

Barriers to Trade in Environmental Goods: How Important they are and what should developing countries expect from their removal

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Elusive triple win: Doha (2001)-EGA (2014-?)

- Countries mandated at Doha to negotiate on removing barriers to trade in EGs and ESs

Expected Triple win:

- Trade: Decrease cost of environmental technologies, stimulate innovation and transfer of technologies; protect resources
- Developing countries: Access to HIC markets for Asian economies + higher-quality EGs on world markets for all developing countries \Rightarrow Emissions \downarrow ; Environment preserved for all
- Our planet: At global level environment better preserved especially if wide definition of EGs

Elusive triple win: Doha (2001)-EGA (2014-?)

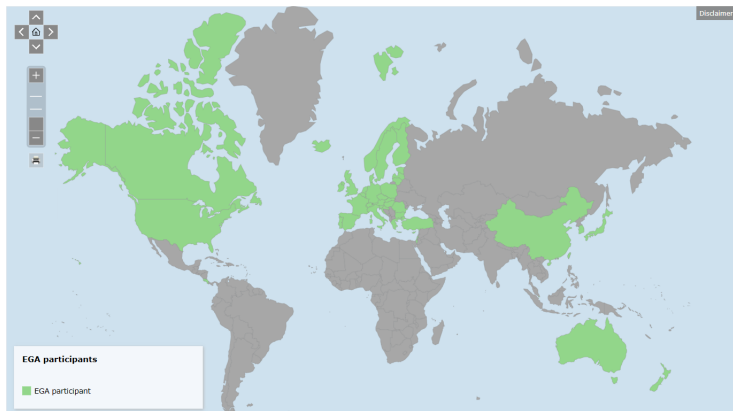
The reality of negotiations

- Reduction/elimination of barriers to trade in EGs

But how defined? (...by negotiators) Project, request/offer, list (HS6) ⇒ 18 years of wrangling at Doha/EGA ⇒ Only tariffs on agenda

- NTBs left off agenda
- Env. Services (ESs) not on agenda (though strong complementarity with EGs)
- ⇒ A minima agenda at Doha, APEC, and EGA negotiations (2014-)
- ...and developing countries have not participated in stalled EGA (see next slide)

Most developing countries are not participating in EGA



source: WTO website

Superior environmental outcomes for countries that trade in EGs

Evidence

- Countries with strict environmental policies are associated with $RCA > 1$ for EGs.
- Identification via policy changes (e.g. KP). Environmental policies affect trade flows
- RTAs with environmental provisions have better outcomes on emissions
- Emissions gap for GHGs emissions per capita smaller for countries that engage in bilateral trade in EGs
- Lower barriers to trade in EGs expected to lead to increased trade in EGs and to lower per capita GHG emissions

Conclusion: Removing barriers to trade in EGs and ESs is important

Negotiations outcome: So far wrangling for nearly 20 years

Successful Negotiations are

- Key to prevent collision of World Trading System and Climate Regime
- Key ingredient for transition to green development path
 - For developing countries, access to EGs to clean up environment
 - For developed countries to lessen carbon footprint by shifting to consumption of goods giving less environmental damage

This paper:

- Describes barriers to trade on EGs for a sample of 47+EU countries
 - bilateral tariffs data
 - Count measure of NTBs constructed from a comprehensive list of NTMs
 - Presents a new measure of regulatory overlap for NTB measures
- Evidence on the concerns of developing countries that have led to non participation in the negotiations
- Evidence of mercantilism in submission of EG lists
- Estimates on bilateral trade for a sample of 47+EU countries of reduction in tariffs and increase in regulatory overlap

Environmental Goods

- Two broad types of Environmental Goods (EGs)
 - Goods for environmental management (GEM) or 'end-of-pipe'
 - Environmentally Preferable Products (EPPs)
- overwhelmingly HICs participated at DOHA and EGA negotiations (China and Costa Rica exceptions)
- Countries (or group of countries) adopted list-based approach submitting lists of EG products (mostly GEM):
 - APEC's list (54 mostly GEM products) served as base for EGA negotiations
 - WTO list (411 products) combines all possible submissions (of mostly GEM products) during Doha round
- For counterfactual representative of developing countries we also use a list of EPP (103 products) compiled by Zugravu-Soilita (2018)

