Endogenous Politics and the Design of Trade Institutions

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The Questions

1. When is endogenizing political pressure important for answering optimal design questions?
   - Exogenous vs. endogenous politics
2. Can trade agreements be used to manipulate domestic lobbying incentives?
   - Government objective function

Political Economy of Trade Institutions

With a few exceptions, TA design literature has taken political economy forces to be exogenous. I:

- endogenize politics into a standard model for studying TA design questions
- carefully distinguish between dynamics induced by exogenous and endogenous politics for
  - base case with tariff caps
  - tariff caps with escape clause
- examine escape clause design when both exogenous and endogenous forces are present

Results

- Show that TAs may be used to manipulate domestic political actors (no long-run distortions)
- For both tariff caps and escape clauses, outcomes are very different with endogenous politics
- Demonstrate that (standard, theoretical) escape clause can't work in the presence of endogenous political pressure
  - Points to real-world design of WTO Agreement on Safeguards
  - May explain why escape clause has fallen out of use

Design of Trade Agreements

- **Tariff caps**: Bagwell and Staiger 2005, Horn et al 2010, Amador and Bagwell 2012; Beshkar and Bond 2012
- **Escape clause**: Bagwell and Staiger 2005, Horn et al 2010,
- **Shallow vs. deep integration**: Bagwell and Staiger 2001, DeRemer 2014
- **Dispute settlement**: Maggi 1999, Ludema 2001, Maggi and Staiger 2011/2013, Klimenko et al 2008
- **Property vs. liability rules**: Pauwelyn 2008, Beshkar 2010, Maggi and Staiger 2014
- **Retaliation**: Bown 2002/2004, Beshkar 2010

Role of Trade Agreements: TOT Externality

Bagwell and Staiger (2002)

- Joint social welfare maximized at free trade
- Trade war (i.e. no agreement)
  - Maximize with respect to home country welfare only
  - Terms of trade (TOT) externality $\Rightarrow$ positive tariffs
- Trade agreements
  - Now take into account impact on foreign welfare
  - Internalize TOT externality $\Rightarrow$ free trade

Role of Trade Agreements: TOT Externality

Grossman and Helpman (1995)

- Add endogenous politics
- Now in "Trade War": two reasons for positive tariff
  - TOT externality + pressure from import competing lobby
- Trade agreement: only internalizes TOT externality

Role of Trade Agreements: Domestic Commitment

- Maggi and Rodriguez-Clare (1998, 2007)
  - Allow for (imperfect) capital mobility
  - Domestic investment decisions depend on level of protection
  - Inability to commit $\Rightarrow$ investment too high b/c importers know protection will respond
  - Trade agreements provide commitment device
- Mitra (2002)
  - Here distortion is wasted resources in lobby formation

Economy

Two countries: home and foreign (*)

- Separable in two goods: X and Y
  - P_i: home price of good i
  - P_i^*: foreign price of good i
- Demand identical for both goods in both countries
  - $D(P_i) = 1 - P_i$
- Supply: $Q_X^*(P_X) > Q_X(P_X)\ \forall P_X$; symmetric for Y
  - $Q_X(P_X) = \frac{P_X}{2}$; $Q_Y(P_Y) = P_Y$
  - Home net importer of X, net exporter of Y

Policy and Politics

Home levies τ on X, Foreign levies τ^* on Y

- $P_X = P_X^W + \tau$ increasing in τ
- $\pi_X(P_X)$ increasing in P_X, therefore also τ

Non-tradable specific factors motivate political activity

Timeline

Each period:

1. **Trade Agreement Formed**
   i. Governments set trade policy in international agreement
2. **Domestic Politics Played Out**
   i. Exogenous shocks are realized AND/OR
   ii. Import-competing industry lobbies government for protection
3. **Tariffs are Applied**
   i. Given political pressure, governments choose applied tariff levels

Applied Tariff Decision

Baldwin-style government objective function:

$$W = CS_X(\tau) + \gamma(s, e)\pi_X(\tau) + CS_Y(\tau^*) + \pi_Y(\tau^*) + TR(\tau)$$

- Standard *except* weight on import-competing industry profits $\gamma(s, e)$:
  - s: exogenous shock
  - e: lobbying effort
- Optimal applied tariff is a function of $\gamma(s, e)$
  - Ignores foreign welfare
  - Takes into account trade agreement enforcement
- Assume γ, γ^* is private info of each government

