# Chapter 10 : International Macroeconomics

EE312

Macroeconomics, Stephen Wiliamson, Chapter 15,16

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# International Macroeconomics

- Foreign economic activities:
  - Trade in goods and services.
  - Trade in assets (capital movement).
  - Foreign exchange (money).
- **Small open economy**: the country's economic activity has no influence on the world prices of goods.
  - Most countries are 'small' in the world economy.

# The balance of payments

- Records of all foreign economic transactions.
  - Trade in goods and services.
  - International transfers.
  - Capital movements (lending, investment)
- **Double-entry method:**
  - Foreign exchange earnings — credit (+).
  - Foreign exchange expenditures — debit (-)
  - Official reserve transactions — the opposite entry.

# The current account (CA)

| | | Credit(+) | Debit(-) |
|---|---|---|---|
| | Merchandise Exports | + | |
| | Merchandise Imports | | - |
| (1) | **Merchandise Trade Balance** | surplus | deficit |
| (2) | Service balance | + | - |
| (3) | Transfer | + | - |
| | **CA Balance (1)+(2)+(3)** | surplus | deficit |

# The capital account

| | Credit(+) | Debit(-) |
|---|---|---|
| Public Borrowing Lending | + | - |
| Private Borrowing Lending | + | - |
| **Investment Portfolio investment Direct investment** | + | - |
| **Capital Account Balance (1)+(2)+(3)** | surplus | deficit |

# Official reserve transactions

- Changes in official reserve assets at the central bank due to activities in the current account and the capital account.
  - Gold;
  - Special drawing rights (SDRs);
  - Foreign currencies;
  - Foreign government securities.
- **Existence of sovereign funds**.

# (S – I) gap and the current account

$$
\begin{aligned}
Y &= C + I + G + (X - M)\,; M = \text{import} \\
S_p &= Y - T - C \\
\text{or } Y - T &= S_p + C \\
S_p + C + T &= C + I + G + (X - M) \\
S_p - I + T - G &= (X - M) \\
\text{Since } S_g &= T - G,\ S = S_p + S_g \text{and } CA = X - M \\
S - I &= CA = Y - [C + I + G]
\end{aligned}
$$

# Small-open economy with production and investment

- The economy faces a given world real interest rate and free foreign trade.
- The output supply curve (Ys) has a positive slope.
  - Equilibrium in the labor market; labor supply is determined by the real interest rate.
  - A given aggregate production function.

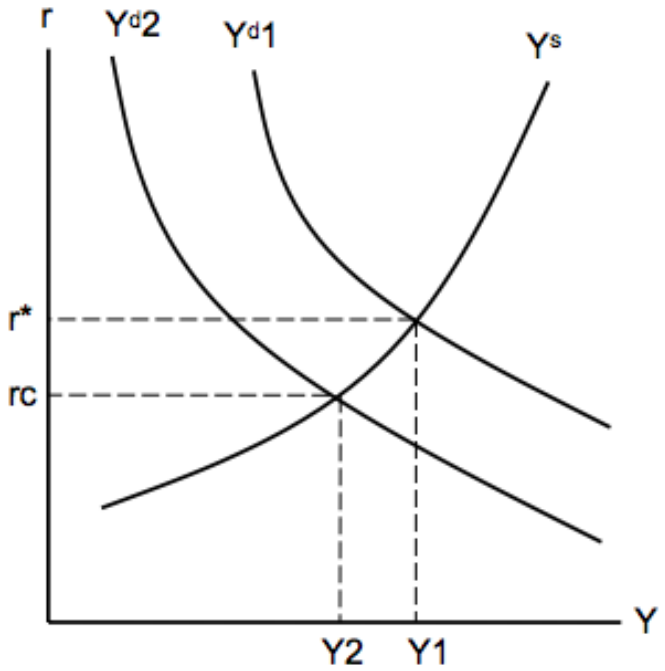
# Demand for current goods

$$Y^d = C^d + I^d + G + NX$$

- Domestic absorption = C + I + G
  - C, I are influenced by the real interest rate.
- NX = net exports.
  - NX > 0; the CA surplus.
  - NX < 0; the CA deficit.
- The output demand curve (Yd) has a negative slope.

# Real intertemporal model

- $Y_2^d$ = demand with no trade.
- $r_C$ = domestic real interest rate.
- $Y_1^d$ = demand with trade (output = Y1).
- $r^*$ = the world real interest rate.
- NX > 0.

