# 3.7 Supply-side policies

# Learning objectives

| 3.7 Supply-side policies | Depth | Diagrams and calculations |
| --- | --- | --- |
| Goals of supply-side policies<br>• Long-term growth by increasing the economy's productive capacity<br>• Improving competition and efficiency<br>• Reducing labour costs and unemployment through labour market flexibility<br>• Reducing inflation to improve international competitiveness<br>• Increasing firms' incentives to invest in innovation by reducing costs | AO2 | |

# Learning objectives

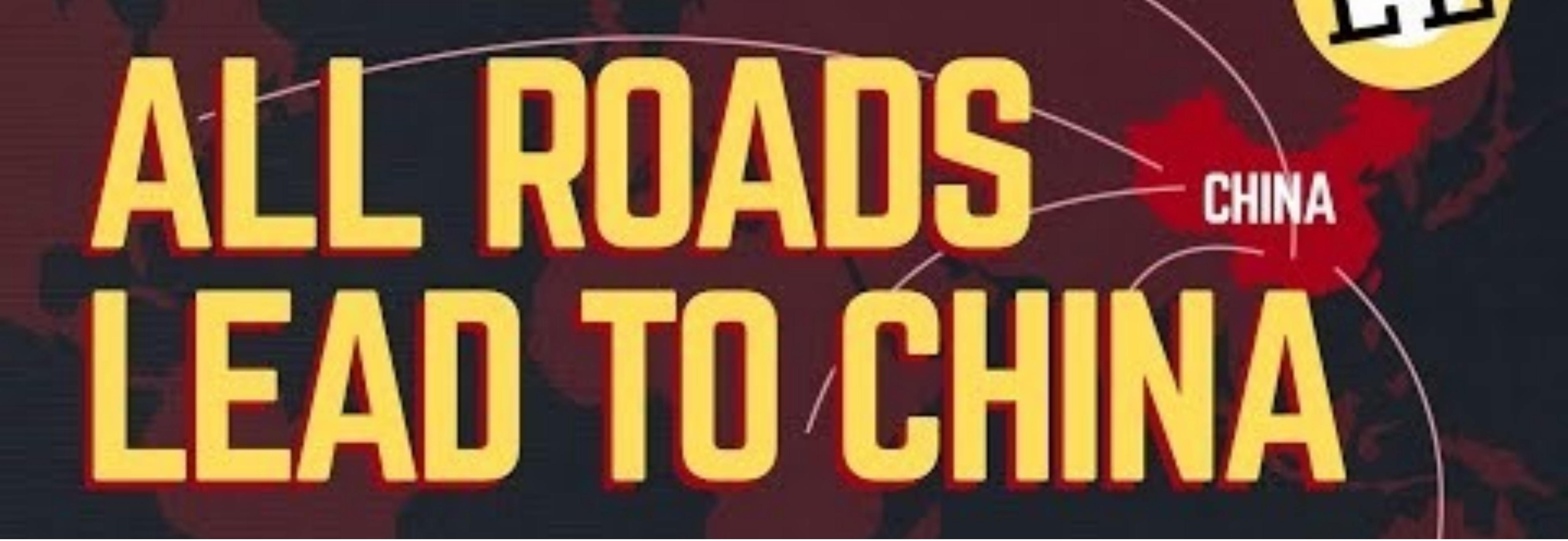
| 3.7 Supply-side policies | Depth | Diagrams and calculations |
|---|---|---|
| Market-based policies, including:<br>• policies to encourage competition, such as:<br>• deregulation • trade liberalization<br>• privatization • anti-monopoly regulation<br>• labour market policies, such as:<br>• reducing the power of labour unions<br>• reducing unemployment benefits<br>• abolishing minimum wages<br>• incentive-related policies, such as:<br>• personal income tax cuts<br>• cuts in business tax and capital gains tax | AO2<br>AO4 | Diagram: AD/AS model and LRAS curve to show the effect of supply-side policies<br><br>Diagram: showing minimum wage |

# Learning objectives

| 3.7 Supply-side policies | Depth | Diagrams and calculations |
|---|---|---|
| Interventionist policies, including:<br>• education, training<br>• improving quality, quantity and access to health care<br>• research and development<br>• provision of infrastructure<br>• industrial policies | AO2 | |
| Demand-side effects of supply-side policies | AO2 | |
| Supply-side effects of fiscal policies | AO2 | |

# Learning objectives

| 3.7 Supply-side policies | Depth | Diagrams and calculations |
|---|---|---|
| Effectiveness of supply-side policies<br>• Constraints on supply-side policies<br>    • Market based – equity issues, time lags, vested interests, environmental impact<br>    • Interventionist – costs, time lags<br>• Strengths of supply-side policies<br>    • Market based – improved resource allocation, no burden on government budget<br>    • Interventionist – direct support of sectors important for growth<br>• Strengths and limitations in promoting growth, low unemployment, and low and stable rate of inflation | AO3 | |




## Real world example

What economic benefits might China’s Belt and Road Initiative (BRI) bring?

# Introduction

**Supply-side policies** aim to increase aggregate supply and the productive capacity of the economy by improving the **quality and/or quantity** of factors of production. There are two major categories of supply-side policies:

