CHARTA LEARNING · LESSON NOTES

Trade, trading blocs and geopolitics

CFA Level I · Economics

You will learn: Explain why trade makes countries better off even when one is better at everything, work out what a tariff, quota or subsidy does to price, quantities and money, place a trading bloc on the ladder of integration, and describe geopolitical risk and its tools.

Running example: Examples use made-up figures: two countries, Aldia and Berra, making wheat and cloth; a small country importing a good at a world price of $40; a fund of $100 million; and a factory with sales of $100.

1. Comparative advantage and the gains from trade

- Absolute advantage: making a good with fewer resources. Opportunity cost: what you give up to make one more. Comparative advantage: a lower opportunity cost than the other country. Even a country worse at everything has one. The test is lower opportunity cost, never who is more productive.
- Each country should specialise in the good for which its opportunity cost is lower. Specialising raises world output; the gain only helps if countries swap, at any price between the two opportunity costs.
- The gains from trade are wide but thin: lower prices, variety, bigger markets for exporters, cheaper inputs. The costs are narrow but deep: jobs and towns in shrinking industries. The fight is about who pays, not the arithmetic.

Opportunity cost of X = units of Y given up ÷ units of X gained

EXAMPLE 1: 100 WORKER DAYS EACH. ONE DAY MAKES: ALDIA 6 T WHEAT OR 12 M CLOTH; BERRA 2 T WHEAT OR 8 M CLOTH

Cost of 1 t wheat	Aldia 12 ÷ 6; Berra 8 ÷ 2	**2 m cloth; 4 m cloth: Aldia has the edge**
Cost of 1 m cloth	Aldia 6 ÷ 12; Berra 2 ÷ 8	**0.5 t; 0.25 t: Berra has the edge**
No trade (Aldia 80/20 days, Berra 40/60)	480 t + 80 t; 240 m + 480 m	**world 560 t, 720 m**
Specialised: Aldia all wheat, Berra all cloth	100 × 6; 100 × 8	**600 t, 800 m (+40 t, +80 m)**
Aldia sells 100 t for 250 m (2.5 m per t)	after trade	**Aldia 500 t, 250 m; Berra 100 t, 550 m: both better off**

Watch out: Confusing absolute and comparative advantage: Aldia is better at both goods yet Berra still has a comparative advantage.

2. Trade restrictions and the tariff

- Tariff: a tax on imports collected at the border. Quota: a cap on units imported. Voluntary export restraint (VER): a quota the exporter imposes on itself, often under pressure. Subsidy: a payment to domestic producers. Export subsidy: a payment per unit sold abroad. Each protects someone and costs others more.
- A small country takes the world price as given. A tariff lifts the home price by the tariff, raising home output, lowering home demand and cutting imports (halved in the example). Producers and the government gain; consumers lose more.
- The net loss is the deadweight loss, two triangles: extra home output that costs more than the imports it replaced, and purchases buyers give up.
- Tariff revenue uses the imports after the tariff, not before.

Tariff revenue = tariff × imports after tariff. Deadweight loss = ½ × tariff × (rise in output + fall in demand)

EXAMPLE 2: DEMAND QD = 1000 − 10P, SUPPLY QS = 10P − 200, WORLD PRICE $40, TARIFF $10

Price; home output; demand; imports	$40 to $50; 200 to 300; 600 to 500; 400 to 200	**price $50, imports 200**
Government revenue	10 × 200	**$2,000**
Producers gain / consumers lose	10 × (200 + 300) ÷ 2 / 10 × (600 + 500) ÷ 2	**$2,500 / $5,500**
Deadweight loss	½ × 10 × 100 + ½ × 10 × 100	**$1,000 (4,500 − 5,500)**

3. Quotas, VERs and subsidies

- A quota gives the same price, quantities and losses as the equivalent tariff. The difference is the money: each unit is bought abroad at the world price and sold at the higher price. This gap is the quota rent, and it goes to whoever holds the import licences.
- If the government auctions the licences it collects the rent like a tariff; if it hands them out free, importers pocket it; under a VER the exporters hold the rights, so the rent goes abroad.
- A subsidy pays home producers to produce more rather than taxing imports. Consumers are not hurt and the loss is smaller, but taxpayers pay in full.
- An export subsidy: firms ship more, the home price rises (home consumers lose, taxpayers foot the bill), and foreign buyers get cheaper goods. In every case the winners gain less than the losers lose.

