Intra-Industry Trade, Global Supply Chains and the Political Economy of Preferential Trade Liberalization

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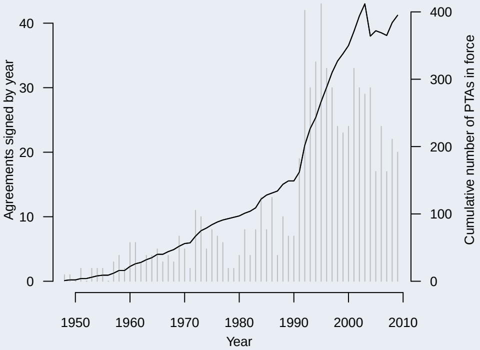
Motivation and research questions

Proliferation of preferential trade agreements (PTAs)



Data from www.designoftradeagreements.org (Dür et al. 2014).

Motivation and research questions

What we want to know:

- Who manages to shape these agreements?
- Who wins and who loses?
- Particularly relevant given the TTIP and TPP negotiations

Our contribution

Concrete research question:

- Which role do intra-industry trade (IIT) and global supply chains (GSCs) play in the political economy of PTAs?
  - IIT has been increasing for many years according to most measures
  - Trade in intermediates accounts for two-thirds of imports for most OECD countries
- We argue that the two developments interact in shaping the political economy of PTASs and use an original dataset on tariff concessions in PTAs to test this argument

Argument

Difference between finished goods and intermediates:

- Firms increasingly offshore parts of the production process (vertical specialization)
- Creates trade in intermediates that can take place within a firm or at arm's length ("contract manufacturers")
- Trade barriers on intermediate goods become a major obstacle for firms that import them (cumulative effects)
- Companies involved in GSCs can be expected to push for the liberalization of trade in intermediate goods
- As we do not see a similar constituency demand the liberalization of finished goods, the political economy of trade liberalization differs for finished goods and intermediates

Argument

Conventional argument about IIT applies for finished goods:

- If IIT is low, the adjustment costs for import-competitors are high; they strongly oppose liberalization
- If IIT is high, import-competitors are less concerned (Helpman 1981; Krugman 1981; Lipson 1982; Milner 1997; Manger 2015)
- An increase in IIT increases net demand for trade liberalization of finished goods

Argument

This argument should not hold for intermediates:

- Demand for liberalization from downstream industries should be higher if IIT is low than if IIT is high
  - If IIT is low, downstream industries tend to be unified in their support of trade liberalization
  - If IIT is high, downstream industries will be divided (those sourcing abroad benefit from trade liberalization; those sourcing domestically are either indifferent or support tariffs e.g. because a tariff reduction would benefit their competitors)
  - Domestic producers of intermediates are either concerned about direct competition (low IIT) or about competitive pressure on their downstream users (high IIT)
- An increase in IIT reduces net demand for trade liberalization

Argument

From trade policy demands to trade policy supply:

- Assumption that decision-makers follow societal demands when designing trade agreements
- This can be a result of lobbying or because decision-makers try to preempt lobbying

Hypothesis:

Whereas more IIT facilitates the liberalization of finished goods, this is not the case for intermediate goods.

Research design

Our data:

- We use tariff concessions in PTAs to test our argument
- Tariff liberalization remains a key element of PTAs
- Some tariffs are liberalized immediately, others are liberalized after a few years, still others are completely exempted
- PTAs ideal testing ground because IIT is dyadic

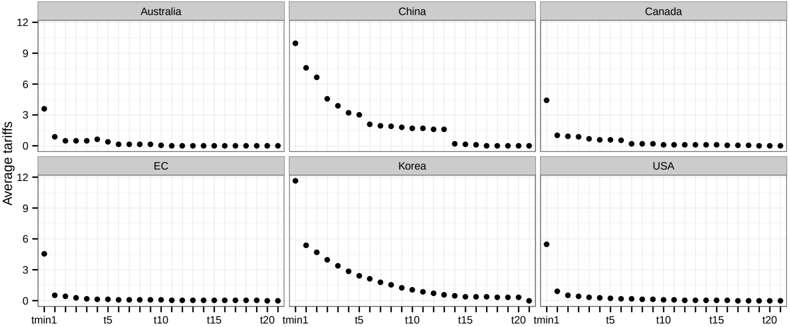
Research design

Our data

- Original dataset containing the tariff concessions exchanged in 61 PTAs at the 6 digit HS level
  - The DESTA project (Dür et al. 2014)
  - Australia, Canada, China, European Union, Japan, South Korea and the United States
  - 1995 to 2014
- 158 tariff schedules with around 5,000 tariff lines each
  - WITS alone not sufficient! (and WITS coverage considerably worse than ours)
- Around 800,000 observations

