# LSE EC1B5
# Macroeconomics

Handout 16

## Countercyclical Macroeconomic Policy (II)

# Key Ideas

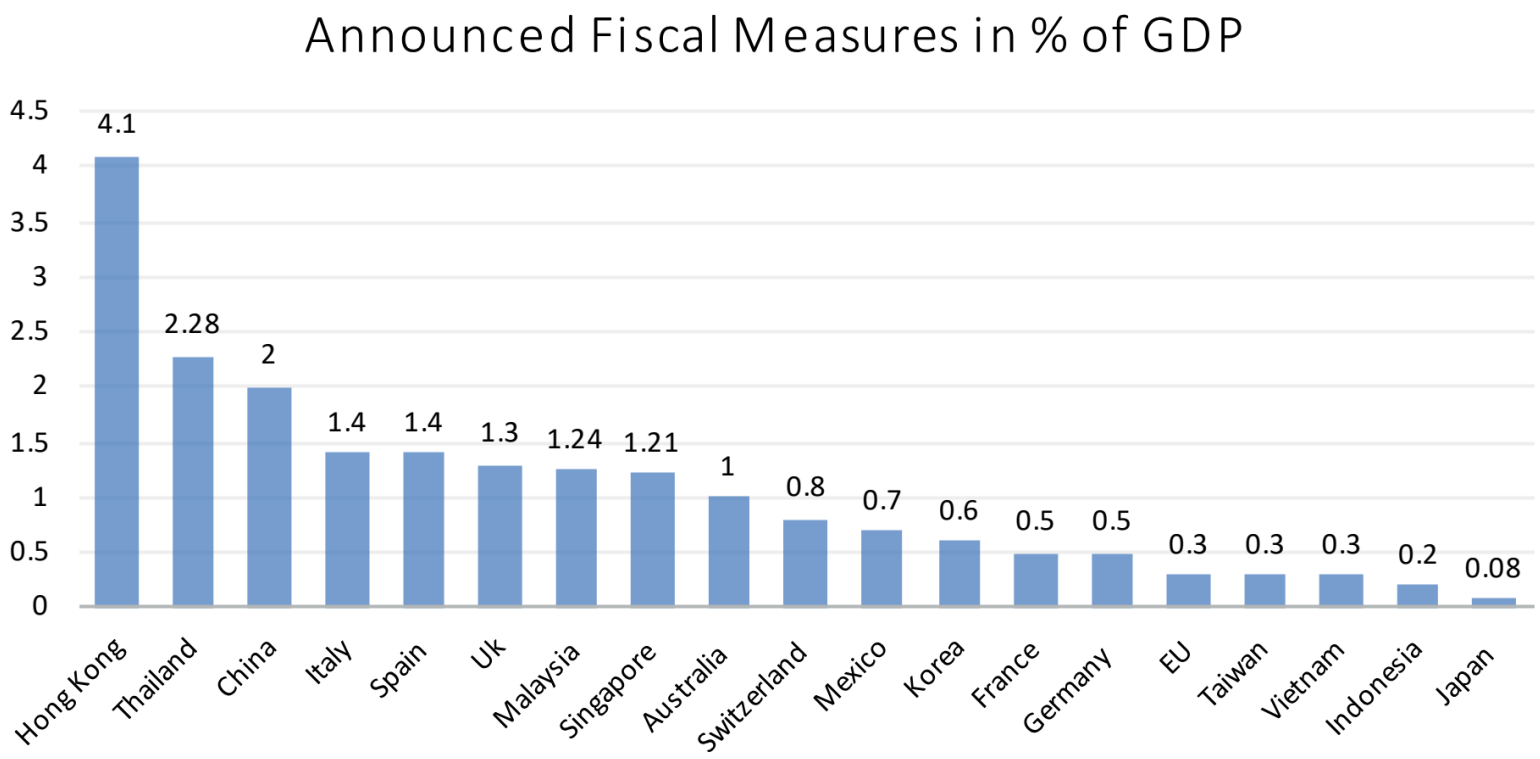
1. Countercyclical fiscal policy reduces fluctuations by manipulating government expenditures and taxes.
2. Expansionary fiscal policy increases government expenditure and decreases taxes. Contractionary fiscal policy decreases government expenditure and increases taxes.

