Political Contestation and Firm Behavior in Response to WTO Disputes

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Motivation

- What explains how much firms lobby over trade policy?
  - The *intensive* margin of lobbying.

- How do firms interact strategically?
  - Emphasize how shocks affect one firm directly.
  - ... which indirectly affects other firms.

- This talk:
  1. Show a general modelling framework.
  2. Show beginnings of empirical test.
Intensive Margin of Lobbying I

Figure: Distribution of PAC Expenditures

PAC Data 1997-1999. Contributions between 5K and 2M.

- High variation in intensive margin.
- Intensive margin speaks directly to welfare.
Intensive Margin of Lobbying II

Figure: Distribution of Standardized PAC Expenditures

PAC Data from 1997-1999. Mean-standardized contributions.
Existing IPE Explanations

- “Describe whether the firm supports or opposes protection”
  - According to an underlying economic model.
  - Old, New, New NEW!, ... $New^{newestest}$ trade theory.

- “+ Grossman and Helpman.”
  - Deriving contribution schedules complete pain.
Lobbying Contests

- Lobbying as contestation between firms with opposing preferences.

- Two or more actors can exert costly effort to win a prize.

- Value added:
  - Accommodates the effects of many “shocks.”
  - Smooth comparative statics about “own-firm” and “cross-firm” effects.
Two firms: Free trade $F$ and Pro-protection $P$

Value to prize: $V_F$ and $V_P$

Cost of effort: $c_F$ and $c_P$

Contest: $\phi_F(e_F, e_P) = \frac{e_F}{e_F + e_P}$

Objective: $\Pi_i = \phi_i(e_i, e_j)V_i - e_i c_i$
Timeout

- Timeout: Recharacterize objective function
  - $\Pi_i = \phi_i(e_i, e_j) V_i - e_i c_i$
  - $\Pi_i = \phi_i(e_i, e_j) - e_i d_i$

  - Where $d_i \equiv \frac{c_i}{V_i}$.

- Easier to map real-world stories about $c_i$ and $V_i$ to the model’s predictions.
Equilibrium

- Unique, pure strategy NE:
  \[ e^*_i = \frac{d_j}{(d_i + d_j)^2} \]

- Clean comparative statics:

  **Own-firm Effects**
  \[ \frac{\partial e^*_i}{\partial d_i} = \frac{-2d_j}{(d_i + d_j)^3} \]

  **Cross-firm Effects**
  \[ \frac{\partial e^*_i}{\partial d_j} = \frac{d_i - d_j}{(d_i + d_j)^3} \]
Optimal Effort

Equilibrium Effort Levels as $V_F$ Varies

Optimal Effort
WTO Disputes

- Increase the value of compliance to one side.
  - Information provision.
  - New groups who will suffer from retaliation.
  - Moral, suasion.

- Lower costs of lobbying.
  - Focal point for collective action.
  - Political cover for politicians.

- Can also accommodate changes in lobbying technology.
Effect of Shock on Contest Outcome

Change in $\Pr(\text{Compliance})$ against $V_F$
Empirics

- Challenge 1: Identify pro-protection firms.
  - Take petitioning firms from Bown’s Temporary Trade Barriers dataset.

- Challenge 2: Identify anti-protection firms.
  - Downstream firms harmed by the petition.

1. Identify product-exporters in TTB.
2. Identify U.S. firms who import that product from that country.
   - Bill of Lading Data
## Bill of Lading Data

<table>
<thead>
<tr>
<th>Manufacturer / Shipper</th>
<th>Consignee</th>
<th>BILL OF LADING</th>
<th>ARRIVAL DATE</th>
<th>WEIGHT (LB)</th>
<th>WEIGHT (KG)</th>
<th>UNIT$</th>
<th>QUANTITY</th>
<th>CONTAINER COUNT</th>
<th>CBM</th>
<th>VOYAGE NO.</th>
<th>PORT OF LOADING</th>
<th>PORT OF DISCHARGE</th>
<th>VESSEL NAME</th>
<th>CARRIER CODE</th>
<th>COUNTRY OF ORIGIN</th>
<th>PLACE OF RECEIPT</th>
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<td>SURVITEC SURVIVAL PRODUCTS INC 11070 CABOT COMMERCE CIR STE 100 JACKSONVILLE FL 32226 US</td>
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<td>444W</td>
<td>SOUTHHAMPTON</td>
<td>CHARLESTON, SOUTH CAROLINA</td>
<td>YORKTOWN EXPRESS</td>
<td>FTNV</td>
<td>UNITED KINGDOM</td>
<td>GB</td>
</tr>
</tbody>
</table>
Predictions

- A positive shock to the red firm’s value to the prize.
  - Left: When red is relatively weak.
  - Right: When red is relatively strong.
We should care about the intensive margin of lobbying.

- Inherently important for welfare.
- Reveals strategic interaction among firms.

Contestation is a useful framework.

- Accommodates many real world stories.

Data collection to test using expenditures.