

The Production Possibilities Curve

AP Microeconomics | Unit 1 | efficiency, opportunity cost, and shifts

Running example. An economy produces two goods, computers and wheat.

1. On, inside, outside

Production possibilities curve (PPC)

Every combination of two goods an economy can produce when all of its resources are used fully and efficiently.

On the curve	efficient: more of one good means less of the other
Inside the curve	attainable but inefficient: idle or misused resources (unemployment, recession)
Outside the curve	unattainable with today's resources and technology

2. Opportunity cost and the bowed shape

computers	wheat	cost of the last 10 computers
0	100	
10	90	10 wheat
20	70	20 wheat
30	40	30 wheat
40	0	40 wheat

Shape tells you the cost

Bowed out (concave): *increasing* opportunity cost. Resources are not equally suited to both goods, so each extra unit costs more than the last.

Straight line: *constant* opportunity cost. Resources are equally suited to both goods.

The opportunity cost of one good is always measured in units of the *other* good.

3. What shifts the curve

- **Outward shift (economic growth):** more or better resources (labor, capital, land, education) or better technology.
- **Pivot:** a technology improvement in only one good stretches the curve along that good's axis; the other intercept does not move.
- **Not a shift:** a recession or unemployment. The resources still exist, so the economy moves to a point *inside* the same curve.
- **Capital vs. consumer goods:** producing more capital goods today means less consumption now and a faster outward shift later.

4. Two kinds of efficiency

Productive efficiency	lowest possible cost, nothing wasted	<i>any</i> point on the curve
Allocative efficiency	the mix society wants most	<i>one</i> point, where $MB = MC$

Where students lose points

1. Shifting the curve in for a recession: it is a point inside.
2. Saying a point inside is “unattainable”: it is attainable but inefficient.
3. Bowed out = increasing cost; straight line = constant cost.
4. Giving opportunity cost in the wrong good’s units.
5. Calling every point on the curve allocatively efficient.

Now practise it

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