Overview
○○○

Model
○○○
○○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

Temporary Trade Barriers: When Will They End?

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Overview
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Model
○○○
○○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

The Questions

1. How long do deviations from trade agreement tariffs last?
2. What are the determinants of renewals?
   - They don't happen for *no* reason at all

Overview
○●○

Model
○○○
○○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

Institutional Detail

▶ Temporary trade barriers have potential to be renewed
  ▶ For Anti-dumping (AD) duties, initial five year term, renewal for five years
  ▶ For Safeguards, four then four; much rarer than AD

▶ Authorized by WTO

▶ Very little in the agreements to guide the process
  ▶ WTO litigation gives gov'ts a LOT of latitude

▶ In U.S., for AD:
  ▶ DOC initiates, determines whether dumping would continue
  ▶ ITC determines whether injury would recur / continue

Overview
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Model
○○○
○○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

Preview

Preview of Results

The probability that an AD duty gets renewed

- ▶ Increases in lobbying effort
- ▶ Decreases in the MFN tariff
- ▶ Is invariant to the trading partner's tariff
- ▶ Increases in the profitability of the import-competing sector
- ▶ Increases in the strength of the lobby
- ▶ May be concave in the AD duty

Overview
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Model
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000

Uncertainty
000

Results
0000000

Conclusion
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Economic and Political Structure

Timeline

Taking trade agreement tariff and anti-dumping duties as given,

1. Import-competing firms lobby DOC/ITC to renew AD duties
2. Uncertainty is resolved
3. DOC/ITC decide whether to renew duties
4. Private actors make production, consumption decisions

Overview
○○○

Model
○●○
○○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

Economic and Political Structure

Economy

- Two countries: home and foreign ($*$)
- Separable in three goods: X and Y (traded) and numeraire
- Demand identical for both goods in both countries
- Supply: $Q_X^*(P_X) > Q_X(P_X)$ $\forall P_X$; symmetric for Y
  - Home net importer of X, net exporter of Y

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

- $P_X = P_X^W + \tau$ and $\pi_X(P_X)$ increasing in τ

Non-tradable specific factors motivates political activity

Overview
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Model
ooo●
ooo

Uncertainty
ooo

Results
ooooooo

Conclusion
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Economic and Political Structure

Political Structure

In Home country (foreign is passive):

- Dept. of Commerce / Int'l Trade Commission
  - Can renew AD duties
  - Susceptible to influence of lobbying, perhaps both direct and indirect
  - Modeled in reduced form
- A Single Lobby
  - Represents import-competing sector, X

Overview
○○○

Model
○○○
●○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

The Players

"Government"

Renewal decision determined by complex process including DOC, ITC, pressure via other political bodies. Reduced form:

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

- ▸ $CS_i(\cdot)$: consumer surplus
- ▸ $\pi_X(\tau)$: profits of import-competing industry
- ▸ $\pi_Y(\tau^*)$: profits of exporting industry
- ▸ $TR(\tau)$: tariff revenue

Overview
○○○

Model
○○○
○●○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

The Players

"Government"

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

▶ $\gamma(e, \theta)$: weight on import-competing industry profits
  ▶ e: lobbying effort
  ▶ θ: uncertain element in G's preferences

Assumption 1

1. $\gamma(e, \theta)$ is increasing and concave in e for all $\theta \in \Theta$.

Overview
○○○

Model
○○○
○○●

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○○

The Players

Lobby

Lobby chooses effort to maximize:

$$\{1 - \Pr[\text{AD Renewal}]\} \, \pi(\tau^a) + \Pr[\text{AD Renewal}] \, \pi(\tau^{ad}) - e$$

- ► e: Lobbying effort
- ► τ^a: home import tariff under trade agreement
- ► τ^{ad}: home import tariff equivalent under anti-dumping duties

Overview
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Model
ooo
ooo

Uncertainty
●oo

Results
ooooooo

Conclusion
oo

Timeline

1. **Import-competing firms lobby DOC/ITC to renew AD duties**
2. Uncertainty is resolved
3. **DOC/ITC decide whether to renew duties**
4. Private actors make production, consumption decisions

Overview
○○○

Model
○○○
○○○

Uncertainty
○●○

Results
○○○○○○○

Conclusion
○○

Why uncertainty?

Government

- ▶ AD duties renewed if G prefers τ^{ad} to τ^a

Lobby

- ▶ Given (τ^a, τ^{*a}) and τ^{ad}, lobby knows what e is required to induce renewal
- ▶ Lobby pays this e if: $\quad \pi(\tau^{ad}) - e > \pi(\tau^a)$

In Equilibrium

- ▶ Firms only put forth effort when they know renewal will be granted

What's this uncertainty about?

