3.6 Demand management – fiscal policy (includes HL only sub-topics)

Learning objectives

3.6 Demand management – fiscal policy	Depth	Diagrams and calculations
Fiscal policy • Sources of revenue – direct and indirect taxation, sale of goods and services from state-owned enterprises, sale of government assets • Expenditures – current expenditures, capital expenditures, transfer payments	AO2	

Learning objectives

3.6 Demand management – fiscal policy	Depth	Diagrams and calculations
Goals of fiscal policy • Low and stable inflation • Low unemployment • Promote a stable economic environment for long-term growth • Reduce business cycle fluctuations • Equitable distribution of income • External balance	AO2	

Learning objectives

3.6 Demand management – fiscal policy	Depth	Diagrams and calculations
Expansionary and contractionary fiscal policies in order to close deflationary/recessionary and inflationary gaps	AO3 AO4	Diagram: AD/AS curves showing expansionary and contractionary fiscal policy for both Keynesian and monetarist/new classical schools of thought

Learning objectives

3.6 Demand management – fiscal policy	Depth	Diagrams and calculations
Keynesian multiplier (HL only) • $\frac{1}{1-\mathrm{MPC}}$ or • $\frac{1}{\mathrm{MPS}+\mathrm{MPT}+\mathrm{MPM}}$ **MPC – Marginal propensity to consume** **MPS – Marginal propensity to save** **MPT – Marginal propensity to tax** **MPM – Marginal propensity to import**	AO2 AO4	**Calculation (HL only):** **Keynesian multiplier** **Calculation (HL only): the effect on GDP of a change in an injection in investment, government spending or exports, using the Keynesian multiplier**

Learning objectives

3.6 Demand management – fiscal policy	**Depth**	**Diagrams and calculations**
Effectiveness of fiscal policy	AO3	
• Constraints on fiscal policy, including: • political pressure • time lags • sustainable debt • **crowding out (HL only)**	AO4	**Diagram (HL only):** **showing the crowding-out effect**

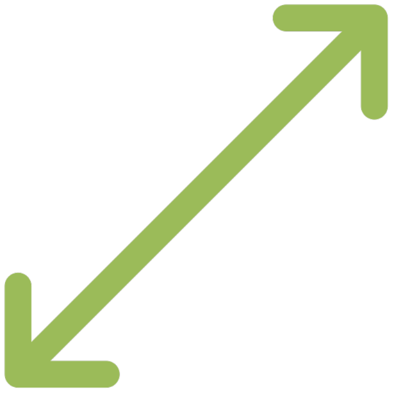
Learning objectives

3.6 Demand management – fiscal policy	Depth	Diagrams and calculations

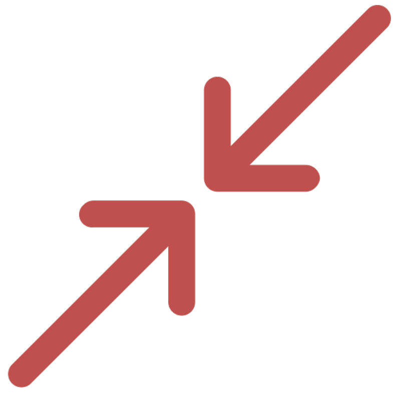
• Strengths of fiscal policy, including:
  • targeting of specific economic sectors
  • government spending effective in deep recession
• **Automatic stabilizers: progressive taxes, unemployment benefits (HL only)**
• Strengths and limitations in promoting growth, low unemployment, and low and stable rate of inflation
	AO3	

Introduction

Fiscal policy involves the use of government spending and taxation to fulfil macroeconomic objectives by influencing AD. There are two types of fiscal policy:



Expansionary fiscal policy



Contractionary fiscal policy

Real world example – Hong Kong Government Budget

Source 1: Hong Kong Government Budget 2019-2020

Source 2: Hong Kong Government Budget 2020-2021

Compare and contrast the HK government budget infographics across the two years.

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?

Fiscal Policy Tools

Fiscal policy can be used to promote long-term economic growth and reduce unemployment in three main ways:

- Government spending on physical capital goods
- Government spending on human capital formation
- Provision of incentives for firms to invest.

Fiscal Policy Objectives

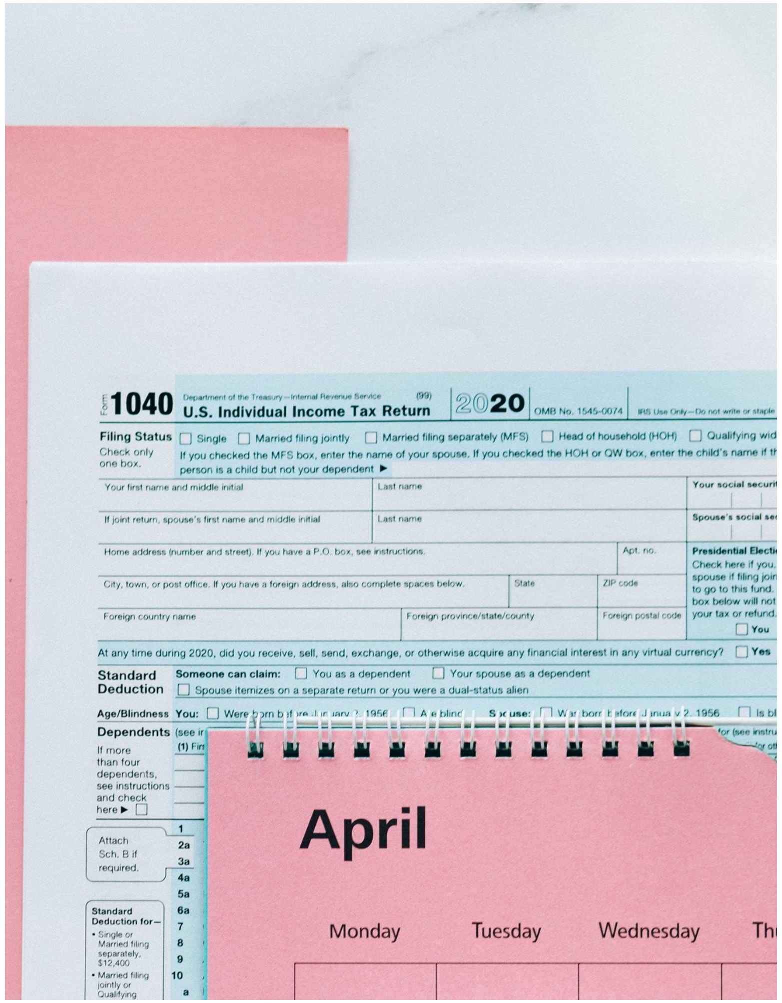
Fiscal policy has six main objectives:

- Low unemployment
- Promoting a stable economic environment for long-term growth
- Low and stable inflation
- Reducing business cycle fluctuations
- Achieving an equitable distribution of income
- Trade balance.