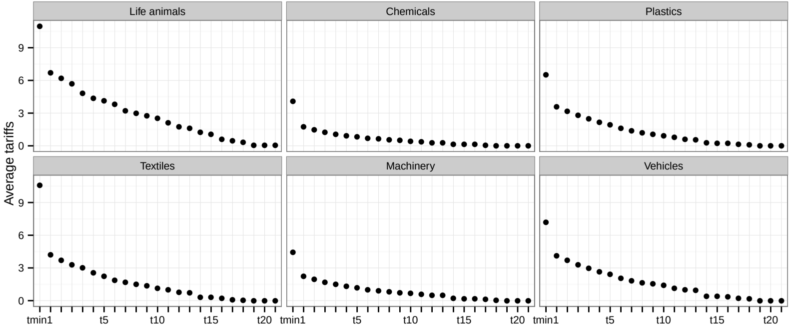
Research design

Average tariff levels over time, by major trading entity.



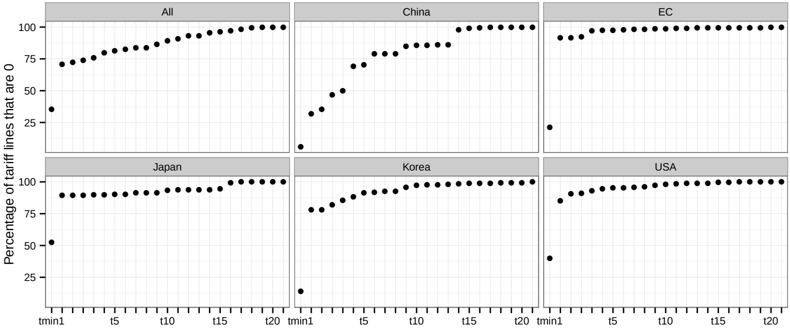
Research design

Average tariff levels over time, by economic sector.



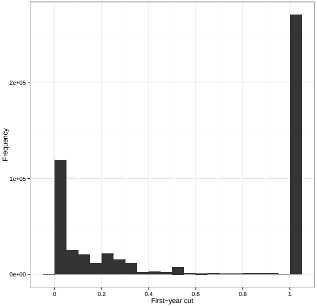
Research design

Share of tariff lines with zero duties.

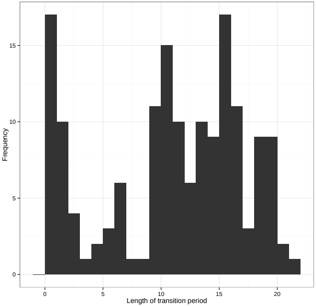


Dependent variables

First-year cut as % of tariff rate tmin1: (tmin1 - t0)/tmin1
(*Proportional cut*)



Years needed for tariff to go to zero
(*Time to zero*)



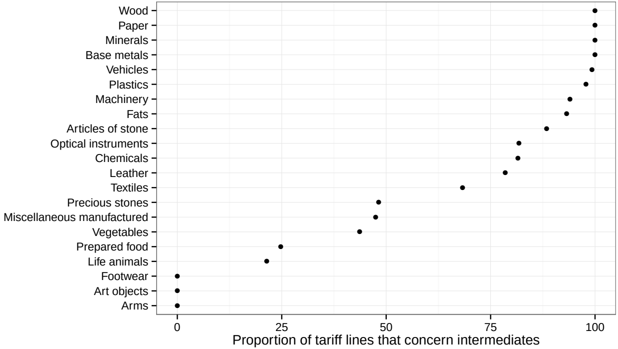
Estimation

- OLS regression (fractional regression as robustness check for first-year cut)
- Clustered standard errors at the HS6 level
- We drop tariff lines that are zero at tmin1. In robustness checks, we use a Heckman selection model to deal with the resulting selection effect.

