

## Appendix A

### Proof for Decision Rule Three

A's share of  $G$  is a function of their share of  $R$ :  $\theta_G ai = \theta_R ai * \theta_R i$ . Therefore if A reelects when  $E[\theta_G ai] > E[\theta_G ac]$ , then A will also reelect when

$$\theta_R ai * E[\theta_R i] > E[\theta_R ac] * E[\theta_R c]$$

or when

$$\frac{\theta_R ai}{E[\theta_R ac]} > \frac{E[\theta_R c]}{E[\theta_R i]}$$

## Appendix B

### Simulation Details

In the simulations, I generate 50,000 versions of A, each of whom is assigned an incumbent and challenger. The total pool of resources is set at 1. The amount each leader keeps in rents is drawn from  $U(0,1)$ ;  $R_x$  is the remainder. A is then assigned a payout drawn from  $U(0, R_x]$ , and B is assigned whatever remains. On average, the leader keeps 50% of the pot and A and B are each assigned 25%. A then decides whether to retain the incumbent, according to the three decision rules.

To simulate a world in which A has no priors about the incumbent, I generate  $E[\theta_G ai]$  and  $E[\theta_G ac]$  from uniform distributions. To simulate a world in which A has moderately informative priors, I first draw each  $\theta_G xy$ , and then draw  $E[\theta_G xy]$  from a normal distribution centered on  $\theta_G xy$ , with a standard deviation of 0.4; expected and actual  $\theta_G xy$  are correlated with an R of 0.45.

## Appendix C

### Simulated Outcomes of Alternative Models

Table 3.

Alternative Decision Rules Under Full Information.

			Correct (%)	
	Information	Reelect if:	No priors	Priors
Alt One	$D_{bi}$ and $G$	$\theta_{ai} > E[\theta_{ac}]$ or $\frac{\theta_R ai}{E[\theta_R ac]} > \frac{E[\theta_R c]}{E[\theta_R i]}$	62	70
Alt Two	$D_{bi}$ and $G$	$\theta_G ai + \theta_R ai > E[\theta_G ac + \theta_R ac]$	65	70

## Appendix D

### Ethics and Debriefing

The benefit of deception is that I was able to avoid distortion of players' behavior in the game, and thus accurately capture how players respond to information. Introducing a computer had the potential to create confusion both because computers are unfamiliar to most Ugandans – 85% of respondents on Round 5 of the Uganda Afrobarometer say they “never” use a computer – and because predicting the payout from a computer “challenger” is not necessarily intuitive. Confusion, in turn,<sup>1</sup> increases the likelihood that players will turn to the enumerators for help, providing an opportunity for enumerators - whether intentionally or inadvertently - to guide players to particular choices. Additionally, as shown by Houser and Xiao (2009), players tend to respond more strategically and less emotionally to computer allocators than to human ones; using a computer allocator increases the abstraction of the game and makes the results even less externally valid to actual elections. All of these substantially reduce the study's potential to improve understanding of the role of information in voters' choices.

There are two potential risks of harm from the deception. One is players' sense of frustration or embarrassment at having been manipulated. This effect is likely to be temporary. In addition, though always possible *ex ante*, it also does not seem to have occurred in this case: only three players had a negative reaction to learning they had actually been playing against a research assistant with a computer, and all three were irritated, not because of the deception, but because they thought a foreign researcher should have been able to give them a more generous payout.<sup>2</sup> The other risk of harm is contamination of the subject pool: players might disbelieve any future researchers sampling the same population, even if these researchers are being entirely truthful. Mukono is a popular place for research, so this is not a trivial concern. However, this risk is predicated on an assumption that players *will* trust researchers as long as they are never deceived; in Uganda, this is not the case. Ugandans, like citizens in other countries where political dissent may be punished, are often highly suspicious of the motivations of interviewers who arrive at their homes, especially those who are asking political questions.<sup>3</sup> The debriefing statement that followed the deception, rather than heightening player's distress, seems to have reassured a number of players that we were in fact researchers and not political operatives. Thus, in my opinion, deception ensured the usefulness of the study without adding substantially to its costs.

