The Impact of Inflation on Support for Kamala Harris in the 2024 Presidential Election

Selim Erdem Aytaç
Koç University
saytac@ku.edu.tr

Daniel McDowell
Syracuse University
dmcdowel@syr.edu

David A. Steinberg
Johns Hopkins SAIS
dsteinberg@jhu.edu

Abstract: Inflation is unpopular with voters and is widely believed to harm the popularity of incumbents. High inflation following the Covid-19 pandemic has been identified as a key reason for poor incumbent performance at the polls around the world, including the defeat of the Harris-Walz ticket in the 2024 US Presidential election. Such conjectures align with existing research showing that voters' inflation perceptions are associated with poor evaluations of incumbent parties. Yet observational studies cannot eliminate the possibility that the causal relationship runs the other way, where opposition to incumbent governments causes individuals to report higher price increases. To help overcome this inferential challenge, this study draws on an experiment embedded in a large, nationally representative, survey fielded just days before the 2024 US Presidential election. We find that priming Americans to think about inflation reduces approval of the Biden-Harris administration and lowers confidence in the Democrats' ability to manage the economy. Moreover, we find this effect is most pronounced among Independents and Democrats, precisely the voters Harris-Walz needed to win the election, suggesting that inflation likely contributed to the Democrats' defeat.

Introduction

Inflation re-emerged as a major global economic challenge following the Covid-19 pandemic. In advanced industrialized democracies, the rate of inflation increased to levels not seen in forty years (Ha, Kose, and Ohnsorge 2023). Fast rising prices are widely believed to reduce the popularity of incumbent governments, and post-pandemic elections in countries with high inflation provide some anecdotal support for this expectation. For instance, incumbent parties experienced major declines in their vote shares in Argentina, India, the United Kingdom, and the United States—four countries where inflation had been high by historical standards.[1]

This study examines the effect of inflation on support for incumbents in one crucial case: the 2024 US Presidential election. Though inflation in the United States had subsided by the time of the election—down to 2.4% from a peak of 9% two years earlier[2]—surveys of American voters consistently found that inflation remained a top concern.[3] A majority of American voters also believed that the Republican challenger, Donald Trump, would handle inflation better than Kamala Harris, the Democratic Party's nominee for President.[4] For his part, Trump made the issue a centerpiece of his campaign. At a rally in New York's Madison Square Garden just days before the election, the Republican nominee presented his closing argument, first asking the crowd if they were "better off now" than four years ago, then adding: "With your vote in this

[1] An analysis by *Financial Times* reports that every governing party facing an election in a developed country in 2024 lost vote share, a first in almost 120 years of records. See https://www.ft.com/content/e8ac09ea-c300-4249-af7d-109003afb893?shareType=nongift

[2] https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category-line-chart.htm.

[3] See, for example, https://today.yougov.com/topics/politics/trackers/most-important-issues-facing-the-us and https://www.pewresearch.org/politics/2023/06/21/inflation-health-costs-partisan-cooperation-among-the-nations-top-problems/.

[4] https://today.yougov.com/politics/articles/50846-donald-trump-leads-on-immigration-and-inflation-kamala-harris-on-abortion-and-health-care.

election, I will end inflation."[5] In the days following the election, many pundits singled out inflation as the critical factor behind Trump's decisive victory.[6]

It may indeed be the case that American voters spurned Democrats at the ballot box due to inflation. But punditry is no substitute for a careful empirical assessment. There are, in fact, reasons to question whether inflation had a causal effect on the Harris-Walz loss in 2024. Due to high levels of partisan polarization in the United States today (Iyengar et al. 2019), the economy may have less impact on voters' attitudes and behavior than in the past (Donovan et al. 2020; Ellis and Ura 2020). Moreover, even if we observe a correlation between individuals' concerns about inflation and their opposition to incumbents, it is unclear whether this occurs because worries about inflation drive opposition to incumbents or if partisanship influences individuals' reported concerns about inflation (Bachmann et al. 2021; Gillitzer et al. 2021; Stantcheva 2024).

This paper assesses the presumed link between inflation and support for the incumbent party. To do so, we draw on a pre-registered experiment in a large, nationally representative, survey that was fielded the week prior to the 2024 US Presidential election. We employ a question-order experiment in which some respondents were asked to report about how much prices have gone up in the last year *before* being asked for the evaluations of Biden-Harris administration and the Democratic Party. Other respondents received the inflation question *after*

[5] https://rollcall.com/factbase/trump/transcript/donald-trump-speech-campaign-rally-new-york-madison-square-garden-october-27-2024/.

[6] Examples include the following: https://www.reuters.com/markets/us/hey-stupid-it-wasnt-just-economy-it-was-inflation-2024-11-06/, https://www.washingtonpost.com/business/2024/11/06/economy-biden-trump-voters/, https://www.theguardian.com/business/2024/nov/06/inflation-looks-to-have-secured-trump-win-but-his-policies-mean-higher-prices, https://www.theatlantic.com/politics/archive/2024/11/kamala-harris-donald-trump-inflation/680557/, https://www.aljazeera.com/economy/2024/11/7/inflation-versus-wages-trumps-stunning-comeback-explained-in-two-charts, https://www.cnn.com/2024/11/07/business/inflation-economy-trump-tariffs/index.html, and https://www.huffpost.com/entry/kamala-harris-inflation-donald-trump_n_672b8515e4b0be8c956b6157.

providing those evaluations. This design enables us to test whether thinking about inflation has a causal effect on support for the incumbent party.

Our results paint a clear picture that inflation reduced voter support for the Democratic Party in the 2024 Presidential election. Respondents who were first primed to think about inflation report lower approval of the Biden-Harris administration and express less confidence in the ability of the Democratic Party leadership to manage the economy. Most notably, this drop in approval is particularly steep among two critical groups that Harris needed to turn out to support her at the election: voters that identify as Democrats and those that identify as political Independents. These patterns provide new evidence that the salience of inflation contributed to the poor performance Harris and the Democratic Party in the 2024 election.

Inflation and Support for Incumbents

Inflation, defined as an increase in the price level for goods and services, has adverse effects on most individuals. Stantcheva (2024) finds that inflation is viewed as an unambiguously negative outcome among voters, and rising prices increase anger toward the government. This suggests that high inflation should hurt the popularity of the incumbent.

