Bilateral versus Multilateral Free Trade Agreements: A Welfare Analysis

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Why do we observe bilateral rather than multilateral FTAs?

Exploring the enforceability of different types of FTAs by
- an infinitely repeated game framework
- comparing minimum discount factors
- globally welfare maximizing trade agreements
- estimating the policy weights on
  - consumer surplus
  - producer surplus
  - tariff income

Obstacles for having a multilateral FTA are found as
- transportation costs
- differences in country sizes
- differences in comparative advantages
The Model

- Partial-equilibrium trade model of \( N \) countries and \( N \) goods.

- Linear demand and linear supply considering:
  - transportation costs
  - differences in country sizes
  - differences in comparative advantages

- Welfare function is given by:

\[
W_j = \sum_k \left[ WCS \int_{p_{jk}}^{A/B} D_{jk}(u) \, du + WPS \int_{-\alpha_{jk}/\beta}^{p_{jk}} X_{jk}(u) \, du \right] \\
+ WTI \sum_k t_{jk} M_{jk}(p_{jk})
\]

where

- WCS is the weight on consumer surplus
- WPS is the weight on producer surplus
- WTI is the weight on tariff income.
Baier and Bergstrand (2004) have empirically found that likelihood of a bilateral FTA are economically and significantly higher:

- the closer in distance are two trading partners
- the more remote a natural pair is from the rest of the world (ROW)
- the larger and more similar economically (i.e. real GDPs) are two trading partners
- the greater the difference in comparative advantages
- the less is the difference in comparative advantages of the member countries relative to that of the ROW.

We calibrate our model by estimating WCS, WPS and WTI that are consistent with Baier and Bergstrand (2004).

- WCS (the weight on consumer surplus) is estimated as between 0.01 – 0.07
- WPS (the weight on producer surplus) is estimated as between 0.71 – 0.77
- WTI (the weight on tariff income) is estimated as 0.22.
On average across countries, the policy weight on producer surplus is much higher than weights on consumer surplus and tariff income.

Although a multilateral FTA is the first-best solution globally, bilateral FTAs are the agreements that are globally-sustainable-Pareto-optimal for a wider range of parameters, while a welfare maximizing multilateral FTA is globally-sustainable-Pareto-optimal only for very special cases (i.e., when we have very high minimum discount factors).

- A multilateral FTA is hard to sustain due to self-enforcement issues.

Transportation costs, country size differences, and comparative advantage differences across countries all contribute to having bilateral rather than multilateral FTAs.

Possible ways to increase the likelihood of a self-enforcing multilateral FTA are all based on reducing asymmetries across countries by

- investing in transportation technologies
- having underdeveloped countries to catch-up with developed countries through pushing for their economic stability
- sharing technological improvements around the world, say, through patent agreements across countries, or through encouraging foreign direct investments from high-technology countries.