# FEDERALISM AND INCENTIVES FOR SUCCESS OF DEMOCRACY
by Roger B. Myerson, <u>Quarterly Journal of Political Science</u>, 1:3-23 (2006).

*"Countries in transition that have aimed for national elections as a first step (Bosnia for example) have bogged down and generally handed power over to avatars of the old regime. By contrast, Kosovo and East Timor began with local elections, with a far better result of bringing forward new talents and capabilities, and giving people a sense of empowerment."*
                         Final Report on the Transition to Democracy in Iraq (Nov 2002).

## 1.1 How do chances of democracy's success depend on constitutional structures?

Constitutions are the rules of the political game, affecting equilibrium behavior.
But new democracies cannot guarantee success simply by copying the successful constitution of another nation.  With multiple equilibria, culture matters.
What could make a nation culturally unready for democracy?
New and established democracies differ in the reputations of their political leaders.
Any institution is sustained by individuals (officials) who expect to enjoy privileged status as long as they act according to the institution's rules.
That is, institutions are sustained by reputational equilibria.
When democracy is new in a nation, no politician has an established reputation for responsibly using political power to serve the general population.
Reputational incentives in old regime: to serve superiors and reward supporters.
Voters may expect the first leader to suppress opposition, abuse power to benefit himself and his supporters; and any replacement may be expected to do same.

**1.2  Some structures seem empirically to reduce chances of democracy failure: PR parliamentarism, and federalism.**  (Boix, *Democracy & Redistribution*, 2003) Both increase opportunities for independent leaders to cultivate reputations for responsible use of power.  This will be the central logic of our results here.

In a dynamic political game, we find multiple equilibria for unitary democracies: equilibria where democracy succeeds, other equilibria where democracy is frustrated. But democracy cannot be consistently frustrated at both levels in a federal system, nor in a transition process where local democracy precedes national elections.

Our analysis can be understood with parallels to oligopoly theory, where profit-taking is reduced by higher elasticity of demand and lower barriers to entry. Political corruption may be seen as an analogue of oligopolistic profit. In our argument, federalism lowers entry-barriers into national politics when it gives local leaders opportunities to prove qualifications for national leadership. The possibility of advancement to greater national office gives local leaders higher elasticity of demand for leadership with respect their corruption-price.

Market reforms that increase competition are likely to be opposed by oligopolists. Similarly, constitutional reforms that increase political competition may be good for voters but bad for politicians, who generally write the constitutions. Economists may be needed to identify the interests of consumers and voters.

## 2.1  Basic model of unitary democracy

In each period, there is an election, then leader serves responsibly or corruptly:

$b$ = the leader's benefit (each period) when he serves responsibly,

$b+c$ = leader's benefit from serving corruptly,   $0$ = politician's payoff out of office,

$w$ = expected welfare for voters when leader serves responsibly,

$0$ = expected welfare for voters when leader serves corruptly,

$x$ = expected transition cost for voters when changing to a new leader,

$\rho$ = discount factor per period.  All actions observable.

$\varepsilon$ = probability that any new politician is always-responsible <u>virtuous</u> type.

(Else <u>normal</u> payoff maximizer.)

Voters agree, so assume election determined by any representative voter.

Transition cost $x$ may be due to new leader learning on job,

or to thefts by outgoing leader,

or to active voters' costs of opposing an incumbent.

("Politicians" here may be interpreted as individuals, or as parties, or as factions.)

## 2.2  Equilibria in unitary democracy

At any point in any equilibrium of this game, we may say that democracy
<u>succeeds</u> if the leader is expected to serve responsibly always (with prob'y 1);
is <u>frustrated</u> if the leader would be reelected always even after acting corruptly.
(Success is optimal for voters.  Frustration is optimal for the incumbent leader.)
In eqm, frustration implies only a virtuous leader would serve responsibly (failure).

Voters' <u>expected benefit from democracy</u> is their expected value of payoffs in eqm
*minus* their expected value if their current leader were guaranteed power forever:
$E[\text{NPV of voters' payoffs in eqm}] - P(\text{leader is virtuous}) * w/(1-\rho)$.

<u>Theorem 1.</u>  Suppose  $\varepsilon < x(1-\rho)/w < 1$  and  $b+c < b/(1-\rho)$.
Then unitary democracy has a good eqm where democracy succeeds
and voters' expected benefit from democracy is strictly positive,
but it also has a bad eqm where democracy is frustrated
and voters' expected benefit from democracy is 0.

