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Tribalism as a Minimax-Regret Strategy: Evidence of Voting in the 2007 Kenyan Elections

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Although many studies find that voting in Africa approximates an ethnic census in that voting is primarily along ethnic lines, hardly any of the studies have sought to explain ethnic voting following a rational choice framework. Using data of voter opinions from a survey conducted two weeks before the December 2007 Kenyan elections, we find that the expected benefits associated with a win by each of the presidential candidates varied significantly across voters from different ethnic groups. We hypothesize that decision to participate in the elections was influenced by the expected benefits as per the minimax-regret voting model. We test the predictions of this model using data of voter turnout in the December 2007 elections and find that turnout across ethnic groups varied systematically with expected benefits. The results suggest that individuals participated in the elections primarily to avoid the maximum regret should a candidate from another ethnic group win. The results therefore offer credence to the minimax regret model as proposed by Ferejohn and Fiorina (1974) and refute the Downsian expected utility model.

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I. Introduction

A well-known prediction of the rational voter hypothesis as formulated by Downs (1957) and extended by Tullock (1967) and Riker and Ordeshook (1968), is that, given the extremely low probability that an individual voter brings about the victory of a candidate or issue, rational self-interested individuals should not vote. However, this outcome contradicts the observed behavior of voters: many vote even in those elections where the probability of one's vote being pivotal is miniscule (that is when the number of voters "N" is large such that the probability of a voter being decisive approaches zero). Given that rationality and self interest assumptions are applicable in political markets as well as in private markets, this outcome presents a paradox. An interesting focus in the study of the economics of voting has been an attempt to unravel why rational people vote when the expected benefits from voting are likely to be much less than the costs.

Several plausible theories to explain the paradox of voting have been proposed.[2] In one such attempt, Ferejohn and Fiorina (1974; 1975), seek to rescue 'rational choice theorists from this embarrassing predicament' and propose an alternative voting theory whereby the motivation for voting is to minimize possible maximum regret-the *minimax-regre*t *strategy*. Ferejohn and Fiorina argue that voters cannot assign probabilities to outcomes under uncertainty. Instead, they compute regrets (losses) associated with different strategies and choose the strategy that minimizes maximum possible regret. Thus, in this formulation, the voter is motivated to vote in order to avoid regretting should a less preferred candidate or issue were to be selected as a result of the voter abstaining. Although the minimax-regret model others a promising explanation of voter participation, it has been challenged on theoretical grounds. For example, the model has been criticized because of its extreme assumption of complete uncertainty concerning probabilities of electoral outcomes. Furthermore, the model lacks strong empirical support (Blais et al. 1995).

In this paper, we provide evidence that others credence to the theory of voting on the basis of minimax-regret. We utilize unique data of opinions by prospective Kenyan voters obtained through a survey conducted two weeks before the 27 December 2007 elections. The information on voter opinions is complemented with evidence of actual turnout in the election as reported by the Kenyan Electoral Commission. By evaluating voter opinions on a number of issues, we present payoff and regret matrices from which we formulate plausible hypotheses and predictions about voting behavior. Our results suggest that ethnic voting patterns are to a large extent the outcome of voting on the basis of minimax-regret. In Section II, we provide a brief summary of voter opinions and also simple payoff and regret matrices followed by some empirical results of voter turnout. Section III concludes with suggestions for institutional reforms.

[2] See Dowding (2005) and Geys (2006) for a recent survey of various studies that have sought to resolve the voting paradox.

