

International Trade Agreements

ECON 171 · Spring 2026 · Week 9

Sasha Petrov

Today's Agenda

1. Types of trade agreements: PTAs, FTAs, customs unions, common markets
2. Trade creation vs. trade diversion (Viner, 1950)
3. Three-country analysis of preferential liberalisation
4. Which country configurations maximise gains from integration?

What We Aim to Learn

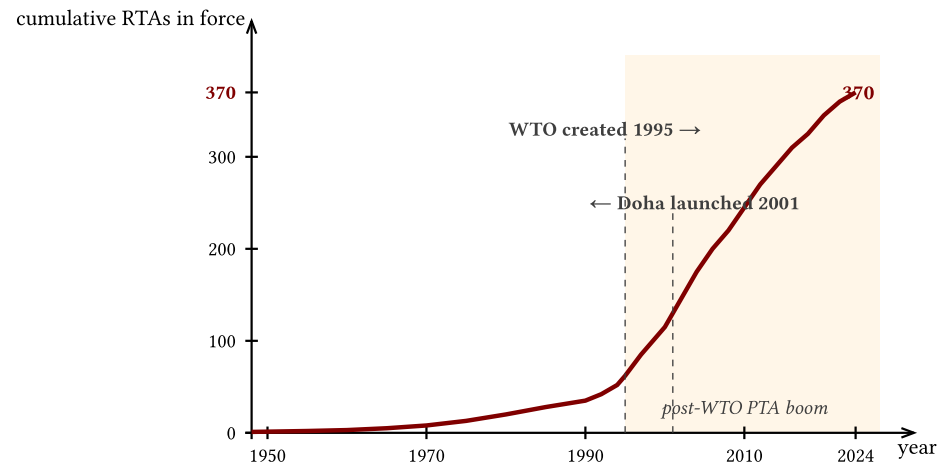
- What are the main forms of trade agreement, and how do they differ?
- How does *preferential* liberalisation differ from *multilateral* liberalisation?
 - What is the difference between trade creation and trade diversion?
 - How do we decompose welfare changes in a three-country model?
 - Which configurations of partners make gains largest — and when do individual incentives conflict with the aggregate?

How much trade do agreements cover?

- **WTO-MFN tariffs** cover nearly all merchandise trade (164 members) — the trade-weighted average is only **~2.5%** for manufactures (2024).
- On top of MFN, **~370 PTAs** are in force — roughly *half* of world trade is now preferential.
- Tariffs are low; the action has moved to **rules** (services, IP, standards) and to agreements as *foreign-policy* tools.

Most policy questions today are about *which* agreement, with *whom*, on *what* terms — not whether to trade.

RTAs in force, 1948 – 2024



Source: WTO RTA database (2024); cumulative count of physical RTAs in force. Numbers approximate.

Source: WTO RTA database; UNCTAD; Bown & Crowley (*Handbook of Commercial Policy*, 2016).

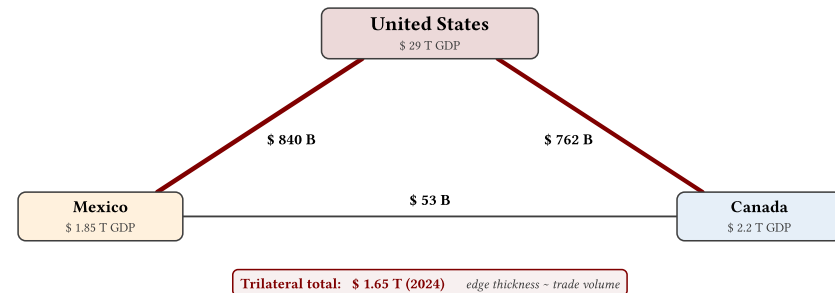
NAFTA → USMCA at 30

Free-trade area

- **1994:** NAFTA enters into force — eliminates tariffs on most US, Canada, Mexico trade over 15 years.
- **2024:** trilateral goods trade reaches ~ **\$1.8 T**. Mexico becomes the **#1** US trading partner.
- Each country keeps its *own* external tariff against non-members — that's what makes it a **free-trade area**, not a customs union.
- **2020:** renegotiated as **USMCA** — new auto rules-of-origin (75% North-American content), labour and environment chapters.

