

## 3.2 Aggregate Demand and Aggregate Supply



## 3.2 Aggregate Demand and Aggregate Supply

3.2 Variations in economic activity—aggregate demand and aggregate supply	Depth of teaching	Diagrams and calculations
Aggregate demand (AD) <ul style="list-style-type: none"><li>Aggregate demand curve</li></ul>	AO2, AO4	Diagram: AD curve
Components of AD: consumption (C) + investment (I) + government spending (G) + net exports (total exports [X] - total imports [M])	AO2	
Determinants of AD components <ul style="list-style-type: none"><li>C: consumer confidence, interest rates, wealth, income taxes, level of household indebtedness, expectations of future price level</li><li>I: interest rates, business confidence, technology, business taxes, level of corporate indebtedness</li><li>G: political and economic priorities</li><li>X - M: income of trading partners, exchange rates, trade policies</li></ul>	AO2	
Shifts of the AD curve caused by changes in determinants	AO2, AO4	Diagram: shifts of the AD curve

## 3.2 Aggregate Demand and Aggregate Supply

3.2 Variations in economic activity—aggregate demand and aggregate supply	Depth of teaching	Diagrams and calculations
Short-run aggregate supply (SRAS) curve and determinants of the SRAS curve <ul style="list-style-type: none"><li>costs of factors of production</li><li>indirect taxes</li></ul>	AO2, AO4	Diagram: SRAS curve
Shifts of the SRAS curve	AO2, AO4	Diagram: shifts of the SRAS curve
Alternative views of aggregate supply (AS) <ul style="list-style-type: none"><li>Monetarist/new classical view of the long-run aggregate supply (LRAS) curve</li><li>Keynesian view of the AS curve</li><li>Inflationary and deflationary/recessionary gaps</li></ul>	AO2, AO4	Diagram: alternative views of the AS curve
Shifts of the AS curve over the long-run (monetarist/new classical LRAS) or over the long term (Keynesian AS)	AO2, AO4	Diagram: shifts of the LRAS or Keynesian AS



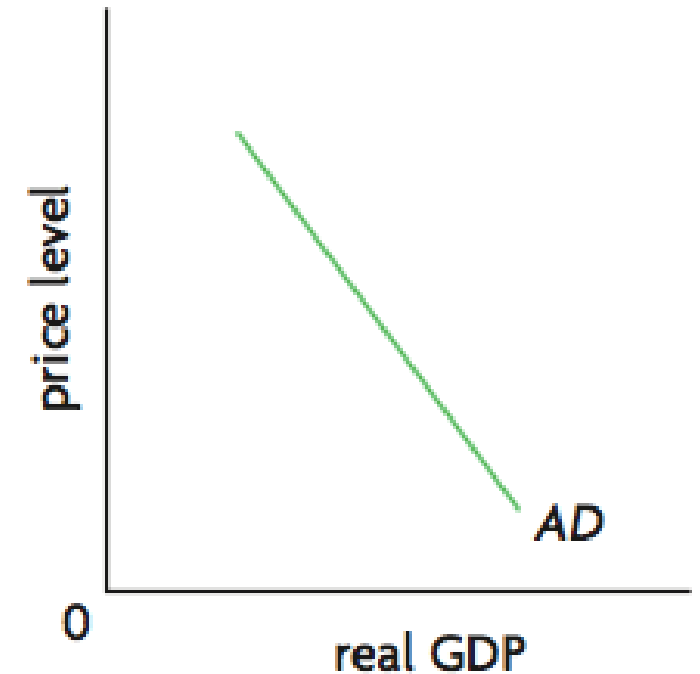
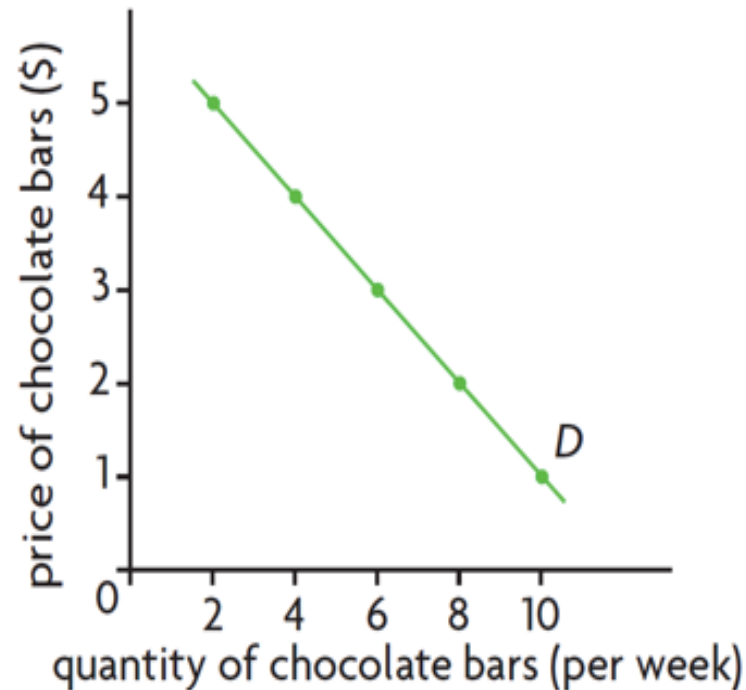
## 3.2 Aggregate Demand and Aggregate Supply

3.2 Variations in economic activity—aggregate demand and aggregate supply	Depth of teaching	Diagrams and calculations
<ul style="list-style-type: none"><li>• Changes in the quantity and/or quality of factors of production</li><li>• Improvements in technology</li><li>• Increases in efficiency</li><li>• Changes in institutions</li></ul>		
<ul style="list-style-type: none"><li>• Macroeconomic equilibrium</li><li>• Short-run equilibrium</li><li>• Equilibrium in the monetarist/new classical model<ul style="list-style-type: none"><li>☒ Determination of long-run equilibrium at full employment level of output (potential output)</li><li>☒ Automatic adjustment to full employment equilibrium</li><li>☒ Unemployment at full employment equilibrium is equal to the natural rate of unemployment</li></ul></li><li>• Equilibrium in the Keynesian model<ul style="list-style-type: none"><li>☒ Persistence of deflationary/recessionary gaps: equilibrium level of output might not equal the full employment level of output</li></ul></li></ul>	AO2, AO4	Diagram: macroeconomic equilibrium in both the short run and long run
Assumptions and implications of the monetarist/new classical and Keynesian models	AO3	

## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Demand

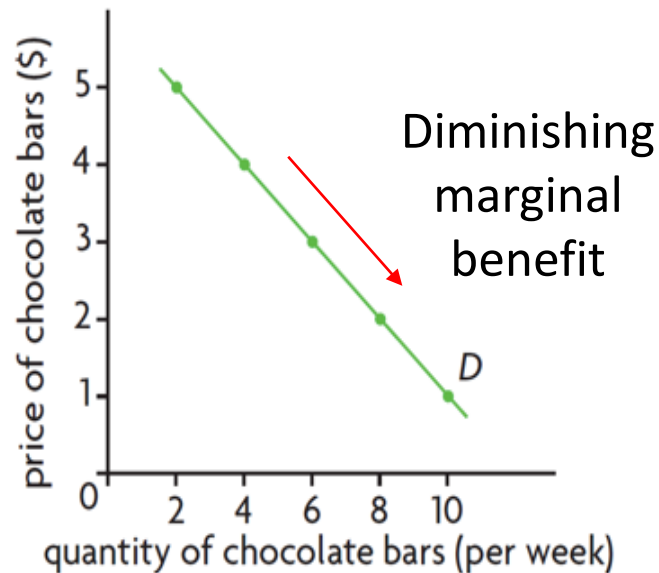
**Aggregate demand** is the total quantity of goods and services that all buyers in an economy want to purchase over a particular time period, at different prices, ceteris paribus.



## 3.2 Aggregate Demand and Aggregate Supply

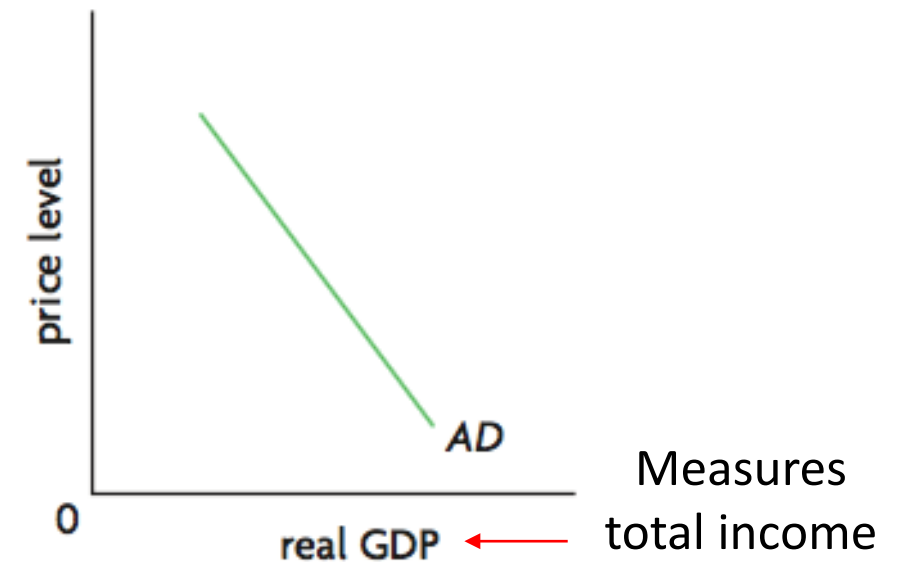
### MICROECONOMICS

**Demand** reflects the *willingness and ability* of consumers to buy a single product at different possible prices of that product, over a particular time period (*ceteris paribus*)



### MACROECONOMICS

**Aggregate demand** reflects the *willingness and ability* of all possible buyers to buy the economy's aggregate output (total real GDP), at different possible price levels, over a time period (*ceteris paribus*)



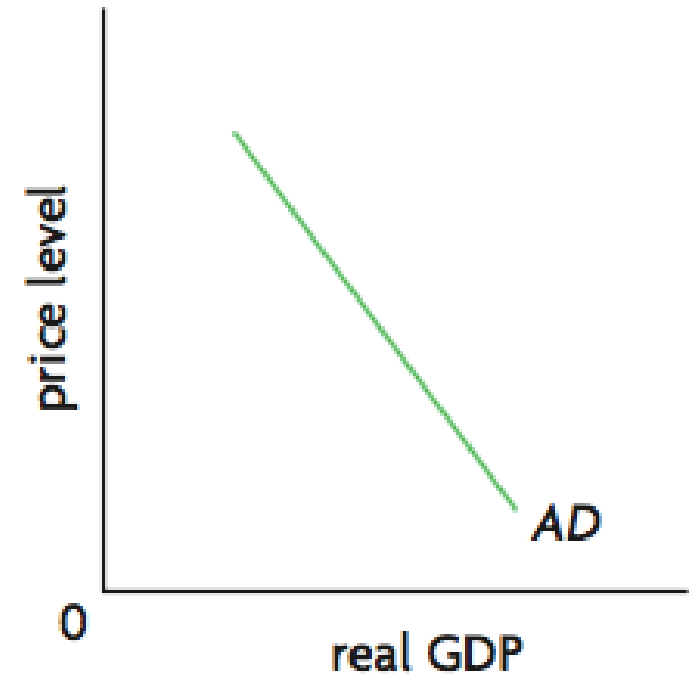
## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Demand

**Aggregate demand** is the total quantity of goods and services that all buyers in an economy want to purchase over a particular time period, at different prices, ceteris paribus.

Aggregate Demand consists of all the following components:

- the demand of **consumers (C)**
- the demand of **businesses (firms) (I)**
- the demand of **government (G)**
- the demand of foreigners for **exports (X)** **minus** the demand for **imports (M)** ( $X-M$ )



## 3.2 Aggregate Demand and Aggregate Supply

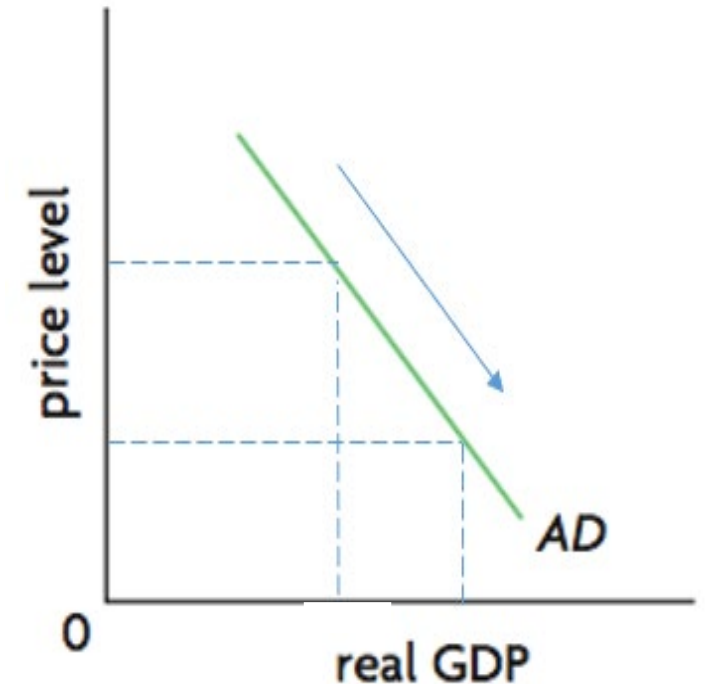
### Aggregate Demand

**Aggregate demand** is the total quantity of goods and services that all buyers in an economy want to purchase over a particular time period, at different prices, ceteris paribus.

Based on our previous understanding...

Movements along the AD curve is caused by

- a) a change in real GDP
- b) a change in price level
- c) a change in the determinants of AD





## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Demand

**Aggregate demand** is the total quantity of goods and services that all buyers in an economy want to purchase over a particular time period, at different prices, ceteris paribus.

**Aggregate demand curve** shows the relationship between the total amount of real output demanded by the four components and the economy's price level over a time period.

It illustrates a negative relationship (downward-sloping) between price level and aggregate output demanded. This is caused by

- The wealth effect
- The interest rate effect
- The international trade effect

Factors causing a movement along the aggregate demand curve



## 3.2 Aggregate Demand and Aggregate Supply

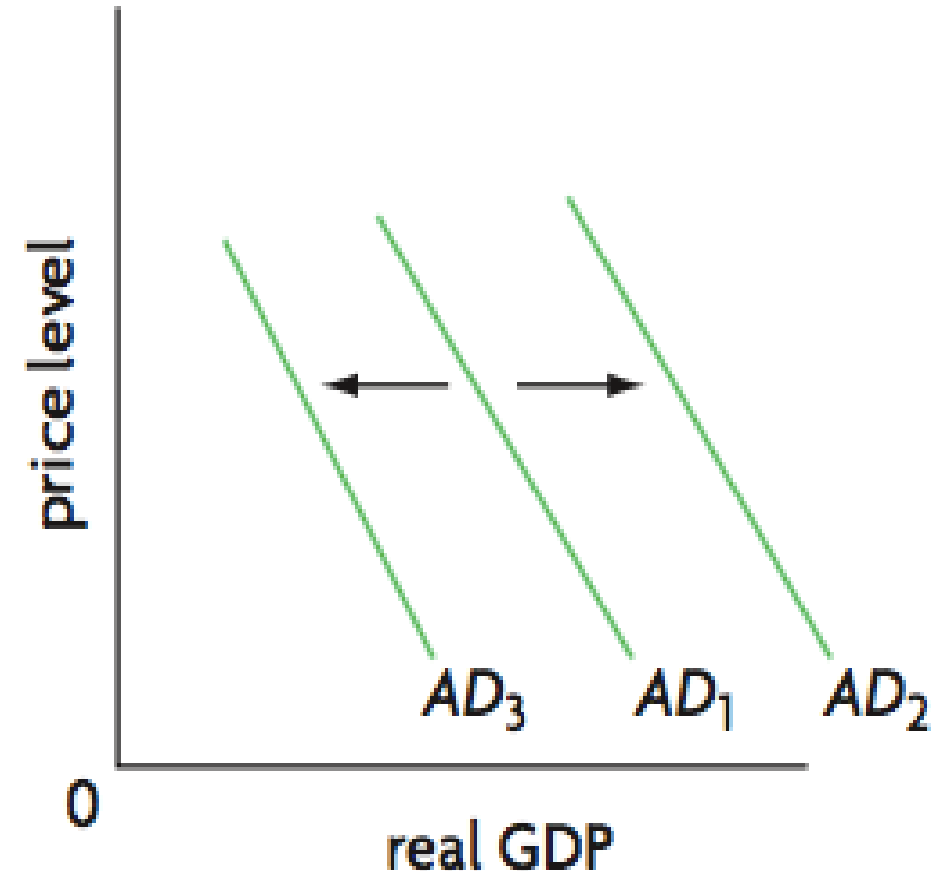
### Shifting of the Demand Curve

A **rightward shift** means that AD increases for any price level - i.e. more output is demanded

A **leftward shift** means that AD decreases for any price level - i.e. fewer output is demanded

$$\text{Aggregate Demand} = C + I + G + (X - M)$$

Changes in any of the AD components will result in a shift of the AD curve.



## 3.2 Aggregate Demand and Aggregate Supply



### Real world example

**Video:** [Economy suffers record-breaking GDP fall due to COVID-19](#)

Using the video and your own knowledge, explain how the COVID-19 pandemic may impact the components of AD within an economy.

## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the Demand Curve

#### Changes in Consumer Spending

- Changes in consumer confidence
- Changes in interest rates
- Changes in wealth
- Changes in personal income taxes
- Changes in the level of household indebtedness
- Expectations of future price levels



## 3.2 Aggregate Demand and Aggregate Supply

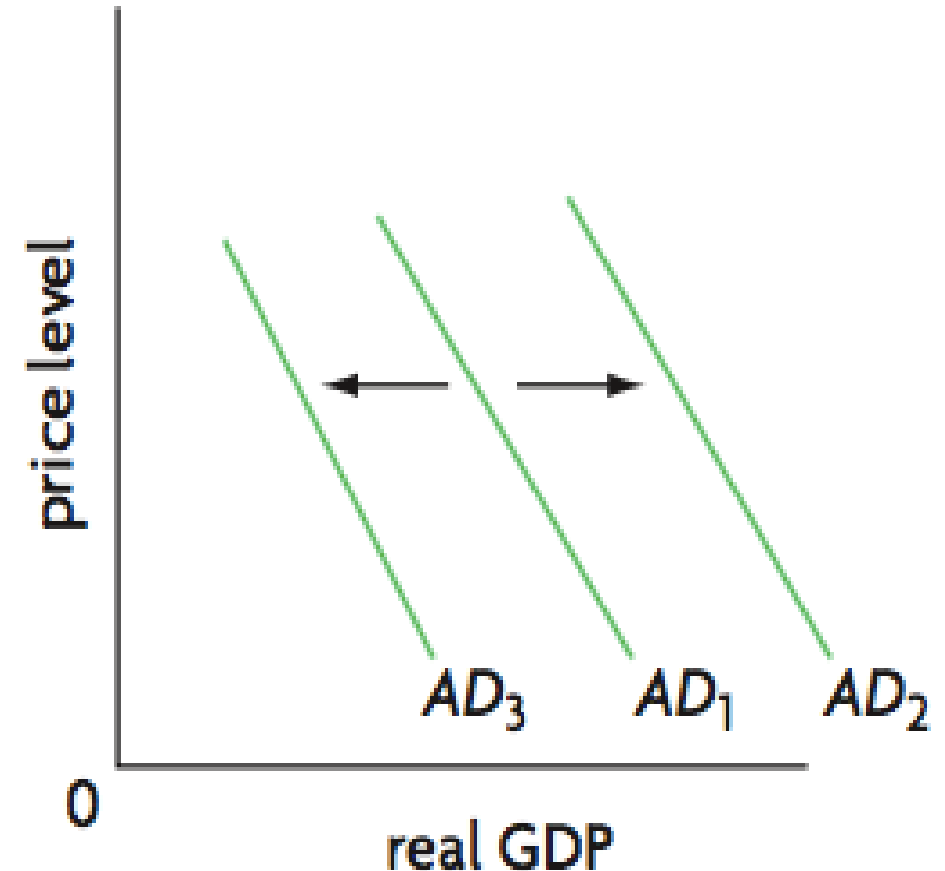
### Shifting of the Demand Curve

#### Changes in Consumer Spending

- **Changes in consumer confidence**  
Consumer confidence is a measure of how optimistic consumers are about their future income and the future of the economy.

High consumer confidence = AD rightward shift

Low consumer confidence = AD leftward shift





## 3.2 Aggregate Demand and Aggregate Supply

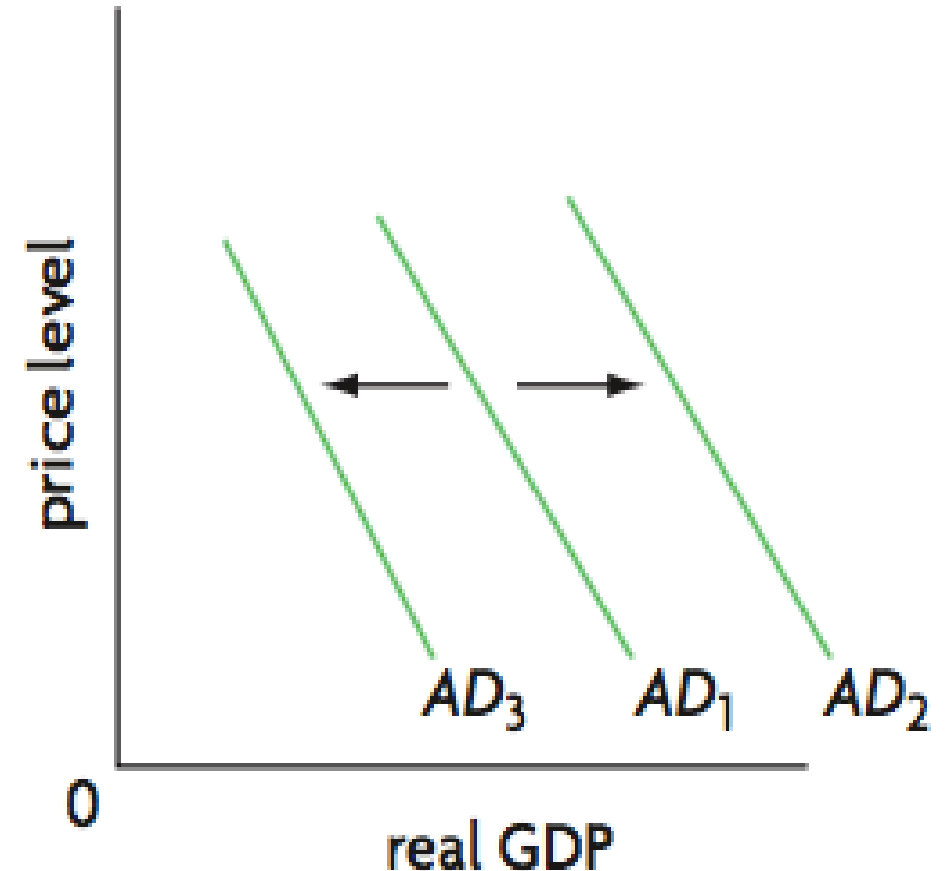
### Shifting of the Demand Curve

#### Changes in Consumer Spending

- **Changes in interest rates**  
Some consumers rely on borrowings for spending so is influenced by interest rates.