Indeed, numerous studies have found that incumbent vote shares are negatively correlated with inflation (Chappell and Veiga 2000; Fair 1996; Goodman and Kramer 1975; Kiewiet and Udell 1998; Lewis-Beck 1990; Palmer and Whitten 1999).[7] Time-series studies likewise find that incumbent approval ratings decline when inflation is high (Beck 1991; Berlemann and

[7] Other economic outcomes, such as unemployment and GDP growth rates, also correlate with voting patterns. In an early review of the economic voting literature, Lewis-Beck and Paldam (2000, p. 117) note that "as inflation has virtually disappeared in the West during the last decade," scholars have turned to unemployment and growth as the key macroeconomic variables driving economic voting. The fallout from the Covid-19 pandemic has put inflation back to the spotlight in economies around the world.

Enkelmann 2014; Carlin et al. 2018). Extensive research based on individual-level survey data also finds a link between inflation and anti-incumbent attitudes. People with negative perceptions of inflation tend to express lower levels of government approval and are less likely to vote for the incumbent party (Baccini and Weymouth 2024; Clarke and Whitely 1990; Lewis-Beck and Stegmaier 2000; Price and Sanders 1995).

Some recent studies, however, cast doubt on an ironclad link between inflation and diminished electoral prospects for incumbents. Mutz and Mansfield (2024), for instance, conduct an analysis of the 2022 US Congressional election and conclude that individuals who had worse views of inflation were no more likely to switch their votes towards the Republican Party. In another study focusing on the 2022 election, Baccini and Weymouth (2024) find that while perceptions of inflation influenced vote choices, objective indicators of individuals' exposure to inflation did not. [8]

While evidence of a correlation between inflation concerns and incumbent support is suggestive, these studies face a potential endogeneity problem: economic perceptions, such as inflation assessments, are influenced by individuals' political leanings (e.g., Evans and Andersen 2006; Evans and Pickup 2010). Research shows that partisanship has a sizable impact on individuals' inflation expectations, both in the United States and abroad (Bachmann et al. 2021; Gillitzer et al. 2021; Stantcheva 2024). Consequently, prior studies that establish a correlation between inflation perceptions and incumbent popularity are unable to support a causal

[8] Baccini and Weymouth (2024) include an experiment alongside their observational study, but the experimental portion of their study does not focus on the effect of inflation itself. Rather, the experiment tests a somewhat different question, which is whether attributing responsibility for inflation to either government spending or corporate greed influences support for different political parties.

interpretation of this relationship. To overcome the limitations of previous studies, we adopt an experimental design described below. [9]

Research Design and Hypothesis

In order to test the causal effect of inflation on voters' support for incumbents, we embedded a question-order experiment into a nationally-representative survey fielded in the United States just days before the 2024 presidential election.[10] Half of our subjects in the experiment are randomly "treated" with a question about inflation immediately *before* being asked for their evaluations of the incumbent Democratic Party. The other half of respondents, which serve as our control group, receive the inflation question *after* the questions about incumbent evaluations.[11] Receiving the inflation question first should prime respondents to focus on this topic when answering questions about the incumbent.

The question about inflation asked subjects how much prices for goods and services had changed in the last year. We presented five answer categories, ranging from prices being lower

[9] A small number of previous studies (Alt, Lassen and Marshall 2016; Aytaç 2020; Simonovits 2016) have used experiments to test how economic conditions influence government approval. Our studies differ from these previous ones in two important ways. First, the previous experiments are not focused on inflation. Second, prior experiments examine whether randomly assigned information, or frames, about the economy influence political evaluations. By contrast, we avoid providing respondents with any direct, novel, information about the economy. Instead, the design we adopt assesses how individuals' pre-existing knowledge and understanding of economic conditions influences their political attitudes.

[10] The research is approved by Johns Hopkins University's Institutional Research Board. The survey was fielded online between October 24 and November 1, 2024. Dynata recruited the sample from their panel of respondents. Demographic quotas for gender, age, and education were included to obtain a sample that is broadly representative of the overall population. Appendix A describes the survey instrument and sample in greater detail.

[11] The experiment was placed near the beginning of the survey. Respondents in the control group received the incumbent evaluation questions immediately after answering a short series of demographic questions (ethnic identity, education, age, gender identity, and the state of residence), which are relatively unlikely to sway political attitudes.

than they were a year ago to prices being more than 20% higher than a year ago. The exact wording of the question-and-answer categories read as follows:

> Think for a moment about how much you pay for goods and services today, and how much cheaper or more expensive everything has become over the past year. In your experience, which of the following best describes what has happened to the prices that you pay for things compared to one years ago?
>
> (1) Prices today are lower than they were one year ago; (2) Prices today are about the same as they were one year ago; (3) Prices today are 1-5% higher than one year ago; (4) Prices today are 6-20% higher than one year ago; (5) Prices today are more than 20% higher than a year ago.

It is worth emphasizing that with we did provide any information about inflation to respondents. Instead, our design assesses how individuals' pre-existing knowledge and understanding of inflation influences their political attitudes. Thus, our empirical strategy utilizes an *indirect treatment* (Mutz 2011, 50), designed to "surreptitiously 'prime' or bring to mind a particular consideration" without the respondent being aware of the relevant characteristic of the treatment. The effect of this treatment should largely mimic the effects of increased attention to inflation that occurs in the "real world" when consumers experience higher prices at the grocery store and gas station, or when the press or opposition parties highlight this issue.

Two outcomes of interest serve as our dependent variables. First, we asked respondents the extent to which they approved or disapproved of the Biden-Harris administration's performance on a scale from 0 ("strongly disapprove") to 10 ("strongly approve"). Second, we asked about respondents' level of confidence in the ability of the Democratic Party leadership to manage the economy, again on a 0-10 scale (0=no confidence, 10=extremely confident). This way we can assess respondents' evaluations of the incumbent government, broadly, as well their evaluations of the Democrats' competence managing the economy, specifically.

