

Following the Leader Against Democracy? Evidence from the 2022 Brazilian Presidential Election

— Online Appendix —

Appendix A. Questionnaire (English Translation)

Introduction and Consent

Hello! We are conducting a new round of our public opinion survey on a variety of topics and would like to invite you to participate. The survey takes approximately 5 minutes. There are no right or wrong answers — we are only interested in your honest opinions. It is very important that you answer individually and spontaneously, without consulting other people or the internet.

[POP-UP MESSAGE]: Your answers will be kept strictly confidential and will only be reported in aggregate percentages, never individually.

- 1. Yes, I agree to participate in the survey.
- 0. No, I do not agree to participate in the survey.

Politics

Presidential Approval

How would you rate the government of President Jair Bolsonaro?

- 01. Excellent
- 02. Good
- 03. Fair
- 04. Poor
- 05. Very poor

- 98. Don't know
- 99. Prefer not to answer

Positive Partisanship

Is there any political party you like?

- 01. Yes
- 00. No
- 98. Don't know

If yes: Which party do you like the most?

(Single answer, randomized list with logos):

- MDB
- PDT
- PT
- PSB
- PSDB
- PSOL
- PL
- 9. Other party

Negative Partisanship

Is there any political party you dislike?

- 01. Yes
- 00. No
- 98. Don't know

If yes: Which party do you dislike the most?

(Single answer, randomized list with logos):

- MDB

- PDT
- PT
- PSB
- PSDB
- PSOL
- PL
- 9. Other party

Ideological Self-Placement

In politics, people often speak of left and right. On a scale from 1 to 7, where 1 means “far left” and 7 means “far right,” where would you place yourself?

- 1. Far left
- 2. Left
- 3. Center-left
- 4. Center
- 5. Center-right
- 6. Right
- 7. Far right
- 98. Don't know

Economy

Current Financial Situation

Thinking about your personal finances over the past month, which of the following best describes your situation?

- 01. Could not pay all bills
- 02. Had just enough to pay all bills, with no leftover money
- 03. Paid all bills and was able to save money

- 98. Don't know
- 99. Prefer not to answer

Future Financial Expectations

Thinking about your financial situation, how do you expect it to be six months from now?

- 01. Much better
- 02. A little better
- 03. About the same
- 04. A little worse
- 05. Much worse
- 98. Don't know
- 99. Prefer not to answer

National Economic Situation

Thinking about Brazil's economic situation compared to six months ago, would you say it is better, the same, or worse?

- 01. Much better
- 02. A little better
- 03. About the same
- 04. A little worse
- 05. Much worse
- 98. Don't know
- 99. Prefer not to answer

Elections

Vote Intention

If the presidential election were held today, who would you vote for? (*randomized list*)

- 01. Luiz Inácio Lula da Silva
- 02. Jair Bolsonaro
- 03. Ciro Gomes
- 04. Simone Tebet
- 05. Other
- 97. None / Blank / Null
- 98. Don't know
- 99. Prefer not to answer

Expectations of Winner

Regardless of your vote, who do you think will win the presidential election?

- 01. Luiz Inácio Lula da Silva
- 02. Jair Bolsonaro
- 03. Ciro Gomes
- 04. Simone Tebet
- 05. Other
- 97. None / Blank / Null
- 98. Don't know
- 99. Prefer not to answer

Voting Intention on Election Day

Thinking about election day, would you say:

- 01. I will definitely vote
- 02. I may vote, but I'm not sure
- 03. I will definitely not vote

Priority Issues

Which issue do you think the government should prioritize above all others?

- 1. Reduce inflation
- 2. Reduce unemployment
- 3. Fight corruption
- 4. Combat deforestation
- 5. Increase funding for health
- 6. Increase funding for education
- 7. Fight crime and violence
- 8. Improve security of the electronic ballot
- 9. Raise the minimum wage
- 10. Reduce poverty
- 11. Promote family values
- 12. Lower fuel prices

Trust in Electronic Voting Machines

Would you say you trust a lot, trust a little, or do not trust the electronic voting machines used in elections?