Fall in interest rates = AD rightward shift

Rise in interest rates = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

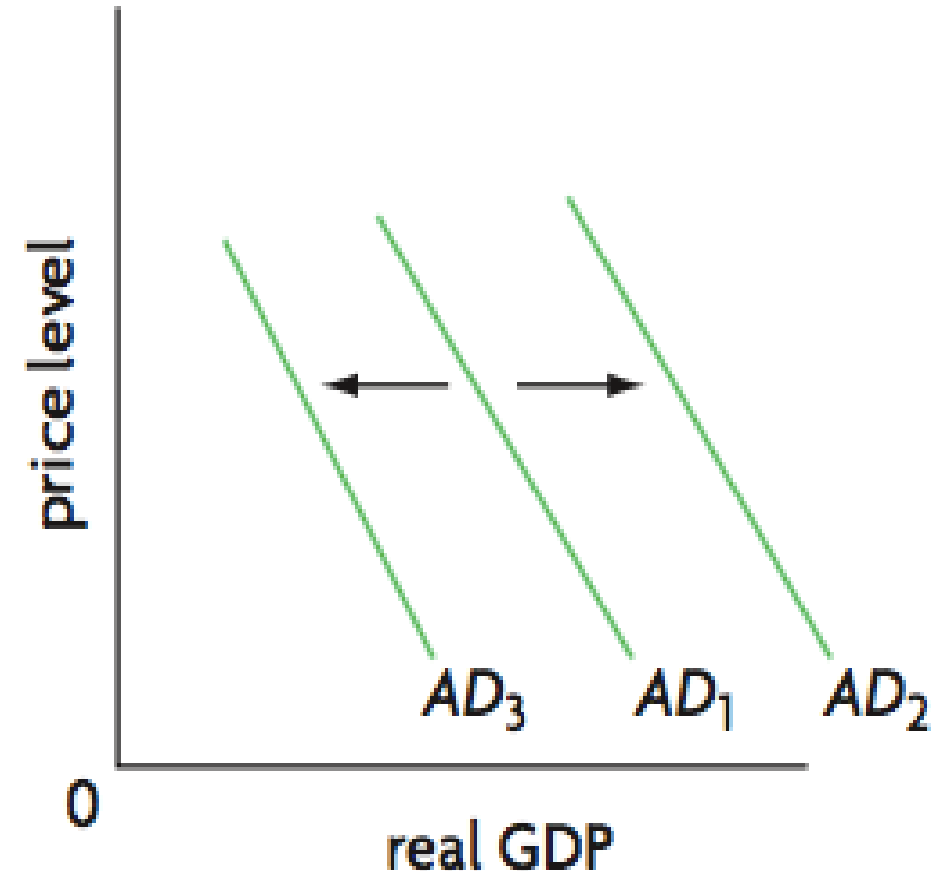
### Shifting of the Demand Curve

#### Changes in Consumer Spending

- **Changes in wealth**  
An increase in consumer wealth leads to high levels of spending in the economy.

Rise in consumer wealth = AD rightward shift

Fall in consumer wealth = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

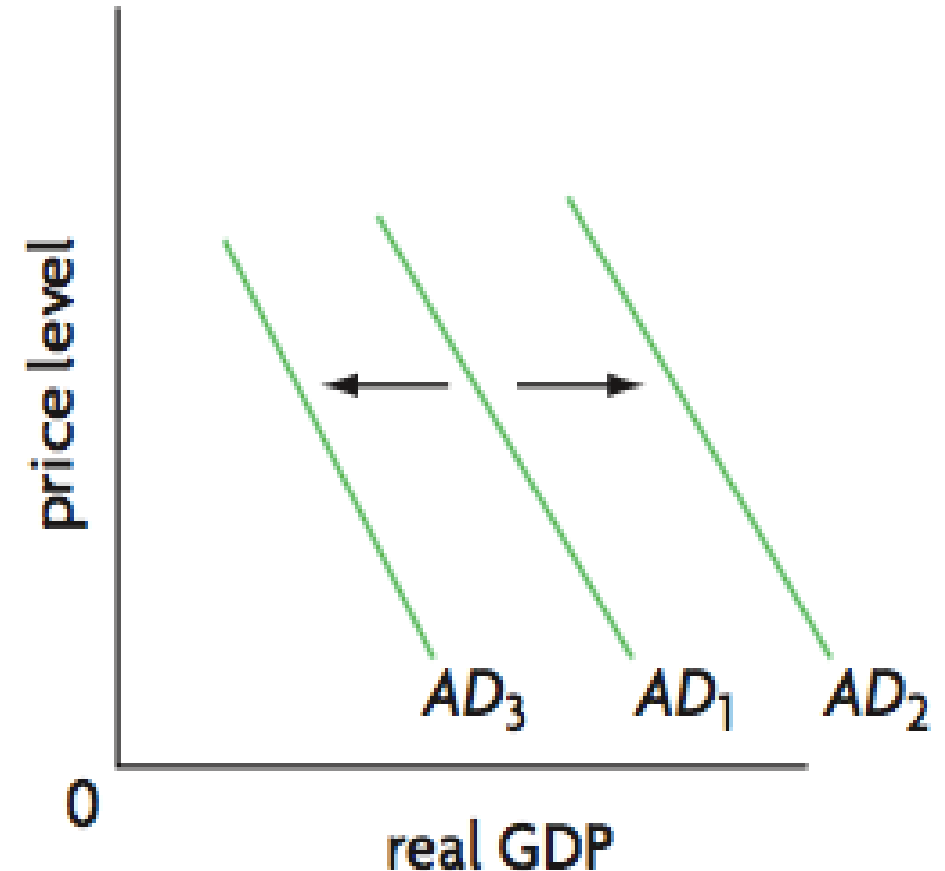
### Shifting of the Demand Curve

#### Changes in Consumer Spending

- **Changes in personal income taxes**  
Income taxes have an effect on the amount of disposable income that consumers have left.

Fall in income taxes = AD rightward shift

Rise in income taxes = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

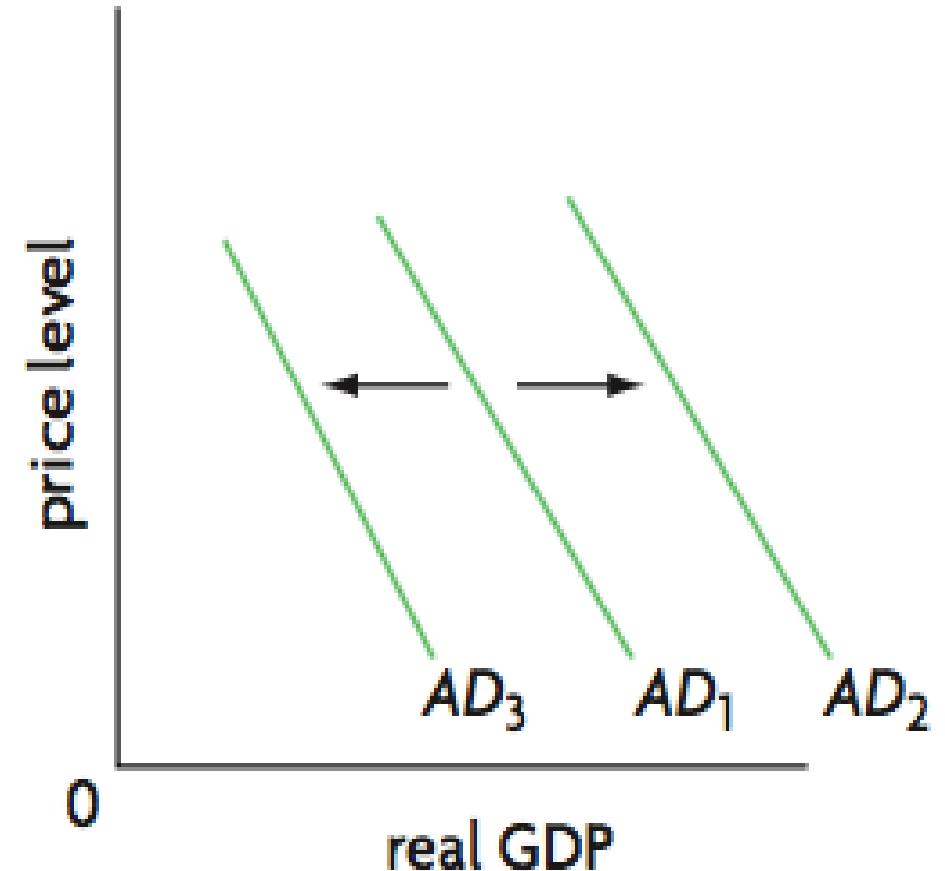
### Shifting of the Demand Curve

#### Changes in Consumer Spending

- **Changes in household indebtedness**  
Indebtedness refers to how much money people owe from taking out loans in the past.

Low level of indebtedness = AD rightward shift

High level of indebtedness = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

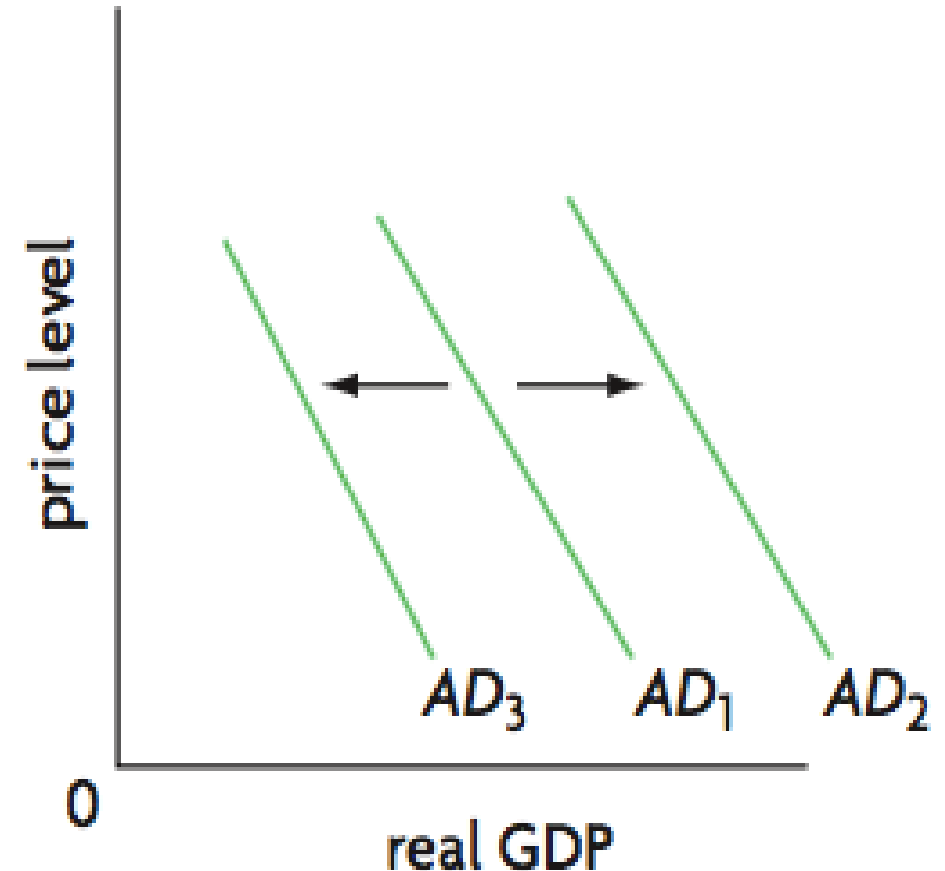
### Shifting of the Demand Curve

#### Changes in Consumer Spending

- **Expectations of future price levels**  
Indebtedness refers to how much money people owe from taking out loans in the past.

Expect future prices to rise = AD rightward shift

Expect future prices to fall = AD leftward shift





## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the Demand Curve

#### Changes in Investment Spending

- Changes in business confidence
- Changes in interest rates
- **Changes in technology**
- Changes in business taxes
- The level of corporate indebtedness
- **Legal/institutional changes**



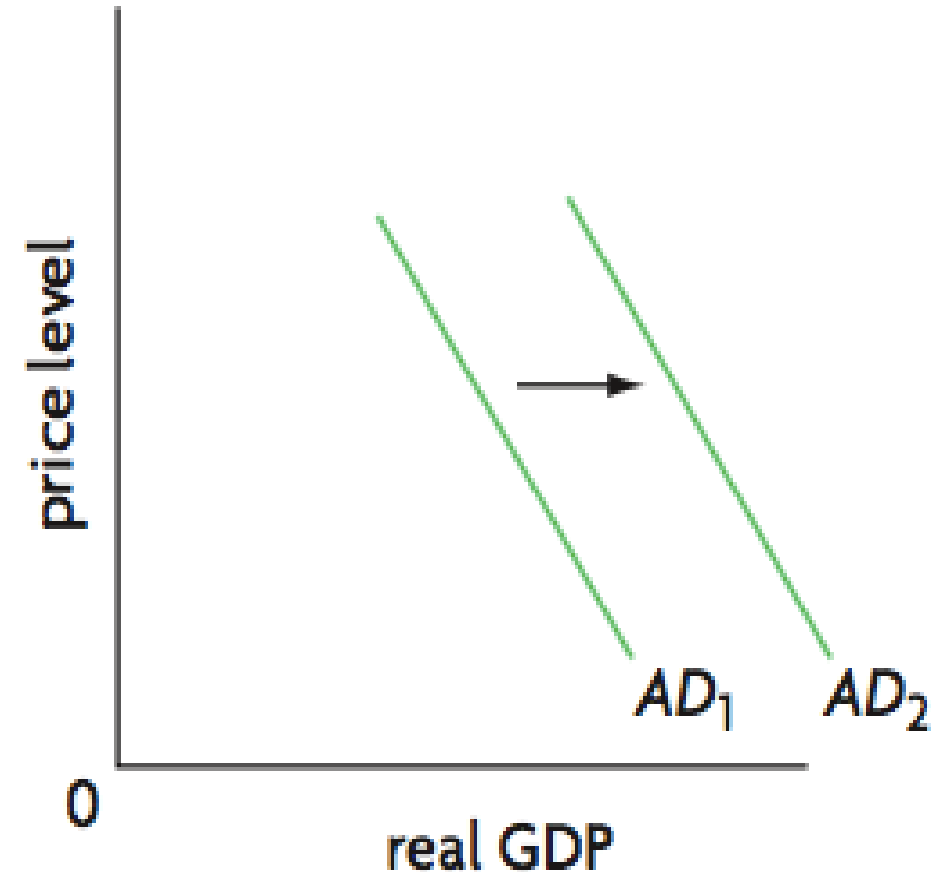
## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the Demand Curve

#### Changes in Investment Spending

- **Changes in technology**  
Improvements in technology stimulate investment spending.

Better Technology = AD rightward shift



## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the Demand Curve

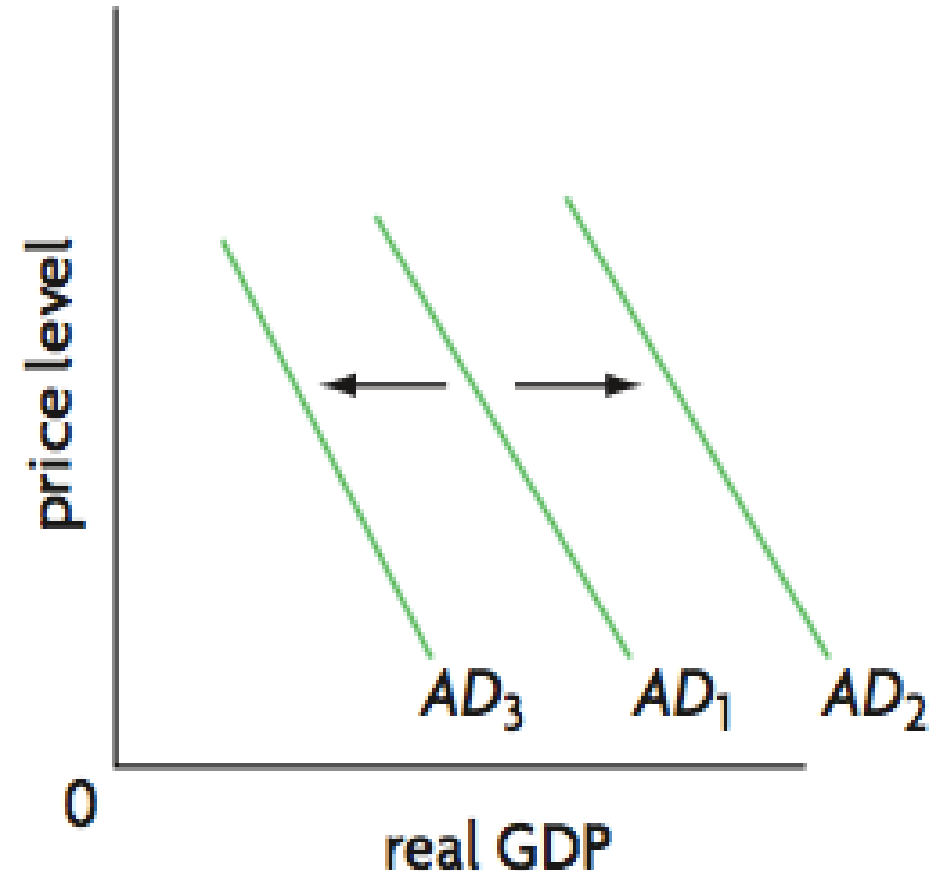
#### Changes in Investment Spending

- **Legal/institutional changes**

The legal and institutional environment may determine how difficult or easy it is for firms to obtain finance investments or secure property rights to ownership.

Ease of access to finance = AD rightward shift

Less access to finance = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the Demand Curve

#### Changes in Government Spending

- **Changes in political priorities**  
Government's expenditures may change in response to changes in its priorities.
- **Changes in economic priorities**  
Government can use its own spending as part of a deliberate attempt to influence AD.

Increase in spending = AD rightward shift

Decrease in spending = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the Demand Curve

#### Changes in Net Exports

- Changes in national income abroad
- Changes in exchange rates
- Changes in the level of trade protection





## 3.2 Aggregate Demand and Aggregate Supply

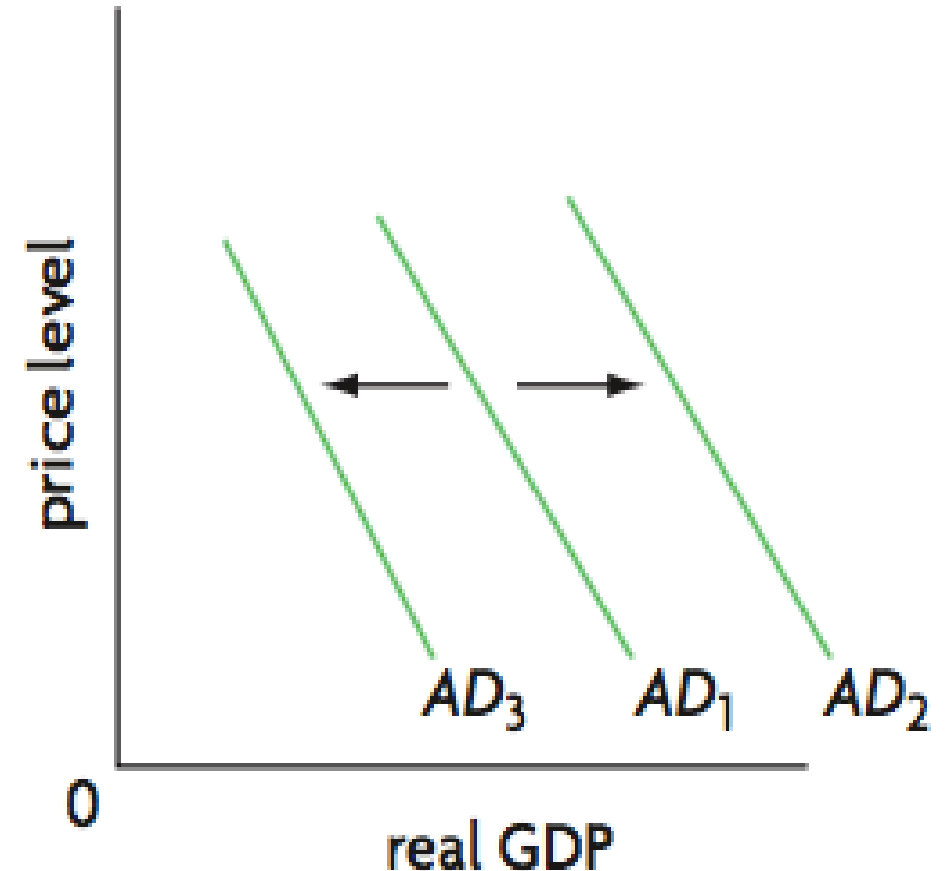
### Shifting of the Demand Curve

#### Changes in Net Exports

- **Changes in national income abroad**  
The national income of foreign countries would influence their purchase of imports.

Higher exports = AD rightward shift

Lower exports = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

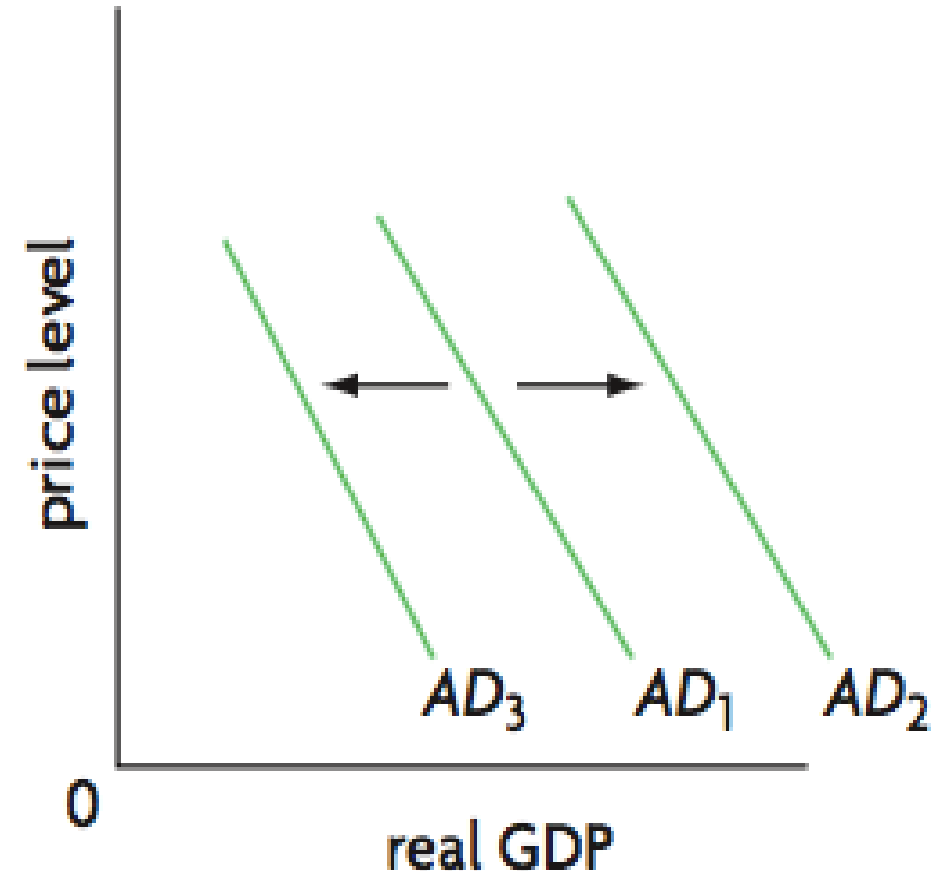
### Shifting of the Demand Curve

#### Changes in Net Exports

- **Changes in exchange rates**  
Exchanges rate is the price of one country's currency in terms of another country's currency.

Currency depreciation = AD rightward shift

Currency appreciation = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

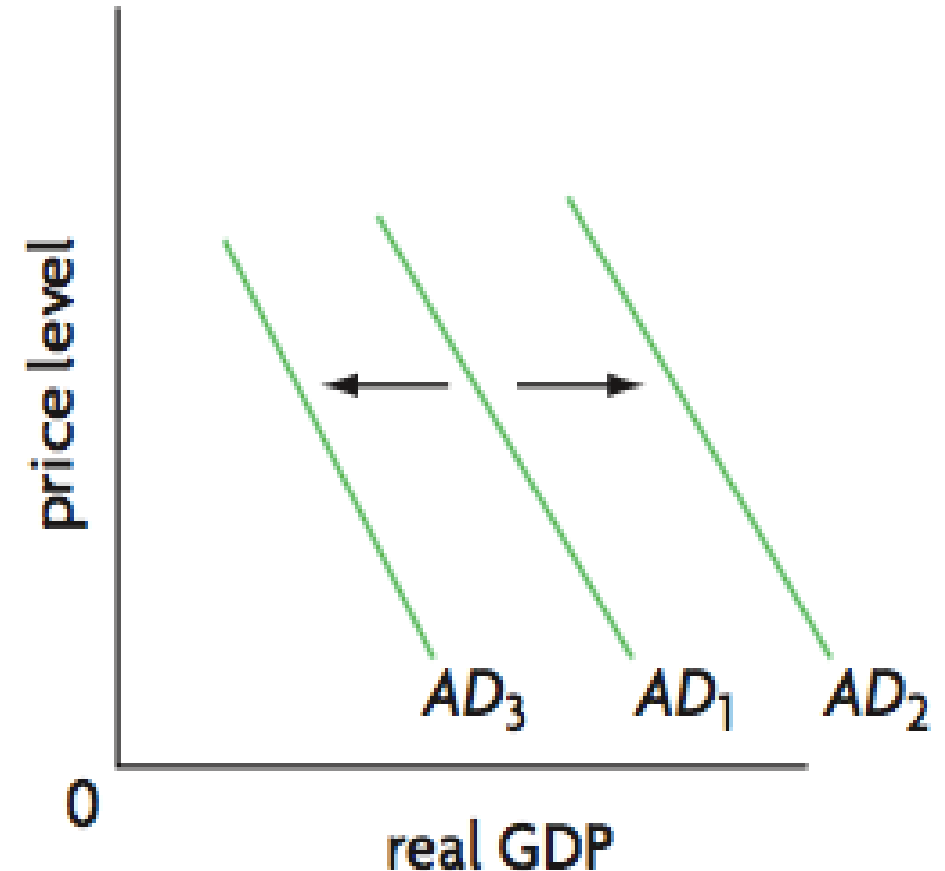
### Shifting of the Demand Curve

#### Changes in Net Exports

- **Changes in the level of trade protection**  
Trade protection refers to restrictions to free international trade imposed by governments.