We expect receiving the inflation question prior to the government evaluation questions should influence responses to the latter questions through a process known as "priming." Research on priming finds that issues that are more salient in voters' minds have a disproportionately large impact on how voters evaluate political candidates. Issues become more salient when they receive more attention from the media (Edwards, Mitchell, and Welch 1995; Iyengar and Kinder 1987; Krosnick and Kinder 1990) and from political campaigns (Hart 2013; Vavreck 2009). Within the context of a survey, the topic of the preceding question should, similarly, increase the salience of that subject.[12] Thus, compared to those in the control group, voters that receive the inflation question before the outcome questions are likely to focus more on inflation when formulating their opinions about the Democratic Party.

Given that inflation should be considered undesirable across the electorate, we anticipate that priming respondents to think about inflation will reduce average levels of incumbent approval and perceptions of incumbent competence in managing the economy. Thus, our main hypothesis is the following:

H1: Priming respondents to think about inflation reduces incumbent approval and confidence in the incumbent party's ability to manage the economy.

[12] Prior questions are believed to impact responses to subsequent questions through processes described as "priming" (e.g., Strack 1992, 25; Tourangeau et. al. 1989, 404). Others describe the effects of prior questions, equivalently, as increasing the "salience" (Van De Walle and Van Ryzin 2011, 1436; Mutz 2011, 37) and "accessibility" of a particular issue (McClendon and O'Brien 1988; Tourangeau, Rips, and Rasinski 2000, 206).

Findings

Inflation Perceptions and Incumbent Evaluations

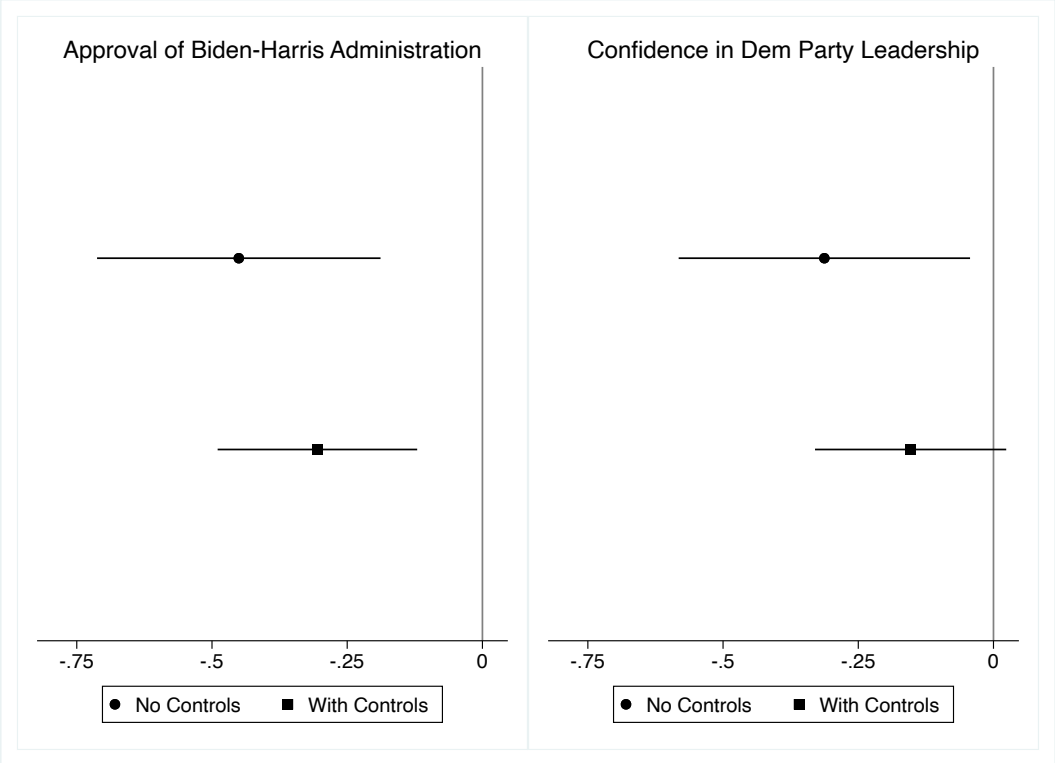
Before turning to our main experimental findings, we first explore whether reported inflation perceptions correlate with our two outcome questions: approval of the Biden-Harris administration and confidence in the Democrats' management of the economy. In line with previous observational studies, Appendix B shows that individuals who report higher levels of inflation are more likely to report negative views of the incumbent party. However, we also find that party identity is a very strong predictor of inflation perceptions; Republican voters report significantly higher inflation rates than Democrats. Thus, rather than inflation causing low approval of the incumbent party, it may be the case that low approval of the incumbent party causes individuals to report higher price increases. We now turn to our question-order experiment, which was designed to overcome these causal-identification challenges.

Main Experimental Results

Our main findings are straightforward: priming voters to think about inflation reduces evaluations of Harris-Biden and the Democratic Party. The average level of government approval among those who were not first primed to think about inflation (the control condition) is 4.7. On the other hand, respondents who were first asked to report price increases (the treatment condition) return a mean of 4.2, a difference of 0.5 points. This difference is statistically significant ($p<0.01$). Average scores for the question about confidence in the Democratic Party leadership's management of the economy are 4.8 in the control condition and 4.5 in the treatment condition, and this difference is also statistically significant ($p<0.05$).

Figure 1 plots our estimated average treatment effects, along with 95% confidence intervals. Following our pre-analysis plan, we present two sets of estimates, those without any control variables, and those from an ordinary least squares (OLS) regression model that includes controls for individuals' party identification, level of education, gender identity, age, and state fixed effects.[13] The inclusion of controls produces slightly smaller and less precise point estimates than those reported above. Nevertheless, the evidence is largely consistent with the hypothesis that raising the salience of inflation leads to worse evaluations of incumbent parties and their candidates. [14]

Figure 1: Average Treatment Effects



[13] The pre-registration document is available at https://aspredicted.org/7vzc-fjzg.pdf.
[14] Complete regression output is available in Appendix C. The treatment effect is statistically significant at the 90% level in the model of the confidence variable that includes control variables. This effect is significant at the 95% level in the remaining three models.