II. Minimax-Regret and Tribal Voting

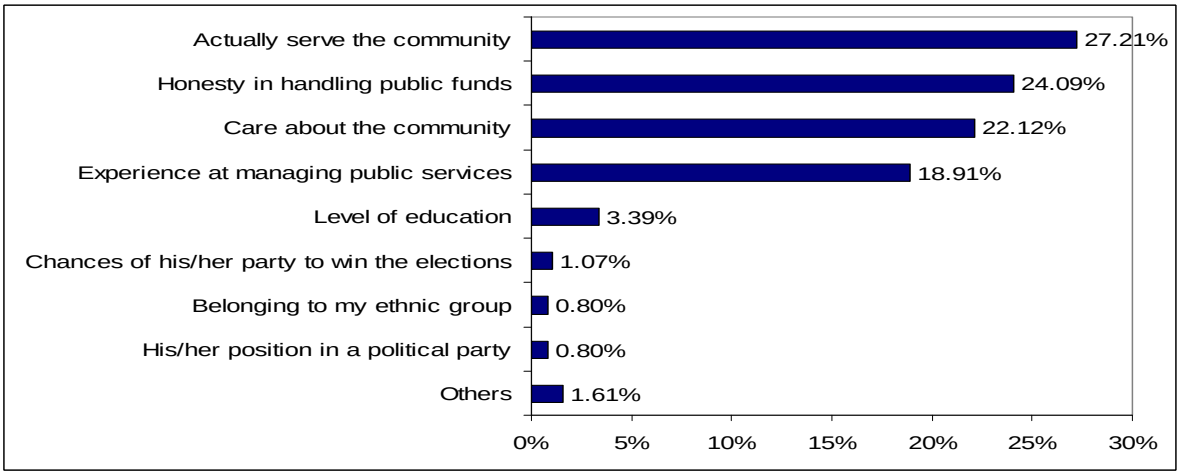
The introduction of competitive party politics in Kenya has generally been associated with increased ethnic polarization (Muigai 1995; Oyugi 1997; Kimenyi 1997; Orvis 2001). Of considerable concern is that competitive elections have been marred by widespread ethnic violence (Kimenyi and Ndung'u 2005). In December 2007, Kenya held what was probably the most competitive presidential election since independence. The three leading candidates included the incumbent president Mwai Kibaki (Party of National Unity-PNU), Raila Odinga (Orange Democratic Movement-ODM), and Kalonzo Musyoka (Orange Democratic Movement-Kenya-ODM-K). [3] As the election date approached, opinion polls showed that Kibaki and Odinga were in a statistical tie and it was difficult to predict a winner with any degree of certainty. Such a competitive and peaceful electoral process should foster confidence in the institutions of democracy. Unfortunately, the election process ended up in a dispute followed by unprecedented levels of violence and displacement of people thereby weakening the institutions of governance considerably. The analysis in this paper sheds light on why and how Kenyans voted, and what factors could have triggered divisions of the electorate and subsequent post-election violence.

About two weeks before the 27 December 2007 general election, researchers from the University of Oxford, University of Connecticut and Michigan State University, conducted a survey of voter opinions. The primary purpose of the survey was to gather information on key factors influencing voter preferences. The survey collected information on a wide range of voter characteristics and also opinions about the government, accountability, violence, candidate and party preferences, etc. The survey sample included 1,207 Kenyans aged 18 and over from all of the country's eight provinces, and covering 76 out of 210 electoral constituencies. The sample is nationally representative and as such captures the rural-urban split; and the ethnic distribution of the sample respondents mirrors the ethnic distribution of the national population according to the country's latest population Census (see also Bratton and Kimenyi, 2008).

The survey data provide a unique opportunity to explore what motivated Kenyans to vote and what shaped their voting intentions. To understand voting intentions we started by asking likely voters to state the main issue motivating them to select their preferred presidential candidate. As data in Figure 1 shows, 90 per cent of the population stated that they would select a candidate based on the candidate's track-record of honesty in managing public services and care for the community. Perhaps, most surprisingly, only less than one per cent of survey respondents (0.80 percent) stated that the ethnicity of the candidate was the most important factor in shaping their voting motivations. From the responses to this question we might infer that voters are interested in the quality of leadership and not on the ethnicity of their leader.

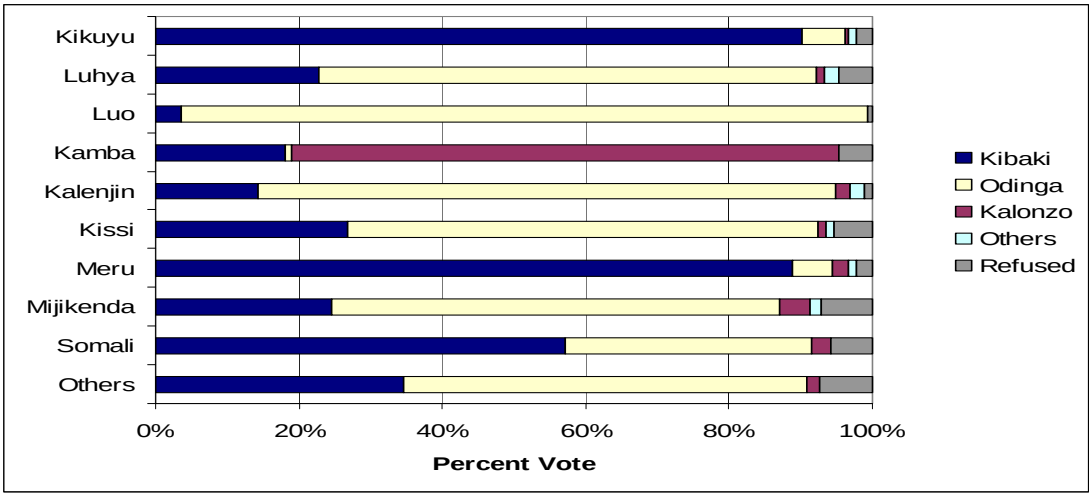
[3] Although there were several other presidential candidates, only three had national support and all others were marginal with limited following.

