A Theory of Political Transitions

Acemoglu and Robinson AER 2001
Electoral franchise extended in much of the world – E.g. Europe, Latin America in Late 19, early C20

Many reversions in Latin America

Key Conflict over Distribution

- In democratic societies poor impose higher taxes on rich than in nondemocratic societies.
- Makes the poor pro-democratic while rich have incentive to oppose democracy
Transitions to Democracy

- In autocracies poor excluded from political power, but have revolutionary threat, (periodic)
- The rich (elite) try to prevent revolution by making concessions to the poor, e.g. income redistribution.
- But threat of revolution is often only transitory,
- Current redistribution does not guarantee future redistribution.
- If temporary redistribution is insufficient to prevent a revolution, elite forced to make a credible commitment to future redistribution.
- Extending voting rights achieves this by changing identity of future median voter
Transitions to Autocracy

- Democracies not necessarily permanent because elite may have opportunity to mount coup.
- Poor would like to commit to low levels of future taxation to prevent this.
- Such commitments not always credible, so elite may prefer to retake power, even though coups are socially wasteful.
- More likely to do so when, because of high taxes, democracy is relatively costly for them.
- Taxes, in turn, high when inequality is high.
- Highly unequal societies move in and out of democracy.
Predictions: Inequality and redistribution

- Greater inequality in a democracy increases redistribution
- But greater inequality may lead to longer periods in non-democracy
- So, over longer run, redistribution may be lower than in more equal society
Predictions: Recessions and transitions

- Both movements in to democracy and out of democracy more likely in periods of depressed economic activity
- Threat of revolutions higher then
- Threat of coups higher then
- Opportunity costs of each fall in recessions
- N.B. Transitory (Here is where commitment matters!)
The Model

- Two groups of agents: the poor and the rich (the elite).
- Political state: democratic or nondemocratic.
- In democracy,
  - median voter sets the tax rate, and median voter is a poor agent.
  - Rich can mount a coup
- In a nondemocratic regime,
  - taxes are set by rich.
  - Poor can attempt a revolution, and elite decide whether to establish democracy.
- Aggregate income stochastic, opportunity costs of coups and revolutions change with income.
- Hence, powerful cannot commit to future tax rates,
  - Threats may pass
Infinite horizon. Discrete time.

Measure 1 of agents. A fraction $\lambda > 1/2$ agents are Poor ($p$), the rest is Rich ($r$).

There is an unique consumption good $y$ and a unique productive asset with total stock $h$.

At the beginning of time $t=0$ the poor owns $h^p$ and the rich $h^r > h^p$.

To parameterize income inequality in this economy we use the parameter $\theta < \lambda$ such that the share of capital owned by the poor is less than proportional to their size $h^p = h\theta / \lambda$ and $h^r = h(1- \theta)/(1-\lambda)$.

Higher $\theta$ implies lower income inequality (and vice versa).
Income accrues from production: \( y_{i,t} = A_t h^i \) for \( i = p, r \) where \( A_i \) indicates aggregate productivity, which follows a stochastic process:

\[
A_t = A^h = 1 \quad \text{with prob. } 1-s \\
A_t = A^l = a \quad \text{with prob. } s
\]

where \( a < 1 \) and indicates a period of recession and \( s < 1/2 \) so recession is relatively rare.

All agents maximize expected discounted consumption:

\[
E_t \sum_j \beta_j C_{i,t+j} \quad \text{for } i = p, r
\]
Disposable income is given by after-tax income plus (not-group-specific) transfers (should matter):

$$(1 - \tau_t)A_t h^i + T_t$$

Also assume that there is a cost in raising taxes equal to $c(\tau_t)A_t h$ with $c'(0) = 0$, $c' > 0$, $c'' > 0$, $c'(1) = \infty$.

The government budget constraint is given by:

$$T_t = \lambda \tau_t A_t h^\nu + (1 - \lambda) \tau_t A_t h^r - c(\tau_t)A_t h$$

$$= (\tau_t - c(\tau_t)) A_t h$$
Revolution

Society starts in non-democracy and poor can attempt a revolution in any nondemocratic period after $t = 0$. If attempted, it always succeeds (essentially).

