Economics in Action · Chapter 1

Foundations, Supply & Demand

What economics is, and how prices get made

Tickets go on sale at 10:00.

By 10:01, every seat is sold out.

An hour later, resale prices are 3× face value. Why?

To crack it: a few building blocks.

An illustrative scenario

Economics =

the study of how people make **choices** when they **can't have everything**.

Micro vs. macro

Two zoom levels on the same subject

	Microeconomics	Macroeconomics
Zoom	One person, firm, or market	The whole economy
Asks	Why is coffee $5?	Why are all prices rising?
	How many workers to hire?	Why is unemployment up?
	Who buys concert tickets?	What does the central bank do?

Section 2

Scarcity, opportunity cost & the margin

The ideas everything else rests on

Scarcity:

we want more than we can have.

So every choice has a **cost.**

Opportunity cost =
the value of the next-best thing you gave up.

What does that concert really cost?

Illustrative numbers

	Amount
Ticket price	$80
Shift you could have worked instead	$120
True cost of going	$200

Money spent plus the best thing you gave up. Going is only worth it if the night is worth $200 to you.

Opportunity cost hides everywhere

Time: four years of college costs tuition and four years of wages

Money: cash under the mattress costs the interest it could earn

Space: a store shelf for one product is a shelf not used for another

Think at the margin

Marginal = one more

Marginal means one more: the next unit, the next hour, the next dollar

Rule: do it if the extra benefit > extra cost

Sunk costs don't count: what's already spent can't be un-spent

Should the coffee shop stay open later?

Illustrative numbers · extra cost = $40 staff & lights + beans, milk & cups

Extra hour	Extra sales	Extra cost	Do it?
8 to 9 pm	$90	$58	Yes
9 to 10 pm	$55	$51	Yes, barely
10 to 11 pm	$30	$46	No

Stop where the extra cost of one more hour beats the extra benefit.

People respond to incentives

An incentive is anything that rewards or punishes a choice

Prices are the biggest incentive of all

Change the reward, and behavior changes, sometimes in ways nobody planned

How economists think

Models simplify on purpose, like a map

Ceteris paribus: change one thing, hold everything else equal

Positive = what is (testable). Normative = what should be (a value judgment)

Section 3

Economic systems & the circular flow

How a society organizes its choices

Who decides?

Every economy must decide: what to make, how, and for whom

System	Who answers the 3 questions
Traditional	Custom: do what was done before
Command	The government plans it
Market	Millions of buyers and sellers, through prices
Mixed	Mostly markets, plus government rules and services

The four factors of production

The ingredients every economy uses, and what each one earns

Land: natural resources → earns **rent**

Labor: people's work → earns **wages**

Capital: tools, machines, buildings → earns **interest**

Entrepreneurship: combining them and taking the risk → earns **profit**

The circular flow



Section 4

The production possibilities frontier

A picture of trade-offs

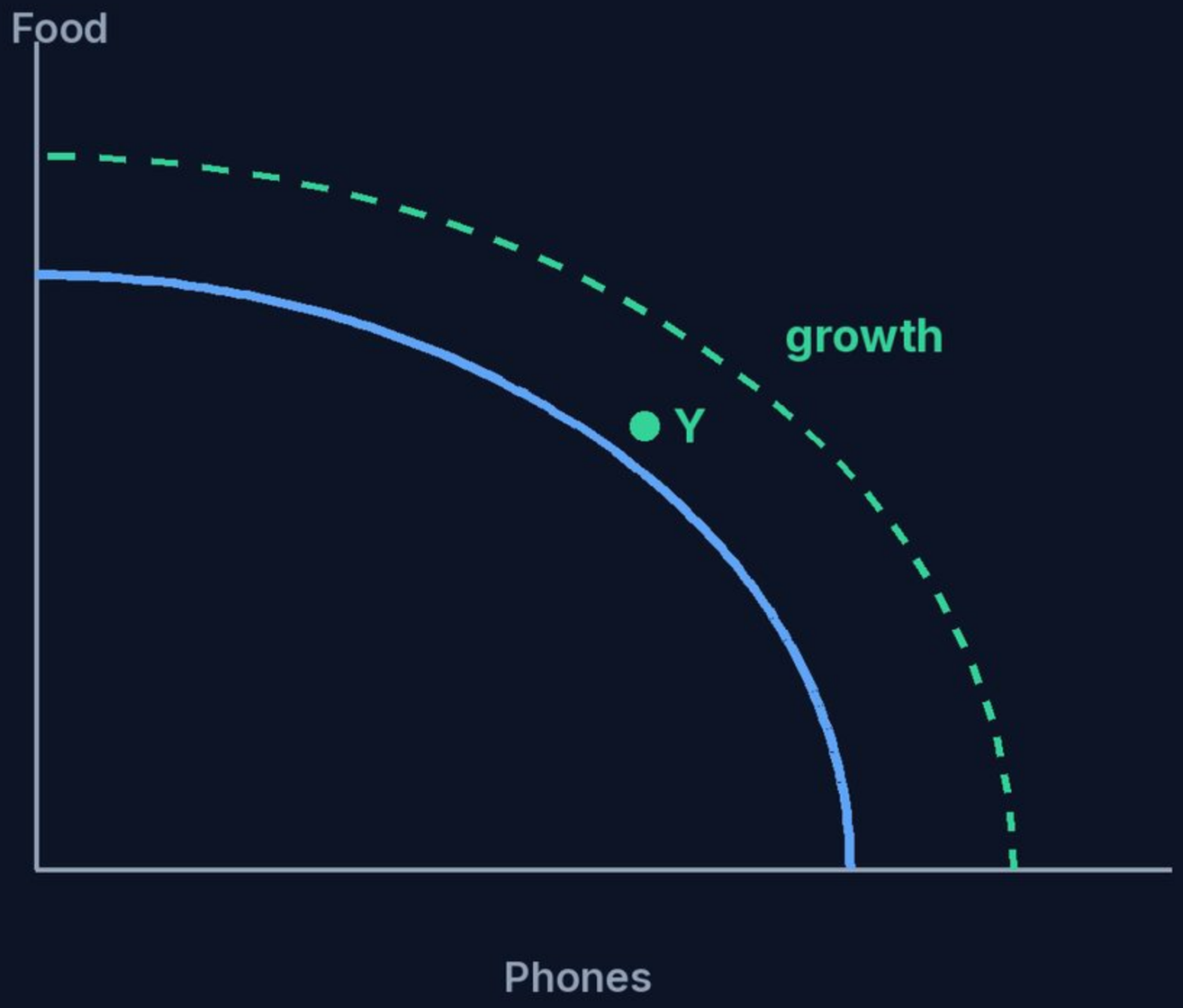
One country, two goods

Made-up economy, illustrative numbers

Option	Food (tons)	Phones (thousands)
A	100	0
B	90	10
C	70	20
D	40	30
E	0	40

Each extra 10 thousand phones costs more and more food: 10, then 20, then 30, then 40 tons.

The production possibilities frontier



Growth

More workers, more machines, or better technology

→ the whole frontier shifts out.

Y is now within reach.

Invest today → more of both tomorrow.

Section 5

Comparative advantage

Why trade makes both sides better off

Two workers at a café

Made-up numbers: what each can make in one hour

	Sandwiches	OR coffees
Maya	30	60
Leo	10	40

Maya is faster at both. That's absolute advantage.

