Appendix for "In Defense of a Divided Opposition"

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A Model of choice between major parties

For a voter that prefers m, the voter's utility from supporting the incumbent is:

$$u(i) = ((1 - \Pr(o) + v)(G_i + C_i) + (\Pr(o) - v)(G_o) \tag{1}$$

the voter's utility from supporting the major opposition party is:

$$u(o) = (\Pr(o) + v)(G_o + C_o) + ((1 - \Pr(o)) - v)(G_i) \tag{2}$$

A voter will support the opposition over the incumbent when:

$$(\Pr(o) + v)C_o + v(G_o - G_i) > (1 - \Pr(o) + v)C_i + v(G_i - G_o) \tag{3}$$

As G_i increases, voters will continue to select i over o as long as:

$$G_i > \frac{1}{2v} \cdot ((\Pr(o) + v) \cdot C_o - (1 - \Pr(o) + v) \cdot C_i) - G_o \tag{4}$$

Support for i will be increasing in G_i, and support for the opposition decreasing, unless the incumbent simultaneously reduces clientelist spending to be substantially below what the opposition would provide. Voters will become relatively more likely to vote for the incumbent as G_i increases or where $\Pr(o)$ is lower.

If we assume that the voter has a sincere preference for i, we simply add e on the left-hand side of the equation. If we assume a sincere preference for o, e is added to the right. A sincere preference for one party over another will change the threshold at which G_i becomes sufficient to make the voter choose i, but it does not change that support for i over o will be increasing in G_i, all else equal.

B Movement in and out of minor party as programmatic distribution increases

For a voter that prefers m, as G_i increases, voters will prefer m over o when:

$$G_i > (1 - \frac{\Pr(o)}{v})C_o + G_o + \frac{e}{v} \tag{5}$$

As G_i increases, voters will prefer m over i when:

$$\frac{e}{v} - (1 - (\frac{1 - \Pr(o)}{v})C_o + G_o > G_i \tag{6}$$

Voters will prefer m to o and i where:

$$\frac{e}{v} - (1 - \frac{1 - \Pr(o)}{v})C_i > G_i > (1 - \frac{\Pr(o)}{v})C_o + \frac{e}{v} \tag{7}$$

There will be some G_i that meets the inequality where:

$$e > \frac{1}{2}((v - \Pr(o) \cdot C_o) - (v - (1 - \Pr(o)) \cdot C_i)) \tag{8}$$

As G_i increases, voters will move from o to m, and will not move back out of m to i, as long as e is greater than (at most) half of the difference between the expected values of o and i's clientelist distribution. Again, this condition is fairly easily satisfied as long as the incumbent does not provide dramatically less clientelism than the opposition.

If the voter has a sincere preference for i or o, there is no condition under which she will choose m instead. Movement on G_i for these voters will only affect the choice of o or i: see Appendix A.

C Correlates of perceived school quality

Table A1: School quality vs. presidential performance evaluations

	Education performance		Overall performance		Vote for incumbent	
School problems scale	-0.242***		-0.231***		-0.078***	
	(0.029)		(0.032)		(0.018)	
Fees too expensive		-0.061**		-0.015		-0.016
		(0.023)		(0.025)		(0.014)
Poor textbooks and supplies		-0.080***		-0.069**		-0.000
		(0.024)		(0.026)		(0.015)
Poor teaching		-0.108***		-0.136***		-0.041**
		(0.026)		(0.028)		(0.016)
Absent teachers		-0.055*		-0.035		-0.033*
		(0.026)		(0.028)		(0.016)
Poor facilities		0.043		0.039		0.017
		(0.023)		(0.025)		(0.014)
N	1417	1426	1400	1409	1093	1102

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Regresses respondents' evaluations of presidents' performance in the education sector, his overall performance, and vote intention on reports of problems at local schools. "School problem scale" is the sum of individual problem measures.