Fewer trade restrictions = AD rightward shift

More trade restrictions = AD leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

### Macroeconomics: Short Run vs Long Run

In the **short run**, prices of resources (especially wages) are fixed.

Price of labour is often rigid in the short run because:

- labour contracts fix wage rates for a certain period of time
- minimum wage legislation
- workers and labour unions resist wage cuts
- firms avoid wage cuts as it negatively affects morale

## 3.2 Aggregate Demand and Aggregate Supply

### Macroeconomics: Short Run vs Long Run

In the **short run**, prices of resources (especially wages) are fixed.

In the **long run**, prices of resources (especially wages) are **flexible** and change along with changes in the price level.

Wages tend to account for the largest part of firms' cost of production.

The change in wages would have a significant impact on quantity of output supplied by firms.





## 3.2 Aggregate Demand and Aggregate Supply

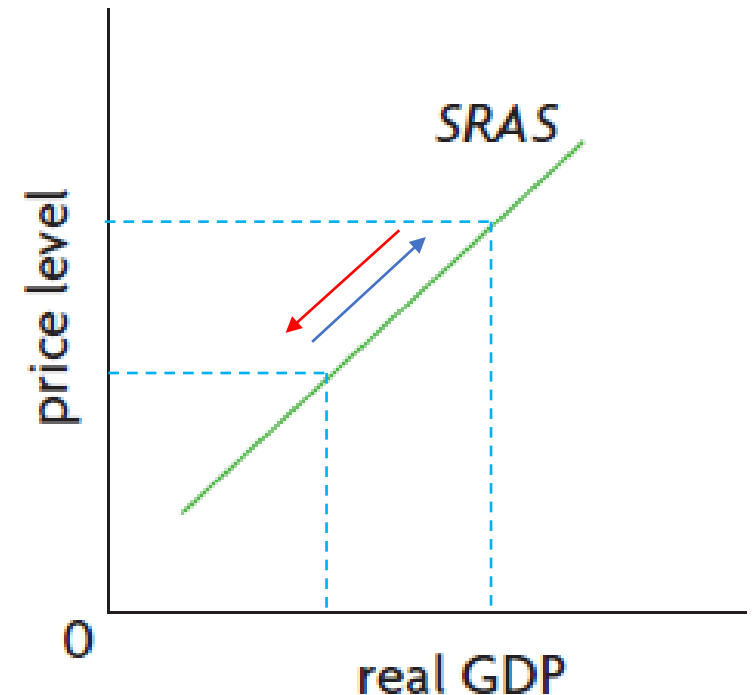
### Aggregate Supply and SRAS

**Aggregate supply** is the total quantity of goods and services produced in an economy over a particular time period at different price levels.

**SRAS** shows the relationship between the price level and the quantity of real output produced by firms when resource prices (especially wages) do not change, ceteris paribus.

It illustrates a positive relationship (upward-sloping) between price level and aggregate output supplied.

A change in price level leads to a **movement on the SRAS**



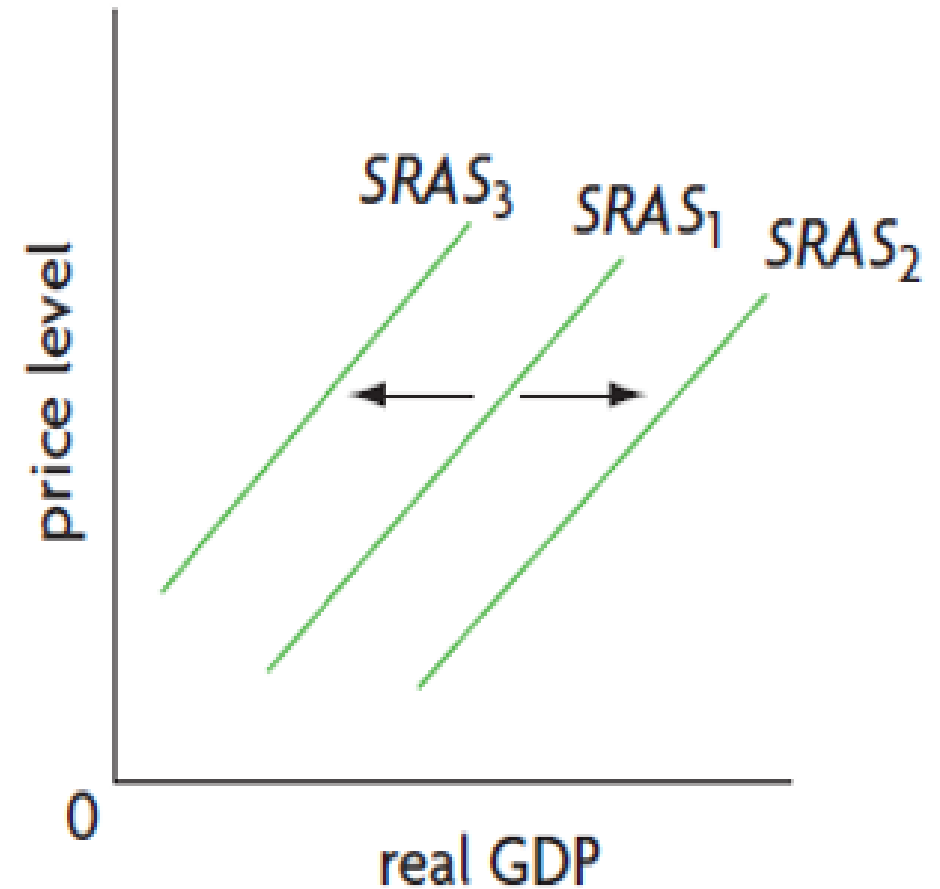
## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the SRAS Curve

A **rightward shift** means that SRAS increases for any price level - i.e. larger quantity of real GDP.

A **leftward shift** means that SRAS decreases for any price level - i.e. lower quantity of real GDP.

Over short periods of time, the SRAS curve shifts mainly as a result of factors that influence firms' **costs of production and supply shocks**.



## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the SRAS Curve

- **Changes in resource prices**  
This may include wages or non-labour resources such as capital goods.
- **Changes in indirect taxes**

Higher production costs = SRAS leftward shift

Lower production costs = SRAS rightward shift



## 3.2 Aggregate Demand and Aggregate Supply

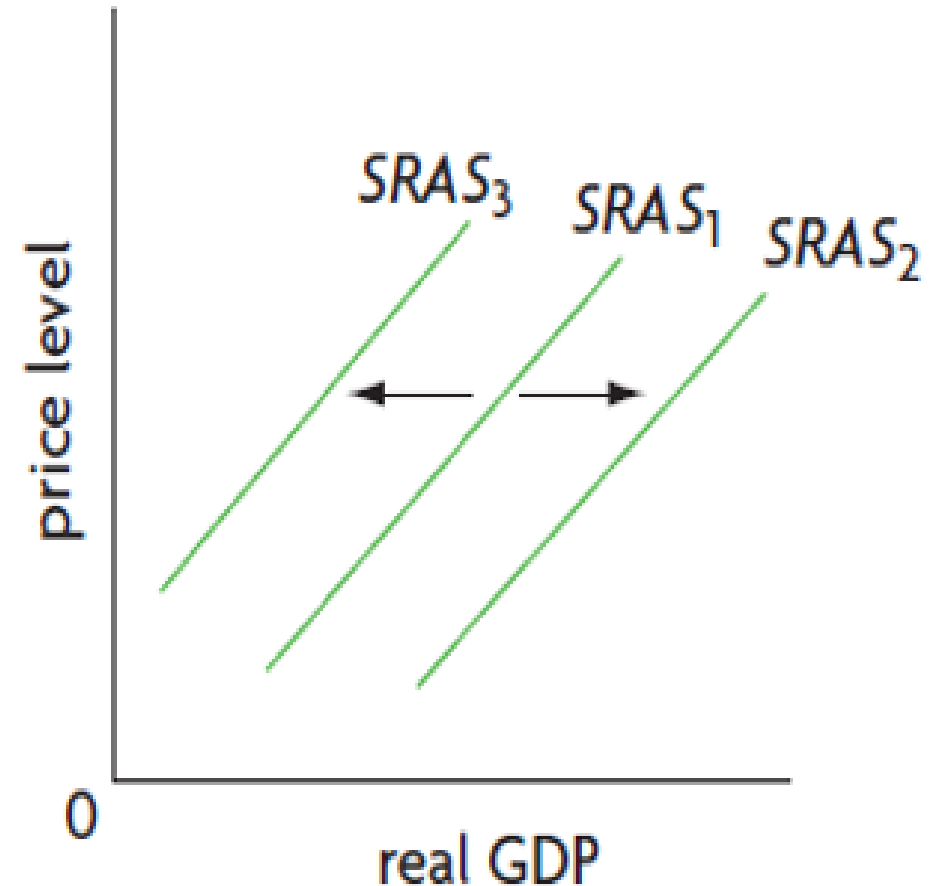
### Shifting of the SRAS Curve

- **Changes in subsidies for firms**

Subsidies helps to lower cost of production for firms that receives them.

More subsidies = SRAS rightward shift

Less subsidies = SRAS leftward shift



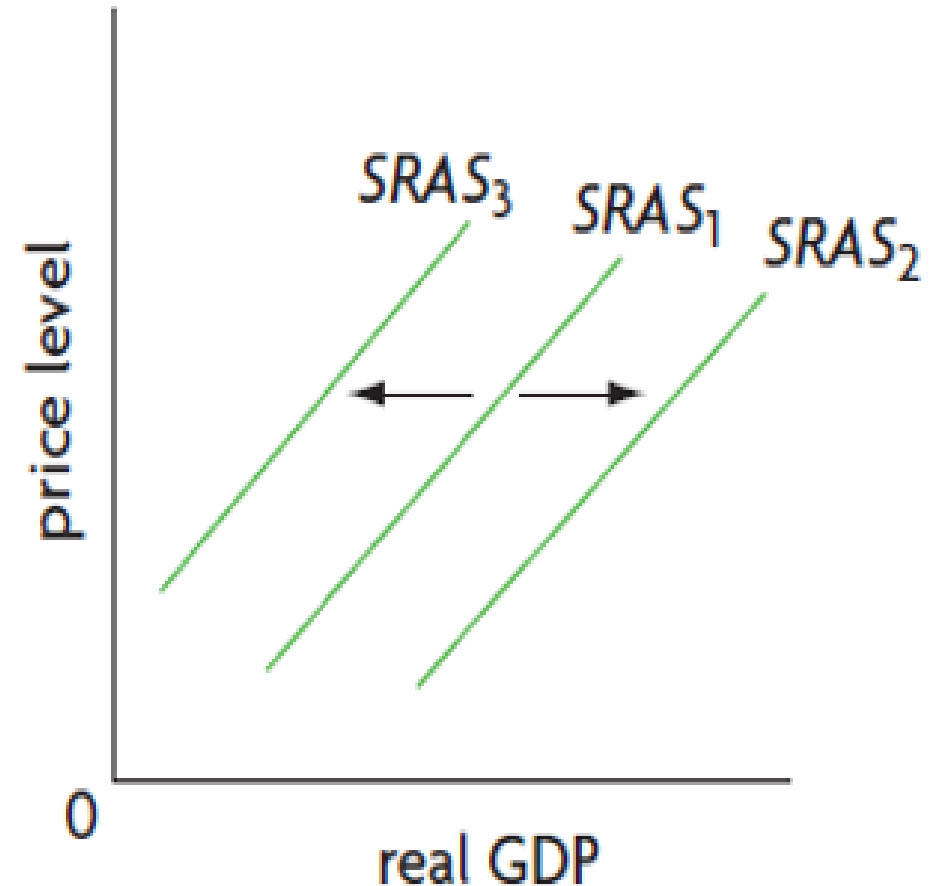
## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the SRAS Curve

- **Supply shocks**  
Events that have a sudden and strong impact on SRAS such as war or unfavourable weather.

Positive supply shocks = SRAS rightward shift

Negative supply shocks = SRAS leftward shift



## 3.2 Aggregate Demand and Aggregate Supply

### Short Run Equilibrium: AD-AS Model

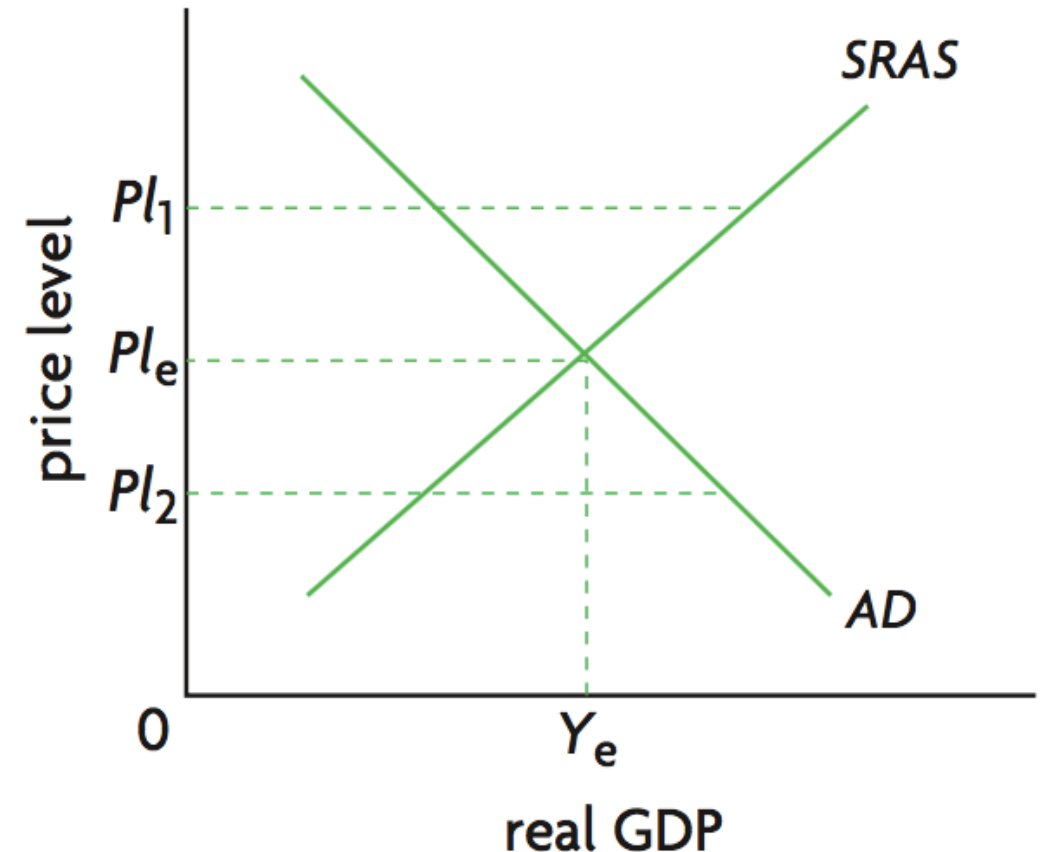
In the short run, equilibrium is given by the point of intersection of the **AD and SRAS curves**.

It determines the price level and real GDP.

- Equilibrium at  **$P_l^e \times Y_e$**

The equilibrium of real GDP determines how much unemployment there is in the economy.

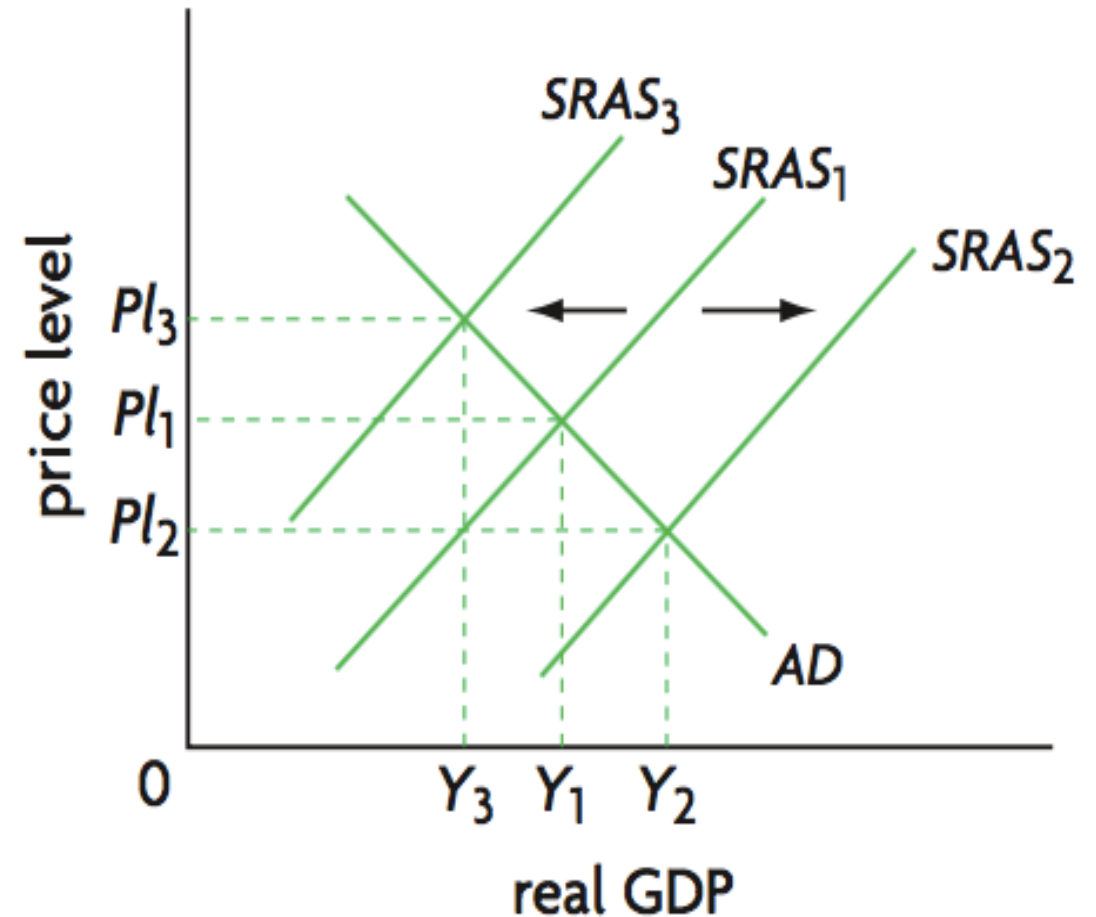
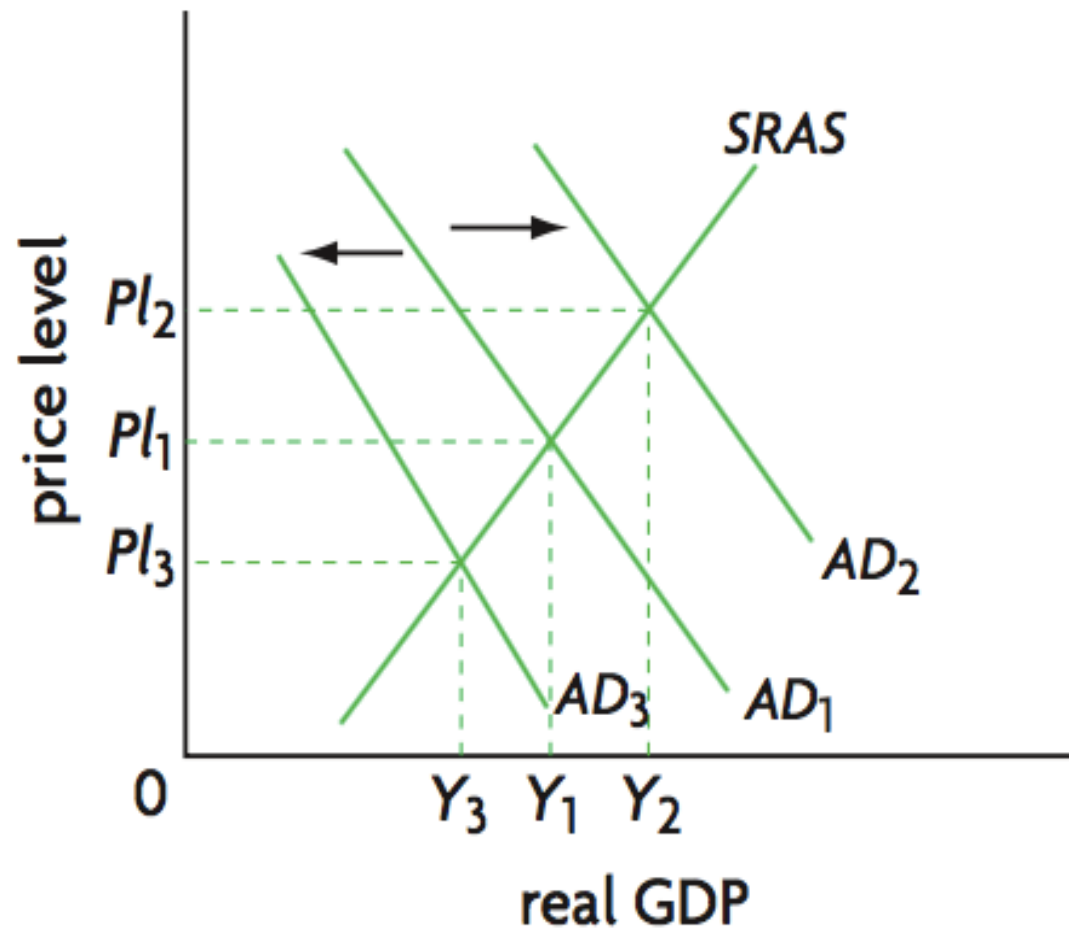
- Excess supply at  **$P_l^1$**   
Excess demand at  **$P_l^2$**





