Research Paper One-Pager

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### Research Question

Does varying daily temperature affect how voting-age population perceive politician performance in Ecuador?

### Academic Sources

1. Retrospective voting, attribution errors and the influence of emotion

Bower, G. H. (1981). Mood and memory. *American Psychologist*, *36*(2), 129–148. <https://doi.org/10.1037/0003-066X.36.2.129>

Schwarz, N., & Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology*, *45*(3), 513–523.

Achen, C., & Bartels, L. (2017). *Democracy for realists: Why elections do not produce responsive government*. Princeton University Press.

Healy, A. J., Malhotra, N., Mo, C. H., & Laitin, D. (2010). Irrelevant events affect voters’ evaluations of government performance. *Proceedings of the National Academy of Sciences of the United States of America*, *107*(29), 12804–12809. <https://www.jstor.org/stable/25708619>

Healy, A., & Malhotra, N. (2010). Random Events, Economic Losses, and Retrospective Voting: Implications for Democratic Competence. *Quarterly Journal of Political Science*, *5*(2), 193–208. <https://doi.org/10.1561/100.00009057>

1. Presidential approval literature

Berlemann, M., & Enkelmann, S. (2014). The economic determinants of U.S. Presidential approval: A survey. *European Journal of Political Economy*, *36*, 41–54. <https://doi.org/10.1016/j.ejpoleco.2014.06.005>

Donovan, K., Kellstedt, P. M., Key, E. M., & Lebo, M. J. (2020). Motivated Reasoning, Public Opinion, and Presidential Approval. *Political Behavior*, *42*(4), 1201–1221. <https://doi.org/10.1007/s11109-019-09539-8>

Jung, J. W., & Oh, J. (2020). Determinants of presidential approval ratings: Cross-country analyses with reference to Latin America. *International Area Studies Review*, *23*(3), 251–267. <https://doi.org/10.1177/2233865919888373>

1. Weather and political outcomes

Bassi, A. (2019). Weather, Risk, and Voting: An Experimental Analysis of the Effect of Weather on Vote Choice. *Journal of Experimental Political Science*, *6*(1), 17–32. <https://doi.org/10.1017/XPS.2018.13>

Liao, Y., & Ruiz Junco, P. (2022). Extreme weather and the politics of climate change: A study of campaign finance and elections. *Journal of Environmental Economics and Management*, *111*, 102550. <https://doi.org/10.1016/j.jeem.2021.102550>

1. Other relevant literature

Quijano-Ruiz, A. (2023). *Assessing the Reliability of Self-rated Health: The effects of Transient Weather Fluctuations on Perceived Health* [Working {Paper}].

Deller, C., & Michels, J. (2022). *The Effect of Weather on Subjective Performance Evaluation*. SSRN. <https://doi.org/10.2139/ssrn.3780405>

Lucas, R. E., & Lawless, N. M. (2013). Does Life Seem Better on a Sunny Day? Examining the Association between Daily Weather Conditions and Life Satisfaction Judgments. *Journal of Personality and Social Psychology*, *104*(5), 872–884. <https://doi.org/10.1037/a0032124>

### Data

* Public opinion data from the [AmericasBarometer survey](https://www.vanderbilt.edu/lapop/) from the Latin American Public Opinion Project (LAPOP) for Ecuador. I intend to use eight waves of data (2008-2023), each with about 1,500 respondents. The survey rounds include the day of the interview, which will allow me to join this data with the temperature data.

The AmericasBarometer by the LAPOP Lab. (n.d.). *The AmericasBarometer* [Datasets with codebooks]. Retrieved February 11, 2024, from <https://www.vanderbilt.edu/lapop/raw-data.php>

If the need arises, the [Latinobarómetro](https://www.latinobarometro.org/) survey is also available, but the AmericasBarometer is more scientifically rigorous.

* [Global daily grided temperature](https://psl.noaa.gov/data/gridded/data.cpc.globaltemp.html) from the U.S. government National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Laboratory (PSL). I will use the daily temperature data for Ecuador, available 1979-2024. An algorithm is needed to extract the temperature from the NetCDF files, which was developed by Alonso Quijano-Ruiz and freely available on [GitHub](https://github.com/aquijanoruiz/Weather_HealthPerception/blob/main/code/weather_draft.R).

National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Laboratory (PSL). (2024). *CPC Global Unified Temperature* [Datasets]. <https://psl.noaa.gov/data/gridded/data.cpc.globaltemp.html>

### Empirical Strategy

I will estimate the impact of transient daily temperature changes on perceptions of politican performance, as measured by the survey, using pooled cross-sectional models, as follows:

where is the political performance variable, is daily temperature, is a vector of relevant time and individual-varying controls (as indicated by the literature), and is the error term. and are vectors of time and region fixed effects, respectively, which control for time-varying and region-invariant unobserved heterogeneity for time periods and regions.

The identifying assumption is that changes in daily temperature are random. This ensures the unbiased estimation of its coefficient, , and thus, the causal effect of temperature on perceived political performance. Time and region fixed effects control for regional weather patterns as well as medium term trends in weather. In different specifications, I can include fixed effects at different aggregations (region, canton/municipality and parish are available)[[1]](#footnote-38), as well as lagged temperature and other robustness checks.

1. I could include individual fixed effects, but since this is not panel data, it might overspecify the model. [↑](#footnote-ref-38)