Political Selection and Persistence of Bad Governments

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James Madison in Federalist papers:

“The aim of every political Constitution, is or ought to be, first to obtain for rulers men who possess most wisdom to discern, and most virtue to pursue, the common good of society; and in the next place, to take the most effectual precautions for keeping them virtuous...”

Both moral hazard and selection.
Most of political economy studies moral hazard and corruption.
A smaller literature on the selection of politicians, with the focus on “asymmetric information”
But selection of politicians in dynamic economies is subject to rich interactions even without asymmetric information and crucially depends on the underlying political regime.
This Paper

- A systematic study of dynamic political selection without asymmetric information

- Key questions:
  - When can bad governments persist?
  - What is the effect of political regime on the emergence of good governments?
  - Which types of regimes are more flexible?

- The last question particularly important since “flexibility” of a regime (how it adapts to changes in the environment), potentially more important than how it performs in a given stationary environment

- “Political regime”: modeled here as different degrees of incumbency advantage
  - perfect democracy vs. perfect dictatorship.
Surprisingly, countries classified as “democracies” do not perform better economically than “dictatorships” (e.g., Barro, 2000, Limongi and Przeworski, 1997).

- e.g., fast-growing autocracies in Asia.

A puzzle, particularly given the numerous autocratic “basket cases”.

But historical evidence suggests that “oligarchic regimes” often run out of steam and do not perform as well as the long run → less flexibility.

Also, significantly higher volatility of growth in dictatorships (e.g., Besley and Kudamatsu, 2007) and democracies seem to avoid the worst outcomes (e.g., no famines in democracies, Sen, 1981).
Results

- A general framework for analysis of dynamic political selection.
- Anticipation of future changes in the composition of government acts is a force keeping inefficient government in place.
- Perfect democracy (where incumbents have no special powers) ensures the emergence of the best government.
- Under any other regime, even the worst government can emerge as an equilibrium and persist forever.
- No guarantee that regimes with higher “degree of democracy” will perform better in nonstochastic environment.
- However, in stochastic environments, greater degree of democracy translates into greater *flexibility*—i.e., long-run performance is better for more democratic regimes.
Related Literature

- **Bad politicians / bad governments**

- **Inefficient institutions**

- **Citizen candidates**

- **Dynamic political equilibria**

- **Oligarchy vs. democracy**
  - Olson (1982), Acemoglu (2009)
Roadmap

- Introduction
- Outline of theory
- Description of environment
- Heuristic equilibrium analysis
- Conclusion
Basics

- Governments are subsets of citizens
- Each government is characterized by its competence
  - e.g., amount of public good provided
- Each citizen draws utility from
  - competence of the government
  - rents / salary / perks if she is in the government
- A political regime characterize by
  - the number of “citizens” necessary to change governments
  - number of insiders who need to consent to such a change
    (degree of democracy/incumbency advantage)
- In perfect democracy, no incumbency advantage.
Example

- Suppose citizens are enumerated according to their “competence”
  - 1 is the most competent, then 2, 3, 4, 5, 6, etc.
- Feasible governments consist of three players
- Government’s competence is monotonic w.r.t. that of players (e.g., sum of competences)
  - e.g., \{1, 3, 5\} is more competent than \{2, 3, 6\}
- Citizens value being part of the government higher than competence
- For a political transition from government \(G\) to an alternative \(G'\), we need
  - \(G'\) to gain the support of the majority of population
  - to get consent of one member of \(G\) (minimal degree of incumbency advantage)
Example: Solution

- \{1, 2, 3\} is stable (more formally “MPE involves this government persisting”)
  - highest competence: no incumbent is better off under any alternative
- \{1, 4, 5\} is not stable
  - players 1, 2, 3, 6 prefer \{1, 2, 3\}, and 1 is an incumbent
- \{4, 5, 6\} is stable
  - a less competent government will not be favored by a majority
  - a more competent government will include 1, 2, or 3.
  - but any such government will lead to \{1, 2, 3\}
  - \{1, 2, 3\} is worse than \{4, 5, 6\} for 4, 5, and 6, so any competence-increasing change will be blocked by the three incumbents
- But note if \(n = 6\), \{4, 5, 6\} is the least competent government.
Example: Other Regimes

- Suppose again that $n = 6$, but now the society is less democratic: consent from two current government members necessary for a transition.
- Now $\{4, 5, 6\}$ is no longer stable.
  - Under this political regime, $\{1, 4, 5\}$ is stable, so $\{4, 5, 6\}$ will transition to $\{1, 4, 5\}$
Example: Shocks

- Now imagine that the environment may change, in which case the competences of individuals 3 and 5 will be swapped
  - changes in abilities or changes in the needs of the society.