Predictors

Good type:

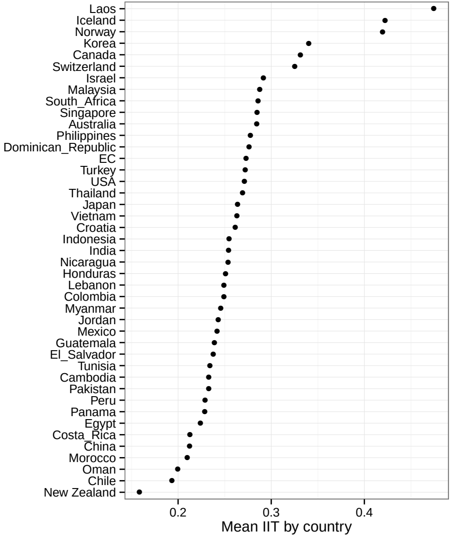
- Final vs. intermediate and mixed (Francois and Pindyuk 2012 and Bekkers et al. 2012)



Predictors

Intra-industry trade:

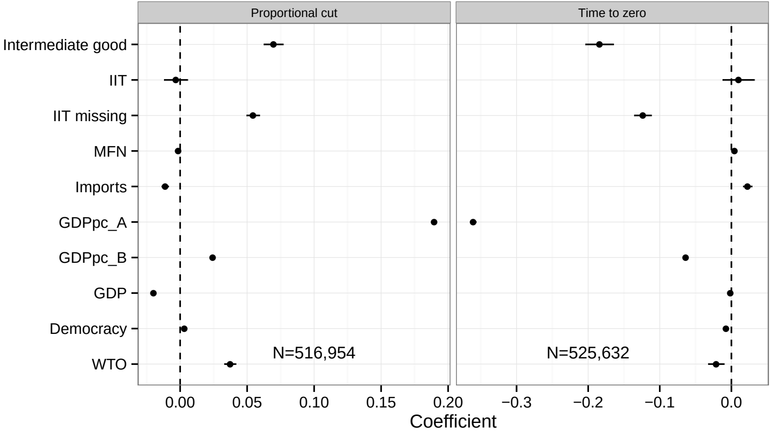
- Simultaneous imports and exports of a good
- Measured at the HS6 level
- IIT missing to control for missing observations



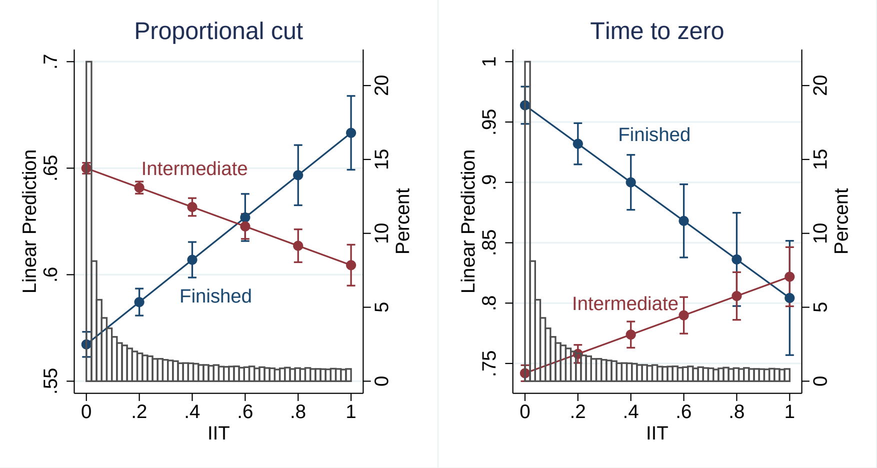
Control variables

- Tariff level at tmin1
- Imports
- GDP per capita (countries A and B)
- GDP (combined)
- Democracy
- WTO membership
- In some models: fixed effects for country A, country B, PTA, year and HS2 sector