Figure 1. Self-Described Voting Motivations



Nevertheless, a different picture emerges when we look at the voting intentions according to voters' ethnicity. Figure 2 presents intentions of voters from three ethnic groups that also had major presidential candidates. The Figure shows that there is a clear uniform pattern in the voting intentions of each ethnic group. The three main presidential candidates, Kibaki (a Kikuyu), Odinga (a Luo) and Kalonzo (a Kamba) were overwhelmingly supported by members of their own ethnic groups. Even voters from other ethnic groups that did not have a major presidential candidate contending in the elections were strongly aligned to one of the three main presidential candidates. Thus, on the one hand, voters indicate that their primary motivation for candidate choice is driven by policy and the character of the candidate. On the other hand, when asked how they intend to vote, clear ethnic patterns emerge.

Figure 2. Voting Intentions by People's Tribe of Origin



We explore further possible reasons for this apparent contradiction between stated factors influencing the choice of a candidate and the tendency to vote along ethnic lines. One possible reason could be that preferences over issues and policy vary systematically and in distinct ways across ethnic groups. In other words, the positions

of the median ethnic voter vary substantially across the various ethnic groups. Another possible explanation might be that there is low level trust amongst ethnic groups. Lack of trust might motivate voters to select a candidate from own ethnic group over an otherwise better candidate just because they may not trust leaders from other ethnic groups. In the survey, one question sought to investigate social distance between groups by focusing on expressed trust of members of other ethnic groups. As Table 1 shows, Kenyans mistrust members of other ethnic groups. Very few respondents indicated that they trust members outside their own ethnic group a lot. The lack of trust of people from other ethnic groups is particularly high among those of Kikuyu and Luo origin. For these two groups, up to 60 percent of the respondents *do not trust at all* or *trust only a little*, people from other ethnic groups.[4]

Table 1: Ethnicity and Trust

Respondent's Ethnic Group	**How much do you trust Kenyans from other ethnic groups?**			
	Not at all	Just a little	Somewhat	A lot
Kikuyu	20.8	42.0	28.8	7.5
Luo	20.3	41.9	30.4	4.7
Kamba	6.2	43.8	44.6	4.5
Luhya	16.3	42.6	28.9	5.8
Kalejin	13.6	45.6	30.1	9.7
Mijikenda	2.7	36.0	41.3	13.3
ALL	14.3	42.6	31.9	7.8

Given the apparent extensive lack of trust expressed by respondents, it is of interest to determine which ethnic groups mistrust each other most and also to unravel why this might be the case. We do so in an indirect way by asking respondents whether they feel particularly distant from a specific political party. Given that political parties are overwhelmingly supported by specific ethnic groups, assessing whether people feel very distant to a party might tell us which ethnic groups they do not trust.

The results reported in Table 2 reveal that 40 percent of respondents stated that they felt very distant from some specific political party. Of the Kikuyus, over 50 percent felt distant from the ODM (a party supported mainly by Luos, Kalenjin and Luhyas). Likewise, a similar proportion of Luos stated that they felt distant from the PNU (a party supported mainly by Kikuyu, Embu and Merus). The data also show that other ethnic groups felt very distant from the three main political parties. For instance, the Kambas felt very distant from the ODM, while the Luhya, Kalenjin and Mijikenda felt very distant from the PNU. From this evidence we can infer that the high levels of mistrust across ethnic groups extend to the political arena. Furthermore, it is possible

[4] It is important to note that the information does not really tell us who the groups mistrust. In other words, we cannot conclude that the responses represent mistrust of the two groups. This is possible but not conclusive from the data.

to infer which groups mistrust each other most. In this case, it does appear that there is a very high level of mistrust between the Kikuyus and Luos.

