Pastor Paulo vs. Doctor Carlos: Professional Titles as Voting Heuristics in Brazil

Appendix

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1 Representativeness

The online sample was fairly representative of the Brazilian population in terms of race, region, party identification, church attendance, and vote in the 2010 presidential election. On other variables, including age, income, sex, religion, and the size of the respondent's municipality, it over- or under-sampled certain groups. Tables 1 and 2 compare the online sample to Brazil's 2010 census, the nationally-representative 2012 AmericasBarometer survey, and the results of the 2010 election.

2 Real vs. Fictional Candidate Treatments

For respondents from municipalities with one or more "pastor" or "doctor" candidates competing in the 2012 election (74% and 80% of the sample, respectively), half were assigned to receive a randomly sampled "real candidate" treatment or control, with that candidate's name, party, and biographical details substituted for those of Pastor Paulo or Dr. Carlos. As shown in Table 3, "real candidate" treatment effects are never significantly different from those in which respondents from the same set of municipalities were given fictional candidates.

3 Treatment Effects by Screener Passage

The survey including two "screener" questions to check whether respondents were paying attention. As shown in Table 4, treatment effects do not differ significantly among those passing one or both screeners versus those who passed none.

4 Balance Statistics

Random assignment resulted in similar treatment and control groups. Tables 5 and 6 present a series of balance statistics: mean values of each covariate in the treatment and control groups; the mean difference divided by the pooled standard deviation (ideally 0); the ratio of treatment to con-

trol group variance (ideally 1); and the p-values associated with a difference-in-means t-test and a bootstrapped Kolmogorov-Smirnov (KS) test for equality of distributions (the latter for continuous covariates only). For the "pastor" experiment, the main covariates that are unbalanced between treatment and control groups are percent Catholic in a respondent's municipality and a dummy variable for Charismatic Catholics. For the "doctor" experiment, the only clearly unbalanced covariate is a dummy variable for identifying with the PSDB. As shown in Tables 7 and 8, treatment effects are virtually identical when controlling for these unbalanced covariates.

5 Municipal Predictors of Using a "Pastor" Electoral Name

Analysis of Brazilian electoral data suggests that city council candidates who use the "pastor" title expect to gain votes from fellow evangelicals and are not concerned about alienating those of other faiths. Table 9 presents the results of a logistic regression of the decision to use a "pastor" electoral name on the number of clergy candidates running for city council in the municipality, evangelicals' and Catholics' share of the municipal population, and election-year fixed effects. Running as "pastor" is more likely when one is competing with fewer other clergy candidates and when evangelicals make up a larger share of the population. However, the percent Catholic in the municipality—and hence, the vote share potentially lost due to an anti-evangelical backlash—has no bearing on this decision.

Table 1: Online Sample vs. 2010 Census

	Online Sample	Census
Municipality		
Median Population	202,942	154,472
Median "Pastor" Candidates	2	2
Median "Doctor" Candidates	4	4
Region		
Center-West	8.7	7.3
Northeast	25.6	26.6
North	6.1	7.4
Southeast	41.5	43.8
South	18	14.9
Religion		
Catholic	43	65.8
Evangelical	29.7	21
No Organized Religion	14.2	7.4
Atheist/Agnostic	4.2	0.4
Other	8.9	5.3
Race		
White	51	49.2
Black	9	8.2
Brown	35.8	41
Asian	3	1.2
Indigenous	1.3	0.4
Household Income		
0–2 $\times$ Min. Wage	29.1	38.5
2–5 $\times$ Min. Wage	30.6	36.4
5+ $\times$ Min. Wage	40.2	25.1
Other		
Median Age	22	38
Male	58.4	48.2

Census data are for residents 18 and older. Municipality figures are those associated with the median individual. Non-median figures are percentages.