# Reminder

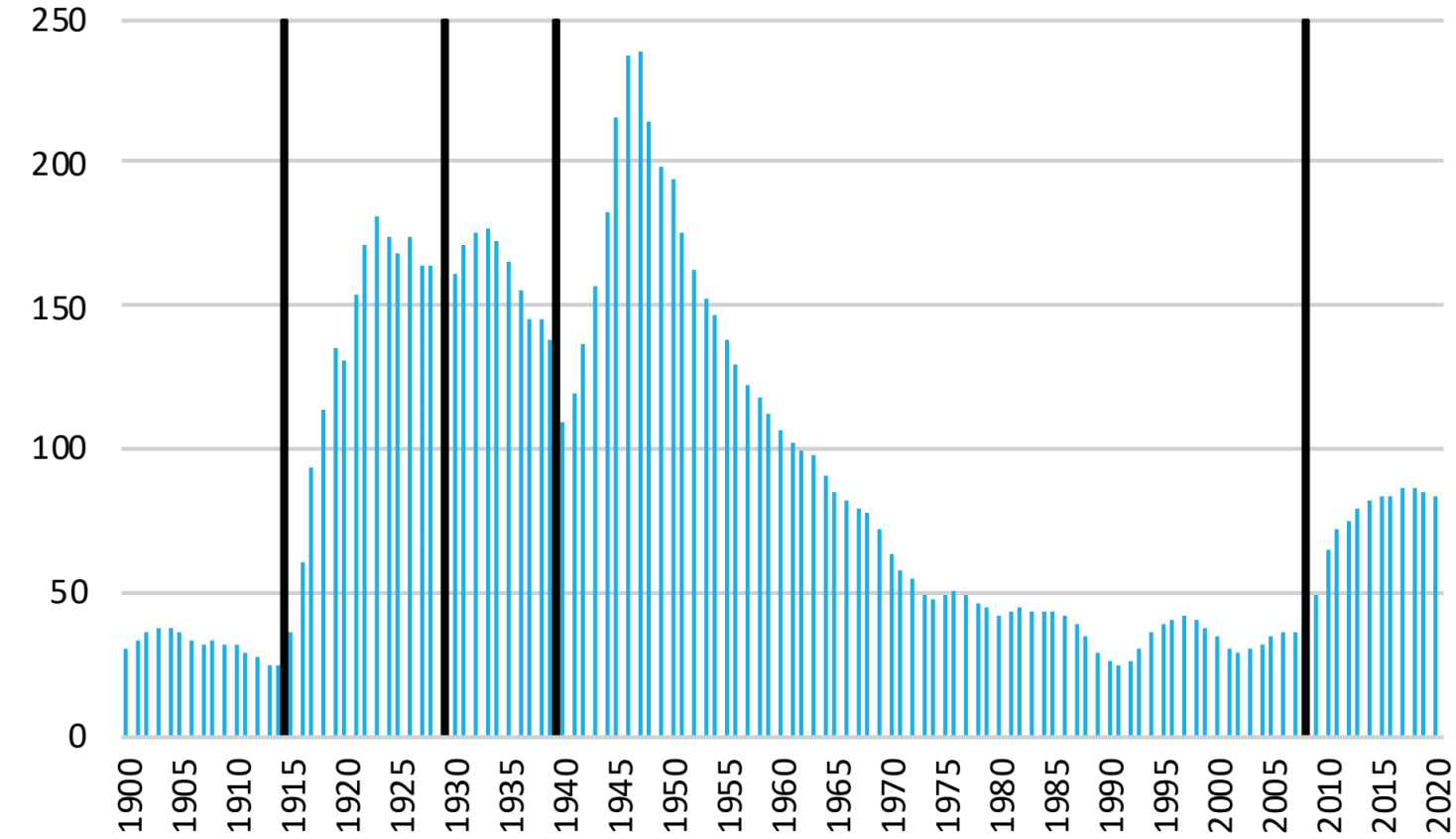
- National income accounting identity:
- $Y = C + I + G + X - M$

- Monetary policy
- Fiscal policy

# Response to Covid



# Debt/GDP Ratio (UK)




*Source:* Panizza based on Bank of England

# Countercyclical Fiscal Policy in the US

Countercyclical fiscal policy is passed by the legislative branch (e.g., Congress) and signed into law by the executive branch (e.g., the president).