After a revolution the share of capital owned by the poor becomes more proportional to their size $A_t h \pi / \lambda$ with $\theta < \pi$.

The revolution destroys $(1 - m) > 0$ fraction of resources in the period in which happens. $m$ tells how cheap the revolution is (the higher $m$, the less the poor lose from revolution). No collective action problem for poor (all get private benefits).

For the poor the return in the period of the revolution is $mA_t h \pi / \lambda$ and the per period return ever after is $A_t h \pi / \lambda$.

Note: Discounted net present value of revolution is $W_p(R) = (1 - s + sa)h \pi / \lambda (1 - \beta)$.

For the rich revolution is costly: assume lose everything forever. $W_r(R) = 0$. Hence, the rich will always try to avoid revolutions.

Rich can always voluntarily extend the franchise, in which case tax rate set by the median voter, i.e. a poor person.
A coup can be attempted in any democratic period.

If attempted, the coup always succeeds. Essentially, requires enough rich to partake, but since identical, if one does all will.

A coup destroys \( (1 - \Phi) > 0 \) fraction of resources while it takes place.

\( \Phi \) indicating how cheap the coup is (the higher \( \Phi \), the less the rich loses from coups).

For the poor and for the rich the return in the period of the coup is \( \Phi A_i h^i \).
Timing of the game

Sequential structure:

2. If there has been a revolution in the past, the poor receive their income, consume, and the period ends. If the state is democracy the poor picks a tax rate $\tau_t$. If the state is autocracy the rich picks a tax rate $\tau_t$.
3. In a nondemocratic regime the rich decide whether to extend the franchise to the poor. In a democratic regime the rich decide whether to stage a coup. Whoever is in power after this can fix a new tax rate $\tau_t$ which potentially differs from that set in 2.
4. In a nondemocratic regime (and only there) the poor decide whether to initiate a revolution. If there is a revolution the poor share the remaining income in the economy. If there is no revolution the tax rate $\tau_t$ gets implemented.
5. All receive their income, consume, and the period ends.

Note that institutions have “bite”. Revolutions can only start in a non-democratic regime. The poor cannot undertake a revolution immediately after a coup.
Equilibrium

Essentially only two players: Poor and Rich representative agents, because no policy conflict within a group.

Focus on (pure strategy) Markov Perfect Equilibria: Strategies depend only on the current state and the prior actions taken within the same period. [A standard way for excluding history-dependence of strategies and other complications. But reduces the possibility of generating inter-temporal cooperation!]

For a given level of productivity $A$, there are three possible states $S$:

- $(A, D) = \text{poor in power (Democracy)}$
- $(A, E) = \text{Elite in power (autocracy)}$
- $(A, R) = \text{Revolution (an absorbing state)}$
Transitions

(A, E)  \quad \rho = 0 \quad (A, E)

(A, E)  \quad \gamma = 0 \quad (A, E)

(A, E)  \quad \gamma = 1 \quad (A, D)

(A, E)  \quad \rho = 1 \quad (A, R)

(A, E)  \quad \zeta = 0 \quad (A, D)

(A, E)  \quad \zeta = 1 \quad (A, E)

Democratization  \quad Revolution  \quad Coup d’etat
Strategies

For the rich:
\[ \sigma^r(S | \tau^p) = \{ \gamma, \xi, \tau^r \} \]

\( \gamma \), in state \((A,E)\) extend the franchise \((\gamma=1)\) or not \((\gamma=0)\)
\( \xi \), in state \((A,D)\), given \(\tau^p\), stage a coup \((\xi=1)\) or not \((\xi=0)\)
\( \tau^r \) in state \((A,E)\) or in state \((A,D)\) after a coup \((\xi=1)\), fix the tax rate by the rich.