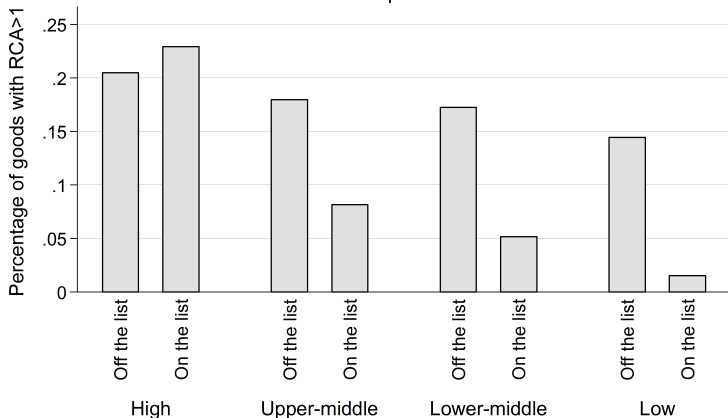
Environmental services

- Environmental Services have been left out of the current negotiations
- strong complementarities between trade in EGs and trade in ESs in the environmental projects in developing countries
- This is a potential issue for the developing countries who import projects involving EGs and complementary ESs (?)

Reluctance of developing countries to participate(1)

First, negotiations based on a narrow list of mostly industrial goods (i.e. GEMs) with very low percentage of $RCA > 1$

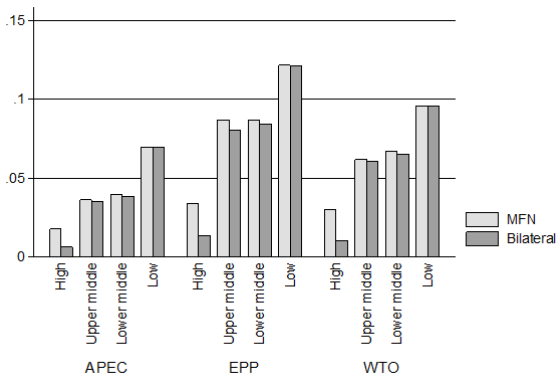
Comparison of RCA by income level
for apecs list



Reluctance of developing countries to participate(2)

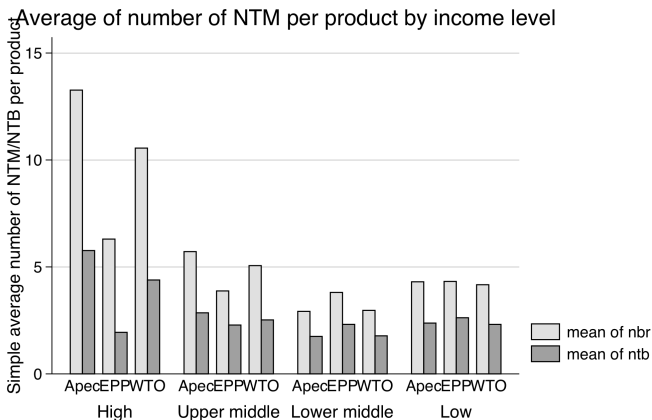
Second, HICs tariffs very low ... HICs also excluded EGs with peak tariffs from their submission lists

⇒ Mercantilistic behavior by participants (see Balineau and Melo (2013))



Reluctance of developing countries to participate(3)

.. and, third, NTBs are off the agenda

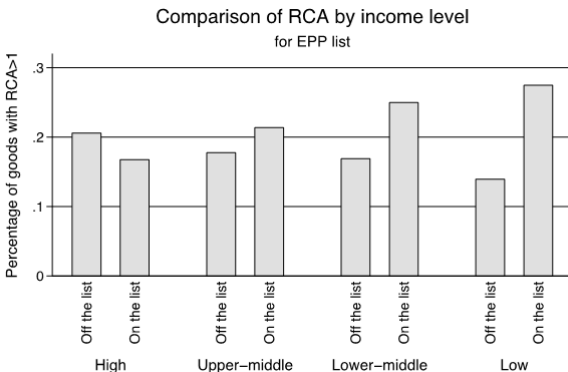


source: Authors

Notes : NTBs (NTMs) in dark (light) gray

Tilting the list towards Environmentally Preferable Products (EPPS)

would better represent exporting interests of developing countries



source: Authors

.. but ...

