

Majoritarian principles in critical junctures: an analysis of Brazil's 2018 presidential election

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Rationale: highly divisive candidates



Research Question

Is the election of divisive or polarizing candidates an artifact of the voting methods?

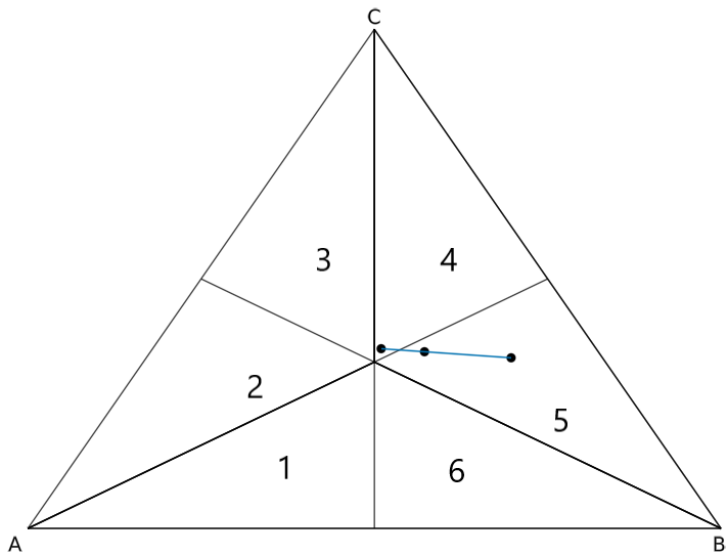
- Potthoff and Munger [3] and Kurrild-Klitgaard [2] argue that Trump might have been a Condorcet loser. Woon et al. [4] argue he was in the Core.
- Igersheim et al. [1] argue that the Condorcet, Borda, Utilitarian winner was actually Sanders.

- I expected similar results in the Brazilian 2018 presidential elections. Particularly, I expected him to have neither “pairwise” nor high “positional” mandate;
- The reason: high rejection would be taken into account by voting procedures that use the whole ranking. Information paucity would be causing the electoral victory of divisive candidates.

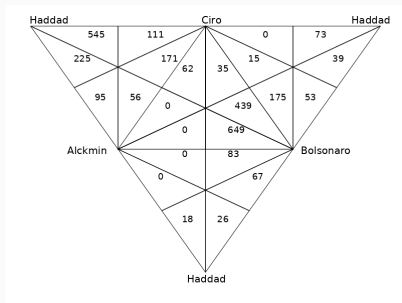
- I use a “representative” street survey a week before the first round of the presidential election. A pairwise comparison of the top 4 candidates was the only question I analyzed.
- Not all respondents compared all candidates. I imputed the data with a polytomous regression¹.
- There was a discrepancy between the survey and the result of the first round. I transferred while respecting Kemeny's distance, and picked the transference with minimal euclidean distance to the result.

¹Using the **R** package mice

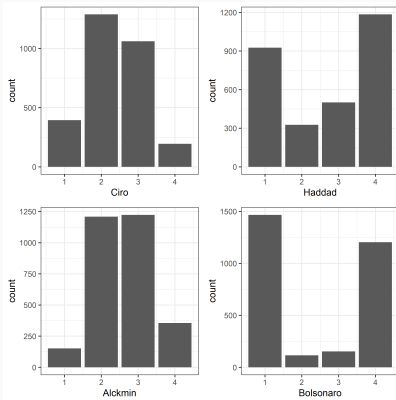
Method - Saari's Outcome Triangle



Profile after imputation and rankings transference



(a) Opened representation tetrahedron



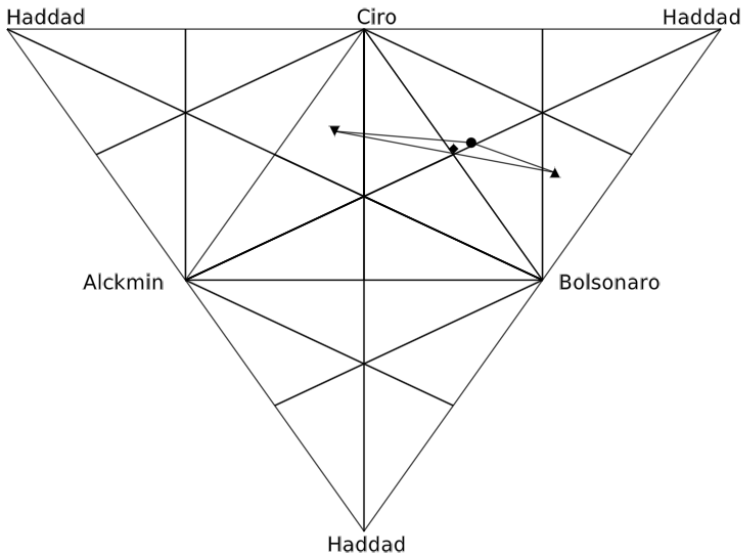
(b) Frequencies at each position

Results I: Borda and Condorcet

	Alckmin	Bolsonaro	Ciro	Haddad
Alckmin	0.0%	-12.63%	-16.99%	8.27%
Bolsonaro	12.63%	0.0%	5.48%	7.46%
Ciro	16.99%	-5.48%	0.0%	16.65%
Haddad	-8.27%	-7.46%	-16.65%	0.0%

