

Exchange can rearrange possibilities

People can gain from exchange because they value goods differently, face different opportunity costs, or both. Specialisation can also change what a group produces. These are related but distinct sources of gain. Every example in this lesson is illustrative. A voluntary agreement shows expected gains for participants under their information, not guaranteed gains for everyone.

Absolute advantage asks about productivity

Absolute advantage means producing more output with the same resources, or using fewer resources for the same output. It is measured good by good. Comparative advantage instead asks which producer sacrifices less of another good. A producer can be more productive in every activity yet still benefit from exchange with someone less productive.

Worked example A: set up production

Ada and Ben each have eight working hours. Ada makes four loaves or two metres of cloth per hour. Ben makes one loaf or one metre of cloth per hour. Within this illustrative model, each person can split time freely and has constant productivity. Ada has an absolute advantage in both goods.

Worked example A: compute opportunity costs

For Ada, one loaf costs half a metre of cloth: two divided by four. For Ben, one loaf costs one metre: one divided by one. Ada has comparative advantage in bread. Conversely, one metre costs Ada two loaves and Ben one loaf. Ben has comparative advantage in cloth despite lower absolute productivity.

Worked example A: establish a baseline

Initially, each person spends four hours on each good. Ada produces sixteen loaves and eight metres. Ben produces four loaves and four metres. Combined production is twenty loaves and twelve metres. With no trade, each consumes their own output. Record this baseline before claiming that a different arrangement benefits either person.

Worked example A: reorganise and exchange

Ada switches to six bread hours and two cloth hours, producing twenty-four loaves and four metres. Ben makes cloth for eight hours, producing eight metres. Ada then exchanges six loaves for four of Ben's metres. Final bundles: Ada has eighteen loaves and eight metres; Ben has six loaves and four metres.

Terms of trade divide the available gain

The exchange rate was four metres for six loaves, or two-thirds of a metre per loaf. That lies between Ada's bread opportunity cost of half a metre and Ben's cost of one metre. Rates strictly between these costs can benefit both at the margin, provided desired quantities, feasibility and exchange costs also permit agreement.

Worked example B: a different technology

Mira produces four app screens or two tests per hour. Sol produces one screen or three tests per hour. Each has six hours. One screen costs Mira half a test and Sol three tests. With three hours on each task initially, Mira produces twelve screens and six tests; Sol produces three screens and nine tests.

Worked example B: verify the gains

Full specialisation gives Mira twenty-four screens and Sol eighteen tests. Mira trades six screens for nine tests. Mira finishes with eighteen screens and nine tests; Sol finishes with six screens and nine tests. Each improves on the baseline. The exchange rate of 1.5 tests per screen lies between their opportunity costs.

Trading uses resources too

Finding partners, comparing quality, negotiating, transporting goods and enforcing agreements all have costs. In the bread example, each participant gained two loaves before exchange costs. If arranging the exchange costs each the equivalent of one loaf, each retains a one-loaf net gain. Larger costs can eliminate the advantage or prevent trade entirely.

Preferences and alternatives still matter

Lower opportunity cost creates a production opportunity; it does not force anyone to want the resulting goods. Potential partners may disagree on quality, quantity or timing. Their outside alternatives shape acceptable terms. A mutually beneficial reallocation exists only when the final bundles are feasible and preferred after all relevant costs are considered.

More total output need not mean everyone gains

An increase in aggregate output does not by itself show that each person benefits. Prices, ownership and adjustment costs affect distribution. A worker may lose a valued occupation even when consumers gain. Possible compensation is different from compensation actually received. Assess the relevant people and transition costs rather than treating a group total as everyone's experience.

Institutions support or obstruct cooperation

Clear ownership, reliable information and workable contracts can reduce uncertainty about what is exchanged and on what terms. Competition among alternatives can improve options. These are mechanisms to investigate, not guarantees of perfect outcomes. A rights-based judgement about permissible exchange differs from a positive claim about productivity, prices or measured welfare.

Audit a claim about gains from trade

Check resources, production rates, units and opportunity costs. Specify the baseline, the new production plan and the exchange. Verify that no goods appear from nowhere. Compare each person's final bundle after transaction costs. State which assumptions support the claimed gains, which people are included, and what the calculation does not establish.