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Inequality, Growth and Development Democratization or repression?

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Abstract

Regimes controlled by a rich elite often collapse and make way for democracy amidst widespread social unrest. Such regime changes are often followed by redistribution to the poor at the expense of the former elite. We argue that the reason why the elite may have to resort to full-scale democratization, despite its apparent costs to themselves, may be that lesser concessions would be viewed as a sign a weakness and spur further unrest and more radical demands. The elite may therefore be forced to choose between repression and the most generous concession, a transition to full democracy. © 2000 Elsevier Science B.V. All rights reserved.

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‘Men must be either crushed or pampered’ – Machiavelli (1961, p. 8).

1. Introduction

Many instances of democratization happen amidst widespread unrest and revolutionary threat by the masses excluded from the political process. In previous work, we argued that democratization is a natural response for the rich elite in these cases because it ensures future redistribution and makes a

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revolution relatively less attractive. Mere redistribution in this case is not sufficient because it can be easily reversed when the threat of a revolution subsides. Democratization solves this problem by changing the identity of the future median voter, hence making a credible commitment to future redistribution (Acemoglu and Robinson, 1997, 1999). Historically, significant moves towards democracy are in fact often followed by large increases in redistribution (for example, in Britain, France and Sweden, see Acemoglu and Robinson (1997)). This view of democratization as a commitment to future redistribution poses the following question, however: why can the rich elite not make a less costly concession, for example by extending voting rights to only a subset of the disenfranchised, hence limiting the ensuing redistribution, or by making some other credible promise to limited redistribution?

The situation is nicely illustrated by the historical experience of democratization in Argentina (see Rock, 1975). The move towards democratization in 1912 happened in response to a series of widespread uprisings led by Yirogen and the Radical party, whose leaders were primarily from the urban middle classes. However, the coalition against the rich (primarily landed) elite included not only the Radicals, but also workers and the peasants (led by Anarchists and Syndicalists). Once it became clear that a concession was necessary to prevent further increases in the unrest, the elite chose a full-scale democratization, rather than only including the middle-classes in the ruling coalition. This move is all the more surprising in view of the fact that over the previous 20 years, similar social unrest in the typically more democratic Western European countries led only to gradual reforms. Why did the elite in this case prefer full-scale democratization rather than a more limited concession?

We argue that the answer may lie in observations made by Machiavelli and de Tocqueville. Machiavelli argued that concessions were dangerous for the ruler, as they would demonstrate his weakness and entice the opposition to seek further gains. The ruler should therefore either resist all concessions or make the most generous concession possible. De Tocqueville also reached a similar conclusion in his analysis of the events leading up to the French Revolution. He argued that it was a mistake for Louis XVI to call the Estates-General in January 1789 since this showed the weakness of his regime and paved the way to a successful revolution (see de Tocqueville, 1856, Part III, Chapter 5). As Skocpol (1979, p. 123) puts it, as a consequence of the calling of the Estates-General, 'every peasant community was invited by order of the king to ruminate collectively upon its troubles. The result surely was ... to heighten the possibilities for the peasants to rebel'.¹

¹ There are several other interesting examples where the attempt to make partial concessions in a turbulent environment appears to have been counterproductive for the ruling elites. One is the reaction of the Shah to the disturbances of mid 1978 (see Saikal, 1980), and another is the creation of the Kerensky government in Russia in 1917.

To illustrate the related issues that arise in the context of democratization, we consider a simple economy in the midst of social unrest caused by the disenfranchised poor.² The rich elite can counter this revolutionary threat in one of three ways; by repression, by full-scale democratization, or by making a lesser concession. We interpret this lesser concession as extending voting rights only to the middle classes, but generally any limited redistributive move would also be an equivalent concession. We are interested in a situation in which extending voting rights to the middle-classes is sufficient to prevent revolution; in future political equilibria, the middle-class median voter will choose some degree of redistribution from which the poor will benefit. However, when there is uncertainty surrounding how strong l'ancien régime is, such concessions may signal weakness and hence encourage further demands, or even precipitate the revolution they are intended to foil. This, we argue, may induce the elites to choose between repression and full-scale democratization. We show that when weak governments try to take advantage of the uncertainty regarding their types, a revolution can occur. Our model also shows that repression is more likely to be used when inequality is higher because the cost of democracy to the rich is greater in a more unequal society.

