Should the bus be free?

A city asks for advice: fact and opinion, goals, failures, tools, and five questions for any policy.

1 Positive · normative

fact or opinion

- POSITIVE what **is** or **will be** → data can test it, even if it turns out **wrong** · "a free bus gets more riders"
- NORMATIVE what **should be** → rests on **values** · clues: **should, ought, deserves, unfair, wrong**
- Economist's job → say what a policy **does** and who **pays** ⇒ which policy is right = citizens decide
- Practice (P = positive, N = normative): fare up → fewer riders (P) · every child deserves… (N) · riders earn less than average (P) · ought to spend less on roads (N)

2 Goals

they clash

- **Efficiency** → most from scarce resources · **equity** → fair shares of gains and costs
- **Stability** → steady prices, steady jobs · **growth** → more income each year
- More of one goal ⇒ less of another = **trade-off** · free buses: equity ↑, cost ↑

3 Failures

market · government

- **Market failure** → a cost lands on others, an **external cost** (smoke, delay, noise) → reason to act
- **Government failure** → the fix goes wrong: **poor information** · **own incentives** · **unplanned effects**
- Market failure ≠ proof the fix works ⇒ ask for **evidence**
- Practice: noisy club, traffic jam, factory smoke = market · grand opening, old data, walkers ride = government

4 Tools

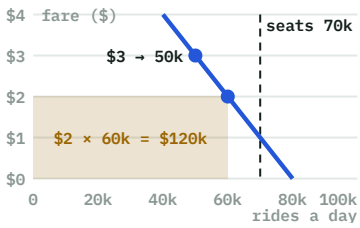
seven levers

- **Tax** · **subsidy** (pays part of a price) · **price rule** (legal lowest or highest price) · **regulation**
- **Spending** · **transfer** (cash to people) · **interest rate** (price of borrowing, central bank)
- Free bus = **subsidy of 100%** → city pays what riders paid

5 Model

fare · rides · cost

- Demand: `rides = 80 − 10 × fare` (thousands a day) → $2: 60k · $0: 80k · buses hold **70k**
- `fares paid = fare × rides` · $2 × 60,000 = **$120,000** → free: box gone, taxpayers pay
- Fare −100% ⇒ rides +33% = **inelastic** · higher fare, more money: **$3** × 50,000 = **$150,000**
- Crowding: below **$1** riders exceed seats → shortage of seats



6 Cost to taxpayers

practice numbers

- `city pays = running cost − fares paid` · made-up cost **$4** a ride (toy number)
- $2: 60k × 4 = 240k − 120k = **$120k** → $1: 70k × 4 = 280k − 70k = **$210k** ⇒ +$90k for +10k rides



7 Five questions

policy card · evidence

- **1** problem → **2** tool → **3** model → **4** evidence → **5** trade-off
- Model **predicts** · evidence **checks** · trade-off = who gains, who pays
- **Tallinn 2013** (capital of Estonia, free fares): free fares alone ≈ **+1.2%** rides, use **+14%** in a year, many new riders had **walked** ⇒ separate the causes
- Luxembourg (small European country) 2020: tickets ≈ €41M a year vs running cost over €500M ⇒ tickets < 1/10 of cost · effect on traffic still disputed