Contesting an International Trade Agreement

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Motivation

- Real world TAs characterized by
  - **Conflicting lobbying interests**
  - **Ratification uncertainty**
- Uruguay Round (Dam (2001), Strange (2013))
  - Pro-trade: large firms
  - Anti-trade: small firms
  - Ratification uncertainty
    - Senate ratification uncertain, even after House ratified
- TPP
  - Pro-trade: agric (pork, dairy, ...), retailers (Nike, Walmart)
  - Anti-trade: auto, tobacco, labor unions, environ groups
  - Ratification uncertainty
    - Signed Oct 2015 $\longrightarrow$ Obama lame duck $\longrightarrow$ Trump

Motivation: merging literatures

- New political economy framework of TA formation
  - Conflicting lobbying interests, ratification uncertainty
- Merge contest literature and TA literature
- Contest literature
  - Decision made by single **decision maker**
  - Interest groups **contest** each other to influence decision
    - EX: worker promotions, firm patent races, lobbying over policy
  - Decision modeled by **Contest Success Function**
    - $\uparrow$ lobbying by Lobby A $\Rightarrow \uparrow$ pr decision in Lobby A's favor

Motivation: merging literatures

- Our new **parallel contest** framework
  - Each govt decides on TA ratification
    - TA implementation requires mutual TA ratification
  - Anti-trade and pro-trade lobbies contest each other
    - $\uparrow$ Home pro-trade lobbying $\Rightarrow \uparrow$ pr Home TA ratification
  - Parallel contests intrinsically linked
    - Home lobbying intensity depends on pr Foreign ratification

Main results

1. Lobbying is liberalizing force for TA negotiations
   - Most liberal TA possible if govts only care about lobbying
   - Prior lit: consumer interests $\Rightarrow$ liberalization
2. Inherently protectionist govt prefs $\Rightarrow$ protection
   - Tensions balanced by equilibrium protection?
     - Us: liberalizing lobbying vs protectionist govts
     - Prior lit: protectionist lobbying vs liberalizing govts
3. New international political externalities
   - Exist for fixed terms of trade
     - Not internalized by govts who internalize TOT externalities
   - For fixed TOT, Foreign tariff affects home:
     - Pr(Foreign ratification) $\Rightarrow$ Home lobbying intensity
     - Pr(Foreign ratification) $\Rightarrow$ expected degree of liberalization

Existing literature: purpose of TAs

- Bagwell & Staiger (AER 1999)
  - Sole purpose of TA is internalizing TOT externalities
  - Our govt prefs lie **outside** BS (AER 1999)
- Maggi & Rodriguez-Clare (AER 2007)
  - TOT externalities and **domestic** political externality
    - Commitment theory of TAs
  - Us: TOT externalities and **international** political externalities

Existing literature: political economy frameworks

- GH "Protection for Sale" menu auction
  - Lobby group contribs *contingent* on policy outcome
  - Govt collects contribs *after* policy outcome realized
- Our contest framework
  - Govt collects contribs *before* policy outcome realized
  - Lobby group contribs *not contingent* on policy outcome
- Empirical interpretation for low observed tariffs
  - PFS: strongly welfare minded govts
  - Us: liberalizing force of lobbying

Outline

Outline

TA negotiations & opposing domestic interests

- 2 countries (Home and Foreign)
  - Status quo tariffs: $\boldsymbol{\tau}_{SQ} = \left(\tau_{SQ}, \tau^*_{SQ}\right)$
  - Agnostic about $\boldsymbol{\tau}_{SQ}$
- TA: govts negotiate reciprocal tariff liberalization
  - TA tariffs: $\boldsymbol{\tau}_{TA} = \left(\tau_{TA}, \tau^*_{TA}\right) < \boldsymbol{\tau}_{SQ}$
  - Possible TAs: a "line" of reciprocal TA tariffs
    - EX 1. Symmetry: $\tau_{TA} = \tau^*_{TA}$ ▸ Fig.
    - EX 2. Asymmetry: $\left(\tau_{TA}, \tau^*_{TA}\right)$ satisfy "principle of reciprocity" ▸ Fig.
- Each country: "anti-trade" (L_A) and "pro-trade" (L_T) lobbies
  - Tension b/w firms
    - Today: agnostic
    - Another time: intra-industry Melitz, inter-industry SF

Payoff structure: local lobby groups

- Lobbies have "valuations"
  - Value to L_A of preventing TA: $v_A(\tau_{TA}, \tau_{SQ}) \geq 0$
  - Value to L_T of TA going ahead: $v_T(\tau_{TA}, \tau_{SQ}) \geq 0$
- **Impact of "more liberal" TA?**
  - $v_A \uparrow, v_T \uparrow$
    - Greater polarization ▸ Fig.
  - $\frac{v_T}{v_A} \uparrow$
    - Pro-trade biased polarization ▸ Fig.
    - Holds in Melitz model
    - Holds in endowment SF models
    - Holds in GE SF model if not too close to PPF corner