Taxation

Governments earn money through direct and indirect taxation.

- Direct taxes are imposed on **income (rent, wages, interest, profit)**
  - Income tax
  - Corporation tax
  - Capital gains tax
- Indirect taxes are imposed on **expenditure**
  - Sales tax
  - Excise taxes



Alternative Sources of Government Revenue

Governments can also earn revenue from the operation and sale of public sector businesses.

- State-owned enterprises earn revenue through the sale of goods and services
- Governments can sell state-owned enterprises to the private sector i.e. **privatization**.

Revenues and Expenditures

Expenditures refer to money spent by governments, either through government spending (G) or transfer payments.

Transfer payments are payments made by the government without goods or services being received in return, such as welfare payments and donations.

Revenues and Expenditures

Furthermore, government spending can be split into two types:

- **Current expenditures (short-term)**
  - Wages for public sector employees
  - Supplies for public sector businesses
  - Interest payments for national debt
  - The provision of subsidies and grants
- **Capital expenditures (long-term)**
  - Infrastructure

Revenues and Expenditures

Revenues are allocated and earmarked to expenses through a government budget.

A government budget can be of three types:

- **Balanced:** where expenditures = revenues
- **Surplus:** where expenditures < revenues
- **Deficit:** where expenditures > revenues

Research activity

Select 3 economies of your choice and research the following information from the latest government budgets.

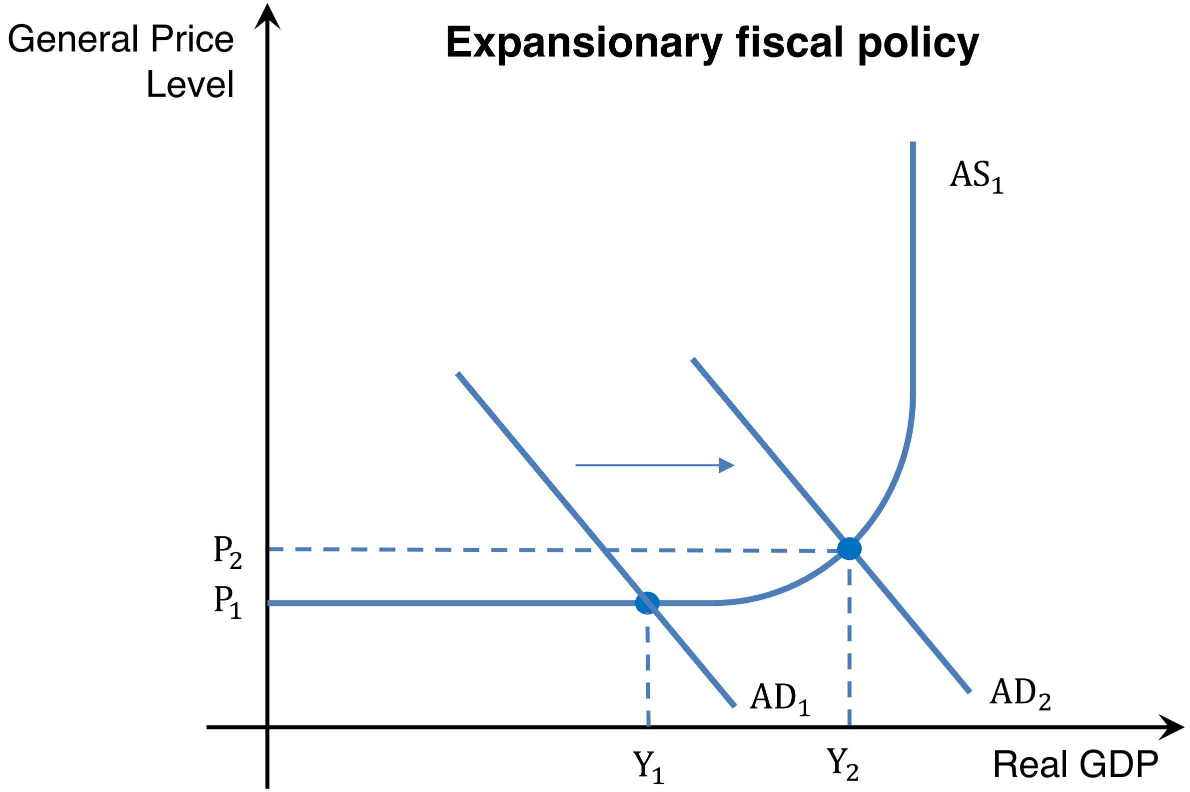
1. The 3 largest contributors of government revenue.
2. The 3 largest areas of government expenditure.
3. In pairs, discuss the possible reasons behind the differences and similarities in your findings.

Expansionary Fiscal Policy

Expansionary fiscal policy increases AD by:

- Increasing government expenditure $(\uparrow \mathrm{G})$
- Decreasing direct and indirect taxation$(\uparrow \mathrm{C}, \mathrm{I})$

This is particularly important in Keynesian economics as economies may be stuck in a recessionary gap for long periods of time.



