Taxability and Trade

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Trade and Fiscal Capacity
What are the implications of limited fiscal capacity for trade policy?
Question

- What are the implications of limited fiscal capacity for trade policy?
- Does it make protection more likely? Who benefits and who loses?
Literature Overview

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- This broad pattern is well observed in the literature (Besley and Persson 2011, Dincecco and Prado 2012, etc.) but doesn’t tell the whole story.
Argument

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Claim 3: Costs to taxation = \( f(\text{ease of evasion, ease of implementation, deadweight losses}) \) differ across taxable quantities.
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- Claim 2: Domestic taxation and spending decisions are determined by a similar distributive politics game.
- Claim 3: Costs to taxation = $f$ (ease of evasion, ease of implementation, deadweight losses) differ across taxable quantities.
- Combine these, and you get a game in which trade and taxation decisions are jointly determined, and fiscal capacity conditions these decisions by determining when taxation can be used as a substitute redistributive policy.
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G(t_1, t_2, \tau) = \alpha \ln \left[ (1-t_1)(y_1 + \tau v_1) + \theta_2 t_2(y_2 + (1-\tau)v_2) \right] + \ln \left[ (1-t_2)(y_2 + (1-\tau)v_2) + \theta_1 t_1(y_1 + \tau v_1) \right]
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See paper for more details.
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Conclusions

- Relative taxability of groups matters.
- Greater fiscal capacity can make tariffs more or less likely depending on the sources of that increased fiscal capacity.
  - Greater ability to tax losers of free trade makes protectionism more likely.
  - Greater ability to tax winners of free trade makes free trade more likely.
Lots of dimensions on which you could have trade cleavages, which tend to vary depending on the particular trade policy being considered, the parties to that policy, and whether one is considering the short or long term.
**Implications**

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- Factor cleavages: which is more taxable, capital or labor?
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- **Firm cleavages?**
  - Freer trade, especially intraindustry trade, tends to lead to market consolidation around a smaller number of large firms.
  - If larger firms are more/less taxable (Hanlon, Mills, and Slemrod suggest less taxable, as they appear to engage in more avoidance) trade policy may be biased towards larger/smaller firms.
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The conditions under which government spending can be used to build broader coalitions in support of freer trade (see: embedded liberalism) are thus more tightly circumscribed.
Model Appendix

- $\tau \in \{0, 1\}$, $t_1, t_2 \in (0, 1)$, $\alpha \in (0, 1)$, $\theta_1, \theta_2 \in (0, 1)$, $y_1, y_2, v_1, v_2 \in \mathbb{R}^+$
- Specify gov’t objective function: $G(t_1, t_2, \tau) = \alpha \ln[(1 - t_1)(y_1 + \tau v_1) + \theta_2 t_2(y_2 + (1 - \tau)v_2)] + \ln[(1 - t_2)(y_2 + (1 - \tau)v_2) + \theta_1 t_1(y_1 + \tau v_1)]$
- Need to show that $\tau^*(\theta_1)$ is monotonically increasing.
- We want to compare cases where $\tau = 0$ and $\tau = 1$, so:

  $$G(t_1, t_2|\tau = 0) = \alpha \ln[(1-t_1)(y_1)+\theta_2 t_2(y_2+v_2)] + \ln[(1-t_2)(y_2+v_2)+\theta_1 t_1(y_1)]$$

  $$G(t_1, t_2|\tau = 1) = \alpha \ln[(1-t_1)(y_1+v_1)+\theta_2 t_2 y_2] + \ln[(1-t_2)(y_2)+\theta_1 t_1(y_1+v_1)]$$
Want to take derivatives to find a monotone comparative static, applying Milgrom and Shannon (1994). So get:

\[
\frac{\partial G(\tau = 0)}{\partial \theta_1} = \frac{t_1 y_1}{(1 - t_2)(y_2 + v_2) + \theta_1 t_1 y_1} \tag{1}
\]

\[
\frac{\partial G(\tau = 1)}{\partial \theta_1} = \frac{t_1 (y_1 + v_1)}{(1 - t_2)y_2 + \theta_1 t_1 (y_1 + v_1)} \tag{2}
\]

Note that either \( t_1 \) or \( t_2 \) will be at a corner solution in each case, given that taxation is costly (destroys value). If \( t_1 = 0 \) in both, these derivatives are equal: in fact, it makes sense that \( \theta_1 \) will have no effect on tariff policy if you won’t tax group 1 in any case. If \( t_1 = 0 \) only when \( \tau = 0 \), then clearly \( (2) > (1) \). If \( t_1 \neq 0 \) in either case, implying \( t_2 = 0 \) in both cases, then we can compare:

\[
(1) = \frac{t_1 y_1}{y_2 + \theta_1 t_1 y_1 + v_2}, \quad (2) = \frac{t_1 (y_1 + v_1)}{y_2 + \theta_1 t_1 y_1 + \theta_1 t_1 v_1}
\]

Where some algebra can demonstrate that \( (2) > (1) \).
Combining the results gives us $\frac{\partial G(\tau=0)}{\partial \theta_1} < \frac{\partial G(\tau=1)}{\partial \theta_1}$, which is a statement of increasing differences. Thus we have that $\tau^*(\theta_1)$ is monotonically nondecreasing.

Other results follow similarly.