Payoff structure: governments

$$\begin{aligned} G &= L + a \cdot h(\boldsymbol{\tau}) \\ G^* &= L^* + a^* \cdot h^*(\boldsymbol{\tau}) \end{aligned}$$

- Aggregate contributions: $L = \ell_A + \ell_T$
- Potentially, other factors: $a \cdot h(\boldsymbol{\tau})$
  - "Inverse" political economy weight: $a \geq 0$
  - TA implemented: $a \cdot h(\boldsymbol{\tau}_{TA})$
  - TA not implemented: $a \cdot h(\boldsymbol{\tau}_{SQ})$
  - Examples for h
    - Social welfare
    - Employment in import-competing firms
    - Tariff revenue

Stages

1. Governments announce a TA: $\boldsymbol{\tau}_{TA} = (\tau_{TA}, \tau^*_{TA})$
   - "Bargaining" structure imposed on $\boldsymbol{\tau}_{TA}$
     - $\boldsymbol{\tau}_{TA}$ "efficient"
     - Satisfies principle of reciprocity given $\boldsymbol{\tau}_{SQ}$
2. Local lobby groups contest the TA
3. Each government decides whether to "ratify" TA
   - TA goes ahead iff *both* govts ratify
     - Otherwise, $\boldsymbol{\tau}_{SQ}$ prevails

Outline

Stage 3: contesting a TA

- Prob that home govt "ratifies" TA

$$\rho_T = \frac{\ell_T + a \cdot h(\boldsymbol{\tau}_{TA})}{[\ell_T + a \cdot h(\boldsymbol{\tau}_{TA})] + [\ell_A + a \cdot h(\boldsymbol{\tau}_{SQ})]}$$

- Don't have to think of this as govt decision rule
  - Can be reduced form representation for...
    - shocks hit govt prefs after lobbying contribs made

Stage 2: optimal lobbying efforts

- Expected payoffs of lobby groups (Home)

$$\begin{aligned}
\mathrm{E}[u_A] &= (1-\rho_T^*)\cdot v_A + \rho_T^*\cdot(1-\rho_T)\cdot v_A - \ell_A \\
&= \mu_A + (1-\rho_T(\ell_A,\ell_T))\cdot \tilde{v}_A - \ell_A \\
\mathrm{E}[u_T] &= (1-\rho_T^*)\cdot 0 + \rho_T^*\cdot\rho_T\cdot v_T - \ell_T \\
&= \mu_T + \rho_T(\ell_A,\ell_T)\cdot\tilde{v}_T - \ell_T
\end{aligned}$$

- **Benchmark** case: $a = 0$

$$\ell_i = \rho_T^* \cdot \frac{1}{2}\cdot\frac{1}{1+\frac{v_j}{v_i}}\bar{v}$$

  - $\uparrow \rho_T^* \Rightarrow \uparrow$ lobbying intensity
  - Tension
    - $\bar{v}$: $\uparrow$ harmonic mean of $v_A, v_T \Rightarrow \uparrow$ polarization
    - $\frac{v_j}{v_i}$: $\uparrow$ asymmetry $\Rightarrow \downarrow$ relative strength of L_i

Implications for Stage 3

- Prob TA implemented

$$\rho_T \rho_T^* = \left[1 + \frac{v_A}{v_T}\right]^{-1} \left[1 + \frac{v_A^*}{v_T^*}\right]^{-1}$$

- **Relative valuation $\frac{v_T}{v_A}$ sufficient statistic for ratification**
  - Pick underlying trade model $\longrightarrow$ tractable comparative statics
  - Scope for future empirical work

Stage 1: equilibrium TA

- Meaning: efficient τ_{TA} subject to reciprocity rule
- **Benchmark** case

$$G = L = \ell_A + \ell_T = \rho_T^* \frac{1}{2} \bar{v}$$

  - $\bar{v}$ is harmonic mean of v_A and v_T
- Maximize L if...
  - max $\bar{v}$ (i.e. max polarization)
  - max $\rho_T^* \Leftrightarrow$ max relative strength of L_T^* (i.e. max $\frac{v_T^*}{v_A^*}$)
- Assumed more liberal TA $\Rightarrow \uparrow v_A, v_T, \frac{v_T}{v_A}$
  - **Key result**: Equilibrium TA is "most liberal" TA
  - **Corollary**: Free trade equilibrium TA if on line of reciprocity

Outline

Stage 3: contesting a TA

- Prob that home govt "ratifies" TA

$$\rho_T = \frac{\ell_T + a \cdot h(\boldsymbol{\tau}_{TA})}{[\ell_T + a \cdot h(\boldsymbol{\tau}_{TA})] + [\ell_A + a \cdot h(\boldsymbol{\tau}_{SQ})]}$$

Stage 2: optimal lobbying efforts

- **"Lobbying leakage"**

$$\begin{aligned} \ell_T &= \ell_T(a=0) - a \cdot h(\boldsymbol{\tau}_{TA}) \\ \ell_A &= \ell_A(a=0) - a \cdot h(\boldsymbol{\tau}_{SQ}) \end{aligned}$$

