

# Evolution, Uncertainty, and the Asymptotic Efficiency of Policy

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# Two Conflicting Views of Politics

- Government failure theory:
- Political Coase theorem:

# Static Political "Coase" Theorem

- Suppose competing interest groups bargain over policy
  - Steel producers vs. steel consumers
- Steel producers wants to enact tariffs with benefit to them
- The consumers would incur a cost
- Without organization costs, new policy is enacted if

# Static Political "Coase" Theorem

- If  $Q > 0$ , as in standard model, policy is **inefficient**
- Consumers can organize into consumers and block
- Consumers can offer to pay producers an amount
- Without transaction costs, policy is efficient

# Adding Organizational Costs

- Cost of organizing Group
- Organize and enact policy if
- If , to prevent this policy, group 2 must form and pay a bribe:
- If , but , then rest will never materialize
- Rest of society is better off living with than working to prevent
- creates wedge preventing efficient policies
  - Olson (1965)

# Moving to Dynamics

- Previous examples can't speak to dynamic persistence
  - One time, eternal vote on policy
- flow benefit to producers                      present value
  - = real interest rate
- To overturn policy, consumers would have to enter the political market and pay the producers
- If steel productivity in foreign countries follows a random walk, then will follow a random walk
- Once                      , consumers will enter
- depends on                      and the time-series properties of

# Theoretical Results

- Proposition 1:
  - Policy inefficiencies are eliminated in the long run



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- **Proposition 2:**

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- **Proposition 2:**

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- **Proposition 3:**

- Static analysis finds too many inefficient politics

# Move to Evolutionary Perspective

- **Goal:** emphasize the dynamic, evolutionary attributes of politics
- Interest group formation as selection mechanism:
  - Interest groups pay cost to form,
  - Enter politics, and
  - Overturn policies
- Only take action if  $MB > MC$

# A Formal Model

- Standard real option model
- Time is continuous, lasts forever
- Currently policy:
  - Flow benefits to current interest group:
  - Flow cost to rest of society:
- Cost to organize an interest group:

- Alternatively,

- : net social cost of the current policy
- If , policy is **inefficient**

# Brownian Motion

- Suppose the net social cost of the policy varies randomly and exogenously
  - Outside control of any interest group
- Geometric Brownian motion

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- : expected rate of change in the net cost
- : conditional standard deviation
- : increment of a Wiener process
- \_\_\_\_\_, where is drawn from a standard normal distribution

# Real Option to Enter

- The interest group always has the option to enter the political market and end the costly policy
- Option to enter is like a financial option
- Can derive the value of this option as a function of the net cost of existing legislation
- Can determine the precise value for the net cost at which the prospective interest group will decide to enter the market

# Option Value

- Let  $V_t$  be the option value to enter the political market

- Recursive representation:

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- $\rho$  : rate of time preference
- $E_t$  : expectations operator
- $c_t$  : net cost of the policy after a time interval of length  $\Delta t$

- In continuous time,

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# Normative Implications

- In
- Normative claims must move to the institutional level and organizational costs
- The institutional level is strictly speaking, outside of the maximization calculus
- This is the Alchian move, away from firm decision making and to the institutional/market level

 Paper: <http://bit.ly/bca-evolution-paper>

 : [bit.ly/bca-clemson2019](http://bit.ly/bca-clemson2019)

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# Derivation

name: derivation

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