

Equilibrium Strategy Profiles (For JLEO Revision)

First, need to get timing clear for evolution of state variable. Take state variable to be q_{st} .

- q_{s1} : beginning of the world (or, $Q_{s0} - \mu = q_{s1}$)
- $Q_{s1} = q_{s1} + R_{p1} + R_{c1}$
- $q_{s2} = Q_{s1} - \mu$

Strategies

- For patron: function of q_{st}
- For c: function of $q_{st} + R_{pt}$
- For s: function of $Q_{st} = q_{st} + R_{pt} + R_{ct}$
- For g: not a function of q_{st} at all

For Markov-perfect equilibrium, strategy profile must be dependent on state variable, q_s only.

Note that patron will never invest to augment l_s or w_g . This leave four state variables in which the patron may invest: q_s , q_g , l_g and w_s .

- Also, Gov't / Secessionists: Choose unilateral, simultaneous best responses depending on magnitudes of Q_{i1} , L_{i1} and ω_{i1}
- Game only continues if (SQ,SQ) or (Cede, Cede) was played

Period 1

1. Patron: $R_{p1} = \frac{\beta}{1-\delta} - (q_{s1} - l_{s1})$ to augment q_{s1} if this is greater than 0. Else, $R_{p1} = 0$. Can write in max language.
 - International community:
 - (a) If $R_{p1} + q_{s1} - l_{s1} \geq \frac{\beta}{1-\delta}$, $R_{c1} = 0$
 - (b) Otherwise $R_{c1} = l_{s1} - (q_{s1} + R_{p1}) + \varepsilon$ to augment l_{s1}
 - (SQ,Cede) is played and game ends

2. Patron might also want to invest to encourage recognition. Most efficient way to do this is to augment L_{g1} (other options are to push either g or s to war, but probability of other outcome diminishes efficiency of investment, and assume payoff to war is lower to begin with).
3. Patron is willing to invest up to $\frac{\lambda p_{1s} - \alpha(1-p_{1s}) + \mu + \beta}{1-\delta}$ toward instigating fighting when this quantity is positive, and will not invest when the quantity is non-positive.
 - c will counter up to this amount (NEED TO CHECK THAT THESE CALCULATIONS ARE CORRECT GIVEN THAN INVESTMENT IN w_s will be weighted down)
4. Patron could also invest in g_q to counter something by c . But this would only been needed if c had incentive to invest in g playing Fight, and we've ruled that out