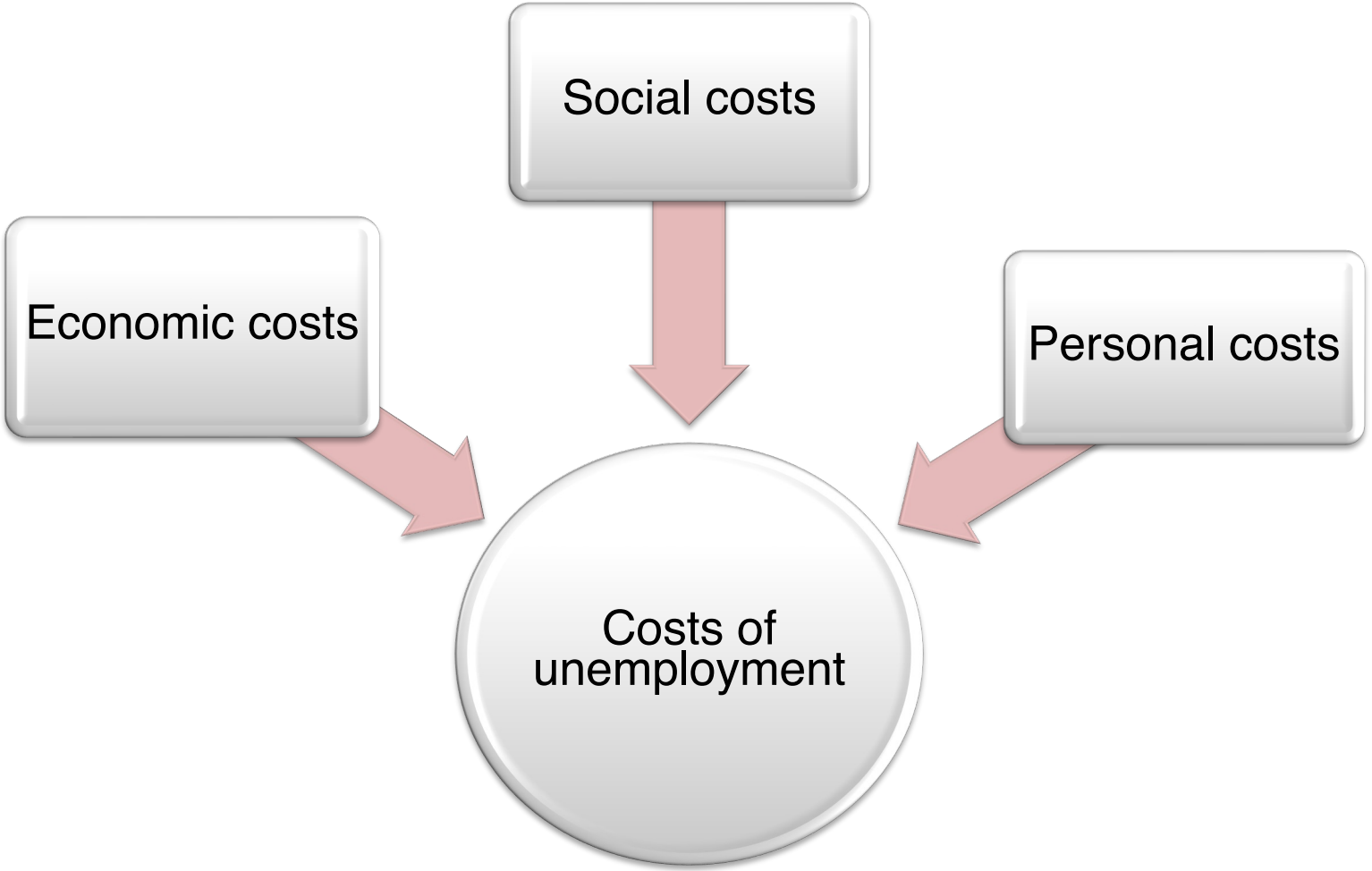
1. How did the US government support unemployed individuals?
2. What undesirable effects might unemployment benefits cause?
3. How are individuals affected by being unemployed?

Reducing the natural rate of unemployment

Policies to reduce the natural rate of unemployment aim to make the labour market more flexible and competitive:

- Reducing the bargaining power of trade unions – these unions create labour market rigidities by pressurizing the government to raise minimum wages
- Reforms to the welfare benefit system – reduce unemployment benefits to create incentives for people to find jobs
- Reduce barriers to labour mobility – provide subsidies for job centers to help the unemployed to find jobs
- Reduce income taxes – improve incentives to work.

Costs of unemployment



Costs of unemployment

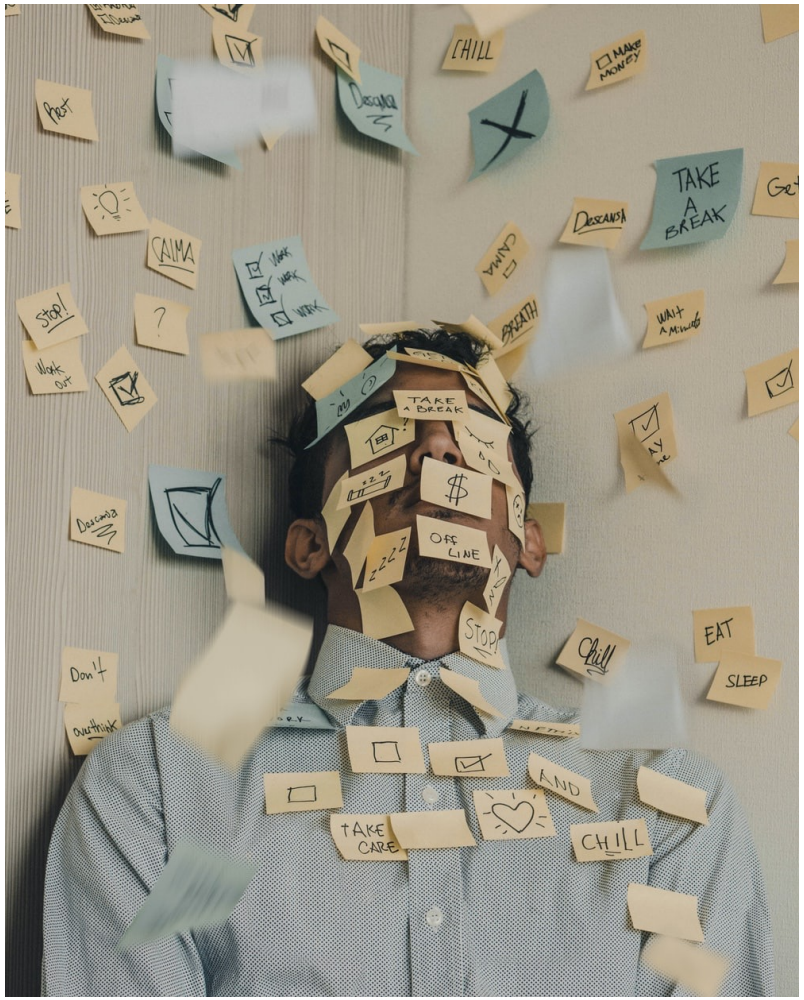
Economic costs

- **Loss of GDP** – negative economic growth, lower international competitiveness and lower potential output (due to inefficient use of scarce resources)
- **Loss of tax revenues** – due to lower income and expenditure
- **Loss of income for individuals –** lower household income for individuals and families
- **Increased costs of unemployment benefits** – increased national debts
- **Greater disparities in the distribution of income** – certain groups suffer from more prolonged periods of unemployment.

Costs of unemployment

Social costs

- **Increased crime rate and anti-social behaviour** – alcoholism, vandalism
- **Indebtedness** – unaffordable debt or bankruptcies, leading to other social problems
- **Social deprivation** – the local community may suffer from absolute poverty, falling asset values, increased crime rates etc.



Costs of unemployment

Personal costs

- **Stress** – possibly leading to mental health issues
- **Low self-esteem** – lack of self-confidence
- **Poverty** – hunger, poor health, homelessness
- **Family breakdowns** – family arguments, divorce.

Test your knowledge on this unit: Kahoot!

Macroeconomic objectives – Low and stable rate of inflation

What is inflation?

Inflation is the sustained increase in the general price level of an economy over time. This means that prices increase on average, and people must pay more to buy the same amount of goods and services.

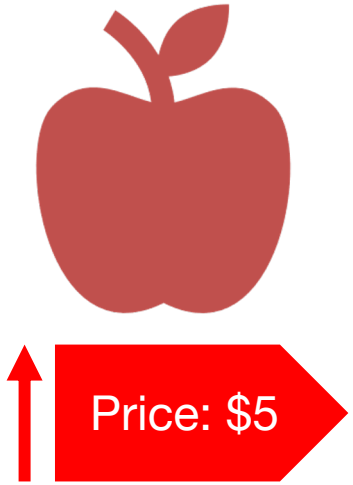
Price: $4

Price: $25

Price: $50

What is inflation?

Inflation is the sustained increase in the general price level of an economy over time. This means that prices increase on average, and people must pay more to buy the same amount of goods and services.



What is inflation?

Since inflation reduces the purchasing power and international competitiveness of a country, governments set a target inflation rate to achieve price stability. For example, the US federal reserve targets a 2% inflation rate.

Price stability is achieved when the price level remains broadly constant.

Measuring the inflation rate

Inflation rates are typically measured by the **consumer price index (CPI)**.

The consumer price index (CPI) is a weighted index of the average prices of goods and services consumed by the typical household. Calculating the **percentage change in CPI** from the **base year** would give us the inflation rate.

Measuring the inflation rate

Price changes of goods and services are measured every month but reported for a twelve-month period.

A **base year** is selected as the starting period of the calculation. The base year has price index of 100.

If the price index of a year is 103, then the general price level has increased by 3%, compared to the base year.

How does the consumer price index work?

1. The prices of a selected basket of goods and services, purchased by the typical household, are collected from different retail locations.

How does the consumer price index work?

2. Each item is assigned a statistical weight. There are two ways to apply the weights on CPI:

   i. **Amount** of goods purchased – the greater the quantities purchased, the more important the good is to the average household

   ii. **Value** of goods purchased – the higher the portion of income spent on the good, the more important the good is to the average household

   For example, since the typical household spends a larger portion of its income on housing than on utilities, housing has a higher statistical weight than utilities.

3. The CPI is reviewed regularly in order to reflect changes in consumption habits.

Calculating the inflation rate – Case 1

Assume that there are three products in the basket of goods and services consumed by the average household. The base year is 2018 when the total price of the basket is $112.

Calculate the inflation rate between 2019 and 2020.

Products	2019	2020
Apple	$6	$8
Book	$80	$85
Cake	$30	$34
Total basket price		

Calculating the inflation rate – Case 1

Step 1 Calculate the total basket price for each year.

Total basket price in 2019 = $(6 + 80 + 30) = $116

Total basket price in 2020 = $(8 + 85 + 34) = $127

Products	2019	2020
Apple	$6	$8
Book	$80	$85
Cake	$30	$34
Total basket price	$116	$127

Calculating the inflation rate – Case 1

Step 2 Calculate the price indices for the two years.

$$\text{Price index for 2019} = \frac{116}{112} \times 100\% = 103.57$$

$$\text{Price index for 2020} = \frac{127}{112} \times 100\% = 113.39$$

Products	2019	2020
Apple	$6	$8
Book	$80	$85
Cake	$30	$34
Total basket price	$116	$127

Calculating the inflation rate – Case 1

Step 2 Calculate the price indices for the two years.

$$\text{Price index for 2019} = \frac{116}{112} \times 100\% = 103.57$$

$$\text{Price index for 2020} = \frac{127}{112} \times 100\% = 113.39$$

Step 3 Calculate the inflation rate.

The inflation rate is the percentage change of the price indices.

$$\text{Inflation rate} = \frac{(113.39 - 103.57)}{103.57} \times 100\% = 9.48\%$$

Calculating the inflation rate – Case 2

The table below shows how a weighted CPI is calculated. The statistical weight is applied by the quantities purchased per time period. The same quantities are purchased in 2019 and 2020.

Calculate the inflation rate between 2019 and 2020.

Products	Price in 2019	Price in 2020	Quantity in basket
Pizza	$90	$98	5
Pen	$8	$10	8
Orange juice	$12	$15	12

Calculating the inflation rate – Case 2

Step 1 Calculate the total value of basket in the two years.

Total value of basket in 2019 = ($90 × 5) + ($8 × 8) + ($12 × 12) = $658

Total value of basket in 2020 = ($98 × 5) + ($10 × 8) + ($15 × 12) = $750

Products	Price in 2019	Price in 2020	Quantity in basket
Pizza	$90	$98	5
Pen	$8	$10	8
Orange juice	$12	$15	12

Calculating the inflation rate – Case 2

Step 2 Calculate the inflation rate.

Inflation rate = Percentage change of CPI

$$\text{Inflation rate} = \frac{(750-658)}{658} \times 100\% = 13.98\%$$

Products	Price in 2019	Price in 2020	Quantity in basket
Pizza	$90	$98	5
Pen	$8	$10	8
Orange juice	$12	$15	12

Over to you…

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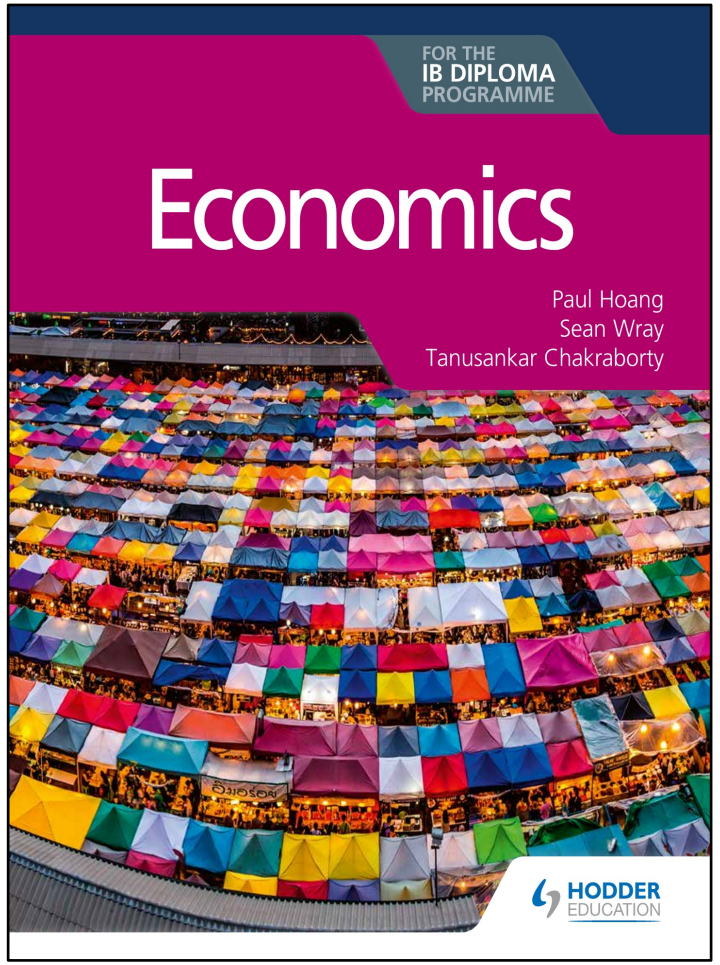
- Page 293
- Paper 2 and 3 Exam Practice Question 20.1 [6 marks]
- Paper 2 and 3 Exam Practice Question 20.2 [4 marks]
- Paper 2 and 3 Exam Practice Question 20.4 [2 marks]
- Paper 2 and 3 Exam Practice Question 20.5 [2 marks]
- Paper 2 and 3 Exam Practice Question 20.6 [2 marks]



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- Page 293
- Paper 2 and 3 Exam Practice Question 20.3
- [3 marks]
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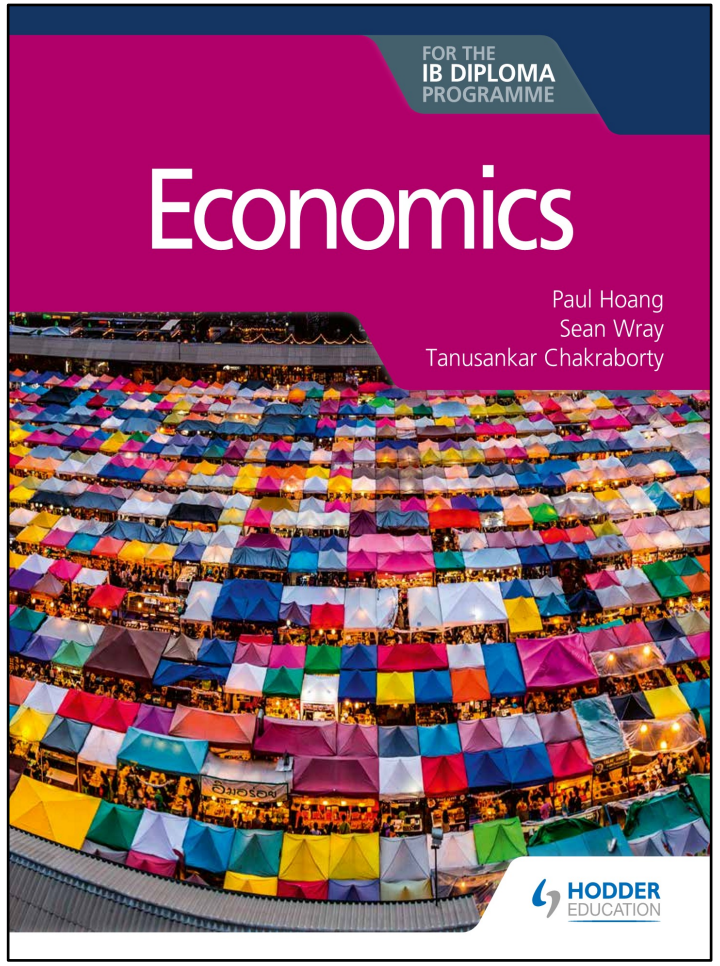
- Paper 2 and 3 Exam Practice Question 20.7
- [8 marks]



Limitations of CPI in measuring inflation rate

1. Different income earners

Wealthy households are less sensitive to price changes while low-income households are more responsive to inflation. Different income earners have different consumption habits due to their different income levels. The CPI does not account for the difference in income levels.

