

# Sociotropic Voting and the Media\*

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\*This chapter draws heavily on the results in our article “Untangling Economic Voting”.

# 1 Introduction

The literature on economic voting notes that voters' subjective evaluations of the overall state of the economy are correlated with vote choice, whereas personal economic experiences are not (Kinder and Kiewiet, 1979, 1981). Missing from this literature is a description of how voters acquire information about the general state of the economy, and how that information is used to form perceptions. In order to begin understanding this process, we asked a series of questions on the 2006 ANES Pilot about respondents' perceptions of the average price of gas and the unemployment rate in their home state. In this chapter we analyze both the determinants and political consequences of respondents' perceptions of these economic variables.

We find that questions about gas prices and unemployment show differences in the sources of information about these two economic variables. Information about unemployment rates come from media sources, and are systematically biased by partisan factors. Information about gas prices, in contrast, comes only from everyday experiences. While information about both indicators show effects from demographics, only unemployment rates affect a respondent's political outlook. Moreover, perceptions of unemployment rates can be used to isolate the effect of economics on partisan preferences.

## 2 ANES Survey Questions

Our contribution is based on questions we proposed for the 2006 ANES Pilot which asked about quantitative measures of economic performance, specifically gas prices and unemployment. These questions appeared as follows where  $R$  is shorthand for respondent.

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As far as you know, what is the current unemployment rate in [R's state] - that is of the adults in [STATE] who wanted to work during the second week of [MONTH], what percent of them would you guess were unemployed and looking for a job?

If R responds "I don't know": What would be your best guess?

During a typical week, how many days do you drive an automobile?

During a typical week, how many times do you notice the price of gasoline in your area?

What is your best guess of the average price of a gallon of regular unleaded gasoline across all of [STATE] today?

If R responds “I don’t know”: What would be your best guess?

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In the analysis that follows we also used questions Mod18\_1, Mod18\_3, Mod18\_5, Mod18\_7, Mod27\_1, Mod27\_5, Mod27\_9 and Mod2\_13. The wording of these questions can be found in the appendix. Note that the questions from Module 18 focused on the media, and that the results of these questions are analyzed in depth in XXX.

### 3 Knowledge about the State of the Economy

At the aggregate level, economic performance is an important prediction of candidate vote share.<sup>1</sup> Survey based studies of economic voting find seemingly contradictory results; voters’ perceptions of the overall state of the economy influence vote choice, but personal economic experience does not. Moreover, the state of the economy has a relatively modest effect on vote choice (Fiorina, 1978, 1981). The theory of sociotropic (rather than egotistical) voting seeks to explain these results by positing that voters care about social utility rather than their personal utility (Kinder and Kiewiet, 1979, 1981). Meanwhile, attempts at reconciling ecological and survey-based findings have largely focused on looking for errors in the statistical methodologies in one or the other type of study. (e.g. Kramer (1983); Andersen and Evans (2006); Lewis-Beck (2006)). Notably absent from these reconciliations is an explanation of where voters get information about the overall state of the economy.

We propose instead that these findings may arise from 1) failing to take account of the media’s role in providing information about objective facts, 2) differences in the nature of statistics used to predict vote choice and vote share (i.e. subjective assessments versus objective economic statistics), and 3) measurement error created by respondents answering

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<sup>1</sup>See Lewis-Beck and Stegmaier (2000) for an overview. Important early work on this subject can be found in Kramer (1971), Fair (1978, 1996) and Tufte (1975, 1978).

survey questions through a partisan lens. We take these arguments in turn.

If a voter's evaluation of the overall state of the economy does not include their personal economic experience, where does their information about the economy come from? Potential sources include their family, friends and neighbors, and the media. We focus on the later because of the well-developed literature on the media. Our questions are designed to elicit a respondent's actual knowledge of economic conditions, and relate this knowledge of economic conditions to their level of media exposure, their actual economic experience, and their subjective assessment of economic questions.