2. The model

We consider an incomplete information game between three groups of agents, the rich (superscripted r), the middle class (superscripted m) and the poor (superscripted p). Political power is initially in the hands of the rich (for example, a military controlling power on behalf of the rich elite). We assume that this initial government may be one of three types, T (tough), F (flexible) and W (weak). We will refer to these types as 'the type' of the elite. The distinction between the three types is their relative ability to stop a revolution, and we will contrast political equilibria when these types are observed publicly vs. the case in which they are the private information of the rich. There are two possible political systems in addition to the initial regime controlled by the rich elite. The elite can institute a full-scale democracy in which all groups participate equally, or they can opt for a limited franchise, in which only the rich and the middle-class participate (or generally, some other concession by the rich that is less costly for them and increases the utility of the poor). We will analyze a period of social unrest in which the poor decide whether to initiate a revolution, and the rich elite decide between repression (denoted r), a limited franchise extension

² Dynamic models of the conflict between the elite and the disenfranchised poor are analyzed in Acemoglu and Robinson (1997, 1999), where we also give a detailed discussion of the economics and political science literatures related to our approach to democratization. Here, to save space we do not give a literature review and refer the reader to our other papers.

(that is, a ‘concession’, c), and full democratization (democratize, d). The median voter in the three political regimes will differ, and so will the amount of redistribution.

2.1. Fundamentals

The three groups of agents, the rich, the middle-class, and the poor, have masses λ^r , λ^m and λ^p with $\sum_i \lambda^i = 1$ and are endowed with exogenous incomes, $h^r > h^m > h^p$ where $\sum_i \lambda^i h^i = 1$. We assume that $\lambda^p > \frac{1}{2}$ so that if there is full democracy, the median voter is a poor agent, and $\lambda^m > \lambda^r$ so that if there is a restricted franchise, including only the rich and the middle class, the median voter is a member of the middle class. We assume that the three types of the rich elite, T (tough), F (flexible) and W (weak), occur with (common knowledge) probabilities p^t for $t = T, F, W$, where $\sum_t p^t = 1$. Throughout the paper, we analyze the actions of these agents in a turbulent period in which the poor pose a revolutionary threat.

The timing of events is as follows.

- The game begins by Nature choosing the type of the elite ($t = T, F$, or W). This type is typically not observed by the poor.
- The elite move next and choose one of three actions, $A \in \{r, c, d\}$, repression, concession, or full democratization.
- After observing these actions, the poor decide whether to initiate a revolution.
- If the poor decide to initiate a revolution, the elite can fight back. If the revolution succeeds, the poor take control of the means of production, and if it fails, the elite remain in power.
- If there is no revolution, then the median voter sets the tax rate, and the identity of the median voter depends on the political system.

The middle-classes do not participate in the revolutionary threat, and their only role is to set the tax rate in a limited democracy.

Since the rich play first, the poor update their beliefs about the type of the rich after observing the action they take. We denote the posterior beliefs of the poor that the type of the rich is t , as a function of the action A taken by the rich, by $\pi^t(A)$ with $\sum_t \pi^t(A) = 1$ for all $A \in \{r, c, d\}$.

In any political system, the only available fiscal instrument is a linear income tax rate, denoted τ . All agents face the same tax rate and all tax revenues are redistributed lump-sum. However, it is costly to raise taxes. We assume that levying a tax rate of τ creates a deadweight loss of $C(\tau)$ where $C' > 0$, $C'' > 0$. When a rich agent is in control, we will have $\tau^r = 0$ as the tax rate choice, since the elite would like to minimize redistribution. In contrast, if there is full democracy, the median voter is a poor agent and the equilibrium tax rate will be the rate most preferred by a poor agent. This tax rate, denoted by τ^p , maximizes