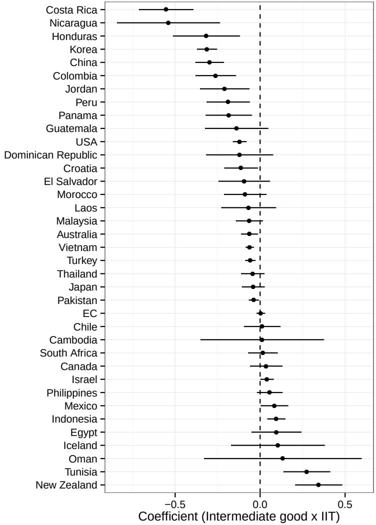
The additive results



Testing the hypothesis

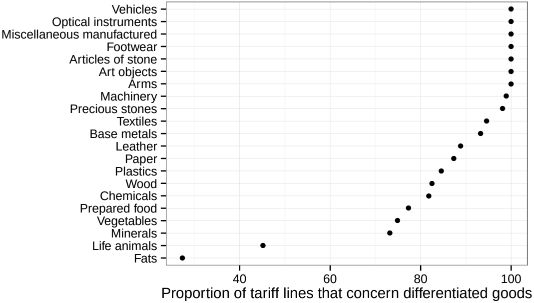


Testing the hypothesis

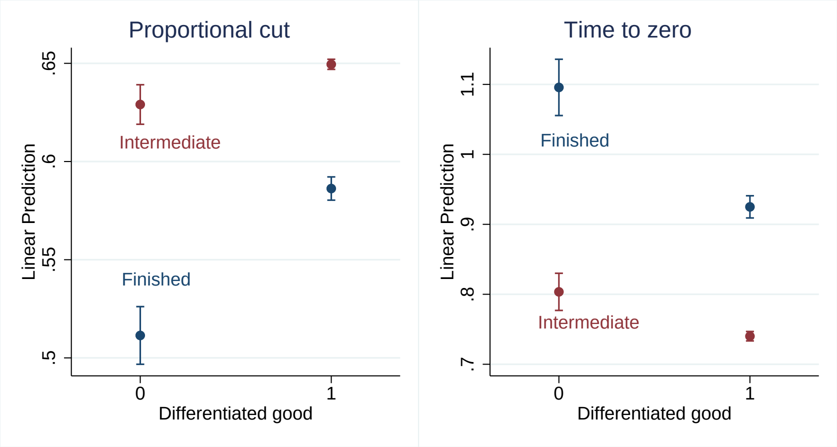


Differentiated good as proxy for IIT

- Homogeneous versus differentiated goods (Rauch 1999)