So should Maya do everything? No. Look at what each task costs.

What each task really costs

Opportunity cost = what you give up

	1 sandwich costs…	1 coffee costs…
Maya	2 coffees	½ sandwich
Leo	4 coffees	¼ sandwich

Lowest cost wins: Maya makes sandwiches, Leo makes coffee. That's comparative advantage.

Specialize, and the café gets more of both

Two hours each. Specialize = Leo all coffee; Maya 1½ h sandwiches, ½ h coffee

	Sandwiches	Coffees
Split time evenly	40	100
Specialize	45	110

More sandwiches and more coffee, from the same two people, same hours. That's the gain from trade.

Why this matters far beyond a café

People: a great lawyer still hires an assistant

Countries: each makes what it gives up least for, then trades. Both can win, even if one is better at everything

But inside a country, some workers and industries lose. More in Chapter 6

Section 6

Demand

What buyers want, and what moves it

Demand = how much people want to buy **at each possible price.**

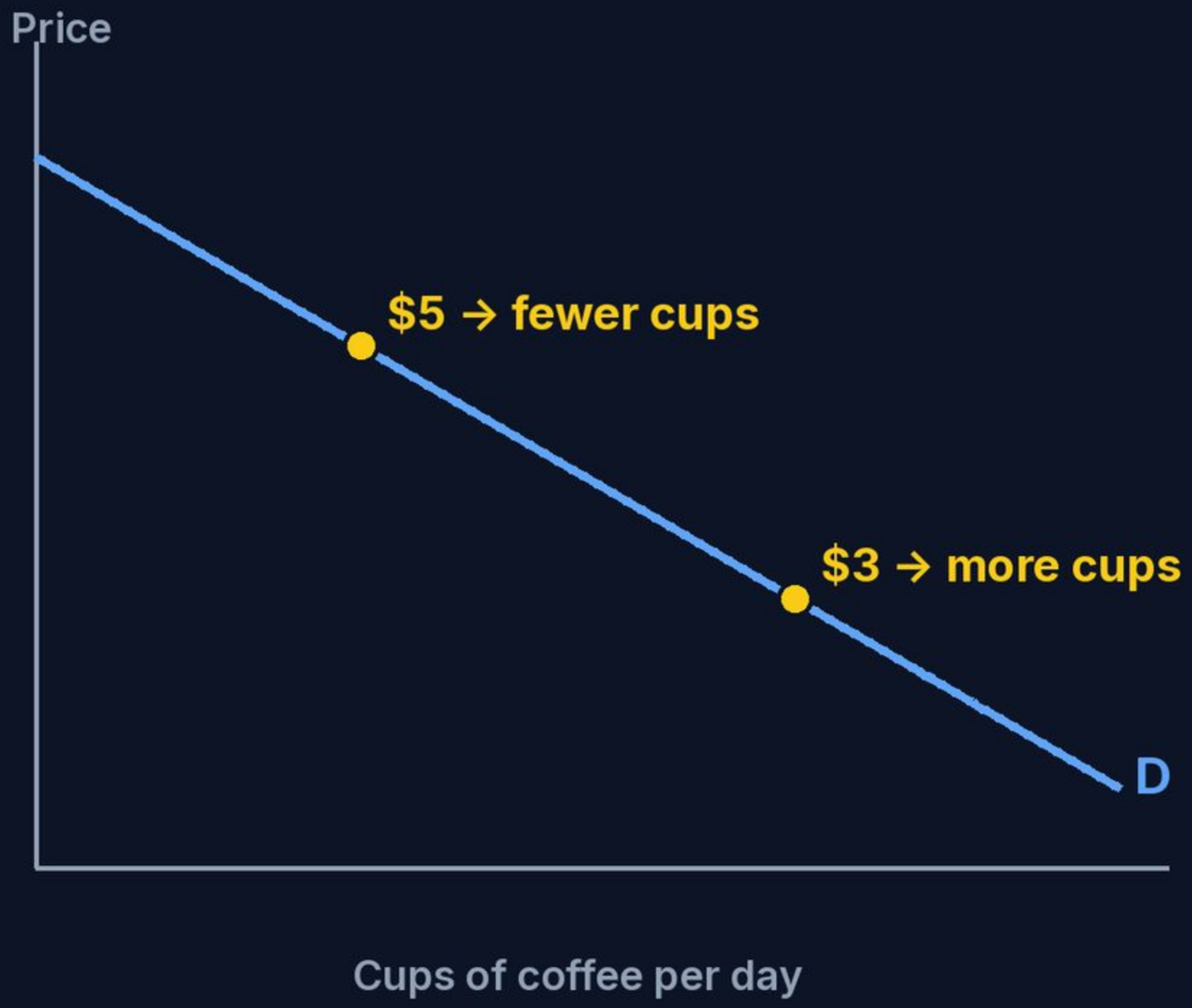
A demand schedule

Coffee in a small town, illustrative numbers

Price per cup	Cups wanted per day
$3.00	1,400
$3.50	1,200
$4.00	1,000
$4.50	800
$5.00	600

Higher price, fewer cups wanted. Plot these points and you get the demand curve.

The demand curve



Law of demand

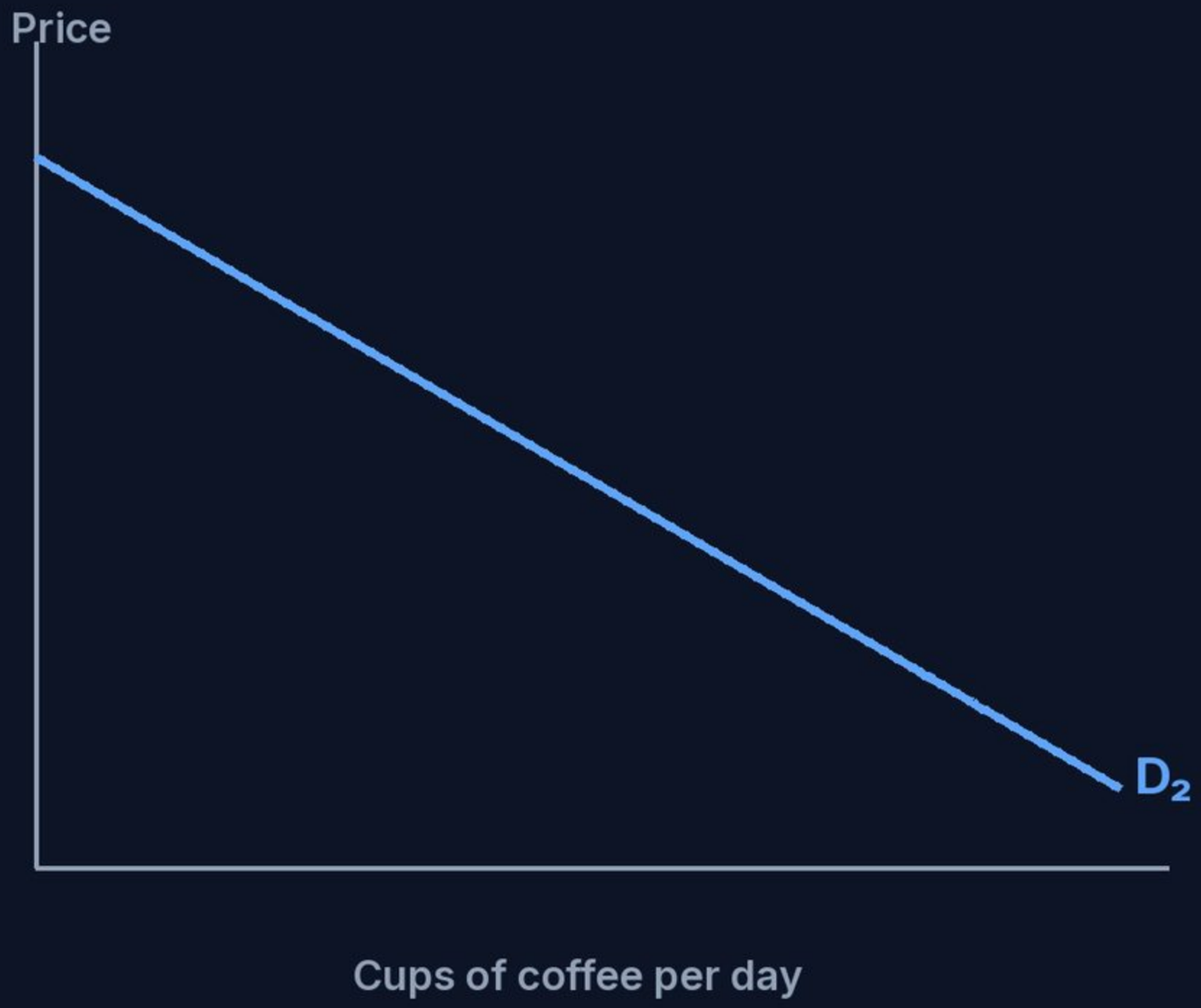
Price up → quantity wanted down.