Table 2: Online Sample vs. 2012 AmericasBarometer and Electoral Results

	Online Sample	AmericasBarometer	Electoral Results
Church Attendance			
1+ Times/Week	19.1	23.8	
1 Time/Week	22.1	21.5	
1 Time/Month	13.9	19.5	
1–2 Times/Year	18.8	15.3	
Never/Almost Never	26.1	19.9	
Party ID			
None	63.9	69.4	
PT	12.4	17.9	
PSDB	4	3	
PMDB	4.3	3.9	
Other Party	14.2	5.1	
2010 Presidential Vote			
Did Not Vote	16.2	10.1	18.1
Dilma	36.5	58.2	35.1
Serra	21.7	20	24.4
Marina	17.1	6.4	14.5
Blank/Null	6.2	3.6	7.1

All figures expressed as percentages of registered voters.

Table 3: Effect of Real versus Fictional Candidate Treatments

	DV							
	Pastor: Vote	Pastor: Competent	Pastor: Intelligent	Pastor: Honest	Doctor: Vote	Doctor: Competent	Doctor: Intelligent	Doctor: Honest
Intercept	3.3	3.25	3.5	3.06	3.51	3.47	3.9	3.08
	(0.1)	(0.09)	(0.1)	(0.1)	(0.09)	(0.09)	(0.1)	(0.09)
Treatment	-0.3	-0.11	-0.15	0.03	0.37	0.32	0.31	0.07
	(0.13)	(0.13)	(0.13)	(0.14)	(0.13)	(0.13)	(0.14)	(0.13)
Real Candidate	-0.21	0.11	0.2	0.15	-0.06	0.07	0.02	-0.04
	(0.13)	(0.13)	(0.13)	(0.14)	(0.13)	(0.13)	(0.14)	(0.13)
Treatment $\times$ Real Candidate	0	-0.22	-0.17	-0.16	-0.27	-0.26	-0.17	-0.03
	(0.19)	(0.18)	(0.19)	(0.19)	(0.19)	(0.18)	(0.19)	(0.18)
N	1513	1499	1494	1491	1493	1476	1472	1462

NOTE: Entries are OLS regression coefficients with estimated standard errors in parentheses. Respondents from municipalities with no real "pastor" or "doctor" candidates are excluded from the corresponding regressions.

Table 4: Variation in Treatment Effects by Screener Passage

	DV							
	Pastor: Vote	Pastor: Competent	Pastor: Intelligent	Pastor: Honest	Doctor: Vote	Doctor: Competent	Doctor: Intelligent	Doctor: Honest
Intercept	3.51	3.61	3.91	3.49	3.56	3.61	3.93	3.42
	(0.11)	(0.1)	(0.1)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Treatment	-0.26	-0.27	-0.24	-0.15	0.34	0.27	0.24	0.12
	(0.14)	(0.14)	(0.14)	(0.15)	(0.16)	(0.15)	(0.16)	(0.15)
One Screener	-0.19	-0.18	-0.32	-0.24	-0.11	-0.05	0.03	-0.4
	(0.15)	(0.15)	(0.15)	(0.16)	(0.16)	(0.15)	(0.16)	(0.15)
Both Screeners	-0.34	-0.39	-0.46	-0.49	0.14	0.08	0.21	-0.25
	(0.14)	(0.13)	(0.14)	(0.14)	(0.15)	(0.14)	(0.15)	(0.14)
Treatment $\times$ One Screener	-0.27	-0.17	-0.05	-0.06	-0.11	-0.18	-0.12	-0.11
	(0.21)	(0.2)	(0.21)	(0.22)	(0.23)	(0.22)	(0.23)	(0.22)
Treatment $\times$ Both Screeners	-0.01	0.21	0.22	0.34	-0.23	-0.14	0	-0.3
	(0.19)	(0.19)	(0.19)	(0.2)	(0.21)	(0.2)	(0.21)	(0.2)
N	2029	2012	2003	2001	1846	1823	1819	1805

NOTE: Entries are OLS regression coefficients with estimated standard errors in parentheses.