For the poor:
\[ \sigma^p(S | \gamma, \tau^r) = \{ \rho, \tau^p \} \]

\( \rho \), in state \((A,E)\) initiate the revolution \((\rho=1)\) or not \((\rho=0)\), note a function of \(\gamma\) because the rich move first in this state
\( \tau^p \) in state \((A,D)\) fix the tax rate by the poor.
A pure strategy Markov Perfect Equilibrium is a strategy combination $\sigma^*(S|\tau^p), \sigma^p*(S|\gamma,\tau')$ such that these strategies $\sigma^*, \sigma^p*$ are best-responses to each other for all possible states. Note that the restriction is that the strategies are best responses to Markov strategies, not that the best responses are restricted to being Markovian.
(1) \[ V^r(S) = \max_{\sigma^r} \left\{ C^r(\hat{\sigma}^p(S|\gamma, \tau^r), \sigma^r, S) \right\} \]

\[ + \beta \int V^r(S') \, dP(S'|\hat{\sigma}^p(S|\gamma, \tau^r), \sigma^r, S) \right\} \]

and

(2) \[ V^p(S) = \max_{\sigma^p} \left\{ C^p(\sigma^p, \hat{\sigma}^r(S|\tau^p), S) \right\} \]

\[ + \beta \int V^p(S') \, dP(S'|\sigma^p, \hat{\sigma}^r(S|\tau^p), S) \right\}, \]

where \( C^i(\sigma^p, \sigma^r, S) \) denotes the consumption of agent \( i \) as a function of the state \( S \) and strategies \( \sigma^p \) and \( \sigma^r \), and \( P(S'|\sigma^p, \sigma^r, S) \) denotes the probability distribution function of transition from state \( S \) to state \( S' \) as a function of the strategies \( \sigma^p \) and \( \sigma^r \). Equations (1) and
Analysis: Preliminaries

Some preliminaries first.

What is the optimal tax rate $\tau^m$ the poor would set, absent the risk of a coup?

Simply maximize the per-period consumption of the poor:

$$\text{Max}\{(1-\tau)A_t h^p + (\tau - c(\tau))A_t h\}$$

which implies

$$c'(\tau^m) = (\lambda - \theta) / \lambda$$

using the fact that $h^p = h\theta / \lambda$. So the higher the inequality (the lower $\theta$), the higher the taxes. Inequality necessary for there to be taxes due to deadweight loss. Note independent of A.
Define $\delta^i(\theta) A_t$ the net amount of redistribution that a person of group $i$ receives in state $A_t$ when the tax rate is $\tau^m$.

So, $\delta^i(\theta) A_t = T^m - \tau^m A_t h^i$

and from the budget constraint transfers are $T^m = (\tau^m - c(\tau^m))A_t h$

This implies positive net transfers to the poor, negative ones from the rich: $\delta^r(\theta) < 0 < \delta^p(\theta)$.

Higher inequality raises taxes on the rich and raises transfers to the poor.
Assumptions

Assume revolutions and coups are not worthwhile in periods of economic expansion (i.e. \( A_t = A^h = 1 \)).

Assumption 1: Sufficient condition for which coups are not profitable in good times.

The cost of a coup for a rich agent in normal times (the direct loss from the coup minus taxes paid = \( (1-\phi)h^r + \delta^r(\theta) \) ) is always larger than the taxes \( \tau^m \) avoided forever (i.e., this is a sufficient condition) \( -(1-s+sa)\delta^r(\theta)\beta/(1-\beta) \)

That is:

\[
(1-\beta)(1-\phi)h^r > -(1- \beta s(1-a)) \delta^r(\theta).
\]
Assumptions

Assumption 2: Sufficient condition for which revolutions are not profitable in good times.

In state \((A_t, E)\) the value of a revolution is

\[ V^p(A_t, R) = mA_t h \pi / \lambda + \beta W^p(R) \]

Where

\[ W^p(R) = \frac{(s \alpha + 1 - s) \pi h}{(1 - \beta) \lambda} \]

The value of never undertaking a revolution and hence never receiving any transfer from the rich from there after is:

\[ \overline{V}^p(A_t, E) = A_t h^p + \beta (1 - s + s \alpha) * h^p / (1 - \beta) \]

This is assuming zero taxes by the rich. Of course this value is a lower bound of the utility under autocracy for the poor (because occasionally there could be redistributive taxation – the rich could tax themselves and give to the poor).