Price down → quantity wanted up.

Why? Substitution: pricier → people switch to other options.

Income effect: a higher price leaves less to spend.

Moving along vs. shifting the curve



The trap

A good's own price never shifts its demand curve.

Price moves you along it.

Everything else shifts it.

What shifts demand

- **Income:** more money → more demand for most goods
- **Number of buyers:** more people in the market
- **Related goods:** substitutes & complements
- **Tastes:** a trend, a new study, a viral video
- **Expectations:** expect prices to rise → buy now

Related goods: substitutes & complements

Substitutes: used instead of each other, like coffee and tea

Price of tea ↑ → more people drink coffee → coffee demand shifts **right**

Complements: used together, like cars and gas

Price of gas ↑ → demand for gas-guzzling cars shifts **left**

Quick check: the price of **tea** jumps. What happens to **coffee** demand?

→ It **shifts right.** Tea, the substitute, got pricier.

Section 7

Supply

What sellers offer, and what moves it

Add supply to the schedule

Same town, illustrative numbers

Price per cup	Cups wanted	Cups offered
$3.00	1,400	600
$3.50	1,200	800
$4.00	1,000	1,000
$4.50	800	1,200
$5.00	600	1,400

Higher price, more cups offered: the supply schedule.

At $4.00, wanted = offered. Hold that thought for Section 8.

The supply curve

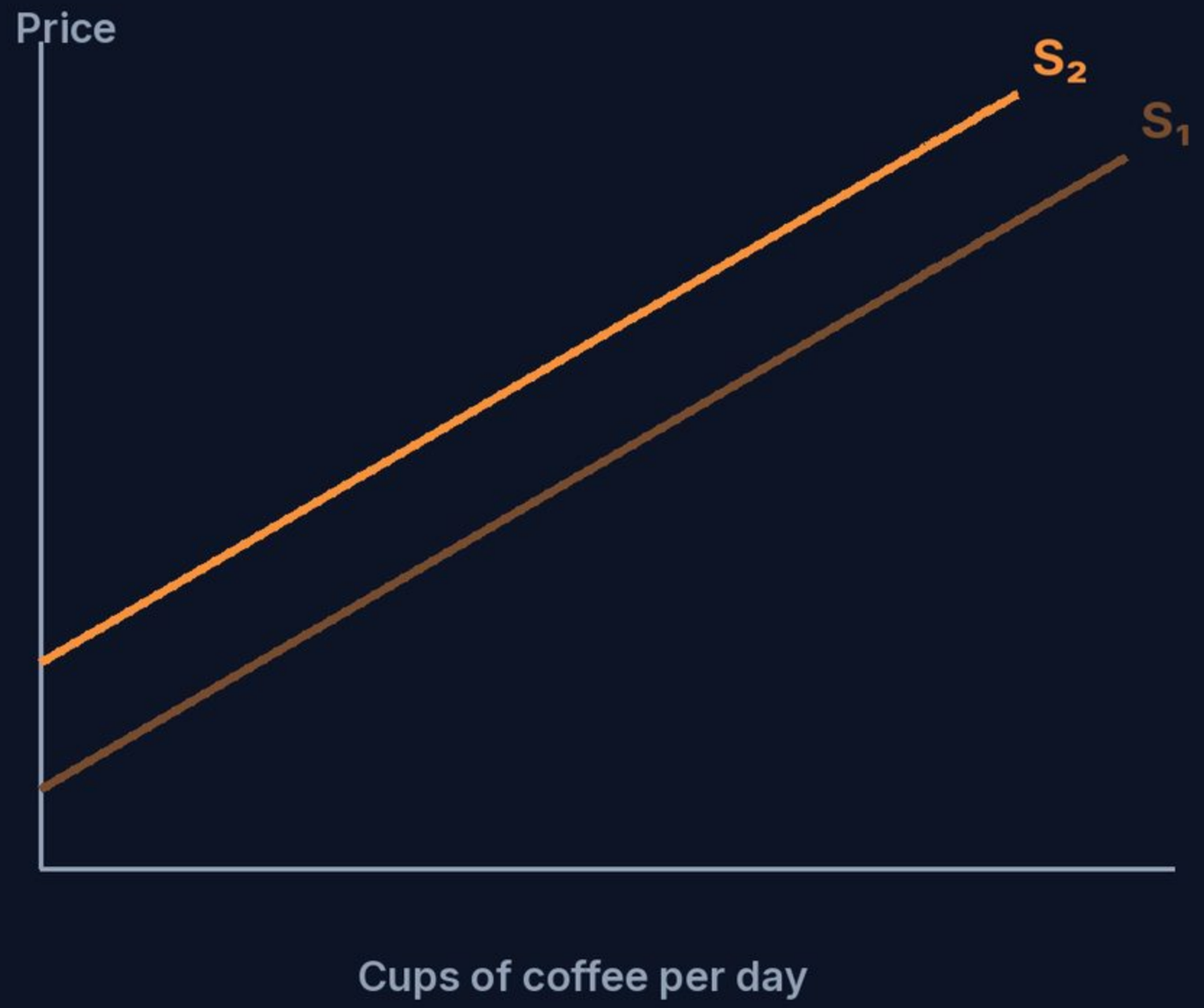


Law of supply

Price up → quantity offered up.

A higher price makes selling more profitable, so sellers offer more and new ones join.

Shifting supply



Shift LEFT

Less offered at every price.

Coffee bean prices spike.

