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## ABSTRACT

A key idea in political economy is that policy is often tailored to voters who are not ideologically attached - swing voters. We show, however, that in political environments where political parties can use repression and violence to exclude voters from elections, they may optimally target the swing voters. This is because they anticipate that if they had to compete for the support of these voters, they would end up giving them a lot of policy favors. Hence in weakly institutionalized political environments swing voters are cursed rather than blessed. We illustrate the analysis with a discussion of recent political events in Zimbabwe.

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# 1 Introduction

A central idea in political economy is that voters who are not ideologically attached to a political party, so-called 'swing voters,' attract policy favors and redistribution because they become the focus of electoral competition. In many parts of the world, however, politicians do not just use carrots to win elections, they also use sticks - coercion and violence. In this paper we show that expanding the 'policy space' to incorporate this can completely overturn the predictions of the standard model. The reason for this is simple, with all groups of voters at play, political competition does indeed lead to a chase for the support of swing voters. In equilibrium this enables such voters to extract a large amount of rent from politicians. Anticipating this, politicians have an incentive to use violence to effectively disenfranchise swing voters. Indeed, and surprisingly, we show that it can be more attractive for an incumbent to disenfranchise the swing voters than the core supporters of the opposition. Swing voters are not blessed but cursed.[1]

Are these ideas of only theoretical interest? We believe not. Since coming to power in Zimbabwe in 1980, Robert Mugabe and his ZANU-PF party has contested and won elections which feature both policy favors, such as land reform, and coercion. As Joseph Kuratidzi, an opposition activist noted after the last election in Zimbabwe, "Mugabe said he would never give up power. It was a mistake to think a vote could change that. When you vote you let him know who to kill."[2]

Case study evidence is consistent with the view that much of this violence was aimed not at the core supporters of Mugabe's opposition, but rather at the swing voters. Already in the election campaigns following independence in 1980 violence was widespread. Laakso (1999, p. 45), referring from the report of the Election Commissioner, notes that

> "In areas where people were highly committed to one party, as in Matabeleland and much of Mashonaland, allegations of intimidation were not as frequent. Instead, Victoria Province, part of the Midlands and part of Manicaland, where both liberation

[1] Our paper therefore presents a different notion of 'curse' than the one formalized by Feddersen and Pesendorfer (1996).

[2] Guardian Weekly, 27/06/08, p. 12.

parties had ground, were said to be the areas of most serious intimidation."

During the 1990s the Movement for Democratic Change emerged as the main opposition party, and in the 2000 parliamentary elections was seriously threatening Zanu-PF's position. Meredith (2002, p. 215) reports that

> "The most fiercely contested was a by-election in Bikita West, a rural constituency that MDC had narrowly won in the general election and that Zanu-PF was determined to wrest back ... Zanu-PF militias set up camps around the constituency, beating up people, forcing them to attend rallies, and confiscated identity cards they needed in order to vote."

In 2005 Operation Murambatsvina (OM) (literally in Chishona 'Operation Drive out Rubbish') was launched by the government. This was a nationwide policy of repression analyzed by Bratton and Masunungure (2006) using survey data collected by the Afrobarometer. They show that (pp. 35-36) OM "caught supporters of the ruling party as well as its opponents. While opposition individuals or blocs may have been singled out, an equally plausible story allows that the security apparatus cracked down on *any* young unemployed - or underemployed, or informally employed - person who was a potential recruit for anti-state protest." In our view it is exactly these same people who may constitute the swing voters in current Zimbabwe.