- ▶ Strength of evidence

- ▶ Probability foreign will retaliate or initiate dispute (indirect)

- ▶ G's valuation of harm to industry, e.g. how politically important is industry?

Timeline

1. Import-competing firms lobby DOC/ITC to renew AD duties

2. Uncertainty is resolved

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Overview
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Model
ooo
ooo

Uncertainty
ooo

Results
o●oooooo

Conclusion
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Government

G renews AD duties if its utility is higher under AD duties than trade agreement tariff

▶ Preferences are ex-ante uncertain through θ

▶ When does G renew AD duties?

$b(e, \tau^a, \tau^{ad})$: probability G prefers τ^{ad} to τ^a for a given effort level e

Lemma 1

The probability that G renews AD duties is increasing and concave in lobbying effort e $\left(\text{i.e. } \frac{\partial b}{\partial e} \geqslant 0, \ \frac{\partial^2 b}{\partial e^2} \leqslant 0 \right)$.

Overview
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Model
ooo
ooo

Uncertainty
ooo

Results
oo●oooo

Conclusion
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Home's Trade Agreement Tariff

Result 1

The total probability that G renews AD duties is decreasing in the home trade agreement tariff τ^a.

There's both a direct effect and an indirect effect through lobby's incentives, and both are negative:

$$\frac{\partial b}{\partial e}\frac{\partial e}{\partial \tau^a} + \frac{\partial b}{\partial \tau^a}$$

Overview
○○○

Model
○○○
○○○

Uncertainty
○○○

Results
○○○●○○○

Conclusion
○○

Foreign's Trade Agreement Tariff

Assuming trading partner does not retaliate

- ▶ No difference in foreign tariff under AD duty and τ^a. So no effect on G's incentives (either direct or indirect)

Result 2

The total probability that G renews AD duties is unaffected by foreign's trade agreement tariff τ^{*a}.

Overview
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Model
ooo
ooo

Uncertainty
ooo

Results
ooooo●oo

Conclusion
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Profitability of Import-Competing Sector

NOTE: this is not quite right, but some version of it will be
Assume $\pi(\cdot)$ shifts up uniformly for all τ.

- ▶ Convexity of profits $\Rightarrow$ G's marginal benefit of providing protection goes up
- ▶ Convexity of profits $\Rightarrow$ return from lobbying increases

Result 3

The total probability that G renews AD duties is increasing in the profitability of the import-competing sector.

Overview
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Model
ooo
ooo

Uncertainty
ooo

Results
ooooooo●o

Conclusion
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Exogenous Shifts in $\gamma(e, \theta)$

Assume $\gamma(\cdot, \cdot)$ shifts up uniformly for all (e, θ) pairs.

- ▶ G gives more weight to firms' benefit
- ▶ Lobbying incentives are unchanged

Result 3

The total probability that G renews AD duties increases when the weighting function shifts up exogenously and uniformly.

Overview
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Model
ooo
ooo

Uncertainty
ooo

Results
ooooooo●

Conclusion
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Protection from AD Duties

When τ^{ad} increases, two effects on G's incentives:

- ▶ Social welfare decreases, pushes for decrease in renewal probability
- ▶ (Over-weighted) import-competing profits increase, pushes for increase in renewal probability

Indirect effect is of same sign as direct effect

- ▶ When τ^{ad} (i.e. close to social optimum), second effect dominates $\Rightarrow$ increase in renewal probability
- ▶ Effect may be concave

Future Work

▶ Comparative static on uncertainty measure

▶ Empirical work

▶ Extend model to include initial decision to grant protection.

  ▶ Explain variation in a lobby's incentives between original application of AD and renewal

  ▶ Lobby's choice between investing in productive vs. rent-seeking behavior while protected

Overview
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Model
○○○
○○○

Uncertainty
○○○

Results
○○○○○○○

Conclusion
○●

Feedback, Comments from InsTED presentation

- Look for Kara Reynold's "Political Economy of Antidumping Reviews (Shushanik)
- Need to have first stage (Jee-Hyeong, Gary Lyn)
  - Look at Park and Blonigen (Jee-Hyeong)
  - Cost differential for firms to get initial duty vs. renewal?
  - Some firms choose not to pursue renewal when DOC contacts them 30-days before (Sasha)
- Lobbying effort may be endogenous: if prob. of success is lower, maybe it's not worth providing effort (Mostafa)
- Uncertainty could be, in part, about how mobile labor is (Kishore)