What shifts supply

- **Input prices:** beans, milk, wages, rent
- **Technology:** faster, cheaper ways to make it
- **Number of sellers:** cafés opening or closing
- **Expectations:** expect higher prices later → hold back now
- **Government:** taxes, subsidies, regulations
- **Other uses of the same resources:** a farmer can grow corn or soybeans

Quick check: a new machine lets cafés make coffee **twice as fast.**

What happens to the **supply of coffee?**

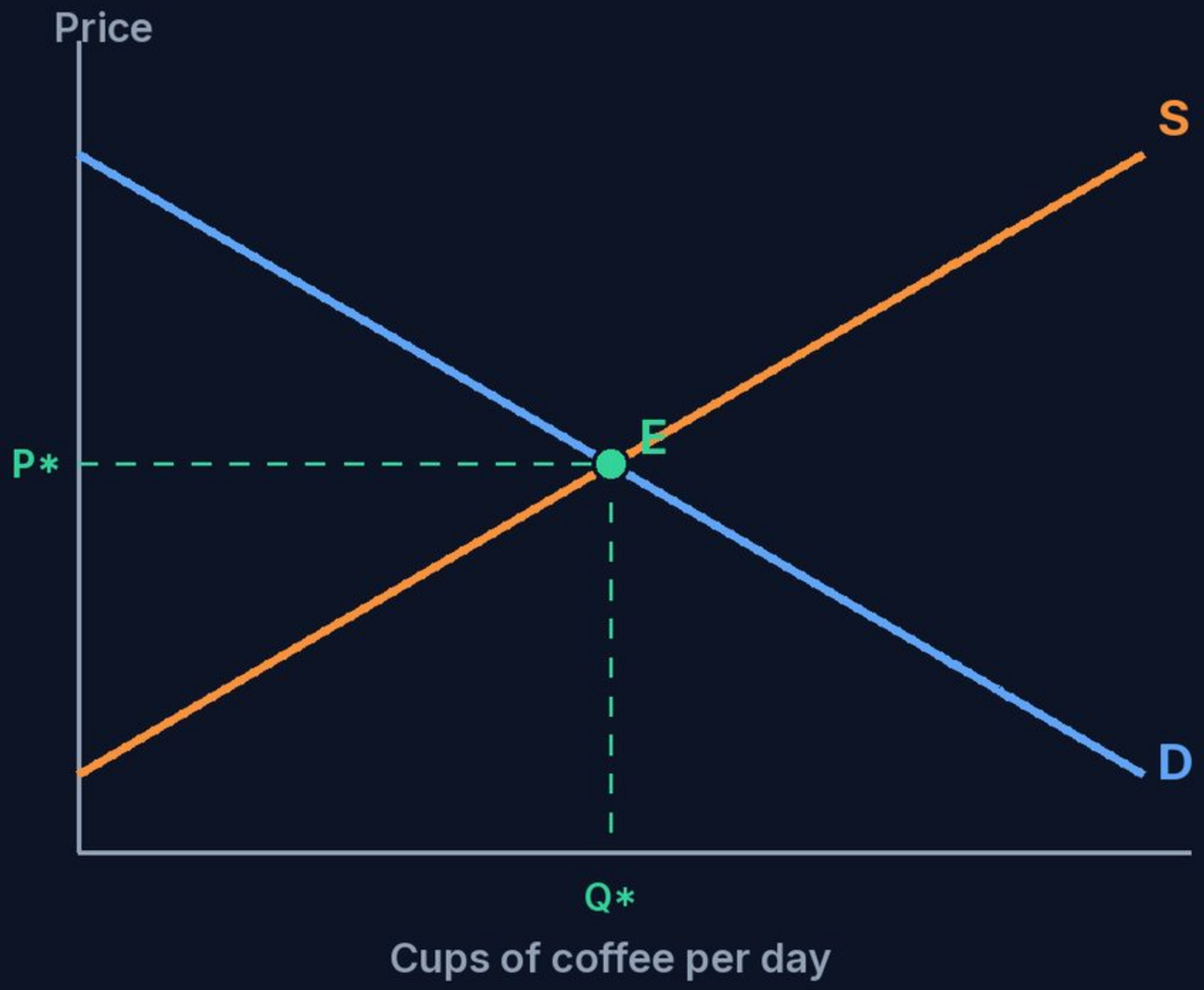
→ It **shifts right.** Cheaper to make, so more is offered at every price.

Section 8

Equilibrium

Where the price lands, and what happens when things change

Put them together



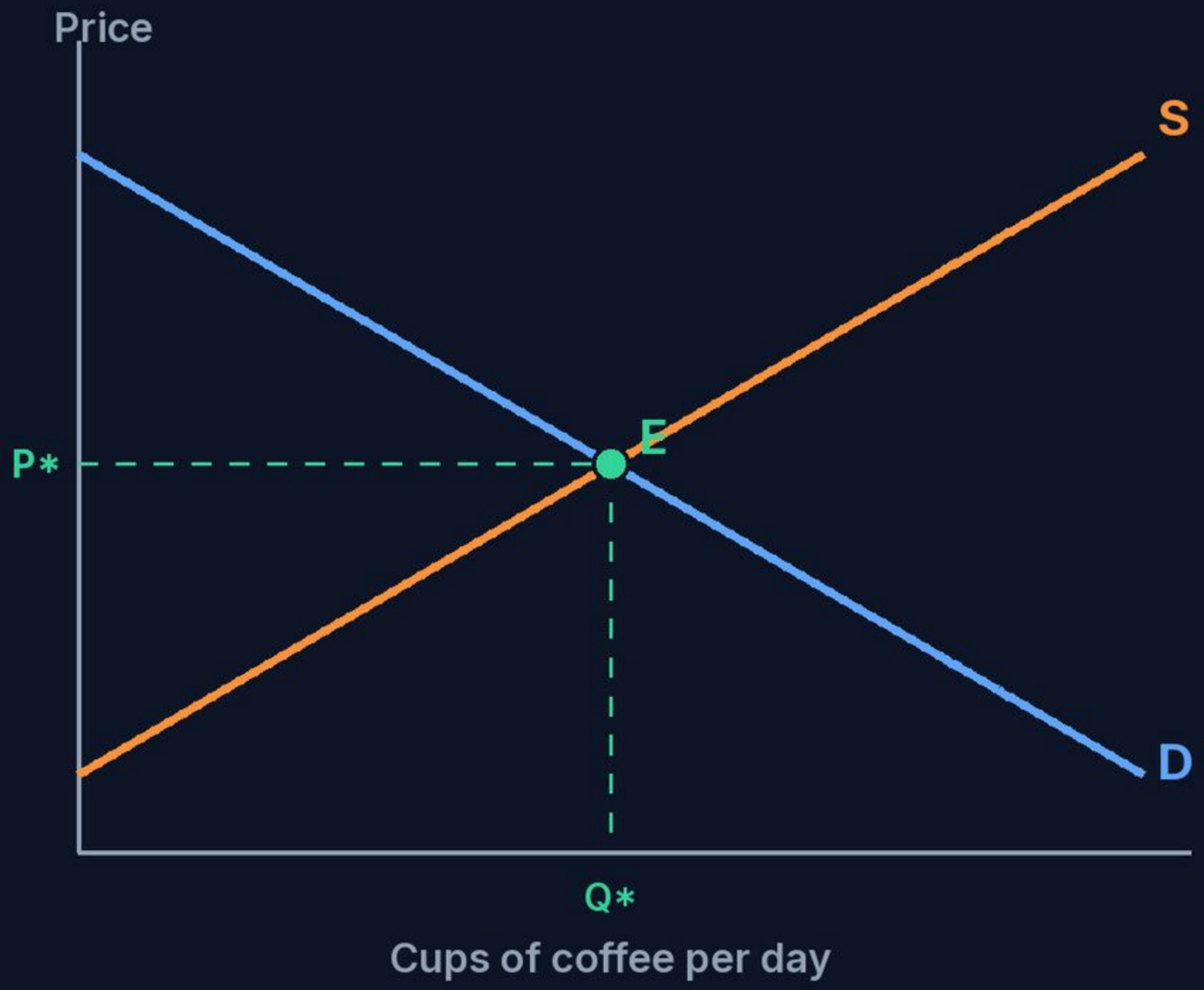
Equilibrium

Where the curves cross.