Domestic Political Pressure

Two potential sources

1. Exogenous shocks
   - Shock directly to γ as in Bagwell & Staiger (2005): γ, γ^* with CDF $H(\gamma)$ on support $\left[\underline{\gamma}, \overline{\gamma}\right]$; or
   - Can take γ as a function of s: $\gamma(s)$
2. Endogenous effort choice of lobby, e
   - Lobby chooses effort to maximize profits, $\pi(\cdot)$, net of lobbying effort, e
   - Call lobby's optimal effort choice e^L

$$e^L = \max_e \pi(\tau(\gamma(e))) - e$$

Trade Agreement Negotiation

Model as Nash bargain between the two countries' governments

- Maximize joint political welfare
- Disagreement point: non-cooperative outcome

Once agreement is set, cooperation enforced by repeated-game punishments conditioned on history, history + DSB signal

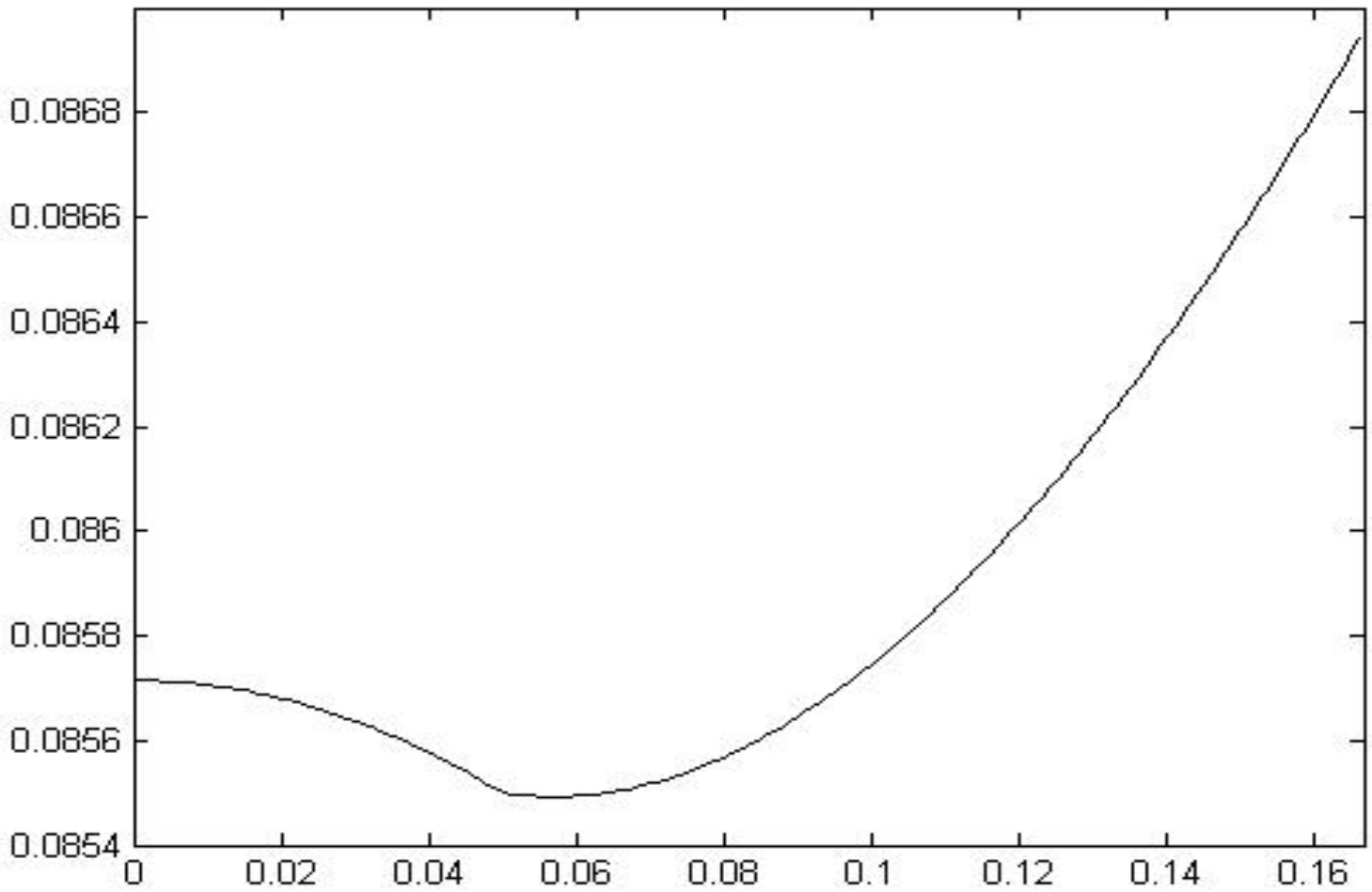
Restraining Political Pressure through TAs