The size of these effects are substantively meaningful. By way of comparison, in the model with control variables, the difference in average approval rates between the treatment and control groups is about as large as the estimated difference in approval rates between those with Bachelor's degrees and high school graduates. The estimated effect of our treatment in that model is also 60% larger than the gap in approval rates between men and women. To further illustrate the substantive effects of the treatment, Figures C1 and C2 in the Appendix present the full distribution of responses to the two outcome questions across the two experimental conditions. Those figures show that the treatment leads to a noticeable decline in the percentage of respondents that express the strongest rates of approval and highest levels of confidence in the Democratic Party. The treatment reduces the percentage of respondents that express the highest rates of approval and confidence by 30% and 23%, respectively .

Although our sample is broadly representative of the US population, it skews slightly female, more educated, and older than the overall population. To assess whether this impacts our results, as a robustness check we also applied post-stratification weights based on demographic variables of gender, age, and level of education. The results, presented in Table C2, are consistent with our unweighted estimates. In fact, the estimated effects with sampling weights are larger and statistically significant at the 95% confidence level in all specifications.

Heterogeneity Across Partisan Groups

The final question we examine is whether inflation has different effects on different groups of voters. We focus our attention on partisanship because individuals' party identities have very

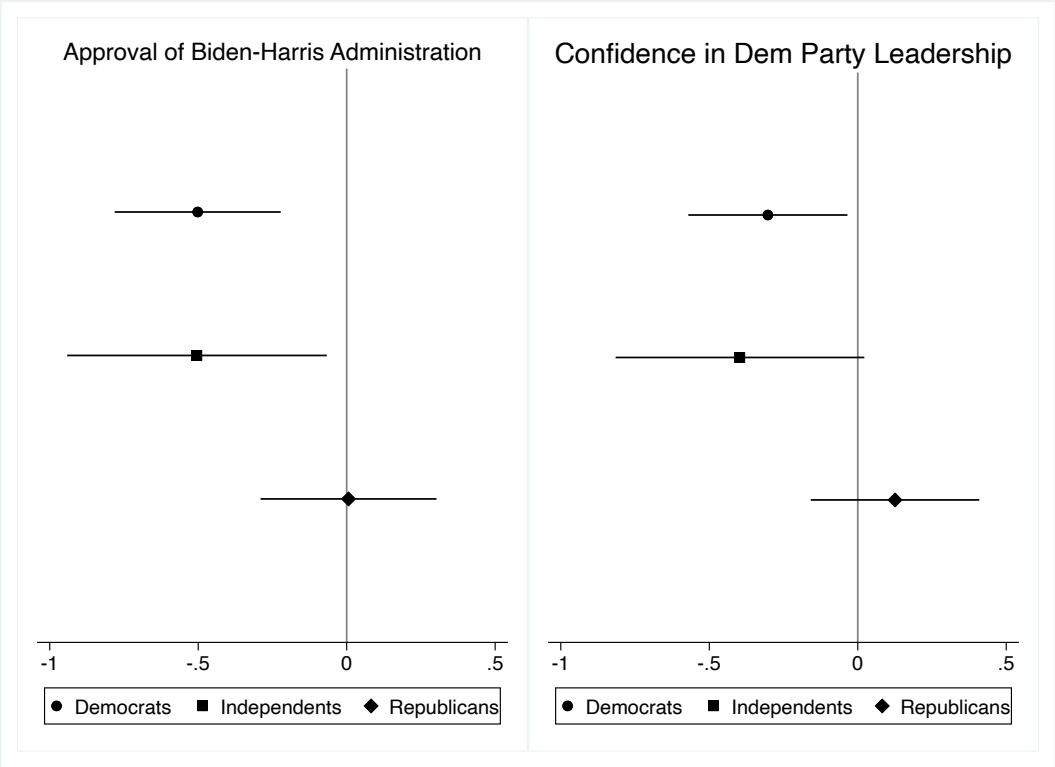
strong effects on their vote choice and government evaluations.[15] While it seems plausible that partisanship would condition voters' responses to inflation, it is less obvious whether Republicans, Democrats, or Independents should be most responsive to our treatment. One possibility is that Republicans, because they report stronger concern with inflation than Democrats in recent US surveys (Binetti, Nuzzi, and Stantcheva 2024; Stantcheva 2024), should be most affected by the inflation prime. On the other hand, because most Republicans oppose the Democratic Party's policy positions on many issues, this may be sufficient to generate strong opposition to the incumbent and limit the impact of inflation. Hence, Democratic identifiers, because they are more sympathetic ideologically with incumbent, may be more susceptible to primes about inflation. A third, and final, possibility, is that the treatment may have the strongest effect among political Independents because they lack strong partisan attachments and might be particularly inclined to assess candidates based on their performance.

To examine whether and how partisanship moderates how individuals respond to the inflation prime, we add interaction terms between the treatment and individuals' party identification to the multiple regression model estimated above.[16] Figure 2 plots the conditional treatment effects for the two outcome variables across three partisan groups: those that identify as Democrats, Independents, and Republicans.[17] We find that partisanship moderates the effect of the inflation prime. Among Democrats, the treatment reduces approval by 0.5 and lowers confidence by 0.3 points, and both effects are statistically significant. We obtain similar point

[15] For instance, the mean approval score among Republican identifiers is 1.6 compared to a mean of 7.3 for Democrats. We also explored whether other factors, such as age, gender, and education, moderate responses to our treatment, but find no evidence that they do so.
[16] Appendix Table D1 presents the complete regression output. Table D2 presents results using sample weights. Appendix Tables D3-D5 show that the patterns we observe here using interaction models are similar when using the split-sample approach that was proposed in our pre-analysis plan.
[17] Appendix Table D6 shows that we obtain similar results using alternative measures of partisanship.

estimates for Independents, though the effect on confidence is only statistically significant at the 90% confidence interval, presumably due to the smaller number of Independents in our sample. Republicans, by contrast, were unmoved by the treatment. The difference in effects between Republicans and both Democrats and Independents is statistically significant.

