Performance-Related Biases and Perceptions

# ## Title

End Bias in Retrospective Voting: The Role of Framing and Affective Judgments

# ## Abstract (7)

The evaluation of presidential economic performance plays a controversial role in retrospective voting and democratic accountability. The tendency for voters to simplify retrospective assessments by substituting conditions at the end for the whole, known as the end bias, can distort their judgments. This study investigates the impact of framing economic information with yearly and cumulative levels on mitigating the end bias and enabling more informed assessments of the incumbent's economic performance. Drawing on a series of surveys and experiments, we demonstrate how voters unintentionally rely on election-year performance due to the accessibility of this information, despite their actual intention to judge presidents evenly throughout the term. The findings suggest that providing voters with both yearly and cumulative economic framing can align their actions with their intentions, eliminating the election-year emphasis. Moreover, we explore the influence of pre-existing affective judgments, which refer to the emotional ties and sentiments individuals hold toward political leaders, on overcoming the end bias, particularly in the evaluation of identified incumbents.

# ## Introduction (7)

**\*\*Democratic Accountability through Informed Assessments of Incumbent Economic Performance\*\***

In the realm of retrospective voting and democratic accountability, evaluating the economic performance of incumbents holds a controverted importance. A noteworthy challenge arises from voters' tendency to prioritize short-term economic conditions shortly before elections, rather than considering the overall performance throughout an incumbent's term [@AchenBartels\_Chairs\_2004]. This behavior raises three critical issues: firstly, it leads politicians to focus on short-term growth at the expense of long-term planning; secondly, it can overshadow sustained economic strategies with short-term manipulations; and thirdly, it fosters myopic policies within each presidential economic juncture rather than evaluating incumbents' preparedness [@Tufte\_1978; @Bartels\_2008; @HealyLenz\_2014]. Studies by @Sarafidis\_2007 and @CampelloZucco\_CommodityPrices2022 further emphasize the prevalence of voters' memory constraints and misattribution of responsibility in evaluating incumbents' economic performance.

**\*\*Understanding the End Bias and the End Heuristic: Challenges and Potential Remedies\*\***

The end bias, a cognitive tendency to substitute the end for the whole, plays a significant role in voters' evaluations of economic performance. The concept of “Attribute Substitution”, illustrated by @Kahneman\_2003 and @KahnemanFred\_2002, reveals how individuals unconsciously replace a target attribute with a more readily accessible, related attribute when making judgments. This phenomenon, exemplified in experiments by @KahnemanEtal\_1993 involving the immersion of hands in cold water, showcases people's inclination to remember experiences based on peak and end conditions, termed the "Peak-End Rule." This bias extends to diverse retrospective evaluations ranging from vacations to colonoscopies that underly the tendency to substitute overall assessments with easily accessible peak and end information (e.g., @Loewestein\_1993; @Baumgarten\_1997; @Ross\_1991; @ZauDieAriely\_2006).

Previous political science research has posited “citizens’ limited memory” and the perception that “election-year economy is particularly informative” as contributors to this bias [@Sarafidis\_2007; @MacKuen\_1992]. However, @HealyLenz\_2014 propose an intriguing explanation known as the "end heuristic" drawing from psychological research by @Liersch\_2009 and @VareyKahneman\_1992, which shows that individuals overweight discomfort at the end when evaluating hypothetical sequences of unpleasant episodes. Contrary to prevailing explanations, the end-heuristic suggests that voters indeed intend to judge presidents based on cumulative growth but due to the accessibility of election-year performance information, voters inadvertently substitute it for cumulative growth.

Over a series of experiments, @HealyLenz\_2014 demonstrate that participants tend to overweight the last year's performance, despite intending to weigh growth equally across all years. Using the incumbent party’s vote margin in 17 US elections, they expose a noteworthy correlation between participants’ economic evaluations and the Real Disposable Income (RDI) growth rate. Furthermore, they show that the end bias can be mitigated by providing voters with both yearly and cumulative economic information. When both types of information are made equally accessible, the election-year emphasis is eliminated, leading to a more accurate and balanced evaluation of incumbents' economic performance.