So we assume that for \(A_t = A^h = 1\), \(\overline{V}^p(1, E) > V^p(A_t, R)\)

With this assumption no revolution in good times. Also the rich will never redistribute to the poor in good times.
Analysis

We need to derive some intuitive value functions in the different states of the world.

What is the value of being in a democracy during good times \((A_i = 1)\) for agents \(i = p, r\)?

Since we are in a markov p.e., poor will always set their optimal tax rate so we have:

\[
V^i(1, D) = h^i + \delta^i(\theta) + \beta W^i(D)
\]

where we make use of the fact that there is never going to be a coup in good times (hence the net transfers are \(\delta^i(\theta)*1\)) and the continuation value from next period on of being in state \(D\) is:

\[
W^i(D) = (1-s)V^i(1, D) + s V^i(a, D)
\]

which depends on the state of the economy next period (could be a boom or a recession).
What is the value of being in a democracy during bad times for agents \( i = p, r, V^i(a, D) \)?

Now, here the situation is tricky for the poor. If they redistribute too much, they can trigger a coup. So they may decide to keep taxes low and transfer less to themselves in bad times just to avoid a coup by the elite.

Call this tax rate (if feasible) \( \tau^d < \tau^m \).

Suppose \( \tau^d \) prevents the coup, then

\[
V^i(a, D) = v^i(a, D| \tau^d) = a(h^i + \Delta^i(\theta, \tau^d)) + \beta W^i(D)
\]

where net transfers under the threat of a coup are \( \Delta^i(\theta, \tau^d) = T^d - \tau^d * A^i h^i \) where \( \Delta^p(\theta, \tau^d) \leq \delta^p(\theta) \), and \( \Delta^r(\theta, \tau^d) \geq \delta^r(\theta) \)

Notice that the continuation value is still \( W^i(D) \) which tells us that if the next period the poor have good times they will increase taxes back up to \( \tau^m \) (won't trigger a coup because times are good). The poor cannot commit to keep taxes low.
Reducing taxes in a democracy may not be enough to prevent a coup though.

\[ V^r(a, D) = \max_\zeta \{ \zeta V^r(a, E) + (1-\zeta)\nu^r(a, D | \tau^d) \} \]

where the continuation value of a coup (\( \zeta = 1 \)) in state \((a, D)\) is:

\[ V^i(a, E) = \phi a h^i + \beta W^i(E) \]

which depends on the fact that the rich will be able to set taxes to zero right after the coup.

Recall there cannot be revolution immediately after a coup, by assumption. Some persistence mechanically!

The continuation value from next period on of being in state \(E\) is:

\[ W^i(E) = (1-s)V^i(1, E) + s V^i(a, E) \]
Analysis

What happens when the Elite are in power?

In a boom, the rich will set taxes to zero, since there cannot be a revolution by Assumption 2, so for agents $i = p, r$:

$$V^i(1, E) = h^i + \beta W^i(E)$$

In a recession the rich will have several options:

1. They can democratize ($\gamma = 1$)
2. They can decide not to democratize ($\gamma = 0$) but they can raise taxes from 0 to $\tau^e$ to appease the poor and avoid a revolution ($\rho = 0$).
3. A revolution may occur ($\rho = 1$).

Since we start from an autocracy, if either $\gamma = 0$ or $\rho = 1$ then you would never observe a democracy. Since we use $V^i(a, E)$ in calculating a deviation from democracy in what follows along the equilibrium path let us focus on case 1 ($\gamma = 1$).
So if $\gamma = 1$ then for agents $i = p, r$:

$$V^i(a, E) = a(h^i + \delta^i(\theta)) + \beta W^i(D)$$

which depends on the fact that the poor will set $\tau^m$ taxes (recall there cannot be a coup immediately after a democratization, only the following period, so the poor will pick the best tax rate for them) and the continuation value from next period on of being in state $D$ is what we derived earlier.