- Many EPPs are "like" products that can be differentiated only by labelling
- this could trigger successful discrimination against developing countries' products at the WTO
- Similar issues to those in the Tuna-Dolphin case at WTO

So Free-riding may be the best option

- Developing countries have high barriers to trade in EGs ...
 - ... and little production of goods on the current list if only because they have few environmental regulations
- Liberalization might prevent them to develop such EG industries
- As emphasized by Wu (2014) and others :
 - with so little at stake in the negotiations
 - low level of tariffs
 - exclusion of NTM
- Free-riding might be the best option for developing countries

Model

- Standard structural gravity model in cross section
- With an interaction between trade policy variables and EG
- Estimated with PPML

$$\begin{aligned}
 X_{ij}^k &= \alpha_{tariff} \log tariff_{ij}^k + \alpha_{tariff-EG} (\log tariff_{ij}^k) EG^k \\
 &+ \beta_{NTB} \log(RO_{ij}^k) + \beta_{NTB-EG} \log(RO_{ij}^k) EG^k \\
 &+ \gamma Bil_{ij} + \gamma_i^k \gamma_j^k + \mu_{ij}^k
 \end{aligned} \tag{1}$$

- We expect a positive coefficient on regulatory overlap and a negative coefficient on tariffs

Data

- We use comprehensive bilateral tariffs data provided by ITC
- NTMs are accounted for by using a regulatory overlap measure adapted from Knebel and Peters (2018)

$$RO_{ij} = \frac{\sum_{k=0}^K \sum^M NTM_{im}^k NTM_{jm}^k}{\sum_{k=0}^K \sum^M NTM_{jm}^k} \quad (2)$$

- where i, j index exporter and importers respectively, k index goods and m index of NTBs
- Only NTMs from the "Process" and "Products" categories defined by Ederington and Ruta (2016) are considered as NTBs

Results

	(1)	(2)	(3)
List EG:	APEC(54)	WTO(410)	EPP(106)
Log(Tariffs)	-6.831*** (0.335)	-6.544*** (0.311)	-6.788*** (0.333)
Log(Tariffs)*EG	2.347** (1.154)	-0.638 (0.735)	-3.233* (1.774)
Log(Reg. Overlap)	0.265*** (0.0699)	0.221*** (0.0821)	0.259*** (0.0685)
Log(Reg Overlap)*EG	-0.303*** (0.112)	0.136 (0.138)	-0.429* (0.225)

Bilateral control variables are omitted in the table to save space

Robust standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Conclusions

- Progress at liberalizing trade in EGs have been small
- Developing countries are not participating for multiple reasons
 - Current list on the table
 - Little access to new markets
 - Domestic markets too small to develop successfully an EG industry
- Tariffs are still a significant barrier especially for EPP list barrier
- Regulatory harmonization would increase bilateral trade
- Estimates for subsample of (LMICs + LICs) with others (see paper) show that import responses to tariff reductions across all groups would be largest in low-income groups.

The end !

Thank you.

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- [3] Knebel, C and Peters, R. (2018) "Non-tariff measures and the impact of regulatory convergence in ASEAN." In: Non-tariff Measures in ASEAN, edited by Lili Yan Ing, Olivier Cadot, Ralf Peters. Jakarta: Economic Research Institute for ASEAN and East Asia.
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- [7] Zugravu-Soilita, N. (2018) ‘Trade in Environmental Goods and Sustainable Development: What are we Learning from the transition economies’ experience?’, Environmental Economics and Policy Studies,