**\*\*Aligning Intentions with Actions: The Role of Framing in Enhancing Voter Assessments\*\***

The concepts of retrospective voting and democratic accountability are closely intertwined with framing, as political actors and media outlets often frame issues to influence public opinion and perception of government performance. Scholars like Erving Goffman (1974) and George Lakoff (2004) argue that the way an issue or message is framed can activate certain cognitive schemas and influence how individuals understand and respond to it. To reinforce democratic accountability, the adoption of yearly and cumulative economic framing could effectively mitigate the end bias. As implied in the research conducted by @Liersch\_2009, providing voters with information that promotes the alignment of voters' actions with their intentions holds the potential to eliminate the election-year emphasis and foster more accurate and informed assessments of incumbents' economic performance.

**\*\*Affective Judgments: The Role of Emotions and Irrelevant Events\*\***

In addition to framing economic information, it is crucial to understand the influence of pre-existing affective judgments in evaluating identified incumbents. We explore the influence of emotional ties and sentiments on overcoming the end bias, particularly in the evaluation of identified incumbents. Emotions and irrelevant events, unrelated to economic conditions, can still play a significant role in voters' decisions as shown by @MoMalhotra\_2009 with the effects of wins and losses of college basketball games on presidential approval, or natural disasters like floods and tornadoes in presidential reelection by Mo et al. (2020). Similarly, @CampelloZucco\_CommodityPrices2022 extend this literature by testing whether individuals' prior affective ties to political leaders cloud their capacity to discount exogenous conditions and hinder the objective evaluation of available evidence.

**\*\*Exploring the Interplay between the End Heuristic, Framing, and Affective Judgements\*\***

Furthermore, the end heuristic can interact with affective judgments, as individuals' emotional reactions to distinct events may influence their evaluations of economic performance. @LoewSmall\_2004 and @MargalitMalhotra\_2014 Malhotra & Margalit (2010) research on the interplay between emotions and judgment highlights the potential impact of affective responses on economic evaluations. The interplay between affective judgments and cognitive biases accentuates the significance of comprehending how emotional responses can shape perceptions of economic conditions, thus influencing voting behavior. Consequently, this scholarship delves into whether framing economic information with both yearly and cumulative levels can act as a mitigating factor, counteracting the influence of affective judgments and facilitating a more accurate and informed assessment of the economic performance of identified incumbents.

The rest of this article is structured as follows. Section (2) introduces the main notions of the end heuristic, retrospective economic voting, and democratic accountability. Then, we explain the relationship between the use of yearly and cumulative economic information, the end bias, and the implications of framing and affective judgements. Section (3) lays out the hypotheses and expected results, followed by the experimental design and implementation logic in Section (4). Next, we interpret and explain the main results of the online experiments in Section (5), followed by the implications, limitations, and future research possibilities in Section (6). Finally, concluding remarks and applications are provided in Section (7).

# ## Theoretical Background (7)

**Democratic Accountability through Informed Assessments of Incumbent Economic Performance**

**Understanding the End Bias and the End Heuristic: Challenges and Potential Remedies**

**Aligning Intentions with Actions: The Role of Framing in Enhancing Voter Assessments**

**Affective Judgments: The Role of Emotions and Irrelevant Events**

**Exploring the Interplay between the End Heuristic, Framing, and Affective Judgements**

Retrospective voting, an essential tenet of democratic accountability, involves voters assessing incumbents' past economic performance during elections. Citizens inherently tend to reward leaders during prosperous periods and hold them accountable in times of economic challenges. Scholarship by Morris Fiorina (1981) and Larry Bartels (2016) emphasize its significance, aligning electoral choices with economic realities and attributing leaders with responsibility for their policy decisions. However, this seemingly straightforward link is nuanced by framing dynamics and cognitive biases like the end heuristic, as well as their interplay with affective emotions.