D Balance

Table A2: Balance table

	Treatment One	Treatment Two
Education	-0.002	0.018
	(0.019)	(0.020)
Age	0.002	0.004
	(0.007)	(0.007)
Female	0.216	-0.031
	(0.164)	(0.173)
Urban	0.302	0.001
	(0.178)	(0.184)
Un/underemployed	-0.202	0.012
	(0.168)	(0.177)
Food insecure	0.004**	-0.002
	(0.002)	(0.002)
School improving (vs. staying same)?	0.379*	0.238
	(0.187)	(0.162)
School better than elsewhere (vs. same as)?	-0.055	-0.325
	(0.134)	(0.212)
Constant	-2.021**	-1.212*
	(0.563)	(0.608)
N	794	751

Standard errors in parentheses

$^{+}$ $p < .1$, * $p < .05$, ** $p < 0.01$

Models show difference in sample characteristics across treatment conditions. All variables different from zero at the 5% level are used in controls in the analyses presented in the body of the paper.

E Robustness Checks for Experiment

Table A3: Vote choice including non-response

	Non-response or other	NRM (inc.)	DP (minor)
Treatment One	-0.402†	-0.525**	-0.595**
	(0.209)	(0.196)	(0.209)
Treatment Two	0.167	0.497*	0.706*
	(0.256)	(0.250)	(0.277)

Standard errors in parentheses

$^{+}$ $p < .1$, * $p < .05$, ** $p < 0.01$

Results present multinomial logit model of party choice, with support for the major opposition party as the omitted category. Non-response includes those who reported an intention not to vote, those who reported an intention to vote for a candidate without a party, or those who refused to answer. The rows present results from different models: analysis of Treatment One controls for unbalanced variables of food insecurity and initial school evaluation. Analysis of Treatment Two does not include additional controls. All models cluster standard errors by the enumerator. All treatment effects are estimated within respondents who gave the same initial evaluations of absolute and relative school quality.

Table A4: Party choice with changes to clustering

	(1)		(2)		(3)	
	NRM (inc.)	DP (minor)	NRM (inc.)	DP (minor)	NRM (inc.)	DP (minor)
Treatment One	-0.500*	-0.591†	-0.523*	-0.594†	-0.500*	-0.591†
	(0.247)	(0.337)	(0.213)	(0.333)	(0.209)	(0.345)
Treatment Two	0.493†	0.706*	0.497†	0.706*	0.493†	0.706*
	(0.268)	(0.339)	(0.300)	(0.347)	(0.253)	(0.331)
N	512	511	512	517	516	517

Standard errors in parentheses

† $p < .1$, * $p < .05$, ** $p < 0.01$

Results present the model in Table 2 with different approaches to clustering in the data. Model 1 does not include any clustering. Model 2 clusters at the level of the sample site. Model 3 clusters by site $\times$ enumerator.

Table A5: Treatment Effects of Positive Cues

	NRM (inc.)	DP (minor)
Treatment One	0.546	0.806
(Improving)	(0.279)	(0.637)
Treatment Two	-0.194	-0.850
(Better than elsewhere)	(0.559)	(0.741)
N	109	109

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Results present multinomial logit model of party choice, with support for the major opposition party as the omitted category. Treatment One cued subjects who said their school was deteriorating to instead believe their school was improving. Treatment Two cued subjects who said their was worse than those elsewhere to believe it was better than elsewhere. Analysis of Treatment One includes controls for the unbalanced variable of education. Analysis of Treatment Two controls for unbalanced variable of media exposure. Both models cluster standard errors by enumerator.

F Ruling out alternative explanations

Table A6: Choice of incumbent vs. opposition

	Inc. vs. opp.	Minor vs. major opp.
Treatment One	-0.297	-0.605**
	(0.199)	(0.214)
Treatment Two	0.190	0.706*
	(0.186)	(0.277)
N	511/516	204/206

Standard errors in parentheses

$^{+}$ $p < .1$, * $p < .05$, ** $p < 0.01$

Model 1 presents effect of treatment on support for the NRM among those who supported any party. Model 2 presents the effects of treatment on the likelihood that an opposition voter will choose the DP. Both models are estimated using standard logit, with specification otherwise the same as in Table 2. The sample sizes reflect samples for analysis of Treatment One/Treatment Two.

G Perceived favoritism and preference for coethnic candidates

Table A7: Effect of candidate coethnicity on vote choice, by perceived favoritism

Initially believed favored, not treated	0.159*
Initially believed favored, treated to perceive disfavor	0.086
Initially believed disfavored, treated to perceive favor	0.090
Initially believed disfavored, not treated	0.049

Results present t-tests comparing support for coethnic and non-coethnic versions of a fictional candidate; ethnicity of candidate was randomly assigned. Categories reflect respondents' initial evaluation of whether their schools were better than schools elsewhere, and whether they were then exposed to Treatment Two, which contradicted their initial evaluation.