## 3.2 Aggregate Demand and Aggregate Supply

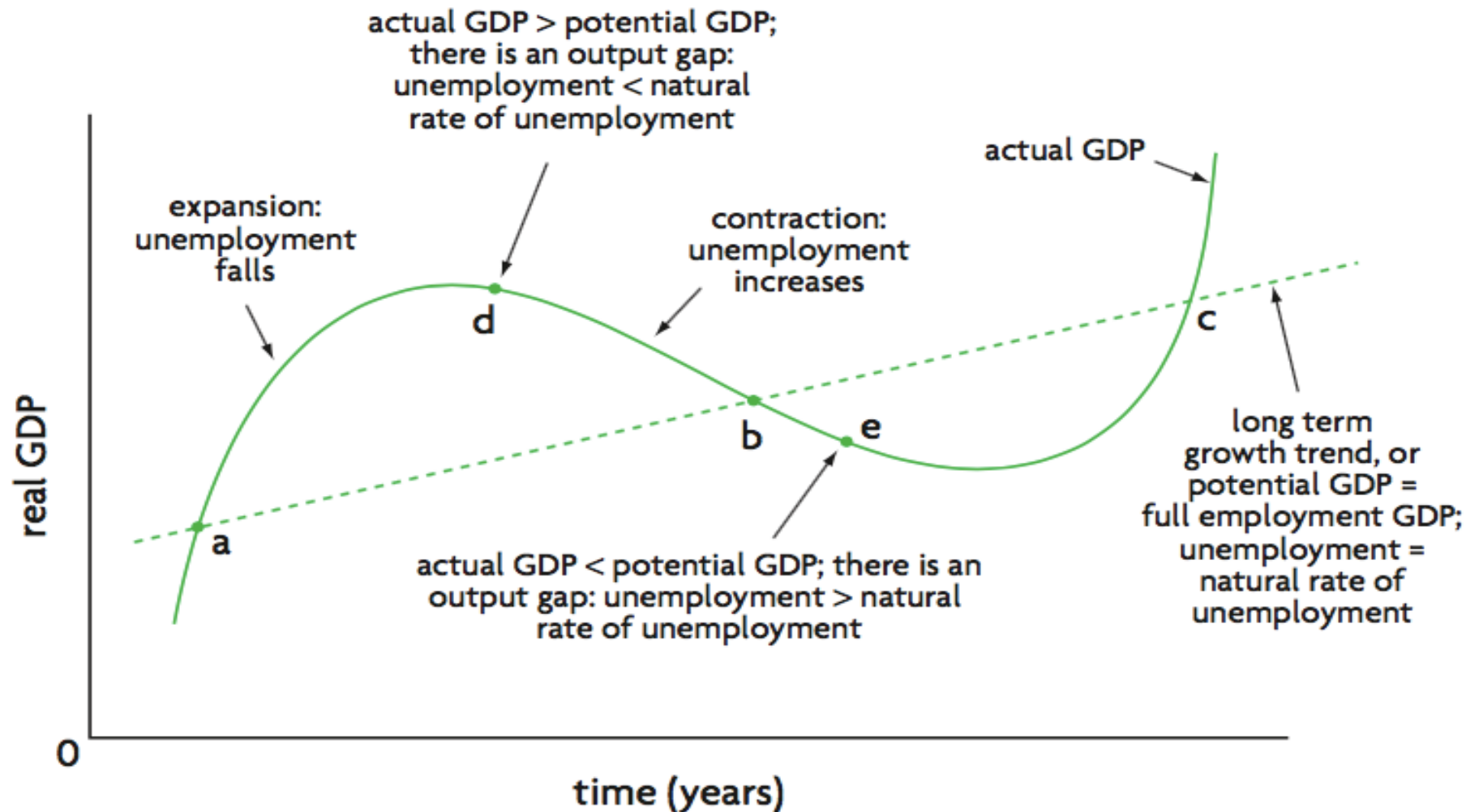
### Short Run Equilibrium: AD-AS Model





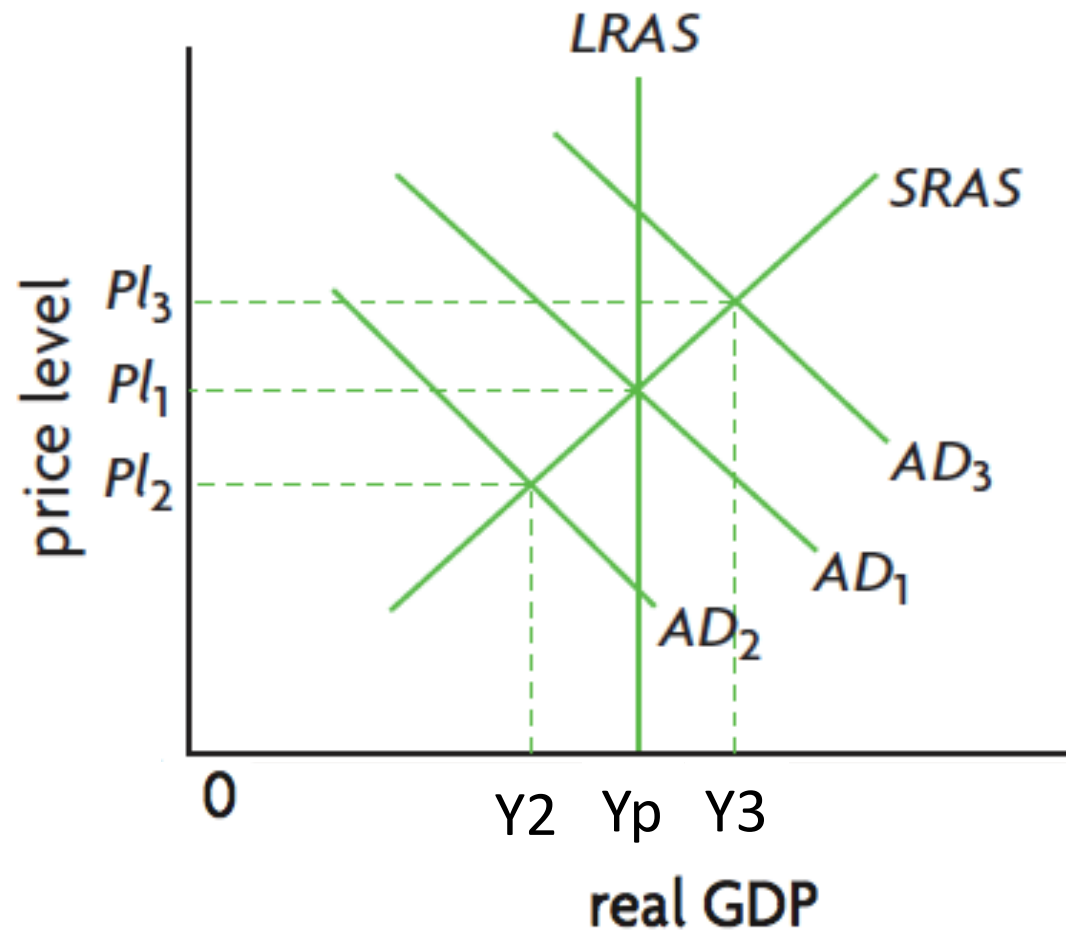
## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium x Business Cycle



## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – New Classical Model



**Based on your understanding...**

Identify which shift in AD would result in

- a) Recessionary gap
- b) Inflationary gap



## 3.2 Aggregate Demand and Aggregate Supply

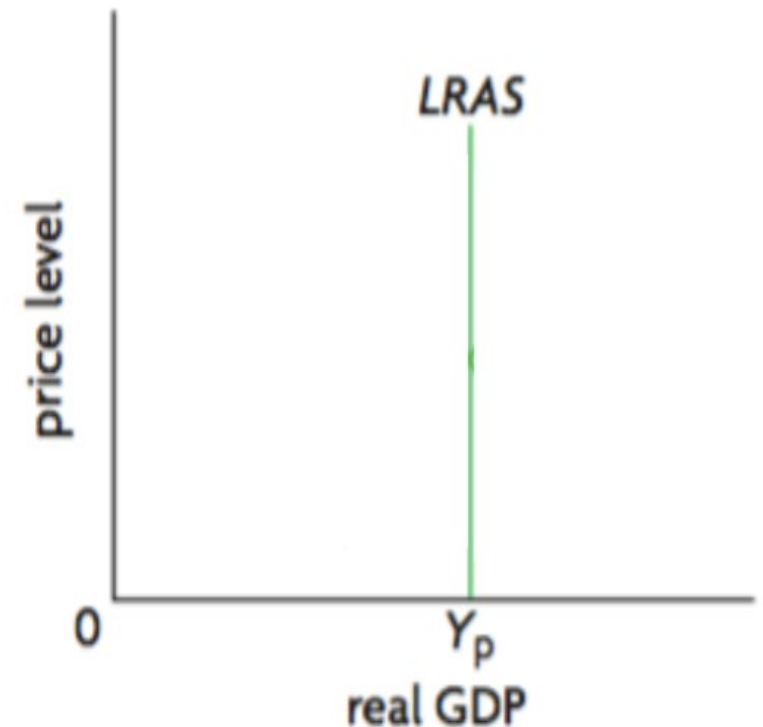
### Long Run Aggregate Supply (LRAS)

**LRAS** shows the total quantity of goods and services produced in the flexible resource price period, at different price levels, ceteris paribus.

**LRAS curve** is vertical at the full employment level of output, indicating that in the long run the economy produces potential GDP, which is independent of the price level.

In the long run, costs of production will change to match output price changes.

Firms profits remain constant and there is no incentive to change their output levels.



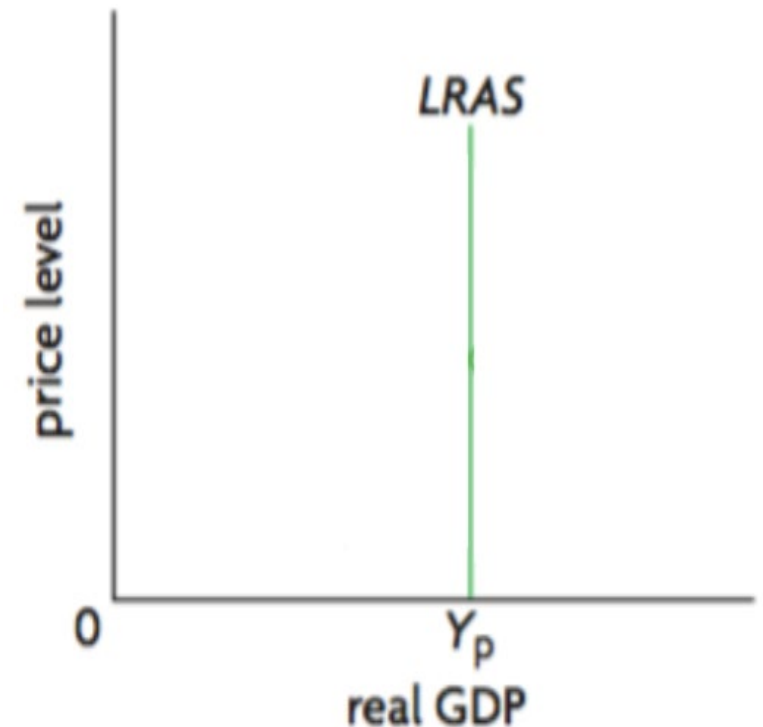
## 3.2 Aggregate Demand and Aggregate Supply

### Long Run Aggregate Supply (LRAS)

**LRAS** shows the total quantity of goods and services produced in the flexible resource price period, at different price levels, ceteris paribus.

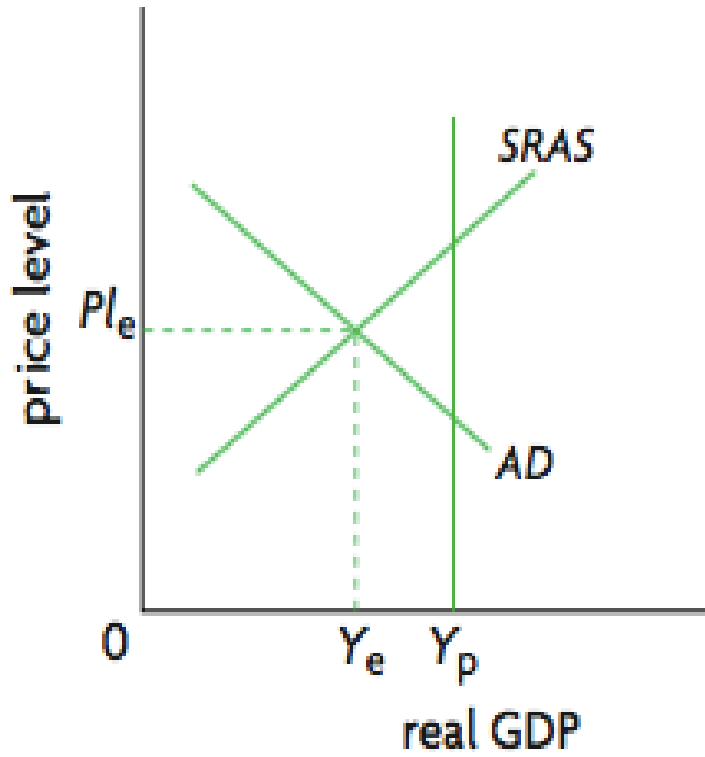
**LRAS curve** is vertical at the full employment level of output, indicating that in the long run the economy produces potential GDP, which is independent of the price level.

Quality and quantity of factors of production will determine firms output levels in the long run. The long run level of output is known as the **potential output**,  $Y_p$ .



## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – New Classical Model



#### Recessionary (Deflationary) Gap

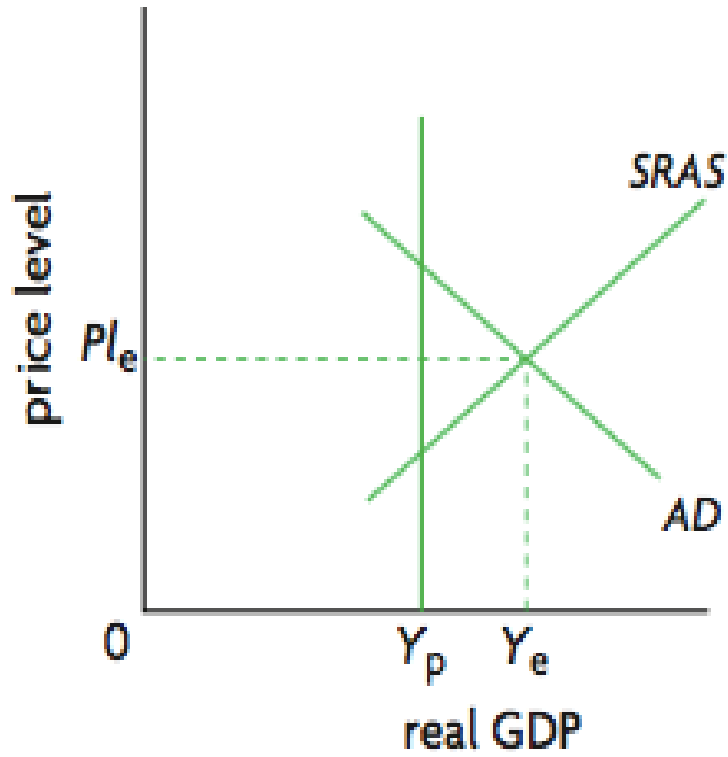
$Y_p$  represents potential output - Real GDP at which there is 'full employment' of resources'.

At  $P_e$ , *equilibrium real GDP* < *potential GDP*.

Firms require less labour for production - i.e. unemployment.

## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – New Classical Model



#### Inflationary Gap

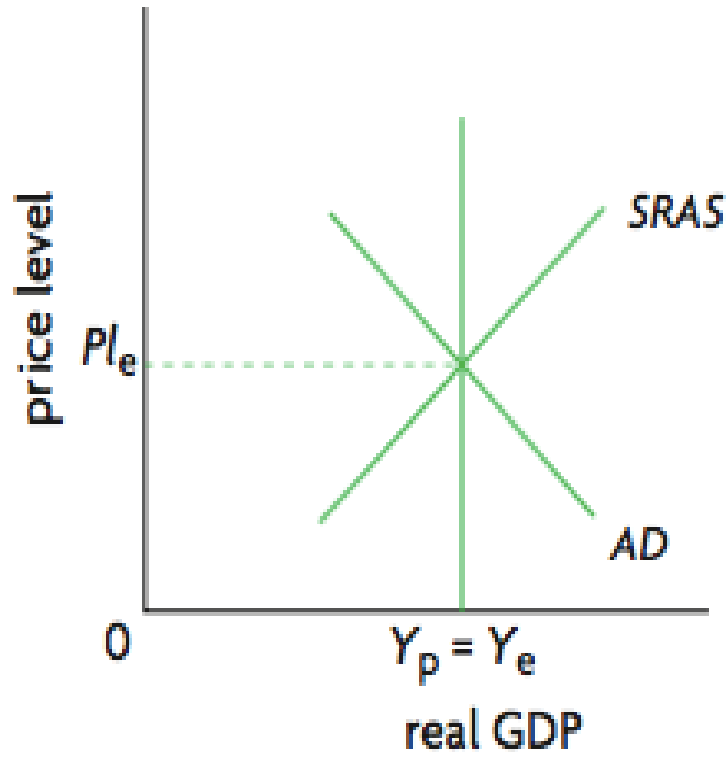
$Y_p$  represents potential output - Real GDP at which there is 'full employment' of resources'.

At  $P_e$ , *equilibrium real GDP*  $>$  *potential GDP*.

Firms respond by producing more output - labour needs increases and unemployment falls.

## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – New Classical Model



#### Full Employment Level of Real GDP

$Y_p$  represents potential output - Real GDP at which there is 'full employment' of resources'.

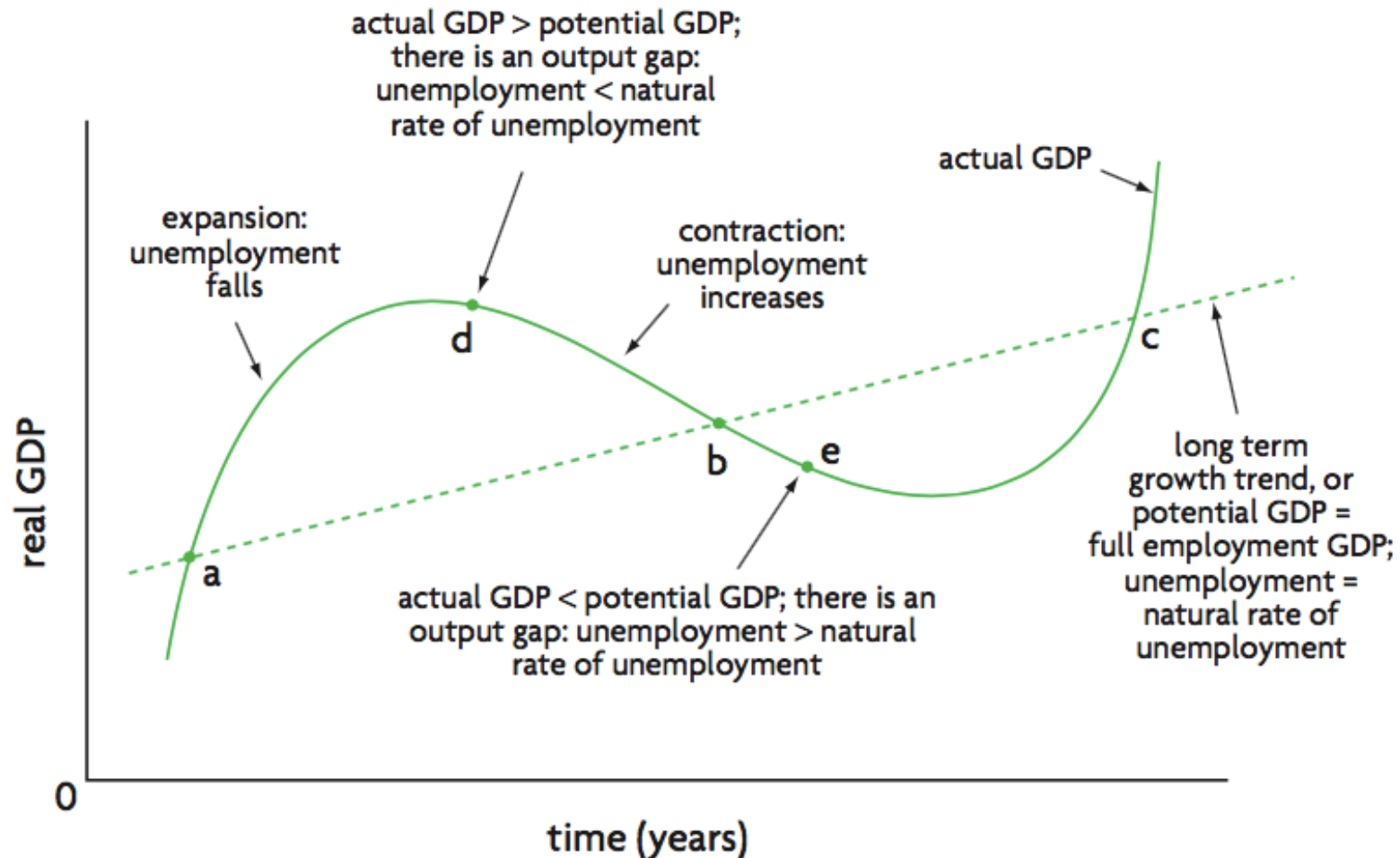
At  $P_e$ , equilibrium real GDP = potential GDP.

Unemployment = Natural rate of unemployment



## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium x Business Cycle



**Based on your  
understanding...**

Identify where the three  
short-run equilibriums  
would correspond to the  
phases of the business cycle.

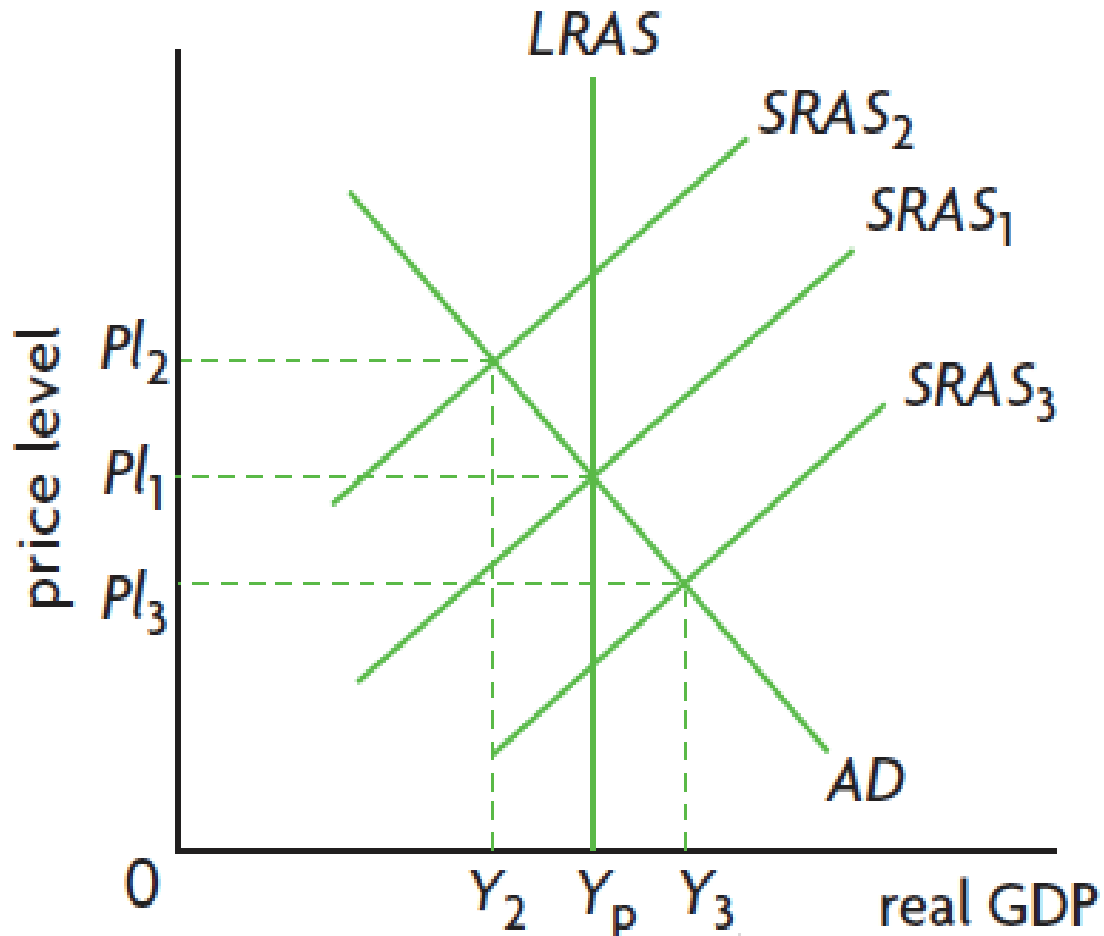
Recessionary

Inflationary

Full Employment

## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – New Classical Model



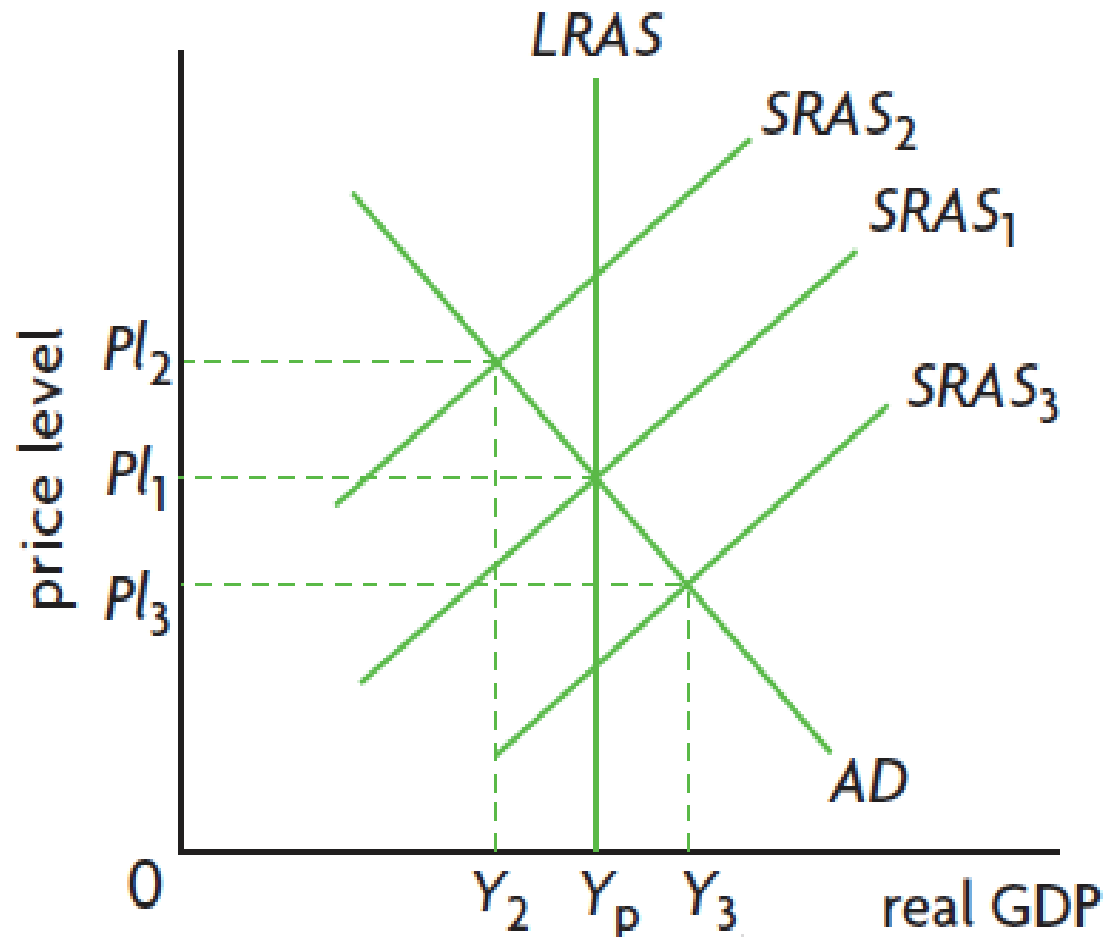
**Stagnation** is a prolonged period of slow economic growth usually accompanied by high unemployment.