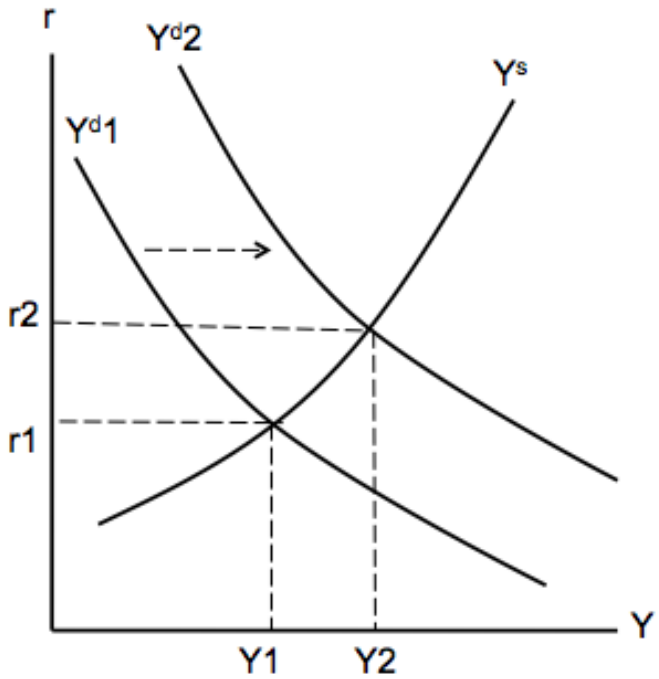


# A rise in the world real interest rate

- An increase in the world real interest rate:
- CA increases; the country's $Y^d$ shifts right.
- Domestic investment drops due to higher r.
- Domestic consumption may rise (due to larger Y) or fall (due to higher r).
- The world's and the country's outputs move in opposite directions.

# Effect of rising world r

- The world r increases from r1 to r2.
- CA increases; Yd1 shifts right to Yd2.
- Domestic output increases from Y1 to Y2.



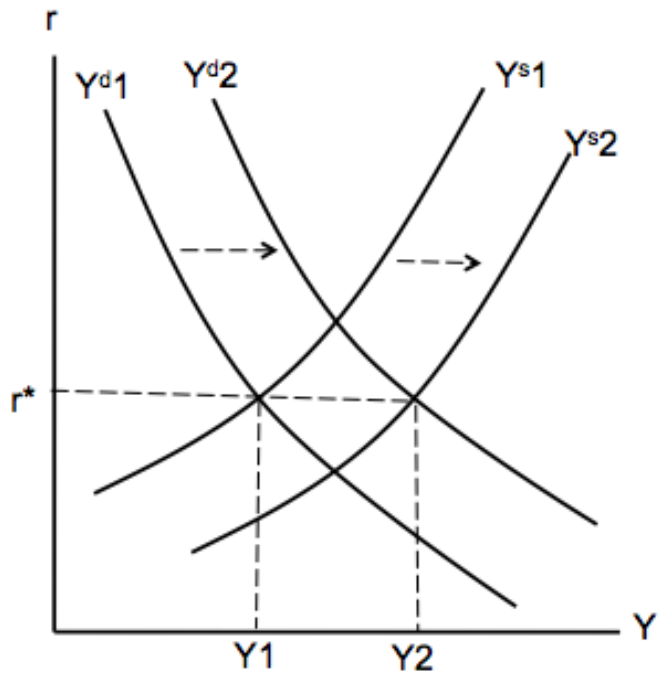
# Temporary increase in G

- The PV of taxes increases; lifetime wealth decreases.
- Labor supply increases; $Y^s$ shifts right.
- Larger G causes $Y^d$ to shift right.
- Weaker effect on lifetime wealth and Ys as $\Delta G$ is temporary.
- Domestic output increases less than domestic demand, the CA surplus decreases.

- The rightward shift of Yd is also small because G rises but CA falls.
- The real interest rate is determined in the world credit market and does not change.
  - Yd and Ys shift right by the same distance.
- No crowding-out effect on C and I.
  - Investment does not fall (r is the same).
  - Consumption increases (larger Y and the same r).
  - Instead, a higher G crowds out net exports (CA).

# Temporary increase in G

- $\Delta G$ causes labor supply (and $Y^s$) to rise.
- $\Delta G$ also raises domestic demand and $Y^d$.
- Output increases with a smaller CA surplus.