Table 2: Opinions about Political Parties

Respondent's Ethnic Group	**Do you feel very distant from any particular party and which party is that?**			
	ODM	ODM-K	PNU	NA
Kikuyu	52.7	5.8	2.7	35.4
Luo	3.4	4.1	53.4	36.5
Kamba	30.4	1.8	9.8	58.0
Luhya	12.6	2.6	44.7	36.3
Kalejin	7.8	1.9	41.7	9.7
Mijikenda	5.3	10.7	28.0	50.7
ALL	42.9	6.9	33.0	7.8

To explain why voting behaviour might be influenced by the expressed mistrust of other ethnic groups, we look into some possible sources of mistrust. During the election campaign, the opposition candidates raised issues of ethnic favouritism and discrimination by the incumbent government. Such perceptions could breed mistrust and grievances that may motivate voters to revert to ethnic voting. In the survey, one question sought to gather information about respondents' perceptions of how their own ethnic group was treated by the incumbent government relative to other ethnic groups. Table 3 reports the summary of the responses by ethnicity. The most salient result concerns the responses of the Luo and Kikuyu. While only 3.1 percent of Kikuyus felt that their group was treated worse or much worse than others, this figure was 41.9 percent for Luos. Likewise, while over 20 percent of Kikuyus consider that their group is treated better or much better, for Luo respondents this figure is only 4.1 percent.

Table 3: Opinions about Group Treatment by Government

Respondent's Ethnic Group	**Is your group's treatment by government, worse, the same or better**					
	Much worse	Worse	Same	Better	Much Better	NA
Kikuyu	0	3.1	31.4	16.8	4.9	43.8
Luo	10.1	31.8	17.6	2.7	1.4	36.5
Kamba	0.9	10.7	31.2	3.6	0.9	52.7
Luhya	1.1	7.4	21.6	10	1.1	56.8
Kalejin	4.9	7.8	34.0	1.9	0.0	50.5
Mijikenda	2.7	28.0	13.3	5.3	0.0	50.7
ALL	2.6	13.5	25.8	9.1	1.9	46.4

Voter opinions and perceptions are informative in terms of ethnic groups' expectations. Low trust of members of other ethnic groups implies that it is unlikely that the majority of voters would trust candidates from other ethnic groups over a candidate from their own group. Likewise, distance from a particular party also suggests that voters expect to benefit much less were such party to win the election. Thus, if we focus on Kikuyu and Luo voters, it is clear that Kikuyus expect much lower benefits from leadership under the ODM, while Luo voters expect low benefits from leadership under the PNU. In other words, the opinions convey significant differences in expectations of benefits to the two groups depending on which party wins. Luos benefit a great deal from an ODM win and Kikuyus benefit from a PNU win. According to Ferejohn and Fiorina, it is such expectations of benefits that primarily drive voting on the basis of minimax-regret.

The above conclusion is supported by the opinions of ethnic group treatment by the government. Here we observe two distinct perceptions about treatment by incumbent government: perceived preferential treatment (PT) to Kikuyus and Discriminatory treatment (DT) to Luos. Table 4 and 5 represents the payoff and regret matrices suggested by these responses. Suppose Odinga were to win. A Luo voter would expect, first, a gain by elimination of perceived discriminatory treatment (DT). At the same time, it is conceivable that the Luo voter would also expect a gain of PT (preferential treatment) under Odinga leadership. On the other hand, a win by Kibaki would result in PT to Kikuyus while a loss would yield 0 (zero) benefits (equivalent to elimination of the preferential treatment). [5] Table 5 represents the regret matrix. As is evident, the worst possible outcome for both groups is a win by a candidate from another ethnic group. Of note also is that, based on the foregoing discussion, the highest payoff is to Luo voters if Odinga wins followed by Kikuyus voters if Kibaki wins. This is because the Luos would expect a gain in DT (elimination of perceived discriminatory treatment) and also a PT (expected preferential treatment) while Kikuyus would only expect PT (preferential treatment) under a Kibaki regime.

Table 4: Ethnic Voting Payoff Matrix

Ethnicity of Voter	**Presidential Candidate and Group of origin**	
	Odinga (Luo) Wins	**Kibaki- (Kibaki) Wins**
Luo Voter	PT-DT	DT
Kikuyu Voter	-PT	PT

[5] We assume that there are no expectations of discrimination against Kikuyus under Odinga leadership. This might not be the case and it is possible that Kikuyus had expectations of discrimination if Odinga won. However, we have no information to support such expectations.

Table 5: Ethnic Voting Regret Matrix

Ethnicity of Voter	**Presidential Candidate and Group of origin**	
	Odinga (Luo) Wins	**Kibaki- (Kibaki) Wins**
Luo Voter	0	PT + (-DT)
Kikuyu Voter	-PT	0

Simple tests of Minimax-Regret Voting

We now turn to predictions of turnout. In the expected utility model, the decision to vote is based on net benefits shown as: R = BP-C, where R is the rewards from voting, B is the difference in utility a voter expects to receive if the preferred candidate wins, P is the probability that an individual's vote is decisive and C is the cost of voting. The key distinction between the Downsian expected utility model and that of the minimax-regret is that, in the expected utility maximization model, the value of P and therefore the closeness of an election, drives turnout. On the other hand, in the minimax-regret model, closeness is not an important determinant of voting and instead it is the expected benefits net of costs that determine voter turnout.