**Shift to  $SRAS_2$  leads to a**

- Fall in real GDP (Recession) at  **$Y_2$**
- Rise in price level (Inflation) at  **$Pl_2$**
- Undesirable for the economy

## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – New Classical Model



Shift to  $SRAS_3$  leads to a

- Rise in real GDP at  **$Y_3$**
- Fall in price level at  **$P_3$**
- **Economic expansion**

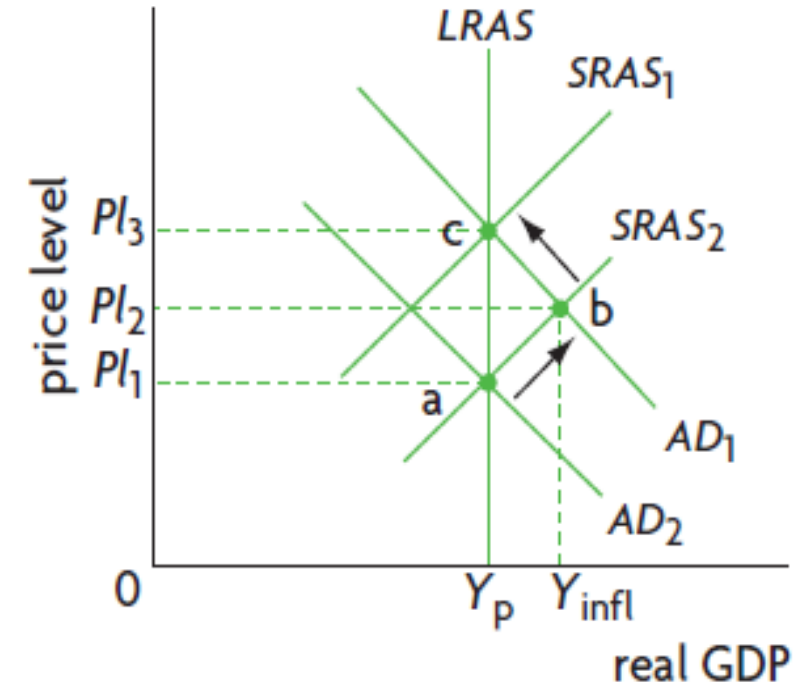
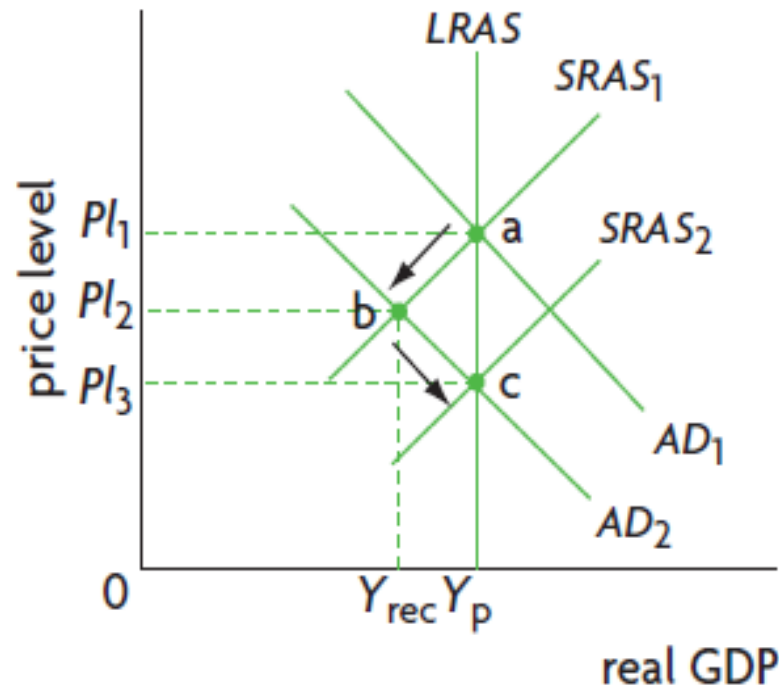
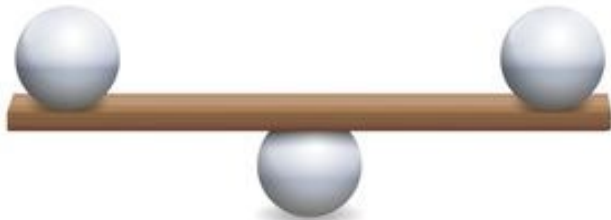
Changes in aggregate supply do not lead to **recessionary or inflationary gaps**.

## 3.2 Aggregate Demand and Aggregate Supply

### Long Run Equilibrium – New Classical Model

If the **LRAS curve** is vertical at potential GDP, it follows that **recessionary and inflationary gaps** are only short-run phenomena that cannot persist in the long run.

The economy has a built-in tendency towards full **employment equilibrium**



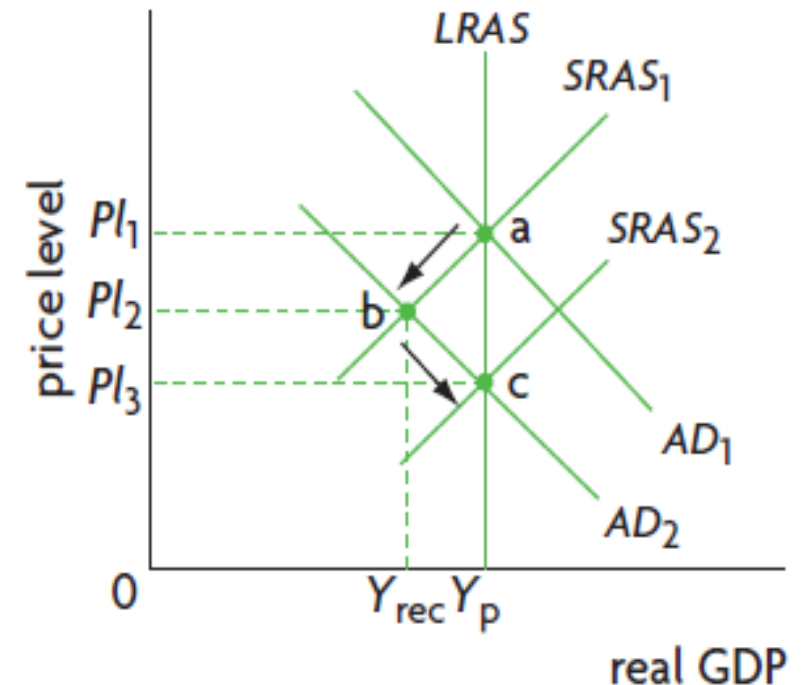
## 3.2 Aggregate Demand and Aggregate Supply

### Long Run Equilibrium – New Classical Model

If the **LRAS curve** is vertical at potential GDP, it follows that **recessionary and inflationary gaps** are only short-run phenomena that cannot persist in the long run.

#### Creating a recessionary gap

- In the short run, the economy moves from **Point A to B** when aggregate demand falls.
- Price levels fall to **PI2**
- Real GDP falls to **Yrec**



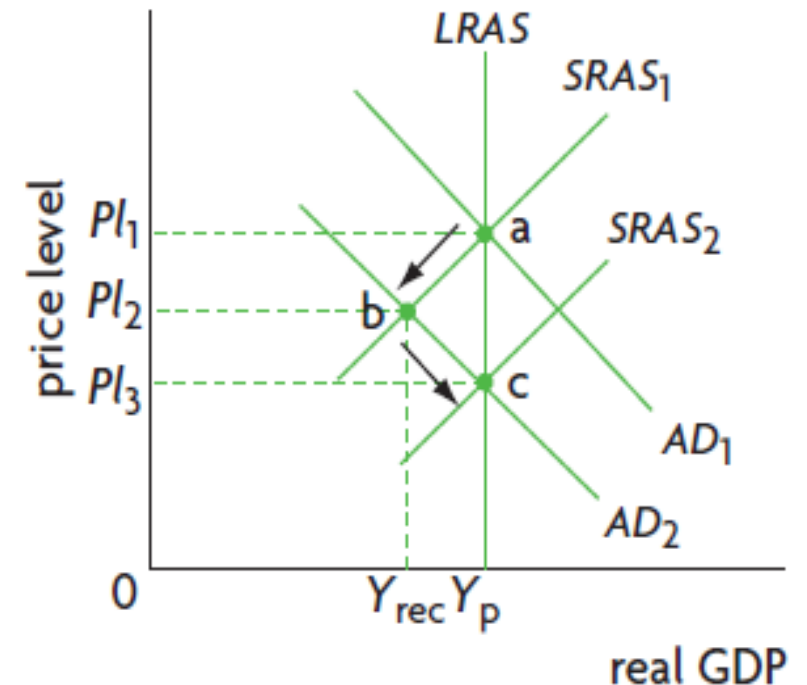
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#### Eliminating a recessionary gap

- In the long run, the fall in the price level is matched by the fall in resource (wages) prices.
- **SRAS1 shifts to the right** as a result.
- Economy returns back to LRAS at **Point C**.
- Only the price level falls from **Pl1 to Pl3**.



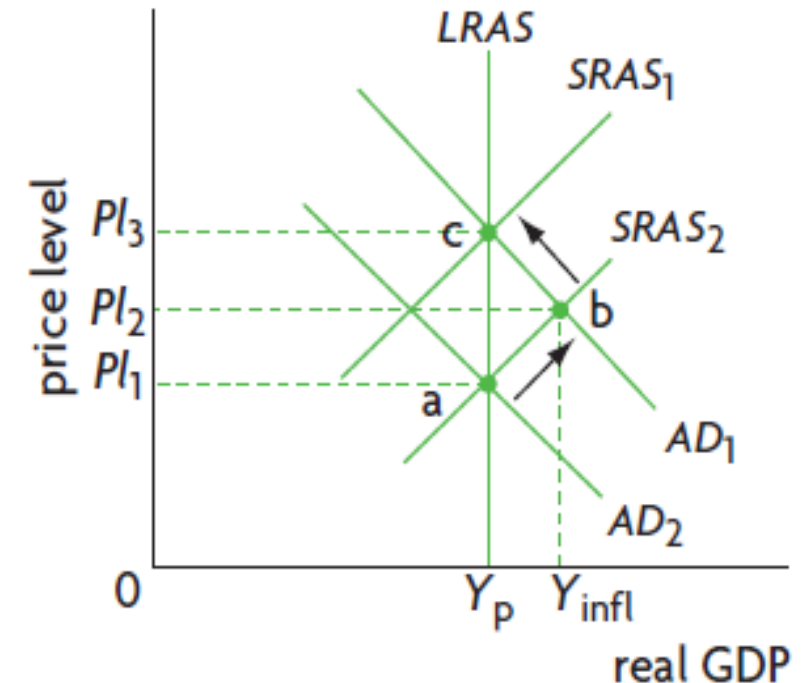
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### Long Run Equilibrium – New Classical Model

If the **LRAS curve** is vertical at potential GDP, it follows that **recessionary and inflationary gaps** are only short-run phenomena that cannot persist in the long run.

#### Creating an inflationary gap

- In the short run, the economy moves from **Point A to B** when aggregate demand rises.
- Price levels rises to **Pl<sub>2</sub>**
- Real GDP rises to **Y<sub>infl</sub>**





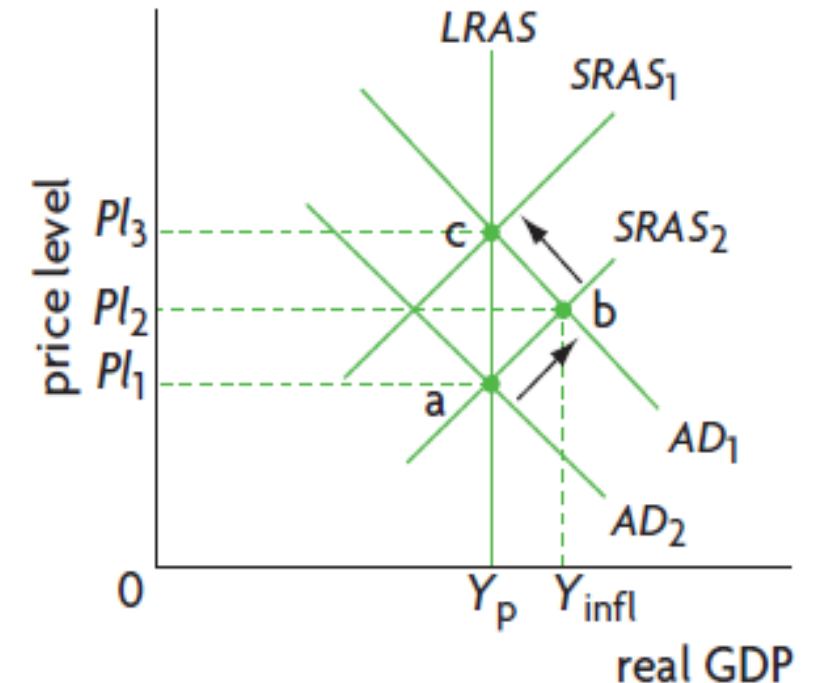
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### Long Run Equilibrium – New Classical Model

If the **LRAS curve** is vertical at potential GDP, it follows that **recessionary and inflationary gaps** are only short-run phenomena that cannot persist in the long run.

#### Eliminating an inflationary gap

- In the long run, the rise in the price level is matched by the rise in resource (wages) prices.
- **SRAS1 shifts to the left** as a result.
- Economy returns back to LRAS at **Point C**.
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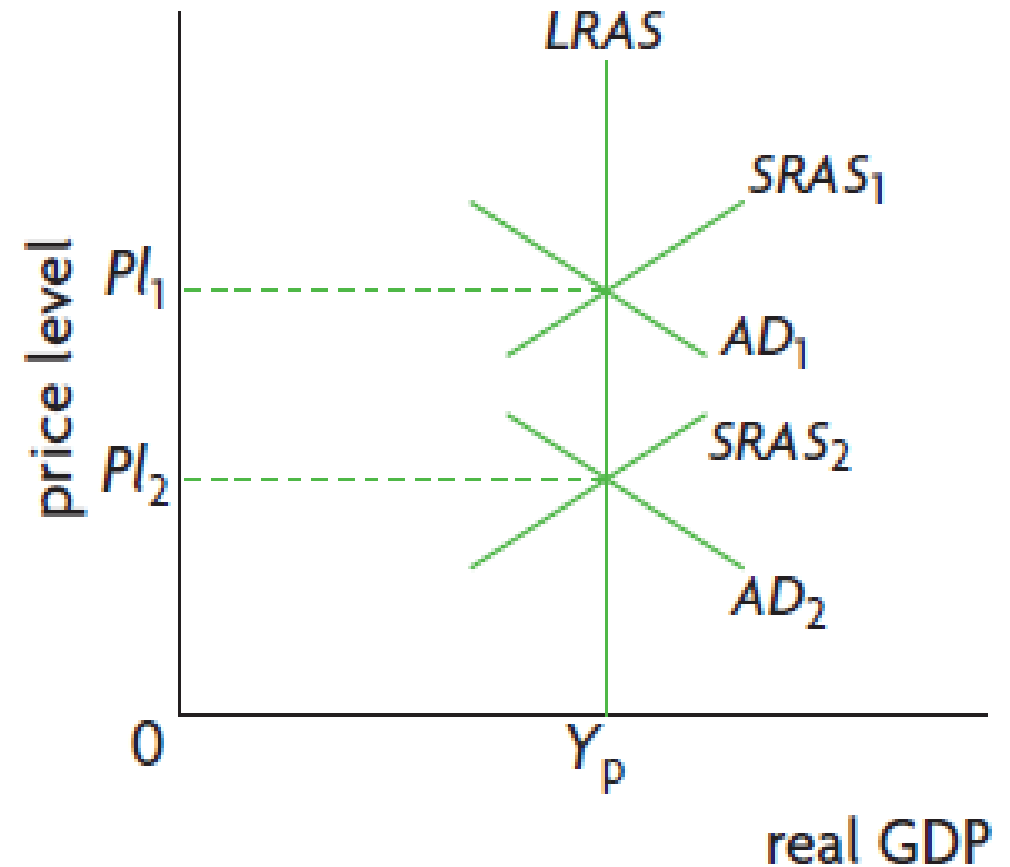
## 3.2 Aggregate Demand and Aggregate Supply

### Long Run Equilibrium – New Classical Model

In the monetarist/new classical model, changes in AD can influence real GDP only in the short run.

In the long run, the only impact of a change in AD is to change the economy's price level.

Real GDP remains constant at the level of potential output ( $Y_p$ ) and the **LRAS curve**



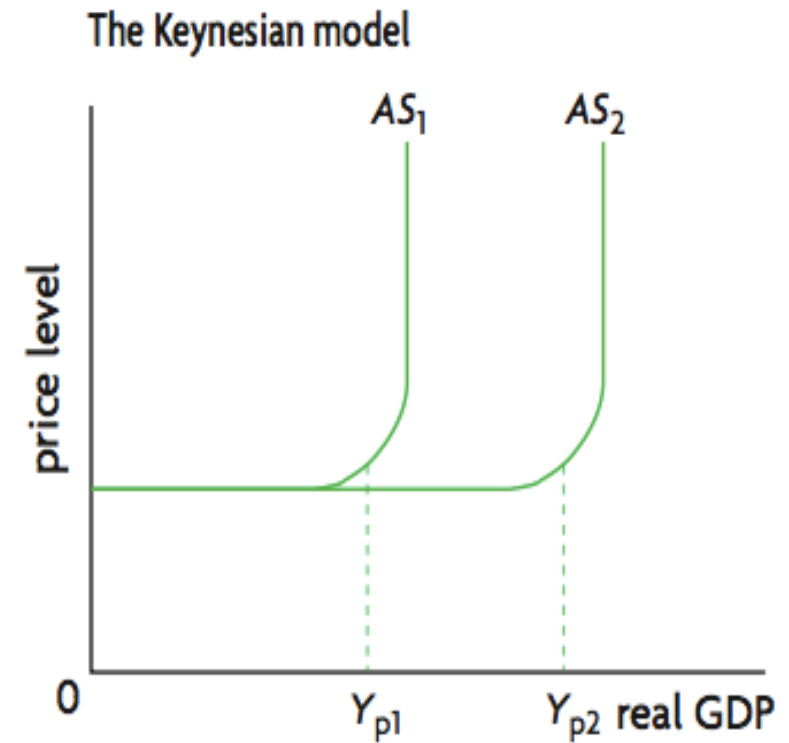
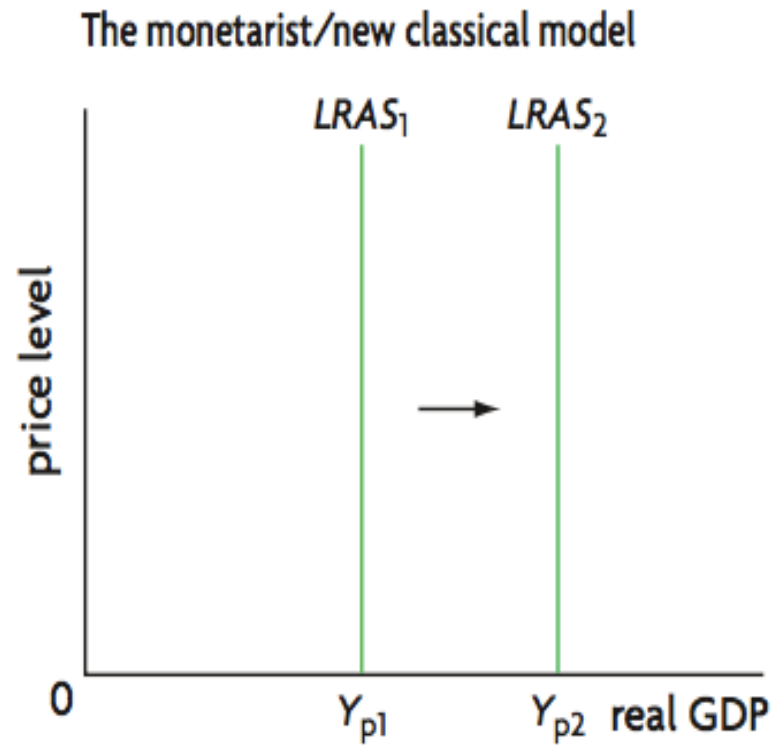
## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the AS Curves (Long Term)

Over time, the curves can shift in response to factors that changes potential output.