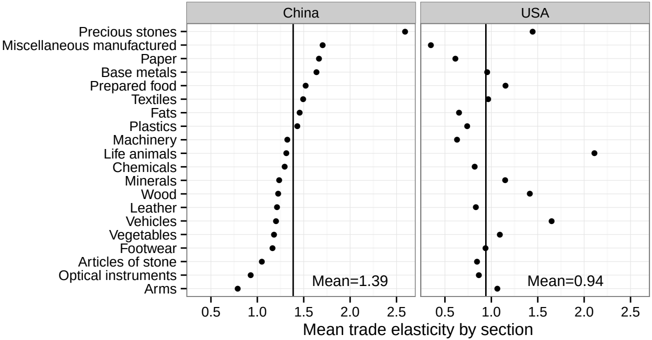


Differentiated good as proxy for IIT

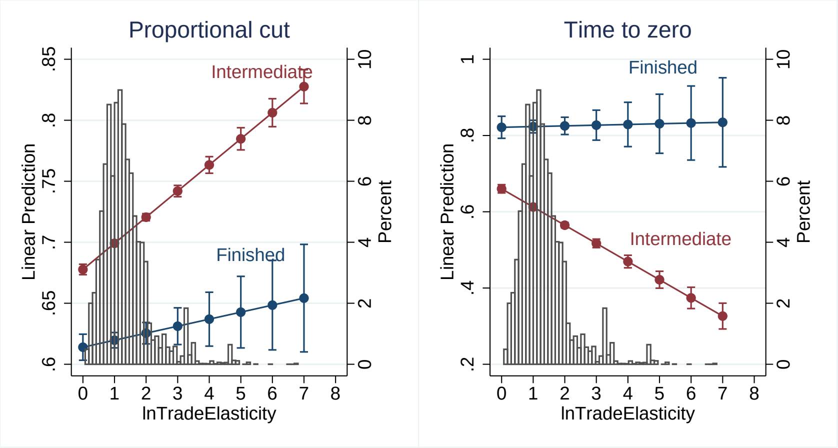


Trade elasticity as proxy for IIT

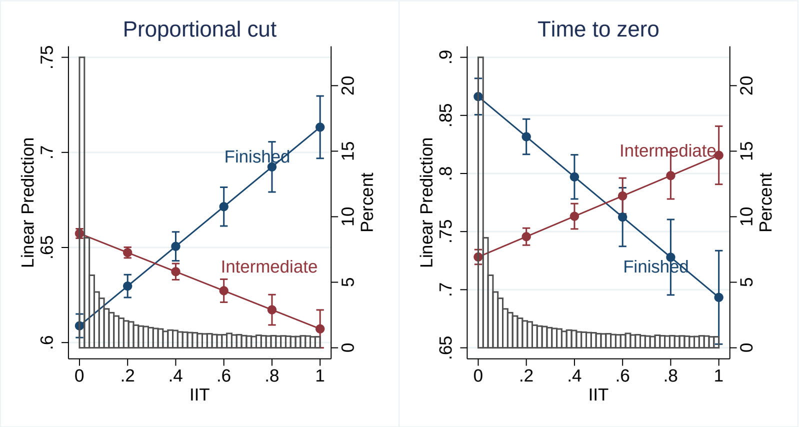
- Trade elasticity captures the extent to which prices react to imports
- Low elasticity is an indication of high IIT
- Import demand elasticities by country at the 3 digit level from Broda et al. 2006



Trade elasticity as proxy for IIT



Is the effect driven by primary commodities?



Data for primary commodity from Basu 2011.

Conclusion

Key findings

- Neither IIT nor GSCs unambiguously facilitate trade liberalization; rather:
  - For finished goods, IIT facilitates trade liberalization; for intermediates, it does not
  - At low levels of IIT, GSCs facilitate trade liberalization; at high levels, they do not
- The most productive companies that source differentiated intermediates abroad do not see their preferences reflected in trade policy
- Rather, the potential losers seem to be key in understanding tariff concessions in PTAs

Many thanks!

Bibliography

Basu, Sudip R. 2011. "Retooling Trade Policy in Developing Countries: Does Technology Intensity of Exports Matter for GDP per Capita." Policy Issues in International Trade and Commodities UNCTAD/ITCD/TAB.

Bekkers, Eddy, Joseph Francois, and Miriam Manchin. 2012. "Import Prices, Income, and Inequality." *European Economic Review* 56(4): 848–69.

Broda, Christian, Joshua Greenfield, and David Weinstein. 2006. "From Groundnuts to Globalization: A Structural Estimate of Trade and Growth." NBER Working Paper 12512.

Dür, Andreas, Leonardo Baccini, and Manfred Elsig. 2014. "The Design of International Trade Agreements: Introducing a New Dataset." *Review of International Organizations* 9(3): 353–75.

Helpman, Elhanan. 1981. "International Trade in the Presence of Product Differentiation, Economies of Scale and Monopolistic Competition: A Chamberlin-Heckscher-Ohlin Approach." *Journal of International Economics* 11(3): 305–40.

Bibliography

Krugman, Paul R. 1981. "Intraindustry Specialization and the Gains from Trade." *Journal of Political Economy* 89(5): 959–73.

Lipson, Charles. 1982. "The Transformation of Trade: The Sources and Effects of Regime Change." *International Organization* 36(2): 417–55.

Manger, Mark. 2015. "PTA Design, Tariffs and Intra-Industry Trade." In *Trade Cooperation: The Purpose, Design and Effects of Preferential Trade Agreements*, eds. Andreas Dür and Manfred Elsig. Cambridge: Cambridge University Press, 195–217.

Milner, Helen V. 1997. "Industries, Governments, and Regional Trade Blocs." In *The Political Economy of Regionalism*, eds. Edward D. Mansfield and Helen V. Milner. New York: Columbia University Press, 77–106.

Rauch, James E. 1999. "Networks versus Markets in International Trade." *Journal of International Economics* 48(1): 7–35.