Quantity wanted = quantity offered.

P * = market price. Q * = cups sold.

Below equilibrium: shortage

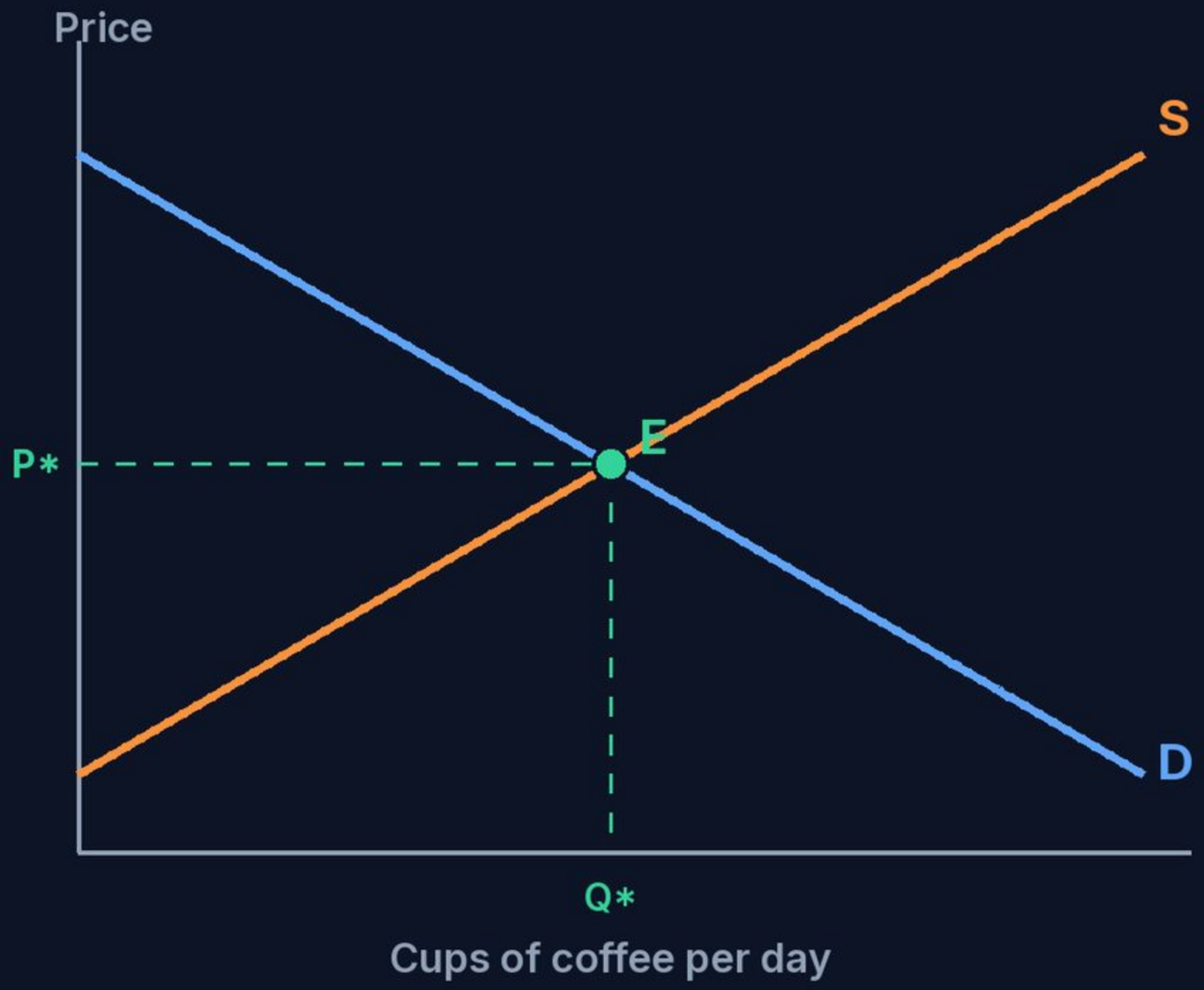


…until it closes

Back at equilibrium.

Nobody had to plan it.

Above equilibrium: surplus



So the price falls

...until the surplus is gone.

Back at equilibrium.

Shortage and surplus, in numbers

Same town, illustrative numbers

Price	Wanted	Offered	Result
$3.50	1,200	800	Shortage of 400
$4.00	1,000	1,000	Equilibrium
$4.50	800	1,200	Surplus of 400

Only one price clears the market: $4.00. Any other price leaves a gap that pushes it back.