H Coding of programmatic distribution variable

Table A8: Correlates of programmatic distribution residual

Trust incumbent	0.302***
	(0.005)
Ethnic discrimination	-0.071***
	(0.006)
Gov't treats people unfairly	-0.055***
	(0.005)
Corruption in president's office	-0.194***
	(0.007)
Constant	2.668***
	(0.016)
N	26099

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table presents correlates of constructed programmatic distribution residual in Afrobarometer data. Model is a standard OLS with country-level fixed effects.

Table A9: Alternate ways of isolating programmatic goods

	(1)	(2)	(3)	(4)	(5)
Programmatic distribution	0.483***	0.483***	0.491***	0.569***	0.411***
	(0.047)	(0.048)	(0.048)	(0.048)	(0.056)
Incumbent margin of victory	7.642***	7.597***	7.445***	7.957***	3.880***
	(0.512)	(0.515)	(0.511)	(0.525)	(0.990)
Distribution × margin	2.123***	2.270***	2.017***	2.129***	1.690***
	(0.249)	(0.252)	(0.256)	(0.252)	(0.312)
Ethnic fractionalization	-1.555***	-1.601***	-1.558***	-1.509***	-1.710***
	(0.394)	(0.396)	(0.395)	(0.402)	(0.462)
GDP pc	0.015***	0.015***	0.015***	0.016***	0.017***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Runoff system	-2.092***	-2.036***	-2.012***	-2.145***	-2.153***
	(0.291)	(0.292)	(0.289)	(0.299)	(0.319)
Coethnic					0.134
					(0.127)
Δ household welfare					-0.110*
					(0.044)
Vote incentive					-0.103^{+}
					(0.057)
N	15360	15050	15034	15291	14743

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table presents results from Table 3 using different measures of programmatic distribution. Model 1 uses a residual constructed without controlling for household-level economic improvements, so that any targeted anti-poverty programs can be included as programmatic distribution. Model 2 uses a residual that replaces reported changes in absolute income with self-reported relative socioeconomic status, which excludes from programmatic distribution any goods that makes respondents better off than others. Model 3 adds self-reported receipt of vote buying to the model used to generate the residual. Because clientelism can accrue to communities, Model 4 uses a residual that accounts for ethnicity, partisanship and welfare improvements at the community level as well as individual level. Model 5 forgoes the residual and instead uses the original presidential approval variable with controls for ethnicity, partisanship and household-level welfare improvements.

I Robustness checks for survey analysis

Table A10: Effect of programmatic distribution on minor party voting, by coding of minor party

Minor party vote share <	Minor party ethnic share >	Coefficient	Interaction
10%	% in pop.	0.352***	1.976***
15%	**% in pop.**	**0.393*** **	**1.524*** **
20%	% in pop.	0.389***	1.148***
10%	50%	0.322***	1.903***
15%	50%	0.417***	1.613***
20%	50%	0.388***	2.172***

The table provides the coefficient on the programmatic distribution residual, using the model from Table 3 in the body of the paper, when ethnic minor parties are coded differently. Column 1 presents the largest vote share the party can capture and still be classified as "minor". Column 2 represents the share of the party the voter's ethnic group must represent for the party to count as an ethnic party: the subject's ethnic group can either be over-represented (ethnic share in the party is greater than share in the population) or a majority. Line two, which is bolded is the coding used in the body of the paper.

Table A11: Support for minor party, alternative clustering

	(1)	(2)	(3)	(4)
Programmatic distribution	0.509***	0.393***	0.438***	0.447***
	(0.040)	(0.045)	(0.049)	(0.125)
Incumbent margin of victory	7.103***	6.041***	3.397***	3.302*
	(1.867)	(0.473)	(0.415)	(1.507)
Distribution × margin	1.351***	1.524***	0.646*	0.601
	(0.208)	(0.236)	(0.296)	(0.632)
N	17172	17037	17037	17172

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Presents model with (1) country random effects, (2) random effects at site and country level, (3) site-level clustered standard errors (4) country-level clustered standard errors.