**Increase in potential output represents economic growth.**

**Decrease in potential output represents negative growth.**



## 3.2 Aggregate Demand and Aggregate Supply

### Shifting of the AS Curves (Long Term)

#### Factors that change aggregate supply:

- Increase in **quantities and/or quality** of factors of production (capital, entrepreneurship, land and labour)

#### Nigeria: Italy's ENI New Discovery Boosts Nigeria's Oil Reserve Capacity



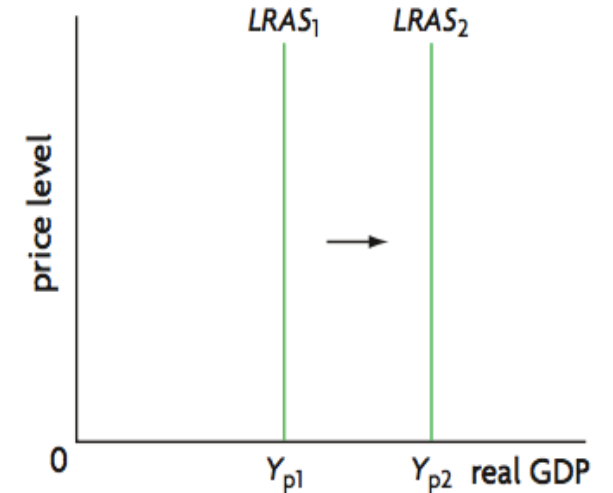
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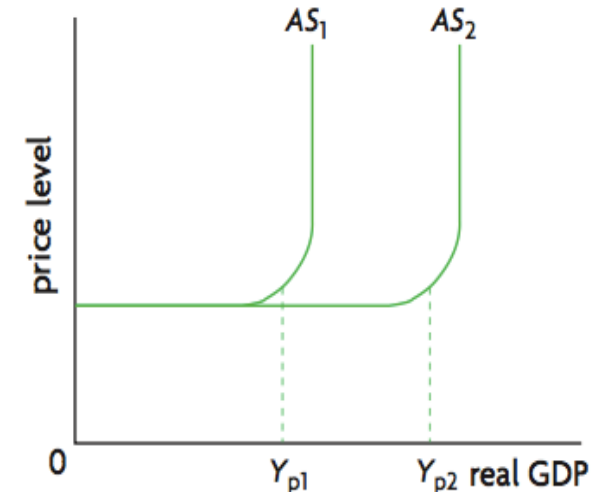
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The monetarist/new classical model



The Keynesian model

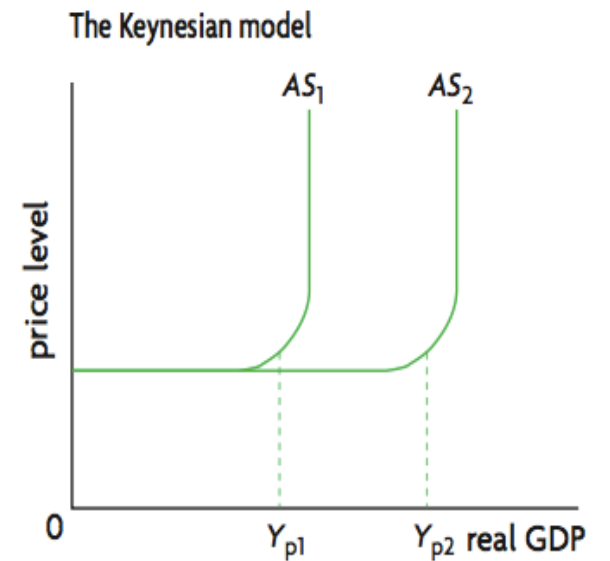
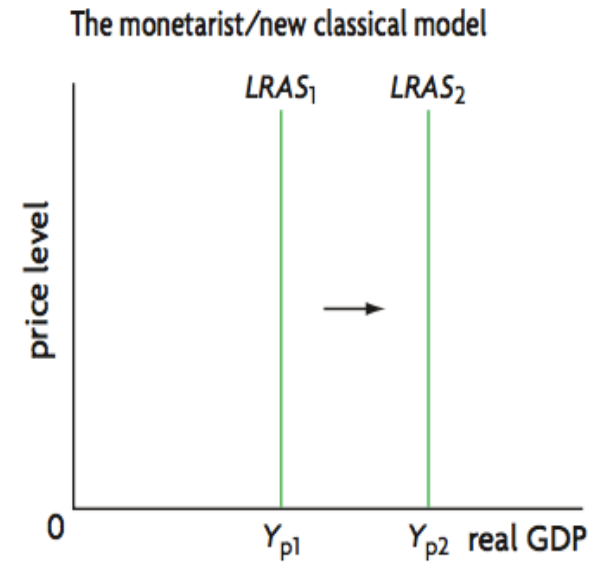


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### Shifting of the AS Curves (Long Term)

#### Factors that change aggregate supply:

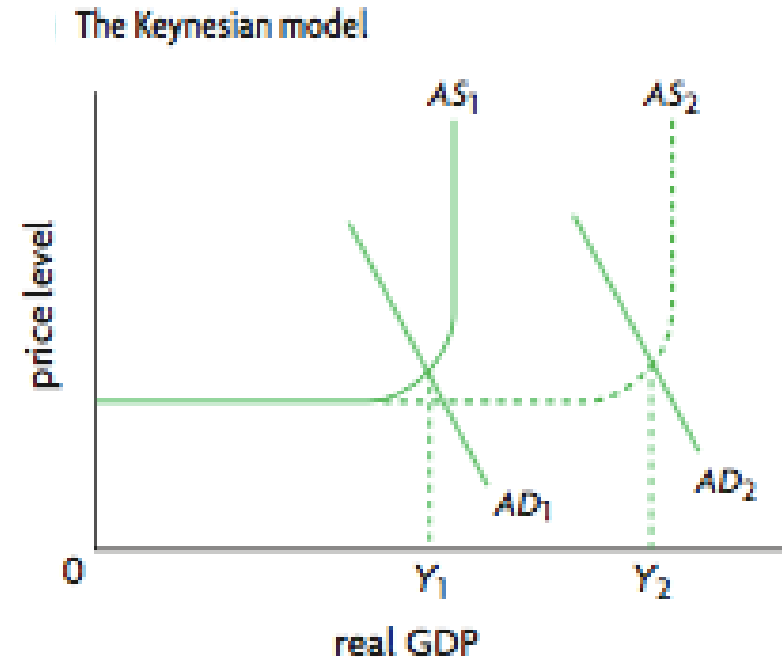
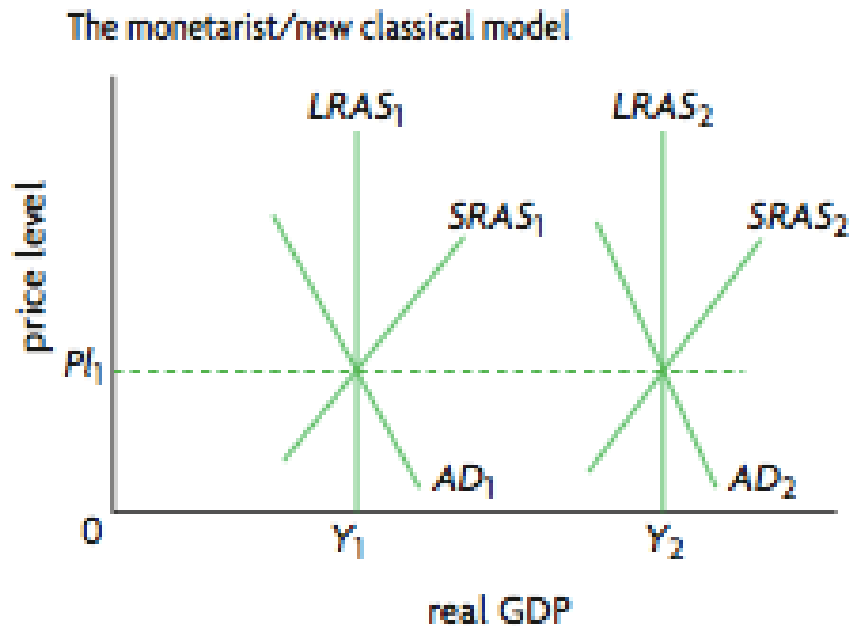
- Increase in quantities and/or quality of factors of production (capital, entrepreneurship, land and labour)
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- Institutional changes (government regulations)
- Reductions in the **natural rate of unemployment**



## 3.2 Aggregate Demand and Aggregate Supply

### Long Term vs Short Term

Long-term growth in the business cycle diagram, showing increases in potential output corresponds to rightward shifting **LRAS or Keynesian AS curves**.



## 3.2 Aggregate Demand and Aggregate Supply

### John Maynard Keynes

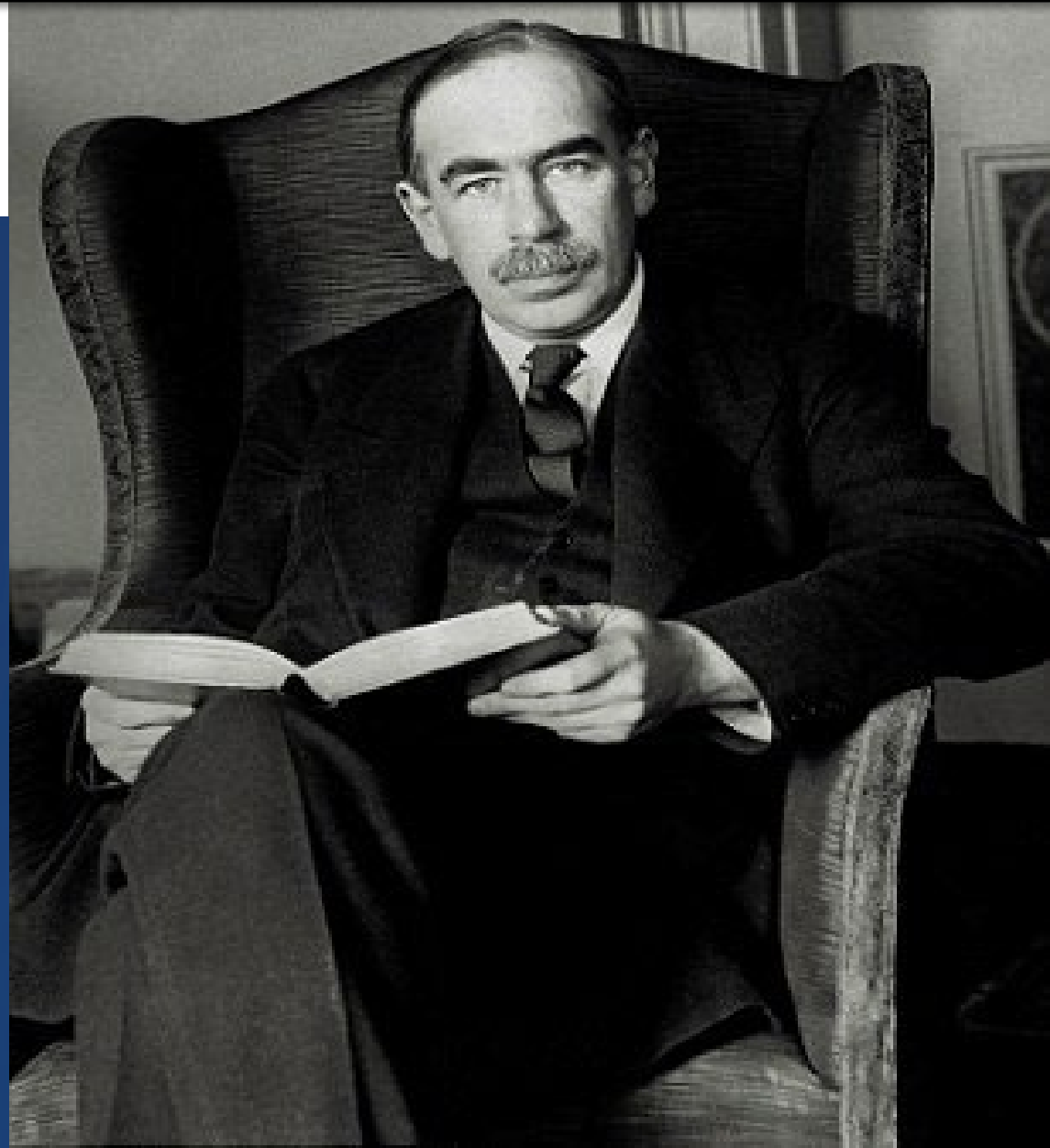
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“The difficulty lies, not in the new ideas, but in escaping from the old ones”

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John Maynard Keynes

Preface to *The General Theory*, 1936: viii



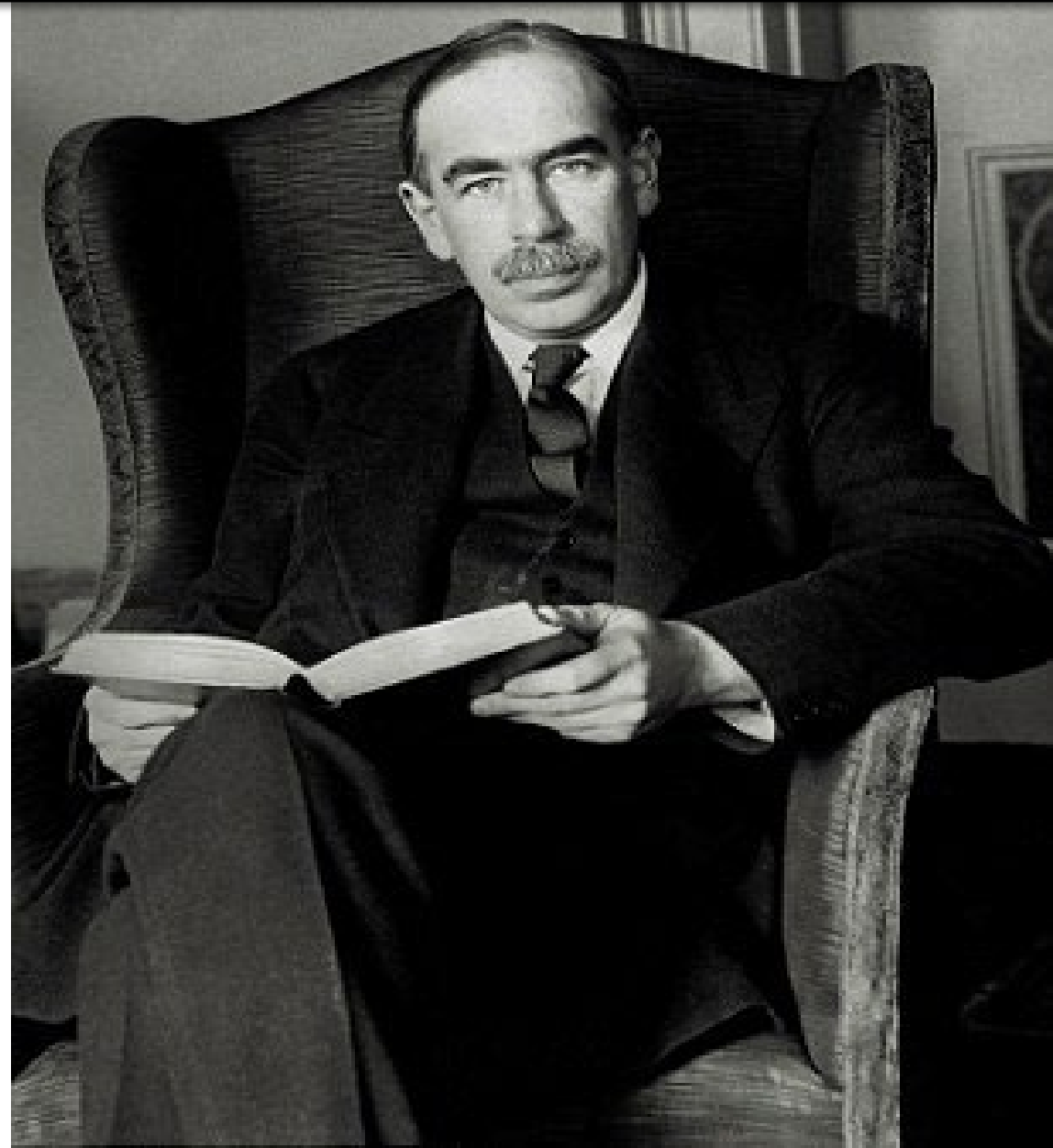


## 3.2 Aggregate Demand and Aggregate Supply

### John Maynard Keynes

Keynes challenged the monetarists/new classical model that the economic system will automatically move towards full employment without intervention.

He showed it is possible for economies to remain in a position of short-run equilibrium for a long period of time.



## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Supply – Keynesian Model

#### Wages and price downward inflexibility

The Keynesian model argues that wages and product prices do not fall easily, even in a recessionary gap due to:

- labour contracts
- minimum wage legislation
- worker and union resistance to wage cuts



## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Supply – Keynesian Model

#### Wages and price downward inflexibility

If wages will not go down, firms will avoid lowering prices to protect profits.

Large **oligopolistic firms** may fear **price wars** and avoid lowering prices.

**Oligopolies** is a state of limited competition, in which a market is shared by a small number of producers or sellers.



## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Supply – Keynesian Model

#### Wages and price downward inflexibility

Keynesians argue that if a **recession** or **depression** continues for a long enough time, wages and prices would eventually begin to fall.

It would be necessary for the government to intervene with **active policies** to help the economy come out of the recession.



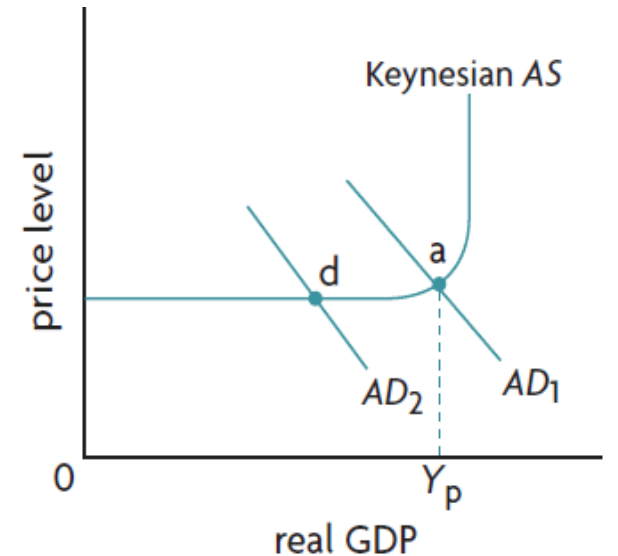
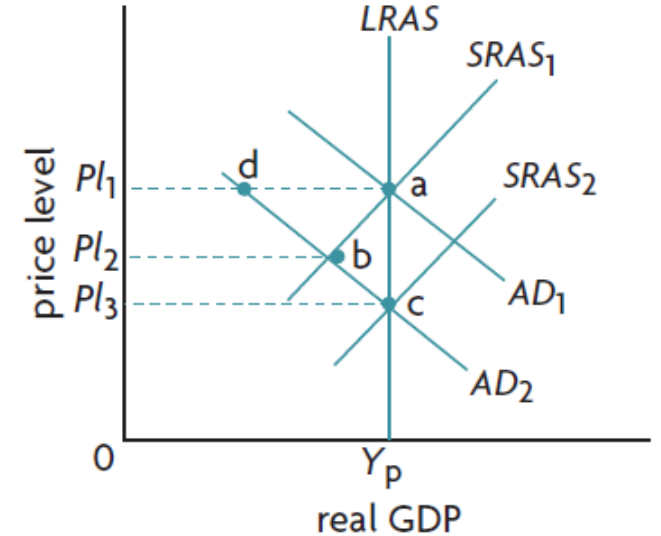
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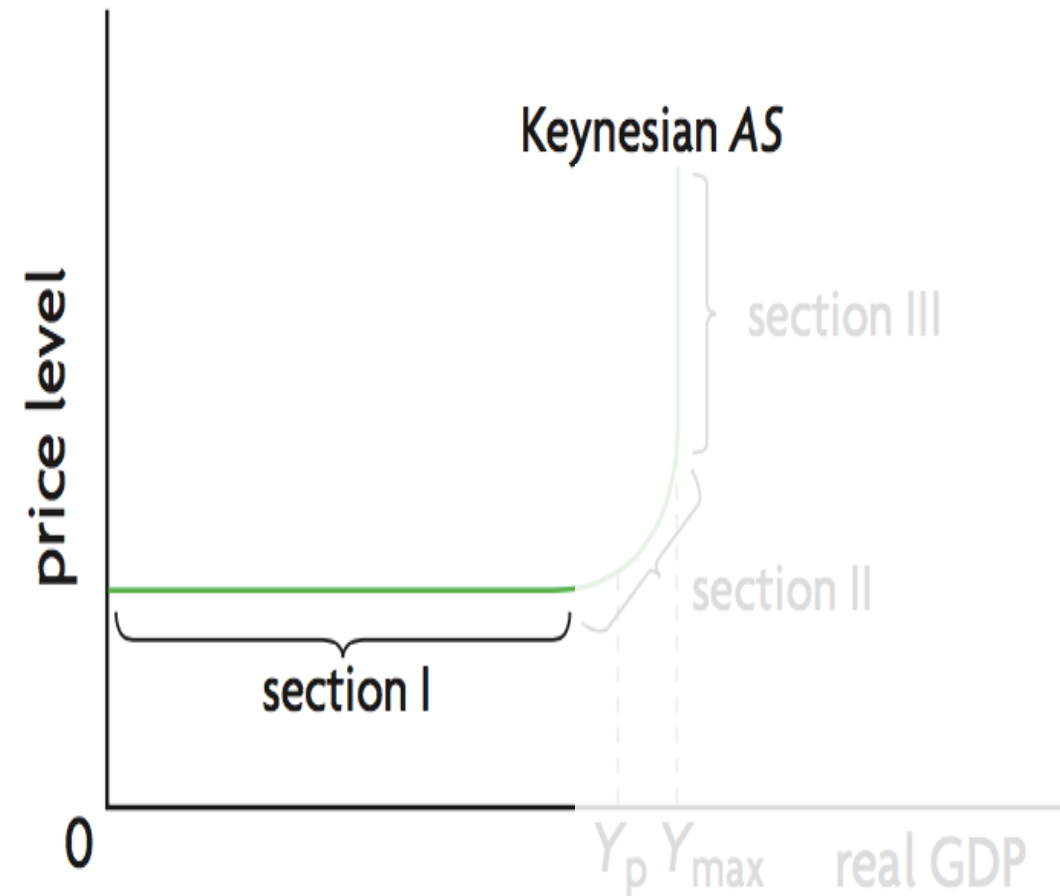
## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Supply – Keynesian Model

#### Section I

In this range of real GDP, many resources are not employed and **spare capacity** exists.

**Spare capacity** refers to physical capital (machines, equipment, etc) that firms have available but do not use.



## 3.2 Aggregate Demand and Aggregate Supply

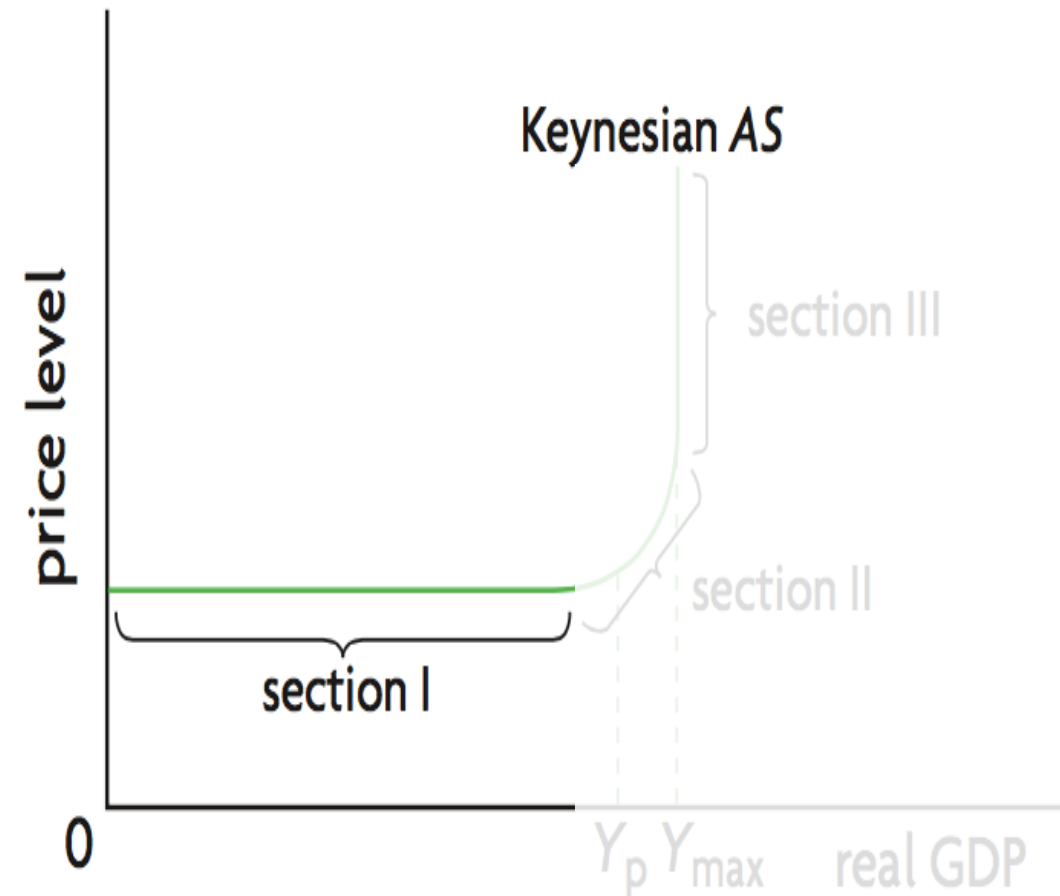
### Aggregate Supply – Keynesian Model

#### Section I

In this range of real GDP, many resources are not employed and **spare capacity** exists.