Democratic accountability, the bedrock of democratic governance, ensures that elected representatives remain responsive to the needs of their constituents. Noteworthy scholars such as Robert Dahl (1971), Adam Przeworski (1991), and Susan Stokes (2005) have extensively explored the mechanics of accountability, emphasizing the importance of citizen engagement, participation, and the role of institutional design. Additionally, insights from Elinor Ostrom's (1990) exploration of collective action institutions and Carole Pateman's (1970) work on participation in democratic theory illuminate the multifaceted nature of accountability. These theories seamlessly converge with framing dynamics, cognitive biases, and affective judgements, influencing how citizens perceive their representatives and how they hold them accountable. Renowned scholars like George Marcus (2000) and Paul Sniderman (2004) delve into how framing shapes public opinion and behavior. Furthermore, the interplay between affective judgments and the end heuristic adds complexity to economic evaluations, as emotions play a role in shaping citizens' perceptions of economic conditions (Malhotra & Margalit, 2010). This intricate interplay, interwoven into the democratic accountability fabric, underscores the multifaceted nature of voter decision-making.

Heuristics such as the end bias, emerge as potential stumbling blocks on the road to objective retrospective voting. Experimental findings, as highlighted by Huber, Hill, and Lenz (2012), reveal participants' inclination to disproportionately emphasize recent incumbent performance. This susceptibility to unrelated influences suggests that voters might struggle to discern an incumbent's actions from exogenous variables. Recognizing the implications of these biases becomes pivotal for refining electoral precision and amplifying the informed nature of voters' decisions. The acknowledgment of these biases emphasizes the necessity of a nuanced approach to understanding voter behavior. Experimental evidence further highlights the limitations in voters' ability to use a retrospective decision rule, even in controlled experimental games, participants tend to overweight recent incumbent performance and are influenced by unrelated events, such as lotteries affecting their welfare (Huber, Hill, & Lenz, 2012). This suggests that voters' ability to accurately assess incumbent performance may be subject to biases, and they may struggle to disentangle the impacts of external factors from the incumbent's actions.

Exogenous events introduce a layer of complexity into retrospective voting, challenging the notion that economic assessments solely pivot on macroeconomic indicators. While the propensity to reward incumbents during economic booms and punish them during downturns holds, researchers like Healy and Malhotra (2009,2010) delve into how exogenous events, such as the effects of wins and losses of college basketball games on presidential approval, or natural disasters like floods and tornadoes on presidential reelection by Mo et al. (2020) can magnify the impact of economic shocks just before elections. For example, the aftermath of natural disasters offers a clear snapshot of how voters respond to unforeseen economic challenges and acknowledges the interplay between broader contextual factors and voters' decision-making @HeinzMueller.

Central to the findings of @CampelloZucco\_2016, is the influence of exogenous economic factors, such as commodity prices and international interest rates, on presidential success. They explain how voters in Latin American countries are quick to reward incumbent leaders during periods of favorable external economic conditions and penalize them when these conditions are adverse. This responsiveness to external economic fluctuations presents a challenge to the effectiveness of economic voting as a mechanism for holding leaders accountable, as voters may not always recognize situations where economic performance is largely determined by factors beyond governmental control.

Furthermore, the complex dynamics of economic perceptions and political accountability in developing democracies, particularly focusing on Latin American countries, have been explored by @CampelloZucco\_CommodityPrices2022. Their research sheds light on a recurring phenomenon wherein voters tend to attribute economic performance, whether positive or negative, to incumbent leaders rather than recognizing the influence of external economic conditions. This misattribution, the authors argue, is not solely a matter of information deficiency; their studies reveal that voters often struggle to accurately apply information, especially when it clashes with their emotional judgments of political figures.