Figure 2: Heterogeneous Treatment Effects



This weak effect among Republicans is likely due to their very strong pre-existing disapproval of the Biden-Harris administration. For instance, 63% of Republican identifiers in the control condition reported the strongest level of disapproval, leaving little room for the inflation prime to further lower this support. By contrast, only 22% of Independents in the control condition strongly disapproved of the Biden-Harris administration, and the treatment

increased this proportion to 28%. Meanwhile, the modal Democrat in the control condition reported the strongest level of approval for the Biden-Harris administration. The treatment lowered the proportion of Democrats in the top category from 25% to 17%. In sum, raising the salience of inflation hurt the Democrats in two ways: it increased the number of Independents that had very negative opinions of the party and lowered the proportion of Democrats who were highly enthusiastic about their own party.

Discussion and Conclusions

When the final autopsy of the Harris-Walz campaign is written, inflation is certain to be atop the list of reasons explaining the Democratic ticket's defeat. Indeed, since the final votes were cast, rising prices have been characterized as being "politically toxic", "radioactive", and identified as the reason for a slew of post-pandemic incumbent losses around the world.[18] Yet, while it is clear that inflation is unpopular with voters, most of the evidence linking it to electoral outcomes is far from definitive because previous studies are unable to rule out the possibility that inflation perceptions are reflections of political evaluations rather than the cause of those evaluations. To ameliorate this challenge, our study relies on an experimental design—specifically, a question-order survey experiment that subtly primes some respondents to self-report on price increases prior to offering their evaluations of the incumbent government.

We find that priming voters on inflation significantly and substantively reduces approval of the Biden-Harris administration and lowers confidence in the Democratic Party leadership's

[18] Long and Menaldo. 2024. "'Inflation is radioactive': Trump's victory is part of a global populist wave of voters throwing out incumbents", *The Conversation*, November 10, https://theconversation.com/inflation-is-radioactive-trumps-victory-is-part-of-a-global-populist-wave-of-voters-throwing-out-incumbents-243113; Mike Dolan. 2024. "Politically toxic inflation may curb Trump agenda", *Reuters*, November 6, https://www.reuters.com/markets/politically-toxic-inflation-may-curb-trump-agenda-mike-dolan-2024-11-06/

ability to manage the economy. When we condition our results on partisan identity, we get an even more granular understanding of how inflation shaped the views of the 2024 electorate. Interestingly, our treatment does not diminish Republican voters' evaluations of the government, likely reflecting the fact that this group already thought poorly of Biden-Harris. On the other hand, we find that the inflation treatment effect is concentrated among Independents and, in particular, Democratic voters. This finding is notable given that a Harris' victory largely hinged on whether she could sway Independents to her side while also turning out Democrats in large numbers. In light of these results, it is reasonable to conclude that inflation played a critical role in the Harris-Walz defeat by tarnishing the ticket's reputation among Independent voters and dampening enthusiasm among the Democratic Party faithful.

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Appendix A: Description of Survey

Table A1 compares the share of the sample in various demographic groups with US Census-based estimates of the population shares of those groups. Our sample is broadly representative of the educational, age, gender, ethnic, and regional composition of the United States. However, it is not a perfect approximation. The sample has a larger share of highly educated, older, female, and Northeastern respondents compared to the population.

Table A1: Demographic Characteristics of Sample

Education	**Population**	**Sample**
HS or Below	37	29
Some College or Associate's Degree	25	28
Bachelor Degree or Above	37	43
Age		
18-24 Years	13	8
25-44 Years	36	36
45-64 Years	34	37
65+ Years	17	19
	13	8
Gender		
Female	51	53
Male	49	47
Region		
Northeast	17	20
Midwest	21	21
South	39	36
West	24	23

The survey begins with a series of demographic questions, which ask respondents about their ethnic identity, educational attainment, birth year, gender identity, state/territory of residence, and whether they live in an urban, suburban, or rural region. This was followed immediately by the experiment on inflation and government approval. Immediately the survey page with the demographic questions, respondents were asked either the inflation question or the government approval questions. The inflation question and approval questions were provided on separate survey pages to limit the likelihood that subjects would perceive the two items as linked. The experiment was included early in the survey and following right after these demographic questions to ensure that control-group respondents were not primed by any other considerations, and started the approval questions following a set of neutral, apolitical, questions.

After the experiment, subjects received a range of other demographic and opinion questions related to other topics. At the end of the survey, respondents were asked about their party

identification and their Presidential vote intentions. These questions were placed after the experiment to limit the risk of partisan priming and were placed as far from the experiment as possible to ensure that the experiment did not impact responses to these questions. Because all respondents had received the inflation question by the time they responded to the party ID and vote questions, with the only difference being whether the inflation question was asked 19 or 17 questions prior, it is not likely for the experiment to impact responses to these questions, which serve as our moderators. Indeed, the share of respondents that identify as a Democrat or that report an intention to vote for Harris is not statistically different across the control and treatment conditions.

The variables included in the regression model are operationalized as follows.

- *Party Identification:* To measure party identification, we first asked the following: "Generally speaking, do you think of yourself as a (1) Republican; (2) Democrat; (3) Independent; (4) Another Party; (5) Do not think in these terms." Those that responded to that question with categories 3, 4, or 5 were then asked "Do you think of yourself as closer to the (1) Republican Party; (2) Democratic Party; (3) Neither party". We code respondents as Republican identifiers if they responded as (1) to either the first or question; as Democratic identifiers if they responded as (2) to either question; and as Independents if they responded with (3)-(5) in the first question and (3) in the second question.
- *Education* is measured as an ordinal scale with the following categories: (1) Did not graduate from high school; (2) High school graduate; (3) Some college or technical school, but no degree (yet); (4) Vocational degree, technical degree, or associate's degree; (5) Bachelor's degree; (6) Postgraduate degree.
- *Age:* Respondents were asked what year they were born. Their age is calculated as the survey year (2024) minus their birth year.
- *Female:* The survey asked whether respondents identify as male, female, or other. We constructed a binary variable from this, where those that identified as female were coded as 1, and those that identified as male or other were coded as zero. Less than 0.2% of our sample selected the "Other" category.
- *State Fixed Effects:* Respondents were asked "Which state or territory do you live in?", and were provided a drop-down menu of options to select.

