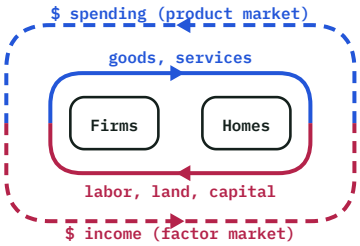
# How big is an economy?

Coralia, a small island nation, publishes its first GDP: what counts, how to add it up, what it misses.

## 1 Circular flow

money goes round

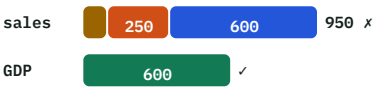
- **Households ⇄ firms** → two markets, two flows
- `PRODUCT MARKET` firms sell goods and services → households spend `$`
- `FACTOR MARKET` households sell labor, land, capital (machines, buildings) → firms pay wages, rent, interest, profit
- **Spending** here = **income** there ⇒ the flow never stops · dashed = `$`, solid = goods and work




## 2 GDP

gross domestic product

- **Market value** of all **final** goods and services **produced** in a country in **one year**
- **Domestic** → made inside the country, whoever owns the firm (foreign-owned hotel in Coralia ✓)
- **Final** good → bought by its last user · **intermediate** good → used up to make another, left out
- **Double counting**: wheat 100 + flour 250 + bread 600 = **950** × → only bread **600** ✓




## 3 Value added

each firm's share

- `value added = sales − inputs bought` → sum over all firms = GDP
- Farm 100 − 0 = **100** · mill 250 − 100 = **150** · bakery 600 − 250 = **350** → 100 + 150 + 350 = **600**
- Practice: crew 120 · cannery 300 − 120 = **180** · supermarket 500 − 300 = **200** → **500**, not 920

## 4 Not in GDP

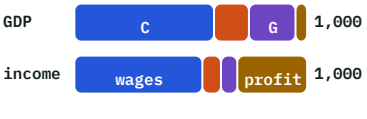
money moves, nothing new

- **Used goods** → counted when new · **shares** (pieces of a firm), **bonds** (loans) → only ownership changes
- **Transfers** (pensions, benefits) → no new work; **G** counts purchases only
- **Unpaid work** (housework, volunteering) and **unrecorded cash work** → no recorded price
- Car made abroad, $30,000: **C** ↑ 30,000 and **imports** ↑ 30,000 ⇒ GDP unchanged

## 5 Spending

who buys it

- `GDP = C + I + G + NX` ← `NX = exports − imports`
- **C** households · **I** new machines, buildings, houses (not shares) · **G** government purchases · **NX** foreigners − imports
- Coralia ($ million): NX = 250 − 200 = 50 → 600 + 150 + 200 + 50 = **1,000**
- Practice: 500 + 120 + 180 + (220 − 170) = **850** · pensions +40 ⇒ still 850




## 6 Income

who earns it

- `GDP = wages + rent + interest + profit` → spending = income, same total
- Coralia: 550 + 80 + 70 + **300** = **1,000** (profit = 1,000 − 550 − 80 − 70)
- Official accounts add sales taxes and wear on machines so both totals match

## 7 Big ≠ rich

per person, limits

- `GDP per person = GDP ÷ population` → compare living standards
- Coralia 1,000M ÷ 50,000 = **$20,000** · Mareth 3,000M ÷ 300,000 = **$10,000** (3× bigger, half as rich)
- Practice: GDP +10% (1,000 → 1,100M), people +10% (50,000 → 55,000) ⇒ per person **$20,000**, unchanged
- GDP misses **free time** · **nature** (cut mangroves add timber sales) · **who gets what** → output ≠ well-being

