

1 Introduction

Whether voters can truly capture a realistic appraisal of the state of the world at the polls remains a core research topic in the study of politics. In an ideal scenario, individuals will be able to adequately judge the strengths and weaknesses of politicians punishing poor performers and providing incentives for new leaders to perform competently while in office. This well known argument of *voter rationality* by Key (1960) builds the foundation of retrospective voting, which models citizens as rational observers of government past-performance (Ferejohn, 1986; A. Healy & Malhotra, 2013). An adequate system of retrospective voting has can to efficient political outcomes, where politicians who underperform leave office resulting in greater democratic accountability (Besley, 2006; Persson & Tabellini, 2002).

However, modern researchers have challenged the view that voters can adequately appraise the performance of a politician, finding a variety of biases in the way voters attribute responsibility to political leaders, which challenges the foundational basis of the perfect retrospective voter (A. Healy & Malhotra, 2013). In this paper, I contribute to this stream of the literature by focusing on how seemingly irrelevant events can significantly affect presidential approval. I do this by leveraging an ordinary yet impactful natural experiment: transient temperature variations across municipalities in a developing democracy.

I construct a novel dataset by merging the AmericasBarometer (AB) public opinion survey data with CPC Global Unified temperature data in Ecuador. Given that daily temperature changes

can be assumed to be random, I exploit this variation to estimate the impact of temperature on presidential approval ratings. The core result of the paper is that higher temperatures have a negative and statistically significant relationship with presidential approval, which suggests that voters commit attribution errors when evaluating politicians. I ascribe this result to a mood misattribution caused by heat discomfort, a robust result across other disciplines but relatively unexplored in the study of political behaviour.

Most of the retrospective voting literature has focused on economic voting, which focuses examining the empirical relationship between economic indicators and political attitudes (Berle-
mann & Enkelmann, 2014; Duch & Stevenson, 2008; Kiewiet & Rivers, 1984). This literature has found mixed results, but one core finding is that in Latin America, economic variables cannot have little explanatory power on presidential approval (Layton et al., 2016). Further, other researchers have found evidence of cognitive and emotional biases in the evaluation of politician performance by voters (Beck, 1982; Hart & Matthews, 2023; Kahneman & Tversky, 1982; Tilley & Hobolt, 2011), yet few have studied the impact of random events such as the I study in this paper (Christopher H Achen author, 2016; A. J. Healy et al., 2010; A. Healy & Malhotra, 2010).

The paper proceeds as follows. In the next section, I present the empirical approach of the paper, which includes the data. In the Results section, I present the paper's main findings. I also present the heterogenous effects of temperature on presidential approval. In the conclusion, I discuss the main findings of the paper and their implications for the literature on retrospective

voting and attribution errors.