We focus on respondents' knowledge about unemployment rates and gas prices for two substantive reasons. The first is that these factors vary in how much knowledge can be gained through personal experience. Perceptions of gas prices will primarily depend upon the prices at the pump during respondents' recent refills. In contrast, perceptions of unemployment rates are likely affected both by the media and whether a respondent's friends or family are currently or recently unemployed. Second, these issues are important factors in political campaigns and have high media salience. In particular, energy prices have particular policy importance not just because of their economic importance, but also due to the underlying security issues evinced by high energy prices.

Our second proposition notes that studies of vote share rely on objective economic statistics, while studies of vote choice rely on voters' subjective assessment of the state of the economy.<sup>2,3</sup> As pointed out by Anderson, Duch and Palmer (2000) voters' answers on subjective questions about the economy depend on their partisan preferences and level of attentiveness. Moreover, these biases in perception may cause aggregation bias when looking across voters for the effect of economic performance on vote choice.

Partisan differences in subjective evaluations of the economy could arise from different

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<sup>2</sup>Conover, Feldman and Knight (1986, 1987) are exceptions as they use individuals' perceptions of objective economic data. However, they examine only the overall accuracy of perceptions, and how these perceptions shape estimates of future economic trends.

<sup>3</sup>By subjective we mean that they ask the respondent to qualify how they perceive the state of the U.S. economy, often as it relates to previous performance, rather than asking about objective economic statistics, as we propose. For examples of subjective questions see ANES questions 900422 and 923531.

perceptions of the actual level of economic indicators. Possible explanations for variation in these perceptions include self-serving bias (Mullainathan and Shleifer, 2005), an exaggeration of the performance of the economy in a way that is consistent with a voter's partisan preferences (Zaller, 1992), and information differences. Another potential explanation is that the subjective threshold by which economic improvement is measured is influenced by characteristics of respondents like partisan leanings; a Democrat may be more likely to respond that the economy is "doing worse" when a Republican is president. By asking questions about the specific level of various economic indicators scholars will be able to untangle these two channels and identify the overall impact of economic performance on vote choice.

## 4 Asking About Unemployment

The 2006 ANES Pilot asked respondents to give their assessment of the unemployment level in their state. Although it would require multiple observations from the same respondent to answer many of the above questions, we can draw some interesting conclusions from the cross-sectional results. We can use a state's actual unemployment rate in November to calculate the difference between the respondent's perception and actual unemployment.<sup>4</sup> Figure 1 shows a kernel density plot of this difference broken down by partisan affiliation.

Overall, respondents' perceptions of the unemployment rate are much higher than the actual unemployment rate. Democrats' responses were higher than those of Republicans or independents. While this is consistent with viewing the state of the economy through a partisan lens, we cannot distinguish this from Democrats perceiving that the economy is worse because of personal experience.

We would like to know to what extent the error in a respondent's perception is due to demographic and partisan factors, as well as media exposure. Table 1 answers some of these questions. For the analyses that follow, we use the standard seven point party identification

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<sup>4</sup>Unemployment figures are from <http://www.bls.gov/web/lauhsthl.htm>

scale to classify each respondent as a Democrat, Republican or Independent.<sup>5</sup>

Table 1 confirms that Democrats are more likely to think that the unemployment rate is high, even when controlling for numerous other factors. The table also indicates that individual characteristics that are correlated with likelihood of unemployment are also significantly related to unemployment perceptions. Black respondents had overwhelmingly higher perceptions of the unemployment rate. Given that the unemployment rate for blacks (8.6 percent) was more than double than that of whites (3.9 percent) in November 2006, this suggests that individuals may be drawing from personal experiences when reporting unemployment perceptions. Consistent with this pattern, females had significantly higher perceptions of unemployment.<sup>6</sup> Similarly, college graduates are less likely to be unemployed and have lower perceptions of unemployment.