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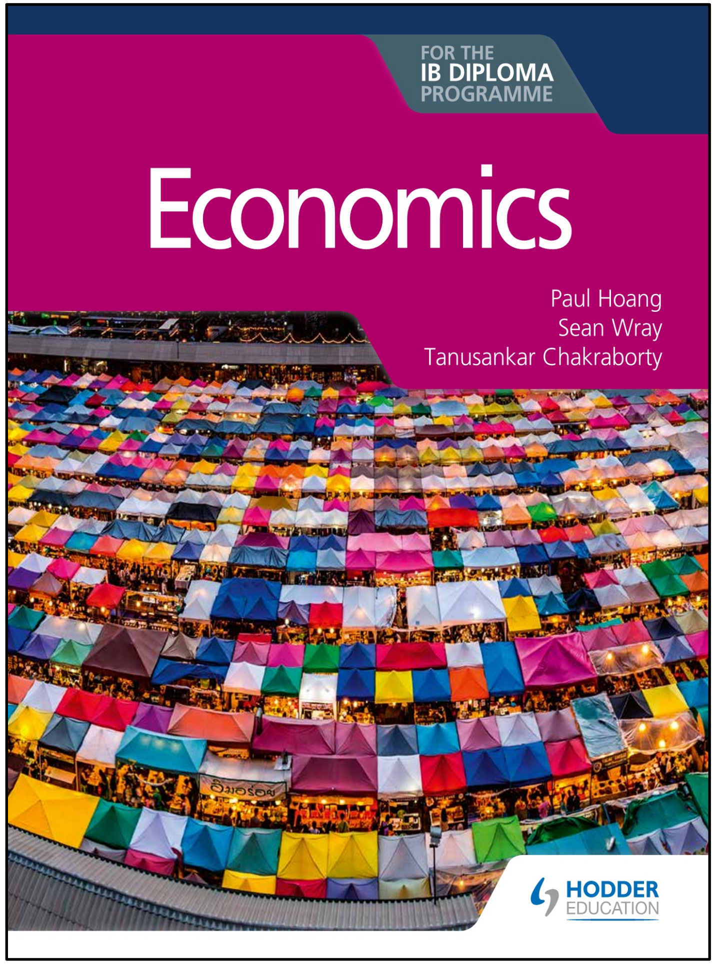
Economics for the IB Diploma Programme

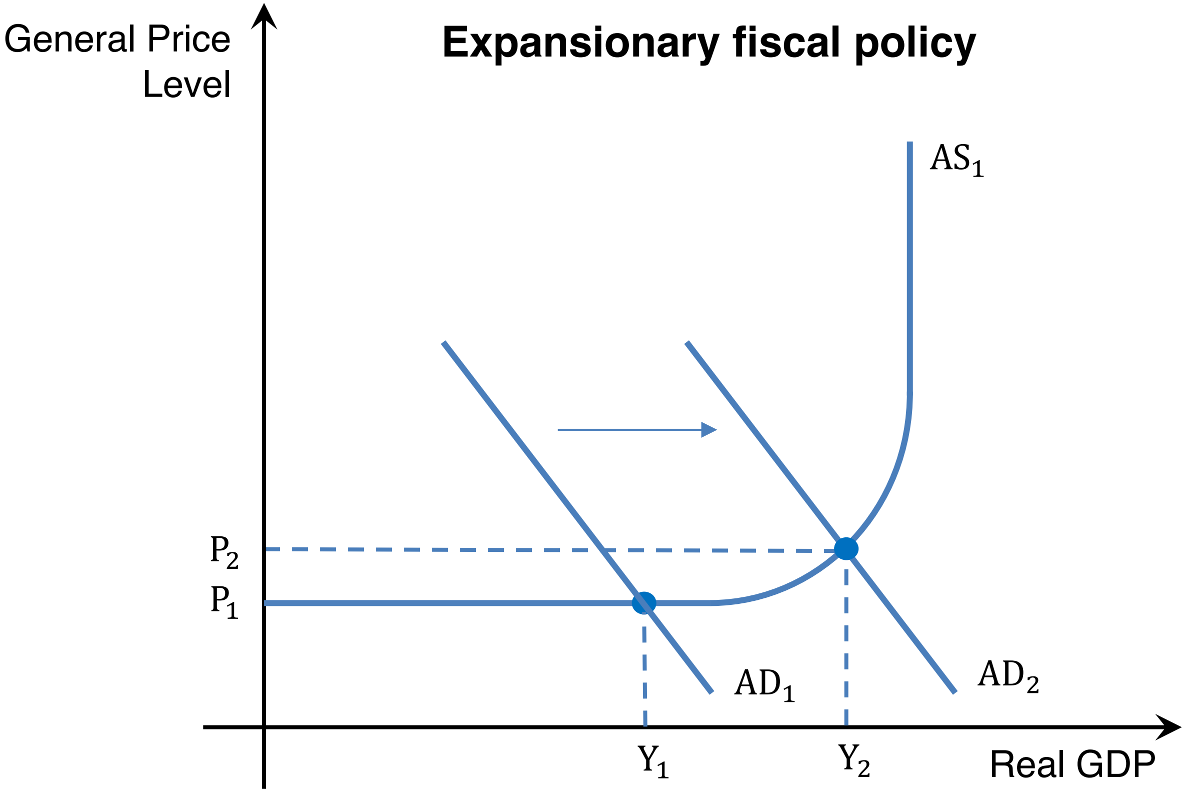
- Page 399
- Paper 1 Exam Practice Question 25.5
- [10 marks]



Expansionary Fiscal Policy

Any government spending which improves the **quantity or quality of resources** will improve AD and AS. For example:

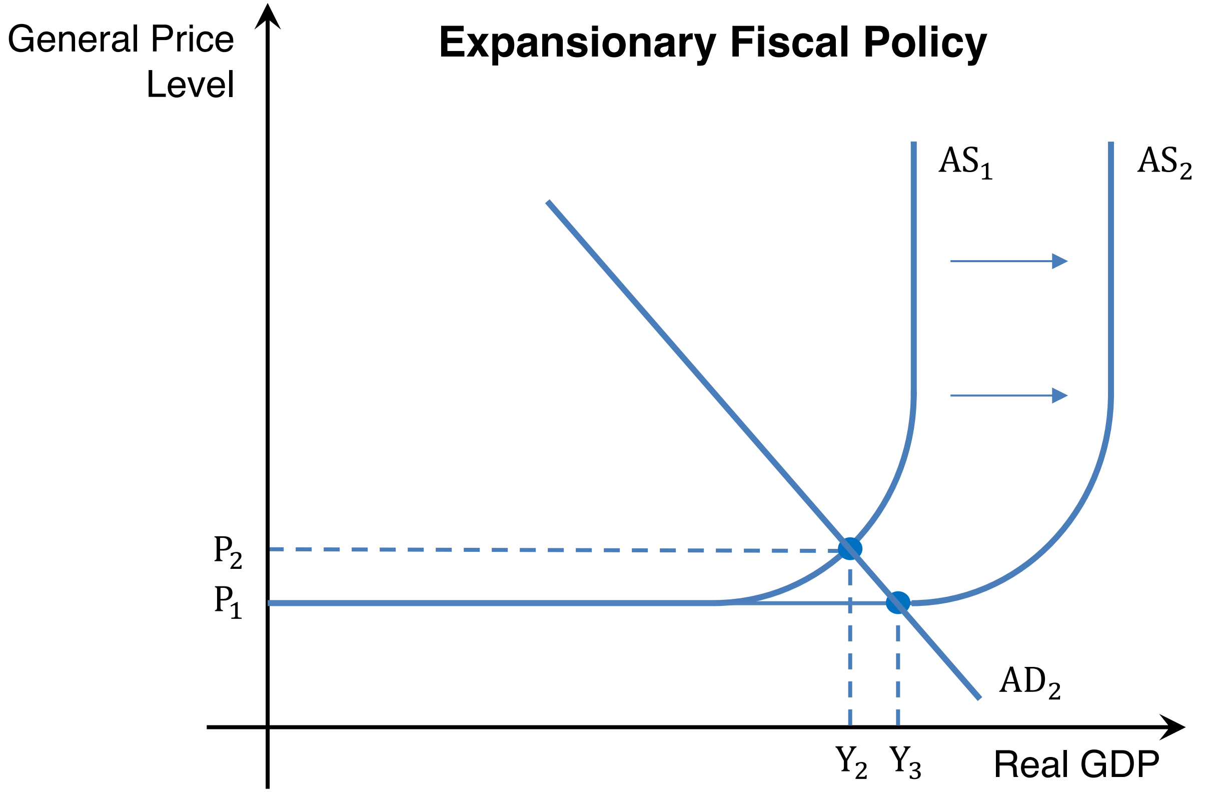
- Government spending on physical capital goods and R&D which improves technology
- Government spending on human capital development through training and education
- Provision of incentives for firms to invest through lower business taxes