The role played by affective judgments – the emotional ties and sentiments individuals hold toward political leaders is explored by Campello and Zucco's (2018). They find that even when provided with information about exogenous economic shocks, voters often fail to adjust their assessments due to pre-existing emotional connections to leaders. This presents a significant obstacle to rectifying the misattribution of responsibility on economic evaluations. Their studies underscore that addressing this challenge requires more than providing information; it requires understanding the intricate interplay between cognitive processes, emotional judgments, and the broader economic context. Ultimately, the research highlights the complexities involved in fostering effective democratic accountability in developing nations, where economic perceptions can be heavily influenced by factors beyond immediate governmental control.

Framing, coupled with cognitive biases plays a pivotal role in shaping citizens' responses to economic information. Furthermore, the nexus between democratic accountability and framing dynamics holds significance. Political actors and media outlets strategically frame issues to shape public opinion and perceptions of government performance. George Lakoff's (2004) and Erving Goffman's (1974) exploration of framing's impact on public discourse and agenda-setting underscores its sway. This dynamic is further enriched by the interaction between framing and affective judgments, which underscores the emotional resonance of political messages to deepen our understanding of how citizens perceive their elected representatives and how they hold them accountable (Marcus, 2000; Sniderman, 2004).

In the following sections we describre the data, hypotheses, and experiments as the groundwork established by these insights into retrospective voting, democratic accountability, framing, and cognitive biases to guide our research. We explore what are the effects of framing, cognitive biases, and emotional judgments on retrospective voting to further the literature and our comprehension of this intricate democratic process.

# ## Data and Empirical Strategy / Experimental Design Overview of Studies

The two plots in Figure 1 depict the Real Disposable Income (RDI) yearly growth rate, as originally presented by @HealyLenz\_2014 and retrieved from the Bureau of Economic Affairs (BEA). They show that, even when presented with data from all years of a President's Term in a simple format, most participants placed substantially more weight on the economy in the final year of presidents’ terms.

In the left panel, which shows Bill Clinton's initial term, there is an appearance of moderate average growth, culminating in a notably strong phase. Conversely, the right panel showcasing Jimmy Carter's sole term demonstrates more robust growth during the first two years, which then experiences a marked deceleration in the election year. Despite the cumulative income growth being superior during Carter's tenure (6.9% in comparison to Clinton's 6.2%), participants evaluated the economy significantly higher during Clinton's first term.