FTA — zero tariffs *inside*, each member sets its *own* tariffs *outside*.

USMCA goods trade, 2024



Sources: BEA International Trade releases (2024); Statistics Canada; INEGI; USTR fact sheets.

USMCA goods trade — \$1.8 T in 2024; Mexico is now the US's #1 trading partner.

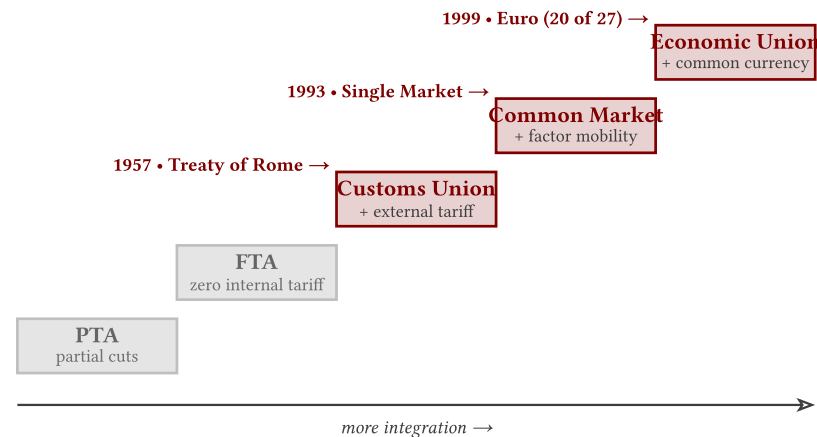
The EU: deepest integration

Customs union → common market → economic union

- 1957 Treaty of Rome creates the EEC — a *customs union* with a common external tariff.
- 1993 Single Market — free movement of goods, services, capital, *and labour*.
- 1999/2002 Euro — common currency for 20 of 27 members; ECB sets monetary policy.
- Each step trades *sovereignty* for integration — tariff (1968), regulatory (1993), monetary (1999).

The EU is the *only* economic union of significant size. The depth bought integration; **Brexit** (2020) shows the *exit* cost is large too.

The EU's climb up the integration ladder



The EU entered the ladder as a customs union (1957) and climbed two further rungs over 42 years.

Each rung trades policy autonomy for deeper market integration.

Source: European Commission, *EU at 30*; Baldwin & Wyplosz, *The Economics of European Integration* (6th ed., 2019).

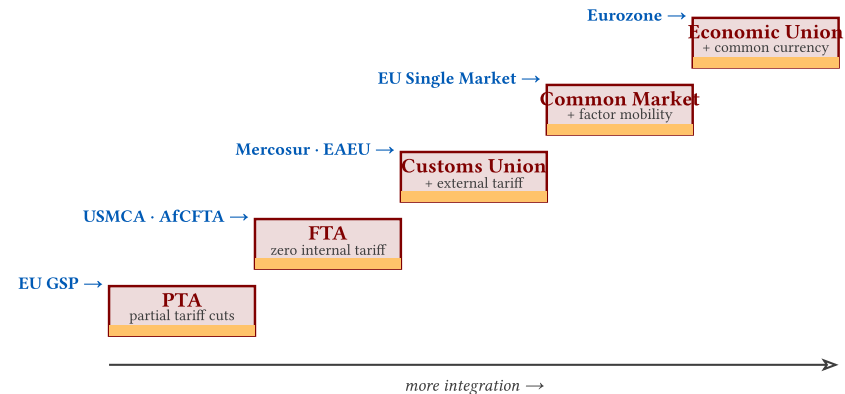
Types of Trade Agreements

A ladder of integration

Five rungs, each adds one freedom

- **PTA** — *partial* cuts on some goods / partners (EU GSP).
- **FTA** — *zero* internal tariffs, own external tariff; needs **rules of origin** (USMCA, AfCFTA).
- **Customs union** — FTA + **common external tariff**; drops rules of origin (Mercosur, EEC).
- **Common market** — CU + **free factor movement** (EU Single Market).
- **Economic union** — CM + **common currency** (Eurozone).