Appendix B: Correlates of Inflation Perceptions

Figure B1 shows the distribution of responses to the question about inflation perceptions. The first two columns of Table B1 examine the relationship between inflation perceptions and the two measures of incumbent evaluations. There is a strong negative partial correlation between inflation perceptions and incumbent popularity, meaning that individuals that report that they have experienced more inflation express worse evaluations of the Democratic Party.

Column 3 of Table B1 examines the relationship between party identification and inflation perceptions. It shows that, compared to Independents, Democrats report lower rates of inflation and Republicans report higher rates of inflation.

Figure B1: Perceptions of Inflation

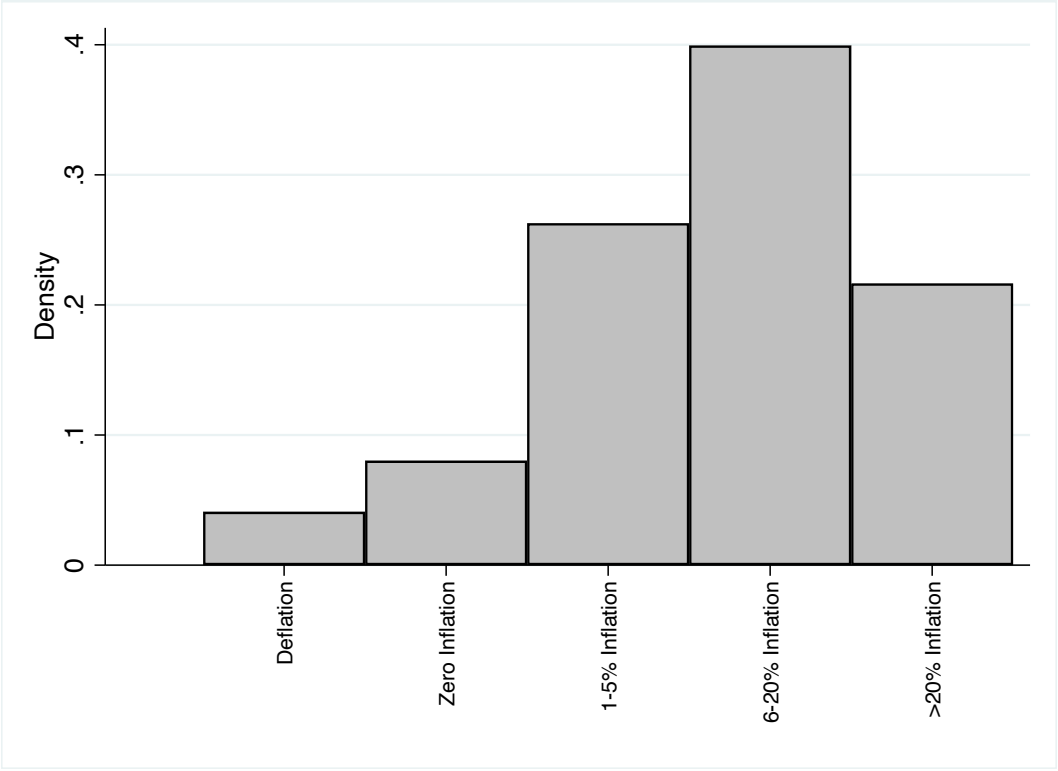


Table B1: Relationship Between Inflation Perceptions and Incumbent Evaluations

	(1) Approval	(2) Confidence	(3) Inflation Perceptions
Inflation Perceptions	-0.89***	-0.87***	
	[0.046]	[0.044]	
Democratic ID	3.09***	3.56***	-0.45***
	[0.127]	[0.121]	[0.050]
Republican ID	-1.96***	-2.01***	0.30***
	[0.129]	[0.123]	[0.051]
Education	0.06*	0.07**	-0.04***
	[0.031]	[0.029]	[0.012]
Female	0.03	0.04	0.24***
	[0.090]	[0.086]	[0.036]
Age	-0.00	-0.01*	-0.00
	[0.003]	[0.003]	[0.001]
Observations	3,002	3,002	3,002
R-squared	0.576	0.634	.144

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included but not shown for reasons of space.

Appendix C: Average Treatment Effects

Table C1 presents the results of ordinary-least squares (OLS) regressions used to estimate the average effect of the treatment on the two outcome variables. Estimates from these tables were used to generate the results presented in Figure 1.

Table C2 presents the results using post-stratification weights. In order to address concerns about the generalizability of our experimental results to the broader US population, we applied post-stratification weights to our sample and reanalyzed our experiments with weighted data. We have drawn on the 2023 Annual Social and Economic Supplement of the Current Population Survey of the US Census Bureau to calculate weights with respect to respondents' gender, age, and education levels. We considered four age groups (between 18 and 24 years old, between 25 and 44 years old, between 45 and 64 years old, and 65 years and above), three education categories (high school or below, some college, and bachelor's degree and above), and the gender (female and male) of respondents, resulting in 24 (4*3*2) exclusive groups of individuals. We calculated weights for each of these 24 groups based on a comparison of their distribution in the US population and in our sample.

Table C1: Regression Estimates of Average Treatment Effects

	(1) Approval	(2) Approval	(3) Confidence	(4) Confidence
Inflation Treatment	-0.45***	-0.31***	-0.31**	-0.15*
	[0.134]	[0.094]	[0.137]	[0.090]
Democratic ID		3.49***		3.95***
		[0.133]		[0.127]
Republican ID		-2.22***		-2.27***
		[0.135]		[0.130]
Education		0.09***		0.11***
		[0.033]		[0.031]
Female		-0.19**		-0.17*
		[0.094]		[0.091]
Age		-0.001		-0.005*
		[0.003]		[0.003]
Observations	3,002	3,002	3,002	3,002
R-squared	0.004	0.524	0.002	0.586

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in columns (2) and (4) but not shown for reasons of space.