  - $\ell_i \downarrow$ by govt value of additional factors

Implications for Stage 3

- Prob TA implemented

$$\rho_T \rho_T^* = \left[1 + \frac{v_A}{v_T}\right]^{-1} \left[1 + \frac{v_A^*}{v_T^*}\right]^{-1}$$

- **Relative valuation $\frac{v_T}{v_A}$ sufficient statistic for ratification**

Stage 1: equilibrium TA

$$\mathrm{E}[G] = L + \underbrace{a\left[\rho_T \rho_T^* h(\tau_{TA}) + (1 - \rho_T \rho_T^*) h(\tau_{SQ})\right]}_{\text{Expected "head start"}}$$

- Know lobbying acts as liberalizing force
  - $a = 0$: lobbying delivers most liberal TA possible
- What about inherent govt preferences $ah(\cdot)$?
  - Pro-trade head starts: $h(\tau_{TA}) > h(\tau_{SQ}), -\frac{\partial h(\tau_{TA})}{\partial \tau_{TA}} > 0$
    - Another liberalizing force...
  - Anti-trade head starts: $h(\tau_{SQ}) > h(\tau_{TA}), -\frac{\partial h(\tau_{TA})}{\partial \tau_{TA}} < 0$
    - Protectionist force
- **Key result**
  - Protection emerges from inherently protectionist govt prefs

Outline

Refresher: Bagwell & Staiger (1999 AER)

- 2 country, 2 sector GE model
- Govt preferences:

$$G\left(\tau, \tau^{*}\right) = G\left(p\left(\tau, p^{w}\right), p^{w}\left(\tau, \tau^{*}\right)\right)$$

- Key observation
  - Foreign tariff impacts home only via p^{w}
- Key result
  - Nothing to negotiate once TA internalizes TOT externalities

Refresher: Bagwell & Staiger (1999 AER)