First condition:  $\varepsilon w/(1-\rho) < x < w/(1-\rho)$,  so voters would replace a corrupt leader
if replacements always serve responsibly, but not if only virtuous do so.
Here $x(1-\rho)/w$  is the lowest probability of new leader serving responsibly such that
voters would replace a corrupt leader.
Second condition: politicians prefer serving responsibly forever over corruptly once.

## 2.3 Two variations on the basic model

*Variation A:*   Suppose prob'y $\delta$ of an incompetent type who'd generate costs $-x/\delta$.
Voters get an expected cost $-x$ of trying new leadership.
Taking $\delta{\to}0$ yields the basic model.
(But in federal extension, implies no cost of promoting a governor who has proven
that he is not incompetent, making our positive results easier to prove.)

*Variation B:*   Each period's transition cost x is set by the incumbent from the
previous period, subject to a constraint $0 \le x \le X$,
where X is some given maximal oppression level.
We may suppose that a virtuous leader would always choose $x = 0$.
Then in the conditions of Thm 1, we replace x by its upper bound X.
With  $\varepsilon w/(1-\rho) < x \le X < w/(1-\rho)$,  voters would resist corrupt oppression if they
expect challengers to serve responsibly, but not if they expect normal challengers to
become corrupt.  Either can happen in equilibrium.

## 2.4 A third variation on the basic model

*Variation C:* Voters do not observe leader's action, but observe their welfare which is a uniform random variable in $[0-\Delta, 0+\Delta]$ or $[w-\Delta, w+\Delta]$, depending on whether the leader serves corruptly or responsibly. (Banks-Sundaram 1993)
For interest, suppose $0+\Delta > w-\Delta$.
To have an equilibrium where democracy succeeds, "$b+c < b/(1-\rho)$" in Thm 1
must be changed to $(b+c)/(1-\rho(1-0.5w/\Delta)) < b/(1-\rho)$.
Then success can be supported by voters re-electing a leader iff
he always generated welfare above the cutoff $w-\Delta$.
But higher standards may be incompatible with success of democracy in eqm.
Example: $w=\Delta=1$, $b=1$, $c=4$, $\rho=0.9$.
With cutoff $w-\Delta = 0$: $(1+4)/(1-0.9\times0.5) = 9.091 < 10 = 1/(1-0.9\times1)$.

Higher re-election cutoff $0+\Delta = 1$: $(1+4)/(1-0.9\times0) = 5 > 1.818 = 1/(1-0.9\times0.5)$.
Lower re-election cutoff $0-\Delta = -1$: $(1+4)/(1-0.9) = 50 > 10 = 1/(1-0.9)$.

## 3.1 Federal democracy.

$N$ = number of provinces.

In each period, elect national president, then elect governor in each province, each serves corruptly or responsibly.

$b_1$ = president's benefit (each period) when he serves responsibly,

$b_1+c_1$ = president's benefit from serving corruptly,

$b_0$ = governor's benefit when he serves responsibly,

$b_0+c_0$ = governor's benefit from serving corruptly,

$w_1$ = welfare for national voters with president serving responsibly,

$x_1$ = expected transition cost for voters when changing to a new president,

$w_0$ = welfare for provincial voters with governor serving responsibly,

$x_0$ = expected transition cost for voters when changing to a new governor,

$0$ = any politician's payoff out of office.

$0$ = welfare for voters at either level with a leader serving corruptly.

$\rho$ = discount factor per period.

$\varepsilon$ = probability that any new politician is always-responsible <u>virtuous</u> type.

Elections at each level are determined by voters' expected payoffs from this level of government, ignoring any effects from the other level of government.

(National elections are not influenced by local effects in one province of its governor becoming president; provincial elections are not influenced by national benefits of searching for better presidential candidates. No provincial cost to supply president.)

## 3.2  Equilibria of federal democracy

Basic assumptions:  $\varepsilon < x_0(1-\rho)/w_0 < 1$,  $b_0+c_0 < b_0/(1-\rho)$,

$\varepsilon < x_1(1-\rho)/w_1 < 1$,  $b_1+c_1 < b_1/(1-\rho)$,  $b_1 > b_0 + c_0$.

So multiple equilibria would exist at each level if it existed alone,
and governors want promotion to president.

With N large,  P(no province has a virtuous governor) $= (1-\varepsilon)^N \le e^{-\varepsilon N}$  is small,
so there are likely to be some provinces where politicians have good reputations
(assuming candidates are recruited independently from pop'n in each province).

At either level (national or provincial), we may say that democracy:
succeeds if voters expect leader to serve responsibly always with prob'y 1;
is frustrated if the leader would always get re-elected even after acting corruptly.

Voters' expected benefit from democracy at either level is their expected value of
payoffs at this level in given eqm *minus* what their expected value at this level would
be if their current leader were guaranteed his office forever.