# 2 A model

We consider a society with three groups of potential voters, where one voter group is less ideological than the other voter groups. We call this group swing voters, while we term the other groups ideological voters. In turn, among the ideological voter groups, one group has a majority of voters with an ideological bias in favor of the incumbent politician $A$, while the other group has a majority of voters in favor of the opposition politician $B$. Each voter group consists of a continuum of agents normalized to unity, thus the total number of voters equals 3. A voter $j$ has an ideological bias $\delta^j$ toward the incumbent politician $A$. In the the swing voters' group, which we term

group $S$, $\delta^j$ is uniformly distributed on the interval $[-\frac{1}{2\lambda h}, \frac{1}{2\lambda h}]$ with density $\lambda h$. In the group of ideological voters that favor politician $A$, which we term group $A$, $\delta^j$ is uniformly distributed on the interval $[-\frac{1-\mu}{h}, \frac{\mu}{h}]$ with density $h$, while in the group of ideological voters that favor politician $B$, which we term group $B$, $\delta^j$ is uniformly distributed on the interval $[-\frac{\mu}{h}, \frac{1-\mu}{h}]$ with density $h$. As swing voters care less about ideology than ideological voters $\lambda > 1$, and the higher is $\lambda$ the less relatively ideological the swing voters are. Furthermore, among group $A$ voters a share $\mu$ has an ideological bias in favor of politician $A$ while among group $B$ voters a share $\mu$ has an ideological bias in favor of politician $B$. Thus $\mu > \frac{1}{2}$. Each individual is also subject to an aggregate shock in favor of politician $A$, denoted $\psi$, which is a random variable uniformly distributed on the interval $[-\frac{1}{2\phi}, \frac{1}{2\phi}]$ with density $\phi > 0$.

By holding power politicians receive some exogenous gross rents $R$. We denote the income transfer to a voter in group $i \in \{S, A, B\}$ from politician $k \in \{A, B\}$ by $y_k^i \geq 0$. In addition to using transfers to attract support we assume that the incumbent, $A$, controlling the police and state apparatus, may choose to use repression and violence to exclude one group of the voters from the election at cost $C$. The incumbent then must decide (i) if to use violence and repression and (ii) in case which group this should be targeted. Thus we basically employ a probabilistic voting model based on Lindbeck and Weibull (1987) extended to allow the possibility that the incumbent can disenfranchise a group of voters.

Citizens attempt to maximize their utility which is the sum of consumption and ideology. Politicians attempt to maximize the expected value of their rents minus repression cost.

## 2.1 Political support

A voter $j$ from group $i \in \{S, A, B\}$ supports the incumbent politician $A$ if

$$\delta^j \geq -y_A^i + y_B^i - \psi.$$

If the opposite is the case the voter supports the opposition politician $B$. Denote the number of voters from group $i$ that supports politician $k$ by $N_k^i$. We then find

$$N_A^A = \int_{-y_A^A + y_B^A - \psi}^{\frac{\mu}{h}} h dj = \mu + h\left(y_A^A - y_B^A + \psi\right),$$

$$N_A^B = \int_{-y_A^B+y_B^B-\psi}^{\frac{1-\mu}{h}} hdj = 1-\mu+h\left(y_A^B - y_B^B + \psi\right),$$

$$N_A^S = \int_{-y_A^S+y_B^S-\psi}^{\frac{1}{2\lambda h}} \lambda h dj = \frac{1}{2} + \lambda h\left(y_A^S - y_B^S + \psi\right).$$

## 2.2 Free and fair elections

Consider first the case where the incumbent chooses not to use violence and repression. In this case all agents vote, and the probability the incumbent is reelected, which we denote by $\Pi$, is given by

$$\Pi = \Pr\left\{N_A^A + N_A^B + N_A^S \geq \frac{3}{2}\right\},$$

which can be shown to be

$$\begin{aligned}\Pi &= \Pr\left\{\psi \geq -\frac{y_A^A - y_B^A + y_A^B - y_B^B + \lambda\left(y_A^S - y_B^S\right)}{2+\lambda}\right\} \\ &= \frac{1}{2} + \frac{\phi[y_A^A - y_B^A + y_A^B - y_B^B + \lambda\left(y_A^S - y_B^S\right)]}{2+\lambda}.\end{aligned}$$