Sources of Information

Through which sources do you usually get information about what is happening in Brazil and in the world? (*Select all that apply.*)

- Newspapers
- Magazines
- News websites and online news portals

- Television or radio programs
- Social media platforms (e.g., Facebook, Instagram, Twitter)
- Podcasts
- Messages or videos shared on apps such as WhatsApp or Telegram
- None of the above
- Don't know
- Prefer not to answer

Appendix B. Panel retention and attrition

Table 1: Table A1. Panel retention across waves

| Wave | Respondents (unique id) | Retention rate (vs. Wave 1) |
|---------|-------------------------|-----------------------------|
| Round 1 | 3383 | 1.000 |
| Round 2 | 3037 | 0.898 |
| Round 3 | 2835 | 0.838 |
| Round 4 | 2555 | 0.755 |
| Round 5 | 2426 | 0.717 |

Table 2: Table A3. Baseline means by attrition status

| Attrition status | N | trust0 | bolsonaro0 | lula0 | antiptID0 | ptID0 | edu0 |
|----------------------------|------|--------|------------|-------|-----------|-------|-------|
| Observed in all waves | 2392 | 0.463 | 0.267 | 0.272 | 0.349 | 0.134 | 4.732 |
| Attrited before final wave | 991 | 0.455 | 0.243 | 0.304 | 0.297 | 0.148 | 4.377 |

Table 3: Table A2. Predictors of attrition
(baseline covariates)

| | Attrition (LPM) |
|--------------------------|----------------------|
| Baseline trust (Trust=1) | 0.006 (0.017) |
| Baseline vote: Bolsonaro | 0.013 (0.022) |
| Baseline vote: Lula | 0.013 (0.024) |
| Baseline Anti-PT ID | -0.024 (0.020) |
| Baseline PT ID | 0.004 (0.028) |
| Education (baseline) | -0.025*** (0.005) |
| Age: 25 a 34 anos | 0.005 (0.028) |
| Age: 35 a 44 anos | -0.042 (0.027) |
| Age: 45 a 59 anos | -0.089*** (0.025) |
| Age: 60 anos ou mais | -0.123*** (0.026) |
| Num.Obs. | 3383 |
| R2 | 0.023 |
| R2 Adj. | 0.020 |

+ p <0.1, * p <0.05, ** p <0.01, *** p <0.001

Robust (HC2) standard errors in parentheses.

Appendix C. Mechanisms

In this section, we turn to test two possible mechanisms that underlie in the results.¹ In particular, we first evaluate whether changes in political alignment translate into changes in trust more strongly among voters who rely heavily on social media and messaging apps. If Bolsonaro’s rhetoric undermining the electoral system operates through these environments, then shifts toward Bolsonaro should be more associated with larger within-person declines in trust among heavy social media users.

Hypothesis A.1.: The negative within-person association between switching into Bolsonaro support and trust in the electronic voting system is stronger among individuals who rely on social and message apps for political information.

We further hypothesize that political interest plays a critical role in moderating the effect of elite rhetoric on trust in elections. Specifically, we expect that individuals with higher levels of interest in politics will be more susceptible to shifts in trust when exposed to partisan messages, as they are more likely to actively engage with and internalize these messages.

Hypothesis A.2.: The negative within-person association between switching into Bolsonaro support and trust in the electronic voting system is stronger among individuals with higher levels of political interest.

The first mechanism is explored in a model where we introduce an interaction between vote switching and media consumption. The results are displayed in Figure 1.

Two clear patterns emerge. First, independent of vote switching, reliance on social media and messaging apps is associated with significantly lower trust in the electronic voting system ($\beta = 0.060$, $p = 0.005$), whereas reliance on legacy media is associated with higher trust ($\beta = 0.059$, $p < 0.001$). Second, media environments strongly condition the effects of switching into Bolsonaro support. The interaction between within-person switching into Bolsonaro and social media use is negative and statistically significant ($\beta = 0.154$, $p = 0.017$). Individuals who move toward Bolsonaro experience substantially larger declines in trust when they rely more heavily on social media. By contrast, the interaction between switching into Bolsonaro and legacy media use is substantively null and statistically indistinguishable from zero ($\beta = 0.0$, $p = 0.992$). No comparable interaction effects are observed for individuals switching into Lula support, either with social media ($\beta = 0.036$, $p = 0.420$) or legacy media ($\beta = 0.024$, $p = 0.360$).