## Countercyclical Fiscal Policy

**Expansionary fiscal policy** uses higher government expenditure and lower taxes to increase the growth rate of real GDP.

**Contractionary fiscal policy** uses lower government expenditure and higher taxes to reduce the growth rate of real GDP.

## Countercyclical Fiscal Policy

*Automatic countercyclical components* are aspects of fiscal policy that automatically partially offset economic fluctuations—for example, unemployment insurance and food stamps.

# Countercyclical Fiscal Policy

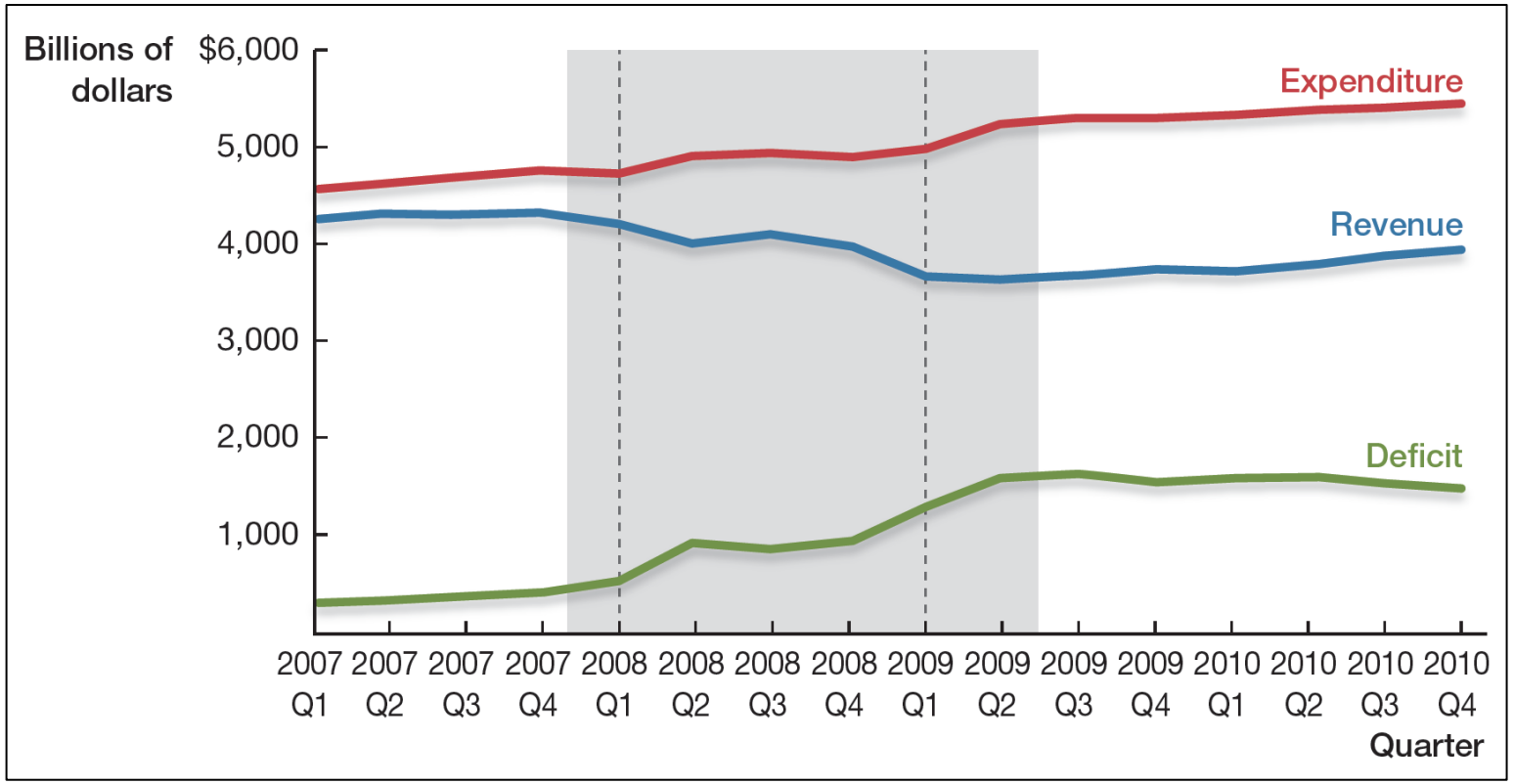
*Discretionary countercyclical components* are aspects of fiscal policy that policymakers deliberately enact in response to economic fluctuations.

