ECON 1550: International Finance

National Income Accounting for Open Economies

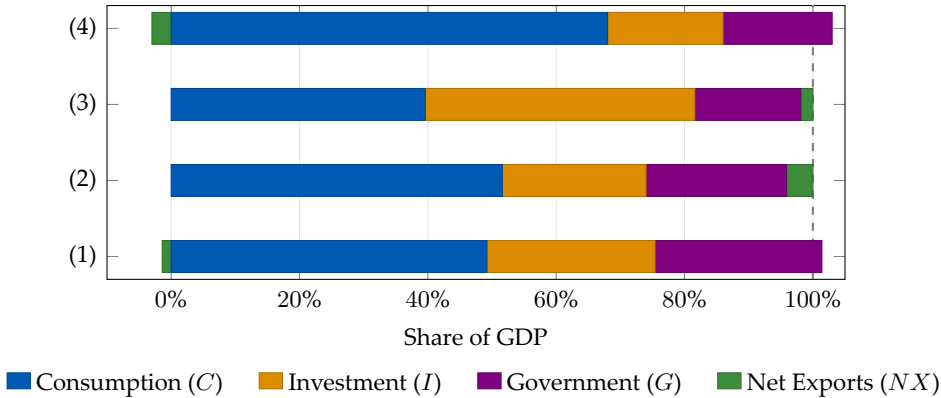
Announcements

- Problem Set 1 due next Wednesday
- Read pages 24–34 of textbook before Monday lecture
- Office today after class
- Two sections before problem set is due next week

Agenda

- Finish review of intermediate macro: Phillips Curve
- Open economy accounting: $Y = C + I + G + NX$
- Saving, investment, and net exports

GDP Composition by Country (2023)



Source: World Bank, BEA, CEIC

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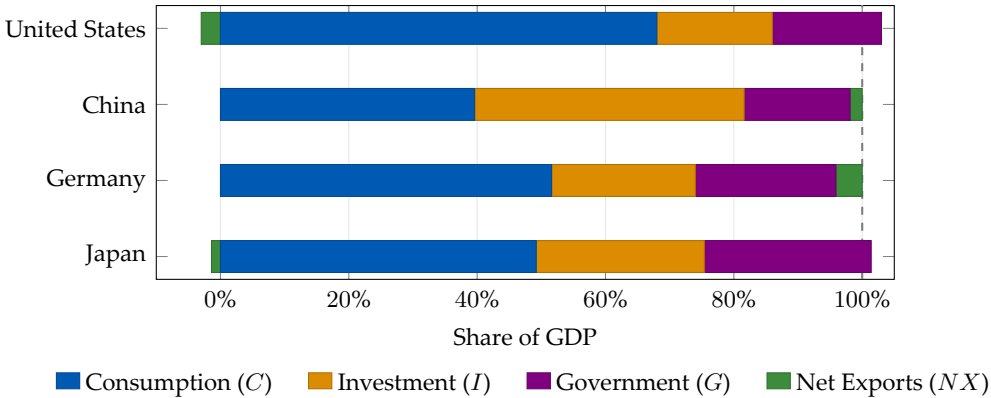

Source: World Bank, BEA, CEIC

Macro Review: GDP

Gross Domestic Product (GDP) measures the total value of:

- **Production:** All final goods and services produced within a country
- **Income:** All income earned from production within a country
- **Value added:** Sum of value added at each stage of production

All three approaches yield the same number.

GDP and GNP

- **GDP:** Value of production *within a country's borders*
  - Regardless of who owns the factors of production
- **GNP:** Value of production by *a country's residents*
  - Regardless of where production takes place
- **Relationship:**

$$\text{GNP} = \text{GDP} + \text{Net Income from Abroad}$$

One Difference from Intermediate Macro

This course builds upon the same formulas and definitions as intermediate macro.

Y **is different!**

In this course, Y is **GNP**, not GDP

Closed Economy

$$Y = C + I + G$$

- All output is either consumed, invested, or purchased by government
- No trade with the rest of the world

Open Economy

$$Y = C + I + G + \underbrace{EX - IM}_{NX}$$

- EX = Exports (domestic goods sold abroad)
- IM = Imports (foreign goods purchased domestically)
- NX = Net exports (trade balance)

National Saving: Closed Economy

National saving = output not used for consumption or government spending

$$\begin{aligned} S &= Y - C - G \\ &= (C + I + G) - C - G \\ &= I \end{aligned}$$

In a closed economy: $S = I$

National Saving: Open Economy

Starting from $Y = C + I + G + NX$:

$$\begin{aligned} S &= Y - C - G \\ &= I + NX \end{aligned}$$

In an open economy: $S = I + NX$

National Saving: Open Economy

Rearranging: $S - I = NX$

- If $S > I$: Trade surplus, country is a net lender
- If $S < I$: Trade deficit, country is a net borrower

Private Saving

Private saving = disposable income that is saved, not consumed

$$S^p = Y - T - C$$

where T = taxes (net of transfers)

Public (Government) Saving

Government saving = tax revenue minus government spending

$$S^g = T - G$$

- If $T > G$: Budget surplus ($S^g > 0$)
- If $T < G$: Budget deficit ($S^g < 0$)

Total Saving

Total national saving:

$$\begin{aligned} S &= S^p + S^g \\ &= (Y - T - C) + (T - G) \\ &= Y - C - G \end{aligned}$$

And we know: $S = I + NX$ Therefore:

$$S^p + S^g = I + NX$$