The incumbents' expected rents in the case where he decides to run free and fair elections is given by $V^A = \Pi\left(R - y_A^A - y_A^B - y_A^S\right)$. The incumbent must now find the policy vector $\left(y_A^A, y_A^B, y_A^S\right)$ that maximizes his expected rents. By observing that $\frac{dV^A}{dy_A^A} = \frac{dV^A}{dy_A^B} < \frac{dV^A}{dy_A^S}$ it follows that the solution to this maximization problem involves $y_A^A = y_A^B = 0$, and incorporating that politician B will also give transfers to swing voters only (see below), the remaining first order condition is

$$\frac{\phi\lambda}{2+\lambda}\left(R - y_A^S\right) = \frac{1}{2} + \frac{\phi\lambda\left(y_A^S - y_B^S\right)}{2+\lambda}. \tag{1}$$

The left hand side is the expected benefit of increasing transfers to swing voters - it constitutes the net rents of winning the election $\left(R - y_A^S\right)$ multiplied by the increase in the re-election probability $\frac{\phi\lambda}{2+\lambda}$ by giving more transfers. The right hand side is the expected cost of giving more transfers - it simply equals the reelection probability since this is the probability the incumbent has to pay transfers after the election.

Politician $B$ similarly chooses the policy vector $\left(y_B^A, y_B^B, y_B^S\right)$ that maximizes his expected rents $(1-\Pi)\left(R - y_B^A - y_B^B - y_B^S\right)$. The solution to this problem involves $y_B^A = y_B^B = 0$, and the remaining first order condition

$$\frac{\phi\lambda}{2+\lambda}\left(R - y_B^S\right) = \frac{1}{2} - \frac{\phi\lambda\left(y_A^S - y_B^S\right)}{2+\lambda}. \tag{2}$$

From (1) and (2) we then find the Nash equilibrium

$$y_A^S = y_B^S = R - \frac{2+\lambda}{2\phi\lambda}.$$

In turn this implies a reelection probability for the incumbent given by $\Pi = \frac{1}{2}$, and expected rents with optimally chosen transfers under free and fair elections, denoted $V^{A*}$, given by

$$V^{A*} = \frac{2+\lambda}{4\phi\lambda}. \tag{3}$$

Thus in this case policy is completely tailored to the swing voters - ideological groups get no transfers. The higher is $\lambda$, that is the less ideologically attached the swing voters are relative to the rest of the population, the lower are expected political rents. A high $\lambda$ means that the marginal effect on the election probability of increasing transfers to swing voters is high, in turn making political competition stiff, increasing transfers to voters and decreasing the rents of the politicians. Furthermore, the higher is $\phi$, the lower are the expected political rents.

If the incumbent chooses to include violence and repression as part of his political strategy, he may target the swing voters' group $S$ or he may target the ideological group $B$ with a majority of voters with an ideological bias in favor of the opposition (it can easily be shown that he will never direct the violence and repression towards the voters with an ideological bias in favor of himself). We consider these cases in turn.

## 2.3 Violence against swing voters

Denote the reelection probability of the incumbent when the he decides to use violence and repression to exclude the swing voters from the election by ${}_{-S}\Pi$. This is given by

$${}_{-S}\Pi = \Pr\left\{N_A^A + N_A^B \geq 1\right\} = \frac{1}{2} + \frac{\phi(y_A^A - y_B^A + y_A^B - y_B^B)}{2}.$$

His expected rents in the case where the incumbent disenfranchises the swing voters is given by ${}_{-S}V^A = {}_{-S}\Pi\left(R - y_A^A - y_A^B - y_A^S\right) - C$. The incumbent must again find the policy vector $\left(y_A^A, y_A^B, y_A^S\right)$ that maximizes his expected rents. By observing that $\frac{d_{-S}V^A}{dy_A^S} < 0$ it follows that the solution to this maximization problem involves $y_A^S = 0$, and that the remaining first order condition is

$$\frac{\phi}{2}\left(R - y_A^A - y_A^B\right) = \frac{1}{2} + \frac{\phi(y_A^A - y_B^A + y_A^B - y_B^B)}{2}. \tag{4}$$