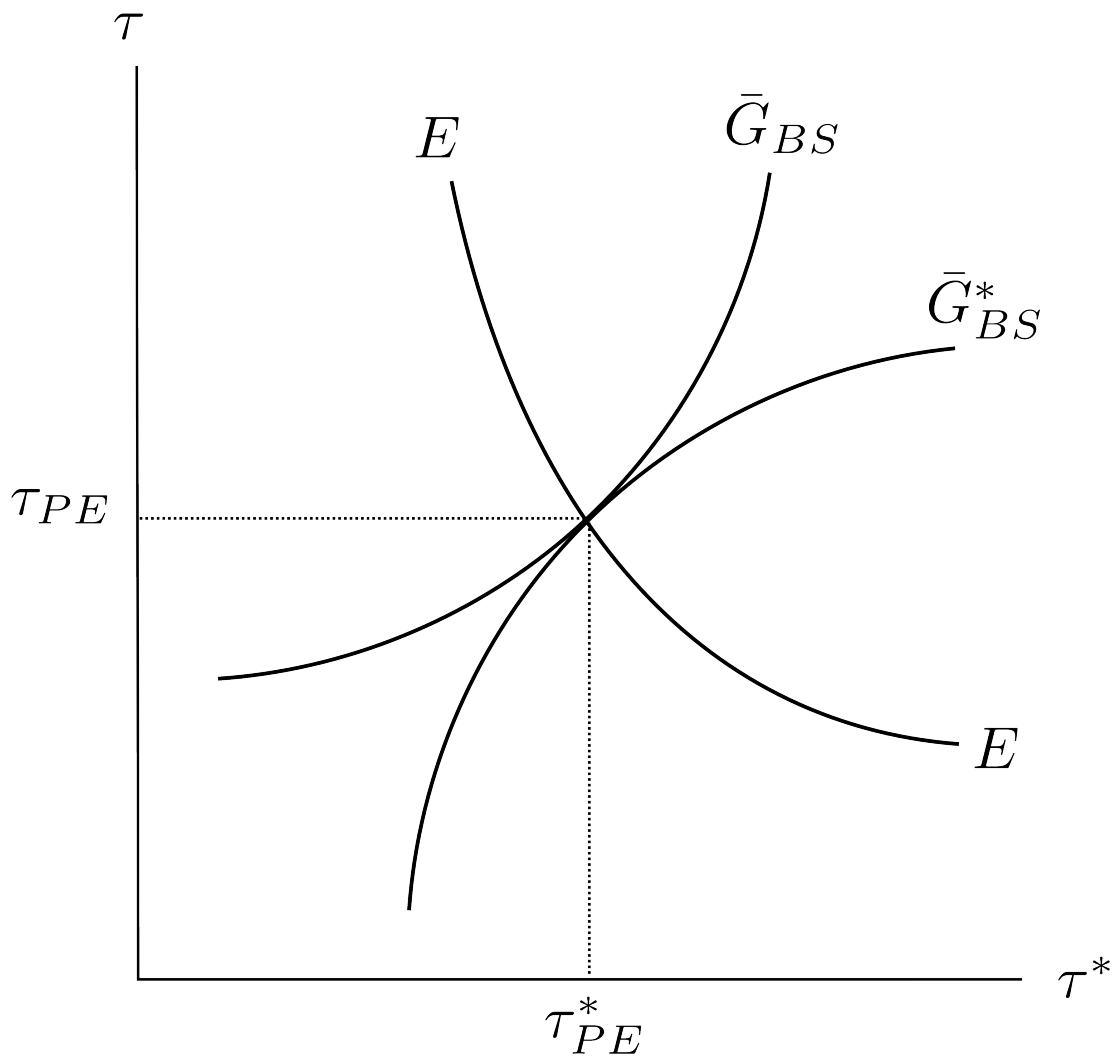

Figure: Politically efficient tariffs are also efficient

Our framework

- BS: 2 country, 2 sector GE model
- Govt preferences

$$G\left(\tau,\tau^{*}\right)=G\left(p\left(\tau,p^{w}\right),p^{w}\left(\tau,\tau^{*}\right),p^{*}\left(\tau^{*},p^{w}\right)\right)$$

- Key observation
  - Foreign tariff impacts home even for fixed p^{w}
  - Holding p^{w} fixed, $\downarrow \tau^{*}$...
    1. $\uparrow \rho_{T}^{*} \Rightarrow \uparrow L \Rightarrow \uparrow G$ (positive externality)
    2. $\uparrow \rho_{T}^{*} \Rightarrow \downarrow \mathrm{E}[h(\boldsymbol{\tau})] \Rightarrow \downarrow G$ (negative externality)
- Key result
  - Negotiations continue after TA internalizes TOT externalities

