

## JIE R&R of SOP\_Repeated

Notes from Joel's comments on model set-up

- Need to make period 0 much bigger: encompass everything executives do
  - Then repeated game is leg and lobby with lobby choosing  $e$ , leg choosing  $\tau$
  - If leg chooses  $\tau \leq \tau^a$ , repeat
  - Else go to a punishment period
- On page 28, I present as  $e_b = 0$ , no break;  $e_a$  and  $\tau = \tau^a$ . Need to integrate into one decision

Notes from phone call with Joel, 9/17

- Add to equilibrium selection argument that players condition only on tariff levels
  - Also T is policy variable, determined by WTO-like actor
  - PPE
  - tariff cap
  - etc.
- Within a period, players in same country take advantage of more information (leg knows what lobby did); players condition on what they know from that period and tariff level from past periods
  - $\Rightarrow$  PPE from period to period
- Change language throughout to make clear it's a subgame-perfect Nash-reversion within a period
- Be more careful about how foreign responds (already taken care of in repeated game support for main construction—done on 9/17)
- For main nash-reversion construction: by definition, continuation payoffs don't depend on what we do today
  - During punishment sequence, don't condition on what happens from period to period
- In asymmetric case, can I make punishments such that players don't condition on lobbying effort across periods? Would need to condition everything on leg's response (higher tariff than it's supposed to choose)

- Be clear that a period is one play of the stage game
  - Phase is one part of the stage game
- Set up with: I'm looking at repeated game. Here's information set up. Discount factor. ...

Intro re-write

- Now my short punishments don't rest on renegotiation
  - So now, for main analysis, must assume that we're constraining attention to a certain class of punishments: symmetric, and "Punish for  $T$  periods then go back to cooperation"
  - Can I show that mine are optimal in this class?
- New section on asymmetric punishments (addresses, in part, Giovanni's #7)
  - Constrain to  $T$ -period class, now asymmetric—punish deviator more
  - There is literature on this (see new-lit.tex)
    - \* Bown 2002/2004: I don't think there's any reason to constrain to reciprocal "legal" punishments
    - \* Martin and Vergote: timing. But I don't think their contemporaneous is realistic. They have the same welfare level in punishment, just redistributed across players
    - \* Hungerford 1991: one country retaliates for past defection (?)
    - \* Bagwell (2008): commensurate vs. disproportionate retaliation
      - disproportionate retaliation can compensate trading partner, who otherwise loses trade volume
      - here, degree of disproportion increases in size of original violation: has to compensate for larger trade volume loss (p.15 of pdf)
    - \* Cotter and Mitchell (1997): different punishments for each country
  - In this setting, you can achieve lower  $\tau^a$  with asymmetric
- Editor point 2: when determining  $\bar{e}$ , I need to take into account that  $\tau^b$  depends on  $\bar{e}$ 
  - It is true that the severity of the punishment for deviating does not depend on  $\tau^b$ , and that this means that  $\tau^b$  will maximize current payoff (actually, continuation value?). So clearly  $\tau^b$  is a function of  $e^b$
  - Need to explain mechanics of  $\bar{e}(\tau^B)$  relationship MUCH better
    - \* Make Corollary 1 into Lemma 1 just before Result 1; add new Lemma 2; old Lemmas 1 and 2 renumbered to 3 and 4
    - \* Improved discussion in sections 2-4
- Note on providing intuition for when trade agreements can be made (i.e. when an interior solution exists from section 4)

For letter

- thank him
- “I want to be very clear that I understand that my previous discussion did not make clear [sic]”

Smaller points

- Reviewer 1, #2 goes away with renegotiation
- Need thorough lit review of finite punishments
  - Green Porter in game theory
  - Is there anything in trade?
- fix discounting to  $\frac{1-\delta^T}{1-\delta}$  (period after punishment is discounted  $\delta^T$ ) and  $\frac{\delta-\delta^{T+1}}{1-\delta}$  (period after punishment is discounted  $\delta^{T+1}$ ) in draft
- Clarify assumption that legislature’s unilateral optimization problem has unique solution

Midwest, April 2015

- James Lake: what about collusion between the lobby and legislatures?
- Maurizio: “trade war” should be to MFN