Macroeconomics & well-being II

Principles of Macroeconomics // Fall 2024

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Readings

Recommended readings

Required readings:

- *Macroeconomics in Context*, 4th ed.
  - → Chapter 4, sections 1—3.

Required listening:

- `Planet Money podcast: GDP and what counts (NPR)`

Words of the day

- “Economic” vs. “business” investment;
- Circular flow.

Quick review

Quick review

Measured by what each economic sector **spends**, **Gross Domestic Product** (GDP) can be defined by:

$$\text{GDP} = C + I + G + (X - M)$$

A few questions:

- Examples of *Consumption* (*C*) expenditures?
- What do we mean by *Investment* (*I*)?
- Examples of *Government* spending?
- How do we call *(X -M)*?

The income approach

The income approach

After seeing how GDP can be computed via the **spending approach**, one can get the same results by:

- Adding up all **incomes**, rather than *outputs*.

The starting point is a measure known as **National Income** (NI).

- It is the sum of the incomes earned by each (macro)economic **sector**, except for the *foreign* sector.

What are the incomes earned by:

- *Households*?
- *Firms*?
- *Government*?

The income approach

NI, however, will **not** be equal to the **GDP** obtained by the **spending** approach.

In other terms:

$$\textbf{Wages} + \textbf{Profits} + \textbf{Rents} + \textbf{Interest} + \textbf{Net Taxes} \neq C + I + G + (X - M)$$

In order to make them equal:

- Add incomes from *foreign* production;
- Add the *wear-and-tear* of structures, equipment, software,...

With that, we arrive at a country's **Gross Domestic Income** (GDI).

The income approach

A country's **Gross Domestic Income** (GDI) is defined by:

> *The total amount of money earned by a nation's people and its businesses.*

Q: What is the **GDI** of the U.S. economy?

A: As of the second quarter of 2024 (2024Q2), its GDI is of US$ *27.88 trillion*.

Q: But wasn't the U.S. GDP around US$ *28 trillion*?

A: Yes, but different data *sources* yield different *results*.

- *Statistical discrepancy*.

The income approach

As an **example**, suppose a simple economy producing a *single* product: bread.

It is produced in **three** stages:

1. Wheat is grown, harvested, and sold for $1 by a farmer to a miller (for simplification, assume the wheat is produced using *no* intermediate goods);
2. The wheat is used by a miller to produce flour, which is sold for $3; and
3. The flour is used by a baker to produce bread, which is sold to a consumer for $7.

Q1: What is this economy's *Gross Domestic Income*?

Q2: What is this economy's *Gross Domestic Product*?

Reality check

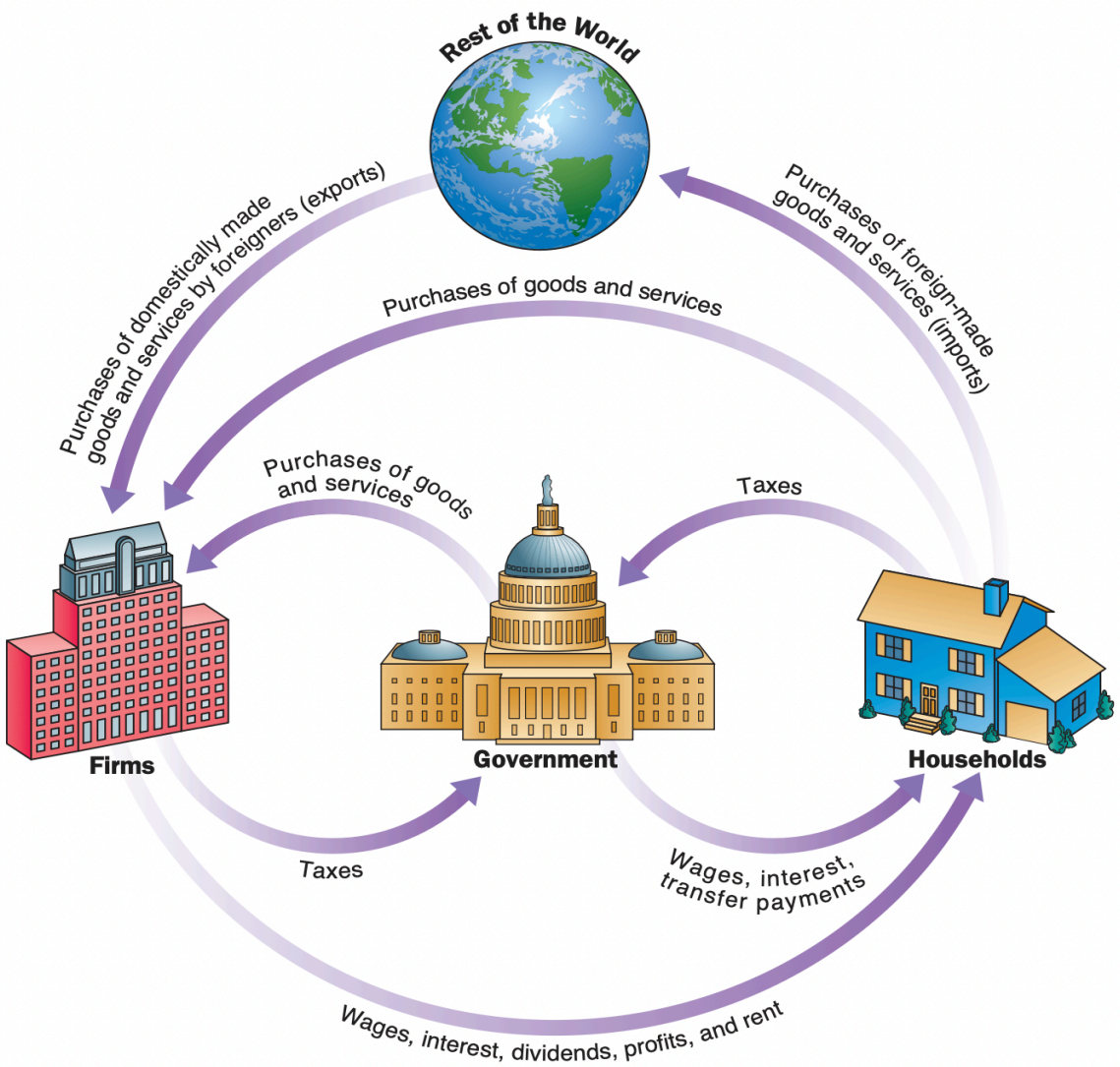
Reality check

- U.S. Gross Domestic Product over time

- U.S. National Income and Product Accounts

GDP wrap-up

The circular flow



Source: *Case, Fair, and Oster (2012).*

Breaking down GDP

What do we mean by:

- *Gross*?
- *Domestic*?
- *Product*?

GDP by expenditure

- U.S. Gross Domestic Product over time, again

Quick practice

Quick practice

Suppose you are given the following data (in US$ billions):

- *Sales of durable goods*: $ 1,035
- *Nonresidential investment expenditures*: $ 1,388.80
- *Federal Government expenditures*: $ 1,144.80
- *Changes in business inventories*: $ -120.90
- *Exports*: $ 1,564.20
- *Services*: $ 6,833.90
- *Sales of nondurable goods*: $ 2,220.20
- *State and local government spending*: $ 1,786.90
- *Imports*: $ 1,956.60
- *Residential investment*: $ 361.00

Compute *(a)* each **aggregate expenditure** and *(b)* its **total value**.

Next time: Shapes and forms of GDP