Table 5: Covariate Balance for "Pastor" Treatment

	Treated	Control	Std. Diff.	Var. Rat.	t-test	KS-test
Municipality						
Log Population	12.18	12.19	0.00	0.99	0.96	0.86
Pct. Evangelical	22.55	22.90	−0.04	0.97	0.31	0.40
Pct. Catholic	64.09	63.07	0.08	1.00	0.07	0.00
Longitude	−45.86	−45.79	−0.01	1.02	0.80	0.98
Latitude	−17.92	−17.94	0.00	1.05	0.96	0.74
Pastor Candidates	3.91	3.90	0.00	0.98	0.96	0.93
Region						
North	0.06	0.06	−0.02	0.94	0.69	
Northeast	0.27	0.26	0.02	1.02	0.65	
Center-West	0.07	0.07	−0.02	0.94	0.68	
Southeast	0.41	0.43	−0.05	0.99	0.29	
South	0.19	0.17	0.06	1.10	0.18	
Religion						
Evangelical	0.29	0.30	−0.02	0.98	0.64	
Catholic	0.43	0.44	−0.02	1.00	0.70	
No Organized Religion	0.15	0.14	0.04	1.09	0.39	
Atheist/Agnostic	0.04	0.04	0.01	1.05	0.83	
Other	0.09	0.09	0.01	1.03	0.84	
Pentecostal	0.13	0.15	−0.05	0.90	0.30	
Charismatic	0.17	0.21	−0.10	0.86	0.04	
Church Attendance (1–5)	2.88	2.91	−0.02	1.01	0.64	0.92
Race						
White	0.51	0.52	−0.01	1.00	0.81	
Black	0.08	0.10	−0.06	0.85	0.24	
Brown	0.36	0.34	0.04	1.03	0.38	
Asian	0.03	0.03	−0.01	0.96	0.88	
Indigenous	0.01	0.01	0.03	1.24	0.60	
Party ID						
None	0.64	0.63	0.02	0.99	0.65	
PT	0.11	0.13	−0.06	0.87	0.20	
PSDB	0.04	0.04	−0.02	0.93	0.75	
PMDB	0.04	0.05	−0.04	0.85	0.43	
Other Party	0.15	0.13	0.05	1.11	0.28	
Other						
Income (1–8)	3.03	2.83	0.09	1.18	0.05	0.15
Campaign Interest (1–7)	4.33	4.39	−0.03	0.99	0.49	0.62
Age	26.49	26.61	−0.01	1.15	0.80	0.08
Male	0.57	0.59	−0.04	1.01	0.42	

'Treated' and 'Control' give mean values; 'Std. Diff.' is their difference divided by the pooled standard deviation. 'Var. Rat.' is the ratio of treatment to control group variance. 't-test' and 'KS-test' give two-sided p-values (bootstrapped for KS).