**Market-based**

supply-side policies

**Interventionist**

supply-side policies

# Goals of supply-side policies

I - International competitiveness

C - Competition and efficiency

L - Labour market flexibility

I - Incentives

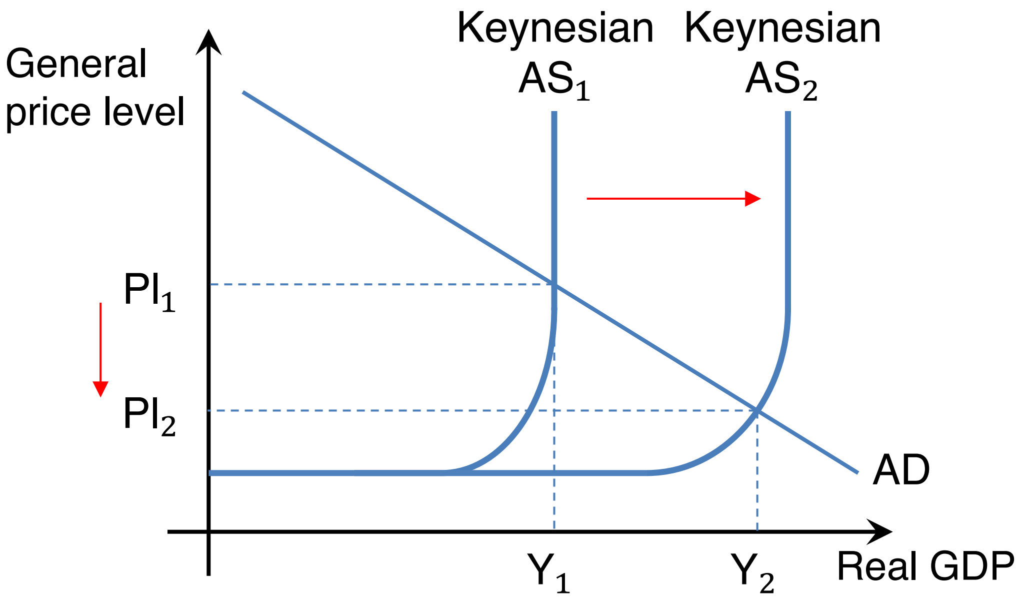
P - Productive capacity

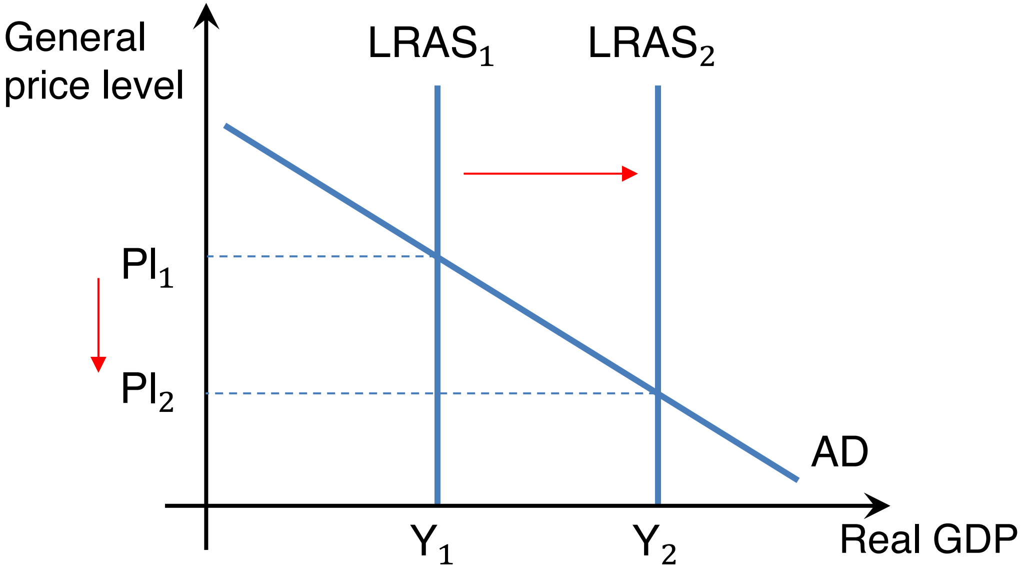
Tip: the acronym **i-CLIP** may help you to remember the five goals of supply-side policies.

# Goals of supply-side policies

## International competitiveness (reduced inflation)

An increase in AS lowers the general price level and the rate of inflation. Lower domestic prices improves the international competitiveness of exports on the international market.



# Goals of supply-side policies

## Competition and efficiency

Policies such as deregulation, privatization, trade liberalization, and anti-monopoly regulation all serve to **encourage competition**.

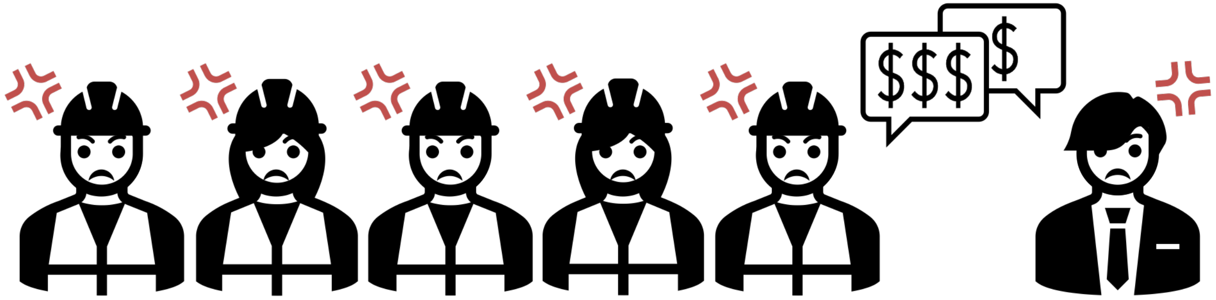

Watch the following video and consider the benefits of competition between firms.

# Goals of supply-side policies

## Labour market flexibility (reduces labour costs and unemployment)

Labour market policies such as those aimed at reducing the power of labour unions, reducing unemployment benefits, and abolishing minimum wages serve to increase **labour market flexibility**.

Greater labour market flexibility lowers labour costs for firms and lowers unemployment; it also improves the efficiency and productivity of the workforce.




# Goals of supply-side policies

## Incentives

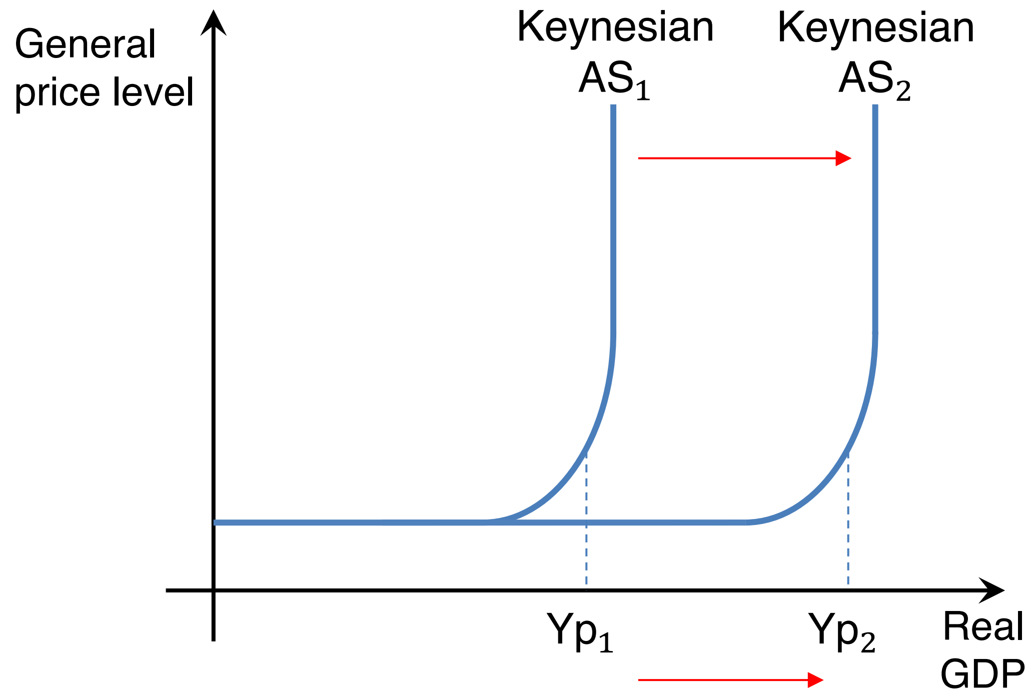
**Incentive-related policies** include cuts in personal income tax, business tax, and capital gains tax.

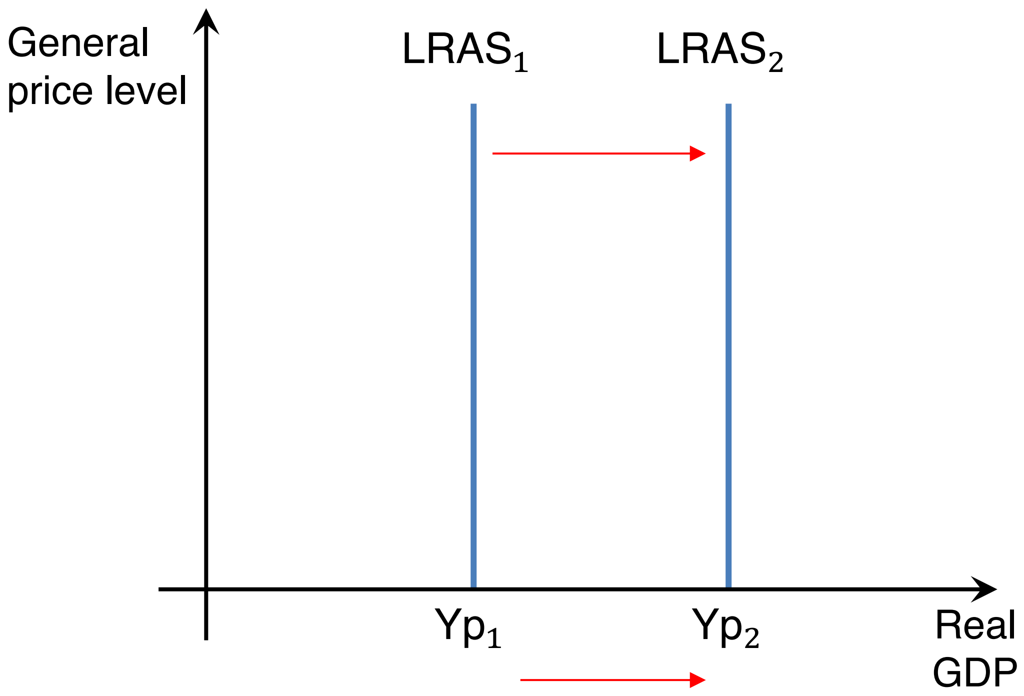
A reduction in personal income tax incentivizes workers to increase output as after-tax income increases for any additional income generated. Cuts in business tax and capital gains tax will allow firms to benefit from lower costs and higher after-tax profits. This increase in disposable income encourages firms to invest in R&D, which is important as innovation can increase AS, thereby increasing the productive capacity of the economy and leading to economic growth.