Similarly politician $B$ maximizes $(1 - {}_{-S}\Pi)\left(R - y_B^A - y_B^B - y_B^S\right)$, implying $y_B^S = 0$ and the remaining first order condition

$$\frac{\phi}{2}\left(R - y_B^A - y_B^B\right) = \frac{1}{2} - \frac{\phi(y_A^A - y_B^A + y_A^B - y_B^B)}{2}. \tag{5}$$

From (4) and (5) we then find

$$y_A^A + y_A^B = y_B^A + y_B^B = R - \frac{1}{\phi}.$$

We still have policy convergence (in the transfers dimension) in the sense that the total amount of transfers given by the two politicians is the same - the distribution of transfers between the two ideological groups does not matter for the election result nor the expected rents of politicians. In turn the reelection probability for the incumbent is again given by ${}_{-S}\Pi = \frac{1}{2}$ and the expected rents when he disenfranchises swing voters by

$${}_{-S}V^{A*} = \frac{1}{2\phi} - C. \tag{6}$$

By comparing (3) and (6) we can then find that a strategy of violence and repression against swing voters dominates a strategy of free and fair elections when

$$C < \frac{\lambda - 2}{4\phi\lambda}. \tag{7}$$

At first sight one may think that if the use of violence and repression were costless then it would always pay to disenfranchise the swing voters since this reduces political competition. However, this is not the case. The natural measure of political competition in our model is the derivative of the

election probability with respect to transfers. Under free and fair elections this measure of political competition is given by $\frac{\phi\lambda}{2+\lambda}$, while with repression against the swing voters it is given by $\frac{\phi}{2}$. Disenfranchising the swing voters has two opposing effects on the extent of electoral competition. First, eliminating the most responsive voters decreases political competition as now politicians compete for less responsive voters. Second, however, with fewer voters the marginal effect on the reelection probability of capturing each voter increases, making political competition stronger. The former effect dominates when $\lambda > 2$, while the latter dominates if the opposite is the case. Thus if swing voters are not very different from ideological voters it is not optimal to disenfranchise them even if this is costless, such disenfranchising will only result in increased political competition and increased transfers to voters. We note that given $\lambda > 2$ the strategy of disenfranchising swing voters is more likely to dominate a strategy of free and fair elections the higher is $\lambda$, the higher is $\phi$, and the lower is $C$.

A standard result in models of political competition is that when voters care more economic factors relative to other characteristics of the candidates, then electoral competition is efficient in the sense that transfers to voters are high and rents to politicians low, see e.g. Persson and Tabellini (2000). By contrast, in our model this is exactly the situation where violence becomes relatively attractive as a means to reduce transfers to voters and increase political rents.

## 2.4 Violence against opposition supporters

In the remainder we assume that (7) is fulfilled so that free and fair elections will not emerge in equilibrium. However this may not imply that swing voters are cursed, as the incumbent must consider the alternative violent strategy of targeting the supporters of the opposition. Thus consider finally the case where the incumbent chooses to disenfranchise the ideological group $B$ that has a bias in favor of his opponent. Denote his reelection probability in this case ${}_{-B}\Pi$, which is given by

$${}_{-B}\Pi = \Pr\left\{N_A^A + N_A^S \geq 1\right\} = \frac{1}{2} + \frac{\phi(\mu - \frac{1}{2})}{h(1+\lambda)} + \frac{\phi[y_A^A - y_B^A + \lambda\left(y_A^S - y_B^S\right)]}{1+\lambda}.$$

His expected rents in this case are given by ${}_{-B}V^A = {}_{-B}\Pi\left(R - y_A^A - y_A^B - y_A^S\right) - C$. By observing that $\frac{d_{-B}V^A}{dy_A^B} < 0$ it follows that the solution to the incumbents maximization problem involves $y_A^B = 0$, and by further observing that $\frac{d_{-B}V^A}{dy_A^A} < \frac{d_{-B}V^A}{dy_A^S}$ it follows that $y_A^A = 0$ and that the remaining first order condition is

$$\frac{\phi\lambda}{1+\lambda}\left(R - y_A^S\right) = \frac{1}{2} + \frac{\phi(\mu - \frac{1}{2})}{h(1+\lambda)} + \frac{\phi\lambda(y_A^S - y_B^S)}{1+\lambda}. \tag{8}$$