Five rungs of trade integration



Each rung adds one freedom (highlighted in gold). Higher rungs are rare — the EU is the only major economic union.

Each rung trades **policy autonomy** for **market access**. Higher rungs are rare — the EU is the only major economic union.

Further reading: Bhagwati, *Termites in the Trading System* (Oxford, 2008); WTO, *World Trade Report 2011: The WTO and Preferential Trade Agreements*.

Multilateral vs. preferential

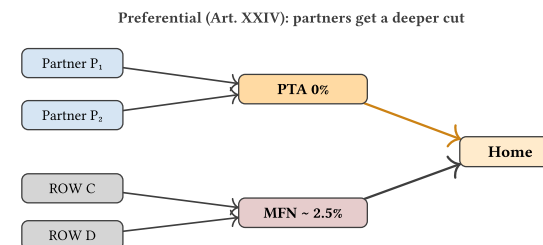
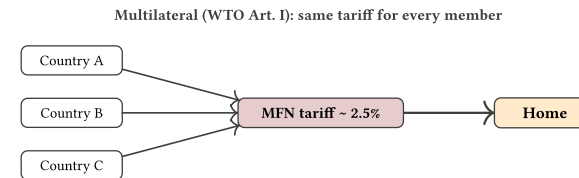
Multilateral — WTO / GATT

- **MFN** (Art. I): a cut to *any* member extends to *every* member — non-discriminatory.
- Eight **rounds** since 1948; Uruguay (1986–94) cut industrial tariffs ~**40%** and created the WTO.
- *Strength*: nobody left out. *Weakness*: 164-member consensus is slow.

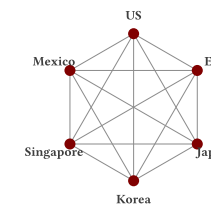
Preferential — RTAs / PTAs

- **Discriminatory** by design: deeper cuts for *some* partners. ~**370** in force; *half of world trade*.
- Allowed by GATT **Art. XXIV** / the **Enabling Clause** if “substantially all” trade is covered.
- *Strength*: deeper, faster, covers services / IP. *Weakness*: the “spaghetti bowl”.

MFN vs. preferential tariffs



The “spaghetti bowl” — overlapping bilateral PTAs



WTO data: world average MFN tariff ~ 2.5% for manufactures (2024). 370 PTAs in force.

References: Bagwell & Staiger, *The Economics of the World Trading System* (MIT, 2002); WTO RTA database (2024); Baldwin, “[Big-Think Regionalism: A Critical Survey](#)” (NBER, 2008).