# Goals of supply-side policies

## Productive capacity

Supply-side policies are aimed at increasing the productive capacity of an economy. This is shown by the Keynesian AS curve / LRAS curve shifting outwards, and real GDP increasing from $Yp_1$ → $Yp_2$.




# Market-based policies

**Market-based supply side policies** are geared towards a free-market economy and promotes competition between firms; this improves efficiency and increases LRAS and potential output.

# Market-based policies – encouraging competition

Governments may use market-based policies to encourage competition as it leads to greater efficiency, thereby increasing LRAS and achieving economic growth.

# Market-based policies – encouraging competition

## Deregulation

**Deregulation** is the reduction or elimination of regulations in order to lower the costs of production for firms, which encourages competition.

Consumers may benefit from increased competition as there would be a greater variety of choices to choose from, and firms would likely improve the quality of their products and/ or lower their prices in order to attract customers.

# Market-based policies – encouraging competition

## Privatization

**Privatization** refers to the process in which state-owned enterprises or assets are transferred from the public sector to the private sector.

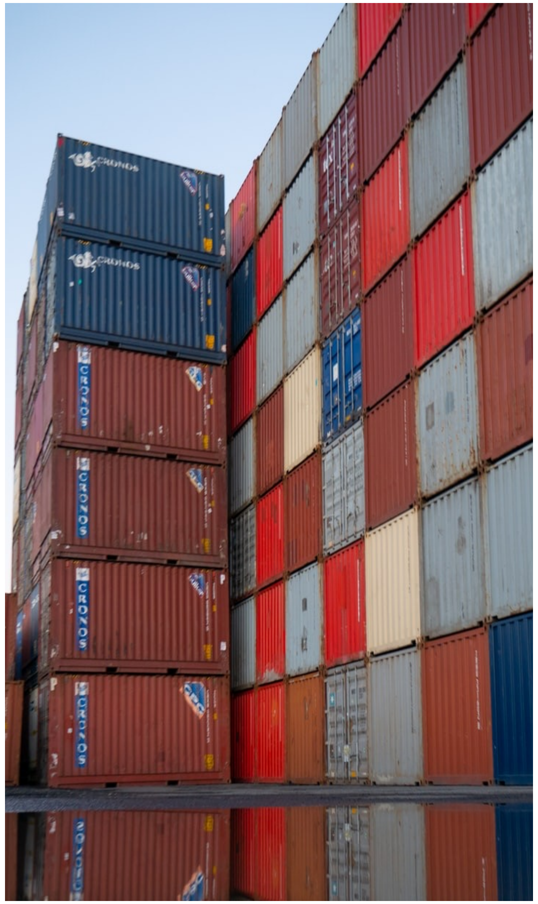
This market-based policy serves to increase competition and efficiency as firms in the private sector face a greater degree of competition and have a greater incentive to make profits. As a result, a private firm would likely be more efficient, as it must find ways to remain competitive and profitable to stay in the market.

**Examples:** British rail (1993), Air Canada (1989), Japanese National Railways (1987)

# Market-based policies – encouraging competition

## Trade liberalization

**Trade liberalization** refers to the elimination of international trade barriers.



This market-based policy encourages free trade, which increases competition and leads to greater efficiency. Producers can specialize according to their comparative advantages and trade with one another, which leads to a better allocation of the world's resources.

What are some examples of international trade barriers?

# Market-based policies – encouraging competition

## Anti-monopoly regulation

**Anti-monopoly regulation** refers to policies that are aimed at limiting the market power of dominant firms in an industry.

Without regulations, monopolies may **abuse their market power** and sell at higher prices and/or restrict output due to a lack of competitors. Monopolies have **no incentives** to increase efficiency or to innovate, which leads to market failure. By using this market-based policy, governments can promote market competition which improves efficiency in the economy.

# Real world example – case study

## Anti-monopoly regulation

**Article:** Breaking up big companies and market power concentration

1. Which US tech companies did US Senator Elizabeth Warren propose to break up?
2. What is Amazon's market share in the e-commerce market?
3. Explain why the government may want to break up the market leaders.
4. Explain what mergers and acquisitions refer to.
5. List some of the mergers/ acquisitions mentioned in the article.
6. Explain Tyler Cowen's opinion on the anti-monopoly regulation.

# Over to you…

Hoang, Wray, & Chakraborty (2020)

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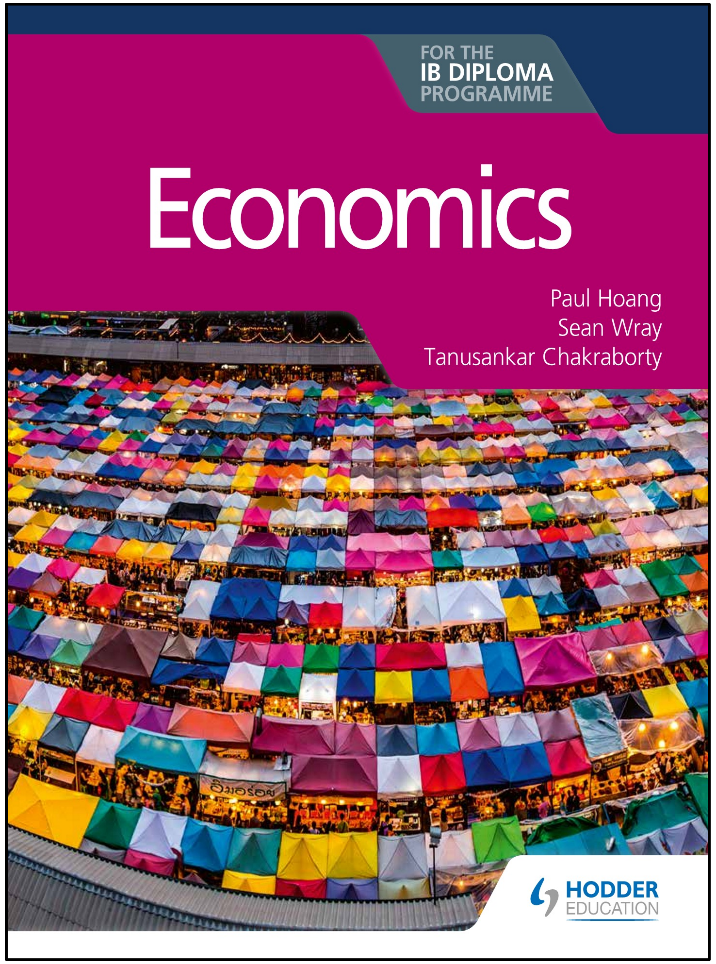


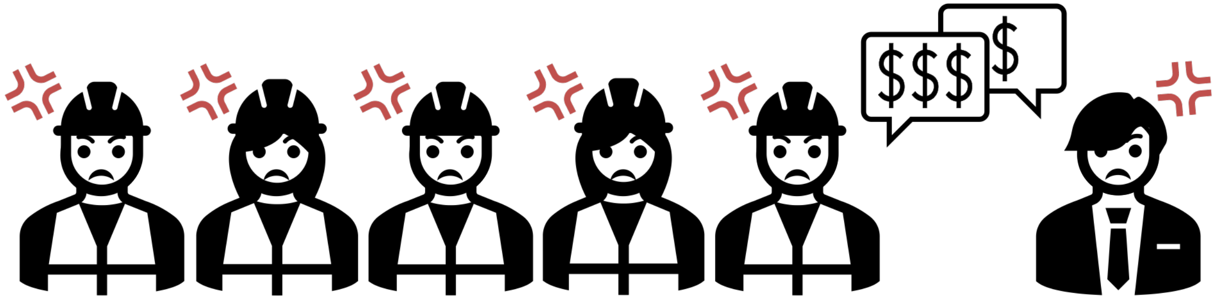

# Market-based policies – labour market flexibility

Governments may use market-based policies to increase labour market flexibility as it reduces labour costs and unemployment, thereby increasing LRAS and achieving economic growth.