Shortage → price rises

Surplus → price falls

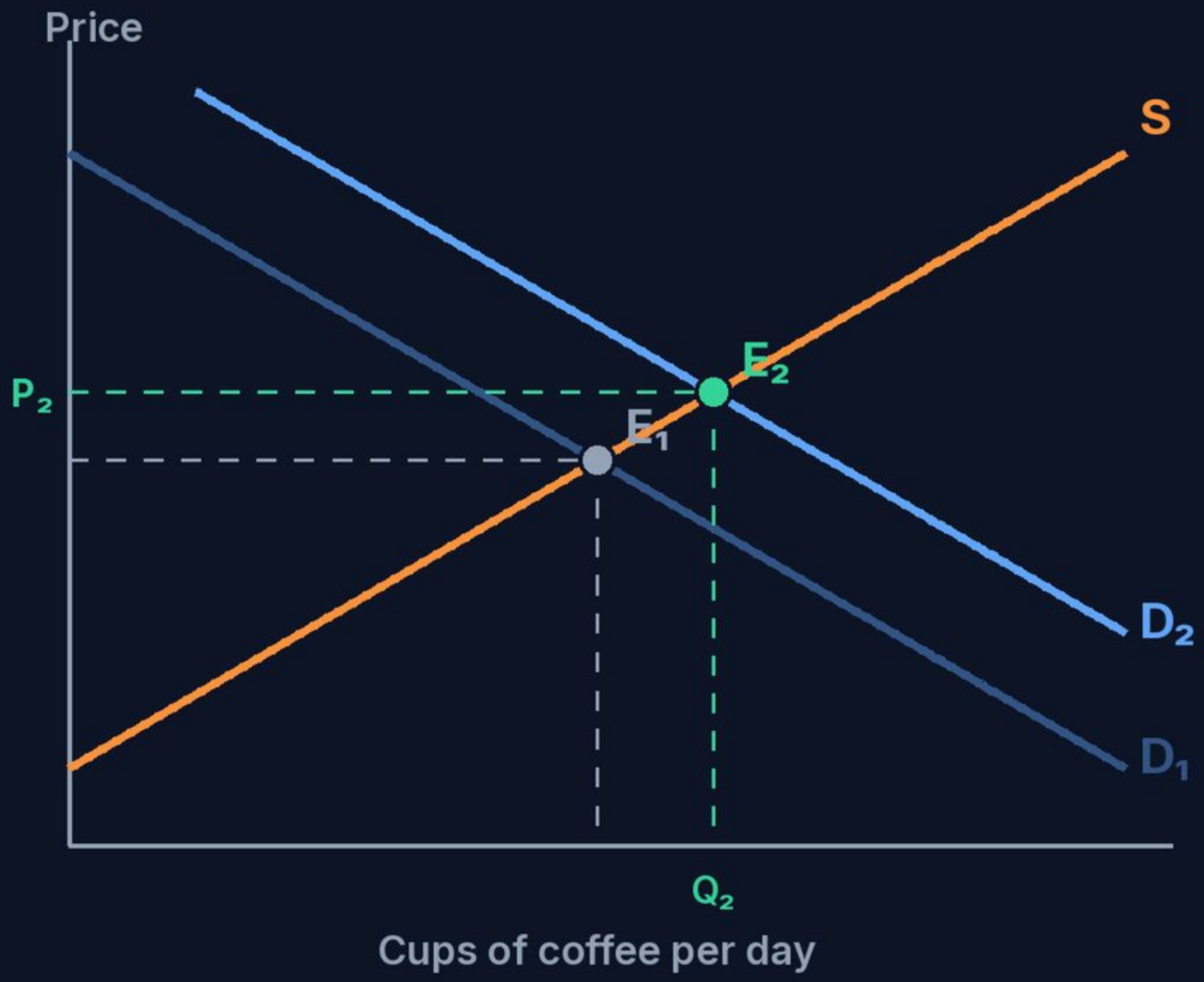
Price is a **signal:** it tells buyers and sellers what to do.

The 4-step method

Use this every time something changes

1. Draw the market as it is now
2. Which curve moves: demand, supply, or both?
3. Which direction: right (more) or left (less)?
4. Find the new crossing: what happened to price and quantity?

Demand shifts right



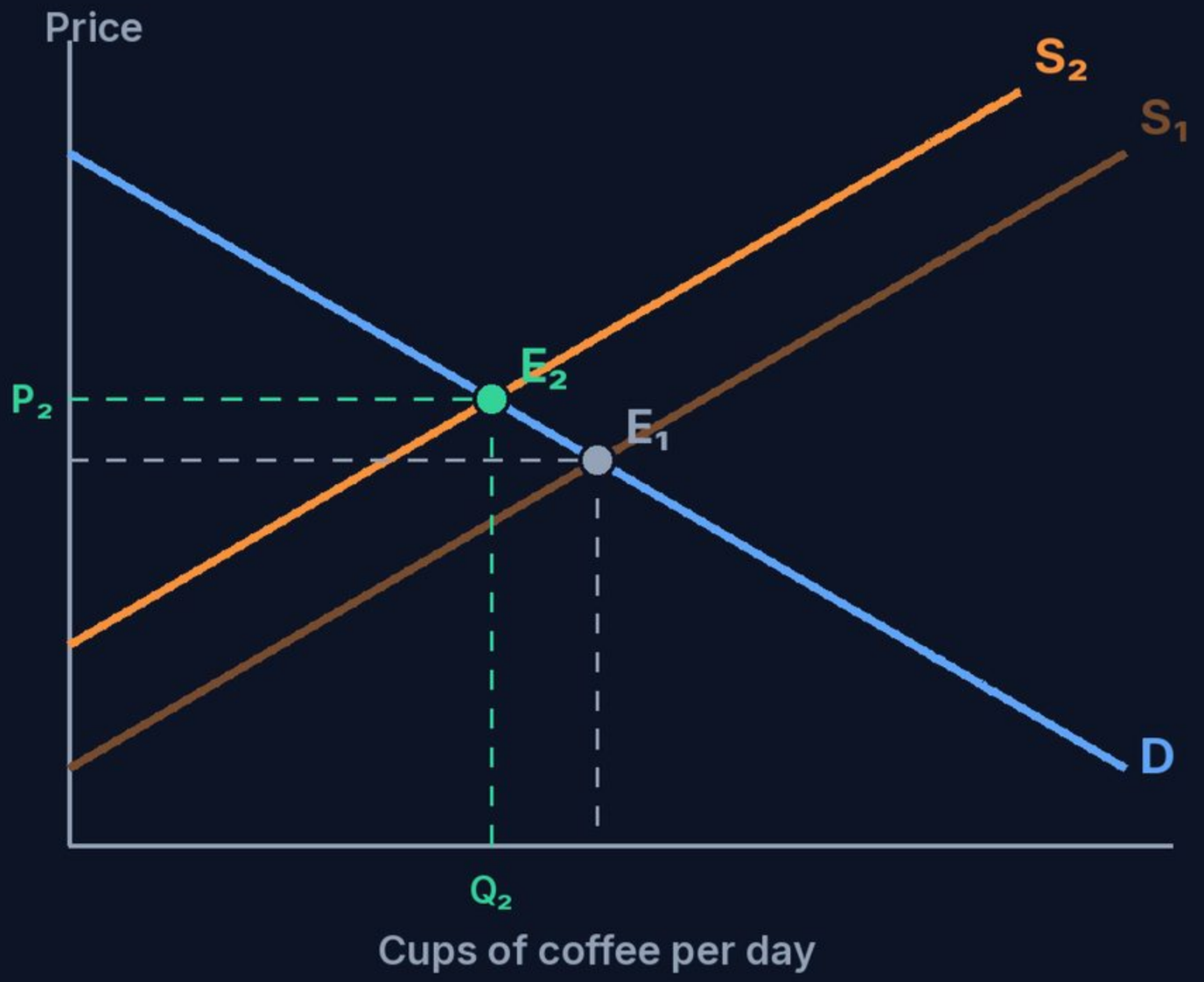
Event

A big office building opens downtown.

Buyers → demand shifts right.

Price ↑ Cups sold ↑

Supply shifts left



Event

Coffee bean prices spike after a bad harvest.

Sellers → supply shifts left.

Price ↑ Cups sold ↓

Read the market backwards

See what price AND quantity did, and you can tell which curve moved

Price	Quantity	What moved?
↑	↑	Demand rose
↓	↓	Demand fell
↓	↑	Supply rose
↑	↓	Supply fell

Prices up while less gets sold? Most likely a supply story. (If both curves moved, you can't tell from these two alone.)