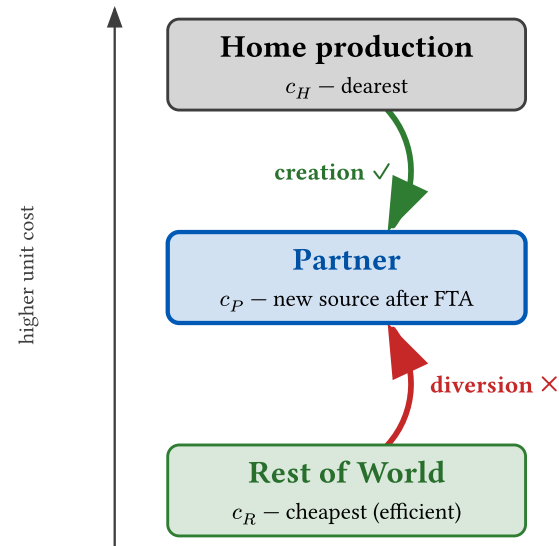
Trade Creation and Trade Diversion

Viner's (1950) insight

- Tariff cuts *to a partner* are a mixed bag. Two effects pull in opposite directions:
- **Trade creation.** Inefficient *domestic* production replaced by efficient *partner* production. **Welfare** $\uparrow$.
- **Trade diversion.** Imports shift from the efficient *non-member* to the (now tariff-free, but higher-cost) *partner*. The non-member's lower cost was *hidden* by the tariff. **Welfare** $\downarrow$.
- Net effect is *ambiguous* — depends on cost gaps, initial tariffs, and elasticities.

A *preferential* tariff cut is **not** unambiguously welfare-improving — unlike a *unilateral* MFN cut.

Viner: a preferential cut moves trade two ways



Before the FTA a tariff lifts the ROW's **landed** cost above the Partner's, hiding its low true cost c_R ; cutting only the Partner's tariff makes c_P the new cheapest source.

The Partner sits **between** Home and ROW: switching to it is a **gain** vs. dearer home output (**creation**) but a **loss** vs. the efficient ROW (**diversion**) — net effect **ambiguous**.

When does an FTA improve welfare?

Creation > diversion is more likely when...

- The partner is already the **lowest-cost producer** (or close to it) — little diversion to capture.
- Pre-agreement **MFN tariffs are low** — the hidden cost wedge between partner and ROW is small.
- Home **demand and supply are elastic** — bigger creation triangles per cent of tariff cut.
- The partner is *large* relative to ROW in the relevant industries — partner supply can absorb the demand shift.

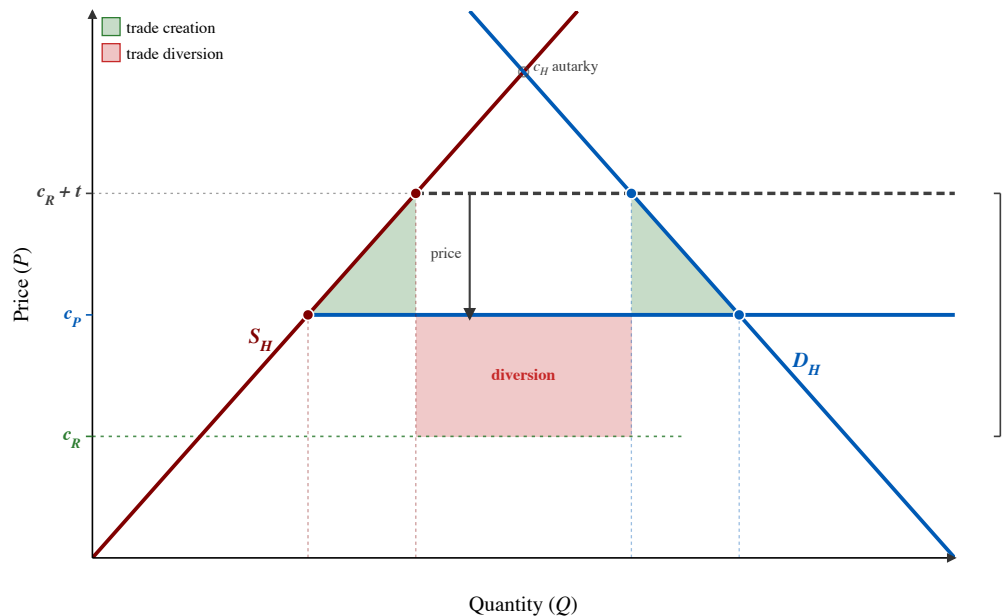
Diversion > creation is more likely when...