	Borda Score	Standardized Borda Score
Alckmin	7029	0.464
Bolsonaro	7718	0.543
Ciro	7756	0.547
Haddad	6867	0.446

Opened Tetrahedron - Four candidates Positional Result

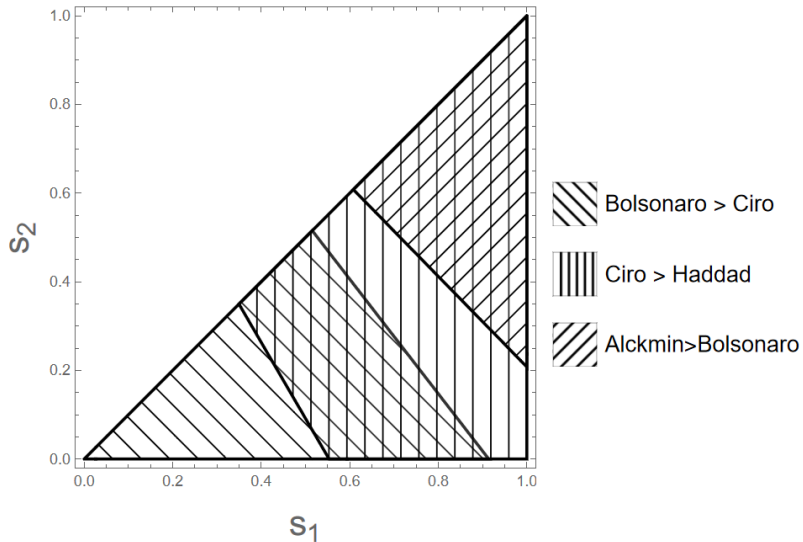


Counterfactual Positional Victories

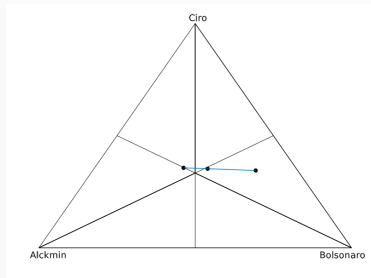
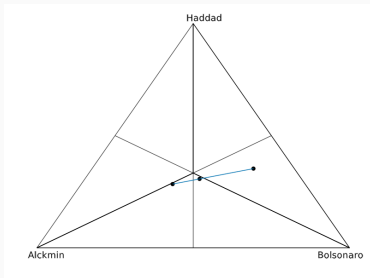
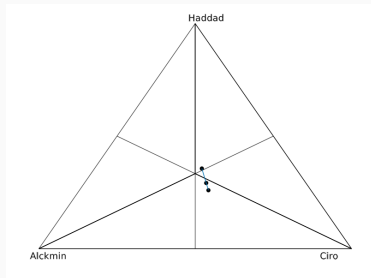
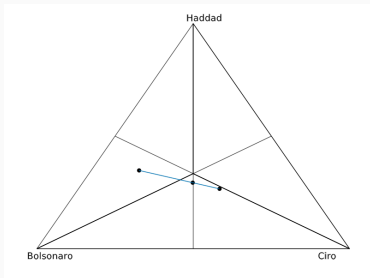
	Alckmin	Bolsonaro	Ciro	Haddad
Alckmin	0.0	0.31	0.0	0.58
Bolsonaro	0.69	0.0	0.47	1.0
Ciro	1.0	0.53	0.0	0.81
Haddad	0.42	0.0	0.19	0.0

Table 1: Proportion of victories in the positional voting procedure set

Victory in terms of s_1 and s_2



Alternative Set Stability



- We can't conclude Bolsonaro's victory was an institutional fluke. However, there is a conflict between the visions of Condorcet and Borda in this case.
- They perfectly match had he not ran.

- Even though the aggregation procedure boosted Bolsonaro's victory, it was not merely its effect, contrary to established theoretical expectations;
- But neither was he an undisputed winner:
 - pairwise mandate: ✓
 - positional mandate: ✗

Next steps?

- Use other variables in the dataset, particularly in the imputation;
- Analyze other moments of the 2018 election;
- Simulate coalitional and strategic alternative scenarios;

References

- [1] Herrade Igersheim et al. “Comparing Voting Methods: 2016 Us Presidential Election”. In: *European Journal of Political Economy* 71.nil (2022), p. 102057. DOI: 10.1016/j.ejpoleco.2021.102057. URL: <http://dx.doi.org/10.1016/j.ejpoleco.2021.102057>.
- [2] Peter Kurrild-Klitgaard. “Trump, Condorcet and Borda: Voting paradoxes in the 2016 Republican presidential primaries”. In: *European Journal of Political Economy* 55 (2018), pp. 29–35.
- [3] Richard F Potthoff and Michael C Munger. “Condorcet Loser in 2016: Apparently Trump; Condorcet Winner: Not Clinton?” In: *American Politics Research* 49.6 (2021), pp. 618–636.

- [4] Jonathan Woon et al. “Trump is not a (Condorcet) loser! Primary voters? preferences and the 2016 Republican presidential nomination”. In: *PS: Political Science & Politics* 53.3 (2020), pp. 407–412.