- Suppose that shocks are sufficiently infrequent.

- Suppose we need the consent of one current government member and we start with \{4, 5, 6\}.
  - This will persist until there is a shock.
  - As soon as there is a shock, individual 3 (former 5) will consent to a change to \{1, 2, 5\}, which is the most competent government.
  - Thus, eventually, the most competent government emerges.

- The value of *flexibility*.
  - The same would not happen if the consent of all three members were necessary.
## Example: Lessons

- **Good news:** best government is stable
- **Bad news:** worst government may also be stable.
- **When a player is farsighted,** she anticipates that:
  - a change of the government may provoke further changes that she cannot block
  - these further changes may lead to a worse outcome for her even though the initial change may be beneficial

- **Bad governments are stable due to**
  - incumbency advantage
  - commitment problems and farsighted strategic behavior
Overview of Results

- General characterization.
- Incompetent governments (even the worst government) may persist even in the absence of information asymmetries.
- Perfect democracies are safe from this effect because of the lack of incumbency advantage.
- In stationary/nonstochastic environments, no clear relationship between quality of government and degree of democracy.
- In stochastic environments, regimes with greater degree of democracy show greater flexibility and adaptability, and have better long-run performance (according to some measures).
Basics

- Society $\mathcal{I}$ consists of $n$ individuals
- Subsets of the society are **coalitions** ($\mathcal{C}$)
- Some coalitions are **feasible governments** (set $\mathcal{G} \subset \mathcal{P}(\mathcal{C})$)
- Governments have bounded size: $|G| \leq \bar{k}$ for all $G \in \mathcal{G}$
- In period $t \geq 0$, government $G^t$ is in power
- Government $G^t$ plays three related roles:
  - It determines collective utilities (provides public goods or government services)
  - It determines individual utilities (members of government receive additional utility)
  - It indirectly influences the evolution of governments by shaping the distribution of political power
Competence

- Competence of government $G$ is $\Gamma^t_G \in \mathbb{R}$ (at time $t$).
- More formally:
  $$\Gamma^t : \mathcal{G} \to \mathbb{R}$$
- For now suppose that this mapping is the same for all $t$ (later introduce stochasticity by allowing it to depend on $t$)
- $\Gamma_G > \Gamma_H$ means that $G$ is more competent, or better, than $H$.

Assumption

*(Genericity) $G \neq H$ implies $\Gamma_G \neq \Gamma_H$*

- This assumption holds *generically*, i.e., for almost all $\{\Gamma_G\}_{G \in \mathcal{G}}$ and simplifies the discussion.
Example

- Suppose \( \mathcal{G} = \{ G \in \mathcal{C} : |G| = k \} \)
- Each individual \( i \in \mathcal{I} \) is endowed with ability \( \gamma_i \)
- \( \Gamma_G = \sum_{i \in G} \gamma_i \) for any \( G \in \mathcal{G} \)
- Suppose \( \mathcal{I} = \{1, 2, \ldots, n\} \) and \( \gamma_i \) is decreasing in \( i \)
- Then \( \{1, 2, \ldots, k\} \in \mathcal{G} \) is the most competent government
Discounted Utilities

- Each individual maximizes expected discounted utility

\[ U^\tau_i = \mathbb{E} \sum_{t=\tau}^{\infty} \beta^{(t-\tau)} u^t_i, \]

where \( \beta \in (0, 1) \) and \( u^t_i \) is instantaneous (stage) payoff:

\[ u^t_i = w_i \left( G^t, \Gamma^t_{G^t} \right) = w_i \left( G^t \right). \]
**Assumption**

*(Payoffs)* The function $w_i$ satisfies the following properties:

1. For each $i \in I$ and any $G, H \in \mathcal{G}$ such that $\Gamma_G^t > \Gamma_H^t$: if $i \in G$ or $i \notin H$, then $w_i(G) > w_i(H)$.

2. For any $G, H \in \mathcal{G}$ and any $i \in G \setminus H$, $w_i(G) > w_i(H)$.

- Part 1 implies that $i$ prefers the more competent of two governments she *is* a member of, and also prefers the more competent of two governments she *is not* a member of. Finally, she prefers to be a member of the more competent government than not be a member of a less competent one.