2. Changes in product quality

For example, the newest edition of smartphones are of higher prices due to its improvement in quality. However, the CPI does not take into account any changes in product quality.

Limitations of CPI in measuring inflation rate

3. Changes in consumption patterns over time

The popularity of goods and services changes over time, so the statistical weights may also change. These changes must be reflected in the CPI calculations for the most accurate results.

4. Atypical households

The CPI only considers the goods and services consumed by the average household, meaning it has minimal relevance for atypical households (such as a pensioner or a university student).

5. Regional and international disparities

As prices vary a lot between countries, international comparisons can be difficult. The CPI does not reflect regional disparities in price levels and costs of living.

Limitations of CPI in measuring inflation rate

6. Time lags

Due to the huge amount of data needed for the calculation of CPI, inflation figures may be outdated by the time the data is published.

7. Value of quantities purchased

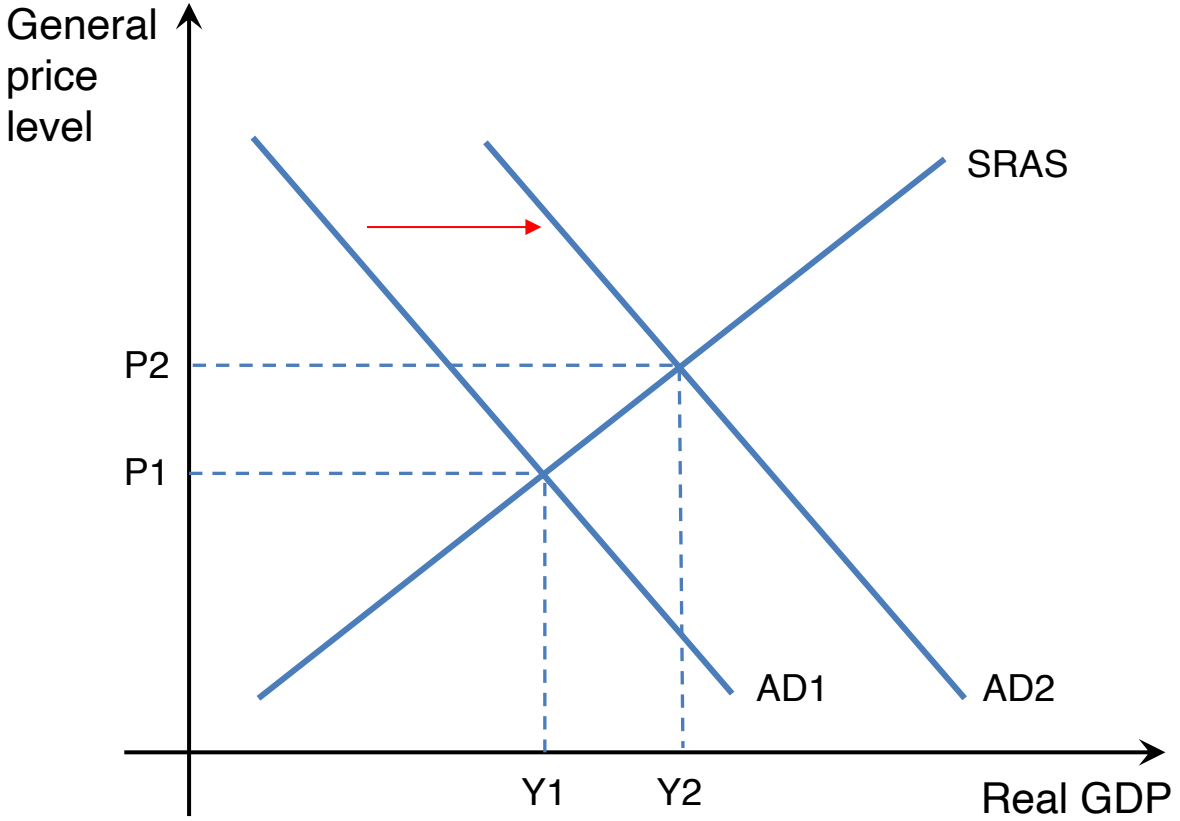
The method of using the **quantities purchased** (rather than the percentage of income spent) as weights in CPI is a limitation.

Causes of inflation – Demand-pull inflation

Demand-pull inflation is caused by an increase in aggregate demand in the economy.

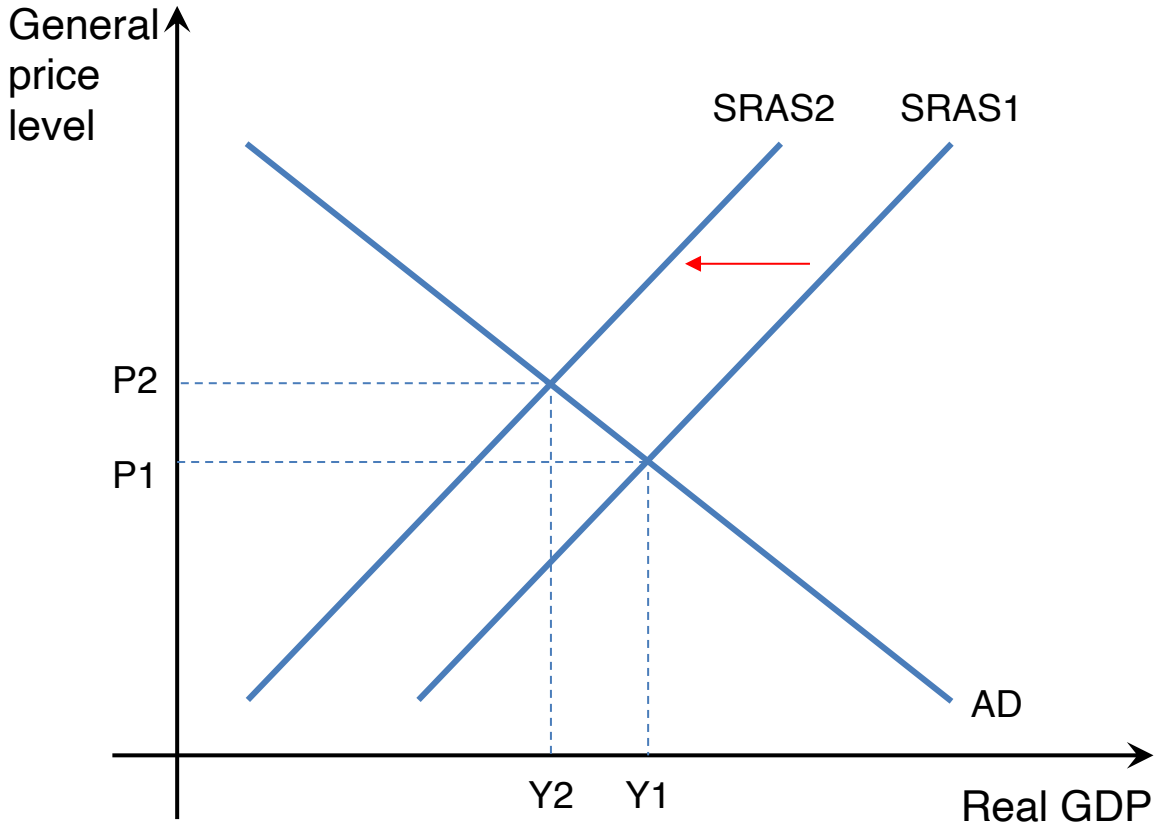
For example, in an economic boom, consumption increases due to higher employment.

- AD increases from AD1 to AD2
- Real GDP increases from Y1 to Y2
- Price level increases from P1 to P2.



Causes of inflation – Cost-push inflation

Cost-push inflation is caused by higher costs of production. This might be caused by increased prices of raw materials or labour costs.



- The increased production cost shifts SRAS1 shifts inwards to SRAS2
- The Real GDP decreases from Y1 to Y2
- The Price Level increases from P1 to P2

Over to you…

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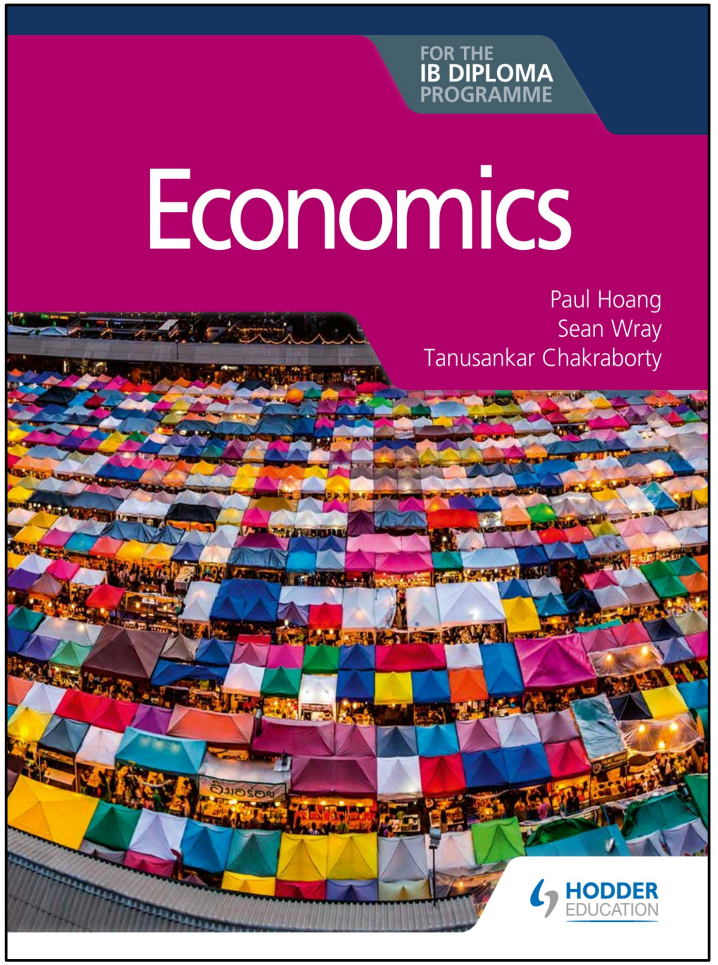
- Paper 1 Exam Practice Question 20.8
- [10 marks]

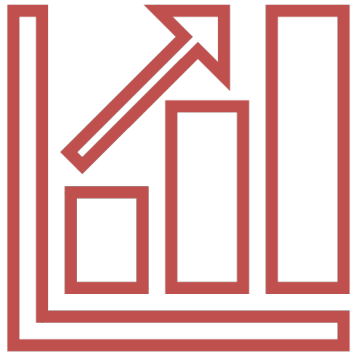


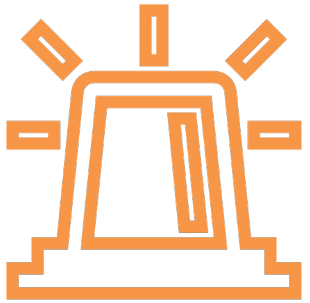
Real world example

1. What are the effects of high inflation on society?
2. Research the causes of Venezuela's hyperinflation. Illustrate the inflation with an AD/AS diagram.

Costs of a high inflation rate

Inflation **lowers the purchasing power** of households, firms and governments as there is a fall in the real national income. High inflation is generally undesirable to economies as it causes negative effects to different stakeholders.





Real world example – data analysis

Source: Purchasing power of the US dollar over time

Data Analysis Questions

1. What do you notice from the data?
2. What questions do you wonder about the data?
3. Research information that may help you answer your questions from Q2.
4. What conclusions can you make from Q1, Q2, and Q3?

Costs of a high inflation rate

1. Uncertainty

Inflation reduces the real value of money, which lowers people's purchasing power. This creates uncertainty to households and firms, leading to lower levels of consumption and business confidence.

Consumers will become uncertain about their consumption expenditures, while firms are discouraged to invest due to uncertainties about costs and revenues. This then lowers economic growth in the long-term.

How does uncertainty lower the actual and potential economic growth of a country?

Costs of a high inflation rate

2. Redistributive effects

The effects of inflation are not distributed evenly among different stakeholders. There are greater costs on people who suffer from the greatest drop in purchasing power.

All consumer groups:
Lose due to higher living costs and lower purchasing power

Low-income groups:
Most vulnerable as inflation has a regressive effect

People with fixed incomes/ fixed welfare payments:
Lose as the real purchasing power of their income and payments decrease

Land and property owners:
Gain from higher prices of their physical assets

Costs of a high inflation rate

3. Effects on saving

Savers lose as the real rate of return decreases, ceteris paribus. For example, if banks offer 1% interest rate on savings, and the inflation rate is 2%, there is a negative real interest rate which discourages saving.

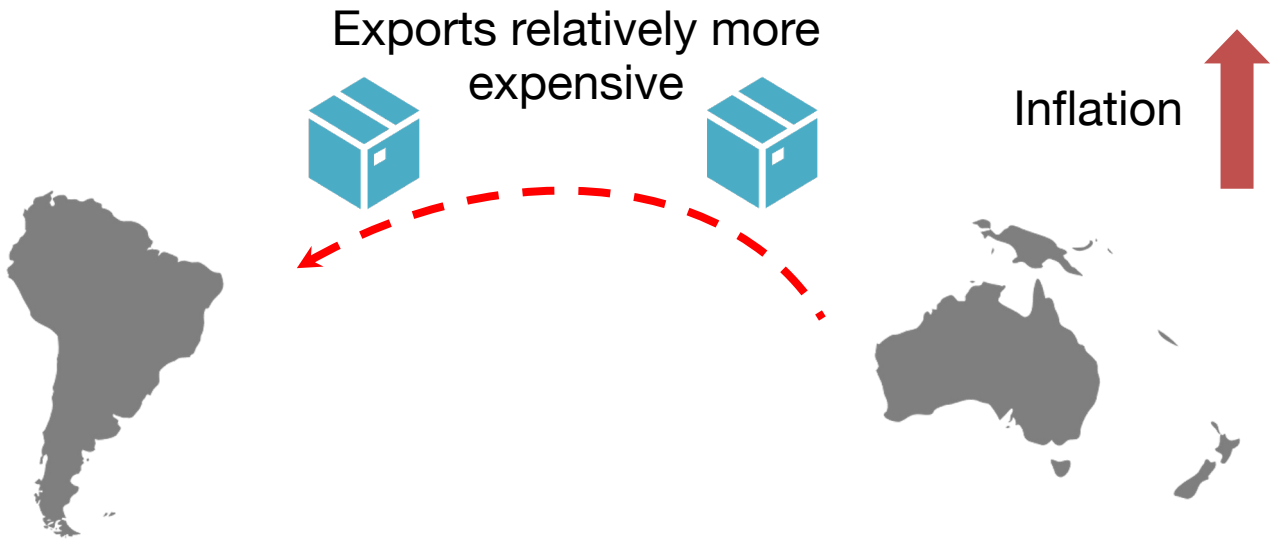
Borrowers gain as the real value of their debt decreases. For example, if a mortgage is at 4% interest and inflation rate is at 2%, the real interest rate is only 2%.

Creditors (lenders) lose as the real value of the money returned decreases.