National frustration implies that a normal president will act corruptly (failure).

## 3.3 Main result on federal democracy

∃ eqm where provincial democracy is frustrated but national democracy succeeds
(a rare governor who serves responsibly can be identified as virtuous,
but his provincial voters still get no expected benefit from democracy, and
his virtue doesn't make him more attractive to national voters than good presidents)

∃ eqm where provincial democracy succeeds but national democracy is frustrated
(corrupt governors would not be re-elected, so all governors act responsibly;
national voters understand that any governor would become corrupt with prob'y $1-\varepsilon$
after election to the presidency, so corrupt presidents are re-elected).

But such mixed equilibria require voters to have inconsistent expectations about
democracy at different levels, and so seem less likely to be focal.
∃ eqm where provincial and national democracy both succeed (presidents and
governors always act responsibly, else they would not be re-elected).

<u>Theorem 2.</u> In any sequential equilibrium of the federal game,
as long as some province has a governor who has not yet acted corruptly,
democracy cannot be frustrated both at the national level and at all provincial levels.
When national democracy is frustrated, in any province where voters have (re)elected
a governor with no record of past corruption, the voters' expected benefit from
democracy must be strictly positive.

## 3.4 Proof of main federal theorem.

<u>Proof of Thm 2.</u>  Suppose democracy is frustrated at the national level.

The current president can get his optimal outcome by always serving corruptly, given that the frustrated voters will never replace him.

So if president acts corruptly this period, then he is normal and should be expected to always act corruptly thereafter.

For any elected governor who has no record of past corruption, let

$\pi = P(\text{he is virtuous}) \geq \varepsilon,$

$Q = P(\text{he acts responsibly this period}) \geq \pi$

(each prob'y is given the history).

Frustration of national democracy implies governors have no hope of promotion to president.  If provincial democracy were frustrated then a normal governor would have no incentive to serve responsibly, and so Q would equal $\pi$.

But  $\pi/Q = P(\text{he is virtuous}|\text{responsible this period}) \leq x_1(1-\rho)/w_1 < 1,$

because otherwise national voters would use him to replace a corrupt president.

In his province,  $E(\text{benefits from democracy}) \geq (Q-\pi)w_0 > 0.$

Frustration of national democracy would increase incentives for governors to make provincial democracy succeed.

So a federal system can offer an insurance policy against total frustration of democracy: voters will see benefits of democracy at some level of government.

## 3.5 Stationarity in federalism

When national democracy is frustrated, governors see no chance of being elected president and anticipate careers entirely contained within their current province. With such isolation of provincial politics, it may be reasonable for provincial voters to satisfy the property of <u>stationary reactions to corruption</u>:
that there is a constant probability of provincial voters rejecting a governor in the next election after any period in which he has acted corruptly.

<u>Theorem 3.</u>  In any federal equilibrium, if national democracy is frustrated and provincial voters have stationary reactions to corruption then each province will (with pr=1) eventually get a governor who always serves responsibly.

<u>Proof of Thm 3.</u>  With frustration of national democracy, Thm 2 tells us that provincial democracy is not frustrated after any new governor is elected;
so the stationary probability of a corrupt governor being rejected cannot be zero.
If Thm 3 were false then, in some positive-probability event, there would be an infinite number of periods when a governor serves corruptly.
After each such period there would be a constant positive probability of electing a new governor who has a positive $\varepsilon$ probability of being virtuous.
So the probability of eventually getting a virtuous always-responsible governor would be 1.

## 4.1  Provisional decentralization in a process of transition to unitary democracy.

Consider a process of transition to democracy:  in an initial phase of T periods there will be only local democracy in the N provinces in confederation, but then a unitary national democracy will be established in period T+1. Each politician initially has a small prob'y $\varepsilon$ of being the virtuous type. All parameters $(N, b_0, c_0, x_0, w_0, b_1, c_1, x_1, w_1, \rho, \varepsilon)$ have the same interpretations as above, except that provincial parameters (0-subscripts) apply in first T periods, national parameters (1-subscripts) apply after period T.

<u>Theorem 4.</u> Suppose  $\rho^T(b_0+c_0) > (1-\rho^T)c_0$,  $b_1+c_1 \geq N(b_0+c_0)$,  and  $w_0 > x_0$. In any equilibrium where national democracy will be frustrated after period T, decentralized democracy succeeds until period T, and any corrupt governor would be replaced by provincial voters.  So there cannot be consistent frustration of democracy in any equilibrium of this transitional process. But there is an eqm in which democracy consistently succeeds at all periods.