Finally allow for:

Assumption 3: Assume revolutions are worse than democracies, so democratizations can help preventing revolutions.

$$V^p(a, R) < V^p(a, D)$$

(Excludes case 3 in previous slide)

This completes the derivation of the value functions. Let’s now look at the properties of the equilibrium.
In state \((a, D)\) the elite would prefer not to stage a coup if it is too expensive, or:

\[
V^r(a, E) < v^r(a, D | \tau^d)
\]

That is, by replacing the expressions in the previous slides:

\[
\phi a h^r + \beta W^r(E) < a(h^r + \Delta^r(\theta, \tau^d)) + \beta W^r(D)
\]

or, more intuitively,

\[
\beta (W^r(E) - W^r(D)) - a \Delta^r(\theta, \tau^d) < a h^r (1 - \phi) \quad (18)
\]

*Capturing power & reducing taxes from \(\tau^d\) to \(0 < \) Cost of the coup.*

Note: If \(a\) is large (recession not too deep) the coup is more expensive and less likely.
Consolidated Democracy

In state \((a, D)\) the elite will never stage a coup for levels of \(\phi\) low enough, such that:

\[
\beta(W^r(E) - W^r(D)) - a\Delta^r(\theta, \tau^m) < ah^r (1 - \phi) \quad (18)
\]

or, more clearly,

\[
\beta(W^r(E) - W^r(D)) - a\delta^r(\theta) < ah^r (1 - \phi) \quad .
\]

Capturing power & reducing taxes even when taxes at the maximum \(\tau^m < \) Cost of the coup

Substituting the value functions, you get a threshold \(\phi(\theta, a, s)\):

\[
\phi(\theta, a, s) = \frac{((1-\beta(1-s))a(h^r + \delta^r(\theta)) + \beta(1-s)\delta^r(\theta))}{((1-\beta(1-s))ah^r)}
\]

For \(\phi < \phi\) coups never occur.
Consolidated Democracy

For $\phi < \phi$ coups never occur, so increasing $\phi$ decreases the range in which coups might occur:

1. $d\phi(\theta, a, s)/d\theta > 0$ more equal societies are easier to consolidate (lower need to tax the rich).

2. $d\phi(\theta, a, s)/d a > 0$ less severe recessions make consolidation easier (by increasing the opportunity cost of a coup).

3. $d\phi(\theta, a, s)/d s > 0$ more frequent recessions make consolidation easier (increasing the frequency at which the rich pay lower taxes makes democracy less costly to the rich). Mitigates commitment problem.
Semi-Consolidated Democracy

In state \((a, D)\) the elite always stages a coup for levels of \(\phi\) high enough, such that:

\[
\beta(W^r(E) - W^r(D)) - a\Delta^r(\theta, 0) > ah^r (1 - \phi)
\]

or, more clearly,

\[
\beta(W^r(E) - W^r(D)) - 0 > ah^r (1 - \phi)
\]

*Returns to capturing power & reducing taxes even when taxes are at the minimum \(\tau^d = 0\) > Cost of the coup*

Substituting the value functions you get a threshold \(\phi(\theta, a, s)\). For \(\phi > \phi\) coups always occur during recessions:

\[
\phi(\theta, a, s) = ((1 - \beta(1 - s))ah^r + \beta(1 - s)\delta^r(\theta))/((1 - \beta(1 - s))ah^r)
\]

For \(\phi < \phi < \phi\) the democracy is *semi-consolidated*, that is, in order to prevent a coup, during recessions the poor lowers taxes to a level \(0 < \tau^d < \tau^m\)

*Note: During booms taxes go back up to \(\tau^m\). Even if the country remains democratic the threat of a coup influences tax policy!*
In state \((a, E)\) the poor would prefer not to start a revolution if it is not worth it, or:

\[
V^p(a, R) < V^p(a, E|\tau^e)
\]

where the rich may wish to avoid revolution by conceding some redistribution \(\tau^e\)

That is:

\[
ma\pi /\lambda + \beta W^p(R) < a(h^p + d^p(\theta, \tau^e)) + \beta W^p(E) \quad (19)
\]

where \(d^i(\theta, \tau^e)a = T^e - \tau^e*ah^i\) and means:

\textit{Capturing power through the Revolution} \textless \textit{Value of living in an autocracy for the poor}

Note: The elite may have the opportunity of avoiding revolutions by just increasing taxes and redistributing during recessions. However, even giving \(\tau^e = \tau^m\) may not be enough to satisfy (19). Why would this not be enough? It is what the poor want. In that case they will need to democratize.
Democratizations

In state \((a, E)\) the poor would always start a revolution if:

\[ V^p(a, R) > V^p(a, E \mid \tau^m) \]

where the rich tries to avoid revolution by conceding maximum redistribution \(\tau^m\)

That is:

\[ m a h \pi / \lambda + \beta W^p(R) > a(h^p + \delta^p(\theta)) + \beta W^p(E) \quad (20) \]

Substituting the value functions you get a threshold \(m(\theta, a, s)\). For \(m > m\) a revolution is always attractive during recessions even at maximum redistribution \(\tau^m\):

\[ m(\theta, a, s) = ((1-\beta(1-s))a(h^p + \delta^p(\theta)) + \beta(1-s)h^p -(1-s+as)\beta \pi h /((1-\beta)a\pi h) \]

In this case the rich can only democratize to avoid a revolution.
Democratizations

For $m < m$ the autocracy can prevent the revolution by redistributing resources during recessions, that is, in order to prevent a revolution during recessions the rich increases taxes (on themselves) to a level $0 < \tau^c < \tau^m$.

During booms taxes go back down to 0.

Note: Even if the country remains autocratic the threat of a revolution influences tax policy!
For $m > m$ a revolution is always attractive during recessions even at maximum redistribution, so the rich democratize during the recession to avoid a revolution (by Assumption 3).

1. $\frac{dm(\theta, a, s)}{d\theta} > 0$ more equal societies are less likely to democratize and the poor are more likely to just be happy with redistribution (autocracy is not that costly to the poor, i.e., their optimal tax rate is not too different from the optimal tax chosen by the rich).

2. $\frac{dm(\theta, a, s)}{da} > 0$ less severe recessions make societies less likely to democratize and the poor are more likely to just be happy with redistribution (Less severe recessions, by increasing the opportunity cost of a revolution, mean the poor can be bought off more cheaply and hence less need to “give” them democracy).

3. $\frac{dm(\theta, a, s)}{ds} > 0$ more frequent recessions make societies less likely to democratize and the poor are more likely to just be happy with redistribution (increasing the frequency at which the rich pay higher taxes makes autocracy less costly to the poor). Frequency of recessions acts as a commitment to redistribution. Mitigating the commitment problem.
Equilibrium (under Assumptions 1-3): Proposition 1

1. If $m < m(\theta, a, s)$, then society remains nondemocratic forever. *Intuition: a revolution can always be bought off by the elite and the system remains an autocracy.*

2. If $m > m(\theta, a, s)$ and if $\phi < \phi(\theta, a, s)$, then society democratizes the first time the state is $(a, E)$ (at the first recession) and it remains a consolidated democracy forever. *Intuition: The revolution threat forces democratization and then coups are too costly to stage even when taxes are at the maximum $\tau^m$.]*

3. If $m > m(\theta, a, s)$ and if $\phi(\theta, a, s) < \phi < \phi(\theta, a, s)$, then society democratizes the first time the state is $(a, E)$ (at the first recession) and it remains a semi-consolidated democracy forever. *Intuition: The revolution threat forces democratization and then coups are not too costly to stage, so taxes have to be lowered in bad times. Violent threats perpetually influence policy, even if the violence is never realized.*

4. If $m > m(\theta, a, s)$ and if $\phi > \phi(\theta, a, s)$, then society becomes an unconsolidated democracy the first time the state is $(a, E)$ (at the first recession) and then at every recession it continuously switches regimes. *Intuition: Democratizations are a reaction on the part of the rich to poor times when the threat of revolutions presses. They give power to the poor. When the poor have power and times are bad, there is an “inefficient” coup. Coase theorem does not hold. Poor would like to promise a lower tax rate in future, but can’t commit. Poor would like to suspend democracy but can’t.*
- How important is Markovian restriction
- Non-Markov equilibria allow more intertemporal coordination – trigger strategies
- Intuitively, may lead to coordination to avoid the inefficient back and forth out of and in to democracy
- Support coordination with “punishments” for violations
- Reduces range in which oscillation occurs
• Connection between unconsolidated democracy and populist redistribution – populist regimes of Latin America (Peru, Argentina, Brazil).