(i) Value of P and Turnout in the Kenyan Elections-Constituencies:

The predication of the Downsian model is that voter turnout is positively related to the closeness of the election. On the other hand, voting on minimax-regret does not depend on closeness. Thus, a simple test of how closeness influenced turnout in the Kenyan elections can reveal which of the two theories of voting performs better. Using reported data on actual votes cast during the 2007 presidential elections and the number of registered voters across the 209 constituencies that held elections, we compute a measure of closeness using the percentage gross margin (PGM).[6] The gross margin is smaller the closer the election and larger the larger the difference between the votes cast for winning candidate and the second most popular candidate. We then estimate a simple regression model with percentage turnout as the dependent variable (TURNOUT) and percentage gross margin (PGM) as the independent variable.[7] We also include the number of registered voters (REG) to capture potential free rider effects on turnout. According to the expected utility maximization model, we expect turnout to increase as the gross margin decreases (hence a negative relationship). On the other hand, if voting is on the basis of the minimax-regret, turnout should decrease as the gross margin decreases (hence a positive relationship). The ordinary least regression results are as follows:

[6] There are 210 parliamentary constituencies but elections in 2 constituencies were nullified.

[7] Percentage Gross Margin in a particular constituency is computed by subtracting the votes cast for the second place candidate from those of the winning candidate and dividing by total votes cast multiplied by 100.

(1) TURNOUT = 57.573 + 0.214 PGM
(41.88)*** (11.22)*** Adjusted R-Square: 0.375

(2) TURNOUT = 104.152 + 0.228 PGN – 0.430 ln REG
(7.19)*** (11.89)*** (-3.23)*** Adjusted R-Square: 0.40

These results show that turnout is higher in constituencies where the election is less ”close”, thus supporting voting on the basis of minimax-regret. At least, even if the results might not be conclusive, we can, with a fair degree of certainty conclude that voters' estimation of P did not influence voting at the constituency level.[8]

(ii) Expected B and Turnout in the Kenyan Elections-Ethnic Groups:
We have already observed that Kikuyu and Luo voters appear to be the two groups with the most to gain or lose depending on whether Kibaki or Odinga were to win. This is conveyed in the information about distance from political parties and also how the groups perceive their treatment by the government. Based on the information provided in Tables 3 to 5, and focusing on the expected benefits, we can predict that turnout should not only be highest among the Kikuyu and Luo voters but the gross margins those constituencies that are dominated by each of the groups should be high. This is confirmed in Table 6. Thus, we demonstrate minimax-regret voting by the existence of both high turnout and high gross margins.

But this conclusion might be challenged on the basis that it is probably because leading presidential candidates were from the two groups. However, looking at voting by Kambas, we notice that the gross margins are even higher than for the Kikuyus. Nevertheless, turnout was much lower. This is consistent to the expected benefits- 58 % do not feel distant from any party and about 30% consider the treatment of their group to be the same as other groups. Turnout by voters from other ethnic groups is consistent with the expected benefits inferred form Table 3 and 4. Thus, overall, we can conclude that a primary factor driving Kenyans to the ballot box is the expected benefits and thus they vote on the basis of minimax-regret.

Table: 6 Turnout and Gross Margin by Dominant Ethnic Groups

Ethnic Group	**Voter Turnout**		**Gross Margin**	
	Mean	Standard Deviation	Mean	Standard Deviation
KIKUYU	80.05	6.81	91.35	16.83
LUO	84.06	7.95	98.12	2.19
KAMBA	67.66	8.27	96.51	4.48
LUHYA	64.14	5.40	50.25	21.99
KALEJIN	74.29	11.44	66.11	28.14
MIJIKENDA	54.83	9.57	30.48	18.28

[8] In an analysis of voter turnout during the 2005 Kenyan constitution referendum, Kimenyi and Shughart (2008) find similar results.

III. Conclusion

This note provides rare evidence of voting behaviour in a developing country setting. Using survey data on voter opinions and actual voter turnout in the Kenyan elections, we find evidence that ethnic voting can be explained on the basis of a minimax-regret strategy. Our survey indicates that there are low levels of trust amongst ethnic groups, likely fuelled by perceptions that the current government has favoured certain ethnic groups and discriminated against others. In addition, voter opinions from the survey suggest that the country is highly polarized along ethnic lines, a factor which could explain the recent episodes of ethnic violence. This points to the necessity of constitutional reforms that devolve power and places sufficient constraints on the executive so as to minimize the likelihood of ethnic-based discriminatory practices.

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