- Partner is **higher-cost than ROW** but the FTA's tariff preference reverses the ranking.
- Initial MFN tariffs are **high** — large cost-wedge, large diversion when it shifts inside.
- The partner specialises in a few goods that displace cheaper ROW supply (e.g. NAFTA textiles vs. Asian textiles in the 1990s).

Same agreement can *create* in autos and *divert* in textiles.

Three-Country Analysis

Trade diversion, step by step



- **MFN tariff.** Home imports M_1 from the low-cost **ROW** at price $c_R + t$.
- **FTA formed.** Partner enters duty-free at $c_P < c_R + t$; price falls, Home switches off the ROW.
- **Trade creation** (green): cheaper imports replace home output and lift consumption.
- **Trade diversion** (red): the original M_1 costs $c_P - c_R$ more each — paid to the Partner; tariff revenue lost.

Verdict. Net = creation — diversion. The sign is *ambiguous* — it hinges on how far the Partner's cost c_P sits above the ROW's c_R .

creation 4.0 — **diversion 8.0** = **net -4.0** (illustrative units)

c_P (partner cost)

6



Press → to step through; drag c_P to vary the Partner's cost. Viner (1950); KMO Ch. 11.

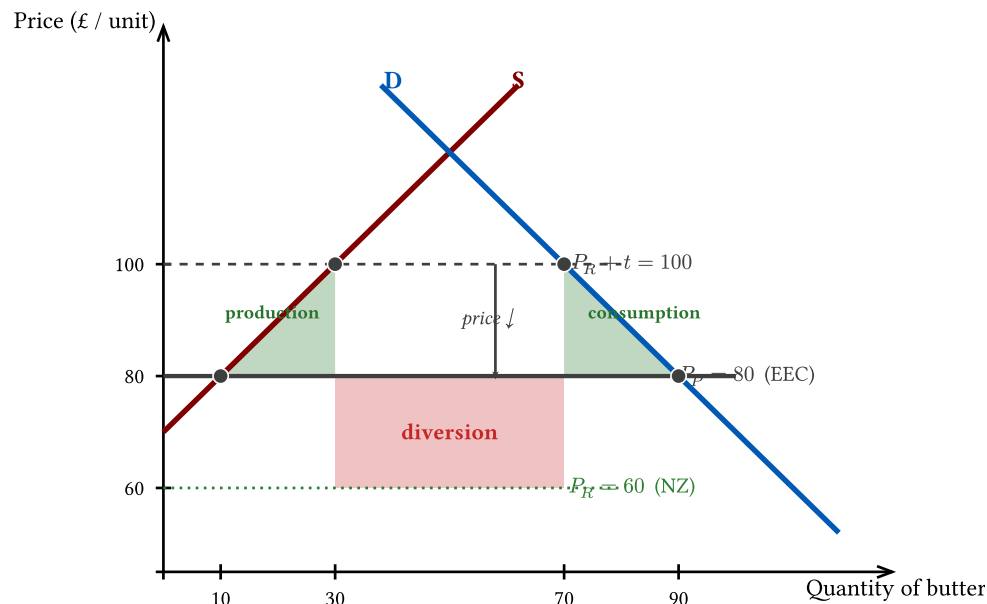
Net = creation — diversion — ambiguous.
 Drag c_P : near c_R the FTA helps; near $c_R + t$ diversion dominates.

Setup: Home, Partner, Rest of World

- One good, three countries. *Chart* →: **Home** = UK, **Partner** = EEC, **ROW** = New Zealand (1973 accession).
- Cost ranking $c_R < c_P < c_H$ — NZ cheapest (£60), EEC dearer (£80), UK dearest.
- **Pre-FTA**: uniform MFN tariff t (£40). Lowest landed cost = $c_R + t = £100$ → UK imports from NZ.
- **Post-FTA**: EEC tariff → 0, NZ still pays t . EEC landed cost = $c_P = £80 < £100$.
- Since $c_P < c_R + t$, the UK switches to the **higher-cost EEC** — trade is **diverted** off NZ.