# Market-based policies – labour market flexibility

## Reducing the power of labour unions

Labour unions/ trade unions are organizations which protect workers by using collective bargaining to negotiate higher wages and/ or better working conditions with employers. Labour unions cause labour costs to increase. Consequently, unemployment may rise as the quantity demanded for labour falls with rising prices.




Therefore, governments may use market-based policies to reduce the power of labour unions, which lowers labour costs closer to the competitive market equilibrium price. By doing so, efficiency will increase, unemployment will fall, and the market will become more competitive.

# Market-based policies – labour market flexibility

## Reducing unemployment benefits

**Unemployment benefits** are transfer payments made by the government to support those who are unable to find employment. However, unemployment benefits may act as a disincentive for some people to find work.

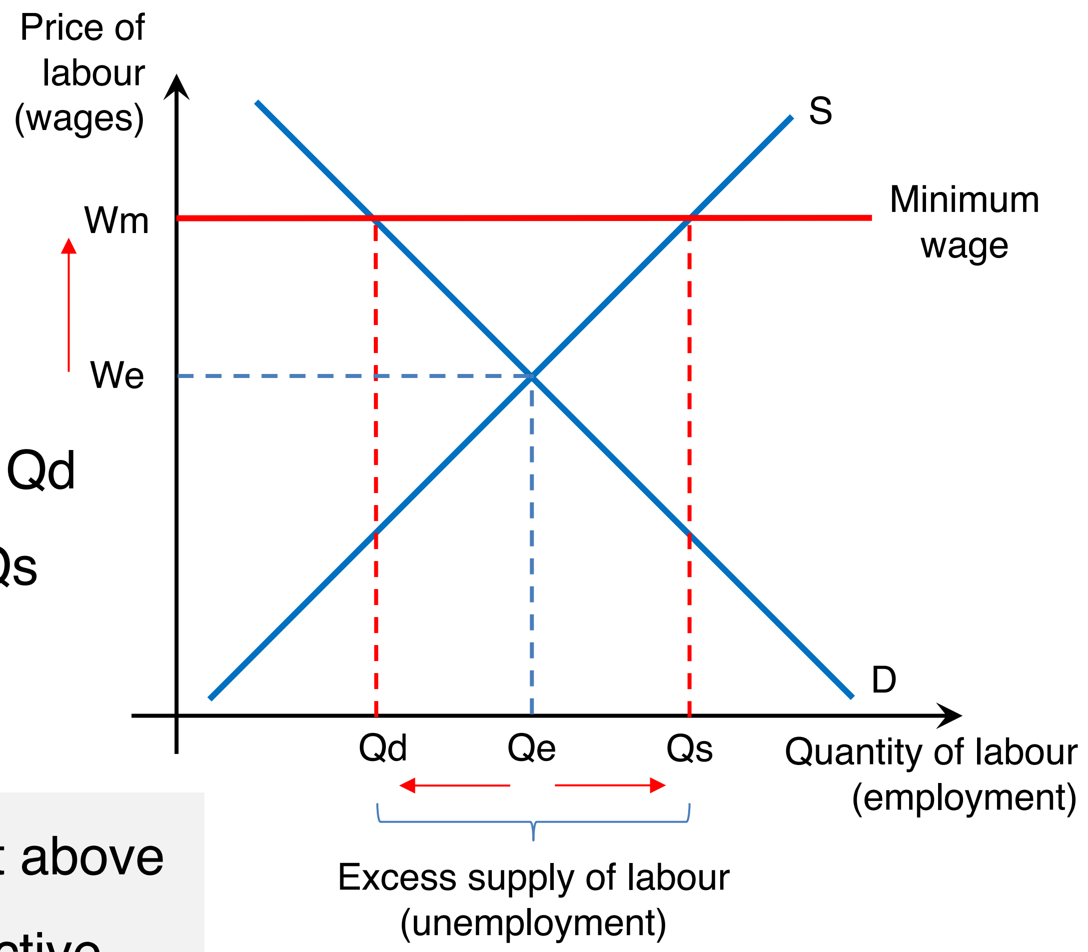
Reducing unemployment benefits will incentivize people to look for work. This will lower unemployment, increase efficiency in labour markets, and shift LRAS outwards.

# Market-based policies – labour market flexibility

## Abolishing minimum wages

A minimum wage is the lowest level of pay which can legally be paid to a worker.

- A minimum wage causes the price of labour to increase from We → Wm.
- The quantity demanded for labour falls from Qe → Qd
- The quantity supplied for labour rises from Qe → Qs
- This results in an excess supply of labour (Qs–Qd)



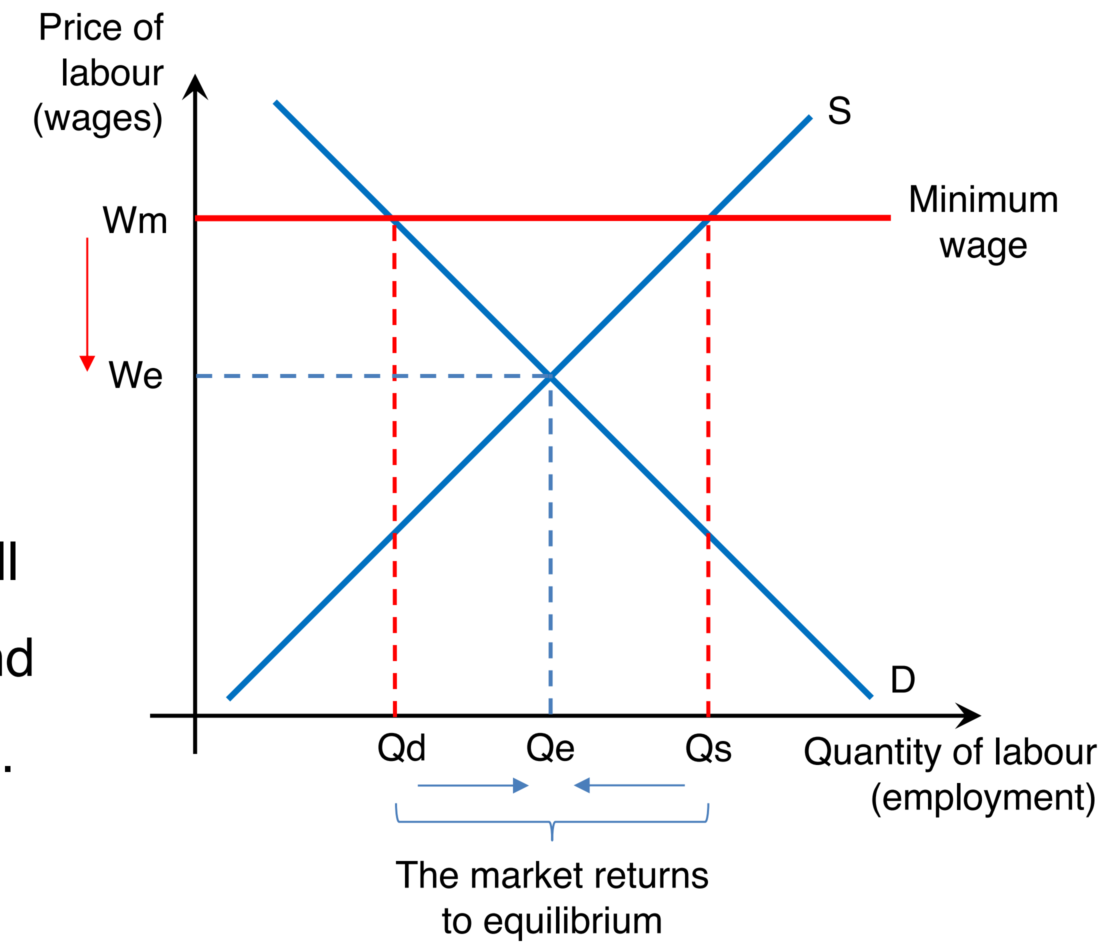

Like a price floor, a minimum wage must be set above the market equilibrium wage in order to be effective.

# Market-based policies – labour market flexibility

## Abolishing minimum wages

Wage rigidities also make it difficult for firms to lower wages, so they may choose to lay off workers instead of reducing their pay during a recession. This would lead to a higher levels of unemployment.

