Who pays for a tariff?

A tax on imported goods: what it does to prices, factories and imports, who gains, who pays, what is lost, and what happened to US washers in 2018.

1 Problem · tool

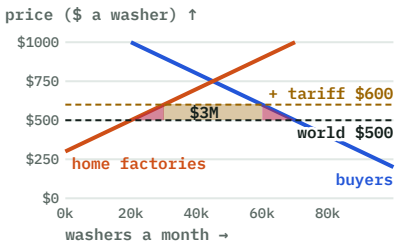
cheaper imports

- **Problem** → goods cost less abroad ⇒ home factories sell fewer, workers fear for jobs · buying abroad pays when others have a lower **opportunity cost** (**comparative advantage**, Micro 1)
- **Tool** → **tariff** = tax on each imported good, paid by the importer to the state at the border

2 Model

toy washers

- Washers in thousands a month · BUYERS `Qd = 120 − P/10` · HOME FACTORIES `Qs = P/10 − 30` · Qd wanted, Qs made, P price ($)
- **No trade** → $750 · 45,000 · **World price $500** (small country: cannot change it) → buyers **70,000**, factories **20,000**, **imports 50,000** · buyers pay $250 less



3 A tariff

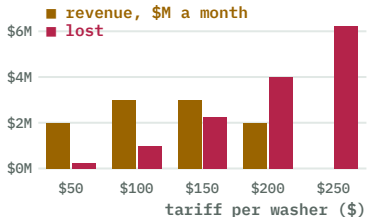
price + tariff

- Price at home = **$500 + tariff** · $100 → **$600** · factories **30,000** (↑) · buyers **60,000** (↓) · imports **30,000** (↓)
- Tariff $50 → 25k · 65k · imports 40k · $150 → 35k · 55k · 20k · $200 → 40k · 50k · **10k**
- **Prohibitive** tariff $250 → imports **0** · price $750 = no-trade price · revenue $0

4 Who pays

money map

- Importer hands it over, **buyers pay** (price ↑ by the whole tariff) · **$100**: buyers lose **$6.5M** (M = million) a month = factories **$2.5M** + state **$3M** + **$1M lost**
- **Revenue** = `tariff × imports still coming in` = $100 × 30,000 = **$3M** (not × 50,000)
- **Deadweight loss** = two triangles, each `½ × tariff × change in washers` · left: made at home for more than $500 · right: buyers who give up
- Bigger tariff ⇒ loss ↑ · revenue ↑ then ↓ · $200 → revenue **$2M**, loss **$4M**



5 Evidence

US washers 2018

- Feb 2018 · **20%** on first 1.2M washers imported a year, **50%** beyond · Flaaen (US Fed = central bank), Hortaçsu, Tintelnot (Univ. of Chicago), economists, 2020
- Washers **≈ +12%** (≈ +$86) ⇒ **buyers paid** · dryers, **no tariff**, **+$92** ⇒ **complements** sold in pairs, priced together
- Sellers abroad pay part only if they **cut their price** (a big buyer can push them) · all 2018 US tariffs: import prices **≈ +full tariff** (Amiti, Redding, Weinstein, economists, 2019)
- **≈ 1,800** new jobs · buyers **≈ $1.5 billion** a year · state ≈ $82M · cost per job = `extra price ÷ jobs` **≈ $815,000** a year

6 Reply · subsidy

other levers

- **Retaliation** = tariff in answer to a tariff · 2018: China, EU (European Union), Canada, Mexico on US goods (pork, whiskey) ⇒ home **exporters** (firms selling abroad) lose (soy farmers)
- Arguments for → **security** (own steel, chips in war) · **infant industry** (protected while it learns, then ends)
- **Subsidy** $100 per washer made: factories 30,000 · buyers still $500 · state pays **$3M** · lost only **$0.5M** (½ × $100 × 10,000) · taxpayers pay, not buyers

7 Trade-off

policy card

- FOR keeps jobs and factories in a town · AGAINST every buyer pays more, value lost, others may reply
- **Positive** (data can test: “washers +12%”) ≠ **normative** (values: “make our own washers”)
- Policy card: problem **imports beat home factories** → tool **tariff** → model **price +$100: buyers −$6.5M, factories +$2.5M, state +$3M, $1M lost** → evidence **US 2018: washers +12%, ≈ $815,000 a job** → trade-off **jobs in one industry vs higher prices for all**