Firms can easily increase their output by using the spare capacity, without having to increase wages and other resource prices.

Increase in real GDP does not affect price level





## 3.2 Aggregate Demand and Aggregate Supply

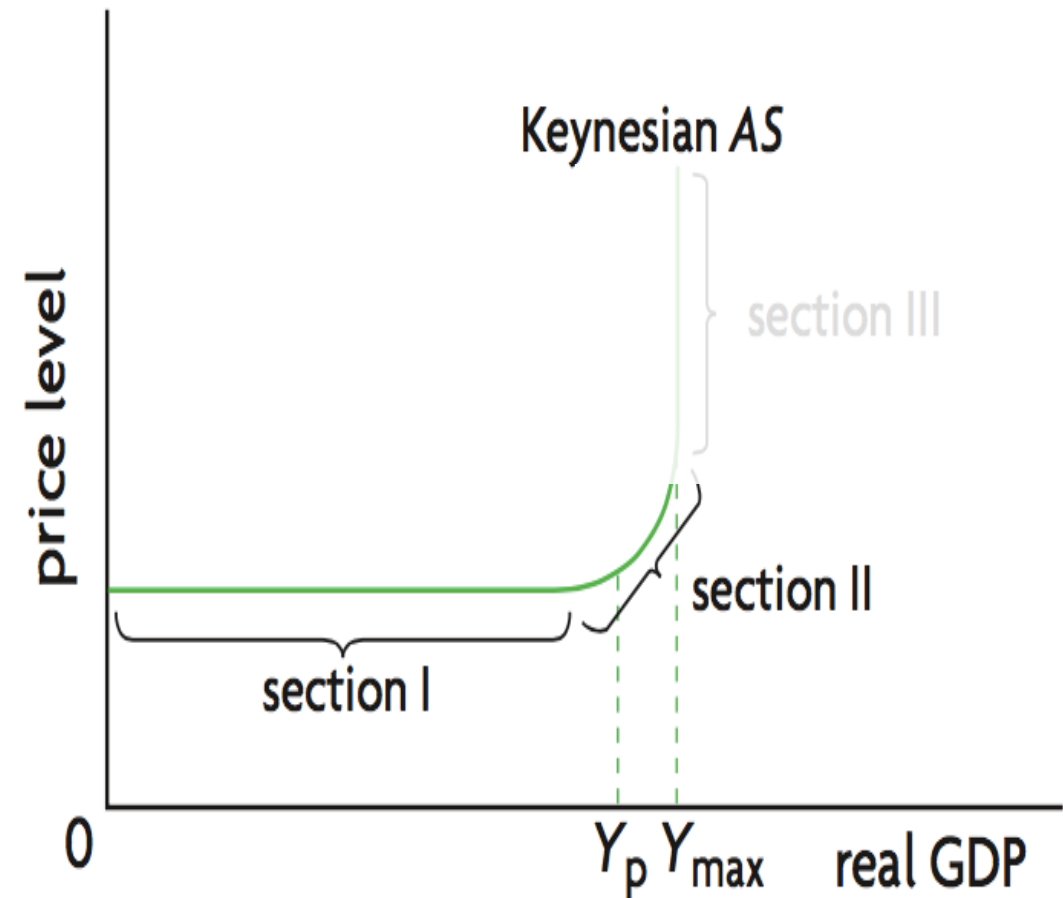
### Aggregate Supply – Keynesian Model

#### Section II

As real GDP increases, more resources are used and spare capacity decreases.

Firms require more workers and resources so production costs begin to rise. Firms increase their output if they can sell at higher prices.

Real GDP increases with the price level



## 3.2 Aggregate Demand and Aggregate Supply

### Aggregate Supply – Keynesian Model

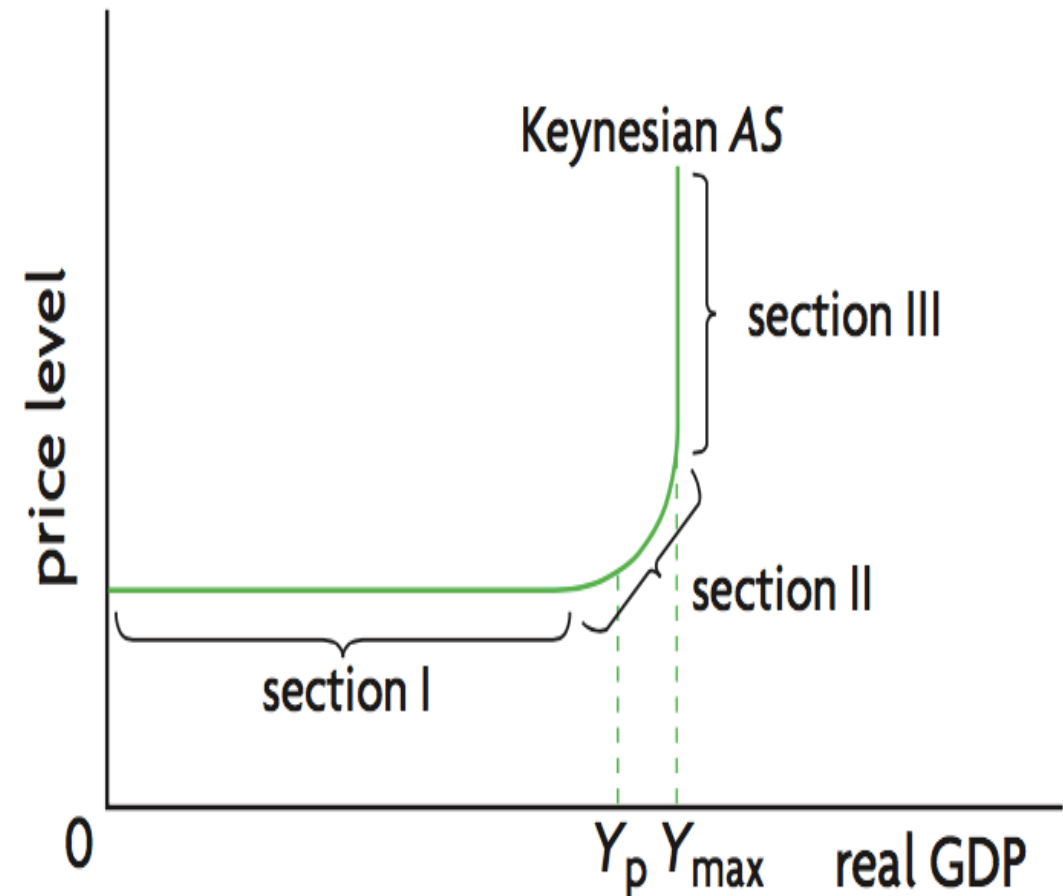
#### Section III

AS curve becomes vertical at **Y<sub>max</sub>**.

Real GDP cannot increase further and firms have maximized their resources.

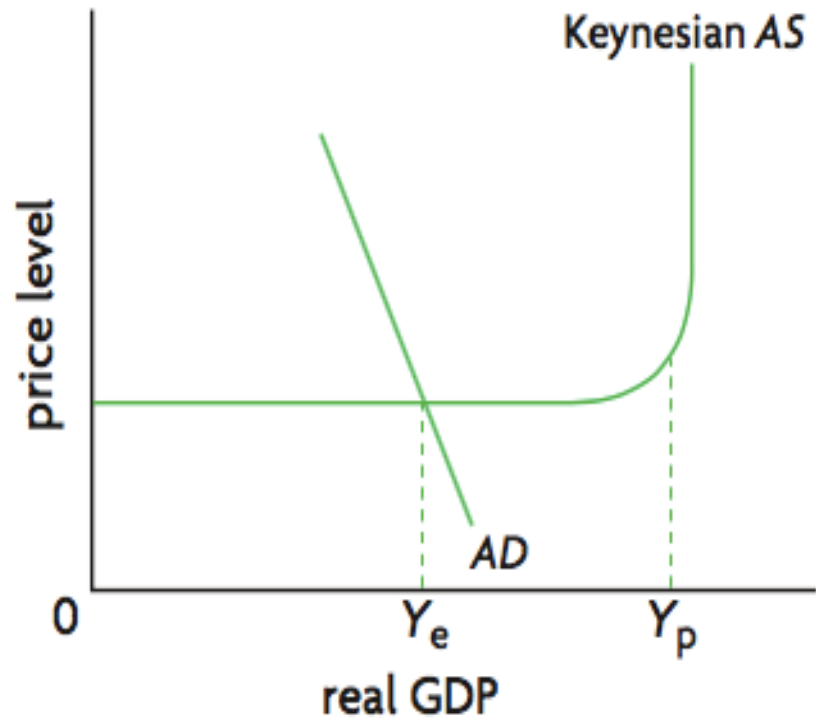
Price level increases very rapidly.

Real GDP does not increase with the price level



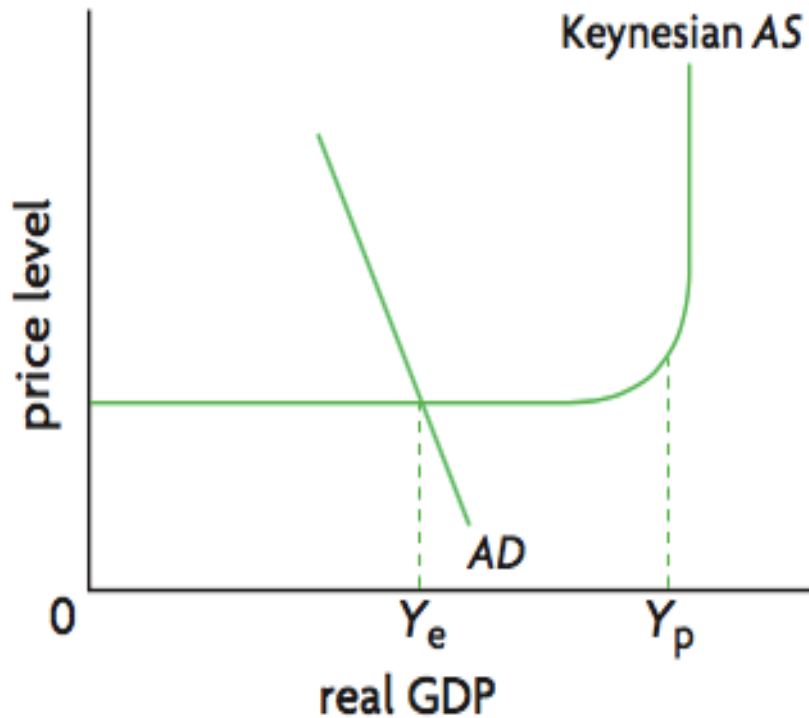
## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – Keynesian Model



## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – Keynesian Model



#### Recessionary Gap

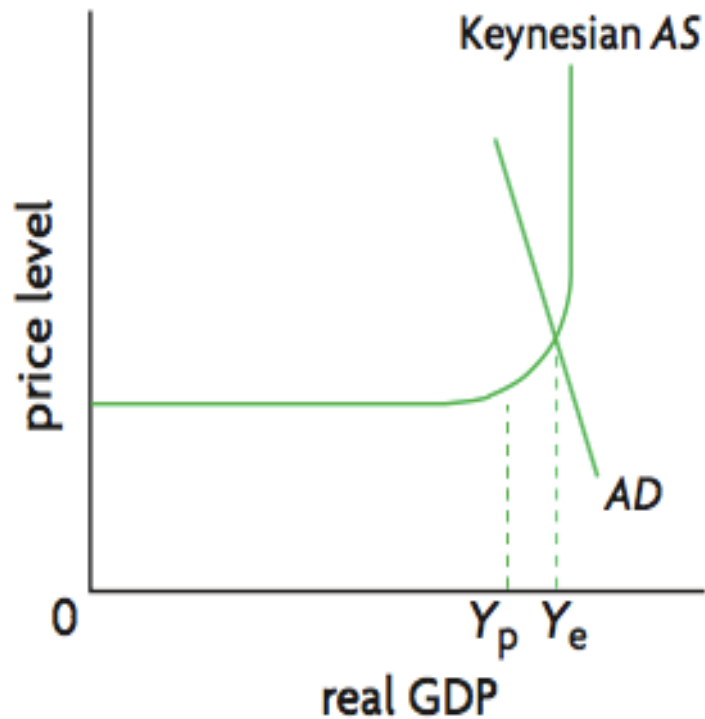
Equilibrium at  $Y_e$  shows that real GDP is lower than potential output ( $Y_p$ ).

Aggregate demand is too weak to motivate firms to produce at  $Y_p$ .

Unemployment is higher than natural rate.

## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – Keynesian Model



#### Inflationary Gap

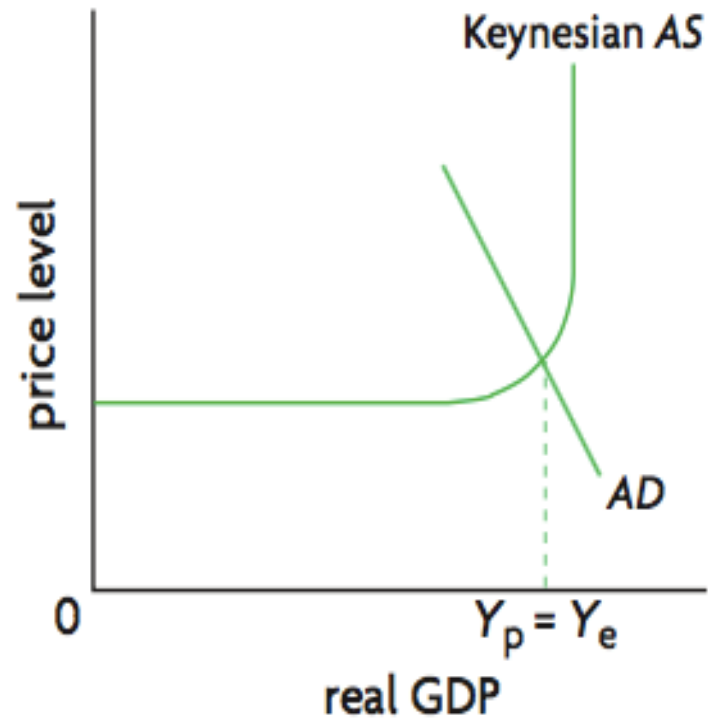
The economy is producing at  $Y_e$ , which is greater than potential output ( $Y_p$ ).

Unemployment has fallen below natural rate.

Economy approaches maximum capacity so price levels increases.

## 3.2 Aggregate Demand and Aggregate Supply

### AD-AS Equilibrium – Keynesian Model



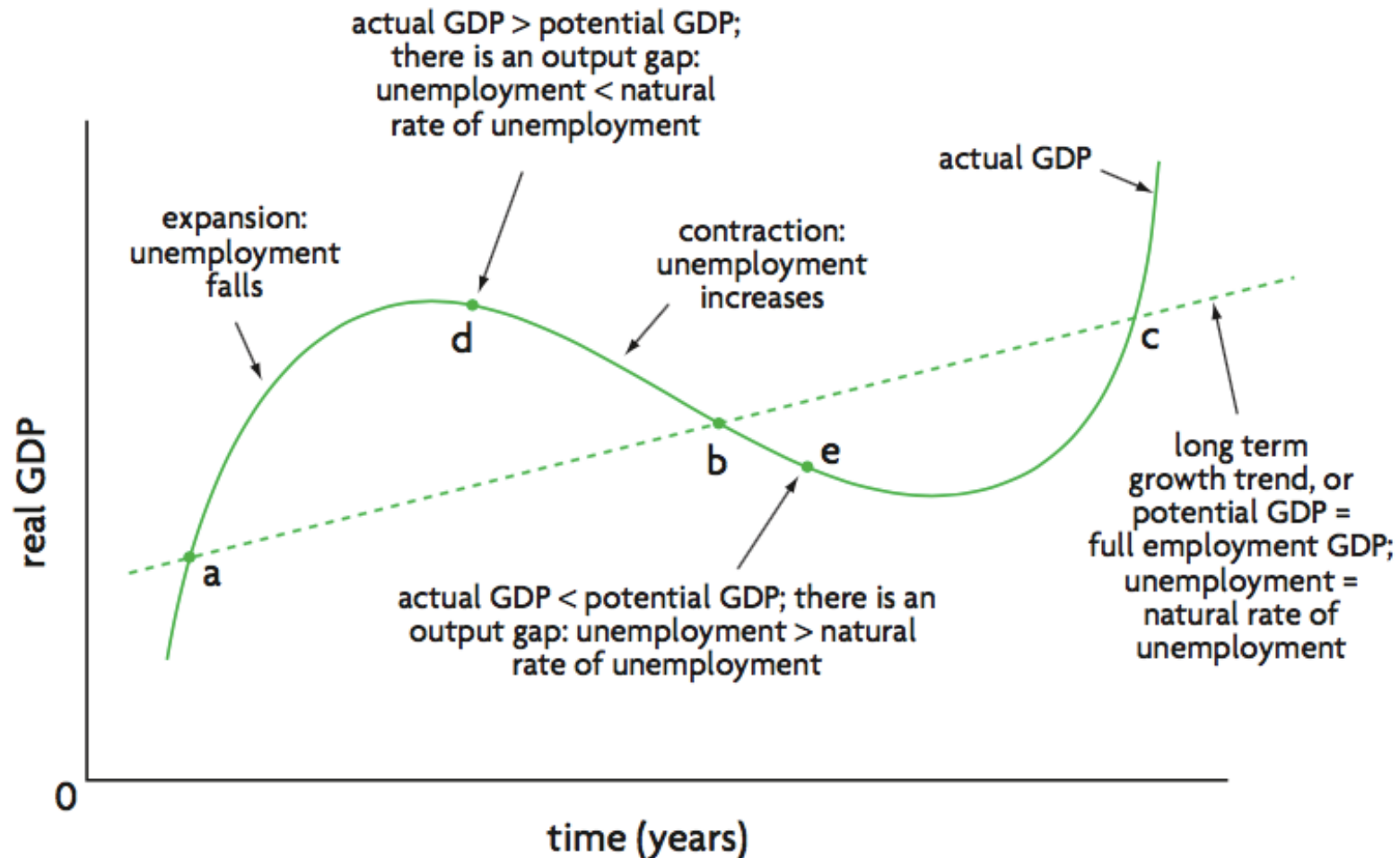
#### Full employment equilibrium

Economy has achieved full employment ( $Y_p = Y_e$ )

Any attempt to further increase production will only increase price levels.

## 3.2 Aggregate Demand and Aggregate Supply

### Keynesian Model x Business Cycle



**Based on your understanding...**

identify where the three Keynesian equilibriums would correspond to the phases of the business cycle.

Recessionary

Inflationary

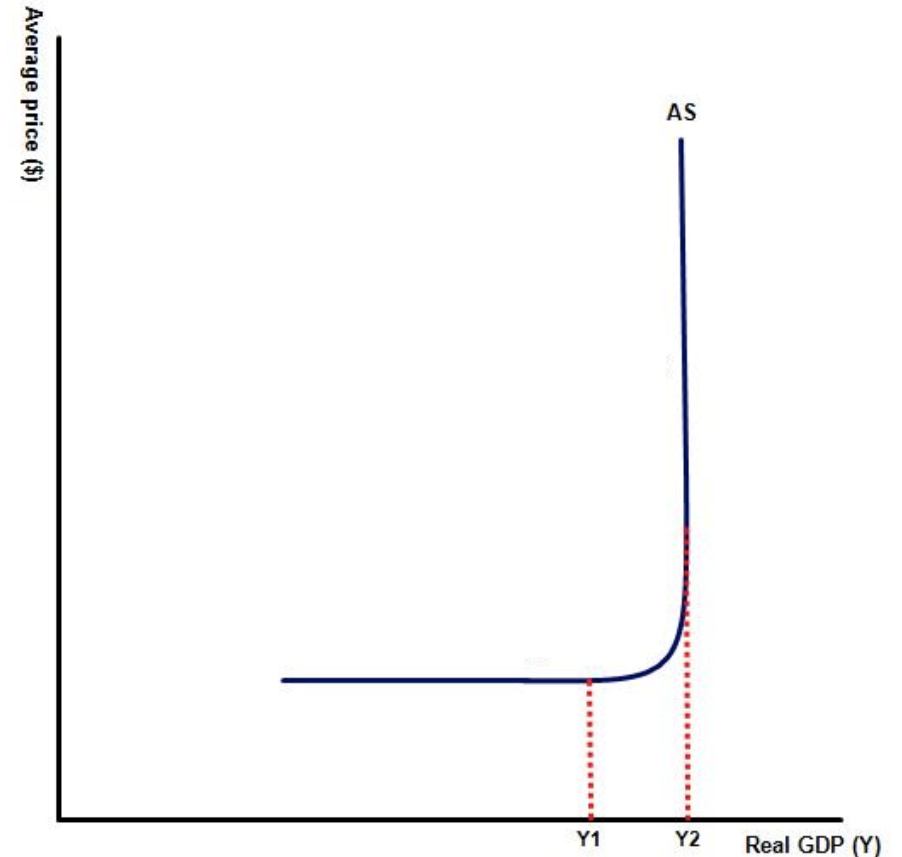
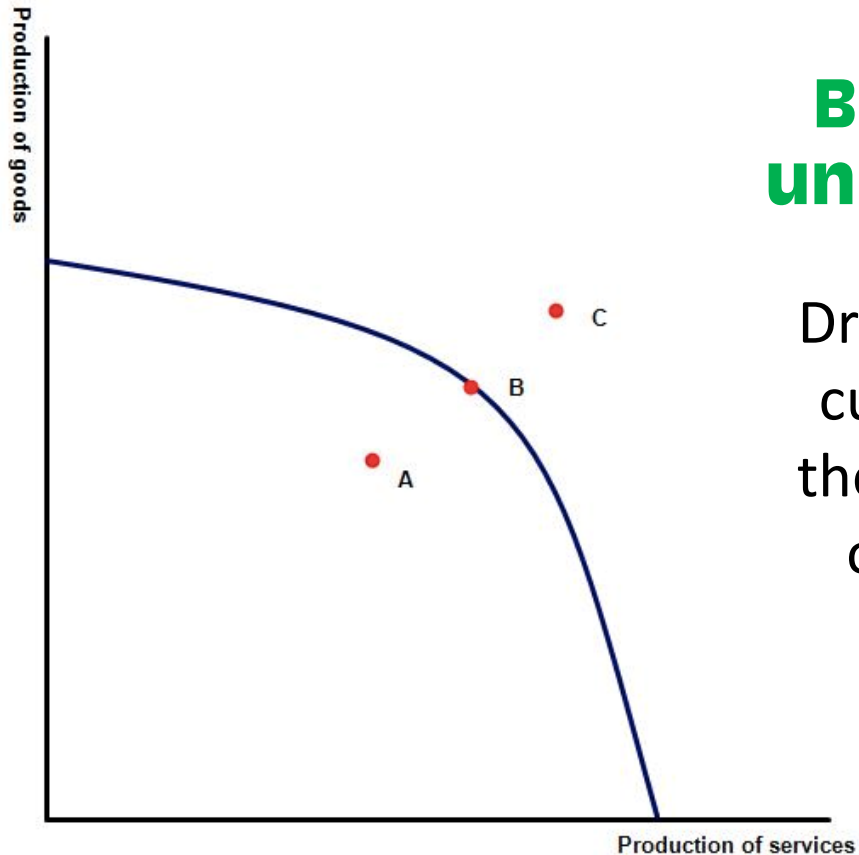
Full Employment

## 3.2 Aggregate Demand and Aggregate Supply

### Keynesian Model x Production Possibilities Curve

**Based on your understanding...**

Draw a Keynesian AS curve and highlight the points A, B and C on your diagram.