When BOTH curves move

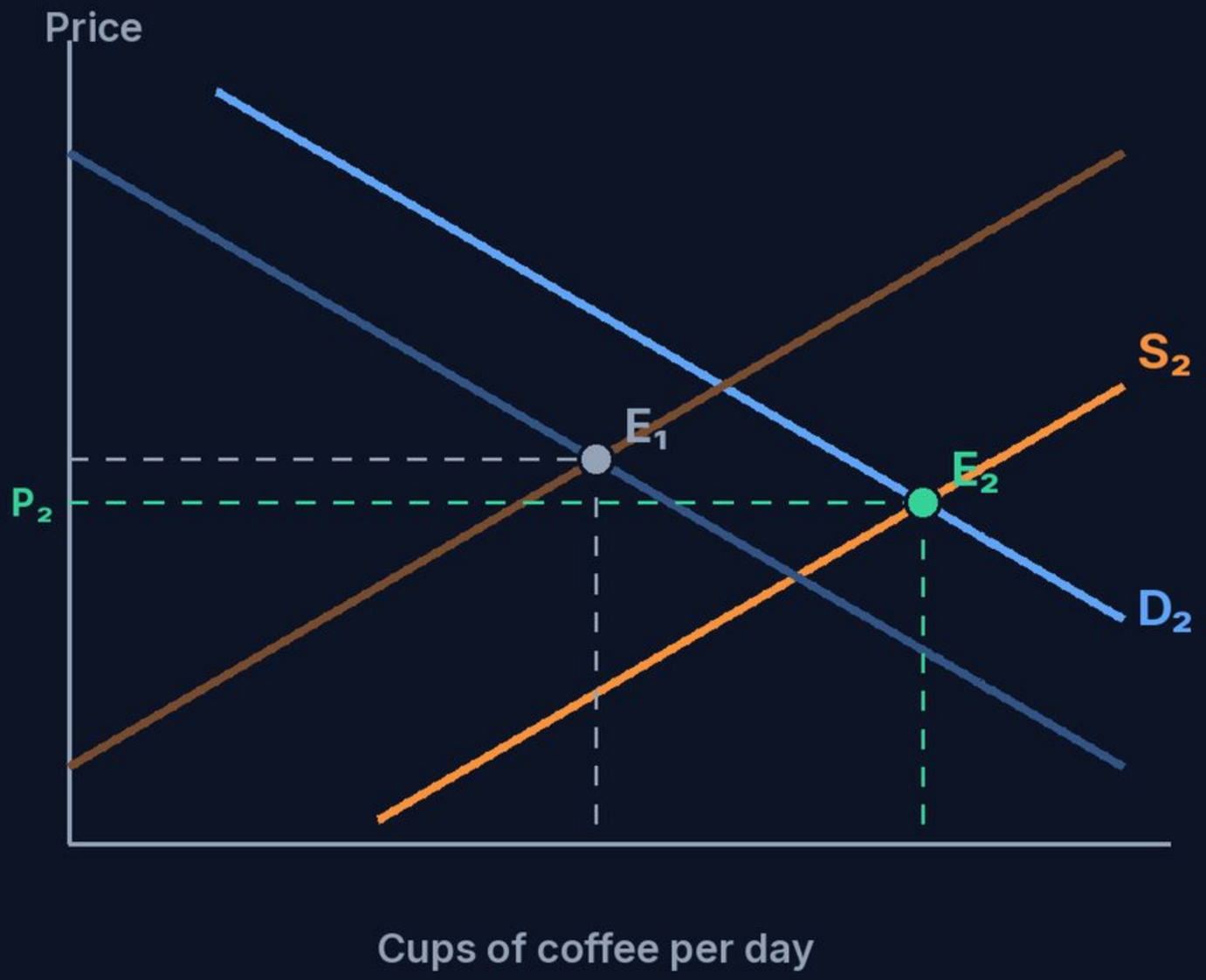
One answer is certain. The other depends on which shift is bigger

Demand	Supply	Price	Quantity
→ **right**	→ right	?	↑
← **left**	← left	?	↓
→ **right**	← left	↑	?
← **left**	→ right	↓	?

Both push quantity up. On price they fight: demand pushes up, supply pushes down.

Rule: when both move, you know one answer for sure. The other is a tug-of-war.

Both shift right: who wins on price?

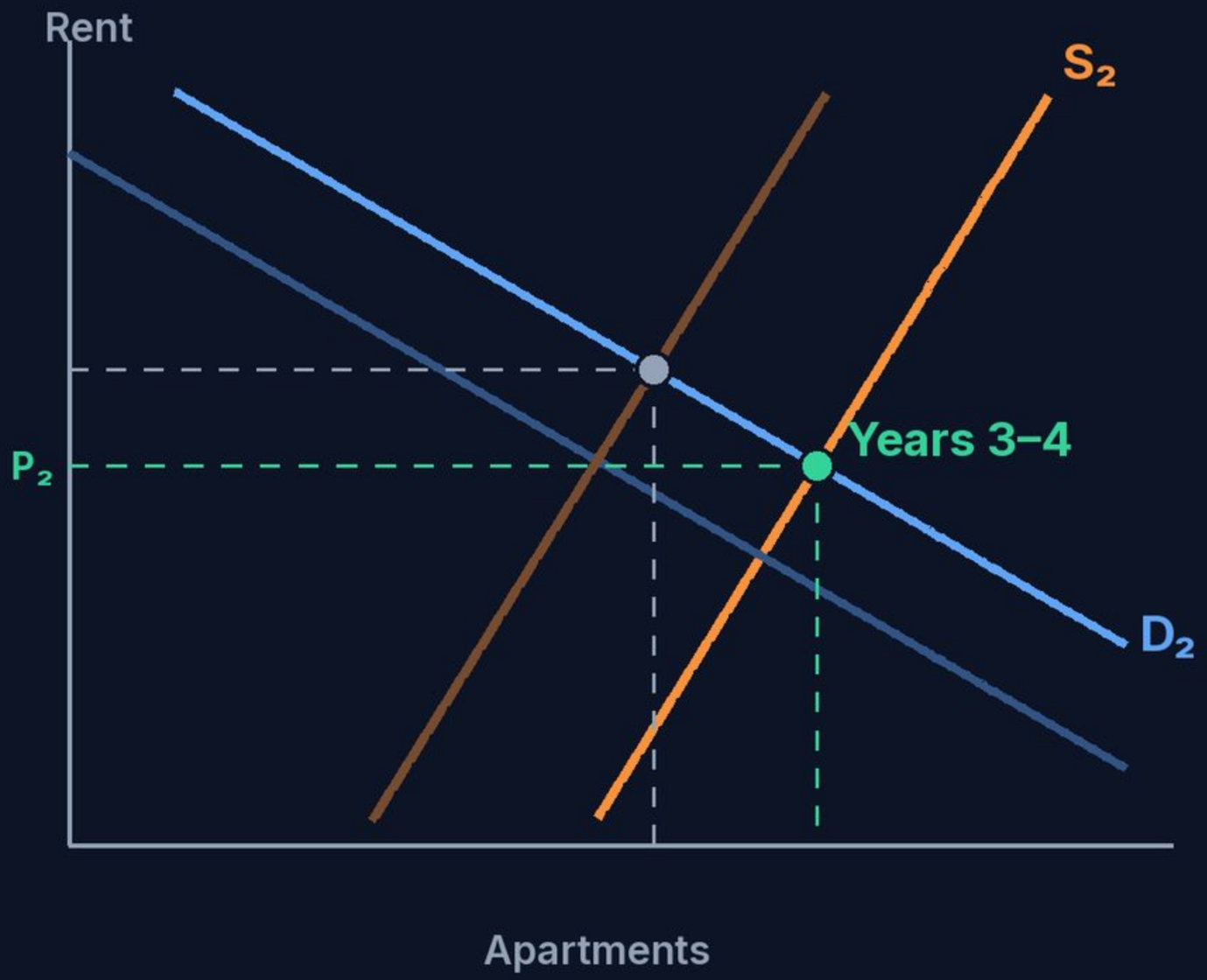


Supply shift bigger

Price ↓

Quantity ↑↑

A real-world pattern: "Boomtown"