These results have important implications. They suggest that information environments play a critical mediating role in translating the effects of vote intentions into institutional

¹We thank a reviewer for the suggestion of exploring this more deeply

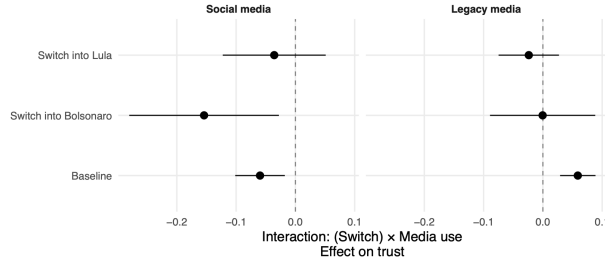


Figure 1: Social Media Consumption moderation on Trust Among Bolsonaro and Lula vote switchers

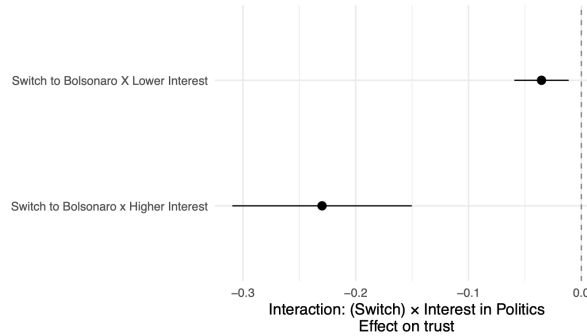


Figure 2: Interest in Politics moderation on Trust Among vote switchers

trust, amplifying distrust only under specific media conditions. In particular, the negative consequences of switching into Bolsonaro support for trust in the electoral system are not uniform but are concentrated among individuals embedded in social media-centric information environments. This pattern is consistent with the idea that exposure to certain elite cues on social media strengthens the internalization of distrust cues, whereas reliance on legacy media appears to buffer individuals from such effects, either because they cues are less present or are contextualized.

Finally, the results for Hypothesis A.2 in Figure 2 demonstrate that the negative within-person association between switching into Bolsonaro and trust is indeed stronger among individuals with higher political interest ($\beta = -0.22$, $p < 0.001$). Those more engaged in politics experience a larger decline in trust as they switch to Bolsonaro support. In contrast, individuals with lower interest in politics show a smaller decline in trust ($\beta = -0.035$, $p < 0.001$). As most Bolsonaro’s voters show high interest in politics, they are driving the main result.