Media is also an important predictor of respondent accuracy. Individuals who reported listening to news on the radio had lower unemployment perceptions. Conversely, individuals watching television news had higher perceptions of unemployment.<sup>7</sup> Additionally, respondent's answers do not depend on the party of the governor, nor on whether the state legislature and executive are all in the hands of the same party or not. This last fact extends the finding in Snowberg, Wolfers and Zitzewitz (2007) that divided government has little effect on economic expectations to the state level.

A question we cannot answer in the cross-section is how campaigns and the media affect the magnitude of the partisan difference in perception of objective facts like unemployment and the number of troops killed in Iraq. It may be that campaigns increase knowledge of objective facts, reducing the reliance on partisan biases, and subsequently reducing partisan differences. In contrast, campaigns may increase partisanship, thereby increasing partisan

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<sup>5</sup>To construct partisan identification we used the Party ID scale and coded 6 and 7 as Republican, 3-5 as independent, and 1-2 as Democrat.

<sup>6</sup>While in official unemployment figures men and women have similar unemployment rates, this does not account for the fact that the labor force participation rate of women is much lower.

<sup>7</sup>The radio variable is nearly statistically significant in the 50th and 75th percentile regressions ( $p = 0.11$  and  $p = 0.15$  respectively). Entering these coefficients one-by-one produces the same results, eliminating concerns of multi-collinearity between the media variables.

differences in the reporting of objective facts. Whichever effect exists, it is likely to be particularly prominent in a long Presidential campaign where there will be plenty of chances for candidates and the media to try to inform voters.<sup>8</sup>

## 5 Using Unemployment Responses to Eliminate The Partisan Lens

In addition to informing scholars about differences in individuals' perceptions of the economy, factual questions can also be valuable for analyzing retrospective voting questions. Numerous studies have looked at the relationship between individual's retrospective evaluations of the economy and vote choice. Generally these studies test how vote choice relates with answers to questions such as "Would you say that over the past year the nation's economy has gotten better, stayed about the same, or gotten worse?" One problem with such a question is that it confounds differences in economic perceptions with the lens through which economic performance is judged. For example, the same person who responded that the nation's economy has stayed about the same in 2006 may have instead answered that the economy got better had a Democrat been president.

The first row of Table 2 examines how individuals' retrospective assessments of the economy relate with their assessment of George W. Bush's overall performance and his performance in three particular policy areas: the economy, foreign affairs, and the war on terror. It shows that individuals' retrospective evaluations of the economy are statistically significantly related to evaluations of the president in all of these domains.

The second row of Table 2 examines how individuals' perceptions of unemployment relate to their assessment of George W. Bush's overall performance and his performance in the same three policy areas.<sup>9</sup> Note that this variable is only related to respondent's assessment of the

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<sup>8</sup>Stevenson and Vavreck (2000) find that economic performance is a more important determinant of vote choice the longer the political campaign.

<sup>9</sup>We top-code the unemployment rate at 30%. Results are similar if we choose 20% or 25% as our

economy. This implies that we can use responses to the unemployment question to isolate the part of a respondent's retrospective evaluation that is actually driven by the economy from the part that is driven by the lens through which respondents judge economic performance.

In Table 3, we use perceptions of unemployment as an instrument for retrospective economic assessments. By rooting retrospective evaluations of the economy in objective perceptions, we isolate variation in economic evaluations rooted in differences in actual economic perceptions. The first column indicates that our first stage correlation is large, validating the use of actual perceptions as an instrument. The second column indicates economic perceptions continue to affect respondent's evaluations of Bush's performance on the economy. The third and fourth and fifth columns show that the part of the retrospective evaluation that is driven by actual economic perceptions is not related to the respondents' assessment of Bush's overall performance or his handling of other issues.

## 6 Asking About Gas Prices

The 2006 ANES Pilot also asked respondents to give their assessment of the average price of gas in their home state. Unlike with the unemployment rate, Figure 2 shows that there are no discernable partisan differences in the perception of gas prices. Moreover, the population is on the whole well calibrated to actual gas prices, with responses distributed symmetrically around the true value.

