Political Economy - Political Agency

January 29, 2013

Political Agency

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    - Politicians actions may not be perfectly observable
    - Voters may not be able to perfectly deduce the actions that politicians took, but they can often observe something of the results

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  - Politicians type only observed by the incumbent politician $\Rightarrow$ **Adverse Selection**

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  - Congruent Politicians Payoffs
    - Share voters objectives - always choose $e_t = s_t$
    - So payoff is $E + \Delta$

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  - Let $e_t(s, i)$ with $s \in \{0, 1\}$ and $i \in \{c, d\}$ denote the politicians action in t

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    - To reelect the incumbent politician
    - Replace the incumbent with random draw from the pool

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  - All agents realize their payoffs

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  - All agents realize their payoffs
  - Game ends at the end of period 2

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    - All politicians behave optimally given the reelection rule of voters

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    - All politicians behave optimally given the reelection rule of voters
    - Voters use Bayes Rule to update their beliefs

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    - $p(a|c) = \frac{p(c|a)p(a)}{p(c|a)p(a)+p(c|b)p(b)}$

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  - Combining these facts gives Bayes Rule
    - $p(a|c) = \frac{p(c|a)p(a)}{p(c|a)p(a)+p(c|b)p(b)}$
  - Employing Bayes rule will allow the voters to make their best guess of a politicians type given their observations

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  - All agents in the model can work this out

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    - λ - probability dissonant politician does what voters want in period 1 - **Political Discipline**

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  - Applying Bayes Rule if Δ is observed gives

$$p(c|\Delta) = \frac{p(\Delta|c)p(c)}{p(\Delta|c)p(c) + p(\Delta|d)p(d)}$$
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$$E + r_1 \leq E + \beta(\mu + E)$$
$$\Longrightarrow \; r_1 \leq \beta(\mu + E)$$

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    - Will choose $e_1(s,d) = s_1$ if

$$E + r_1 \leq E + \beta(\mu + E)$$
$$\implies r_1 \leq \beta(\mu + E)$$

    - Probablity of which (**political discipline**) is

$$\lambda = G(\beta(\mu + E))$$

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  - In the Perfect Bayesian Equilibrium

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    - All politicians that choose $e_1 = s_1$ are reelected, those that do not are replaced

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  - Voters Expected Payoffs

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    - Period 1

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    - Period 2

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  - Voters Expected Payoffs
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$$V_1(\lambda) = [\pi + (1-\pi)\lambda]\Delta$$

    - Period 2

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    - Discounted Voter Welfare

$$\begin{aligned} W(\lambda) &= V_1(\lambda) + \beta V_2(\lambda) \\ &= [\pi + (1-\pi)\lambda]\Delta + \beta\pi[1 + (1-\pi)(1-\lambda)]\Delta \end{aligned}$$

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  - So by substitution

$$\begin{aligned} W(\pi, \mu, \beta, E) = &[\pi + (1-\pi)G(\beta(\mu + E))]\Delta \\ &+\beta\pi[1 + (1-\pi)(1 - G(\beta(\mu + E)))]\Delta \end{aligned}$$

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  - Change in the Discount Rate - β

$$W_\beta(\pi,\mu,\beta,E) = \{G'(.)(\mu+E)[1-\pi-\beta\pi] + [\pi + (1-\pi)G(\beta(\mu+E)]\}\Delta$$

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    - If π small - dissonant politicians are proportionately greater in number, therefore their good behavior is more valuable to voters
    - If π is small we are less likely to replace a dissonant with a congruent in the second period so we are less concerned with detecting them and voting them out of office in period 1

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    - More likely to get a congruent politician in period 1
    - More likely to get a congruent politician in period 2 to replace a dissonant politician that is not reelected

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  - Term Limits

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    - Suppose politicians are term limited to one period in office

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    - Reduces voter welfare