Table 6: Covariate Balance for "Doctor" Treatment

	Treated	Control	Std. Diff.	Var. Rat.	t-test	KS-test
Municipality						
Log Population	12.22	12.15	0.03	0.98	0.44	0.58
Pct. Evangelical	22.70	22.73	0.00	1.03	0.93	0.72
Pct. Catholic	63.77	63.42	0.03	0.94	0.53	0.25
Longitude	−45.75	−45.90	0.03	0.92	0.55	0.23
Latitude	−17.93	−17.93	0.00	0.97	1.00	0.62
Doctor Candidates	9.54	9.56	0.00	0.91	0.98	0.24
Region						
North	0.06	0.07	−0.03	0.89	0.45	
Northeast	0.26	0.26	−0.02	0.98	0.72	
Center-West	0.07	0.07	0.00	1.00	0.99	
Southeast	0.44	0.41	0.06	1.02	0.17	
South	0.18	0.19	−0.04	0.94	0.37	
Religion						
Evangelical	0.30	0.29	0.03	1.03	0.50	
Catholic	0.43	0.43	−0.01	1.00	0.83	
No Organized Religion	0.14	0.14	0.00	0.99	0.93	
Atheist/Agnostic	0.04	0.04	−0.01	0.96	0.85	
Other	0.09	0.09	−0.02	0.94	0.64	
Pentecostal	0.15	0.13	0.04	1.09	0.38	
Charismatic	0.19	0.19	−0.01	0.99	0.86	
Church Attendance (1–5)	2.87	2.91	−0.03	1.00	0.59	0.82
Race						
White	0.53	0.50	0.05	1.00	0.30	
Black	0.09	0.09	−0.02	0.95	0.72	
Brown	0.35	0.36	−0.02	0.99	0.74	
Asian	0.02	0.04	−0.09	0.61	0.07	
Indigenous	0.01	0.01	0.02	1.21	0.64	
Party ID						
None	0.64	0.64	0.00	1.00	0.97	
PT	0.11	0.13	−0.06	0.87	0.19	
PSDB	0.05	0.03	0.14	1.93	0.00	
PMDB	0.05	0.04	0.02	1.07	0.75	
Other Party	0.14	0.15	−0.03	0.94	0.52	
Other						
Income (1–8)	2.88	2.98	−0.05	0.95	0.32	0.61
Campaign Interest (1–7)	4.32	4.39	−0.04	0.98	0.41	0.30
Age	26.37	26.71	−0.03	0.80	0.48	0.23
Male	0.58	0.59	0.00	1.00	0.92	

'Treated' and 'Control' give mean values; 'Std. Diff.' is their difference divided by the pooled standard deviation. 'Var. Rat.' is the ratio of treatment to control group variance. 't-test' and 'KS-test' give two-sided p-values (bootstrapped for KS).

Table 7: "Pastor" Treatment Effects Controlling for Unbalanced Covariates

	DV							
	Vote	Vote	Competent	Competent	Intelligent	Intelligent	Honest	Honest
Intercept	3.32	2.45	3.4	2.66	3.63	3.06	3.22	2.41
	(0.06)	(0.23)	(0.06)	(0.21)	(0.06)	(0.22)	(0.06)	(0.23)
Treatment	-0.32	-0.31	-0.21	-0.2	-0.15	-0.14	-0.02	-0.02
	(0.08)	(0.09)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.09)
Mun. Pct. Catholic		0.01		0.01		0.01		0.01
		(0)		(0)		(0)		(0)
Charismatic Catholic		0.23		0.34		0.24		0.23
		(0.11)		(0.11)		(0.11)		(0.11)
N	2029	1767	2012	1752	2003	1748	2001	1747

NOTE: Entries are OLS regression coefficients with estimated standard errors in parentheses.

Table 8: "Doctor" Treatment Effects Controlling for Unbalanced Covariates

	DV							
	Vote	Vote	Competent	Competent	Intelligent	Intelligent	Honest	Honest
Intercept	3.59	3.56	3.63	3.6	4.02	4.01	3.2	3.19
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Treatment	0.22	0.21	0.16	0.15	0.21	0.22	-0.02	-0.07
	(0.09)	(0.09)	(0.08)	(0.09)	(0.09)	(0.09)	(0.08)	(0.09)
PSDB		0.76		0.8		0.63		0.65
		(0.23)		(0.22)		(0.23)		(0.22)
N	1846	1673	1823	1657	1819	1654	1805	1643

NOTE: Entries are OLS regression coefficients with estimated standard errors in parentheses.

Table 9: Municipal-Level Predictors of Using a "Pastor" Electoral Name

Intercept	-0.67
	(0.72)
Number of Clergy Candidates	-0.08
	(0.03)
Percent Evangelical	0.03
	(0.01)
Percent Catholic	0.01
	(0.01)
Year 2004	0.37
	(0.1)
Year 2008	0.26
	(0.13)
Year 2012	0.1
	(0.12)
N	3019

NOTE: Entries are logistic regression coefficients with estimated standard errors (clustered on municipality) in parentheses.