Expansionary Fiscal Policy

As a result, the productive capacity of the economy increases, shifting the aggregate supply curve outwards.

This increases national output $(Y_2 \rightarrow Y_3)$ while reducing inflationary pressure $(P_2 \rightarrow P_1)$.



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Economics for the IB Diploma Programme

- Page 399
- Paper 1 Exam Practice Question 25.6
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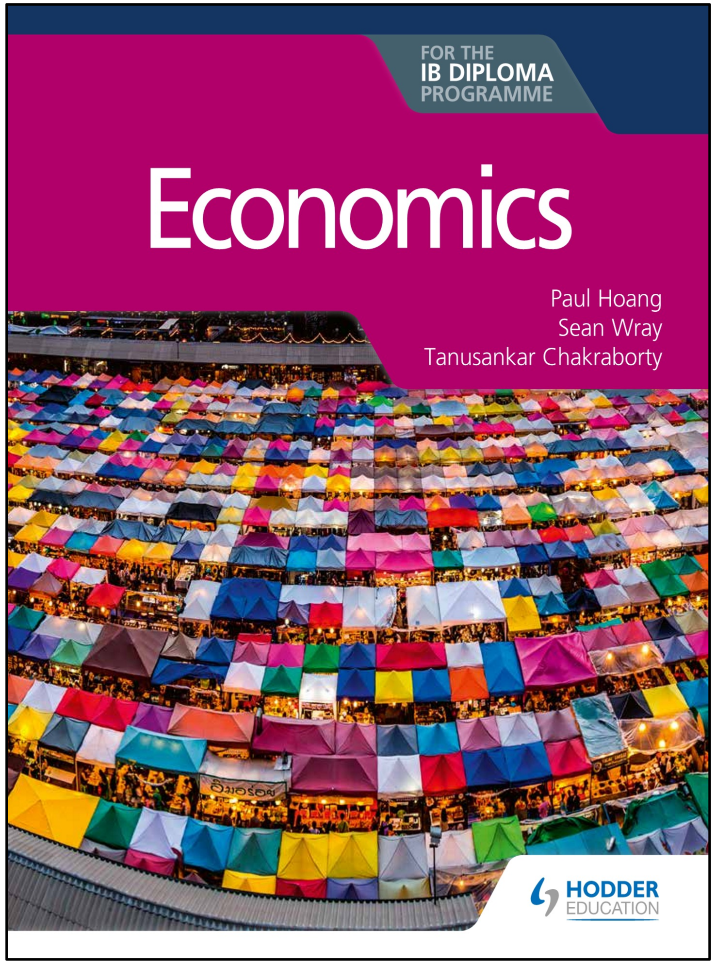
- Paper 1 Exam Practice Question 25.4
- [10 marks]