Examples:

(1) $787 billion American Recovery and Reinvestment Act of 2009

(2) $2.2 trillion Coronavirus Aid, Relief, and Economics Security (CARES) Act of 2020.

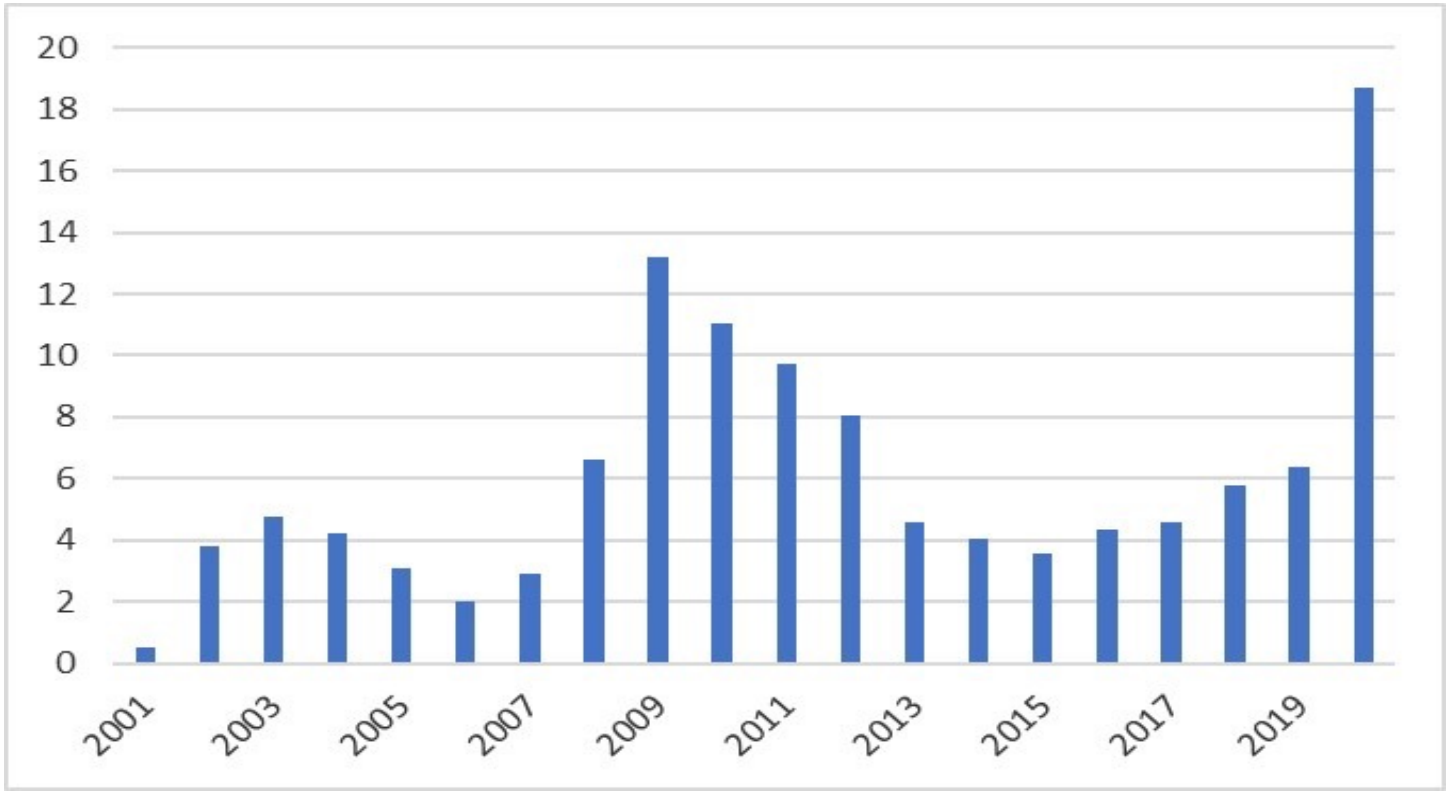
# U.S. Government Accounts from 2007-2010
# Combining federal, state, and local governments (constant 2009 dollars)