- Part 2 implies a stronger conflict of interest—$i$ prefers any government of which she is a member to any of which she is not.
Political Power and Winning Coalitions

- How many citizens (and incumbents) does it take to change government $G$?
- For any $G \in \mathcal{G}$, define the set of winning coalitions, that is, subset of agents (citizens and members of governments) sufficient to enact a transition.
- Clearly, winning coalition $\mathcal{W}_G \in \mathcal{C}$.
(Winning Coalitions) For any feasible government $G \in \mathcal{G}$, $\mathcal{W}_G$ is given by

$$\mathcal{W}_G = \{X \in \mathcal{C} : |X| \geq m_G \text{ and } |X \cap G| \geq l_G\},$$

where $l_G$ and $m_G$ are integers satisfying $0 \leq l_G \leq |G| \leq \bar{k} < m_G \leq n - \bar{k}$ (where recall that $\bar{k}$ is the maximal size of the government and $n$ is the size of the society).

- $m_G$ is the total number of citizens needed ($\bar{k} < m_G \leq n - \bar{k}$)
- $l_G$ is the number of number of members of $G$ needed ($0 \leq l_G \leq |G|$)
- $l = 0$: perfect democracy
- $0 < l < k$: imperfect democracy
Transition Rule and Recursive Utility

- Define the mapping $\phi : \mathcal{G} \rightarrow \mathcal{G}$ as a **transition rule**; it maps each feasible government $G$ to the government that would emerge in period $t + 1$.

- Given $\phi$, we can write the discounted utility for each individual $i \in \mathcal{I}$ starting from current government $G \in \mathcal{G}$ recursively as $V_i (G | \phi)$ as

  $$V_i (G | \phi) = w_i (G) + \beta V_i (\phi (G) | \phi) \text{ for all } G \in \mathcal{G}. \quad (1)$$

- Intuitively, starting from $G \in \mathcal{G}$, individual $i \in \mathcal{I}$ receives a current payoff of $w_i (G)$.

- Then $\phi$ (uniquely) determines next period’s government $\phi (G)$, and thus the continuation value of this individual, discounted to the current period, is $\beta V_i (\phi (G) | \phi)$.
Stable Governments and Acyclic Transitions

- A government $G$ is *stable* given mapping $\phi$ if $\phi (G) = G$.
- A transition rule $\phi$ *acyclic* if for any (possibly infinite) chain $H_0, H_1, \ldots \subseteq G$ such that $H_{k+1} \in \phi (H_k)$, and any $a < b < c$, if $H_a = H_c$ then $H_a = H_b = H_c$.
- Cyclic equilibria (transition rules) possible, but “non-robust”. They can be ruled out by a variety of assumptions (see below).
(Markov) Political Equilibrium

**Definition**

A mapping $\phi : \mathcal{G} \rightarrow \mathcal{G}$ constitutes a (Markov) political equilibrium if for any $G \in \mathcal{G}$, the following two conditions are satisfied:

(i) either the set of players who prefer $\phi (G)$ to $G$ (in terms of discounted utility) forms a winning coalition, i.e.,

$$S = \{ i \in I : V_i (\phi (G) \mid \phi) > V_i (G \mid \phi) \} \in \mathcal{W}_G,$$

(or equivalently $|S| \geq m_G$ and $|S \cap G| \geq l_G$); or else, $\phi (G) = G$;

(ii) there is no alternative government $H \in \mathcal{G}$ that is preferred both to a transition to $\phi (G)$ and to staying in $G$ permanently, i.e., there is no $H$ such that

$$S' = \{ i \in I : V_i (H \mid \phi) > V_i (\phi (G) \mid \phi) \} \in \mathcal{W}_G \quad \text{and} \quad S'' = \{ i \in I : V_i (H \mid \phi) > w_i (G) / (1 - \beta) \} \in \mathcal{W}_G$$

(alternatively, $|S'| < m_G$, or $|S' \cap G| < l_G$, or $|S''| < m_G$, or $|S'' \cap G| < l_G$).
Political Equilibrium: Discussion

A mapping $\phi$ constitutes a political equilibrium if it maps the current government $G$ to alternative $\phi(G)$ that (unless it coincides with $G$) must be preferred to $G$ by a sufficient majority of the population and a sufficient number of current government members (so as not to be blocked).