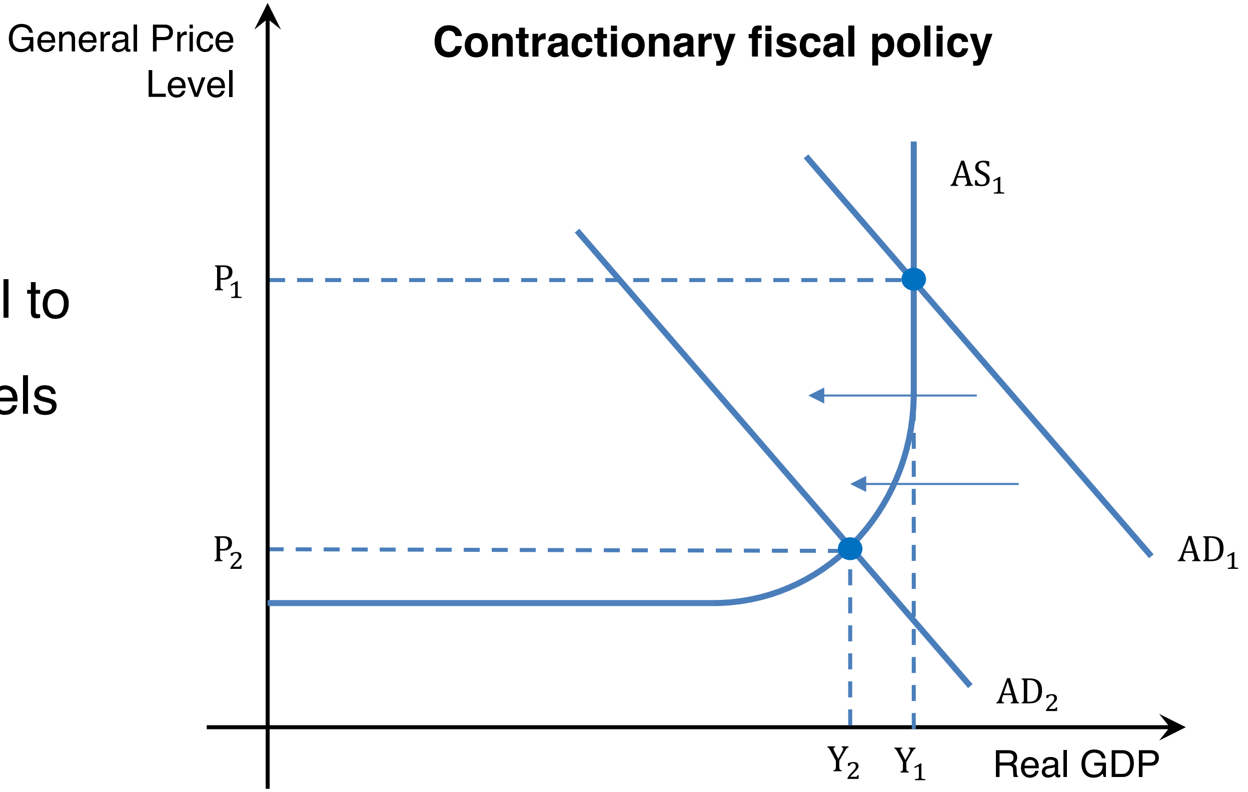
Contractionary Fiscal Policy

Contractionary fiscal policy aims to reduce AD by:

- Decreasing government expenditure $(\downarrow G)$
- Increasing direct and indirect taxation $(\downarrow C, I)$

This can slow economic growth to a healthy level to prevent the economy from overheating. High levels of economic growth can cause:

- Undesirably high levels of inflation
- Shortages in the labour market.



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Economics for the IB Diploma Programme

- Page 389
- Paper 1 Exam Practice Question 25.1
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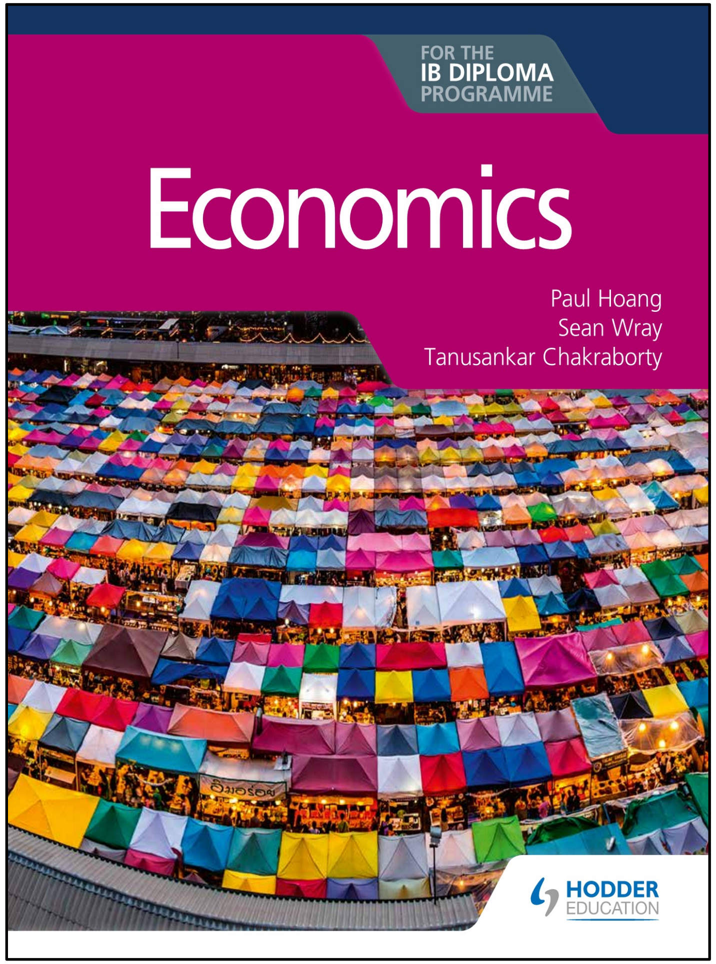


The Keynesian Multiplier (HL only)

When presented with an additional unit of income, households can:

1. Be taxed by the government
2. Save
3. Consume goods and services
4. Import goods or services

The Keynesian Multiplier (HL only)

The allocation of the additional unit of income can be measured through the:

1. Marginal propensity to tax $\left(\mathrm{MPT} = \frac{\Delta \mathrm{T}}{\Delta \mathrm{Y}}\right)$
2. Marginal propensity to save $\left(\mathrm{MPS} = \frac{\Delta \mathrm{S}}{\Delta \mathrm{Y}}\right)$
3. Marginal propensity to consume $\left(\mathrm{MPC} = \frac{\Delta \mathrm{C}}{\Delta \mathrm{Y}}\right)$
4. Marginal propensity to import $\left(\mathrm{MPM} = \frac{\Delta \mathrm{M}}{\Delta \mathrm{Y}}\right)$

Thus, it follows that:

$$\mathrm{MPT} + \mathrm{MPS} + \mathrm{MPC} + \mathrm{MPM} = 1$$

The Keynesian Multiplier (HL only)

The Keynesian Multiplier refers to the idea that the spending of one party becomes the income of another party, which then becomes further spending, with the cycle repeating infinitely.

As such, an injection to the circular flow produces a chain reaction of further expenditures, with the effect of increasing AD and real GDP to a value greater than the initial expenditure.

The Keynesian Multiplier (HL only) – activity

Suppose households spend 20% of their income to consume goods and services. Hence:

$$\text{MPC} = 0.20$$

The government invests $100,000 in the economy. **What is the size of the increase in real national output?**

The Keynesian Multiplier (HL only) – activity

Period	Increase in Consumption	Total Change in Real GDP
0	Initial Investment	$100,000
1		
2		
3		
4		
5		
6		
…		
∞		

The Keynesian Multiplier (supplementary)

The total change in real GDP is said to be a converging infinite geometric series.

$$S_\infty = \frac{u_1}{1-r} = u_1 \times \frac{1}{1-r}$$

… where u_1 is the initial injection and r is the marginal propensity to consume.

