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Endogenous Politics and
the Design of Trade Institutions

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Preview

The Questions

1. Can trade agreements (TAs) be used to manipulate domestic lobbying incentives?
   - ▶ Government objective function

2. What is the optimal design of various trade agreement properties?
   - ▶ Exogenous vs. endogenous politics

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Preview

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

   ▶ use this to examine gov't objective

▶ 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

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Preview

Results

- ▶ TAs may be used to manipulate domestic political actors (even with no long-run distortions)
- ▶ Simple modeling framework can capture results from models of both exogenous and endogenous politics
  - ▶ For both tariff caps and escape clauses, endogenous politics changes outcomes dramatically
- ▶ 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

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Economic and Political Structure

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

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Economic and Political Structure

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

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The Players

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 profits:
  - ▶ 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

The Players

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 shock 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

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

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The Players

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

Role and Design of TAs

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

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Role and Design of TAs

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 ⇒ investment too high b/c importers know protection will respond
  - ▶ Trade agreements provide commitment device
- ▶ Mitra (2002)
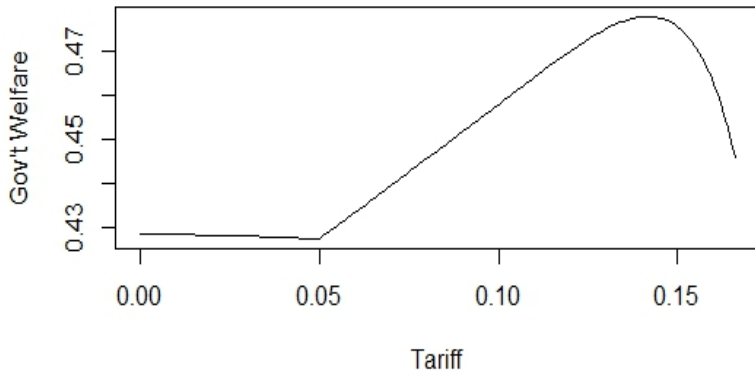 - ▶ Here distortion is wasted resources in lobby formation

Objective Function

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

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

  - Isomorphic to 'Protection for Sale' objective function

- If lobbying effort subtracted as cost from W, welfare no longer monotonic in γ
  - If weights must sum to 1, welfare also not monotonic in γ

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Objective Function

Comparison to the Literature

Others derive non-monotonicity in lobbying effort/tariff

- ▶ Maggi & Rodriguez-Clare (1998/2007): dynamic firm investment disortions
- ▶ Mitra (2002): lobbies pay investment cost to form

Here, I acknowledge the gov't objective function may be fundamentally non-monotonic

- ▶ Achieve same results with simpler model
- ▶ Endogenous politics in a wider range of questions
- ▶ Can have both endogenous / exogenous at the same time
  ⇒ unify the exogenous and endogenous politics literatures

Tariff Caps: Exogenous vs. Endogenous γ

Must set tariff at or below specified level (aka weak binding)

- $\gamma(s)$, i.e. exogenous: Negotiated weak bindings (a) are higher than those gov'ts 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.
  - Bagwell & Staiger 2005 result
- $\gamma(e)$, i.e. 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.
  - Maggi & Rodriguez-Clare (1998/2007) result

Tariff Caps

Tariff Caps with Self Enforcement

- γ exogenous (Bagwell & Staiger 2005): if governments patient enough (discount factor 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

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

- ⇒ $e_b = 0$, agreement remains in force
- ▶ High tariffs, no lobbying, no trade disruptions

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Tariff Caps

When the world is more complicated...

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

Water in the Bindings with $\gamma(s, e)$

Assume $\gamma(s, e) = \gamma(s) + \gamma(e)$. In order for governments to set applied tariffs strictly below the weak binding, the low shock must be realized *and* the lobby must not have the incentive to 'top up' political pressure to the level associated with the binding.

▶ Can happen if gov't mis-judges lobby's incentives

▶ In general, gov't prefers cap because lobby will 'fill in' for low shock up to gov's optimal level of γ

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

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Escape Clause

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

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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

Escape Clause

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.

Escape Clause

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*

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Escape Clause

An Escape Clause for a Complicated World

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

Conclusion

Taking into account endogenous political forces alongside
exogenous ones in this simplified modeling framework

- ▶ demonstrates that TAs can be used to discourage lobbing
  activity in general
- ▶ can nest established results and provide new insights
- ▶ can answer questions about optimal design of trading
  institutions more fully
  - ▸ provides additional general explanation for tariff caps
  - ▸ helps explain the structure and enforcement of the WTO
    Safeguards measure

Future Work

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