

# 1 Conclusion

This paper has shown that daily temperature has a significant negative effect on presidential approval in Ecuador. Survey respondents are about 1.0 to 2.0 percentage points less likely to approve of the president when maximum daily temperatures increase by one degree. This result is robust to the inclusion of socioeconomic and political behaviour controls, including variables which control for partisanship, trust in the police, democracy, personal ideology identification, evaluations of the economy, among others.

These results are consistent with some literature on retrospective voting and voter errors, which suggests that voters may commit attribution errors when evaluating politician's performance. I validate findings from Barrington-Leigh and Behzadnejad<sup>1</sup>, Lignier et al.<sup>2</sup>, and Quijano-Ruiz<sup>3</sup>, who find that weather impacts behaviour.

I argue that the weather affects the mood of individuals negatively, and in turn individuals search externally for factors to validate their mood. This leads to a misattribution of mood to the president's performance, which results in lower approval ratings. The causal mechanism which explains these empirical findings rests on psychological theories of mood misattribution. These describe that individuals in a bad mood are more likely to report feelings of life dissatisfaction, and that they are more likely to attribute their mood to external factors.<sup>4</sup> I

---

<sup>1</sup>“The Impact of Daily Weather Conditions on Life Satisfaction.”

<sup>2</sup>“Does the Climate Impact Satisfaction with Life?”

<sup>3</sup>“Assessing the reliability of self-rated health: the effects of transient weather fluctuations on perceived health.”

<sup>4</sup>Schwarz and Clore, “Mood, Misattribution, and Judgments of Well-Being”; Bower, “Mood and Memory.”

argue that warmer weather in Ecuador may lead to a negative moods, which in turn makes citizens direct their emotions towards the president's performance. This is consistent with the literature on the impact of weather across a range of outcomes, which finds that weather can have a significant impact on behaviour.<sup>5</sup>

In the same line as Quijano-Ruiz<sup>6</sup>, who pioneers the use of CPC weather data in health services research, I introduce the use of this data for political behaviour studies, with promising results. CPC temperature data, though of lesser quality than weather station data, is of invaluable use for countries where weather station data is not available. There is a possibility that my temperature variables are subject to measurement error, which would cause attenuation bias. This would lead the true effect of temperature on presidential approval to be larger than what I estimate in this paper. The fact that I am able to find statistically significant results in an observational setting suggests that the true effect of temperature on presidential approval is likely to be larger, and future research should aim to address this possibility by using more precise temperature data, and by using more sophisticated methods to address measurement error. Replicating this study in other countries where temperature data of higher quality is available would also be valuable, in order to validate these results and understand the precision of CPC weather data for political science research.

I find that daily temperature has an increasing effect on mood through a logarithmic transfor-

---

<sup>5</sup>Keller et al., "A Warm Heart and a Clear Head"; Barrington-Leigh and Behzadnejad, "The Impact of Daily Weather Conditions on Life Satisfaction"; Lignier et al., "Does the Climate Impact Satisfaction with Life?"; Quijano-Ruiz, "Assessing the reliability of self-rated health: the effects of transient weather fluctuations on perceived health"; Deller and Michels, "The Effect of Weather on Subjective Performance Evaluation."

<sup>6</sup>"Assessing the reliability of self-rated health: the effects of transient weather fluctuations on perceived health."

mation. This means that as daily temperature increases, the impact on presidential approval is larger, but at a decreasing rate. This would be consistent with the theoretical argument that mood would be more affected at more extreme temperatures. However, future research should model this relationship with more sophisticated methods, such as ordered logistic regression, to more accurately understand the effect of weather on presidential approval. This would validate this paper's findings and provide a more nuanced understanding of the effect of weather on political behaviour.

Understanding how temperature and other weather-related variables affect political behaviour is important for extending the literature on attribution errors and retrospective voting, but even more so for understanding the way that political behaviour works in Latin America, a region which has been severely understudied in the literature. This paper is a first step in understanding the effect of weather on political behaviour in the literature, which moves away from the focus on standard variables which have been proven to be influenced by factors not present in developed countries. Understanding these mechanisms is important for better research, but also to enact public policy for democratic accountability.