$(1 - \tau)h^p + \tau - C(\tau)$, and therefore satisfies the first-order condition $C'(\tau^p) = 1 - h^p$. When only the rich and the middle class vote, the median voter is instead in the middle class and his most preferred tax rate, τ^m , satisfies $C'(\tau^m) = 1 - h^m$ if $h^m < 1$, and $\tau^m = 0$ otherwise. In what follows we assume that $h^m < 1$, so that $\tau^m > 0$. Since $h^m > h^p$, the strict convexity of C implies that $\tau^p > \tau^m$. We define $\Delta^i(\tau)$ as the net transfers received by agent $i = r, m, p$ when the tax rate is τ . For example, $\Delta^r(\tau^m) = \tau^m(1 - h^r) - C(\tau^m)$. This immediately implies that transfers away from the rich are greater in a full democracy, i.e., $0 > \Delta^r(\tau^m) > \Delta^r(\tau^p)$ (where notice that both of these are negative numbers). None of the results that follow would change if we removed the middle-class, and instead allowed the rich elite to make a concession other than full democratization, for example, instituting a hard-to-reverse welfare state. We can then interpret $A = c$ as this alternative concession, with $\Delta^r(\tau^m)$ as the cost to the rich and $\Delta^p(\tau^m)$ as the benefit to the poor.

If the poor attempt a revolution, the payoff they get depends on the type of the elite. If they are type T or F, the revolution fails and the poor receive the payoff $h^p - \Gamma$ where $\Gamma > 0$ is the cost of the failed revolution. The payoff to the elite when the type of the government is T is h^r , that is the revolution attempt can be suppressed without any cost. Similarly, repression is costless in this case. In contrast, if the type of the government is F, both repression and suppression of attempted revolution are costly. We denote the cost of repression for this type as m^F , so when the strategy chosen by the rich is to repress from the beginning, their payoff is $h^r - m^F$. However, if they choose not to repress, and the poor attempt a revolution, they can still suppress this, but this time, since they act later to counter the revolution, their cost is greater, ϕm^F where $\phi > 1$ but $\phi < 1 + \varepsilon$ where ε is a small number. The payoff to the flexible rich in this case is $h^r - \phi m^F$. If the type of the government is weak, W, they cannot use repression as a strategy (the cost m^W is very large, e.g. $m^W \rightarrow \infty$), and a revolution always succeeds. If revolution succeeds, the poor receive $h^p + \Omega$, $\Omega > 0$, while the rich lose everything and obtain 0.

Table 1 presents the payoffs to the poor and to the different types of agents in the different cases. We omit the payoffs to the middle-class, since they do not play an important role in the analysis.³ The two columns represent the strategies of Revolution or no Revolution for the poor, while the three rows refer to the three strategies of the initial rich elite, Repress, make a Concession, or Democratize. The number on the upper part of each cell is the payoff to the poor, while the number on the lower part is the payoff to the elite, and when this depends on the type of the initial government, the relevant payoffs are split into three smaller cells.

³ Also notice that this is not the normal form of the game; formally, in the incomplete information game, the poor have 2³ pure strategies since they move after observing the elite's action.

Table 1

	Revolution			No Revolution		
	W	F	T	W	F	T
Repress	$h^p + \pi^W(r)\Omega - (1 - \pi^W(r))\Gamma$			h^p		
	$-m^W$	$h^r - m^F$	h^r	$h^r - m^W$	$h^r - m^F$	h^r
Concession	$h^p + \pi^W(c)\Omega - (1 - \pi^W(c))\Gamma$			$h^p + \Delta^p(\tau^m)$		
	0	$h^r - \phi m^F$	h^r	$h^r + \Delta^r(\tau^m)$		
Democratization	$h^p + \pi^W(d)\Omega - (1 - \pi^W(d))\Gamma$			$h^p + \Delta^p(\tau^p)$		
	0	$h^r - m^F$	h^r	$h^r + \Delta^r(\tau^p)$		

Table 1 shows that the payoff to the rich does not depend on their type if there is limited or full democratization. If, instead, the poor attempt a revolution, the payoffs to the rich depend on their type.

2.2. Analysis of the game

We now analyze the Perfect Bayesian Equilibria of this game.⁴ In order to focus on the cases of interest, we start by making a number of parameter restrictions. First, we impose the following assumption.

Assumption 1. $\Delta^p(\tau^p) > \Omega > \Delta^p(\tau^m)$.

This ensures that redistribution in a full democracy is greater than the payoff to the poor from a successful revolution. But the limited redistribution that will ensue when the median voter is from the middle-class gives the poor less than a successful revolution.