The relevant question, of course, is whether I could have controlled game play, and accurately measured the effect of the information treatment, without involving computers or using deception at all. I believe I could not have done so. Other researchers running laboratory games in African countries have developed techniques that are intended to accomplish this, but I find these techniques unsatisfactory. One option is to recruit subjects to play leaders in the pre-study period, and keep only those games in which the leader divides the pot in ways that are useful for the study design. During the study, players would be randomly assigned to receive one of these retained, real games. Another option is to assign Ugandan confederates to play the leader and other citizen in every game, and have them play in real time as dictated by a list of pre-randomized games. However, both of these strategies, while not deceptive in the narrowest sense of the term, still require misleading players about the nature of gameplay and manipulating the game without players' fully informed consent to be manipulated. In the absence of a debriefing acknowledging this manipulation, these techniques are arguably less ethical than outright deception combined with debriefing. Thus I chose the latter approach. The scripts for recruitment, the game, and the debriefing follow:

### D.1 Game instruction and debriefing scripts.

The recruitment script, delivered in the player's preferred language, read:

*To whomever answers door: Hello (or other appropriate greeting). My name is .... I am working for a university researcher who is conducting a study. I am looking for someone in this household who is (gender) and between the ages of (age) and (age). Is there someone here like that?*

*To appropriate player:* Hello (or other appropriate greeting). My name is ... I am working for a university researcher who is conducting a study on the conditions in this community, and how well politicians are serving you here. The survey will take about 45 minutes. Are you interested in talking to me about this today? *If yes:* Good. Let me just check that you are the person we are looking for: Can you tell me how old you are? What language would you like to use for the survey?

*If person is of correct age and gender, and language is one enumerator speaks:* Excellent. Let me tell you more about this. I will ask you some questions about your community, and about your political opinions. Then you will have the opportunity to earn a small amount of money by playing a game that will help us learn what you want from your leaders. The information you tell me will be sent by SMS to a professor in the United States. Then it will be erased from my phone. I will have no record of your participation or your answers. I will not record your name at any time. About 2000 other people, from other parts of Uganda, will also be interviewed.<sup>4</sup>

If you agree to the survey, but then find out there are questions you don't want to answer, you don't have to answer them. You will still be allowed to play the game and earn money. Do you have any questions? Are you still interested in participating?

The instructions of the game, delivered in the player's preferred language, read:

Now I am going to ask you take part in an exercise. It will give you the chance to earn some money. In this exercise, you will be playing a citizen. There will be two other players. One of them will be playing a leader. The third player will be playing a citizen, just like you are. Both of the other players are playing from other locations. I will receive information about them via SMS. I will show you and tell you what the SMS's say. The person who is playing the leader has a pot of money. He gets to decide how much to keep for himself, and then he will divide the rest between you and the other citizen. He knows where you are playing from, but nothing else about you. He will tell us how much to give you and we will give it to you. Then you will decide whether or not to reelect the leader or replace him with someone else. If you reelect him, you will get the same amount of money a second time. If you vote to replace the person playing the leader, we will randomly assign you a new leader and he will decide how much he wants to give you. This new leader may have more or less money than the first leader did, and he may decide to give you a larger or smaller share. There is a risk that this new leader will give you less than the first leader did, but also a chance that he will give you more. So, let us pick your first leader. I will describe him, and give you the money that he wants you to have. Then you will decide whether you want to retain him and receive the same amount of money again, or whether you want to replace him with a new leader who may give you a different amount of money.

Sample game scripts read:

No information: The payout is 700 shillings. The leader is playing from Soroti. Would you like to reelect this leader or get a new leader?

Low information: The payout is 700 shillings. The leader is playing from Soroti. The other player received 1300. Would you like to reelect this leader or get a new leader?

High information: The payout is 700 shillings. The leader is playing from Soroti. The total pot is 2600. The other player received 1300. Would you like to reelect this leader or get a new leader?

The debriefing script, delivered in the player's preferred language, read:

Now that the game is finished, I need to let you know that the person playing the leader was actually a researcher who selected your payout and that of the other player with the help of a computer program. Any money that was left over from the pot rather than being given to you will not be kept by the researcher personally, but will be paid out to another player who we will interview later in the project. Do you have any questions about this?"

## Appendix E

### Sample Characteristics

Table 4.

Sample vs. Round 5 Afrobarometer.

	Sample	Afrobarometer	
		(Uganda)	(Full)
Mean age	37	35	37
% female	49	50	50
Median education	8	7	7
% Urban	33	14	40
Food secure	67	44	50

Compares characteristics of study sample to characteristics of the sample on the Round 5 Uganda Afrobarometer. "Food secure" respondents report that they are "never" without sufficient food for their household.