In the case of the previous activity, $u_1 = 100{,}000$ and $r = 0.2$

$$\Delta\mathrm{GDP} = \Delta Injection \times \frac{1}{1-\mathrm{MPC}} = 100{,}000 \times \frac{1}{1-0.2} = \$125{,}000$$

The Keynesian Multiplier (HL only)

Overall, the total change in national output is the product of the injection and the multiplier:

$$\text{Multiplier: } \frac{1}{1-\text{MPC}}$$

Additionally, recall that:

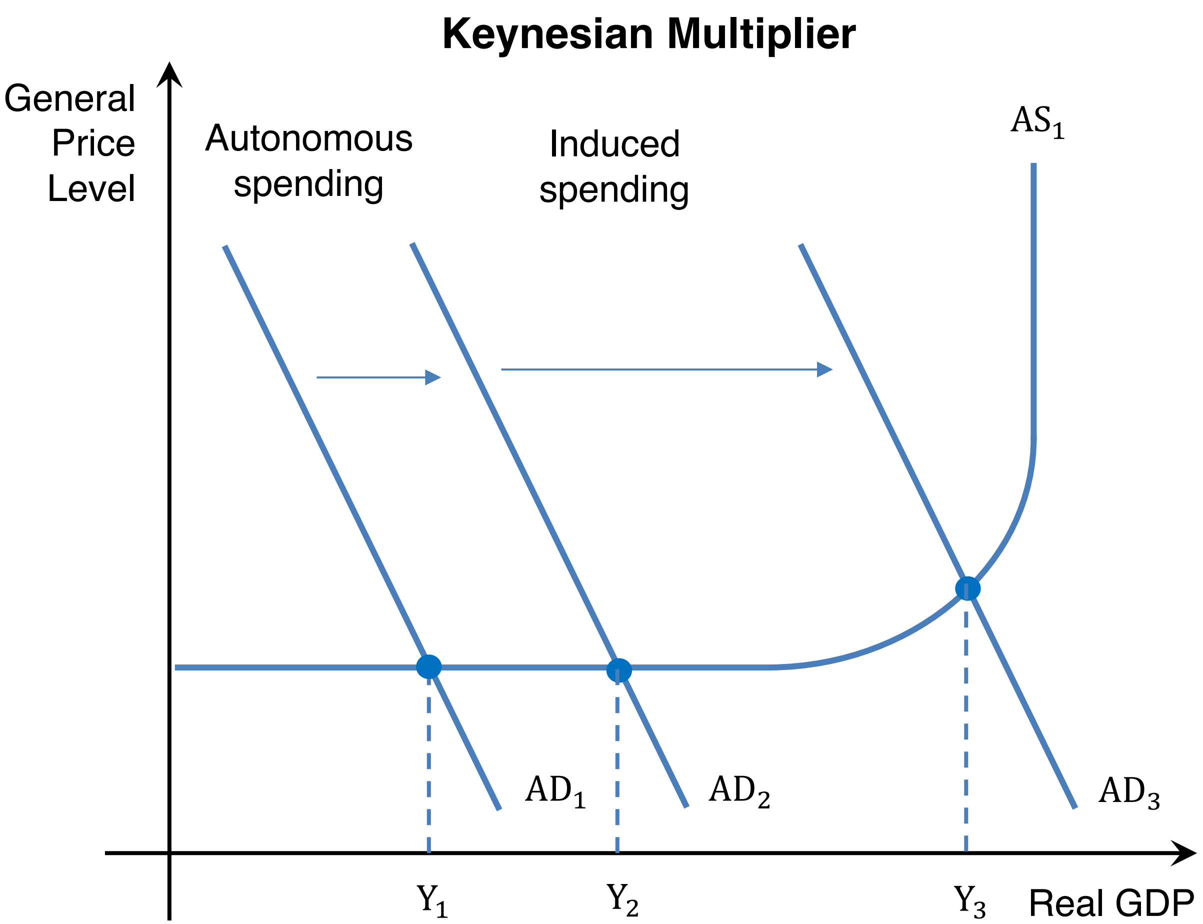
$$\text{MPC}+\text{MPM}+\text{MPS}+\text{MPT}=1$$

Therefore:

$$\text{MPC}=1-\text{MPM}-\text{MPS}-\text{MPT}$$

$$\text{Multiplier: } \frac{1}{1-(1-\text{MPM}-\text{MPS}-\text{MPT})}=\frac{1}{\text{MPM}+\text{MPS}+\text{MPT}}$$

The Keynesian Multiplier (HL only)



The Keynesian Multiplier involves an initial injection into the economy known as **autonomous spending**.

The subsequent spending is known as **induced spending** which further stimulates AD and real GDP.

Over to you… (HL only)

Hoang, Wray, & Chakraborty (2020)

Economics for the IB Diploma Programme

- Page 391
- Paper 3 Exam Practice Question 25.2
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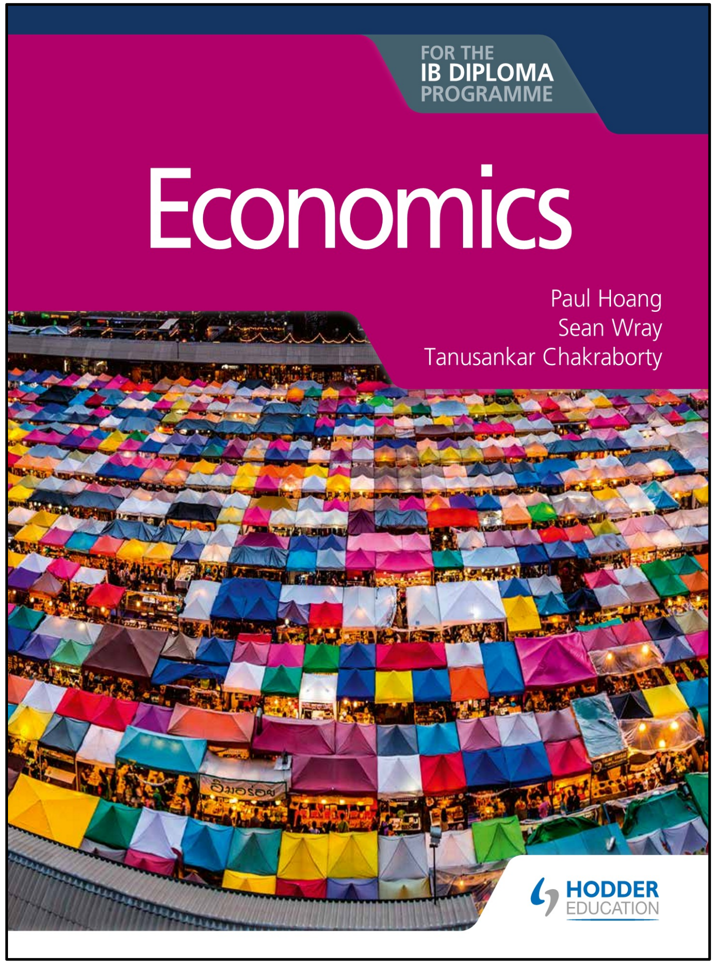


Evaluation of Fiscal Policy

The strengths of fiscal policy include:

- Ability to target specific economic sectors
- Stimulates recovery from a deep recession

However, fiscal policy has its limitations:

- Political pressures
- Time lags
- Sustainable debt
- **Crowding out (HL only)**

Targeting of Specific Economic Sectors

Fiscal policy can be used to correct regional disparities in income and spending habits.