The tariff revenue the UK used to collect on NZ butter *vanishes* with diversion — pure loss.

UK joins the EEC (1973): trade diversion in butter



Before: the UK buys NZ butter at the world price + MFN tariff (£100). **After accession:** EEC butter enters duty-free at £80 < £100, so the UK diverts from the efficient £60 NZ producer to the higher-cost EEC.

Trade creation (green) = +£400 — diversion (red) = £800 → net = -£400: UK welfare falls.

Decomposing the welfare change

- Home welfare change

$$\Delta W_H = \underbrace{\Delta CS}_{\text{consumer gain}} + \underbrace{\Delta PS}_{\text{producer loss}} + \underbrace{\Delta TR}_{\text{tariff revenue}}.$$

- The **creation** triangles (ΔCS and the corresponding ΔPS loss) net to a **positive** triangle — efficiency gain.
- The **diversion** rectangle = (per-unit cost difference $c_P - c_R$) $\times$ the **pre-FTA import volume** (the trade diverted off ROW). It is **negative** — pure transfer to less-efficient partner producers.
- Sign of ΔW_H : ambiguous. Sign of ΔW_P : positive (gain export market). Sign of ΔW_R : negative (lose export market).

Home's welfare account — UK butter (£)

Consumer surplus ΔCS	+ £1,600
Producer surplus ΔPS	− £400
Tariff revenue ΔTR	− £1,600
Net change ΔW_H	− £400

$$= \text{creation } £400 - \text{diversion } £800$$

Who gains, who loses (ΔW)

Home (UK)	− £400	loss <i>here</i> ; ambiguous in general
Partner (EEC)	+	gains the UK market
Rest of World (NZ)	−	loses the UK market
World	?	creation vs. diversion

The Partner's gain *can* exceed the ROW's loss + Home's net loss — **aggregate** welfare may rise even when each country's incentives diverge.

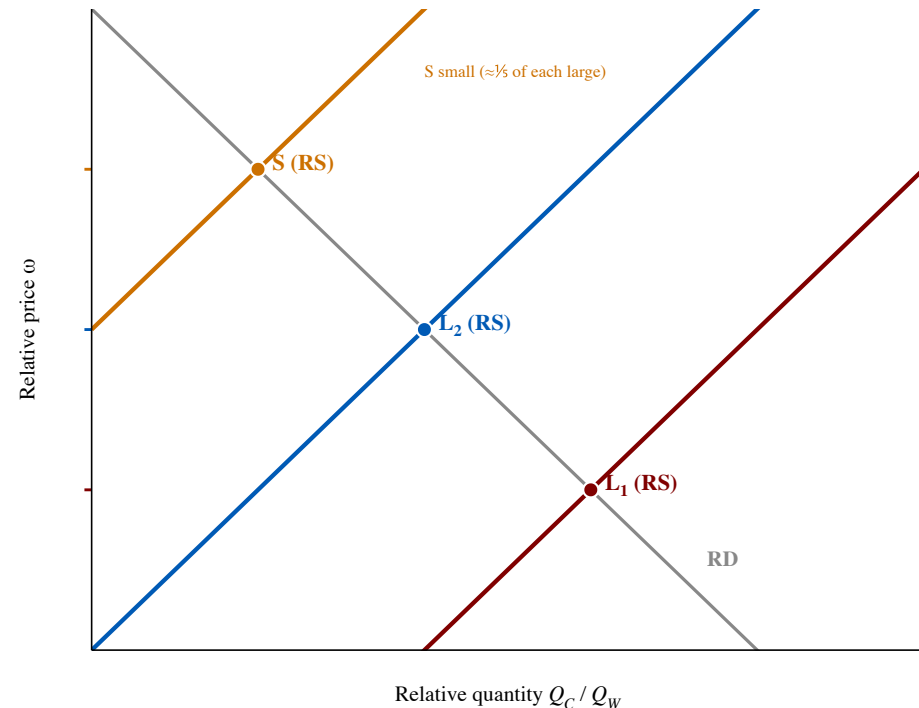
Which Configurations Maximise the Gains?