The first inequality holds if  $\rho^T \geq 0.5$,  so T$\leq$13 with $\rho$=0.95, as for America's Articles of Confederation. The second inequality says that the unitary national leader gets all power held initially by N provincial leaders.

What if America had let local governments in occupied Iraq be elected (and funded)?

**4.2  Proof of Thm 4.**  Assuming normal presidents will be corrupt after T, national voters at T+1 will elect a president with highest prob'y of virtue, given his record. (Corrupt governor's prob'y of virtue = $0 < \varepsilon$ = any layman's prob'y of virtue.) If some governors had any positive prob'y of acting corruptly, then by acting responsibly they could make voters believe that their probability of being virtuous was more than $\varepsilon$, and so one of them would be elected president. There can be at most N such governors alive with good reputations at T+1, and so some of them must expect prob'y at least $1/N$ of being elected president. A governor's cost of serving responsibly for T periods is  $c_0(1 + \rho + \ldots + \rho^{T-1}) = c_0(1-\rho^T)/(1-\rho)$, but his expected gain from being a candidate for president after T periods is at least  $\rho^T(1/N)(b_1+c_1)/(1-\rho)$.  The inequalities in the theorem imply that this gain is strictly greater than the cost, and so no governor would choose to behave corruptly in the first T periods.  A governor with a corrupt record would have no incentive to be responsible at T, so (with $w_0 > x_0$) provincial voters would replace him at T.  Similarly, by induction, a corrupt governor would be replaced earlier.

Eqm where democracy consistently succeeds: voters at any period reject an incumbent who has acted corruptly, national voters at period T+1 will select a president at random among the governors who have served responsibly up to T. Governors are responsible at any period $t \le T$ because the basic assumptions and inequalities in thm imply  $b_0(1-\rho^{T+1-t})/(1-\rho) + (1/N)\rho^{T+1-t}b_1/(1-\rho) \ge b_0+c_0$.

## 5.1 Discussion

Under federalism, an anticipated frustration of democracy at the national level would increase incentives for local politicians to make democracy succeed. So a federal system can offer an insurance policy against total frustration of democracy: voters should see benefits of democracy at some level of government.

*In our argument, federalism lowers entry-barriers into national politics when it gives local leaders opportunities to prove qualifications for national leadership.* Multiparty parliamentary democracy also offers more opportunities for cultivating independent political reputations, when small parties get ministries in a coalition. (Freedom of speech is also about lowering barriers to entry in politics.)

*The possibility of advancement to greater national office gives local leaders higher elasticity of demand for leadership with respect their corruption-price.* Such political elasticity can also be created in a federal system by Tiebout effects: with national mobility of resources, local corruption erodes its own tax base.

For more competitive democracy, constitutional reforms should create more opportunities for politicians to establish independent reputations for good leadership, and should increase voters' ability to reward such reputations.

## 5.2  Limitations on our argument

Because successful local leaders can become potential rivals for national power, national leaders have a strong incentive to control local leadership.
If the national leader can influence selection of governors, he'd prefer governors who have been corrupt, so they cannot use the office to cultivate a virtuous reputation.
National subsidies to provincial governments could be used to reward provinces whose governors have no independent reputation for responsible government.
For national leaders, the best way to deter local corruption is by national criminal prosecution, so that local leaders are controlled without exercise of democracy.

Strong regional identities could undermine our argument:  if the most likely behavioral-type were not generally virtuous but only locally chauvinistic, then responsible local service may not be effective for appealing to national voters.
The appeal of secession for governors (especially when corrupt) is increased when local rivals' national ambitions make local politics more competitive.

We didn't predict local government would be more or less corrupt than national.
If long-run survival of democracy depends on its success at the national level, then survival selection may generate a population of democracies where more corruption is found (at local levels) in federal than in unitary democracies (Treisman).
But if local democratic success can teach voters to expect national democratic success, then federalism should yield statistically higher survival rates (Boix).

## 5.3  Perspectives on this research agenda

The effects of successful democracy, which should make voters want to defend a democratic system, could also make politicians want to undermine it.

Leaders should prefer constitutional structures that have equilibria where democratic competition is frustrated.

If voters do not understand how different constitutional structures would affect the quality of political competition, then political leaders are likely to get the less competitive constitution that they prefer.

Democracy is worth cultivating because the structure of political institutions matters. So we should search for political structures that can maximize the chances of success for new democracies.

At a time when great armies have been sent across the world with an announced goal of building new democracies, the finer points of comparative institutional analysis may have a practical importance that should not be overlooked.


http://home.uchicago.edu/~rmyerson/research/federal.pdf