For example, tax cuts can be applied to low-income households, while marginal tax rates can be increased for high income households to redistribute income.

Similarly, government spending can be targeted at the unemployed, retirees, those with disabilities or those with young children.

Recovering from a Deep Recession

Government spending provides a direct injection of money into the circular flow of income.

Furthermore, with the Keynesian multiplier, the change in national output is greater than the initial injection.

Expansionary fiscal policy can also help to increase confidence levels during a recession, increasing aggregate demand while providing further incentives for firms to continue employing their workers, avoiding further unemployment.

Political Pressure

Political constraints and political pressures mean that government spending and taxation policy decisions are often influenced by political rather than economic factors.

Political pressures prevent the use of contractionary fiscal policy such as higher taxes and less government spending as this may be politically unfavourable.

Time Lags

There are time lags involved with fiscal policy.

There are three types of time lags:

- Recognition lag
- Administrative lag
- Effectiveness lag

Time Lags – Recognition lag

It takes time to tell whether an economy is in need for government intervention.

Furthermore, supply-side shocks can happen at any time, so it is difficult to plan and budget for shocks such as natural disasters and pandemics.

Time Lags – Administrative lag

After identifying the need for government intervention, it will take more time to implement fiscal policy.

- Approval for tax changes
- Changes to the government budget.

Time Lags – Effectiveness lag

Finally, There is a time lag between the implementation of fiscal policies to seeing the actual effects take place in the economy.

- A small reduction in income tax will take time to have a significant impact on household consumption
- The construction of a new school will take many years before graduates enter the labor force.

Sustainable Debt

The effectiveness of fiscal policy will depend on the extent to which the government can afford to sustain a budget deficit.

In the short run, governments may be able to run budget deficits in order to fund expansionary fiscal policies.

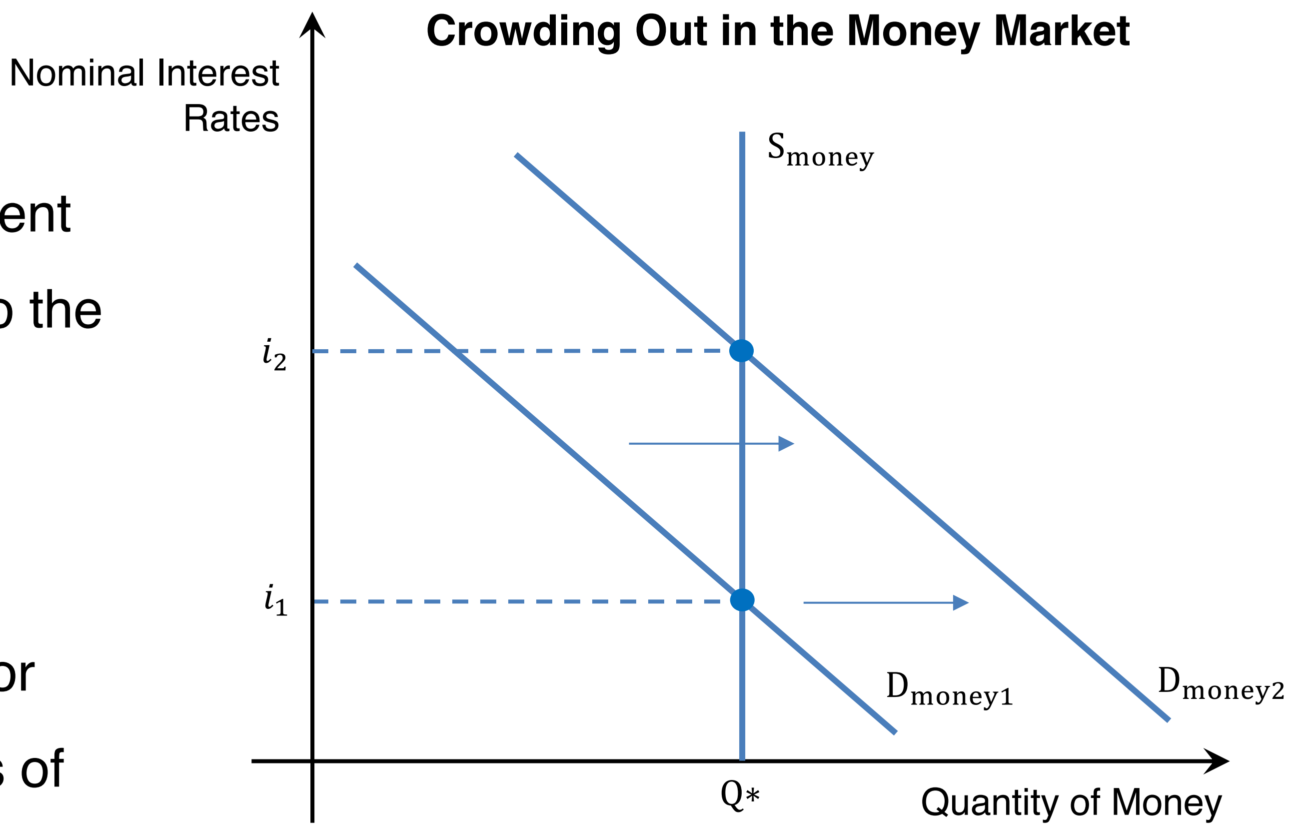
However, this is not sustainable in the long run. Ultimately, the government will need to implement austerity measures to repay its national debts, limiting the effectiveness of fiscal policy.

Crowding Out (HL only)

When a government runs a budget deficit, it needs to borrow funds.