Costs of a high inflation rate

4. Damage to export competitiveness

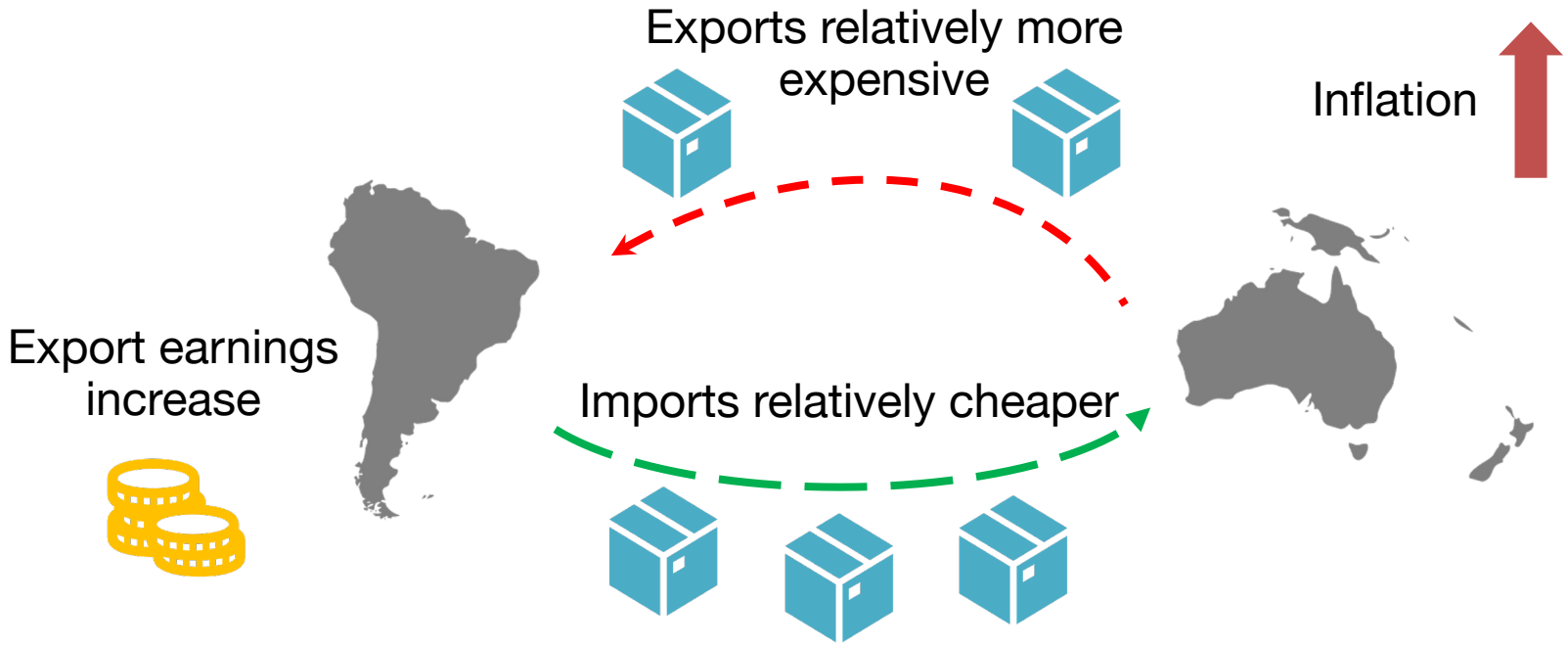
If an economy's inflation rate is higher than its trading partners, its **exports** become relatively more **expensive**. This lowers the export competitiveness of domestic firms which may worsen the trade balance, lower economic growth, as well as higher unemployment if the situation persists.



Costs of a high inflation rate

4. Damage to export competitiveness

Similarly, **imports** become relatively **cheaper** for domestic consumers and firms, which raises the quantity of **imports**.



Costs of a high inflation rate

5. Impact on economic growth

Lower uncertainty
Lower consumption and investment

Lower savings
Fewer funds for investment

Lack of investment expenditure

Lower productive capacity and potential growth

Workers may demand a pay rise in response to rising price levels. This causes labour costs to increase and profit margins to decrease. Meanwhile, consumption is likely to fall, thus employers are worse-off in terms of increased costs and decreased revenue.

Costs of a high inflation rate

6. Inefficient resource allocation

Resource allocation may be distorted by higher price levels.

For example, **the wage-price spiral** may occur. Trade unions may demand higher wages for their workers, which increases the production costs for firms. Without receiving higher wages to compensate for the higher costs of living, labour unrests and conflicts may be caused. This creates problems for the economy like higher costs of production, lower profitability and higher unemployment.

Costs of a high inflation rate

6. Inefficient resource allocation

Resource allocation may be distorted by higher price levels.

A **wage-price spiral** may occur when high inflation levels prompts trade unions to demand higher wages for workers, which increases the production costs for firms. If employers are unwilling or unable to offer higher wages to compensate for the higher costs of living, labour unrests and conflicts may arise resulting in industrial action. This further increases the cost of production for firms, prompting a further increase in the prices of goods and services.

Costs of a high inflation rate

6. Inefficient resource allocation

High levels of inflation create **menu costs**, which are costs to firms for updating price lists and delivering the information to customers.

Costs of a high inflation rate

6. Inefficient resource allocation

Shoe leather costs refers to the cost of time and effort consumers spend in attempt to counteract the effects of inflation. This includes holding less cash, investing in different currencies with lower levels of inflation, and having to make additional trips to the bank.

Deflation

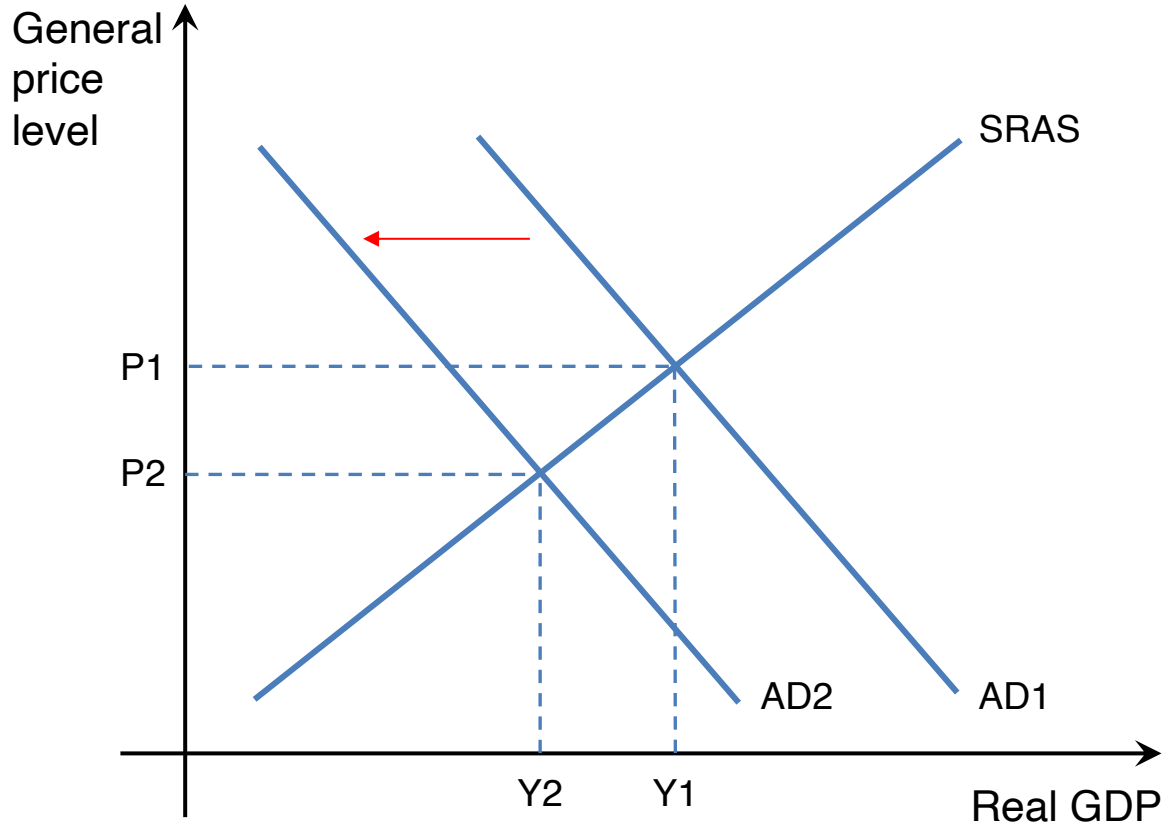
Deflation refers to a sustained decrease in the general price level of an economy. This can be caused by a decrease in aggregate demand or an increase in short run aggregate supply (SRAS).

Malign deflation

Malign deflation is generally harmful as it is caused by a decrease in aggregate demand.

- AD curve shifts inwards from AD1 → AD2
- Price level falls from P1 → P2
- Real GDP falls from Y1 → Y2

This leads to lower economic growth and higher unemployment and is usually associated with a recession.

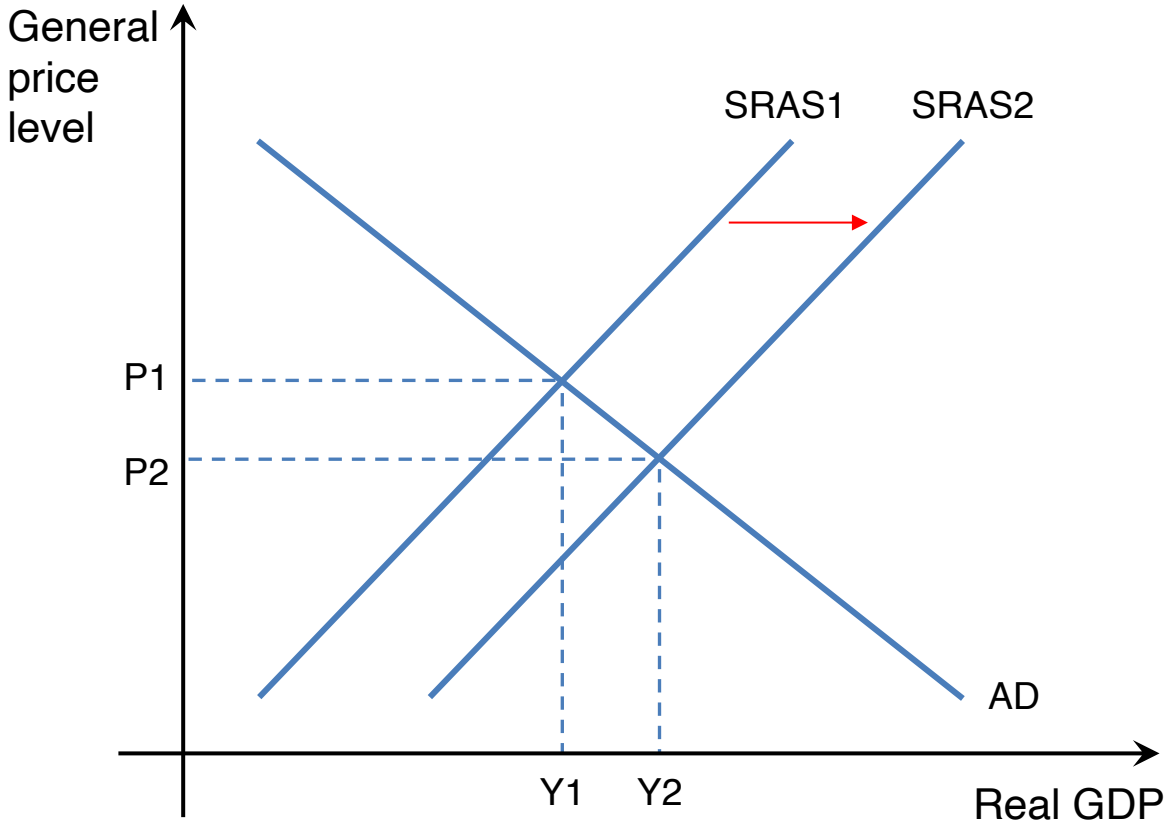


Benign deflation

Benign deflation is the deflation that leads to higher national output. This can be caused by an increase in SRAS or LRAS.

- SRAS1 curve shifts outwards to SRAS2
- Price level falls from P1 → P2
- Real GDP rises from Y1 → Y2

This may not be harmful to the economy if households have cheaper access to goods and services and export competitiveness increases.



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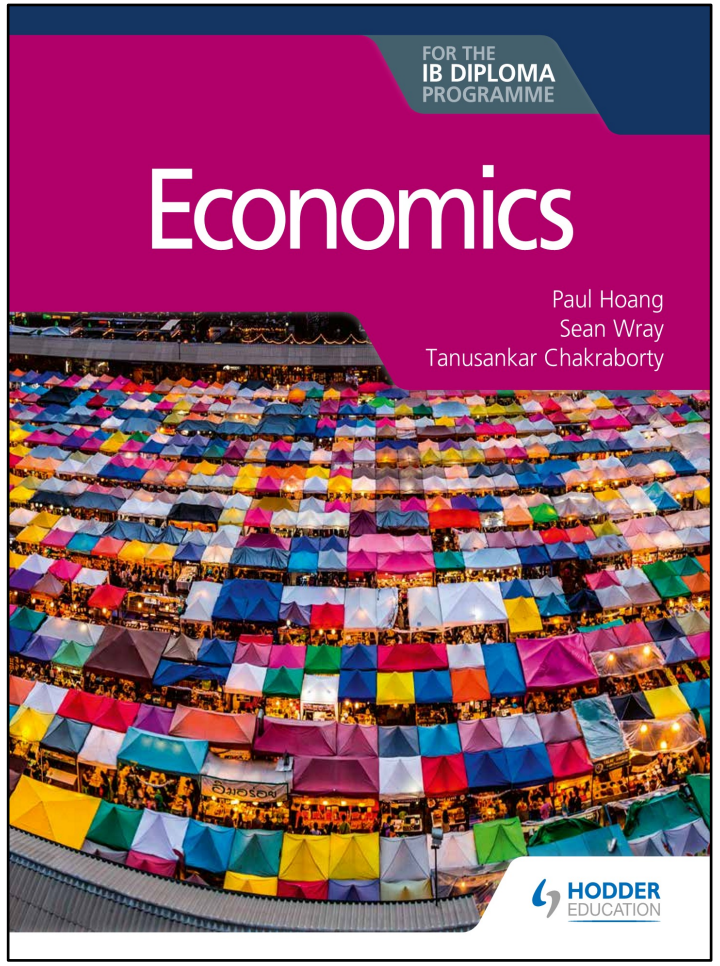
- Page 302
- Paper 1 Exam Practice Question 20.9
- [10 marks]
- Page 303
- Paper 2 Exam Practice Question 20.10
- [8 marks]



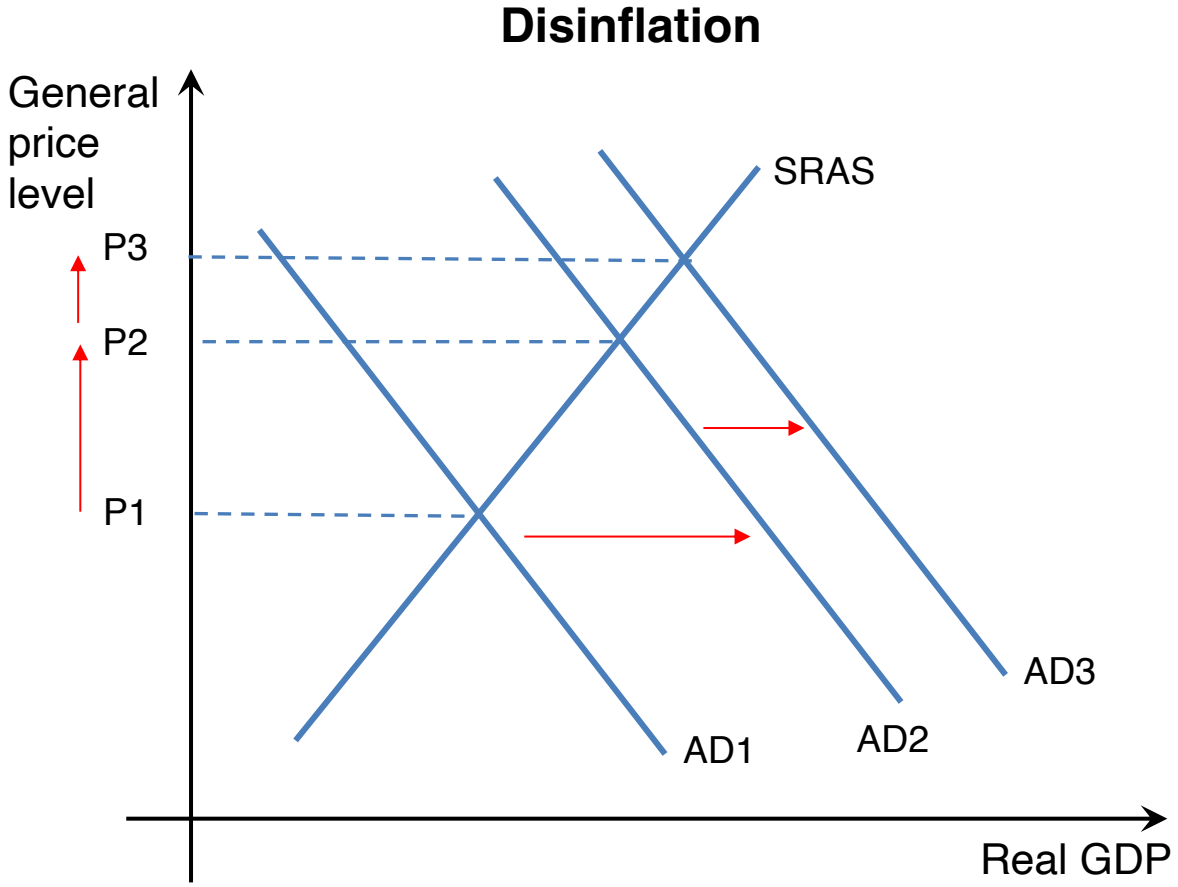
Disinflation

Disinflation occurs when there is a fall in the rate of inflation, meaning that price levels are still rising but at a slower rate. **Disinflation is not to be confused with deflation.**

Disinflation

Demand-pull inflation occurs when AD increases from AD1 → AD2, in which the price level increases from P1 → P2.

Disinflation occurs when the rate of increase in AD slows i.e., from AD2 → AD3. Price levels increase at a slower rate from P2 → P3.