By abolishing minimum wages, the price of labour will fall back to the competitive equilibrium price (We), and the quantity demanded for labour will rise back to Qe. This results in a lower rate of unemployment, and a higher level of national output as well.




# Market-based policies – incentives

Governments may use market-based policies to increase incentives for people to work and businesses to invest, thereby increasing LRAS and achieving economic growth.

# Market-based policies – incentives

## Personal income tax cuts

A **personal income tax** is levied on an individual's wages, salaries, profits, and/ or other forms of earnings.

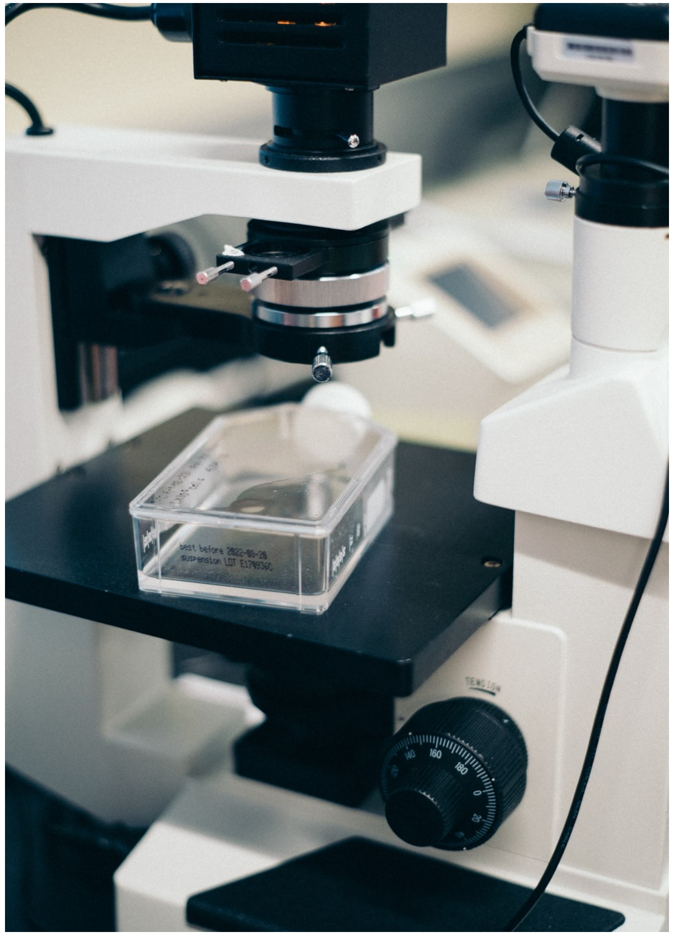
A reduction in personal income tax will increase the level of after-tax income disposable income for taxpayers. This improves productivity by incentivizing individuals to do work more hours or retiring at a later age. This market-based policy also incentivizes those currently without work to seek employment, thus reducing unemployment. Therefore, reducing personal income tax increases LRAS and the productive capacity of an economy.

# Market-based policies – incentives

## Business tax cuts

A business tax is levied on a corporation's profits.

A reduction in business tax will increase the level of after-tax profits, which incentivizes producers to reinvest in the business. This may result in greater capital accumulation and productive capacity in the economy, thereby increasing potential output.



# Real world example – case study

## Business tax cuts

**Task 1**

**Article:** More R&D tax incentives in pipeline

1. Why has the Chinese government reduced taxes on R&D expenses?
2. How will the reduction in taxes affect economic growth?
3. How have the tax breaks for R&D expenses changed in recent years, and how might this affect LRAS?

**Task 2**

Watch the following video:

# Market-based policies – incentives

## Capital gains tax cuts

A **capital gains tax (CGT)** is levied on corporations for the profits earned from the sale of assets such as stocks, bonds, and real estate.

A reduction in capital gains tax (CGT) will incentivize firms to invest more. This increases the amount of capital goods in the economy, thereby increasing LRAS and potential output.

# Real world example – case study

**Podcast:** Evaluating The Washington Consensus

1. Which four reforms of the Washington Consensus did Anusha and her colleagues study?
2. Explain how each of the four reforms may affect economic growth.
3. What were the overall results? How did the reforms affect economic growth?

# Interventionist policies

**Interventionist supply-side policies** involve government intervention in the economy to increase LRAS and potential output.

# Interventionist policies

## Education and training

**Education and training** serve to improve the quality of human capital. With better education and training, the labour force becomes more skilled, efficient, and productive; this increases the productive capacity of the economy where LRAS shifts outwards.

Correlation between mean years of schooling and GDP per capita

How might education and training reduce the level of structural unemployment in the economy?

# Interventionist policies – access to health care

Improving the health of a population will improve the quality of human capital; this will increase the productivity of the workforce and shift LRAS outwards.

**Example:** China builds two hospitals in less than two weeks

# Interventionist policies

## Research and development

**Research and development (R&D)** refers to business activities to introduce and innovate new products and processes.

R&D serves to improve the quality and/ or quantity of capital resources, which increases the productive capacity of the economy and shifts LRAS outwards.

# Real world example – data analysis

## Research and development

**Source:** The Most Innovative Companies in 2021

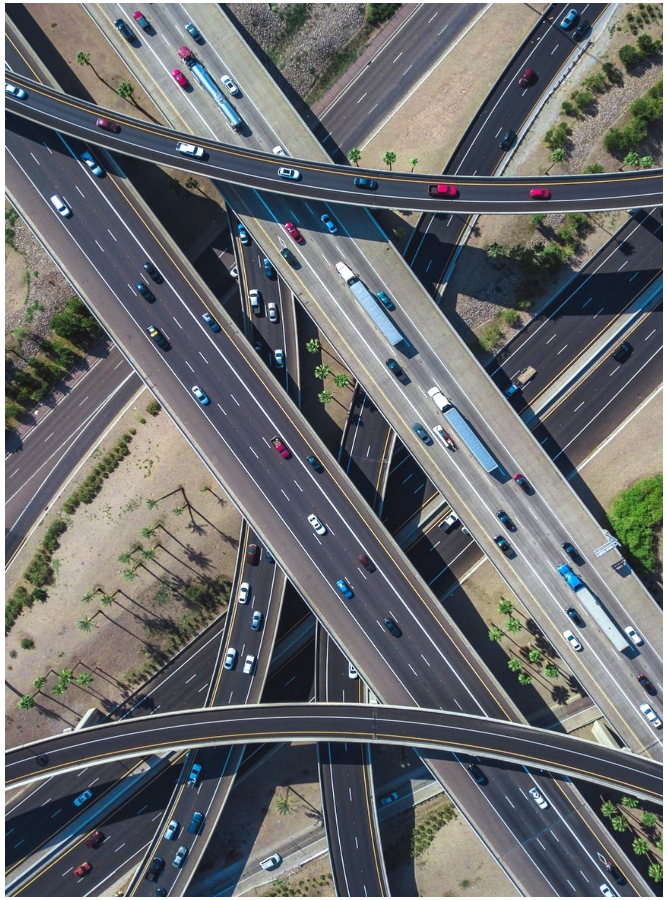
**Data Analysis Questions**

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?

# Interventionist policies

## Provision of infrastructure

**Infrastructure** refers to physical capital such as transportation systems, sewer systems, communication networks etc.



Investments in infrastructure may lower costs, improve efficiency and productivity; this increases the productive capacity of the economy and LRAS shifts outwards.

# Real world example – case study

## Provision of Infrastructure Example: The Hong Kong–Zhuhai–Macao Bridge

### Reduction in unemployment

- ‘Implementation of the works of the HZMB in Hong Kong will create many job opportunities. The works […] will create more than 14,000 jobs.’

### Increase in productivity

- ‘The travelling time between Zhuhai and the Hong Kong International Airport (HKIA) has been reduced from 4 hours to 45 minutes’
- The HZMB bridge improves the mobility of factors of production which may increase productivity.

# Interventionist policies

## Industrial policies

**Industrial policies** are government policies which target specific industries to promote growth in key areas of the economy. For example, the government may provide support for small and medium-sized enterprises or firms (SMEs), and infant industries.