Net positive international political externality

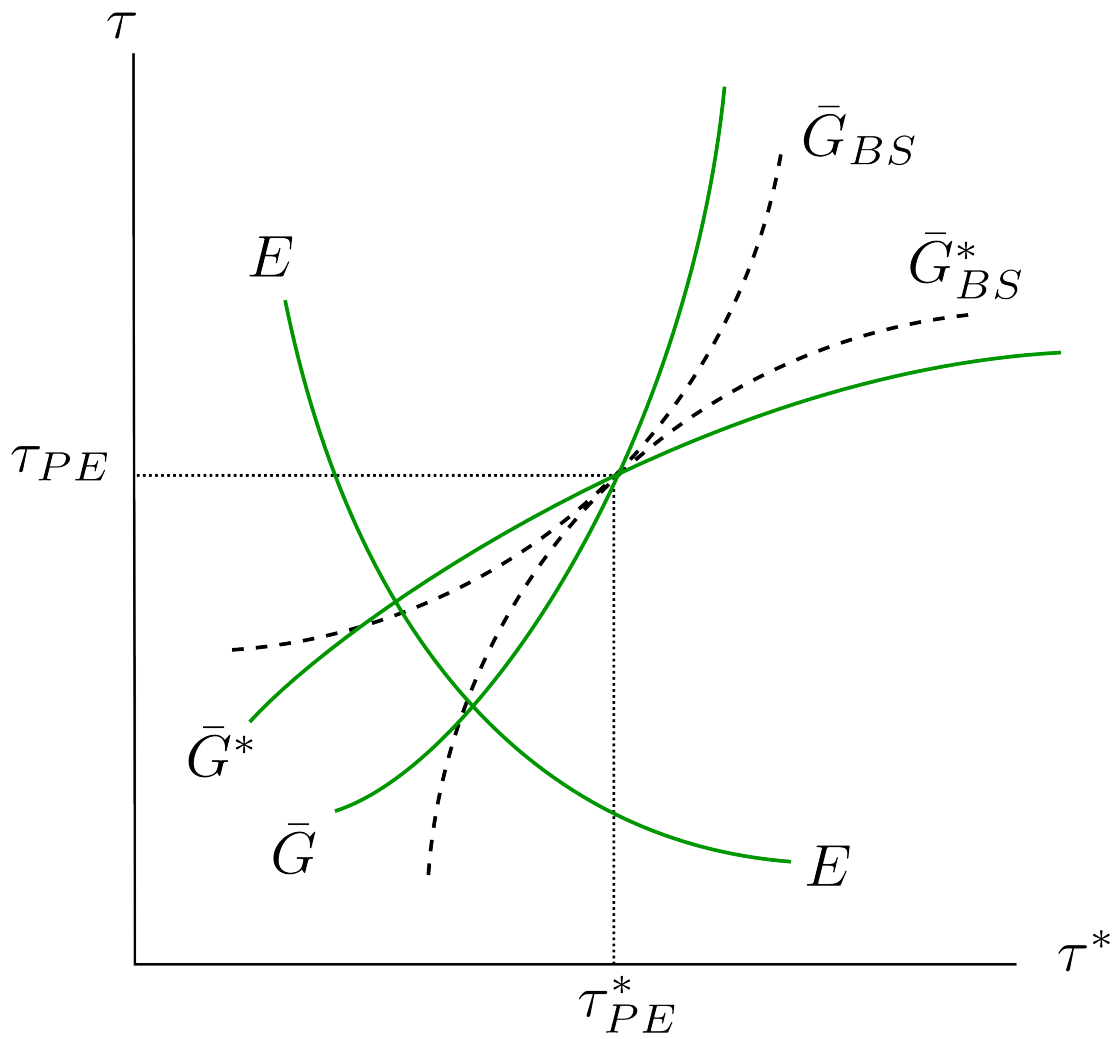

Figure: Politically efficient tariffs are inefficient

Net negative international political externality

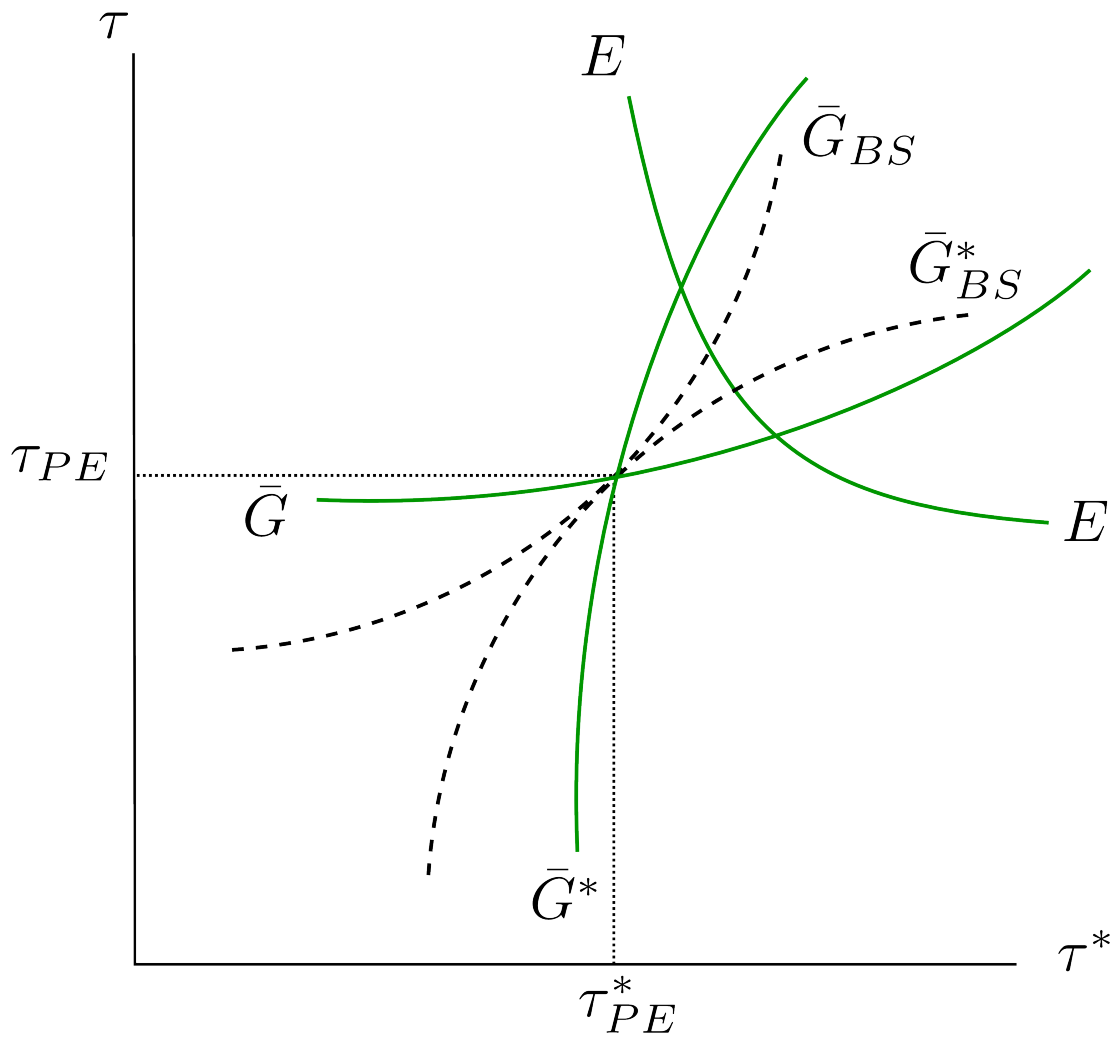

Figure: Politically efficient tariffs are inefficient

Outline

Conclusion

- Develop new political economy framework for TA formation
  - Conflicting lobbying interests
  - TA ratification uncertainty
- Implications

1. Lobbying is a liberalizing force
2. Protection requires inherently protectionist govt prefs
3. New international political externalities
   - Operate outside traditional TOT channel
   - Emerge because ratification prob depends on trade policy