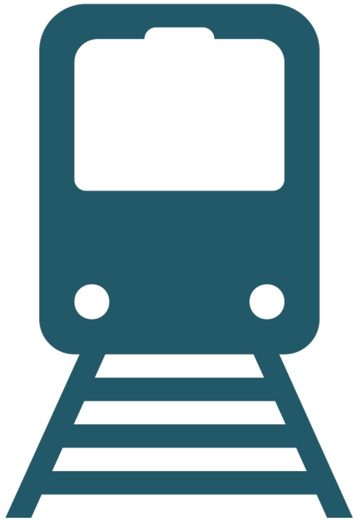
Crowding out occurs when increased government borrowing causes interest rates to rise owing to the higher demand for loanable funds $(D_{money1} \rightarrow D_{money2})$.

Overall, this causes a reduction in private sector investment expenditure due to the higher costs of borrowing $(i_1 \rightarrow i_2)$.



Crowding Out (HL only)

Furthermore, the operation of public sector businesses such as public schools, hospitals, and transportation can drive down private sector investment in these industries.



Government budget and macroeconomic objectives

Source: Hong Kong Budget 2020-21

1. Using the source above, create a presentation which identifies and explains policies aimed to promote any of the following government objectives:
    - Low and stable inflation
    - Low unemployment
    - Promoting a stable economic environment for long-term growth
    - Reducing business cycle fluctuations
    - Achieving an equitable distribution of income
    - Trade balance
2. Evaluate the advantages and disadvantages of these policies.

Automatic Stabilizers (HL only)

Automatic stabilizers are factors that stabilize the economy without government intervention by dampening the short-term fluctuations of the business cycle.

Automatic Stabilizers (HL only)

Progressive income taxes as automatic stabilizers

During an **expansion**:

1. Incomes rise as national output increases.
2. As incomes rise, households will be taxed a higher proportion of their income.
3. This prevents the economy from overheating.

During a **recession**:

1. Incomes fall with national output.
2. As incomes fall, households will be taxed a lesser proportion of their income.
3. This reduces pressure on falling AD and counteracts the economic contraction.

Automatic Stabilizers (HL only)

Unemployment benefits as automatic stabilizers

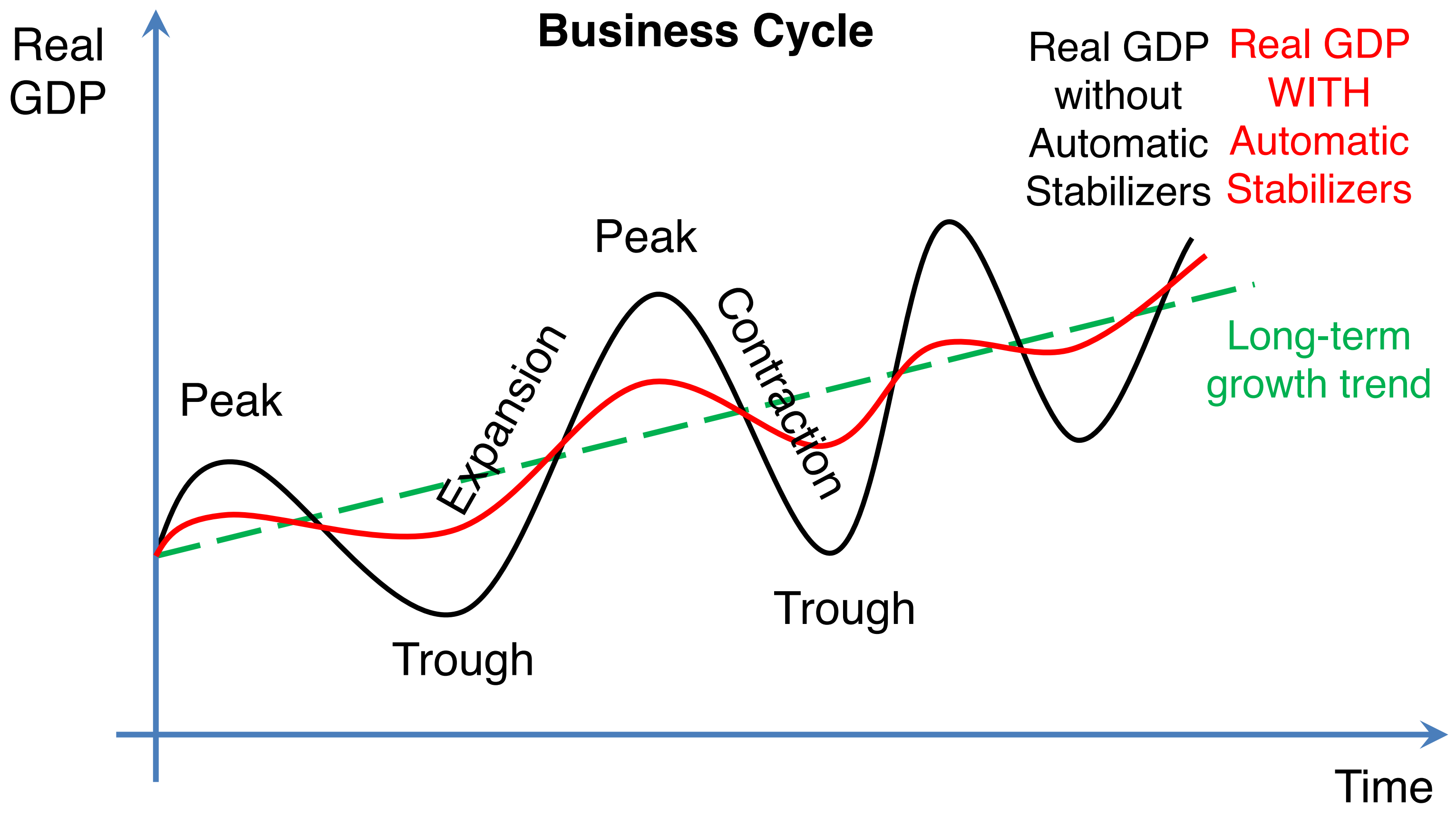
During **expansions**:

- Some workers may be inclined to stay unemployed to claim unemployment benefits.
- As a result, national output does not rise too quickly.

During **contractions**:

- The distribution of unemployment benefits rise as they are offered to more unemployed workers.
- Household consumption will be somewhat maintained, lessening the downward pressure on AD.

Automatic Stabilizers (HL only)



Automatic stabilizers aim to reduce the short-term fluctuations of the business cycle with lower peaks and higher troughs closer towards the long term growth trend.

Test your knowledge on this unit: [Kahoot!]