Appendix D. Full regression results

Table 4: Table A0. Mixed logit REWB model (glmmTMB): log-odds coefficients

| | estimate | std.error | statistic | p.value | conf.low | conf.high |
|----------------------------|----------|-----------|-----------|---------|----------|-----------|
| (Intercept) | -5.149 | 1.019 | -5.050 | 0.000 | -7.147 | -3.151 |
| time_num | 0.124 | 0.043 | 2.897 | 0.004 | 0.040 | 0.208 |
| vote_bolsonaro_w | -1.423 | 0.256 | -5.549 | 0.000 | -1.925 | -0.920 |
| vote_lula_w | 0.301 | 0.243 | 1.241 | 0.215 | -0.175 | 0.778 |
| vote_bolsonaro_b | -5.205 | 0.450 | -11.570 | 0.000 | -6.087 | -4.324 |
| vote_lula_b | 9.726 | 0.740 | 13.147 | 0.000 | 8.276 | 11.176 |
| antiptID | -0.216 | 0.204 | -1.057 | 0.291 | -0.615 | 0.184 |
| ptID | 0.204 | 0.254 | 0.800 | 0.424 | -0.295 | 0.702 |
| sexo_cotasMulher | -0.807 | 0.283 | -2.854 | 0.004 | -1.362 | -0.253 |
| idade_cotas25-34 | -1.356 | 0.491 | -2.762 | 0.006 | -2.317 | -0.394 |
| idade_cotas35-44 | -0.303 | 0.474 | -0.639 | 0.523 | -1.232 | 0.626 |
| idade_cotas45-59 | 1.184 | 0.453 | 2.616 | 0.009 | 0.297 | 2.071 |
| idade_cotas60+ | 1.119 | 0.475 | 2.357 | 0.018 | 0.188 | 2.050 |
| classe_cotasB | 0.817 | 0.587 | 1.391 | 0.164 | -0.334 | 1.968 |
| classe_cotasCDE | 0.049 | 0.611 | 0.081 | 0.936 | -1.149 | 1.248 |
| religiao_cotasEvangélica | -0.778 | 0.375 | -2.073 | 0.038 | -1.513 | -0.043 |
| religiao_cotasOutras | -0.229 | 0.435 | -0.527 | 0.598 | -1.081 | 0.623 |
| religiao_cotasSem religiao | -0.364 | 0.357 | -1.019 | 0.308 | -1.063 | 0.336 |
| situacaoeconNão sei | -1.714 | 0.512 | -3.351 | 0.001 | -2.717 | -0.711 |
| situacaoeconEconomizou | -0.164 | 0.217 | -0.759 | 0.448 | -0.589 | 0.260 |
| situacaoeconPNR | -1.763 | 0.382 | -4.619 | 0.000 | -2.511 | -1.015 |
| situacaoeconSem sobras | 0.033 | 0.156 | 0.211 | 0.833 | -0.272 | 0.338 |
| edu | 0.500 | 0.102 | 4.921 | 0.000 | 0.301 | 0.699 |

Table 5: Appendix: M2a Vote \times Expect Bolsonaro
(REWB)

| | (1) |
|--------------------------------------|--------------------|
| Expect Bolsonaro wins (within) | -0.017 (0.047) |
| Avg. Expect Bolsonaro wins (between) | -0.162* (0.063) |
| Num.Obs. | 14 236 |
| R2 | 0.202 |
| R2 Adj. | 0.201 |

+ p <0.1, * p <0.05, ** p <0.01, *** p <0.001
Wave fixed effects included where specified.

Table 6: Appendix: M2b Vote \times Expect Lula
(REWB)

| | (1) |
|---------------------------------|---------------------|
| Expect Lula wins (within) | 0.123** (0.046) |
| Avg. Expect Lula wins (between) | 0.462*** (0.059) |
| Num.Obs. | 14 236 |
| R2 | 0.244 |
| R2 Adj. | 0.243 |

+ p <0.1, * p <0.05, ** p <0.01, *** p <0.001
Wave fixed effects included where specified.

Table 7: Appendix: M3a Partisanship \times Expect Bolsonaro

| | (1) |
|--------------------------------|------------------|
| Expect Bolsonaro wins (within) | 0.092 (0.100) |
| Num.Obs. | 14 236 |
| R2 | 0.168 |
| R2 Adj. | 0.167 |

+ p <0.1, * p <0.05, ** p <0.01, *** p <0.001
Wave fixed effects included where specified.

Table 8: Appendix: M3b Partisanship \times Expect Lula

| | (1) |
|---------------------------------|---------------------|
| Expect Lula wins (within) | 0.067 (0.054) |
| Avg. Expect Lula wins (between) | 0.393*** (0.048) |
| Num.Obs. | 14 236 |
| R2 | 0.237 |
| R2 Adj. | 0.235 |

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Wave fixed effects included where specified.

Table 9: Appendix: M4 Media: switch \times social+legacy

| | (1) |
|----------------------------------|----------------------|
| Switch into Bolsonaro (within) | -0.106* (0.049) |
| Avg. Bolsonaro support (between) | -0.228*** (0.045) |
| Switch into Lula (within) | 0.039 (0.032) |
| Avg. Lula support (between) | 0.228*** (0.047) |
| Social media use (z) | -0.042** (0.015) |
| Legacy media use (z) | 0.067*** (0.017) |
| Num.Obs. | 13 596 |
| R2 | 0.219 |
| R2 Adj. | 0.217 |

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Wave fixed effects included where specified.