Some of the ways in which governments may support specific industries:

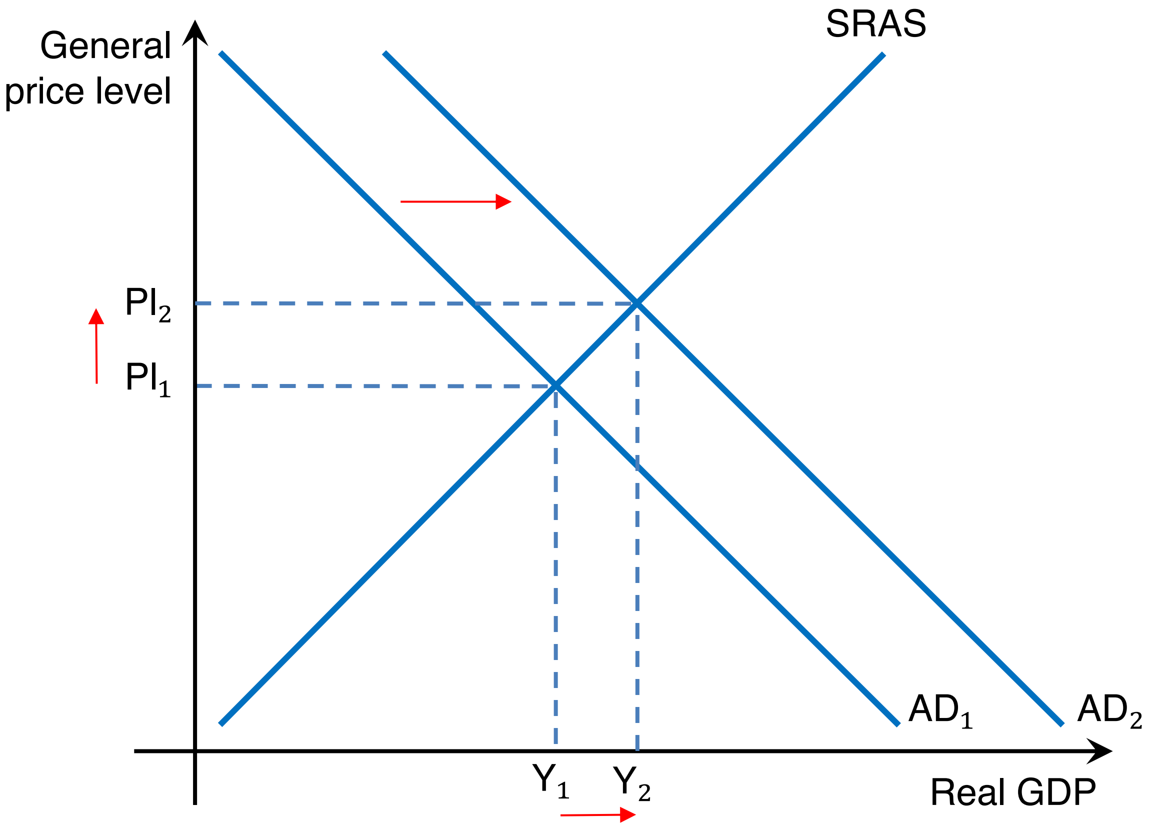
- tax cuts
- tax allowances
- subsidized lending
- trade protectionist policies

# Demand-side effects of supply-side policies

While supply-side policies are aimed at increasing aggregate supply, it is important to note that they are also capable of influencing **aggregate demand** in the economy.

Recall that $AD = C + I + G + (X - M)$

Interventionist policies such as investments on education, training, health care, R&D, and infrastructure all contribute to the G component of AD. Therefore, supply-side policies involving government spending will shift $AD_1 \rightarrow AD_2$.



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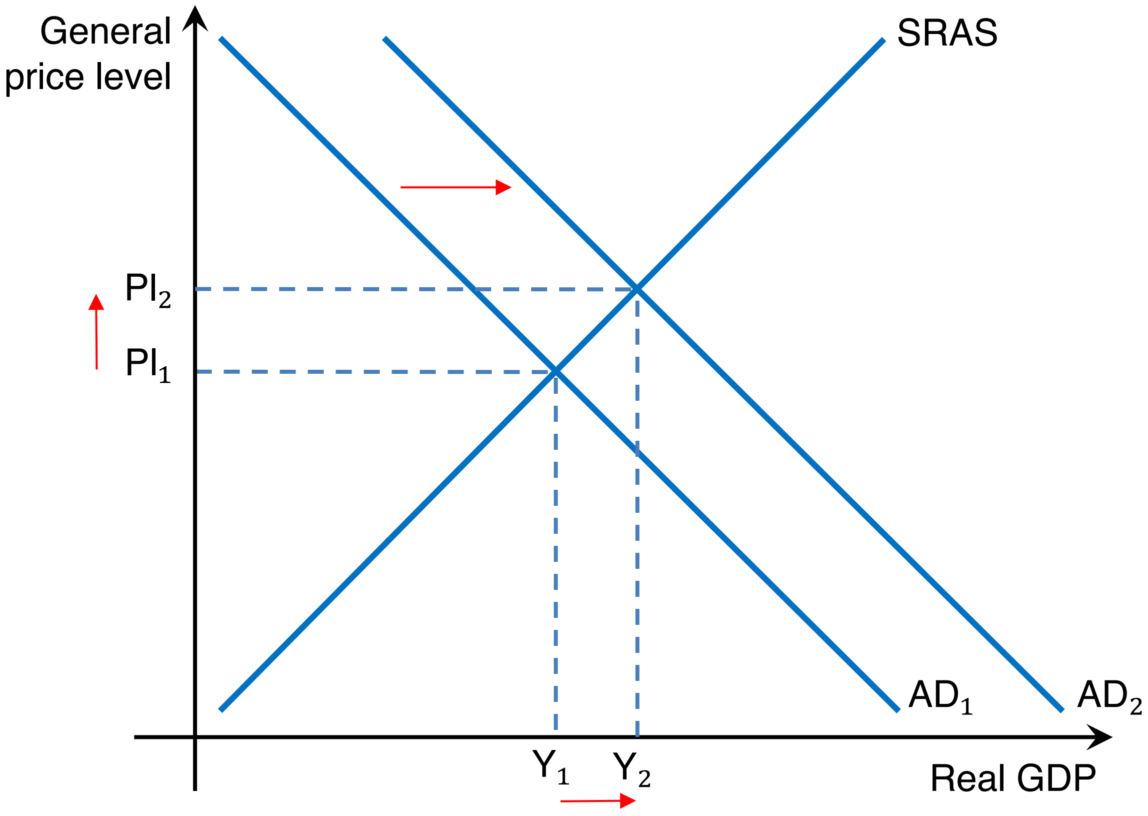
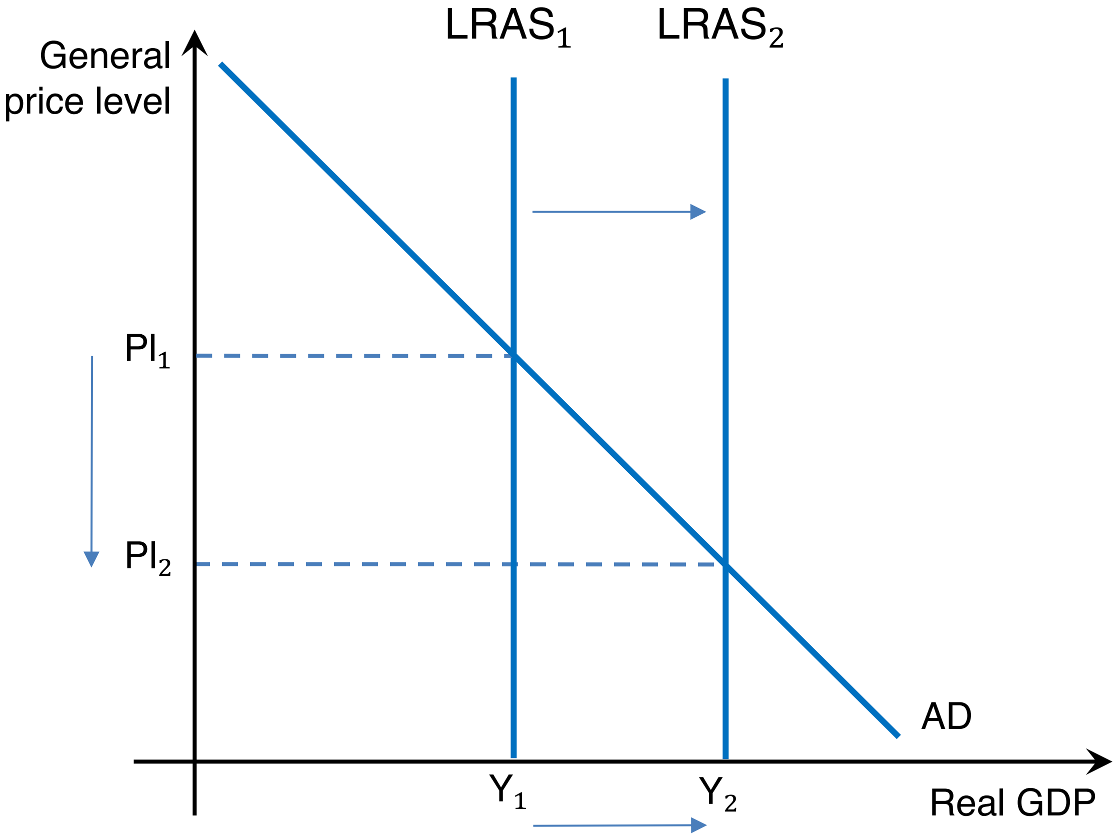