A graph of a line

Description automatically generated with medium confidence

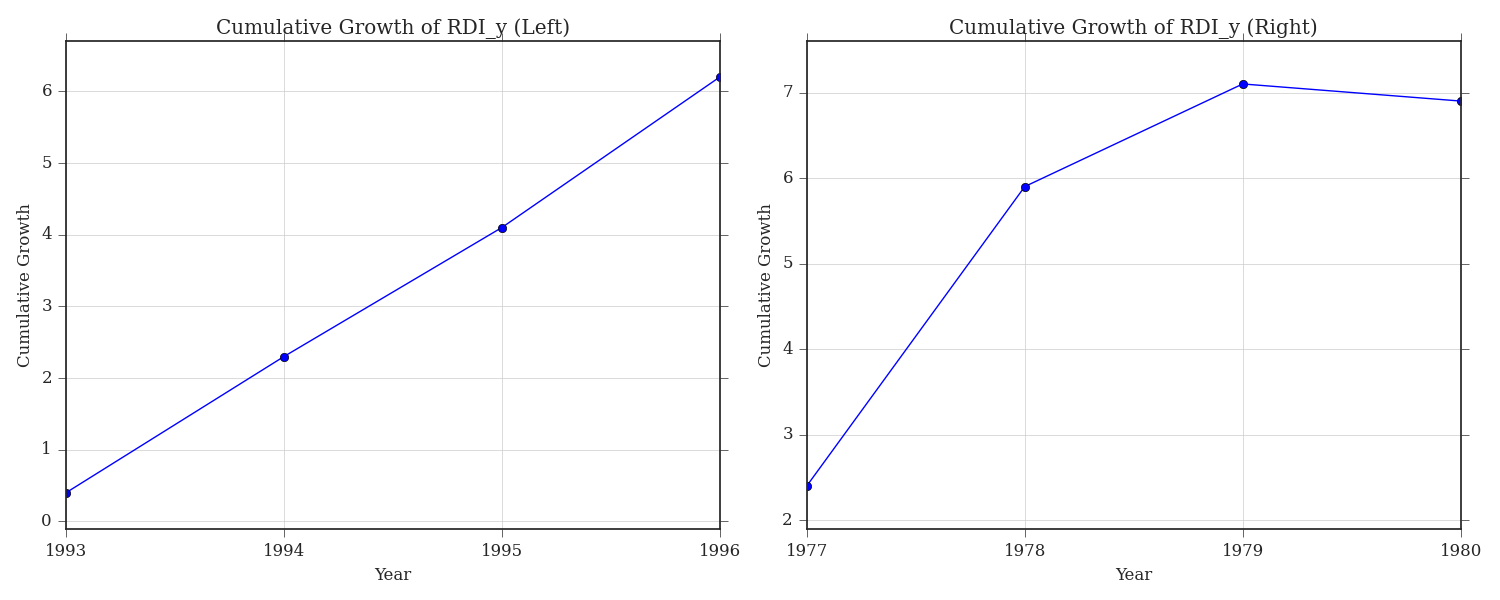
Over a series of tests, @HealyLenz\_2014 asked participants to evaluate each of the 17 economies from 1940 to 2008 individually and reveal that participants tend to overweight the last year's performance, despite intending to weigh growth equally across all years. Results are shown in Figure 2 below where the graph to the left presents the Vote Margin for each election and the RDI Growth Rate, while the second one the Vote Margin and the Economic Evaluations by participants with a pwcorr=0.734.

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After efficiently discarding the hypotheses about “citizens’ limited memory” and the perception that “election-year economy is particularly informative” as contributors to this bias, they included a treatment with cumulative framing. The new experiment had two conditions, in the control condition, participants saw yearly growth plots just like those described in Figure 1. In the treatment condition, participants saw both yearly growth and cumulative growth (one on top of the other) as presented below in Figure 3.

INSERT FIGURE 3



To determine the influence that each year had on participants' economic evaluations, they would regress participants' average ratings of these economies on the percentage change in income growth in each of the four years of the term. In Equation 1 below, the dependent variable $y\_i$ represents the economic evaluation of participant i. The independent variable $x\_i$ represent the RDI growth rate in each of the four years of the term and the $\beta\_i$ coefficients estimate the implicit weight assigned to each year.

**$$ y\_i = \beta\_0 + \beta\_1 X\_1 + \beta\_2 X\_2 + \beta\_3 X\_3 + \beta\_4 X\_4 + \varepsilon\_i $$**

The same equation was used to capture the economic evaluations for participants in the control condition that saw yearly plots (Figure 1) and the treatment condition that saw cumulative plots (Figure 3). We will use the same recruitment description, screening, and end survey as in the original experiment to test our contribution. In a nutshell, we will include identified incumbents in both yearly and cumulative graphs as a third treatment as depicted with the president’s name in Figure 4 below.

INSERT FIGURE 3

This subtle contribution has roots on @CampelloZucco\_2022, where participants were asked to rate a (positive) negative commodity shock followed by a relative shock with a Blind and Identified conditions, as shown in Figure 5 below.

A diagram of a diagram

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Where

Why is this happening?

The end bias, a cognitive tendency to substitute the end for the whole, plays a significant role in voters' evaluations of economic performance.

The concept of “Attribute Substitution”, illustrated by @Kahneman\_2003 and @KahnemanFred\_2002, reveals how individuals unconsciously replace a target attribute with a more readily accessible, related attribute when making judgments.

This phenomenon, exemplified in experiments by @KahnemanEtal\_1993 involving immersion of hands in cold water, showcases people's inclination to remember experiences based on peak and end conditions, termed the "Peak-End Rule."