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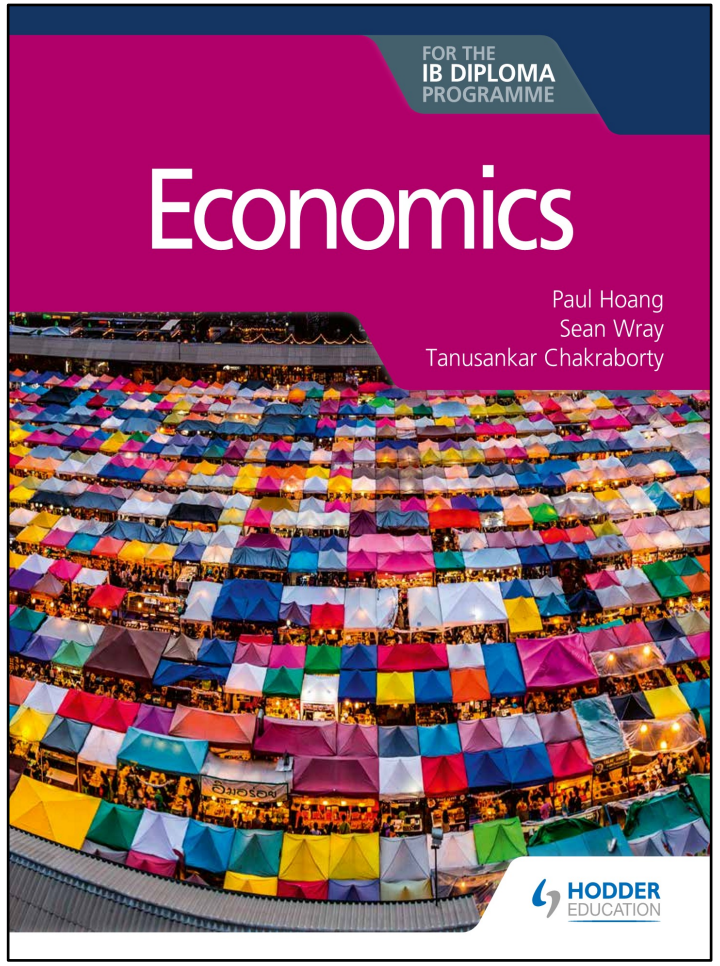
- Page 304
- Paper 2 and 3 Exam Practice Question 20.11
- [2 marks]
- Paper 1 Exam Practice Question 20.12
- [10 marks]



Real world example – costs of deflation

1. What caused deflation during the Asian financial crisis?
2. What are the possible negative effects as a result of prolonged deflation?

Costs of deflation

1. Uncertainty

During periods of deflation, business confidence falls due to growing uncertainty about future prices, costs, and revenues.

Firms become less willing to invest which results in lower levels of economic activity.

Costs of deflation

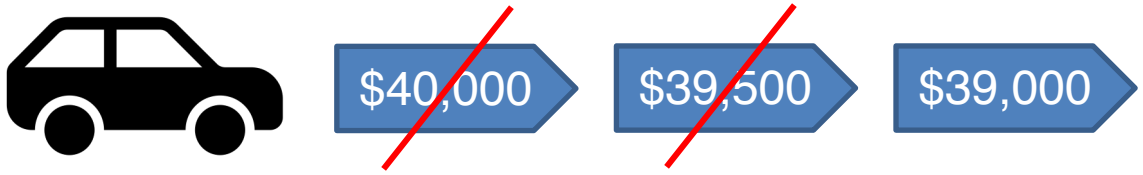
2. Redistributive effects

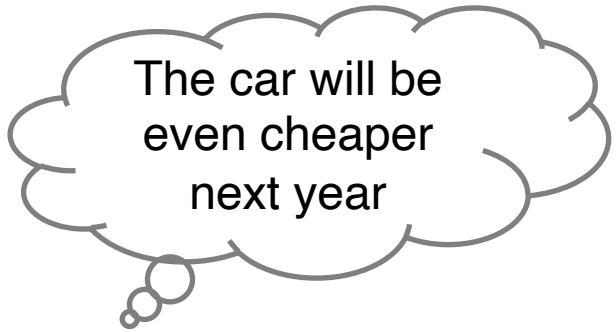
Winners	Losers
• Individuals on fixed incomes and savers/ holders of cash – The real value of money increases.	• Payers of fixed incomes and debtors (borrowers) – The real value of debt increases.
• Creditors (lenders) – The real value of money returned increases.	• Investors and shareholders – Due to declining profitability, share prices fall, causing the value of dividends & other fixed assets to fall.

Costs of deflation

3. Deferred consumption

Consumers tend to postpone spending on certain goods and services during periods of deflation as they expect prices will continue to fall. Households and firms are also discouraged from borrowing as the real value of debt increases during deflation.



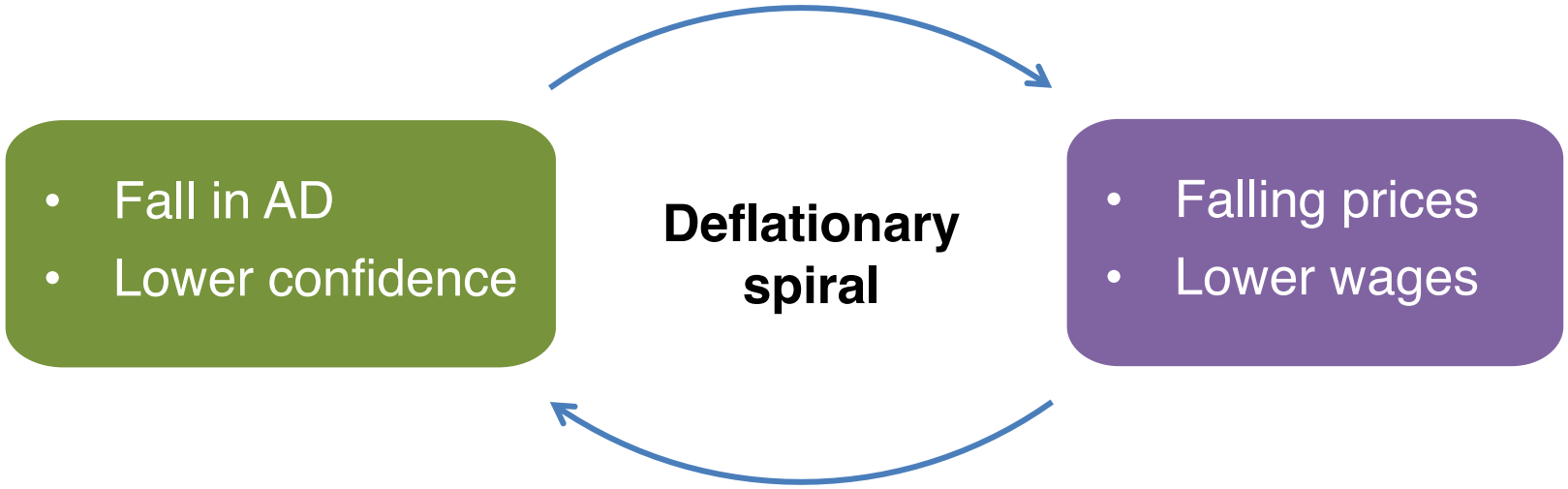


How does deferred consumption and reduced borrowing affect the level of unemployment?

Costs of deflation

4. High levels of cyclical unemployment and bankruptcies

A **deflationary spiral** occurs when deflation results in low levels of consumption and investment, which leads to further deflation, which in turn leads to even lower levels of consumption and investment, and so on. This leads to high levels of cyclical unemployment and bankruptcies.



Costs of deflation

5. Increase in the real value of debt

During periods of deflation, real interest rates increase, and the real cost of debt also increases. This makes it more difficult for borrowers to repay their debts as a greater portion of disposable income is required for debt servicing.

Costs of deflation

6. Inefficient resource allocation

Market distortions are caused by deflation due to:

- Falling prices which incentivize consumers to buy goods and services.
- Greater uncertainty
- Deferred consumption and investment
- Cyclical unemployment
- Bankruptcies
- Increase in the real value of debt

These factors contributes towards inefficient resource allocation.

Costs of deflation

7. Policy ineffectiveness

To boost economic growth, the central bank could lower interest rates (using expansionary monetary policy) to encourage consumption and investment.

However, monetary policy may be ineffective during recessions as interest rates will already be low during this period. Expansionary monetary policy may be ineffective if the interest rate is already at or close to zero, as nominal interest rates cannot fall below 0%.

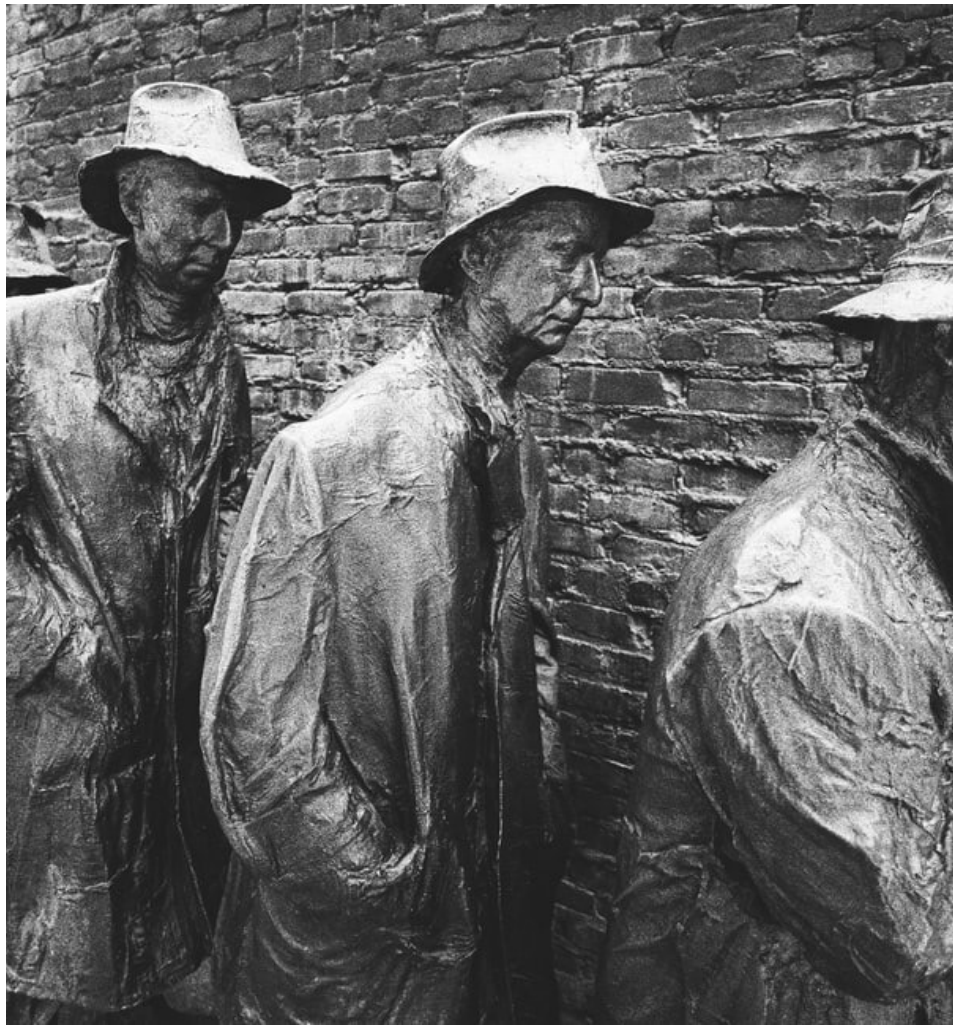
Costs of deflation

7. Policy ineffectiveness

The effectiveness of expansionary monetary policy becomes limited when interest rates are already close to zero during a period of deflation.

Furthermore, consumer behaviour in terms of deferring consumption may be difficult to influence even with expansionary demand side policies.

Case study



Article: The World's Most Famous Case of Deflation and Life and Times During the Great Depression

1. Outline the effect of deflation on product prices, the unemployment rate, trade levels, and income inequality during The Great Depression.

2. Explain how Keynes' suggestions might stimulate the economy.

Relative costs of unemployment versus inflation

Recall the costs of unemployment and high inflation:

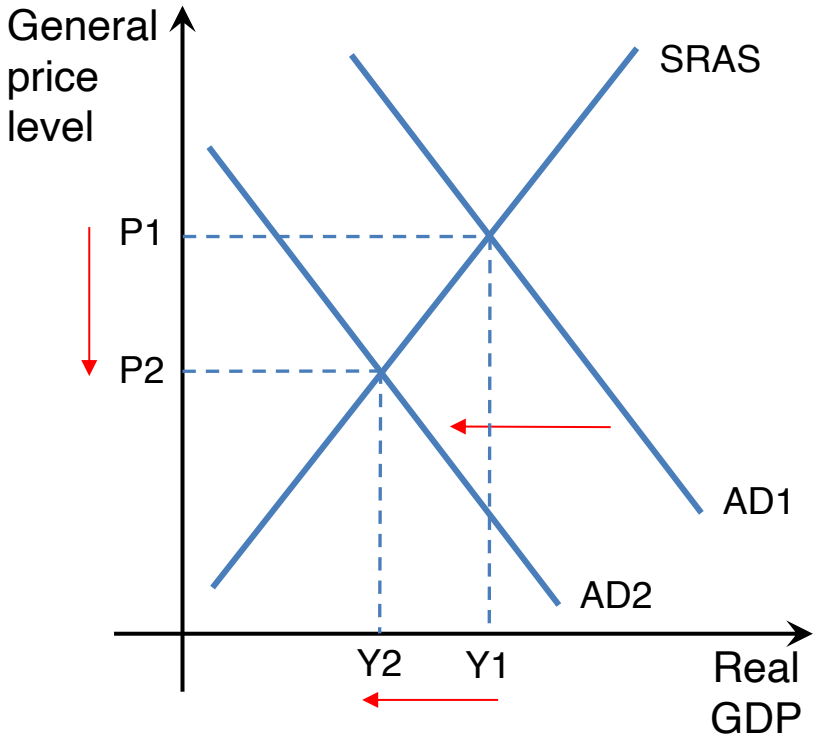
Costs of unemployment	Costs of inflation
• Personal costs • Social problems • Lower economic growth • Loss of household incomes • Widened income gap • Higher government borrowing	• Increased cost of living • Deferred C and I • Reduced international competitiveness • Lower savings • Uncertainty • Menu costs and shoe leather costs

Relative costs of unemployment versus inflation

High levels of unemployment and inflation are both undesirable. Suppose inflation is increasing rapidly and the government looks to slow economic activity.

The government may reduce AD to counteract high inflation, however, real GDP would fall, and unemployment would rise.

In this case, the economy may achieve a lower rate of inflation, but at the cost of greater unemployment. Hence, governments must decide which objectives they would like to prioritize and achieve, as there may be **trade-offs** between different macroeconomic objectives.



The misery index

The misery index was developed by the American economist Arthur Melvin Okun. It is the sum of the unemployment rate and inflation rate of a country. The greater the misery index, the lower the economic well-being. The Most Miserable Countries in the World

Test your knowledge on this unit: Kahoot!

Macroeconomic objectives – sustainable level of government (national) debt (HL only)

Introduction

During the coronavirus pandemic, governments across the globe increased spending to stimulate economic activity.

In Germany, the total public expenditure increased by 12.1% and government revenue decreased by 3.5%, which led to a budget deficit of $225 billion in 2020. In this case, the government needed to borrow money from domestic and foreign creditors.

Article: COVID pandemic pushes Germany to largest deficit since reunification

Sustainable level of government debt

A Budget deficit exists when the value of government expenditure exceeds government revenue in a given time period.

Government debt (national debt) is the sum of all accumulated budget deficits from previous years, which is the money owed to creditors. This is usually expressed as a percentage of the country's GDP.

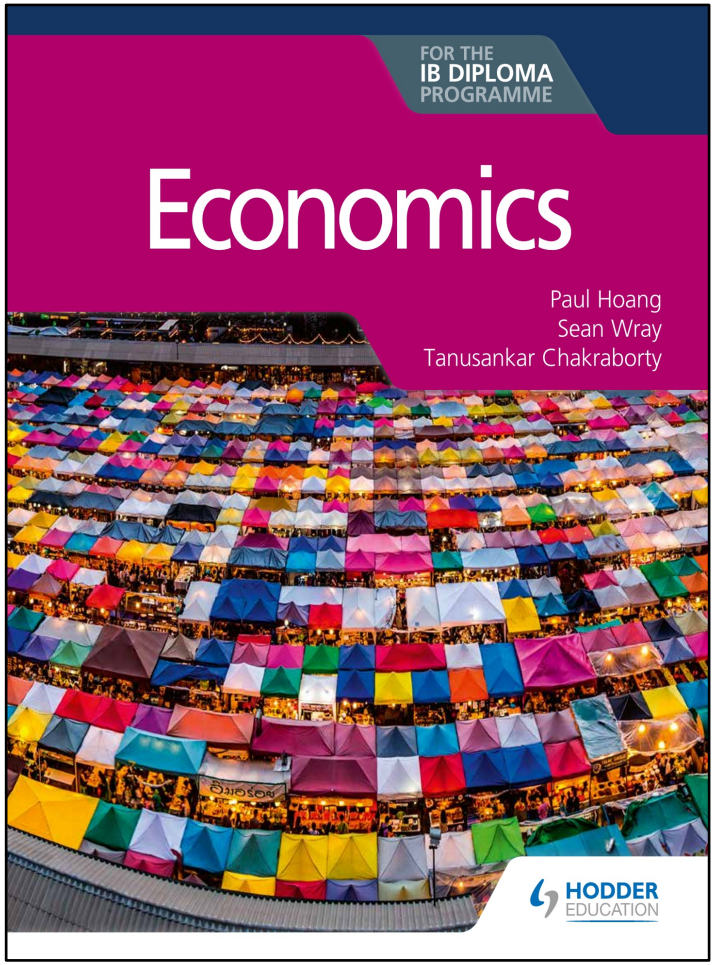
While it is reasonable for a government to borrow money in certain contexts, an excessive level of debt has negative implications. A **sustainable level of government debt** is more desirable.