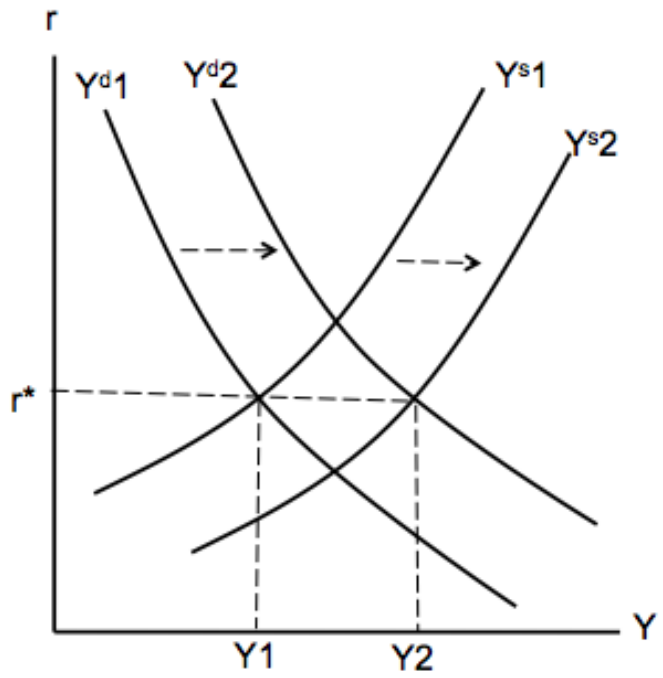


# An increase in current z

- An increase in current total factor productivity induces more labor demand.
  - Employment increases; $Y^s$ shifts right.
  - Output increases; current consumption also increases but less than proportionally.
  - Output increases more than domestic demand.
  - So CA increases; $Y^d$ shifts right.
  - Investment is the same as the world real interest rate does not change.

# Effect of rising current z

- A higher current z raises labor demand and shifts $Y^s$ to the right.
- Domestic demand increases less than output.
- The CA surplus increases.

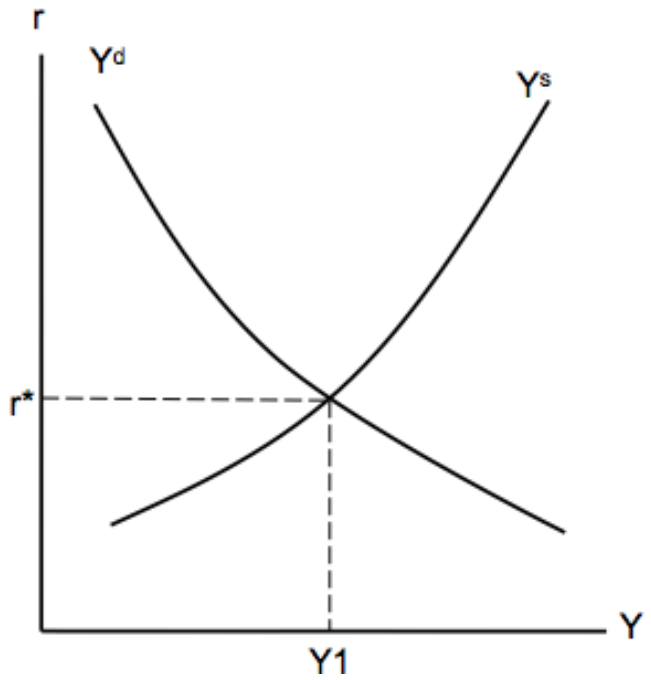


# An increase in future z'

- An increase in future total factor productivity raises investment and current consumption.
  - More current demand for investment goods.
  - Higher future income raises current consumption.
  - Domestic demand for current goods increases.
  - But output ($Y^s$) is the same, so the CA surplus must decrease by the same amount as C and I.
- $Y^d$ is the same; no effect on output.

# Effect of rising future z'

- Higher future z' raises investment and current consumption.
- But output is the same; the CA surplus drops by the same amount.



# Is a CA deficit bad?

- Necessity to finance investment.
  - Future capital stock and productive capacity (and future income) increase.
  - More labor demand, employment and output.
  - Domestic demand increases less than output, so the CA surplus increases (or the CA deficit decreases).
- Consumption smoothing. C
  - A surplus in good times; CA deficit in bad times.

# An increase in capital stock

- Y1 has a CA deficit.
- More investment and capital stock shift $Y^s$ and output to the right.
- The CA surplus increases.