## 3.2 Aggregate Demand and Aggregate Supply

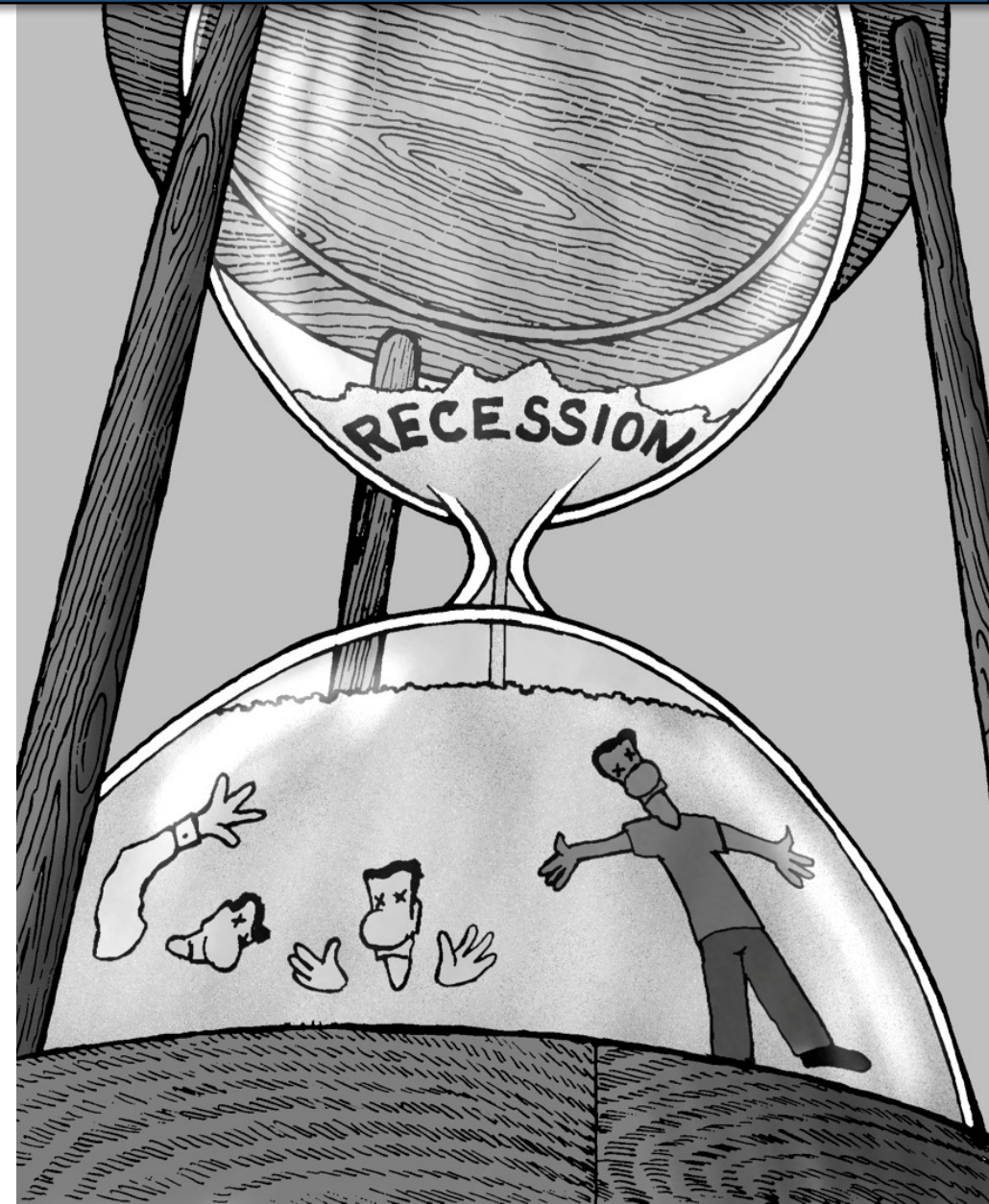
### Keynesian Model

Key features of the Keynesian model:

Recessionary gaps can persist over long periods of time

This occurs because there is

- Inability of wages and prices to fall
- Insufficient **aggregate demand**



## 3.2 Aggregate Demand and Aggregate Supply

### Keynesian Model

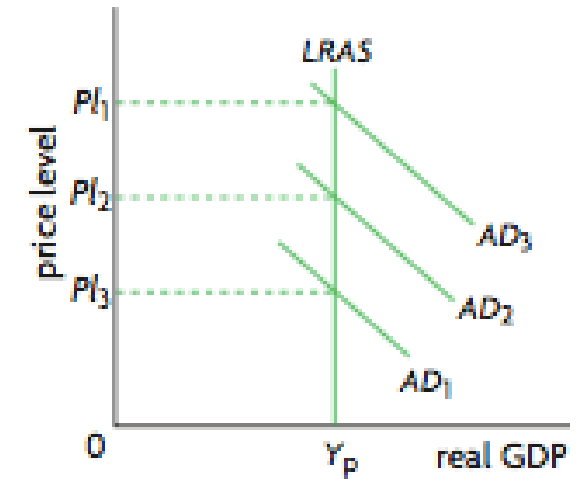
#### Key features of the Keynesian model:

Increases in AD need not increase in the price level

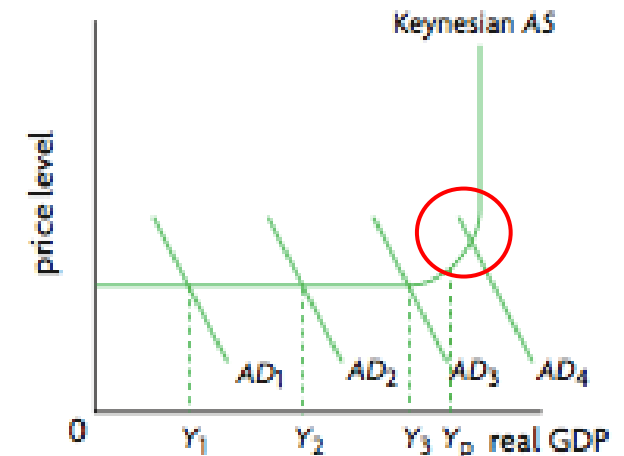
New Classical	Keynesian
In the long run, increase in AD <u>only increases price level</u> , leaving real GDP unchanged	Increases in AD leads to increase in real GDP <u>without affecting price levels</u>

Only when it is close to full employment will a rise in real GDP begin to result in changes in the price level

The monetarist/new classical model



The Keynesian model



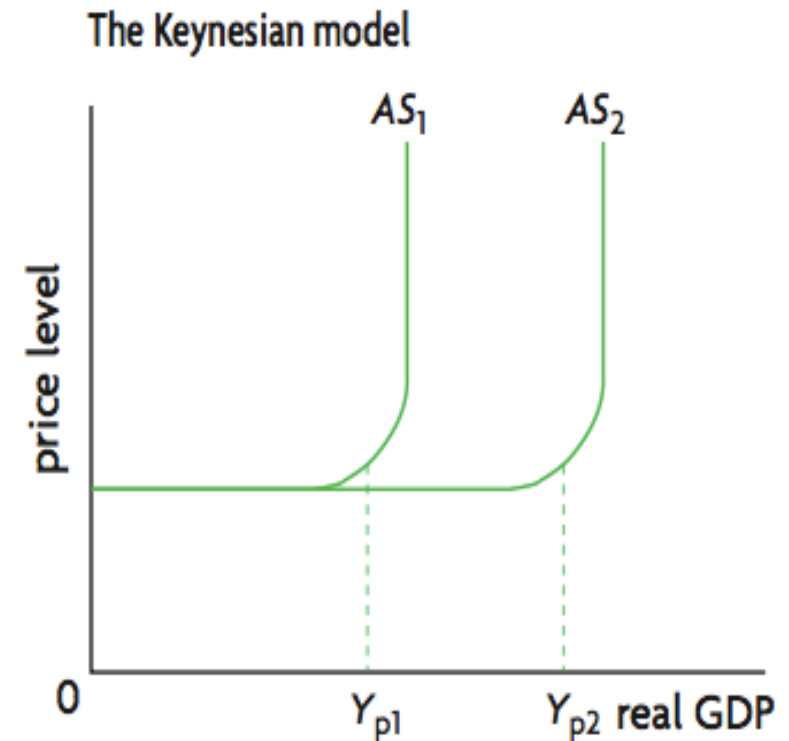
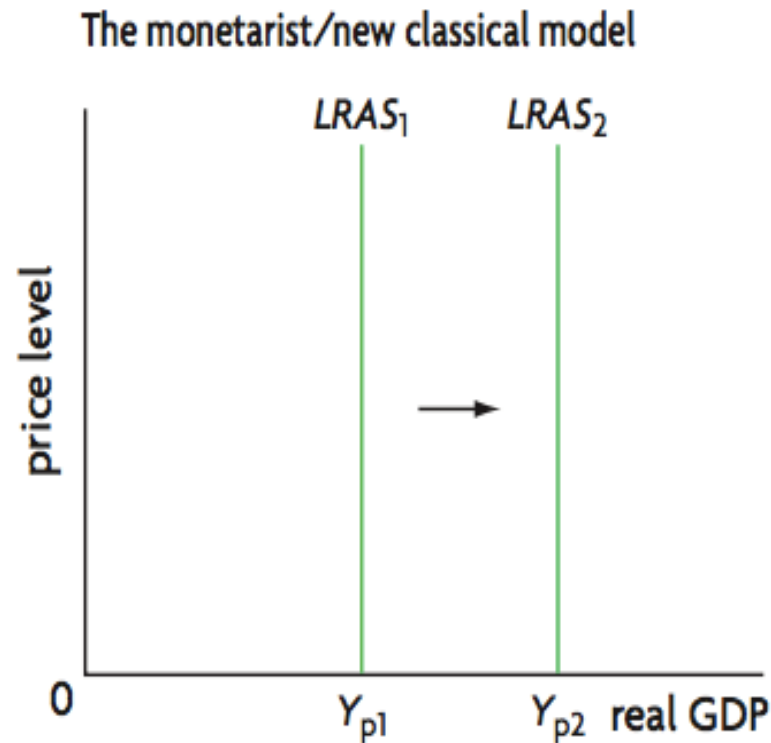
## 3.2 Aggregate Demand and Aggregate Supply

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Over time, the curves can shift in response to factors that changes potential output.

**Increase in potential output represents economic growth.**

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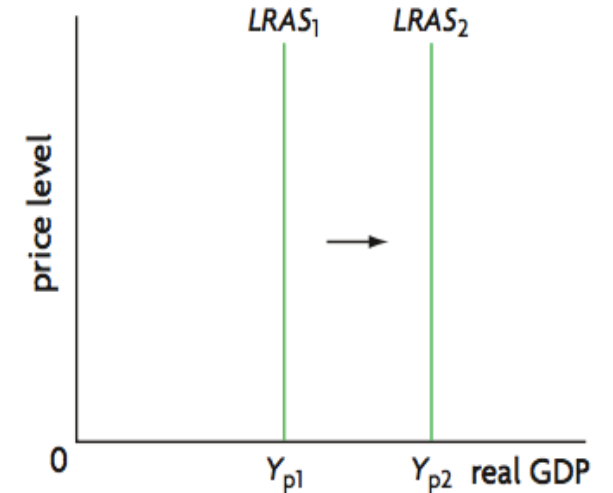
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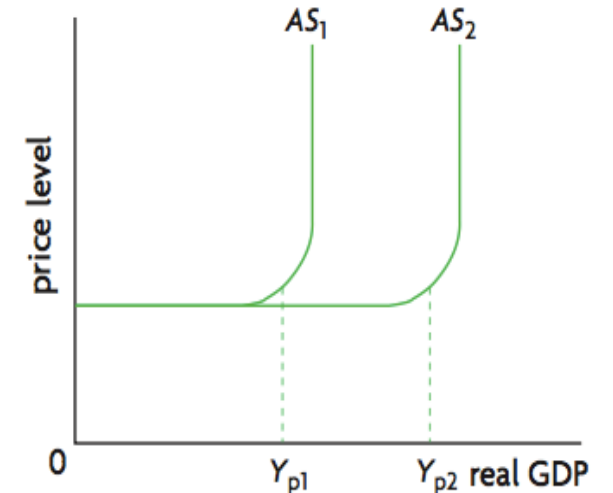
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The monetarist/new classical model



The Keynesian model

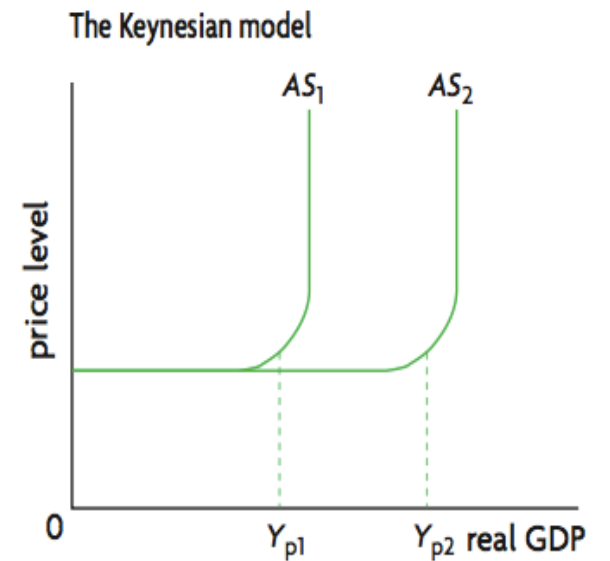
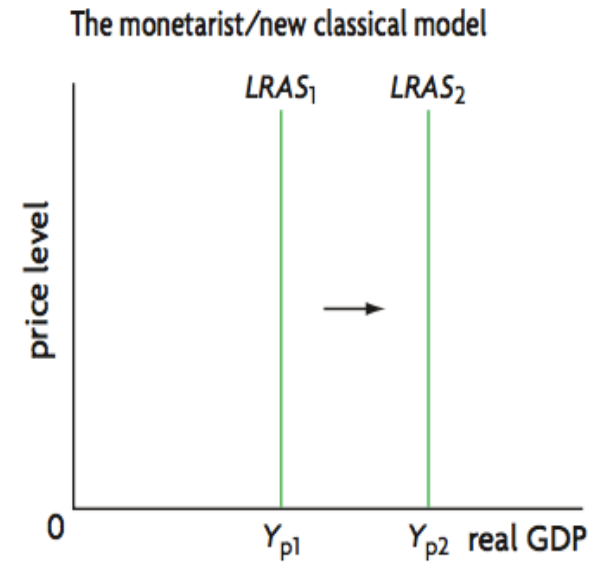


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### Shifting of the AS Curves (Long Term)

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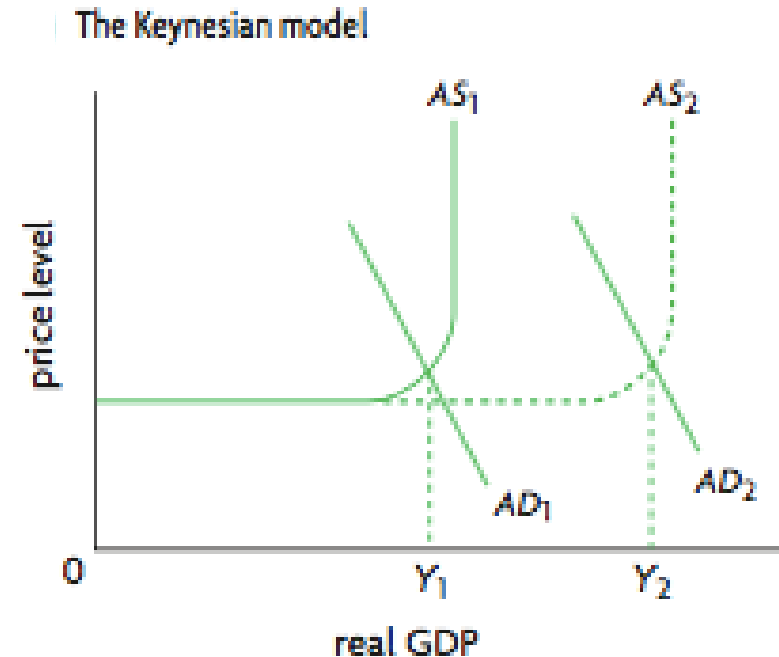
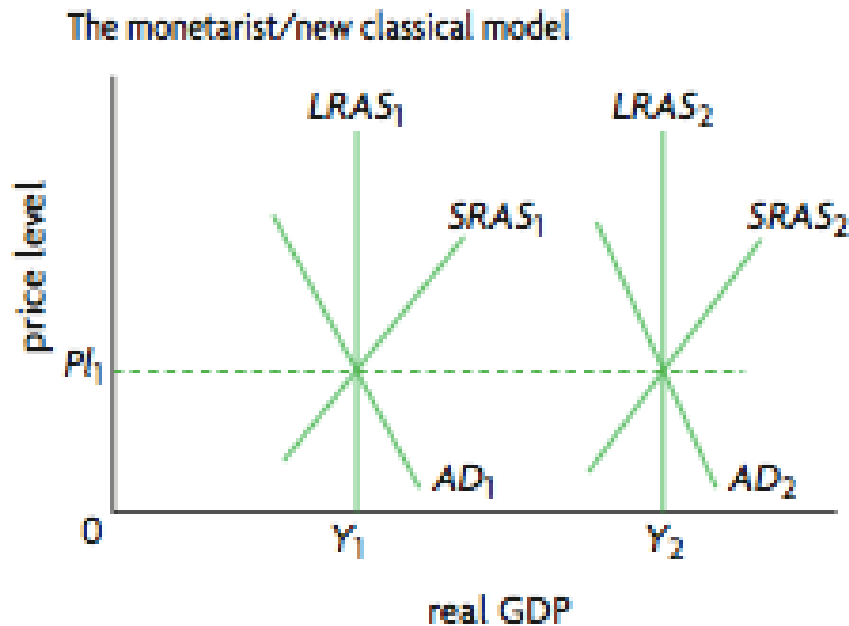
- Increase in quantities and/or quality of factors of production (capital, entrepreneurship, land and labour)
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- Institutional changes (government regulations)
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## 3.2 Aggregate Demand and Aggregate Supply

### Long Term vs Short Term

Long-term growth in the business cycle diagram, showing increases in potential output corresponds to rightward shifting **LRAS or Keynesian AS curves**.



## 3.2 Aggregate Demand and Aggregate Supply

### Long Term vs Short Term

Long-term growth in the business cycle diagram, showing increases in potential output corresponds to rightward shifting **LRAS or Keynesian AS curves**.

In the short-term, economic growth does not involve an increase in potential output in both new classical and Keynesian model.

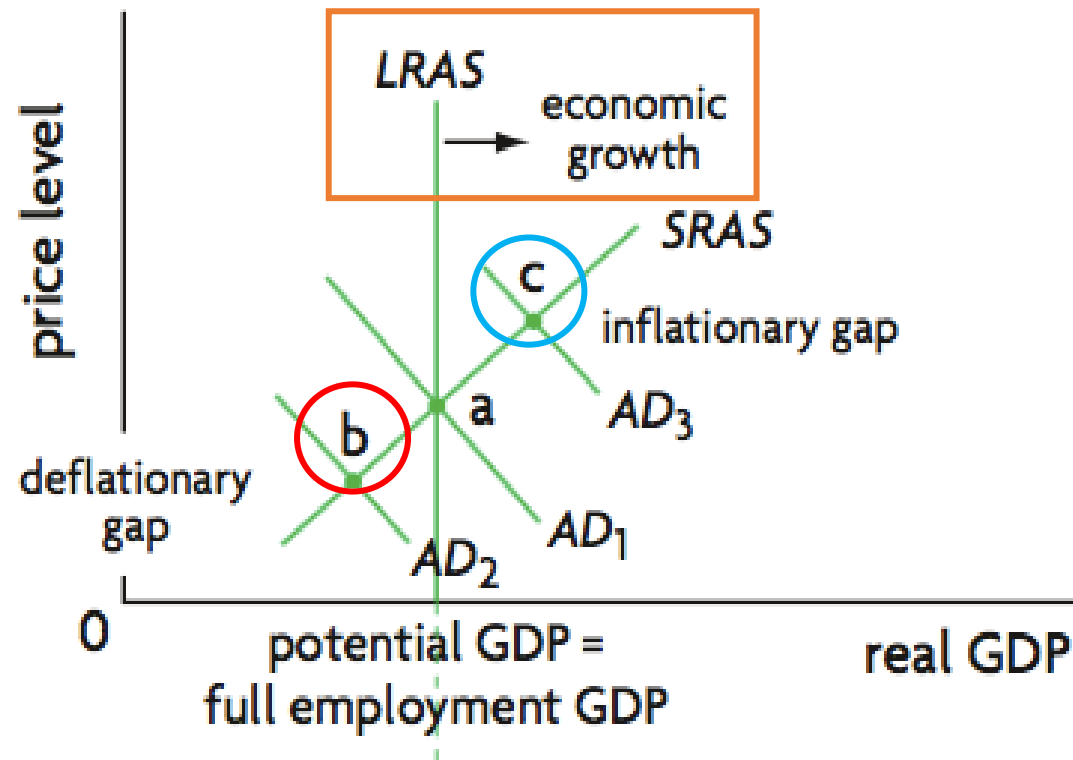
In the long-term, any factors that shifts the LRAS must shift the SRAS curve.

**Exceptions include:** weather conditions and temporary changes in firm's costs of production

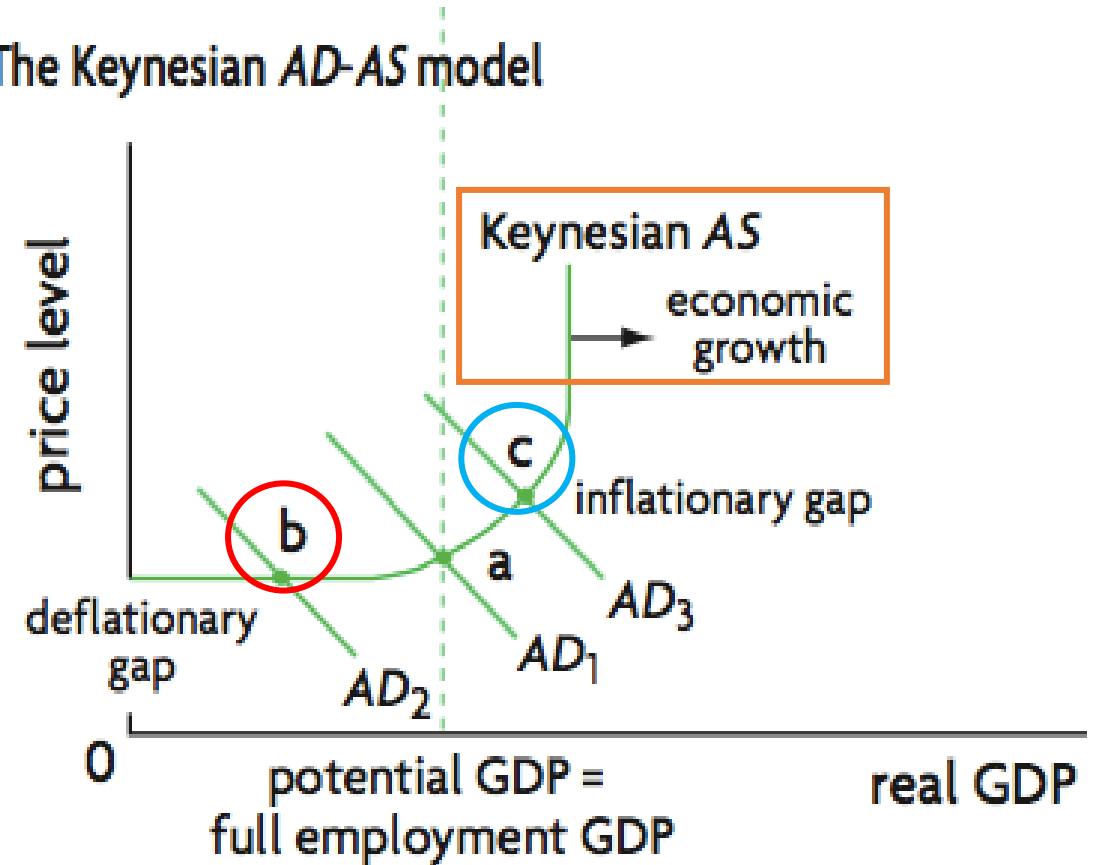
As an economy grows, many of the factors that shifts AS will also shift AD.

## 3.2 Aggregate Demand and Aggregate Supply

The monetarist/new classical model



The Keynesian AD-AS model



How do the differences between the two model implicate government policies?



## 3.2 Aggregate Demand and Aggregate Supply

	Monetarist	Keynesian
Resource prices	Flexible	Sticky downwards
Nature of aggregate supply	SRAS and LRAS	Keynesian AS – 3 sections
Other assumptions	Automatically adjusts to full employment level of output	May be stuck in a recessionary gap
Role of government intervention	Laissez-faire	Demand side policies required to correct recessionary gap