Over to you…

Hoang, Wray, & Chakraborty (2020)

Economics for the IB Diploma Programme

- Page 311
- Paper 2 and 3 Exam Practice Question 21.1
- [10 marks]



Measurement of government debt

The debt to GDP ratio reflects the country's government debt as a percentage of its GDP.

Country	Government debt (USD billion)	Nominal GDP (USD billion)	Debt to GDP ratio (%)
Canada	574	1,643	34.94
Spain	1,330	1,460	91.10

Canada has a higher nominal GDP and a lower level of government debt than Spain. Therefore, the level of government debt is more sustainable compared to Spain's.

Real world example – data analysis

Source: Visualizing the Snowball of Government Debt

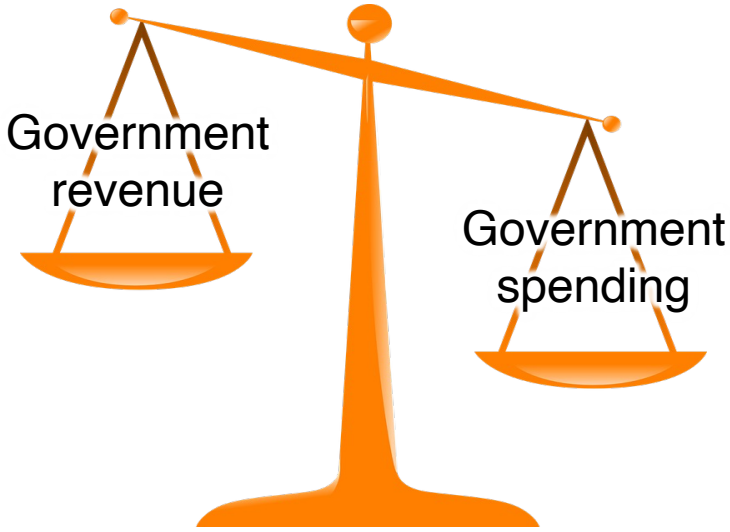
Data Analysis Questions

1. What do you notice from the data?
2. What questions do you wonder about the data?
3. Research information that may help you answer your questions from Q2.
4. What conclusions can you make from Q1, Q2, and Q3?

Budget deficit and government debt

Budget deficits and government debts are closely related as each budget deficit adds to the government debt.

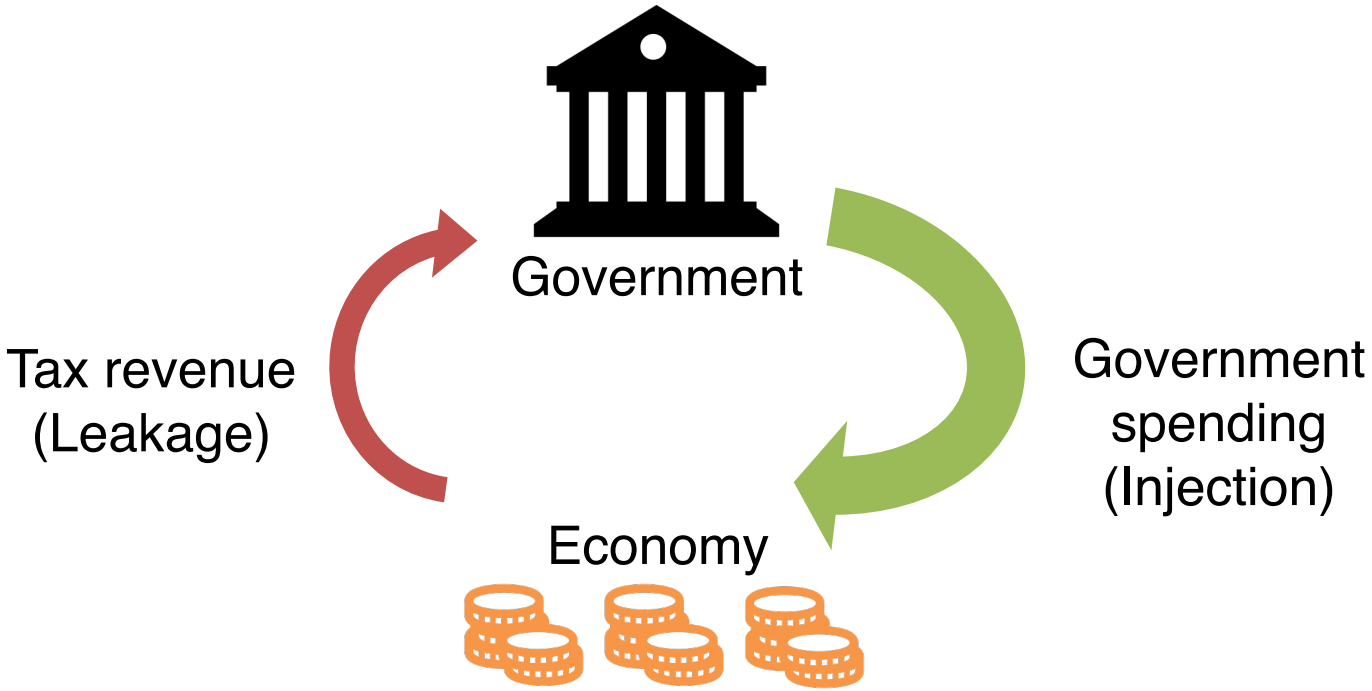
A budget deficit exists when **governments spending** exceeds **government revenue**. The underlying assumption is that tax is the only source of government revenue, e.g., income tax, corporate tax, VAT, and tariffs.



How may the economy benefit from a budget deficit (when government spending > government revenue)?

Budget deficit and government debt

Budget deficits can be beneficial in the short term as it means that more money is injected into the circular flow of income, boosting economic growth and creating jobs. This is particularly useful in the event of a deep recession where the economy requires intervention.



Budget deficit and government debt

In the long term, however, budget deficits are unsustainable. Due to debt interests, the government debt will increase exponentially if it is not repaid.

The government cannot run a budget deficit indefinitely. It must pay off the debt by reducing its spending or by raising its tax revenue. The government debt must be balanced by budget surpluses.

Real world example – data analysis

Source: US Debt Clock

Data Analysis Questions

1. What do you notice from the data?
2. What questions do you wonder about the data?
3. Research information that may help you answer your questions from Q2.
4. What conclusions can you make from Q1, Q2, and Q3?

Budget deficit and government debt

Budget deficit and government debt are closely related, as each time the government experiences a budget deficit, this accumulates to the existing government debt.

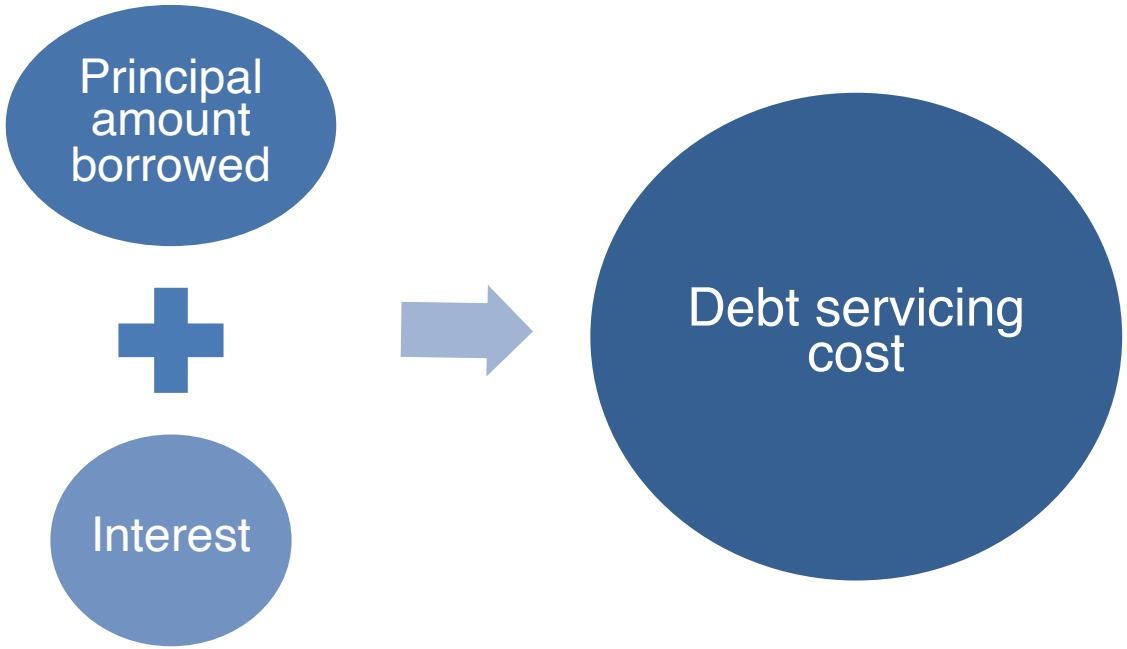
A budget deficit exists when governments spending exceeds tax revenue where the underlying assumption is that tax is the only source of government revenue.

What are the possible costs of accumulating government debt?

Costs of government debt

1. Debt servicing costs

Debt servicing costs refers to the costs of financing debt, which is the sum of the principal amount and interest paid. The larger the government debt, the higher the interest payments, and the greater the debt servicing cost.



Costs of government debt

2. Credit ratings

Credit ratings measure a debtor's ability to repay debt. A party with a higher credit rating is has a greater ability to repay their loans and thus have a higher chance to secure loan capital from financial institutions. Countries with greater existing debts tend to have poorer credit ratings.

Costs of government debt

2. Credit ratings

Credit ratings are determined based on the following criteria:

- Borrower’s past credit record
- Amount of money borrowed
- Amount of existing loans
- Income of the borrower.

Costs of government debt

3. Impact on future taxation and government spending

National debts must be financed by future budget surpluses, where government revenue exceeds government spending.

Austerity measures refer to policies used to reduce government debt, such as increasing tax and/or reduce spending.

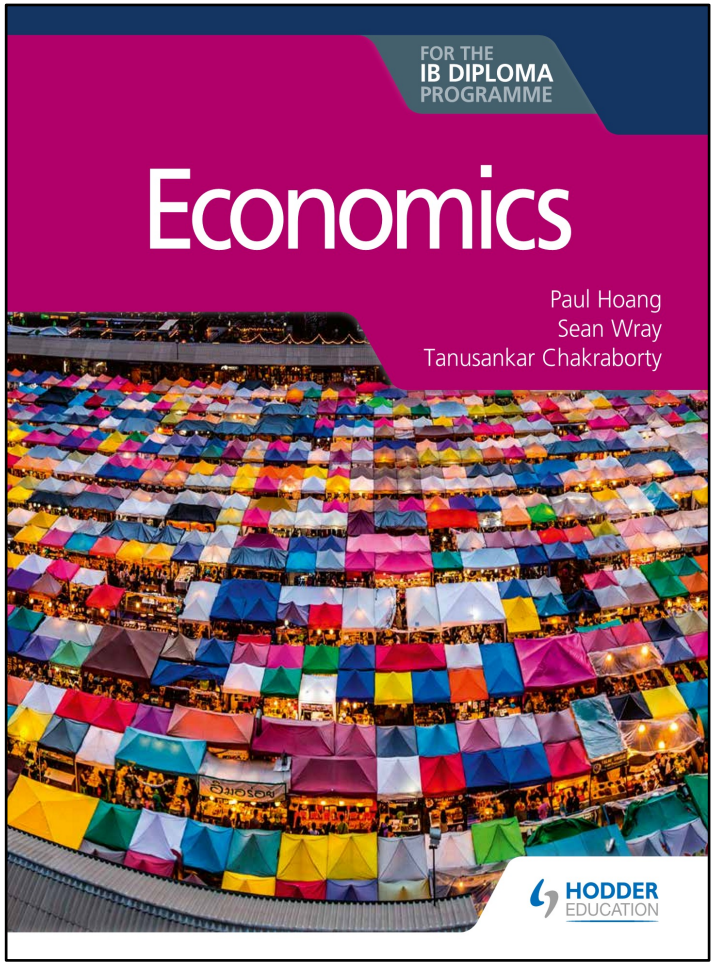
What are the potential long-term costs of austerity measures?

Over to you…

Hoang, Wray, & Chakraborty (2020)

Economics for the IB Diploma Programme

- Page 315
- Paper 1 Exam Practice Question 21.2
- [10 marks]



Potential conflict between macroeconomic objectives

Conflicts between macroeconomic objectives

Certain macroeconomic objectives cannot be achieved simultaneously, resulting in a **trade-off**.

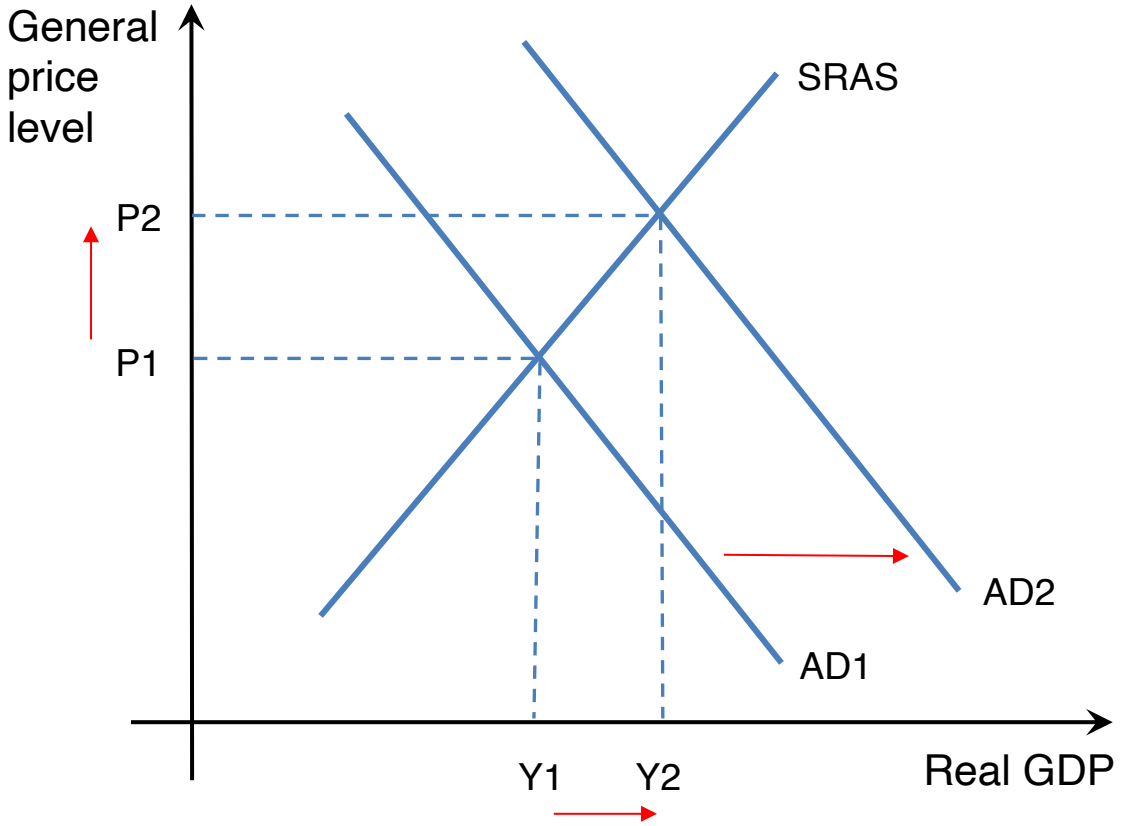
At times, the government must decide which macroeconomic objective to prioritize.

Potential conflicts between objectives include:

- Low unemployment and low inflation
- High economic growth and low inflation
- High economic growth and environmental sustainability
- High economic growth and equity in income distribution.

Low unemployment and low inflation

During an economic boom, AD increases and unemployment falls. More workers enjoy a greater level of disposable income, increasing consumer expenditure, leading to demand-pull inflation.



Hence there is potential conflict between low unemployment and demand-pull inflation.

Low unemployment is likely to cause demand-pull inflation in the short run.

Low unemployment and low inflation

Low unemployment may also lead to cost-push inflation in the short run. As the economy approaches the full employment level of output, wage levels may rise as it becomes harder for firms to attract skilled labour.