This bias extends to diverse retrospective evaluations ranging from vacations to colonoscopies that underly the tendency to substitute overall assessments with easily accessible peak and end information (e.g., @Loewestein\_1993; @Baumgarten\_1997; @Ross\_1991; @ZauDieAriely\_2006).

# ## Expected Results

* **Model 2:** Economic Weight: Linear regression could test economic evaluations on GPD growth rate in each of the four years of the term.
* Where the dependent variable is the economic evaluation of participant i. The independent variables represent the GPD growth rate in each of the four years of the term and the coefficient estimates the weight assigned to each year.
* **Experiments:**
  + **(A):** Participants from the US will be sourced through Amazon MTurk, presented with instructions (only accepted if pass attention test), demographic questions, a battery of feeling thermometers of the 4 previous presidents, and paid upon completion.
    - Participants randomized into the Identified Affective Manipulation will be shown either Obama’s (First Term) or Trump’s (Only Term).
  + **(B):** Participants from Brazil will be sourced through Facebook Ads and implemented in Qualtrics, undergo the same procedure, and as an incentive they participate in a lottery for a simple tablet.
    - Participants randomized into the Identified Affective Manipulation will be shown either Lula’s (First Term) or Bolsonaro’s (Only Term). [Appendix]
* **Sample Size:** 95% confidence level, standard deviation of 0.5, and a confidence interval of 5%, a sample of 385 participants should be enough to avoid sample size problems and ensure a reasonable power.
* **Expected Results**
  + **Hypothesis 1:** I expect participants will evaluate economic conditions more positive (negative) when they see both growth and cumulative information than when they only see growth information.
  + **Hypothesis 2:** When provided with identified incumbents, I expect that participants will slightly evaluate economic conditions more positive (negative), when they reported positive (negative) previously held affective judgements, when they see both growth and cumulative information.
  + **Hypothesis 3:** When provided with identified incumbents, I expect participants will weigh economic conditions in line with their evaluations when they see both growth and cumulative information but not when they only see growth information. Specifically, when they only see growth information, participants will weigh economic conditions in line with their evaluations only if they reported positive (negative) previously held affective judgments otherwise they will continue not to do so.

# ## Discussion and Conclusion / Conclusion and Implications

One of the limitations of the present research proposal is that if we think about the incumbents as observers, considering that they are also influenced by the end-heuristic (Kahneman, 2003), then election-year is subject to myopic policies and action bias. As for individuals, we can find ways to better prepare voters for casting informed votes, despite their previously held affective judgements of politicians. Only through institutional framework that policymakers could be enticed to frame economic data and design public policies grounded on responsible short- and long-term growth despite of their visibility and electoral gains. Some of the biases of self-interest and wishful thinking consider that psychological input has been used in economics mainly to highlight the cognitive imperfections of market participants. However, regulators are themselves imperfect actors with limited cognitive capacities (Tasic, 2011).

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Zucco and Campello (2018) uncovered interesting findings about how people in developing democracies, especially in Latin American countries, view economic issues and hold leaders accountable. They found that voters often link economic performance, good or bad, directly to the leaders, without fully considering outside economic factors. This happens not just because of a lack of information but because of the way our minds work, influenced by emotions and biases.

This understanding leads us to the role of framing, combined with emotions and a psychological tendency called the "end heuristic," in shaping how citizens react to economic information. Experts like George Marcus (2000) and Paul Sniderman (2004) explain how framing, or how information is presented, affects what we believe and how we behave. Plus, emotions mix into the picture, impacting how we see economic conditions, as shown in the work of Malhotra & Margalit (2010).

The connection between democratic accountability and framing is significant too. Politicians and the media carefully present issues to influence how we think about them. George Lakoff (2004) and Erving Goffman (1974) show how framing influences our thoughts. The interplay between framing and emotions makes this even more powerful. This connection, highlighted by Marcus (2000) and Sniderman (2004), offers insights into how we understand our elected leaders and how we keep them responsible.