We also assume

Assumption 2. $m^F > -\Delta^r(\tau^m)$.

⁴ In this type of game, where an informed player moves before an uninformed player, the concept of Perfect Bayesian Equilibria may not be sufficient to rule out some unreasonable outcomes, and some equilibrium refinements need be used to rule this out (see, for example, Cho and Kreps, 1987). Nevertheless, in our simple environment, all Perfect Bayesian Equilibria satisfy the relevant refinements.

This implies that repression for the flexible type is sufficiently costly that it is not worthwhile to undertake it simply to prevent the limited redistribution that will follow when the median voter is from the middle-class.

Finally, we make the following assumption.

Assumption 3. $(p^W\Omega - p^F\Gamma)/(p^W + p^F) > \Delta^P(\tau^m)$.

This ensures that if both the weak and the flexible types played $A = c$ all the time, then the poor would prefer to attempt a revolution following $A = c$. To see why, recall that a concession of limited franchise extension gives the poor an additional return of $\Delta^P(\tau^m)$. Whereas the poor obtain Ω from a successful revolution and lose Γ if a revolution attempt is unsuccessful. If both the weak and flexible types play $A = c$ all the time, then the probability that $A = c$ comes from a weak type is $p^W/(p^W + p^F)$. Assumption 3 therefore ensures that with such a posterior, the poor prefer to attempt a revolution.

Before analyzing the incomplete information case, it is useful to consider the benchmark with complete information where the type of the elite is observable to the poor. Let σ^t denote the (possibly mixed) strategy of a rich of type t . Let $\rho(A)$ for $A \in \{r, c, d\}$ denote the probability that poor choose a revolution following action A by the elite. The following proposition characterizes the unique subgame perfect equilibrium of this game.⁵

Proposition 1. *In the game with complete information,*

- *If $t = T$, then the unique equilibrium involves $\sigma^T = r$ and $\rho(r) = 0$.*
- *If $t = F$, then the unique equilibrium involves $\sigma^F = c$ and $\rho(c) = 0$.*
- *If $t = W$, then the unique equilibrium involves $\sigma^W = d$ and $\rho(d) = 0$.*

With complete information the three different types act in different ways. A tough elite makes no concessions and does not democratize since $h^r > h^r + \Delta^r(\tau^m) > h^r + \Delta^r(\tau^p)$. The poor do not attempt a revolution against such a regime since it will not succeed and will cost them Γ . A flexible elite chooses to concede a limited franchise extension. The poor do not attempt a revolution, since they realize they would not succeed. Moreover, the elite prefer not to use repression, though such repression would be successful, because it is more costly than the limited redistribution following a concession

⁵ In this proposition and the next, we suppress the tax rate choices of the decisive voter at the final stage of the game to simplify the exposition. Also to simplify the notation, we only give the along-the-equilibrium-path actions of the agents. More formally, in this complete information game, the strategy of the poor should be an action conditioned on the type of the rich and their action. So a more formal statement of the equilibrium strategies would be $\sigma^T = r$, $\sigma^F = c$ and $\sigma^W = d$ for the elite, and $\rho(\cdot, T) = 0$, $\rho(\cdot, F) = 0$, $\rho(d, W) = 0$, and $\rho(c, W) = \rho(r, W) = 1$, where $\rho(A, t)$ denotes the probability that the poor will undertake a revolution when type t plays action A .

(Assumption 2). Finally, a weak type is unable to use repression to stop a revolution. Moreover, it cannot get away with just making a concession because a revolution always succeeds against such a regime. Since $\Omega > \Delta^P(\tau^m)$ by Assumption 1, the poor would carry out the revolution in this case, so the weak type chooses full democratization.