Firms find it difficult to attract skilled labour

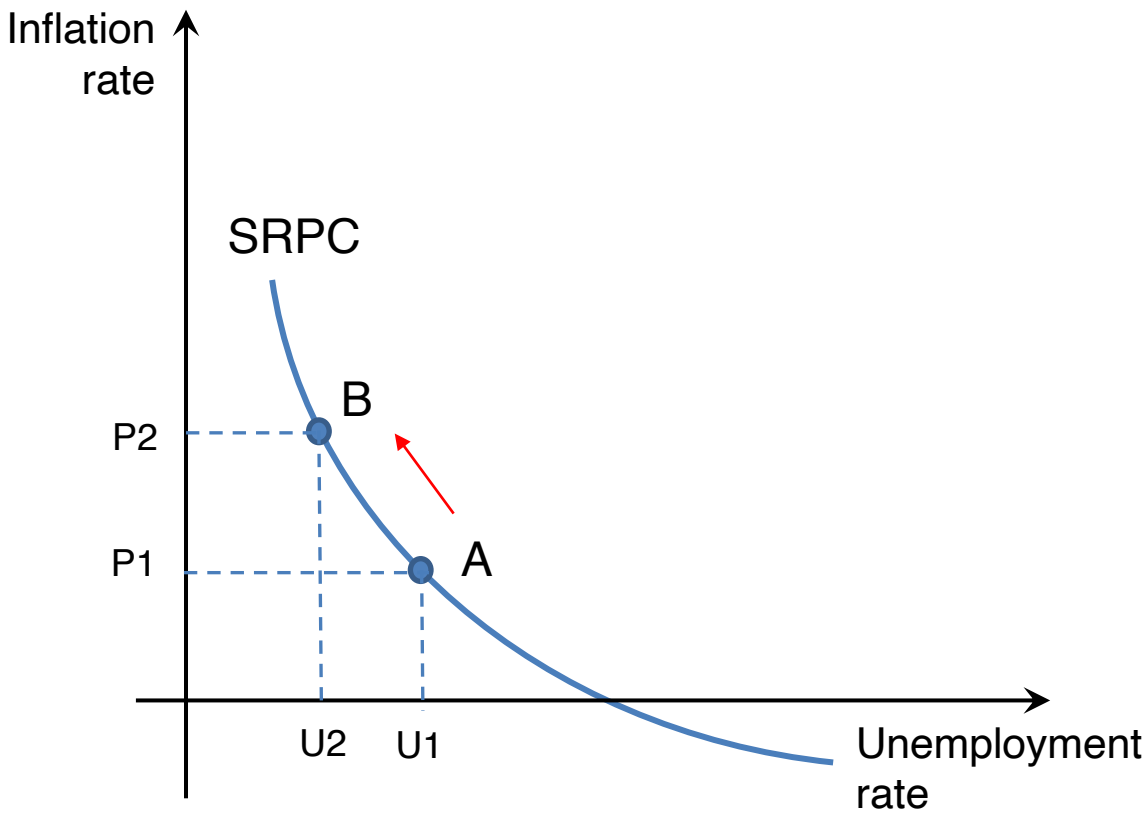
Firms offers higher wages to attract workers

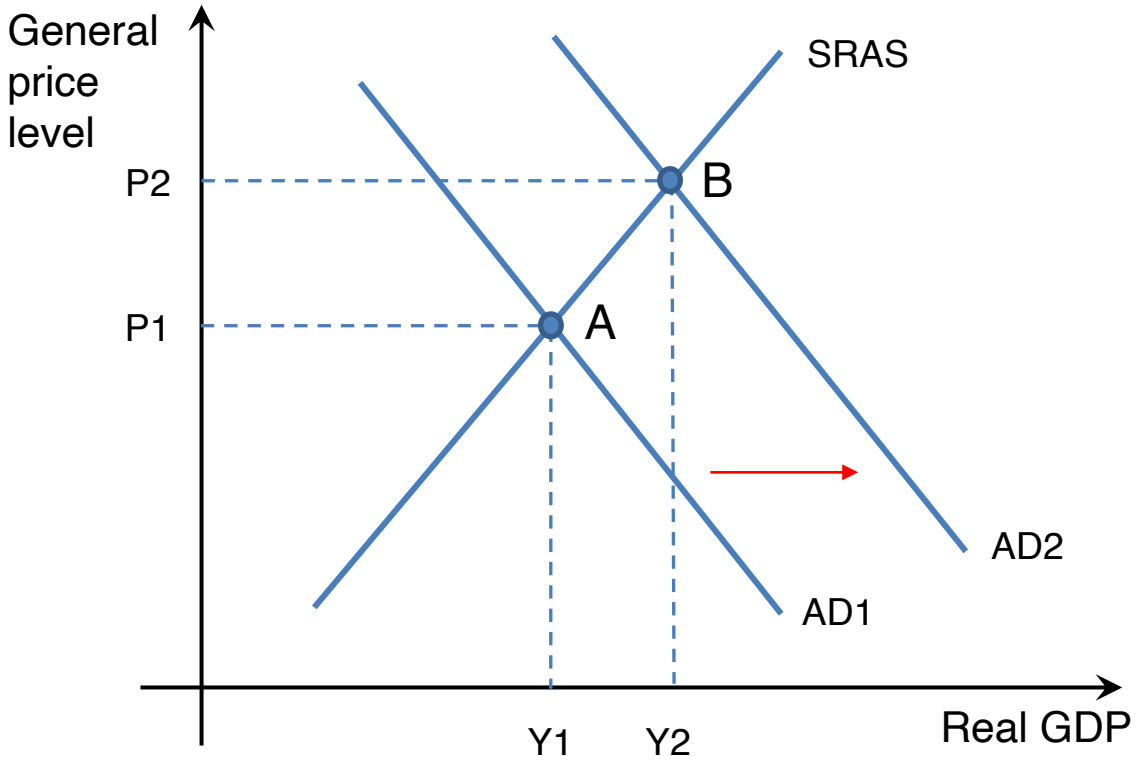
Short-run Phillips curve (HL only)

The **short-run Phillips curve** shows the potential trade-off between **unemployment** and **inflation.**

Short run Phillips curve (HL only)

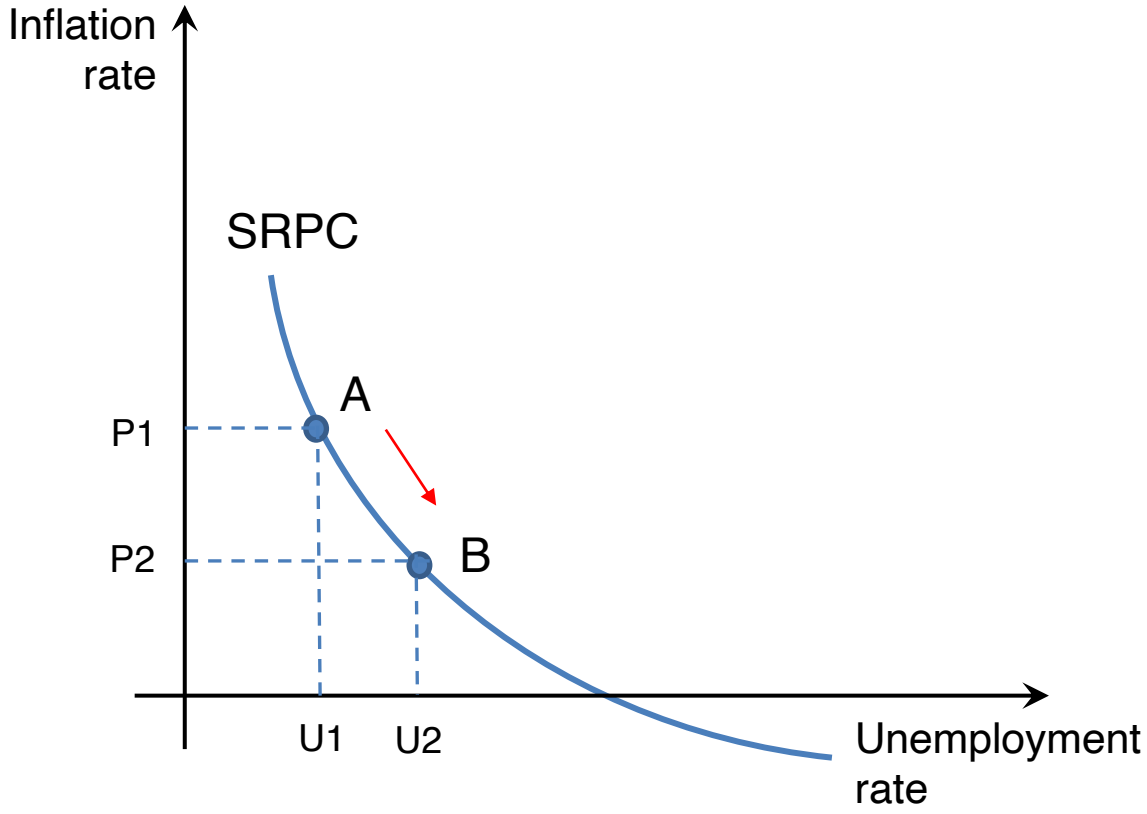
An outward shift in AD in an AD/AS diagram is illustrated by an upward movement along the short run Phillips curve (SRPC).

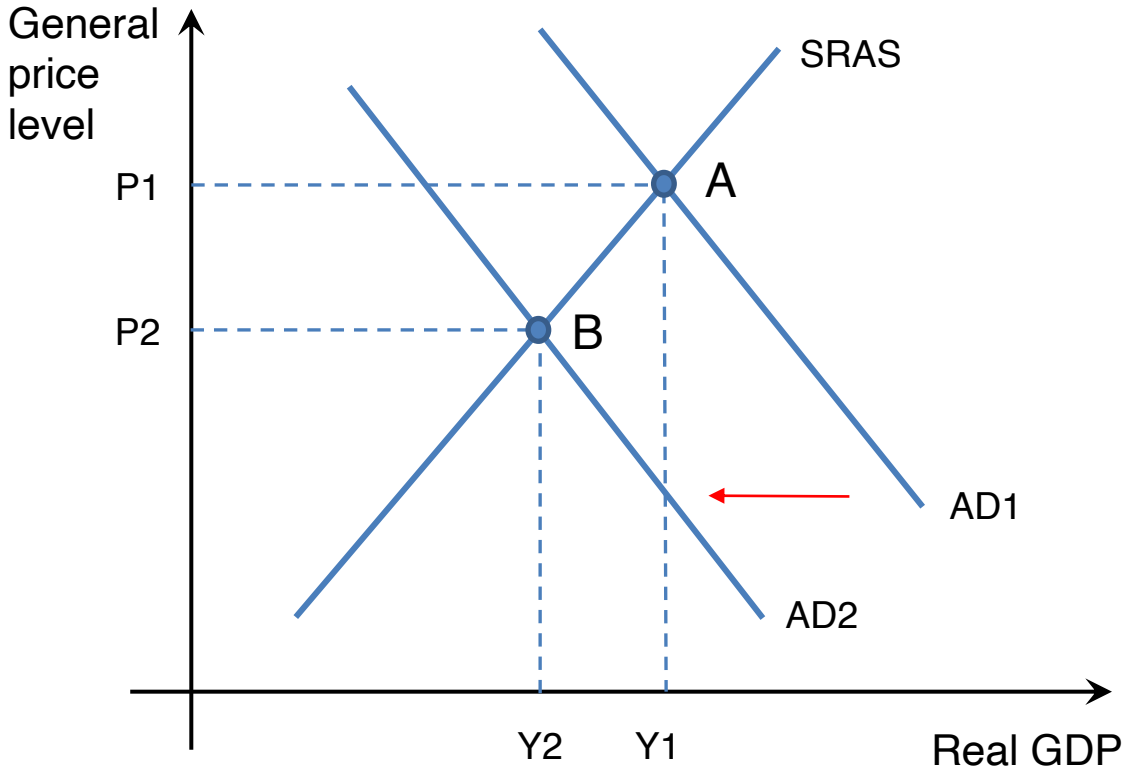




Short run Phillips curve (HL only)

An inward shift in AD in an AD/AS diagram is illustrated by a downward movement along the SRPC.





Short run Phillips curve (HL only)

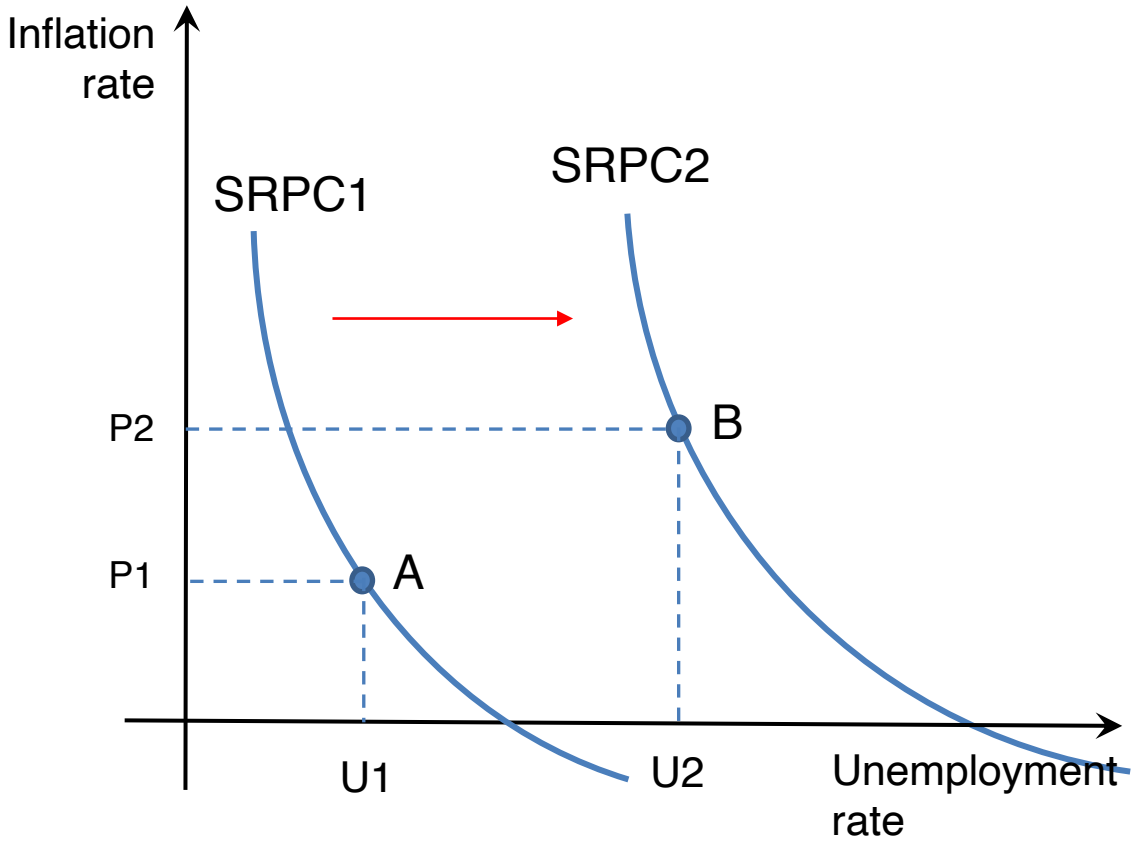
The **Philips curve** was doubted in the 1970s due to the existence of stagflation.

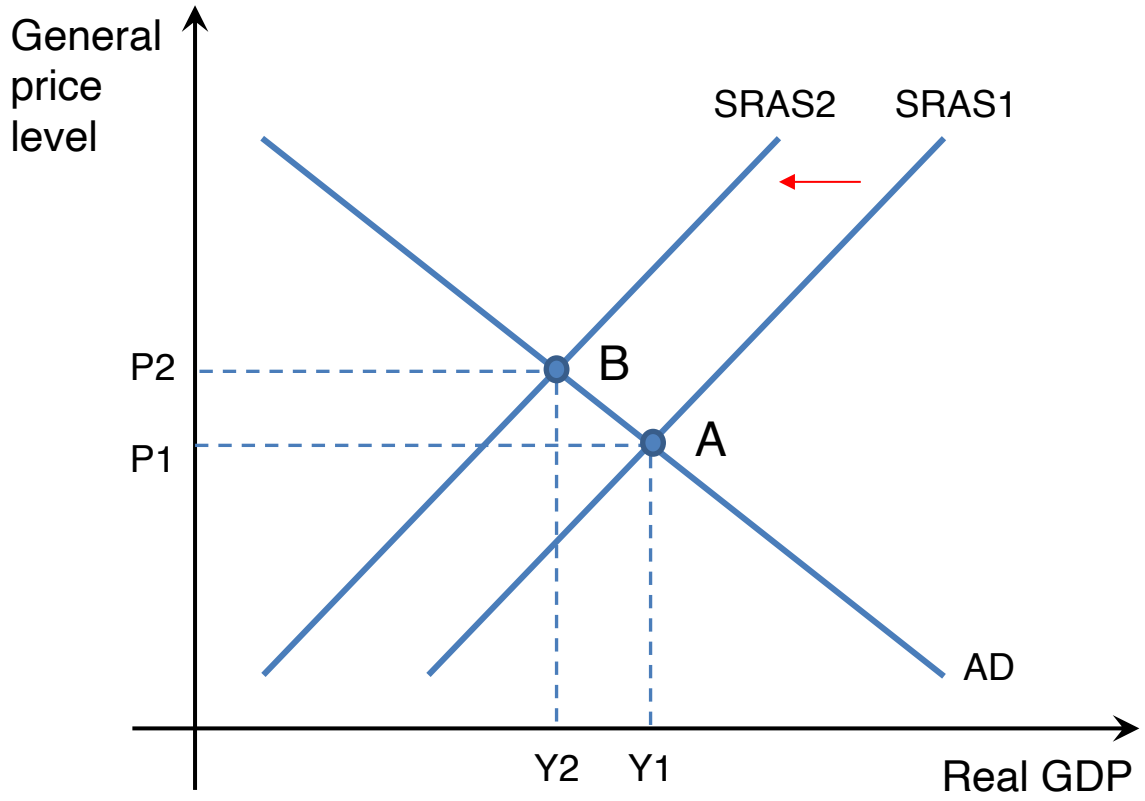
Article: How the 1970s Changed the US Economy

1. What happened in the 1970s oil crisis in the US?
2. Using an AD/AS diagram, illustrate how the oil shock led to cost-push inflation and explain the impact on unemployment and inflation.