Table C2: Regression Estimates of Average Treatment Effects using Sample Weights

	(1) Approval	(2) Approval	(3) Confidence	(4) Confidence
Inflation Treatment	-0.53***	-0.42***	-0.38**	-0.25**
	[0.158]	[0.109]	[0.161]	[0.106]
Democratic ID		3.46***		3.95***
		[0.151]		[0.147]
Republican ID		-2.16***		-2.16***
		[0.167]		[0.165]
Education		0.09**		0.10***
		[0.037]		[0.036]
Female		-0.19*		-0.16
		[0.108]		[0.106]
Age		0.004		-0.004
		[0.004]		[0.004]
Observations	2,997	2,997	2,997	2,997
R-squared	0.005	0.520	0.002	0.578

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in columns (2) and (4) but not shown for reasons of space.

Figure C1: Approval of Biden-Harris Administration Across Experimental Conditions

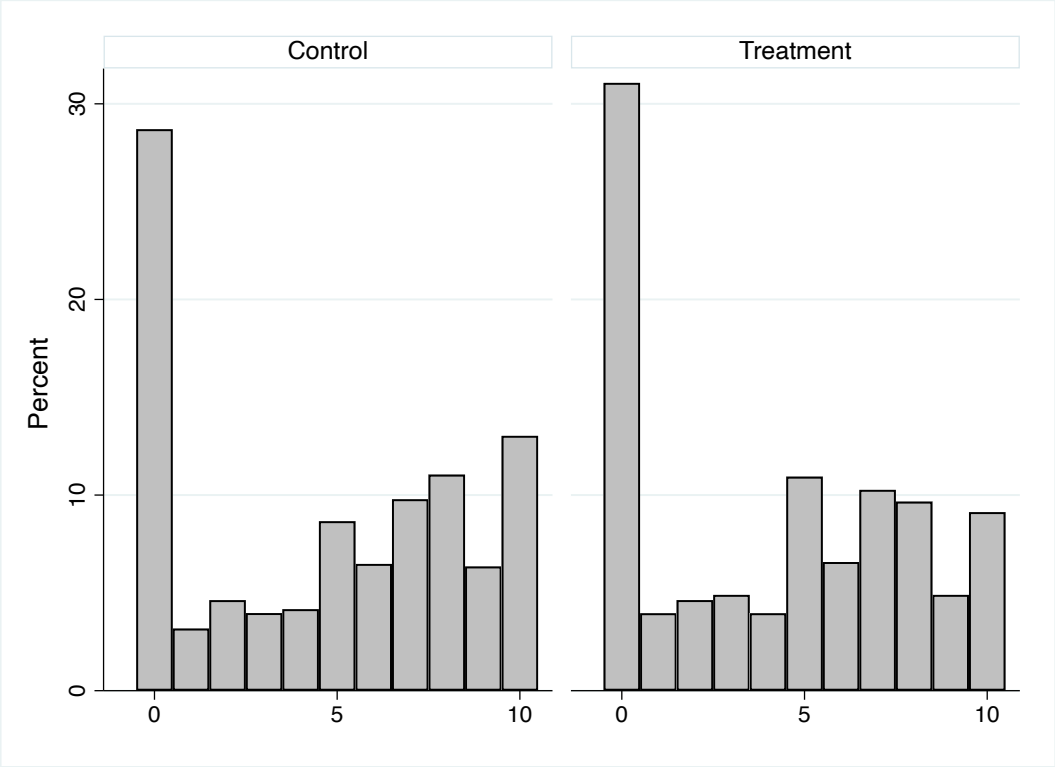
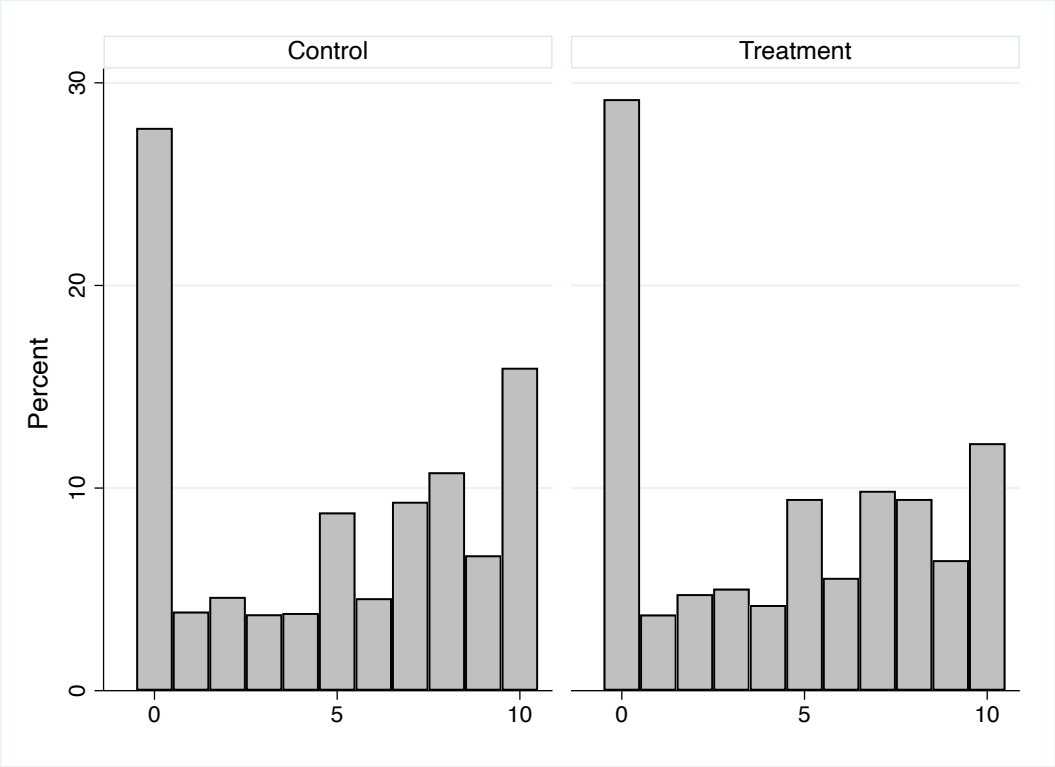


Figure C2: Confidence in Democratic Party Leadership Across Experimental Conditions



Appendix D: Heterogeneous Treatment Effects

Table D1 presents regression results from interaction models, which were used to generate Figure 2. Table D2 presents results from interaction models using sample weights. Tables D3-D5 present results from split-sample estimations for Democrats, Independents, and Republicans, respectively. This empirical strategy is based on what was proposed in our pre-analysis plan. The patterns are similar to those found using the interaction model approach. The main difference is that the results for Independents are less precisely estimated using the split-sample approach, most likely because of the relatively small sample size.