Similarly politician $B$ maximizes $(1 - {}_{-B}\Pi)\left(R - y_B^A - y_B^B - y_B^S\right)$, implying $y_B^A = y_B^B = 0$ and the remaining first order condition

$$\frac{\phi\lambda}{1+\lambda}\left(R - y_B^S\right) = \frac{1}{2} - \frac{\phi(\mu - \frac{1}{2})}{h(1+\lambda)} - \frac{\phi\lambda(y_A^S - y_B^S)}{1+\lambda}. \tag{9}$$

From (8) and (9) we then find the Nash equilibrium

$$y_A^S = R - \frac{1+\lambda}{2\phi\lambda} - \frac{\mu - \frac{1}{2}}{3\lambda h},$$

$$y_B^S = R - \frac{1+\lambda}{2\phi\lambda} + \frac{\mu - \frac{1}{2}}{3\lambda h}.$$

Thus in this case we do not have policy convergence - by eliminating the core supporters of his opponent the incumbent shifts the electorate towards voters viewing himself more favorably. In turn this increases his election probability, making the expected cost of transfers for him higher and for the opposition lower. This makes the incumbent choose less transfers to voters than his opponent, although naturally this effect cannot be sufficiently strong to outweigh the electoral advantage the incumbent has in the first place. The reelection probability for the incumbent is now given by ${}_{-B}\Pi = \frac{1}{2} + \frac{\phi(\mu - \frac{1}{2})}{3h(1+\lambda)}$ and his expected rents by

$${}_{-B}V^{A*} = \left(\frac{1}{2} + \frac{\phi(\mu - \frac{1}{2})}{3h(1+\lambda)}\right)\left(\frac{1+\lambda}{2\phi\lambda} + \frac{\mu - \frac{1}{2}}{3\lambda h}\right) - C. \tag{10}$$

## 2.5 Equilibrium violence

Comparing (6) and (10) we find that a strategy of using violence and repression to disenfranchise swing voters rather than the ideological voters of the

opposition is more likely (i) the lower is $\mu$, (ii) the higher is $\lambda$, (iii) the higher is $h$, and (iv) the lower is $\phi$.

A low $\mu$ means that core voters are not very attached to their politician. This implies that there is not much of an electoral advantage to be gained by disenfranchising them, and a strategy of disenfranchising swing voters instead becomes relatively more attractive.

A high $\lambda$ makes it relatively costly to have swing voters participating in the election compared to other voters because one ends up giving them a lot of policy favors. Then it is relatively more attractive to repress the swing voters.

A high $h$, meaning that there are few ideological hardliners in the population as a whole, makes it relatively more attractive to target the swing voters. The intuition for this is that a strategy of disenfranchising ideological voters of the opposition is relatively less politically valuable if the remaining ideological voters are not very faithful to the incumbent and if the ones one targeted where not very faithful to the opponent. Thus when ideological heterogeneity is low targeting swing voters is relatively more attractive.

Finally, strong political competition in the form of a low $\phi$ makes targeting swing voters relatively more attractive because when electoral competition is stiff, there is relatively less to gain by disenfranchising ideological voters.

# 3 Concluding remarks

In many elections in 'weakly institutionalized polities' (to use the terminology of Acemoglu, Robinson and Verdier, 2004) elections involve not just policies, but violence and coercion. In this paper we have shown that changing the probabilistic voting model in a simple way to allow incumbents repress groups of voters may turn the result that policy is tailored to swing voters on its head. It is precisely because politicians compete for the support of swing voters that it is attractive to use violence to eliminate them from the game. Moreover, the easier the swing voters swing, the harder they fall.

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