EXAMPLES 3 AND 4: SAME MARKET

Quota of 200 units: price rises until demand is 500	1000 − 10P = 500	**$50**
Quota rent	(50 − 40) × 200	**$2,000**
Subsidy $10 a unit: home output	10 × 50 − 200	**300 units (imports 300)**
Cost to taxpayers; producers gain	10 × 300; 10 × (200 + 300) ÷ 2	**$3,000; $2,500**
Deadweight loss	3,000 − 2,500	**$500**

Watch out: Forgetting who gets the quota rent; saying a restriction helps the country because producers gain.

4. Trading blocs

- The ladder of integration, each rung including those below: free trade area (no tariffs or quotas between members; each keeps its own tariffs on outsiders); customs union (adds a common external tariff); common market (adds free movement of labour and capital).
- Economic union adds common economic policies and institutions. Monetary union adds a single currency and central bank, as in the euro area.
- Gains: trade creation (buyers switch from dearer home producers to cheaper members, raising efficiency). Danger: trade diversion (buying from a partner only because it has no tariff, though an outsider is cheaper, lowering efficiency).
- Costs: loss of national control. In a customs union a country cannot set its own tariffs; in a monetary union it cannot set its own interest rates or let its currency adjust. Deeper integration means bigger gains and less national control.

5. Geopolitics, institutions and tools

- Geopolitical risk is the risk that political relations between states disrupt economic activity (conflict, sanctions, export controls, takeovers of foreign property, sudden rule changes). Event risk: known date, unknown result (an election). Exogenous risk: a sudden shock. Thematic risk: a slow trend, such as rising nationalism.
- It cannot be priced like ordinary risk: events are rare, outcomes jump, and assets that move independently in calm times fall together in a crisis. Analysts use scenario analysis and avoid concentration.
- Globalisation rests on shared rules and peace; when that wobbles, governments put security ahead of efficiency. Cheapest is not always safest.
- IMF: monetary and financial stability, short-term lending for balance of payments trouble, usually with conditions. WTO: writes and polices trade rules, runs negotiations, settles disputes. World Bank: long-term development lending.
- Tools: tariffs; sanctions (cutting a target off from trade, banks or technology); cyber operations; resource controls (restricting a vital input to squeeze buyers). Each names a channel through prices, costs, currencies, yields and trade.

EXAMPLES 5 AND 6

Fund $100m: A has 40% exposed, B 10%; sanctions cut exposed firms 25%	25% × $40.0m; 25% × $10.0m	**loss $10.0m (10%); $2.5m (2.5%)**
Factory: sales 100, costs 85, profit 15; ore is 20% of costs	20% of 85	**$17.0**
Ore price rises 50%	17.0 × 0.5; 100 − (85 + 8.5)	**+$8.5; profit $6.5**
Fall in profit	8.5 ÷ 15	**−56.7%**

Key takeaways

- Comparative advantage is the lower opportunity cost, even for a country that is worse at everything.
- Gains from trade are wide and thin, losses narrow and deep.
- Tariff revenue = tariff × imports after the tariff; every restriction leaves a net deadweight loss.
- Quota rent goes to licence holders (free licences: importers; VER: exporters); subsidies cost taxpayers.
- Blocs climb from free trade area to customs union, common market, economic union and monetary union.
- Geopolitical risk is event, exogenous or thematic: use scenarios, avoid concentration, and trace the channel. IMF, WTO and World Bank cover money, trade rules and development.

Quick check

1. Wheat costs 3 m of cloth in country A and 5 m in country B. Who has the comparative advantage in wheat?
   Answer: A, because its opportunity cost is lower.
2. A tariff is $5 a unit. Imports after the tariff are 300 units. How much does the government collect?
   Answer: $1,500: 5 × 300, using imports after the tariff.
3. Which bloc has a common external tariff but no free movement of labour?
   Answer: A customs union. A common market is the next rung up.

Summary notes for the Charta whiteboard lesson. Examples use made-up figures. Watch the full lesson at charta-learning.com.