- Will TA be used to discourage lobbying? Depends on how gov't welfare varies in γ
- With standard Baldwin-style objective function, welfare always increases with γ

$$W = CS_X(\tau) + \gamma\pi_X(\tau) + CS_Y(\tau^*) + \pi_Y(\tau^*) + TR(\tau)$$

  - Note 'Protection for Sale' objective function is isomorphic
- If weights must sum to 1, welfare no longer monotonic in γ

Objective Function



Tariff Caps: Exogenous vs. Endogenous γ

Must set tariff at or below specified level (aka tariff cap)

- γ exogenous (Bagwell & Staiger 2005): Negotiated weak bindings (a) are higher than those gov't's would choose if they instead negotiated strong bindings and (b) imply that governments with low realizations of γ set their applied tariffs strictly below the bound level.
- γ endogenous: Governments will not set applied tariffs strictly below the bound level. They may use the weak tariff binding either to encourage and/or restrain endogenous political pressure.

Tariff Caps with Self Enforcement

- γ exogenous (Bagwell & Staiger 2005): if governments patient enough (δ high enough), optimal externally-enforced weak binding can be self-enforced
- γ endogenous: optimal externally-enforced weak binding may not be self-enforcing
  - Problem: lobby is an additional repeated-game player
  - Lobby's incentive constraint is harder to satisfy as δ increases

▸ Repeated Game Intuition

Escape Clause with Exogenous Politics

When γ is *only* exogenous (Bagwell & Staiger 2005):

- Simple escape clause: add a second (higher) negotiated weak binding
  - Escape clause is designed to allow higher applied tariff when realization of γ is high
- Improves political efficiency
- Can improve self-enforcement
- Incentive compatibility becomes an issue

Incentive compatibility

Escape clause is meant to allow higher applied tariff when realized γ is high

- γ is private information
- We want truthful revelation, but truth-telling must be in the best interest of each gov't
- Gov't can exploit TOT externality by reporting high γ even when γ is low
  - Only way to prevent this is with some cost of using escape clause

Escape Clause with Endogenous Politics

When γ is *only* endogenous:

- Benefit of escape clause from exogenous case is gone
- Assuming lower binding is set to maximize political welfare, escape clause encourages inefficiently high lobbying effort / protection
- (Incentive compatibility still an issue, but often not the central one)
  - (If lobby's preferred tariff $\geqslant$ escape clause binding, gov't experiences high γ, no need to lie)

If γ is only endogenous, escape clause causes problems, provides no benefits

When the world is more complicated...

Now suppose political pressure is a result of both endogenous and exogenous forces (i.e. $\gamma(s, e)$):

- Want escape clause to deal with exogenous shock
- But endogenous part $\Rightarrow$ lobbying incentives make it hard to implement escape clause

Ineffectiveness of Political Criterion for Escape Clause

Assume $\gamma(s, e) = \gamma(s) + \gamma(e)$. If an escape clause conditions on $\gamma(s, e)$ and $\gamma(s^L) < \gamma(s^H) < \gamma(e^L)$, the lower "normal" tariff binding will never be applied.

When the world is more complicated... (con't)

- To make escape clause work, can't use γ
  - Need signal of shock that is not influenced by endogenous pressure
- Can condition directly on s
  - This seems to be what the WTO actually *does*

An Escape Clause for Endogenous Politics

Assume a WTO-like set up: gov't can choose between τ^a, 'escape' tariff $\tau(s)$, or politically-optimal τ matched to $\gamma(s, e)$

- Assume s verifiable, so no punishment for $\tau(s)$
- Punishment for $\tau(\gamma(s, e)) > \tau(s)$

Optimal τ^a may lead government to apply $\tau(\gamma(s, e))$

- When this happens, it leads to dispute, not valid escape
- Otherwise, no extra rent-seeking is encouraged

May explain why escape clause has fallen out of use

Future Work

- Application of framework to other design questions
- Interactions between $\gamma(s)$ and $\gamma(e)$
- Choice between protective measures over time

Conclusion

Taking into account endogenous political forces alongside exogenous ones...

- provides additional general explanation for tariff caps
- demonstrates that TAs can be used to discourage lobbing activity in general
- helps explain the structure and enforcement of the WTO Safeguards measure

Repeated Game Intuition

Legislature: break agreement if punishment not strong enough

- i.e. if one period of gain from cheater's payoff is greater than T-periods of loss from trade-war

Lobby: solve for lowest effort ($\overline{e}_b$) that breaks this constraint

- pay $\overline{e}_b$ if it's less than gain from T periods of trade-war profits

Executives: set lowest τ^a that makes paying $\overline{e}_b$ unprofitable *and* satisfies legislature's condition

$\Rightarrow$ $e_b = 0$, agreement remains in force

- High tariffs, no lobbying, no trade disruptions

Go Back