



How big is an economy?

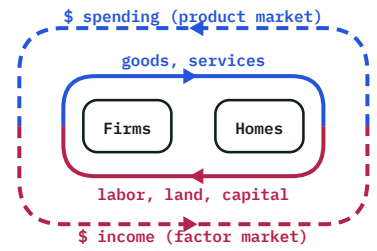
Coralia, a small island nation, publishes its first GDP: what counts, how to add it up, what it misses.

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Circular flow

money goes round

- Households $\rightleftharpoons$ firms $\rightarrow$ two markets, two flows
- PRODUCT MARKET** firms sell goods and services $\rightarrow$ households spend \$
- FACTOR MARKET** households sell labor, land, capital $\rightarrow$ firms pay wages, rent, interest, profit
- Spending** here = **income** there $\Rightarrow$ the flow never stops · dashed = \$, solid = goods and work



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GDP

gross domestic product

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

sales	250	600	950 X
GDP	600	✓	

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Value added

each firm's share

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

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Not in GDP

money moves, nothing new

- Used goods** $\rightarrow$ counted when new · **shares, bonds** $\rightarrow$ only ownership changes
- Transfers** (pensions, benefits) $\rightarrow$ no new work; **G** counts purchases only
- Unpaid work** (housework, volunteering) and **unrecorded cash work** $\rightarrow$ no recorded price
- Car made abroad, \$30,000: **C** $\uparrow$ 30,000 and **imports** $\uparrow$ 30,000 $\Rightarrow$ GDP unchanged

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Spending

who buys it

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

GDP	C	G	1,000
income	wages	profit	1,000

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Income

who earns it

- GDP** = **wages** + **rent** + **interest** + **profit** $\rightarrow$ 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

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Big $\neq$ rich

per person, limits

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

Coralia	\$20,000
Mareth	\$10,000