

Literature on Asymmetric Punishments

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
 - Bown 2002/2004
 - * Shocks, no enforcement
 - * Distinction is between legal and illegal
 - Legal: TOT terms cancel, local effect only
 - Illegal: TOT effect + local effect
 - Beshkar 2010 EER (a)
 - * truthful revelation, no transfers, one shot
 - * asymmetry in size of punishment: compensation award through tariffs doesn't have to be as big as initial harm in order to induce truthful revelation
 - Beshkar 2010 JIE (b)
 - * GATT's instantaneous reciprocity rule (p. 39): immediate suspension of concessions under GATT escape clause
 - * 4 years with no retaliation under WTO Agreement on Safeguards
 - * No asymmetry as far as I can see on quick skim
 - Martin and Vergote
 - * Private info (random shock to import-competing sectors), no transfers, repeated game
 - * Retaliation is the cost for overstating one's own value of γ —it's what delivers incentive compatibility
 - * Distinction is between reciprocity and retaliation
 - Reciprocity: higher contemporary tariff (they have pre-play communication in a mechanism design framework)
 - Retaliation: higher tariffs in the future
 - * In contrast to Riezman 1991 (who has symmetric equilibria à la Green and Porter and then necessarily lower welfare), they have the same welfare level in punishment, just redistributed across players
 - My note: this has flavor of the two different types of renegotiation issues: move inside the frontier or along it

- * They have an optimal level of asymmetry
- * They show that asymmetry is necessary to deliver the efficient outcome (FLM Folk Theorem)
- Hungerford 1991
 - * Asymmetric shocks, TOT is signal, NTBs
 - * Retaliation by going to optimal tariff level
 - * Retaliatory period: one country retaliates for past defection, defecting country plays BR (defect before other country can react)
 - * GATT (p. 364)
 - Add cost of retaliation, but fast so retaliation starts in period $t + 1$ for trigger in period t
 - Investigation is domestic (hence cost), but must “detect” NTB in order to punish
 - Countries don’t spend enough on investigation to discourage NTBs entirely because they can’t always detect them
- Riezman 1991
 - * Symmetric punishments
- 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)
- Bagwell 2009: shocks are persistent
- Furusawa 1999: larger δ not always beneficial (fn 46, p. 42 of BBS lit review)
 - * Context: comparing the δ_i of two different countries, which one is in a stronger negotiating position
 - * Repeated game, first stage of Rubinstein bargaining, then repeated interaction to support agreed-upon tariffs
 - Rubinstein bargaining / asymmetric Nash bargaining that is its limit captures effect of difference in players’ patience levels on their bargaining power and therefore the bargaining outcome
 - “On one hand, patience pays in the negotiation phase since it enhances bargaining power. On the other hand, impatience pays in the implementation phase, since the resulting greater incentive to defect enables a government

to claim a larger share of the fruits of cooperation. We find that the former effect outweighs the latter if the time lag between a defection and punishment in the implementation phase is short, and vice versa.”

- “Kovenock and Thursby (1992) incorporate in their model that the GATT dispute settlement procedures may delay punishment. The US super 301, on the other hand, can be viewed as shortening the response lag”
- “We also show in Section 5 that the basic model can be applied to the case in which a deviation from cooperation is detected with uncertainty, by merely replacing the response lag in the implementation phase with the expected delay to a detection. We find that an improvement of monitoring technology enhances the relative bargaining position of the relatively more patient country.”

– Ludema 2001

- * I like the way he states the agreement / punishment path (p. 362)
- * Nash tariffs for punishment with DSP; autarky for no DSP, so not asymmetric

– Cotter and Mitchell 1997

- * Focuses on renegotiation-proofness
- * Countries initially negotiate a treaty that specifies particular agreement tariff levels and particular punishment tariff levels to be used if either country violates the agreement
- * The one-period Nash equilibrium will not support a renegotiation-proof tariff agreement. Although the simple punishment strategies used here are more general than those used in most earlier papers, they are still not completely general, since, for example, the duration and severity of the punishment do not vary with the seriousness of the violation.
- * We have been forced to simplify some of the institutional features of international trade agreements. First, we ignore lags in punishment. It is possible for countries to violate the trade agreement and avoid punishment within the WTO as long as they repent before the punishment begins (Mitchell, 1997). As a result, the modeling of punishments has been purposefully general enough to cover all types of punishment, including those not sanctioned by the WTO. We also simplify the dispute settlement procedures by specifying particular punishments for each country ahead of time, as part of a trade treaty.
- * We expect that punishments will not harm the punishing country, unless that is unavoidable, in which case they will be as short as possible
- * simple punishment strategy: three different tariff combinations are specified in advance: one to use during regular periods, one to use when punishing home, and

one to use when punishing foreign. Punishment phases last a fixed number of periods: T_h for Home, T_f for Foreign.

- They also have a nice description of the strategies on p. 353-354

- * There is a lot more here, but it's mixed up with renegotiation; big thing that I can see easily is that the punishments *can* be asymmetric in the tariff levels as well as the length