Short run Phillips curve (HL only)

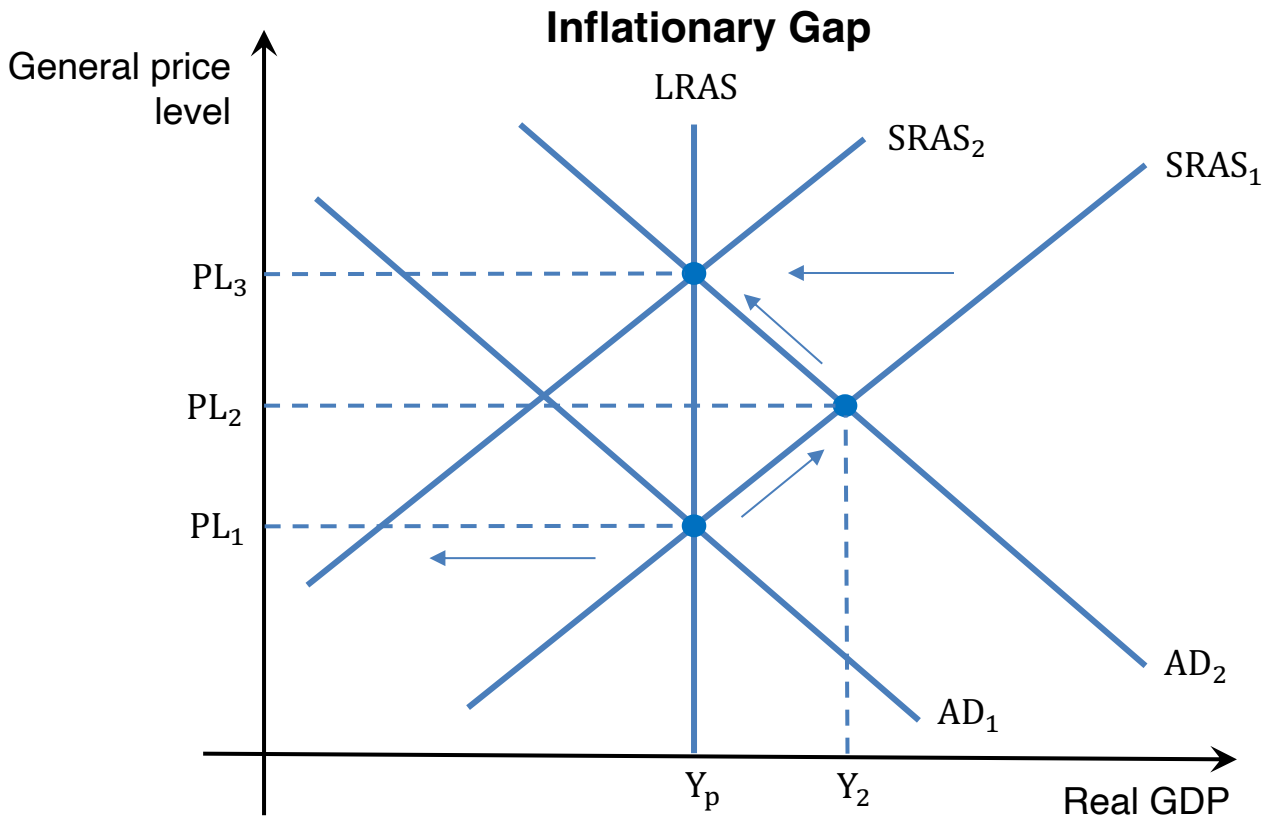
Cost-push inflation or **stagflation** is illustrated by an outward shift of the SRPC.





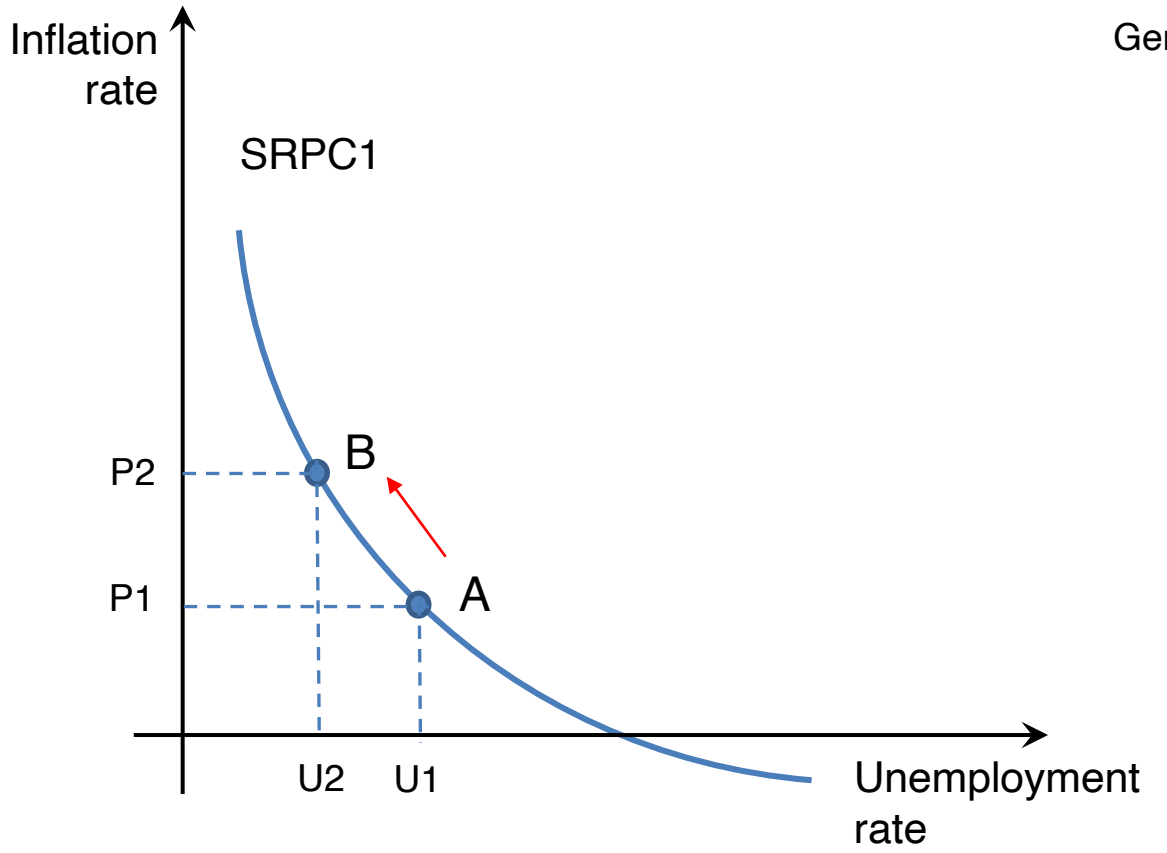
Long run Phillips curve (HL only)

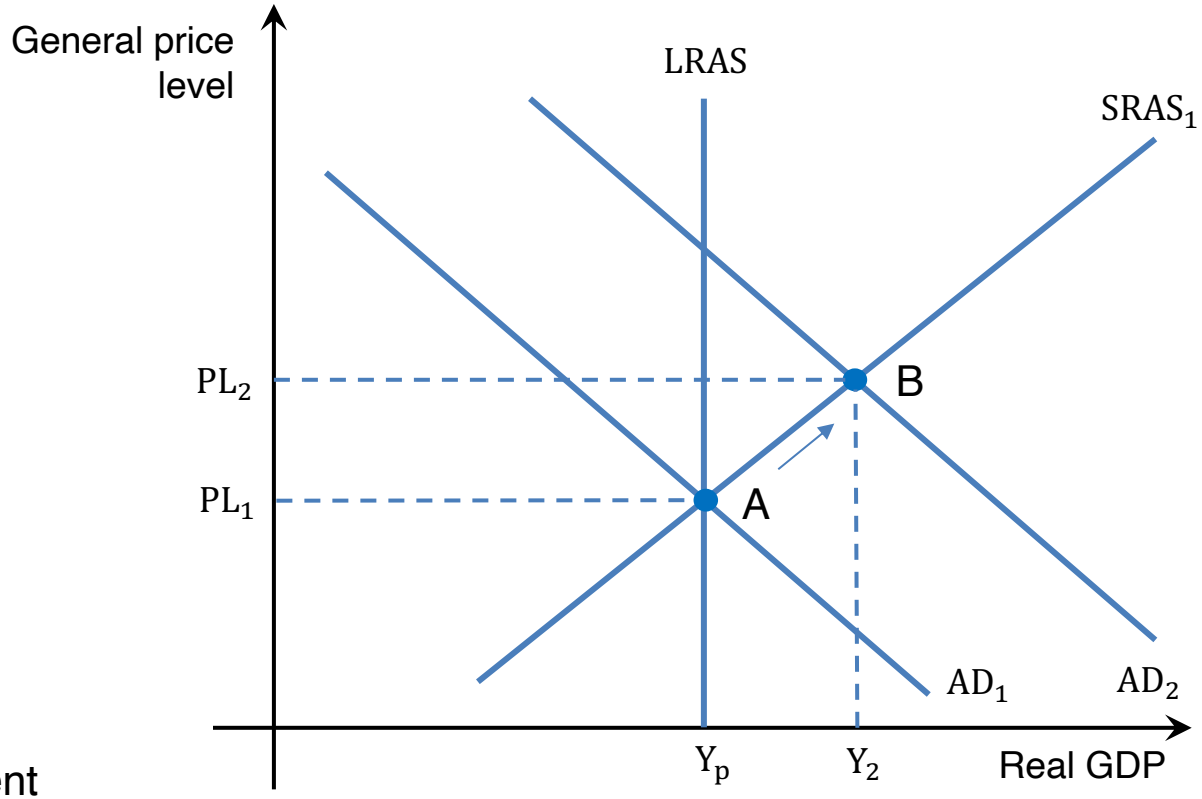
According to the New Classical school of thought, unemployment will always revert to the natural rate of unemployment in the long term due to flexible resource costs (see unit 3.2).



Long run Phillips curve (HL only)

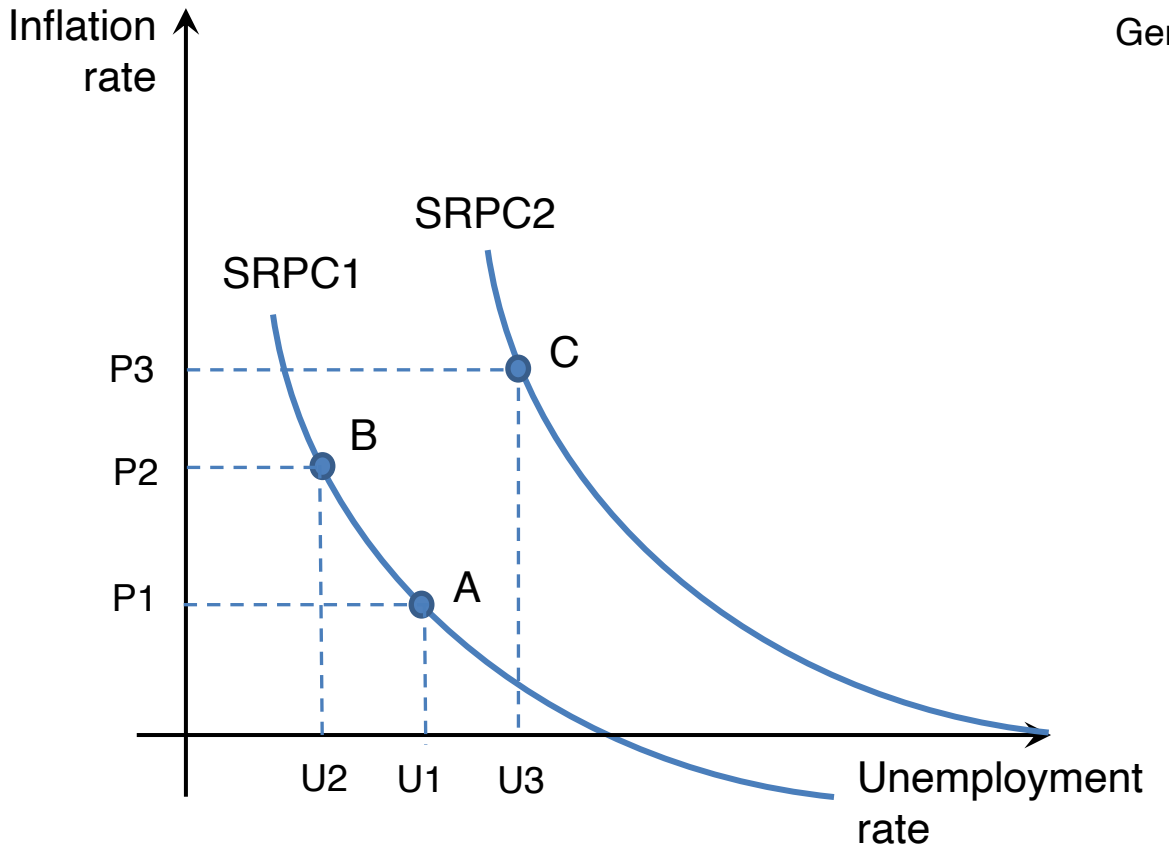
Assume there is an outward shift in AD, resulting in higher inflation and reduced unemployment, this causes an upward movement along the SRPC from A to B.

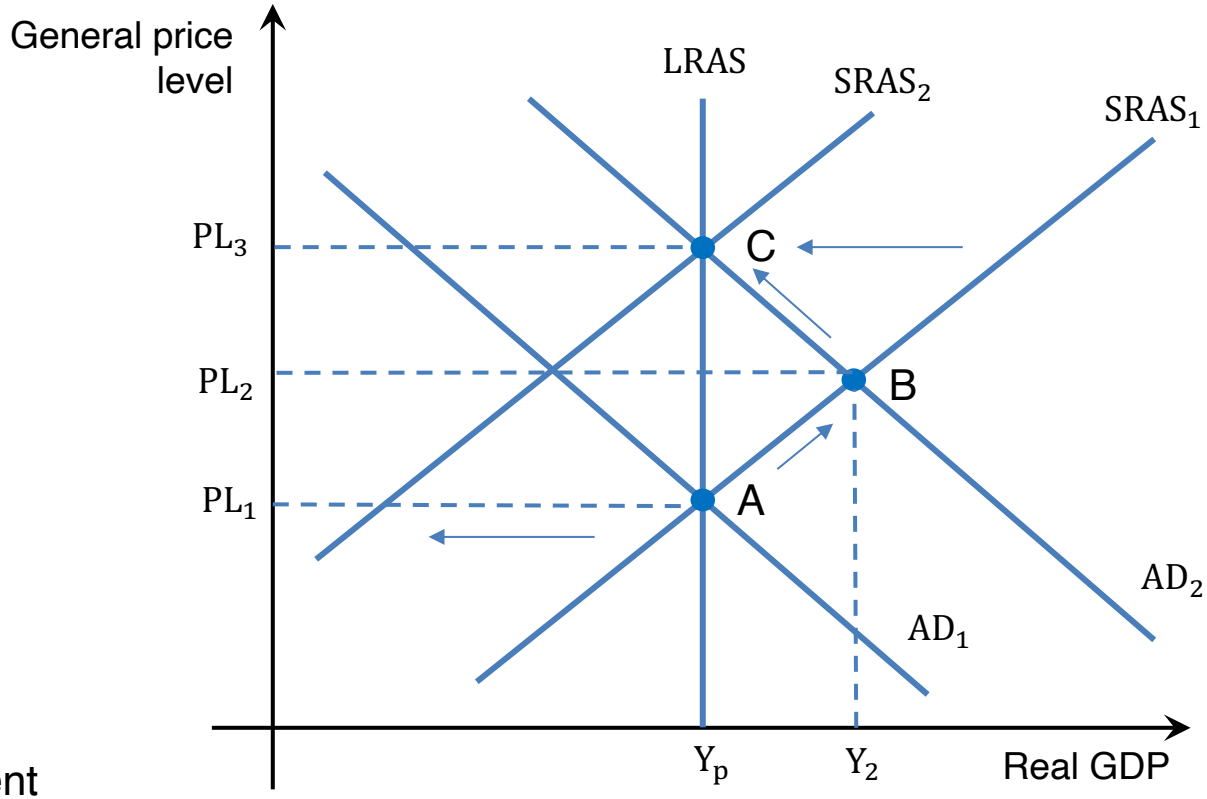




Long run Phillips curve (HL only)

