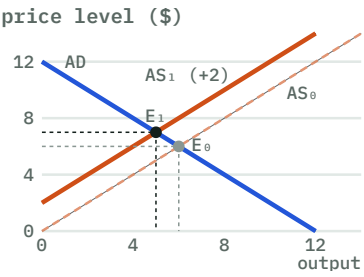
Why did the 1970s hurt twice?

AD and AS, a supply shock moves AS up, stagflation, no free fix (spend more or hold prices), which shocks move AD and which AS, the oil shocks of 1973 and 1979, the Volcker cure, the debate, checklist sign 5.

1 AD and AS

Macroeconomics, Lesson 4

- **Aggregate demand (AD)** = total spending at each price level · **aggregate supply (AS)** = total output firms make at each price level
- Coralia (toy island): AD `P = 12 − Y` · AS `P = Y` · Y = output (units), P = price level ($, average of all prices)
- Crossing: set equal → `12 − Y = Y` → **output 6, price level $6**
- Oil runs everything: factories, trucks, farms → oil costlier ⇒ every unit costs more to make



2 Supply shock

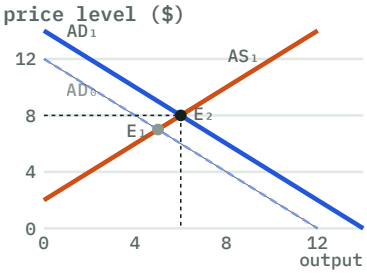
AS moves up

- **Supply shock** = sudden change in what it costs to make things → moves **AS** (AD stays)
- Oil ×4 → each unit **$2 more** → AS up 2: `P = Y + 2` → `12 − Y = Y + 2` → **E_0 → E_1**: output `6 → 5`, price level `$6 → $7` **at once**
- **Stagflation** = output stuck or falling while prices rise (stagnation + inflation) → hurt **twice**: jobs lost + prices up
- **Phillips curve** (Bill Phillips, New Zealand economist, 1958; Economic Policy, Lesson 7): low unemployment ↔ higher inflation, a trade-off → a supply shock **breaks** it: both rise
- Practice: $4 more per unit → `P = Y + 4` → output `6 → 4`, price level `$6 → $8`

3 No free fix

spend more, or hold prices

- **Stimulus**: government spends more + central bank (bank of the government and of the banks) makes borrowing cheap → AD right to `P = 14 − Y` → **E_1 → E_2**: output back at **6**, price level **$8** (was $7)
- Pull AD left to stop prices → output falls again
- Practice (AS `P = Y + 4`): output back at 6 → `P = 6 + 4 = $10`, AD `P = 16 − Y`, $4 above $6 · hold $6 → `6 = Y + 4` → **output 2**
- ⇒ every answer pays in one of the two problems



4 AD or AS?

sort the shock

- **Costs** of making things → **AS**: oil ×4, failed harvest, fuel plants shut, port strike blocks parts
- **Spending** decisions → **AD**: tax cut, stock-market crash, interest rates up, exports boom, families save more
- Good supply shock (practice): cheaper steel → AS **down** → output ↑, price level ↓ (1973 in reverse)

5 1973-1983

the real story

- **Oct 1973**: war between Israel and its neighbors → Arab members of **OPEC** (group of oil-selling countries) stop selling to the US and allies, cut output → oil **≈$3 → $12** a barrel (159 liters) by Jan 1974 (×4)
- US prices **+11%** (1974), **+9%** (1975) · unemployment **8.5%** (1975)
- **1979**: Iranian revolution → oil output ↓ → **≈$40** by 1980 · US inflation **13.5%** (1980) · $3 → $40 ≈ `×13`
- **Paul Volcker** (American economist, head of the Federal Reserve, the US central bank, 1979-87): interest rates (price of borrowing) **≈20%** → borrowing costlier → fewer houses, cars, machines → **AD left** → prices slow, output + jobs ↓
- Inflation `13.5% (1980) → 3.2% (1983)` · unemployment peak **10.8%** (late 1982) · Coralia: AD to `P = 10 − Y` → output 4, $6

6 Debate, checklist

checklist sign 5

- Was the cure worth it? **Supporters**: once people believed the Fed would keep inflation down, inflation stayed low for a generation · **Critics**: millions lost jobs in the worst recession (long fall in output + jobs) since the 1930s, a gentler path might have worked · no verdict
- Open question: how much of 1970s inflation came from **oil**, how much from **earlier money growth** · practice: "oil, and nothing else" → **goes beyond the facts**
- **Bubble checklist** · **Sign 1 · Bought to resell** · **Sign 2 · Money is a promise** · **Sign 3 · A run fills itself** · **Sign 4 · Printing to pay** · **Sign 5 · A supply shock cuts both ways**

Watch out: a supply shock moves **AS**, not AD · AS moves **up** by the extra cost per unit · output ↓ **and** prices ↑ together · more spending brings jobs back but lifts prices **again** · interest rates move **AD**