Setup: one small outlier, two large rivals

- Two goods (cloth, wine); one **relative price** $\omega = P_C/P_W$. Each country's **RS** crosses the common **RD** at its **autarky price**.
- Two large rivals** — L_1 (cloth-abundant, low ω) and L_2 (in between) — and a **small outlier** S : least efficient in cloth, so its RS hugs the axis and its autarky cloth price is **highest**.
- S is small — about $\frac{1}{5}$ the size of each large country.

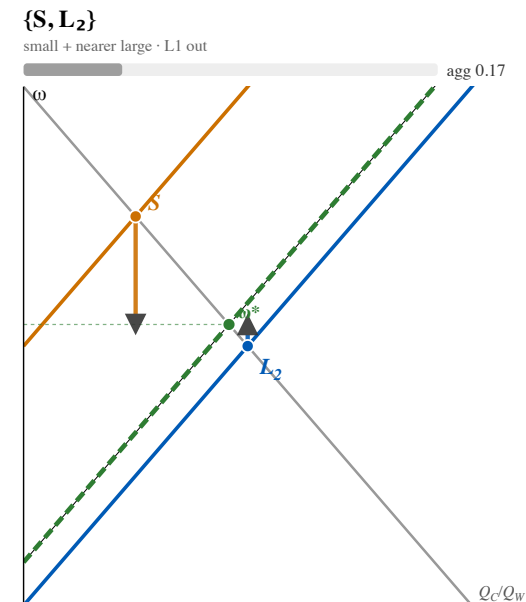
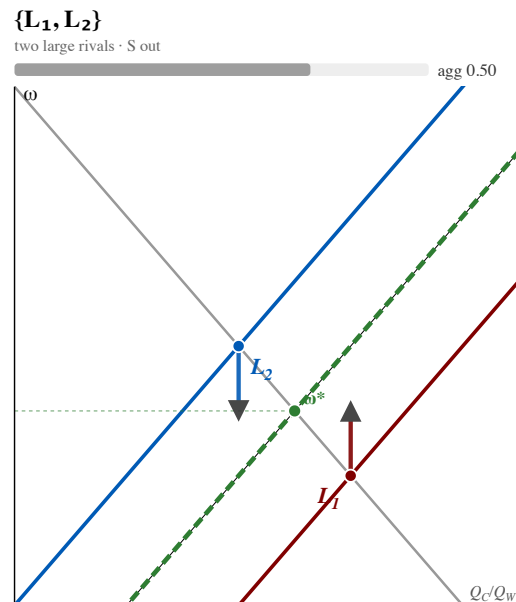
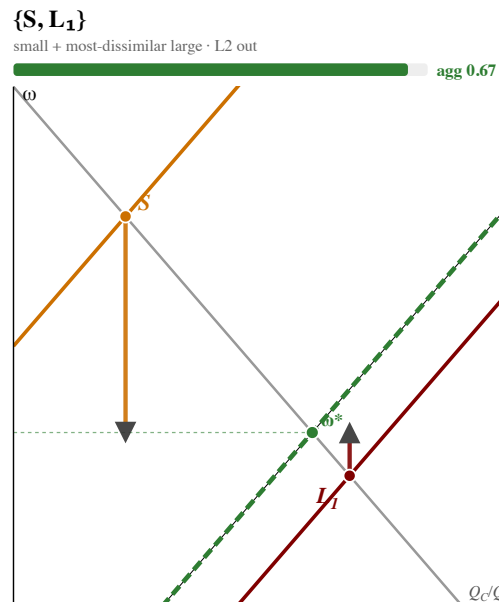
Zoom out to general equilibrium: which of the three FTAs maximises the gains-from-trade *pie* — and is the country that needs it most the one let in?