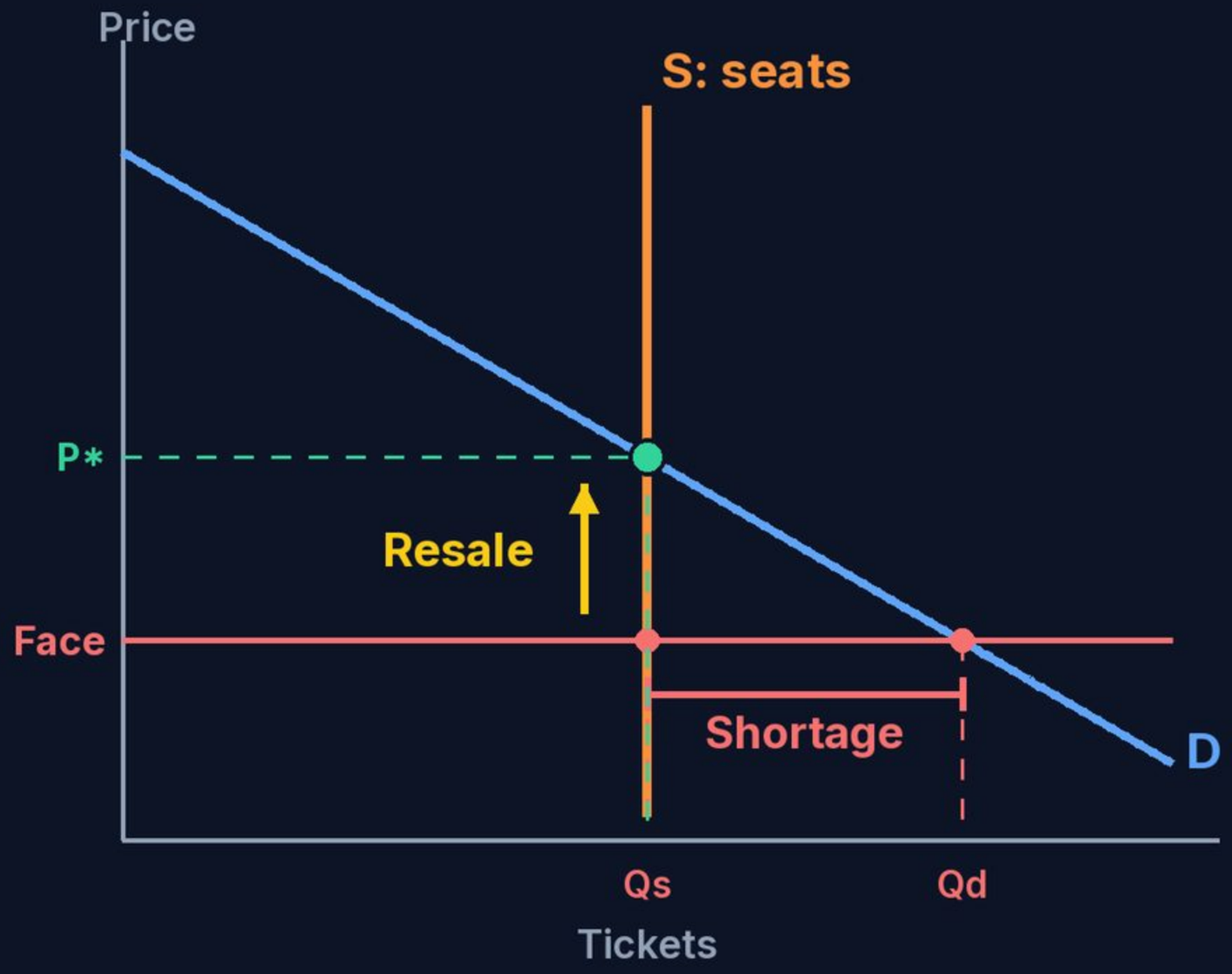
The lesson

Demand can move fast. Supply often moves slow.

A price trend today is not a forecast.

The response is coming.

Back to the puzzle: the sold-out concert



Face value BELOW P*

Fans want far more tickets than there are seats.

Shortage → sold out in a minute.

Resale prices climb toward P*.

The same model, many markets

Jobs: a wage is the price of labor; workers supply it, employers demand it

Stocks: a share price is where buyers and sellers meet

Expectations move all of them: prices react to what people expect

Section 9

Recap & where we're going

Lock it in

Recap

Economics = choices under scarcity. Micro zooms in; macro zooms out

Opportunity cost = the best thing you gave up. Decide at the margin

PPF: the menu of what's possible. Comparative advantage → gains from trade

Demand slopes down, supply slopes up. Price → move along; anything else → shift

Equilibrium: shortage → price ↑, surplus → price ↓. Price set below it → sellouts & resale

Both move: one result is sure, the other is a tug-of-war

Cheat sheet · Chapter 1



Below P*: shortage → price ↑
Above P*: surplus → price ↓
Opp. cost = best option given up
Decide at the margin

Shift rules

Demand →	P ↑ Q ↑
Demand ←	P ↓ Q ↓
Supply →	P ↓ Q ↑
Supply ←	P ↑ Q ↓

Both move: one result sure, the other a tug-of-war

Own price changes → move along. Anything else → shift

Demand shifters

- Income
- Number of buyers
- Related goods (substitutes, complements)
- Tastes
- Expectations

Supply shifters

- Input prices
- Technology
- Number of sellers
- Expectations
- Government (taxes, rules)
- Other uses of resources

Self-check 1 of 3

Gas prices rise sharply. What happens to the demand for bus rides, and why?

Answer

It shifts right. Driving is a substitute for the bus. It got pricier, so at every fare, more people want to ride.

Self-check 2 of 3

This summer, strawberry prices fell while more strawberries were sold. What most likely happened?

Answer

Most likely, supply rose, by more than any change in demand. Price ↓ with quantity ↑ is the supply signature. Maybe a great harvest.

Self-check 3 of 3

You skip a 4-hour, $15-an-hour shift to go to a free festival. What did the festival cost you?

Answer

$60, if the shift was your next-best option. "Free" to enter is not the same as free. Go if it was worth more than $60 to you.

Where we're going

Economics in Action: 6 chapters, from supply & demand to real estate

#	Chapter
1	Foundations, Supply & Demand (this chapter)
2	How Markets Work: elasticity, price controls, taxes, competition
3	Market Failures & the Labor Market: pollution, public goods, hidden info
4	Growth, Employment & Inflation: GDP, jobs, inflation, recessions, debt
5	Money, Banking & Interest Rates
6	Trade, Financial Markets & Real Estate

Next up · Chapter 2

How Markets Work

Elasticity, price controls, taxes, and competition vs. monopoly