# Supply-side effects of fiscal policies

While fiscal policies are demand-side policies, it is important to note that they are also capable of influencing **aggregate supply** in the economy.

Recall that fiscal policies involve the use of government spending and taxation to influence AD.

Government spending on education, training, health care, R&D, and infrastructure may improve the quality and/ or quantity of resources. Therefore, fiscal policies may shift $LRAS_1 \rightarrow LRAS_2$.

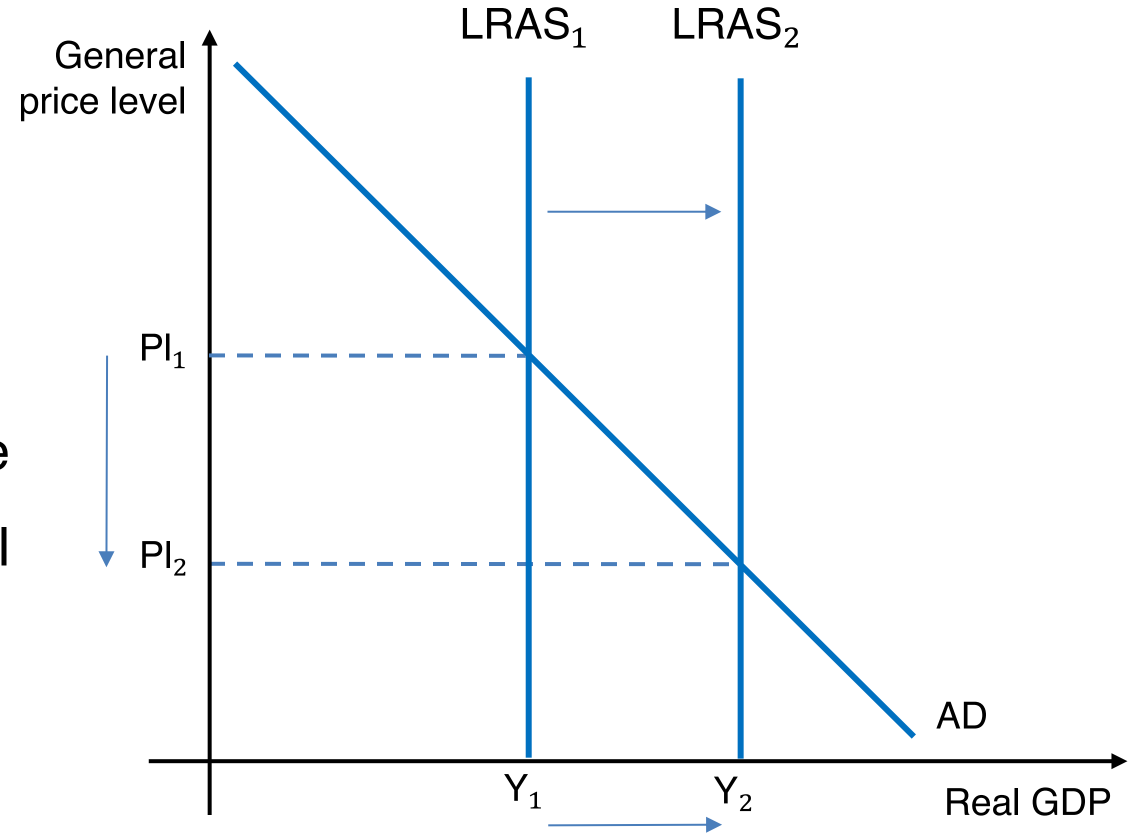


# Supply-side effects of fiscal policies

While fiscal policies are demand-side policies, it is important to note that they are also capable of influencing **aggregate supply** in the economy.

Recall that fiscal policies involve the use of government spending and taxation to influence AD.

Tax reductions incentivize individuals to do more work and businesses to invest in R&D. This will improve productivity and shift $LRAS_1 \rightarrow LRAS_2$.



# Over to you…

Hoang, Wray, & Chakraborty (2020)

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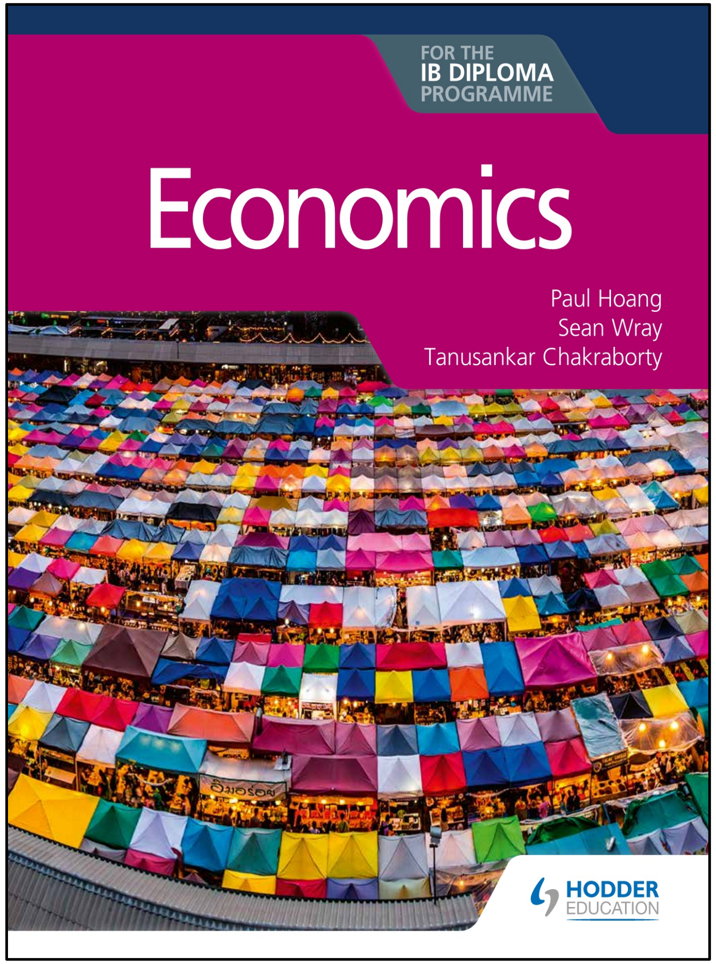
- [10 marks]



# Effectiveness of supply-side policies

Level7 Education

# Constraints on supply-side policies – market-based

## Equity issues

Supply-side policies may have negative effects on equity. For example, labour market reforms will likely hurt low-income earners or those relying on unemployment benefits to a greater extent than those earning higher incomes. High income earners are also more likely to benefit from tax reductions, which results in greater income inequality.

