Scarcity & Opportunity Cost

AP Microeconomics | Unit 1 | scarcity, trade-offs, and the real cost of a choice

Running example. You have one free evening and three options: work a shift and earn \$60, tutor a neighbor and earn \$45, or go to a concert whose ticket costs \$40. You go to the concert.

1. Scarcity: why we have to choose

Scarcity

Wants are unlimited; the resources to satisfy them are limited. There is not enough of a resource to satisfy every want.

Scarcity is not poverty and not a shortage: it holds for everyone, always (a billionaire still has 24 hours in a day).

The four factors of production. *Land*: natural resources. *Labor*: people's work. *Capital*: tools, machines, buildings (**not** money). *Entrepreneurship*: organizing the other three and taking the risk.

$$\text{scarcity} \Rightarrow \text{choice} \Rightarrow \text{trade-off}$$

2. Opportunity cost: the next best alternative

Opportunity cost

The value of the **next best** alternative you give up. One alternative, not all of them.

Choosing the concert, you give up the shift (\$60), your next best option. *Not* \$105: with one evening you could never have done both the shift and the tutoring.

3. Explicit and implicit costs

Explicit cost	money you actually pay	the ticket: \$40
Implicit cost	what you give up without paying for it	the wage not earned: \$60
Opportunity cost of the concert		\$40 + \$60 = \$100

Nothing is free: a *free* concert still costs \$60, because the implicit cost never goes away.

4. Opportunity cost per unit

In one hour a bakery can make 12 cookies *or* 4 pizzas.

From a table

$$\text{opportunity cost of 1 unit} = \frac{\text{what you give up}}{\text{what you get}}$$

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$$1 \text{ pizza}: \frac{12 \text{ cookies}}{4 \text{ pizzas}} = 3 \text{ cookies} \qquad 1 \text{ cookie}: \frac{4 \text{ pizzas}}{12 \text{ cookies}} = \tfrac{1}{3} \text{ pizza}$$

The two answers are reciprocals, and each is measured in units of the *other* good.

5. The PPC in brief

The **production possibilities curve** shows the most of two goods an economy can make with all its resources and current technology.

- **On** the curve: efficient; more of one good costs some of the other (the opportunity cost).
- **Inside**: idle resources (unemployment); moving out gives more of both, so the opportunity cost of that move is zero. **Outside**: unattainable with today's resources.
- **Straight line**: constant opportunity cost (resources equally good at both goods). **Bowed out**: increasing opportunity cost (resources are specialized).
- More resources or better technology for both goods shift the whole curve **out** (economic growth); better technology for one good pivots it out along that good's axis only.
- Opportunity cost from labor-hours: a shirt takes 2 h and a jacket 4 h, so 1 jacket costs 2 shirts.
- **Specialization**: produce what you give up the least to make, then trade.
- **Total utility** is the sum of the marginal utilities of the units consumed.

Where students lose points

1. Adding up all the alternatives: it is only the next best one.
2. Counting only the money paid and forgetting the implicit cost.
3. Saying scarcity is a shortage, or that only the poor face it.
4. Calling money "capital": capital is tools, machines and buildings.
5. Per-unit cost upside down, or in the wrong good's units.

Now practise it

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