A union's gain $\approx (\Delta\omega^{\text{aut}})^2 \times \frac{s m}{s + m}$ — **dissimilarity**² $\times$ **reduced mass**. Far-apart prices *and* comparable size both help.



Three possible FTAs: $\{L_1, L_2\}$, $\{S, L_1\}$, $\{S, L_2\}$. Within a bloc one price rules — the size-weighted **world RS**, which hugs the larger member.

Three FTA configurations



The **world RS** (green dashed) sits between the members, **hugging the larger one**; the coloured arrow is each country's autarky $\rightarrow \omega^*$ price move — its gain. Bars compare aggregate gains.

{S, L₁} **maximises the pie** — the small outlier with its *most-dissimilar* large partner. Its huge price swing (gain $\approx$ dissimilarity²) outweighs its small size; **{L₁, L₂}** is only moderate, **{S, L₂}** weak.

Aggregate-best $\neq$ what gets signed

- **Aggregate ranking:** $\{S, L_1\} \gg \{L_1, L_2\} > \{S, L_2\}$ — the efficient union pairs the small outlier with its most-dissimilar large partner.
- **But the gains accrue to S :** the world price sits near the large partner's autarky price, so the **large partner's terms of trade barely move** — it captures almost none of the gains.

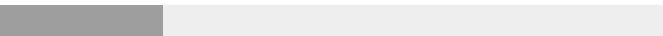
Who each country wants as a partner:

- $S \rightarrow L_1$ (gains 0.56) — desperate to join.
- $L_1 \rightarrow L_2$ ($0.25 > 0.11$ from S); $L_2 \rightarrow L_1$ ($0.25 > 0.03$ from S).
- $\Rightarrow$ the two large rivals pair up; S is **shut out**.

Aggregate gains from trade

$\{S, L_1\}$  **0.67**

$\{L_1, L_2\}$  0.50

$\{S, L_2\}$  0.17

The efficient union $\{S, L_1\}$ would need S to **compensate** L_1 — but FTAs have no machinery for side payments, so $\{L_1, L_2\}$ forms instead.

The pie-maximising agreement is the one no country with bargaining power will sign.

Recap

Key take-aways

- **A ladder of integration.** Each rung — PTA → FTA → customs union → common market → economic union — trades **more national policy autonomy** for deeper market access.
- **Preferential ≠ multilateral.** Because it is *discriminatory*, a preferential cut is **not** unambiguously welfare-improving — a unilateral MFN cut is.
- **Viner's two effects.** Trade *creation* (dearer home output → efficient partner, **good**) versus trade *diversion* (efficient ROW → dearer partner, **bad**): net effect **ambiguous**.
- **Welfare decomposes cleanly.** $\Delta W_H = \Delta CS + \Delta PS + \Delta TR = \text{creation} - \text{diversion}$. The partner gains, the excluded ROW loses, and the *world* is ambiguous.
- **Gains $\approx$ dissimilarity² $\times$ reduced mass.** The pie-maximising union — small + most-dissimilar large — often isn't the one that gets signed, because the large partner captures the terms of trade.

The tension between social welfare and individual incentives: Welfare analysis tells us which unions *should* form — but terms-of-trade incentives explain which ones actually *do*.

Skills you've practised

- **Rank suppliers by true cost** and read trade *creation* against trade *diversion* straight off a partial-equilibrium supply–demand diagram.
- **Decompose a policy's welfare effect** into $\Delta CS + \Delta PS + \Delta TR$, then reconcile with the creation – diversion split.
- **Build the size-weighted world RS curve** in general equilibrium, and read each country's gain from its autarky $\rightarrow$ world-price distance.
- **Separate aggregate efficiency from private incentives** – the *pie* versus the *slice*.

These are the same comparative-statics and welfare tools from earlier in the course – now turned on the *architecture* of the trading system itself.