Moving forward, as we discuss the data, hypotheses, and experiments, the groundwork by Zucco and Campello (2018) helps us navigate the complexities of holding leaders accountable for the economy. This understanding sets the stage for a closer look at how framing, biases, emotions, and economic perceptions interact to shape our voting choices. Through this exploration, we gain insights into the many aspects of the democratic process, helping us better grasp how we form our opinions about economic conditions and how this influences our voting decisions.

Understanding Voter Decision-Making: Interplay of Information and Affective Ties

The ability to accurately evaluate incumbents' economic performance raises questions about the role of information and affective judgments in shaping voter decisions. It has been observed that the misattribution of responsibility for the economy extends beyond informational limitations (Sarafidis, 2007). While respondents are provided with relevant information, many fail to appropriately utilize it, particularly when it confronts pre-existing affective ties to political leaders (Campello & Zucco, 2022). Understanding whether these affective ties overshadow objective evaluations is essential in comprehending the nuanced interplay between available evidence, emotional responses, and voting behavior.

Retrospective Voting: Economic Performance and Electoral Outcomes

Retrospective voting's significance lies in its capacity to link economic performance with electoral outcomes, shaping citizen decisions during elections (Fiorina, 1981; Kramer, 1971). However, this process is not linear; citizens reward incumbents during prosperity and hold them accountable during downturns, yet this simplistic model overlooks the complexities at play. Exogenous factors such as natural disasters and oil price changes also influence voter decisions (Achen & Bartels, 2004), highlighting the need to discern between accountable policy responses and unavoidable economic events.

Democratic Accountability and Its Mechanisms

Democratic accountability is underpinned by intricate mechanisms that span citizen engagement, participation, and institutional design (Dahl, 1971; Przeworski, 1991). The works of Ostrom (1990) and Pateman (1970) further emphasize the variety of avenues through which accountability can manifest. Incorporating framing dynamics into this discourse can illuminate how citizens perceive and hold elected representatives accountable, fostering an informed citizenry capable of distinguishing policy impact from affective ties.

Cognitive Biases and the Complexity of Voter Decision-Making

Voter competence in retrospectively evaluating incumbents' economic performance is complicated by cognitive biases. Experimental findings illustrate participants' inclination to overweight recent information, even in controlled settings (Huber, Hill, & Lenz, 2012). This suggests that the cognitive biases affecting voters' decision-making extend beyond the realm of macroeconomic indicators and encompass a range of external factors that can distort their assessments. Understanding these biases can offer insights into the limitations of rationality in voter behavior.

Framing's Role in Shaping Political Perception

Framing, as a powerful tool used by political actors and media, shapes public discourse and influences perception (Lakoff, 2004; Goffman, 1974). Its impact intersects with affective judgments, as emotionally charged frames trigger particular cognitive responses (Marcus, 2000; Sniderman, 2004). Investigating the interplay between framing and affective judgments enhances our understanding of how citizens interpret political information, form attitudes, and subsequently make decisions.

The End Heuristic: Influence on Economic Evaluations

The end heuristic, a cognitive tendency proposed by Healy (2013) and inspired by Kahneman and Tversky's work, plays a significant role in evaluating economic performance. Its influence on voters' tendency to substitute the most recent information for the entire term can potentially skew their perceptions and decisions. By dissecting this heuristic, we can uncover its implications for retrospective voting and consider interventions to counter its effects.

Integrating Theoretical Frameworks for Comprehensive Insights

Synthesizing theoretical frameworks encompassing retrospective economic voting, framing, cognitive biases, and affective judgments offers holistic insights into voter decision-making and its impact on democratic accountability. These frameworks can provide a roadmap for evidence-based policy-making, enhancing the functioning of democratic systems through a deeper understanding of the multifaceted elements that guide citizen choices.

Feel free to adjust and expand on these paragraphs to fit your thesis's scope and objectives. The provided data and your existing content provide a strong foundation for each topic.

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