• An increase in inequality reduces \( m, \phi \) and \( \phi \).

• At higher levels of inequality, both revolutions and coups are more attractive. Therefore, societies with more initial inequality are more likely to switch between democracy and nondemocracy, and less likely to have a fully consolidated democracy.

• Non-monotonic relationship between inequality and redistribution.
  • Increase inequality, increases redistribution in consolidated democracy
  • Increase further leads to semi-consolidated democracy, decline in taxes but overall increase in redistribution still
  • Increase further leads to eventual coups and declines in redistribution
Consolidation and redistribution

- Asset inequality determines the level of taxation and the costs and benefits of coups.
- Asset inequality reduced permanently, (education, land reforms) the benefits of a future coup to the elite would be lower because democracy would be less redistributive.
- Anticipation of such reforms creates political instability in the short run because elite have a greater incentive to undertake a coup.
Educational expansion in nineteenth-century Britain and France was in part a result of democratization, reduced inequality and there were no significant reversals in the process of democratization.

In Costa Rica, the educational and land reforms that reduced both earnings and land inequality after the democratization in 1948 appear to have helped with the consolidation of democracy.

Venezuela after return to democracy in 1958, led to a land reform redistributing 20 percent of agricultural land.
• Extension to model with a one period delay between the start of the asset redistribution and its implementation
• If elite know this, they may attempt a coup to stop the redistribution
• A number of coups in Latin America were motivated by desire to thwart radical land-reform (Brazil 1964, Guatemala 1954, Chile 1973, Venezuela 1948)
Formal means of consolidation

- Constitutional limits on taxation may also consolidate democracy
- Rich fear poor control less in A=1 state in future if the poor have limits on their capacity to tax
- Super-majority rules required to change constitutions
- Presidential systems consolidate more power with the executive
- Empirical evidence that these lead to more instability
Empirical Implications

Case 1

\[
\begin{array}{cccccccc}
E & 1 & 1 & a & 1 & 1 & 1 \hline
D & 0 & 0 & e & 0 & 0 & 0 \hline
\end{array}
\]

\[\text{OUTPUT}\]

\[\text{REGIME TYPE}\]

\[\text{FISCAL POLICY}\]

Case 2

\[
\begin{array}{cccccccc}
E & 1 & 1 & a & 1 & 1 & 1 \hline
D & 0 & 0 & e & 0 & 0 & 0 \hline
\end{array}
\]

\[\text{OUTPUT}\]

\[\text{REGIME TYPE}\]

\[\text{FISCAL POLICY}\]

Case 3

\[
\begin{array}{cccccccc}
E & 1 & 1 & a & 1 & 1 & 1 \hline
D & 0 & 0 & e & 0 & 0 & 0 \hline
\end{array}
\]

\[\text{OUTPUT}\]

\[\text{REGIME TYPE}\]

\[\text{FISCAL POLICY}\]

Case 4

\[
\begin{array}{cccccccc}
E & 1 & 1 & a & 1 & 1 & 1 \hline
D & 0 & 0 & e & 0 & 0 & 0 \hline
\end{array}
\]

\[\text{OUTPUT}\]

\[\text{REGIME TYPE}\]

\[\text{FISCAL POLICY}\]
1. Society remains nondemocratic forever. Several examples were the poor are bought off, like Singapore, Saudi Arabia.

2. OECD countries. Extension of the democratic franchise to Western societies.

3. Countries that, albeit formally democratic, the threat of coups still constraints redistribution. Russia (?)

4. African and Latin American countries where continuous alternating between regime types continue and are often triggered by economic downturns (Chile, Argentina).