Both automatic and discretionary fiscal adjustment contributed to the rise in deficit.

# Countercyclical Fiscal Policy (US)

U.S. Government Unified Deficit as a Percent of GDP, 2001–2020



# Multipliers

## Analysis of Expenditure-Based Fiscal Policy

The **government expenditure multiplier** is the $\$m$ change in GDP resulting from a \$1 change in government expenditures.

**Crowding out** occurs when rising government expenditures partially or even fully displace expenditures by households and firms.

Ongoing debate on the size of $m$.

# Government Expenditure Multiplier – different scenarios

National income accounting identity:

$$Y = C + I + G + X - M$$

A \$1 increase in $G$ under the first scenario:

$$[Y + 1] = C + I + [G + 1] + X - M$$

**Question:** What is the value of the multiplier?

**Answer:** The government expenditure multiplier $m$ under the first scenario is_____.

## Government Expenditure Multiplier – different scenarios

A \$1 increase in $G$ under the second scenario:

$$[Y + 2] = [C + 1] + I + [G + 1] + X - M$$

**Question:** What is the value of the multiplier?
**Answer:** The government expenditure multiplier $m$ under the second scenario is_____.

## Government Expenditure Multiplier – different scenarios

A \$1 increase in $G$ under the third scenario:

$$[Y + 3] = [C + 1] + [I + 1] + [G + 1] + X - M$$

**Question:** What is the value of the multiplier?
**Answer:** The government expenditure multiplier $m$ under the third scenario is _____.

# Government Expenditure Multiplier – different scenarios

Advocates of expenditure-based fiscal policy believe that the government expenditure multiplier lies between 1 and 2 but can be as high as 3 for certain types of government spending.

## Government Expenditure Multiplier – different scenarios

Example: rise in government spending crowds out private investment

A \$1 increase in $G$ under the **crowding out** scenario:

$$Y = C + [I - 1] + [G + 1] + X - M$$

**Question:** What is the value of the multiplier?
**Answer:** The government expenditure multiplier $m$ under the crowding out scenario is _____.

# Government Expenditure Multiplier – different scenarios

Critics of expenditure-based fiscal policy emphasize crowding out and believe that the government expenditure multiplier is well below 1 and might even be close to zero.

## Government Expenditure Multiplier

**Question:** Which is the "right" scenario?

**Answer:** Economists are not completely sure. However, they do believe that the multiplier is larger when the economy is well below trend and closer to zero when the economy is close to potential.

## Government Expenditure Multiplier

**Question:** What was the impact of the $120 billion in government expenditures of the American Recovery and Reinvestment Act in 2009?

**Caveat:** We assume a multiplier of 1.5 since the economy was in a deep recession.

## Government Expenditure Multiplier

**Answer:**

$$1.5 \times \$120 \text{ billion} = \$180 \text{ billion}$$

Or:

$$\frac{\$180 \text{ billion}}{\$14 \text{ trillion}} \times 100 = 1.3\% \text{ of GDP}$$

## Government **Taxation** Multiplier

National income accounting identity:

$$Y = C + I + G + X - M$$

A \$1 decrease in taxes under the first scenario:

$$[Y + 1] = [C + 1] + I + G + X - M$$

**Question:** What is the value of the multiplier?

**Answer:** The government taxation multiplier $m$ under the first scenario is ____.

## Government Taxation Multiplier

A $1 decrease in taxes under the second scenario :

$$[Y + 2] = [C + 2] + I + G + X - M$$

**Question:** What is the value of the multiplier?
**Answer:** The government taxation multiplier *m* under the second scenario is _____.