We now consider the incomplete information game. Before characterizing these, we define $\bar{\pi}$ such that if $\pi^W(c) = \bar{\pi}$, then the poor would be indifferent between revolution and no revolution following $A = c$ (a concession of limited franchise extension by the elite). Since their expected payoff from revolution after the concession is $h^p + \pi^W(c)\Omega - [1 - \pi^W(c)]\Gamma$, and their expected payoff from no revolution is $h^p + \Delta^P(\tau^m)$, the critical level of their posterior is defined as

$$\bar{\pi} = \frac{\Delta^P(\tau^m) + \Gamma}{\Omega + \Gamma} \in (0, 1),$$

which is always less than 1 because Assumption 1 ensures that $\Delta^P(\tau^m) < \Omega$. If $\pi^W(c) > \bar{\pi}$, the poor prefer to attempt a revolution following $A = c$. In contrast, if $\pi^W(c) < \bar{\pi}$, a revolution is not worthwhile following a concession.

We also define $\bar{\rho}$ as the probability of revolution by the poor following a concession that will make the weak type indifferent between choosing concession and full democratization. This is given by $(1 - \bar{\rho})[h^f + \Delta^r(\tau^m)] = [h^r + \Delta^r(\tau^p)]$, where the left-hand side is the payoff from concession and the right-hand side is the payoff from full democratization for this type. This defines

$$\bar{\rho} = \frac{-\Delta^r(\tau^p) + \Delta^r(\tau^m)}{h^r + \Delta^r(\tau^m)} \in (0, 1)$$

which is positive since $-\Delta^r(\tau^p) > -\Delta^r(\tau^m)$ and less than 1 because $h^r > -\Delta^r(\tau^p)$. If the poor attempt a revolution following concession with probability $\rho > \bar{\rho}$, the weak type would choose full democratization with probability 1. In contrast if $\rho < \bar{\rho}$, the weak type would prefer to always play $A = c$.

Finally, we define \bar{s} as the probability that the weak type plays concede, which will ensure from Bayes' rule that $\pi^W(c) = \bar{\pi}$. This gives

$$\bar{s} = \frac{p^F \bar{\pi}}{p^W(1 - \bar{\pi})} \in (0, 1).$$

Assumption 3 ensures that \bar{s} is less than 1. We can now state the main result of the paper.

Proposition 2. In the game with incomplete information, there are always two equilibria

1. *A mixed strategy equilibrium: the three types of the elite play $\sigma^T = r$, $\sigma^F = c$, and $\sigma^W = d$ with probability $1 - \bar{s}$ and $\sigma^W = c$ with probability \bar{s} . The poor play*

$\rho(r) = \rho(d) = 0$, $\rho(c) = 1$ with probability $\bar{\rho}$, $\rho(c) = 0$ with probability $1 - \bar{\rho}$, and have beliefs $\pi^W(c) = \bar{\pi}$.

2. A pure strategy equilibrium where

- If $-\Delta^r(\tau^p) < m^F$, then $\sigma^T = r$, $\sigma^F = \sigma^W = d$, and $\rho(r) = \rho(d) = 0$, $\rho(c) = 1$, with beliefs $\pi^W(c) \in [\bar{\pi}, 1]$ off the equilibrium path.
- If $-\Delta^r(\tau^p) > m^F$ then $\sigma^T = \sigma^F = r$, $\sigma^W = d$, and $\rho(r) = \rho(d) = 0$, $\rho(c) = 1$, with beliefs $\pi^W(c) \in [\bar{\pi}, 1]$ off the equilibrium path.

First note that repression is a dominant strategy for type $t = T$, so $\sigma^T = r$ in all equilibria. Next, the weak type will never use repression, so we can rule out $\sigma^W = r$. Then, the nature of equilibria hinges on whether the poor expect the weak type to fully democratize or simply make a concession in the hope of reducing overall redistribution. There is always a mixed strategy equilibrium, equilibrium (1) above, where the weak type pretends, some of the time, to be the flexible type and extends voting rights to the middle-class only (rather than choosing full democratization). In this mixed strategy equilibrium, the weak type is indifferent between choosing full and limited democratization, and the poor are indifferent between revolution and no revolution following $A = c$.⁶

Of particular interest for this paper are the second type equilibria. In these equilibria, the flexible type chooses not to make any concessions, even though in the complete information case it always chose concession, and this concession was sufficient to prevent revolution. The reason is that the poor interpret concession as a sign of weakness, a feature captured by the off-equilibrium-path beliefs $\pi^W(c) \in [\bar{\pi}, 1]$.⁷ Since making a concession and then having to fight the revolution is the worst outcome for the flexible type, they prefer repression or full democratization. If the cost of repression is high relative to the costs of taxation in a democracy, i.e., if $-\Delta^r(\tau^p) < m^F$, the flexible elite will choose full democratization. On the other hand, if $-\Delta^r(\tau^p) > m^F$, the taxes in a democracy are so high that they prefer repression to full democratization. This captures the discussion in the introduction that under certain circumstances, concessions will be interpreted as a sign of weakness. In Machiavelli's words, rulers, in this case the rich elite, have to either 'crush' or 'pamper' the opposition.