## Appendix F

### Balance

**[FIGURE 6 ABOUT HERE]**

Figure 6.

Covariate balance.

Standardized coefficients of linear model regressing treatment assignment on subject characteristics, with 90% confidence intervals.

Table 5.

Effect of Relative and Absolute Distribution on Retention Under Full Information.

	(1)	(2)
Share of distribution ( $\theta_{R^{at}}$ )	0.112	

	(0.126)	
Total share of pot ( $G_{R^{ai}}$ )	2.438***	
	(0.273)	
Favored		-0.007
		(0.062)
More than 25% of pot		0.549***
		(0.065)
<i>N</i>	167	167

Standard errors in parentheses.

\*  $p < 0:05$ , \*\*  $p < 0:01$ , \*\*\*  $p < 0:001$ .

OLS Model. Dependent variable takes a one if player retained the leader. The sample includes only players with full information about both relative and absolute distribution. Controls not shown include the assigned ethnicity of the leader as well as respondent gender, age, education, un(der)employment, food security and urban location.

**Table 6.**

Effect of Ethnicity on Reported Economic Outcomes, Afrobarometer.

	(1) Well-being vs. last year	(2) Well-being in one year	(3) Lived poverty index	(4) Treated unfairly by gov't
Coethnic w/ incumbent	0.112***	0.035*	-0.050***	-0.304***
	(0.013)	(0.015)	(0.010)	(0.012)
Education	0.026***	0.025***	-0.066***	0.007*
	(0.003)	(0.004)	(0.002)	(0.003)
Rural	-0.022 <sup>+</sup>	0.001	0.173***	0.022 <sup>+</sup>
	(0.012)	(0.014)	(0.010)	(0.012)
Female	-0.007	0.037**	-0.055***	-0.054***
	(0.011)	(0.012)	(0.009)	(0.010)
News exposure	0.016***	0.027***	-0.031***	-0.008*
	(0.004)	(0.005)	(0.003)	(0.004)
Computer access	0.131***	0.096***	-0.203***	0.014

	(0.025)	(0.027)	(0.019)	(0.023)
Strong national identity	-0.005	-0.031***	-0.010	-0.110***
	(0.005)	(0.006)	(0.004)	(0.005)
Muslim	0.067***	0.138***	-0.065***	-0.052***
	(0.017)	(0.019)	(0.013)	(0.015)
Gov't interviewer	-0.016	0.020	0.009	-0.006
	(0.012)	(0.014)	(0.009)	(0.011)
Bystanders present	-0.013	-0.003	0.101***	0.043***
	(0.013)	(0.014)	(0.010)	(0.011)
Constant	2.862***	3.557***	0.367***	1.149***
	(0.055)	(0.066)	(0.053)	(0.057)
<i>N</i>	32450	29958	32296	31518

Standard errors in parentheses.

<sup>†</sup> $p < 0:10$ , \*  $p < 0:05$ , \*\*  $p < 0:01$ , \*\*\*  $p < 0:001$ .

Models 1-3 are regressions; Model 4 uses logit. All models include country fixed effects. Data is from Round 5 of the Afrobarometer public opinion survey.

## Notes

1. Note that the study already introduced some technology: enumerators recorded responses on smartphone and gameplay took place via SMS. However, Ugandans are far more familiar with mobile technology than they are with computers: at the time of study, the Afrobarometer indicates that 65% of Ugandans owned a mobile phone, and almost 70% used a mobile phone at least a few times per week.
2. This reaction suggests that alerting players ahead of time that the payouts were controlled directly or indirectly by a researcher might also have caused some players to entirely reject the game's electoral mechanism for increasing their payout, choosing instead to attempt to bargain directly with the enumerator. This is consistent with some recent evidence that African lab subjects act strategically, not to increase their payout in the game, but to demonstrate real-world neediness to presumably-wealthy foreign observers (Cilliers et al., 2015).
3. In this study in particular, one player refused to take her winnings because she believed it might be a bribe
4. This number includes subjects enrolled in other parts of the same study.

## References

Cilliers, J., Dube, O., & Siddiqi, B. (2015). The white-man effect: How foreigner presence affects behavior in experiments. *Journal of Economic Behavior and Organization*, 118, 397-414.

Houser, D., & Xiao, E. (2009). *Inequality-seeking punishment* (Working Papers 1009). Fairfax, VA:  
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