Part (ii) requires that there does not exist another alternative $H$ that would have been a “more preferable” transition; that is, there should be no $H$ that is preferred both to a transition to $\phi(G)$ and to staying in $G$ forever by a winning coalition.

The latter condition is imposed, since if there exists a subset $H$ that is preferred to a transition to $\phi(G)$ but not to staying in $G$ forever, then at each stage a move to $H$ can be blocked.
Heuristic equilibrium analysis

- Enumerate the set of feasible governments $\mathcal{G}$ so that
  $$\left\{ \Gamma_{G_q} \right\}_{q=1}^{\left| \mathcal{G} \right|} \text{ is decreasing.}$$
  - $G_1$ is the most competent government and must be stable
  - $G_1$ must be stable
    - for any $G \neq G_1$, only players from $G \setminus G_1$ may prefer $G$ to $G_1$
    - but there are too few of them
  - $G_2$ may be stable or unstable
    - any change leading to $G_3, G_4, \ldots$ will not be supported (because of high discount factor, citizens only care about the ultimate government, not transitional governments)
    - only $G_1$ may defeat $G_2$
    - this will happen iff
      $$\{i \in \mathcal{I} : w_i(G_1) > w_i(G_2)\} \in \mathcal{W}_{G_2}$$
Heuristic Analysis (continued)

- If $G_3$ is at power, the only real challengers are $G_1$ and $G_2$
  - does some winning coalition prefers $G_1$ or $G_2$ to $G_3$?
  - but perhaps $G_2$ is known to lead to $G_1$: then $G_2$ is irrelevant, as it cannot be the end of the transitions

- More generally...
  - let $\phi(G_1) = G_1$
  - for $q > 1$, let
    \[
    M_q = \left\{ j < q, \left\{ i \in I : w_i(G_j) > w_i(G_q) \right\} \in \mathcal{W}_{G_q} \text{ and } \phi(G_j) = G_j \right\}
    \]
    \[
    \phi(G_q) = \begin{cases} 
    G_q & \text{if } M_q = \emptyset; \\
    G_{\min\{j \in M_q\}} & \text{if } M_q \neq \emptyset.
    \end{cases}
    \]
  - we get a unique and well-defined $\phi : \mathcal{G} \rightarrow \mathcal{G}$.

- Two main ideas:
  - Only competence-improving changes may be approved
  - It is impossible to fire more than $l_G$ government members
Example

- \( n \) is large, \( k = 3, l = 2 \)
- \( \mathcal{I} = \{1, 2, \ldots, n\} \) and \( \gamma_i \) is decreasing in \( i \)
- \( \{1, 2, 3\} \) is stable
- \( \{1, 2, *\} , \{1, *, 3\} , \{*, 2, 3\} \) are unstable: immediately lead to \( \{1, 2, 3\} \)
- \( \{1, 4, 5\} \) is stable: any better government includes two players from \( \{1, 2, 3\} \) and ultimately leads to \( \{1, 2, 3\} \)
  - transition to \( \{1, 2, 4\} \) will be blocked by both 4 and 5
- Similarly, \( \{1, 6, 7\} , \{1, 8, 9\} , \ldots \) are stable
- Can there be a stable government without 1?
  - \( \{2, 4, 6\} \)
# Roadmap

- Introduction
- Outline of theory
- Formal description of environment
- Heuristic equilibrium analysis

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Summary of the stochastic model results

- More democratic regimes are more robust against shocks and changes in the environment
  - because they are more flexible
- More democratic regimes can absorb larger shocks
  - an ideal democracy will fully adjust to any shock
- Long-run success related to degree of democracy in stochastic environments.
James Madison in Federalist papers:

“The aim of every political Constitution, is or ought to be, first to obtain for rulers men who possess most wisdom to discern, and most virtue to pursue, the common good of society; and in the next place, to take the most effectual precautions for keeping them virtuous...”

This paper about dynamic selection of politicians.

Even without asymmetric information, bad governments can persist because farsighted individuals anticipate changes in governments in the future unleashed by current reforms.

Quality of governments depends on political regime.

The effects of political regime depend on whether we are in a stationary/nonstochastic environment or whether
Future Work

- More general analysis of stochastic environments (difficult)
- Incorporate elements of asymmetric information selection into the model of dynamic strategic selection (generally straightforward)
- “Mechanism design” for government selection.
- Other dimensions of institutional flexibility.