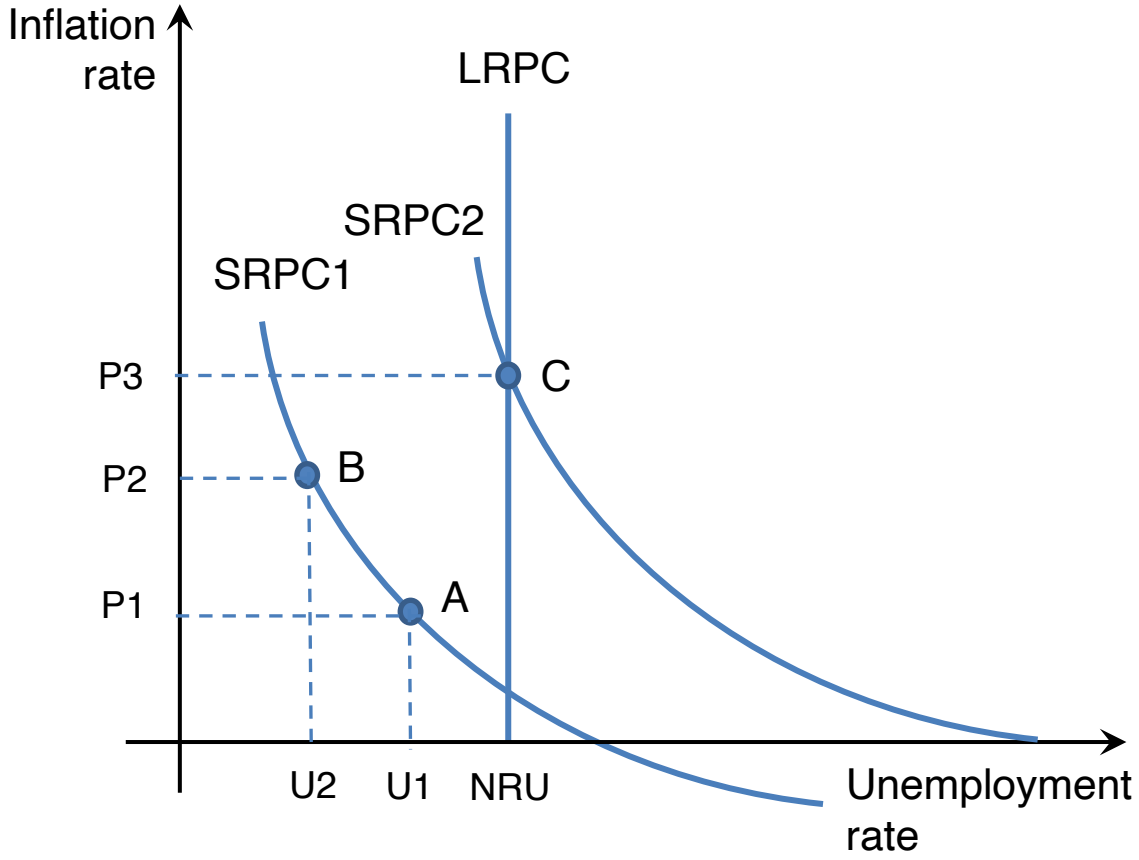
As resources costs adjust to a higher price level, SRAS decreases to SRAS2, resulting in further inflation but also higher unemployment. This causes an outward shift of the SRPC curve.





Long run Phillips curve (HL only)

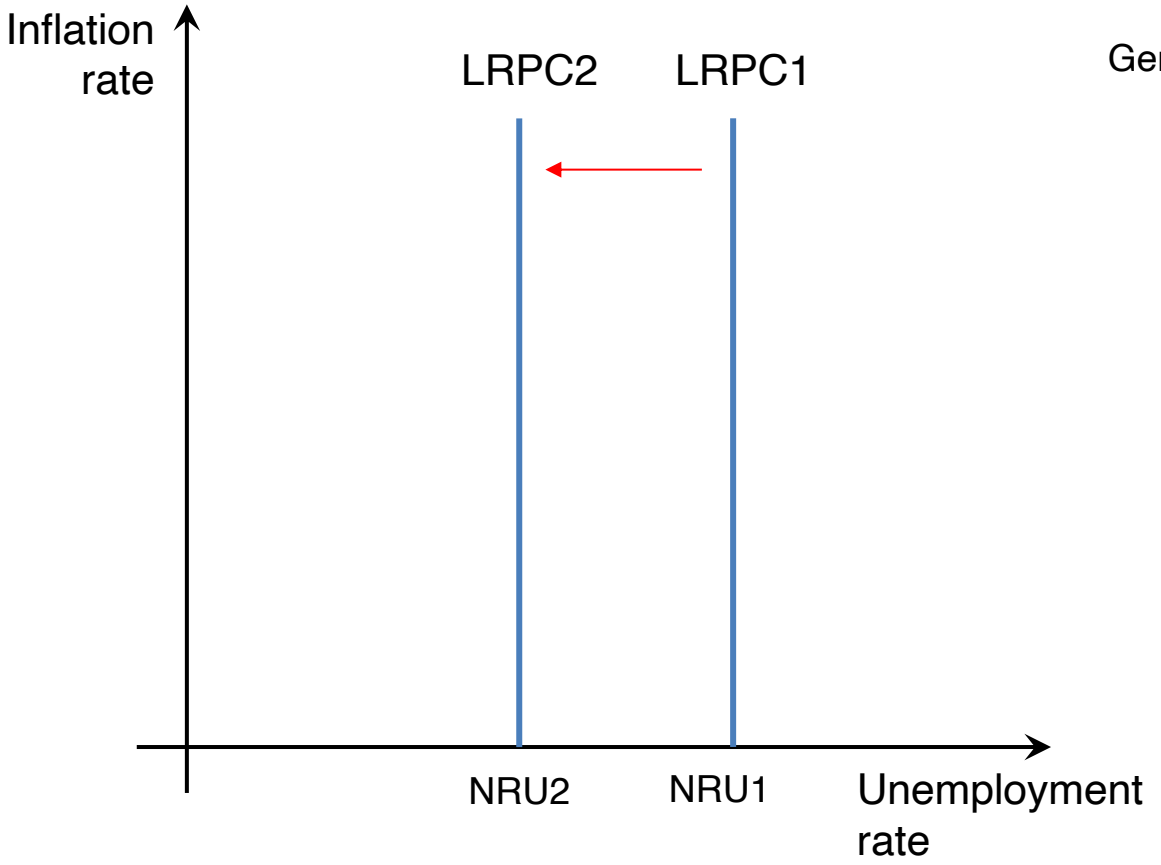
Ultimately, according to New Classical assumptions, any inflationary gaps will be eliminated in the long run and unemployment will always revert to the natural rate of unemployment.

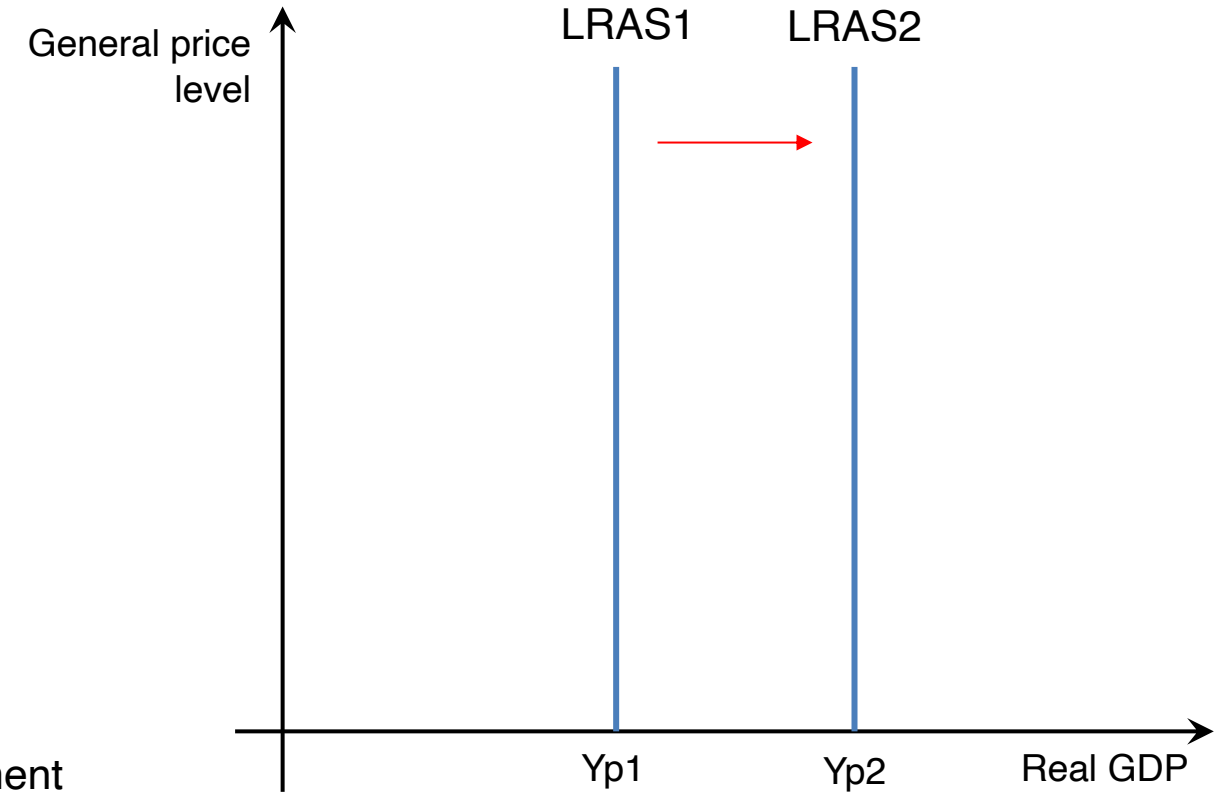


Hence, in the long run there is no trade-off between inflation and unemployment. This is represented by a vertical long run Phillips curve as the natural rate of unemployment, which correlates to the full employment level of output in the New Classical AD/AS model.

Long run Phillips curve (HL only)

Supply side policies which reduce the natural rate of unemployment can shift the LRAS curve and LRPC respectively.



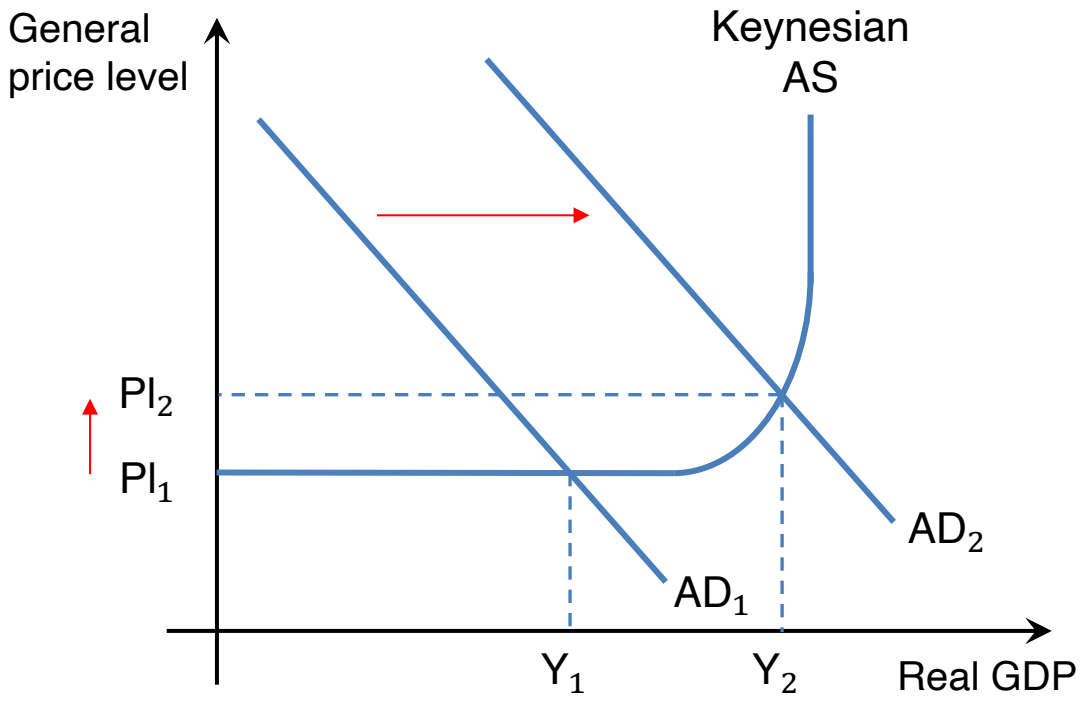


High economic growth and low inflation

Demand-side policies can be used to promote economic growth or lower inflation, but it cannot achieve both macroeconomic objectives simultaneously as demonstrated by the SRPC.

High economic growth and low inflation

Demand-pull inflation occurs due to an increase in AD, resulting in higher levels of real GDP. This leads to a trade-off between economic growth and low inflation.



High economic growth and low inflation

With higher levels of economic growth, the economy approaches the full employment level of output where wage levels may rise as it becomes harder for firms to attract skilled labour.

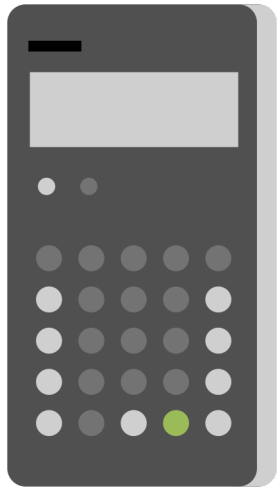
High economic growth and environmental sustainability

Economic growth represents greater production and consumption of goods and services. Negative externalities such as climate change and pollution arise from increased economic activities.

Hence, the pursuit of economic growth potentially conflicts with the objective of environmental sustainability.

High economic growth and environmental sustainability

Economic growth does not necessarily result in environmental degradation. A growing number of countries are striving to achieve economic growth through environmentally-sustainable methods.



Real world example – data analysis

Source: Mapped: The Greenest Countries in the World

Data Analysis Questions

1. What do you notice from the data?
2. What questions do you wonder about the data?
3. Research information (Hint: unemployment rate and inflation rate of countries) that may help you answer your questions from Q2.
4. What conclusions can you make from Q1, Q2, and Q3?

High economic growth and equity in income distribution

The relationship between economic growth and income distribution depends on the type of policies used to achieve growth.

For example, market-based supply-side policies used to promote long term growth such as deregulation and eliminating minimum wages likely comes at the cost of low wages workers.

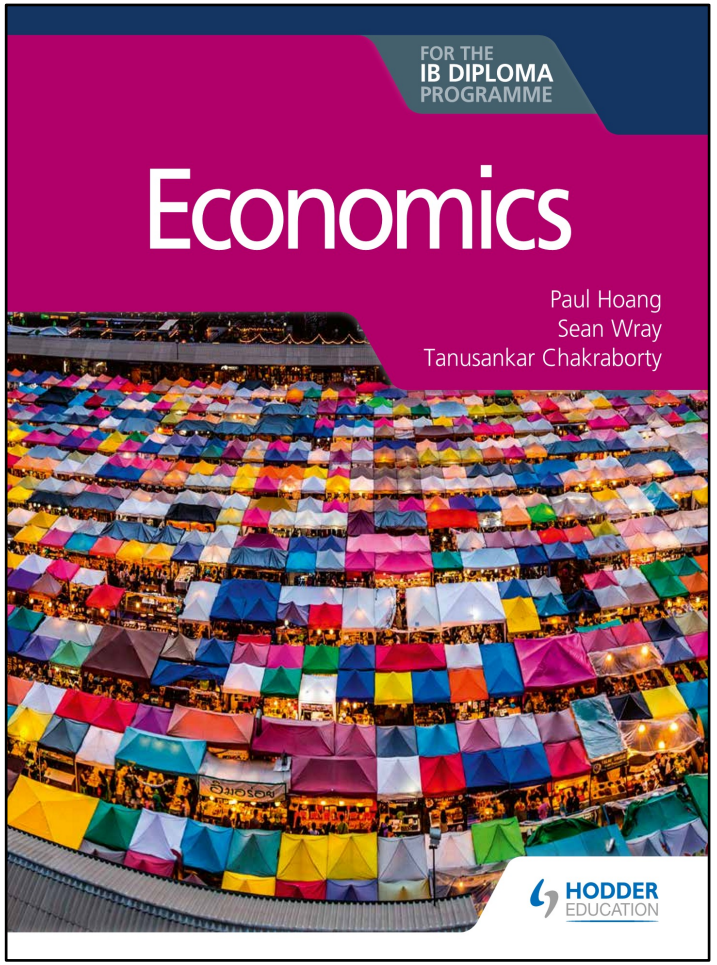
On the other hand, interventionist supply-side policies such as investment in education and training improves the quality and quantity of labour, increasing expected incomes.

Over to you…

Hoang, Wray, & Chakraborty (2020)

Economics for the IB Diploma Programme

- Page 322-333
- Paper 1 Exam Practice Question 22.1
- [10 marks]
- Paper 1 Exam Practice Question 22.2 (HL only)
- [10 marks]



Test your knowledge on this unit: Kahoot!