## Government Taxation Multiplier

A $1 decrease in taxes under the third scenario (crowding-out through fall in investment):

$$[Y + 1] = [C + 2] + [I - 1] + G + X - M$$

**Question:** What is the value of the multiplier?
**Answer:** The government taxation multiplier $m$ under the third scenario is _____.

## Government Taxation Multiplier

A $1 decrease in taxes under the fourth scenario (crowding-out through rise in import):

$$[Y + 1] = [C + 2] + I + G + X - [M + 1]$$

**Question:** What is the value of the multiplier?
**Answer:** The government taxation multiplier $m$ under the fourth scenario is _____.

## Government Taxation Multiplier

**Question:** Which is the "right" scenario?
**Answer:** Economists believe that the government taxation multiplier is between 0 and 2.

Reasons for small multiplier:
(1) the level of consumption – consumption smoothing
(2) anticipation of future tax increases (related to ***Ricardian Equivalence***).

## Government Taxation Multiplier

**Question:** What was the impact of the $65 billion in tax cuts of the American Recovery and Reinvestment Act in 2009?

**Caveat:** We assume a multiplier of 1.0.

**Answer:** $1.0 \times \$65 \text{ billion} = \$65 \text{ billion}$ or:

$$\frac{\$65 \text{ billion}}{\$14 \text{ trillion}} \times 100 = 0.5\% \text{ of GDP}$$

# Countercyclical Fiscal Policy

A few specific fiscal policies are directly targeted at the labor market:

1. Unemployment insurance
2. Wage subsidies (shifts labor demand curve to the right)

Raising incomes for unemployed supports consumption and limits negative multiplier effect… but longer unemployment insurance discourages workers to find new jobs. If labor supply curve shifts to the left, reduces overall employment

# Policy waste and lags

## Policy Waste and Policy Lags

Government programs can suffer from:

1. Policy waste – "pork barrel spending"

2. Policy lags – e.g. the 2009 American Recovery and Reinvestment Act, only a quarter of the infrastructure budget had been spent by June 2010. [Taxation-based policy can be implemented quicker once approved]

# Pork Barrel Spending

$398 million project to build a bridge to Gravina Island, Alaska, which has 50 residents. Proposed in 2008 and cancelled in 2015.

# How much does government expenditure stimulate GDP?

**Question:** How much does government expenditure stimulate GDP?


**Data:** U.S. quarterly GDP data for 1939 to 2008 and historical news coverage.

# How much does government expenditure stimulate GDP?

**Problem:** Government expenditure and GDP are simultaneously determined, so does expenditure cause GDP or vice versa?

**Solution:** Valerie Ramey identifies "random" government expenditure resulting from foreign events
"natural experiment" – foreign shocks cause the government to spend more for reasons unrelated to the state of the economy.

## How much does government expenditure stimulate GDP?

**Question:** How much does government expenditure stimulate GDP?

**Answer:** The government expenditure multiplier is estimated to be between 0.6 and 1.2.

## Policies That Blur the Line Between Fiscal and Monetary Policy

Some countercyclical policies represent a mix of fiscal and monetary policy.

One example is the Troubled Asset Relief Program (TARP), passed in October 2008.

- Developed jointly by Fed and Treasury officials.

## Policies That Blur the Line Between Fiscal and Monetary Policy

TARP authorized the Treasury Department to spend $700 billion to stabilize the banks. This amount was later reduced to $450 billion in 2010.

$250 billion was spent to increase the capital base of U.S. banks.

The remaining amount was spent on the nearly bankrupt companies General Motors, Chrysler, and AIG.

- In sum, countercyclical fiscal policy is important but there are caveats:
  - Raises government debt
  - Long policy lags
  - Potential inefficiency
  - Crowding out and limited multipliers