Comparative statics of $p_T\left(\frac{v_T}{v_A}\right)$ in Melitz model

1. $\gamma = \frac{\text{fixed export cost}}{\text{fixed domestic cost}} > 1$
   - $\uparrow \gamma \Rightarrow$ tougher to be exporter $\Rightarrow \downarrow$ share of EX firms
   - $\therefore \uparrow \gamma \Rightarrow \downarrow \frac{v_T}{v_A} \Rightarrow \downarrow p_T$
2. $k =$ shape parameter in Pareto distn of firm productivity
   - $\uparrow k \Rightarrow \uparrow$ mass low productivity firms $\Rightarrow \downarrow$ share of EX firms
   - $\therefore \uparrow k \Rightarrow \downarrow \frac{v_T}{v_A} \Rightarrow \downarrow p_T$
3. $\varepsilon =$ consumer elasticity of substitution across varieties
   - $\uparrow \varepsilon \Rightarrow \downarrow$ markups $\Rightarrow$ relative adv for high productivity firms
   - $\therefore \uparrow \varepsilon \Rightarrow \uparrow \frac{v_T}{v_A} \Rightarrow \uparrow p_T$

EX 1: symmetric TA tariffs

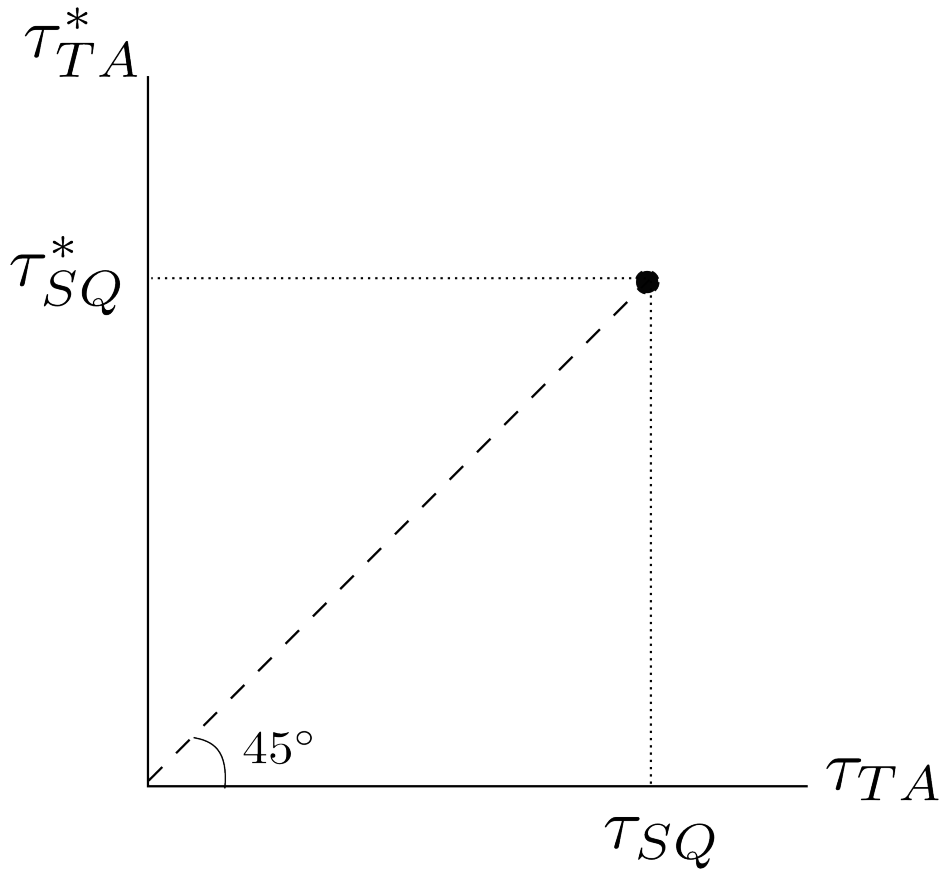

Figure: Set of possible TAs

go back

EX 2: reciprocity TA tariffs

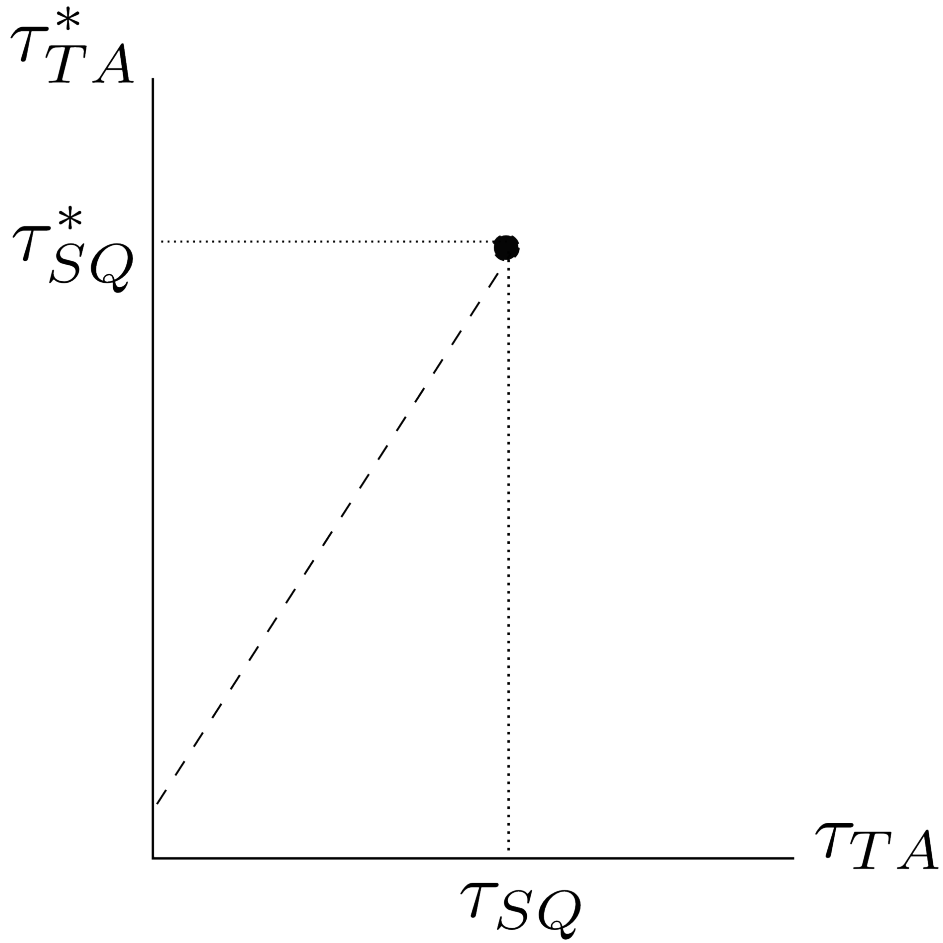

Figure: Set of possible TA tariffs

go back

Tariff liberalization & polarization

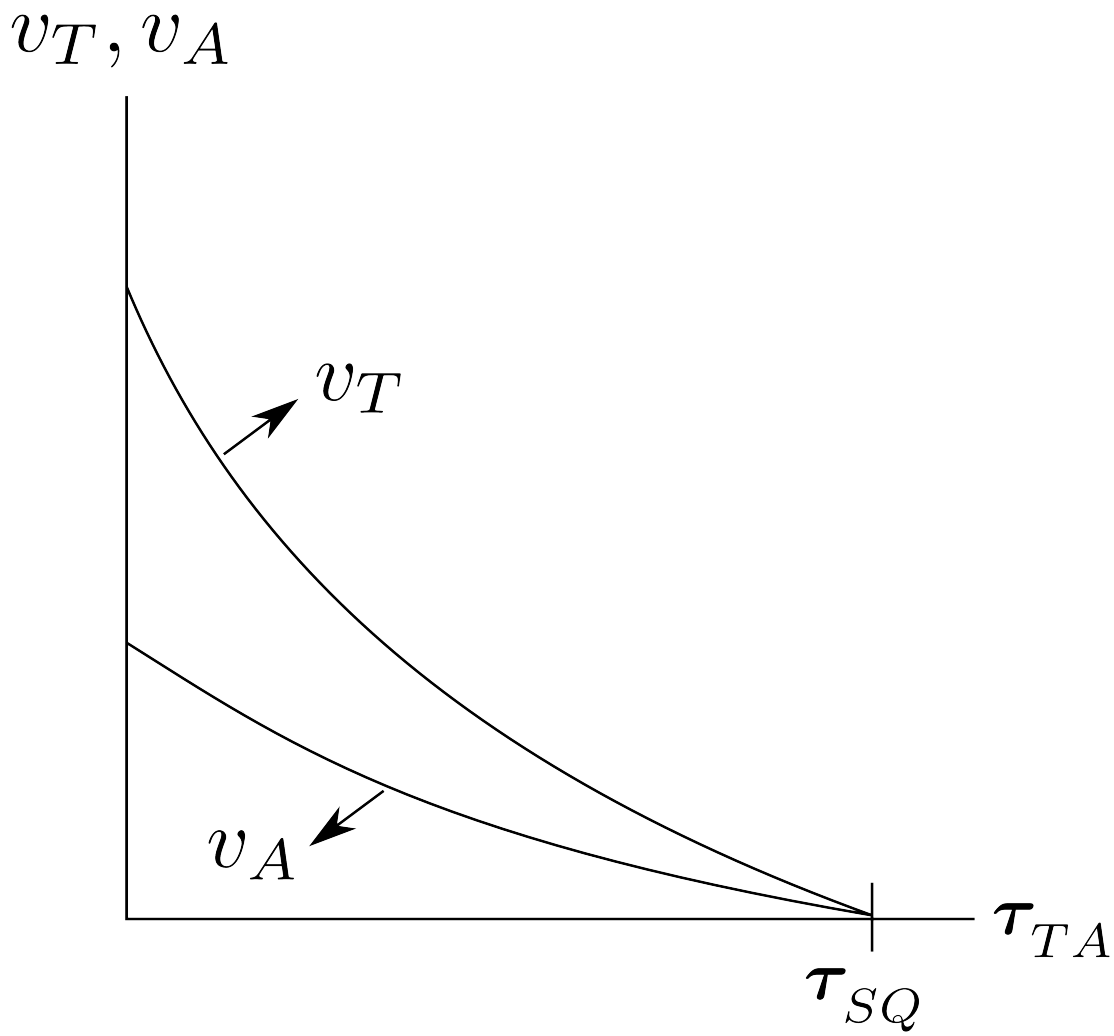

Figure: Tariff liberalization and valuations

go back

Tariff liberalization & pro-trade biased polarization

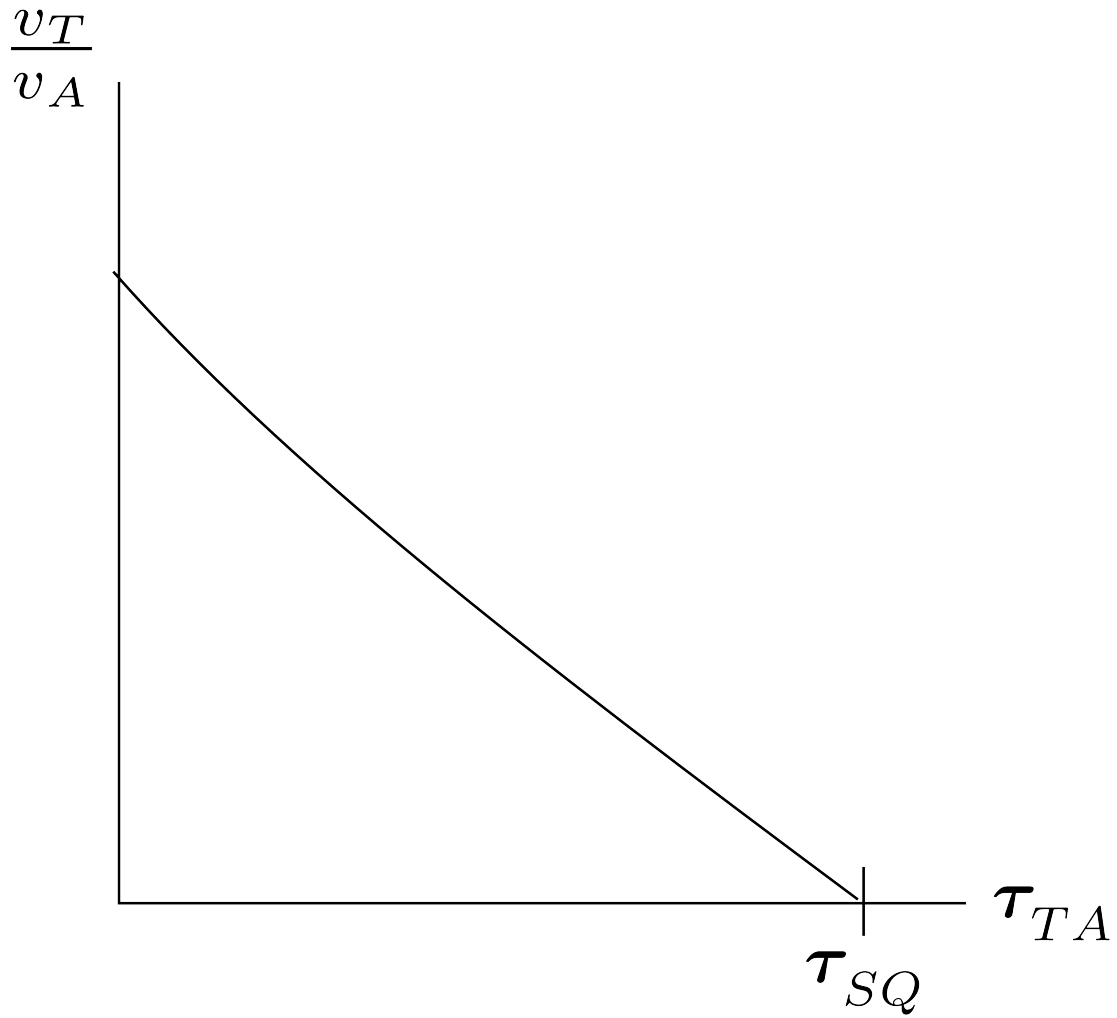

Figure: Tariff liberalization and relative valuations

go back

Equilibrium TA the most liberal TA?

- Pro-trade head starts: $h(\boldsymbol{\tau}_{TA}) > h(\boldsymbol{\tau}_{SQ})$
  - helpful: $\uparrow \rho_T \rho_T^* \Rightarrow \uparrow$ weight to $h(\boldsymbol{\tau}_{TA}) > h(\boldsymbol{\tau}_{SQ})$
  - $\gg$ not helpful: $\uparrow h(\boldsymbol{\tau}_{TA}) \Rightarrow \uparrow$ "lobbying leakage"
- Anti-trade head starts: $h(\boldsymbol{\tau}_{SQ}) > h(\boldsymbol{\tau}_{TA})$
  - helpful: $\downarrow h(\boldsymbol{\tau}_{TA}) \Rightarrow \downarrow$ "lobbying leakage"
  - $\gg$ not helpful: $\uparrow \rho_T \rho_T^* \Rightarrow \uparrow$ weight to $h(\boldsymbol{\tau}_{TA}) < h(\boldsymbol{\tau}_{SQ})$

go back