⁶ If ϕ were sufficiently greater than 1, the mixed strategy equilibrium could fail to exist because the flexible type may prefer to repress. Our assumption that $\phi < 1 + \varepsilon$ ensures that the mixed strategy equilibrium always exists. Also, if Assumption 3 did not hold, this mixed strategy equilibrium would be replaced by a pooling equilibrium in which both the weak and the flexible types play $A = c$ with probability 1.

⁷ Notice that this Perfect Bayesian Equilibrium satisfies the Intuitive Criterion of Cho and Kreps (1987) and other refinements because both the weak and flexible types would benefit from deviating to $A = c$ if the poor did not interpret this as a sign of weakness. In fact, the weak type would benefit more from such a deviation.

Interestingly, revolutions also happen along the equilibrium path due to incomplete information. Recall that with complete information, revolutions were never attempted. In contrast, in the mixed strategy equilibrium, the poor attempt a revolution with probability $\bar{\rho}$ following a limited franchise extension. When such a concession is made by the flexible type, the revolution attempt is suppressed. However, if the concession is made by the weak type, which happens with probability $\bar{\pi}$, and the poor attempt a revolution, which happens with probability $\bar{\rho}$, then the rich are overthrown by a successful revolution.

2.3. Comparative statics

We now consider the comparative statics of the equilibria with respect to inequality. Consider the equilibria in Proposition 2. Higher inequality, especially a lower level of h^p , will increase τ^p , the tax rate preferred by a poor agent. This makes democracy more costly for a flexible type and makes it more likely that $m^F < -\Delta^r(\tau^p)$. Therefore, an economy in which there is a large gap between the poor and the rich is more likely to experience repression rather than full democratization. An increase in τ^p also affects the mixed strategy equilibrium. In particular, it increases the probability that there will be a revolution attempt, $\bar{\rho}$.

Interestingly, the tax level that will be chosen by a middle-class voter is also important in determining the equilibrium political regime. Take h^p as given so that τ^p is fixed. Now consider a decrease in h^m , that is the middle-class become poorer relative to the rich elite. This will naturally increase τ^m , hence increase $\Delta^p(\tau^m)$ and decrease $\Delta^r(\tau^m)$. As a result, $\bar{\pi}$ and \bar{s} decline, implying that the weak type chooses full democratization with a greater probability, and $\bar{\rho}$ increases, implying more frequent revolution attempts.

3. Concluding comments

Many significant moves towards more democratic regimes take place amidst social unrest and turbulence. We have argued in previous work (Acemoglu and Robinson, 1997, 1999) that democratization is often a direct response to such social unrest and helps to defuse the unrest by making a credible commitment to future redistribution. The resulting redistribution is often quite large, however. For example, in Acemoglu and Robinson (1997), we documented the increase in redistribution following democratization in Britain, Sweden and France. Couldn't the elite make a lesser concession to defuse the unrest? Since political concessions are often observed in democratic systems, one might think the answer to this question should be yes. Nevertheless, there are good reasons to expect such concessions to be rare. In a turbulent period, a concession can be viewed as a sign of a weakness and may lead to further demands or even to

revolution. The elite may therefore be forced to use repression to suppress the unrest or make the most generous concession, the transition to a full democracy. This is an insight that goes back to Machiavelli's analysis of how rulers should control their subjects in *The Prince*.

Although our analysis focuses on the conflict between a rich elite and the disenfranchised poor, the general issues apply in other situations of conflict in a turbulent environment. It might be interesting to investigate whether the ideas we have put forward in this paper, and more generally the insight of Machiavelli, have relevance in other situations of conflict. For example, could the difficulty in ending ethnic conflicts be related to concerns that concessions will be interpreted as a sign of weakness?

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