Table D6 examines alternative measures of partisanship. The first two columns use a five-point scale of partisan identity, which is coded as follows: (0) Strong Democrat; (1) Weak Democrat; (2) Independent; (3) Weak Republican; (4) Strong Republican. The coding of strong/weak partisans is based on a question that followed the party ID question for those that responded that they identified as Democrats or Republicans, which asked the following: "Would you call yourself (1) A strong Republican/Democratic; (2) Not very strong Republican/Democrat." The results indicate that the treatment has a negative and statistically significant effect for the baseline category (Strong Democrats). The positive and statistically significant interaction term means that the treatment has a smaller effect among more Republican-identifying individuals.

The third and fourth columns of Table D6 use Presidential vote intentions as a moderator, distinguishing between those that intend to vote for the Democratic candidate (the baseline group); the Republican candidate; and "others," which include those that do not intend to vote in the Presidential election as well as those that plan on voting for third parties. Once we find strong treatments effects among Democrats and null effects among Republicans. Those that intend to vote for neither Democrats or Republicans fall in between the other two groups.

Table D1: Regression Estimates of Heterogeneous Treatment Effects

	(1) Approval	(2) Confidence
Inflation Treatment	-0.50***	-0.30**
	[0.143]	[0.137]
Independent ID	-3.49***	-3.90***
	[0.187]	[0.179]
Republican ID	-5.96***	-6.44***
	[0.147]	[0.141]
TreatmentXIndependent	-0.002	-0.09
	[0.264]	[0.253]
TreatmentXRepublican	0.51**	0.43**
	[0.208]	[0.199]
Education	0.09***	0.11***
	[0.033]	[0.031]
Female	-0.19**	-0.17*
	[0.094]	[0.090]
Age	-0.001	-0.005*
	[0.003]	[0.003]
Observations	3,002	3,002
R-squared	0.525	0.587

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in column (2) but not shown for reasons of space.

Table D2: Regression Estimates of Heterogeneous Treatment Effects with Sample Weights

	(1) Approval	(2) Confidence
Inflation Treatment	-0.59***	-0.34**
	[0.144]	[0.135]
Independent ID	-3.41***	-3.85***
	[0.214]	[0.209]
Republican ID	-5.86***	-6.26***
	[0.179]	[0.176]
TreatmentXIndependent	-0.10	-0.19
	[0.299]	[0.289]
TreatmentXRepublican	0.48**	0.31
	[0.238]	[0.231]
Education	0.09**	0.10***
	[0.037]	[0.036]
Female	-0.19*	-0.17
	[0.108]	[0.105]
Age	0.005	-0.004
	[0.004]	[0.004]
Observations	2,997	2,997
R-squared	0.522	0.578

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in column (2) but not shown for reasons of space.

Table D3: Split-Sample Estimates for Democratic Identifiers

	(1) Approval	(2) Approval	(3) Confidence	(4) Confidence
Inflation Treatment	-0.53***	-0.45***	-0.32***	-0.24**
	[0.128]	[0.126]	[0.119]	[0.119]
Education		0.06		0.09**
		[0.043]		[0.041]
Female		-0.05		-0.08
		[0.127]		[0.120]
Age		0.03***		0.02***
		[0.004]		[0.004]
Observations	1,301	1,301	1,301	1,301
R-squared	0.013	0.117	0.006	0.084

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in columns (2) and (4) but not shown for reasons of space.

Table D4: Split-Sample Estimates for Political Independents

	(1) Approval	(2) Approval	(3) Confidence	(4) Confidence
Inflation Treatment	-0.49*	-0.46*	-0.40	-0.37
	[0.250]	[0.265]	[0.248]	[0.263]
Education		0.02		0.02
		[0.094]		[0.093]
Female		-0.23		-0.08
		[0.268]		[0.265]
Age		-0.01		0.00
		[0.009]		[0.009]
Observations	535	535	535	535
R-squared	0.007	0.084	0.005	0.086

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in columns (2) and (4) but not shown for reasons of space.

Table D5: Split-Sample Estimates for Republican Identifiers

	(1) Approval	(2) Approval	(3) Confidence	(4) Confidence
Inflation Treatment	0.01	-0.01	0.12	0.09
	[0.156]	[0.157]	[0.149]	[0.149]
Education		0.11*		0.13**
		[0.055]		[0.052]
Female		-0.42***		-0.33**
		[0.157]		[0.149]
Age		-0.04***		-0.04***
		[0.005]		[0.005]
Observations	1,166	1,166	1,166	1,166
R-squared	0.001	0.084	0.001	0.095

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included in columns (2) and (4) but not shown for reasons of space.

Table D6: Alternative Measures of Partisanship

	(1) Approval	(2) Confidence	(3) Approval	(4) Confidence
Inflation Treatment	-0.70***	-0.50**	-0.55***	-0.40***
	[0.154]	[0.137]	[0.127]	[0.122]
Party ID Scale	-1.96***	-2.10***		
	[0.046]	[0.044]		
Trump Voter			-6.23***	-6.63***
			[0.133]	[0.129]
Other Voter			-4.05***	-4.50***
			[0.188]	[0.181]
TreatmentXParty ID Scale	0.22***	0.20***		
	[0.064]	[0.062]		
TreatmentXTrump Voter			0.57***	0.54***
			[0.188]	[0.181]
TreatmentXOther Voter			0.36	0.44*
			[0.266]	[0.257]
Education	0.09***	0.11***	0.03	0.05
	[0.032]	[0.031]	[0.030]	[0.029]
Female	-0.23**	-0.22**	-0.12	-0.09
	[0.093]	[0.090]	[0.087]	[0.084]
Age	0.0002	-0.003	-0.01***	-0.02***
	[0.003]	[0.003]	[0.003]	[0.003]
Observations	3,002	3,002	3,002	3,002
R-squared	.543	.594	0.594	0.642

Standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1. State fixed effects included but not shown for reasons of space.