## Time lags

Market-based policies take a long time to take effect as they must go through drafting, presenting, voting, and signing processes before being implemented.

# Constraints on supply-side policies – market-based

## Vested interests

A vested interest refers to an individual or group of individuals who have a personal interest in becoming involved in certain policies or decisions. For example, anti-monopoly regulations may benefit society, but the companies involved in the antitrust law may oppose this policy as it limits their market power.

## Environmental impact

Market-based policies such as deregulation may have detrimental effects on the environment.

**Article:** Trump rolling back environmental regulations.

# Constraints on supply-side policies – interventionist

## Costs

Interventionist supply-side policies such as investments on education, training, health care, R&D, and infrastructure can be extremely costly for the government and may lead to a budget deficit. There is also an opportunity cost incurred when the government spends money on improving the supply side of the economy.

## Time lags

Like market-based policies, interventionist policies also take a long time to take effect. For example, it may take decades for investments on education to affect the potential output of an economy.

# Strengths of supply-side policies – market-based

## Improved resource allocation

Market-based policies can help to improve the allocation of resources by improving allocative efficiency and productive efficiency.

For example, competition will pressure firms to lower their costs and improve efficiency, labour market reforms will reduce structural and frictional unemployment, and incentive-related policies will improve productivity and efficiency.

# Strengths of supply-side policies – market-based

## No burden on government budget

Unlike interventionist policies, market-based policies are aimed at increasing free-market efficiency and hence the government does not incur any explicit costs which would otherwise be a burden on the government budget.

Remember that **market-based** policies involve the removal of existing government policies and encourage free market efficiency, whereas **interventionist policies** involve direct government intervention as the free market fails to allocative resources efficiently.

# Strengths of supply-side policies – interventionist

## Direct support of sectors important for growth

Interventionist policies allow governments to support specific sectors of the economy which are deemed important for growth.

For example, governments may target specific sectors providing merit goods, such as education and healthcare. According to the World Bank's latest data, government spending on education accounted for **2.8%** of Haiti's GDP in 2018, while spending on healthcare accounted for **7.69%** of GDP in the same year.

# Over to you…

Hoang, Wray, & Chakraborty (2020)

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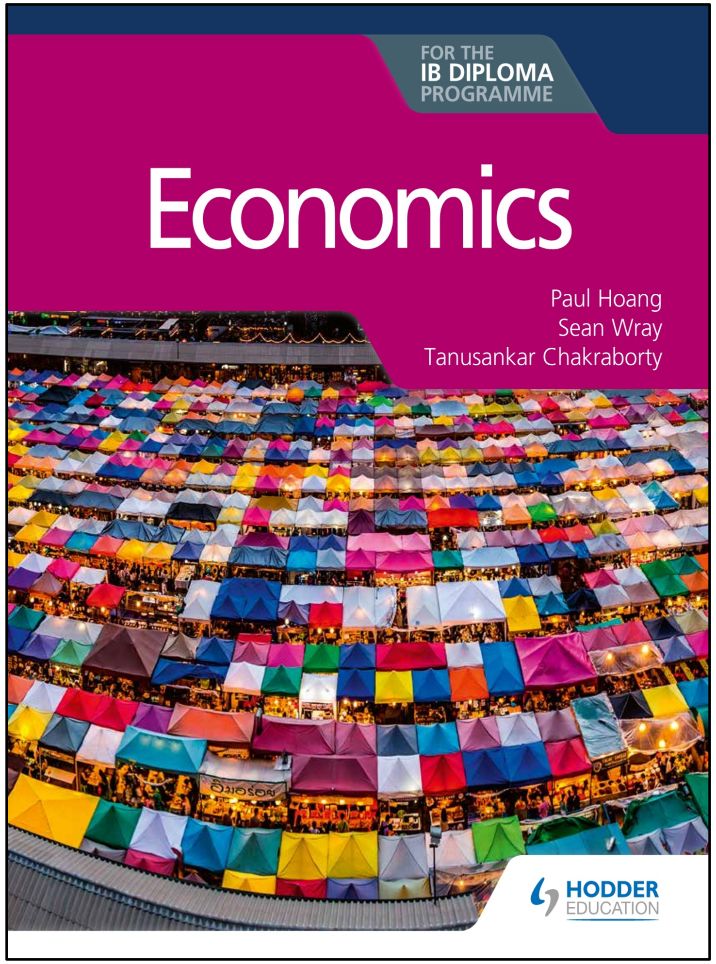
- Paper 1 Exam Practice Question 26.3
- [15 marks]
- Paper 1 Exam Practice Question 26.4
- [15 marks]

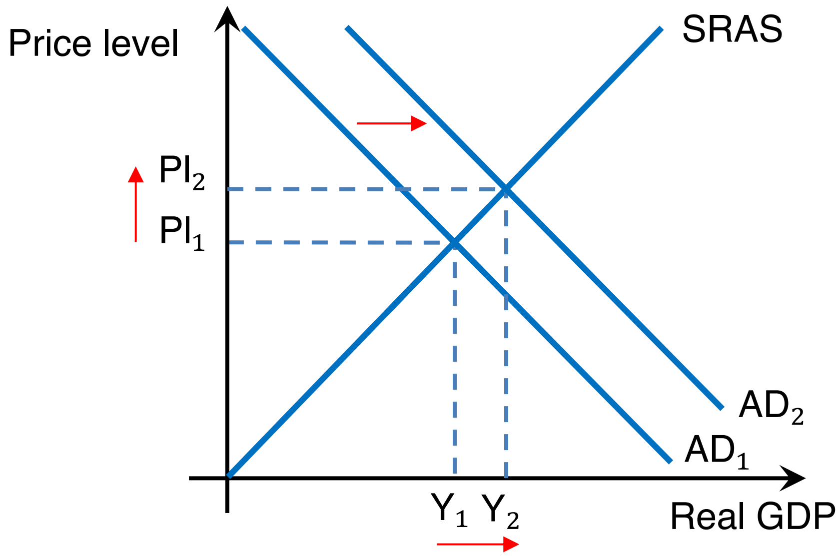


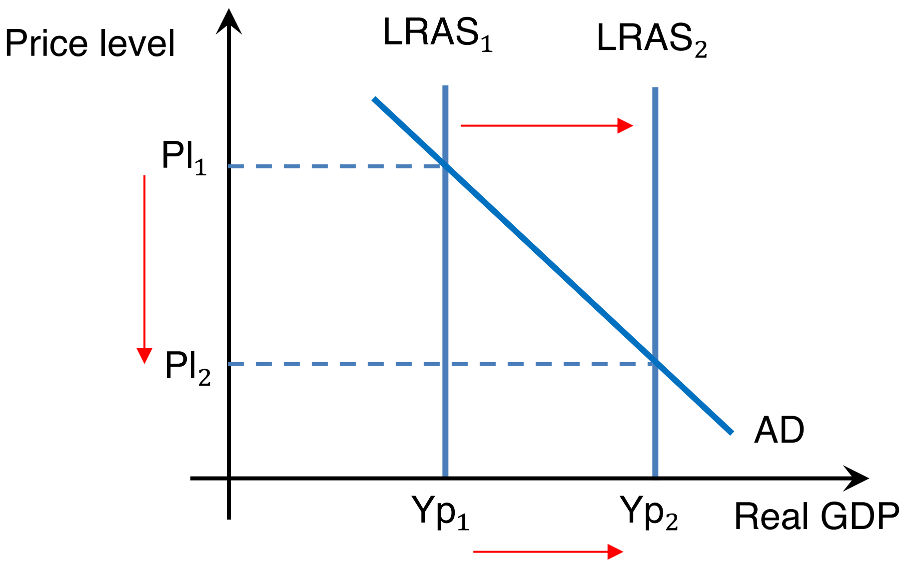
# Effectiveness of supply-side policies

In the short run, supply side policies can increase the level of aggregate demand in an economy.

In the long run, it can increase the productive capacity of an economy, which is shown by LRAS shifting outwards, where potential output increases, leading to **economic growth**.

Supply-side policies also enable economies to grow while achieving a **low and stable rate of inflation**.



## Test your knowledge on this unit: Kahoot!