However, Figure 2 may obscure some important differences. It may be that certain groups of respondents (by race, age, gender, or education level) all give biased answers; they are systematically above or below the correct amount. Some groups may also be imprecise; they are in aggregate accurate, but have a large dispersion around the true answer. The correlates of bias and imprecision in the population is largely unknown. For example, Ansolabehere, Snowberg and Snyder (2005) found that, perhaps counter-intuitively, higher education at-

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threshold for top-coding. Results are generally similar if the threshold is above 30%, however, the results become sensitive to the choice of threshold as outliers drive more and more of the variation.



tainment was inversely correlated with the accuracy of information about campaign finance.

Table 4 shows that a respondent's perception of gas prices is influenced by demographic characteristics. Taken together, the first and second columns show that no group is accurate in their assessment of gas prices, however, blacks and Hispanics make significantly less precise predictions. The table also shows that it is possible to ask questions to control for lifestyle factors that might make a respondent's perception of gas prices more precise. The number of times that the respondent drives and notices gas prices each week are both highly correlated with the precision of the respondent's prediction, whether these controls are entered separately or jointly (as in the table). Notably absent from the results are any effect of the media on gas price perceptions. This is perhaps intuitive as information about gas prices is readily available from everyday experience, whereas information about unemployment rates is not.

Finally, we examine how perceptions of economic variables might affect partisan leanings. Table 5 examines the effects of both gas prices and unemployment perceptions on changes in party identification between 2004 and 2006. The regressions include dummies for a respondent's initial party ID to control for the fact that an initially extreme party ID allows movement in only one direction towards the center.<sup>10</sup> The effects of unemployment on party ID are unequivocal: higher perceptions of unemployment are associated with shifts to the left, away from a Republican ID. Although this drift is somewhat smaller among respondents who initially identified as Republicans, the effect holds across the political spectrum. This is true even if we control for other measures of approval of the president and retrospective economic evaluations.

Interestingly, there is no effect of gas prices on party ID. This seems to contradict the conventional wisdom that energy prices are an important political factor. However, what may be politically important are changes in perceptions of gas prices, rather than the level of perception. Since gas prices tend to be lower in November than during the summer, it may

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<sup>10</sup>This might be thought of as a regression to the mean or censoring problem.

be that elections (and election studies) are conducted at the wrong time for this issue to be salient. Moreover, gas prices were particularly high during this period. This may have made respondents unusually aware of gas prices masking variations in perceptions that might be present during times when gas prices are lower.

## 7 Conclusion

This summary outlines several findings from questions about objective economic numbers on the 2006 ANES Pilot. These findings are preliminary, and we hope that a broader adoption of such economic questions will allow the research community to better understand phenomena such as economic voting.

We conclude by posing some research questions that we were not able to address using just this one survey. How do different groups acquire and process economic information? For example, why do blacks and women perceive a higher unemployment rate than whites and men? Is it due to respondent's personal experiences or those of their peer groups? The underlying correlates of accuracy and precision can inform researchers about this question. Accuracy and precision cannot be measured using subjective questions since, by definition, subjective questions have no correct answer.

How does voter information change with the statistical bias of local and national media? We have reason to believe that there will be such an effect as Hetherington (1996) has found that increased media usage leads to more negative perceptions of the economy. Since statistical bias deals with the reporting of numbers, it is easier to measure and correlate with survey responses than traditional notions of media bias (Ansolabehere, Snowberg and Snyder, 2005).

Finally, by adding these questions to the standard ANES time-series study, researchers will be able to examine how the accuracy and consistency of perceptions about economic aggregates map into subjective evaluations of the economy and vote choice. For example, it

may be that when a group gives inconsistent measures of economic statistics, it may be that those who suggested a number above a certain threshold will be markedly more likely to suggest that the economy is doing well, or to vote for a particular candidate. By continuing to use these questions scholars will be able to examine this question, and to eliminate a large amount of measurement error from respondent's subjective and objective evaluations (Ansolabehere, Rodden and Snyder, 2006).

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Figure 1: Respondent's estimates of unemployment levels show partisan bias.

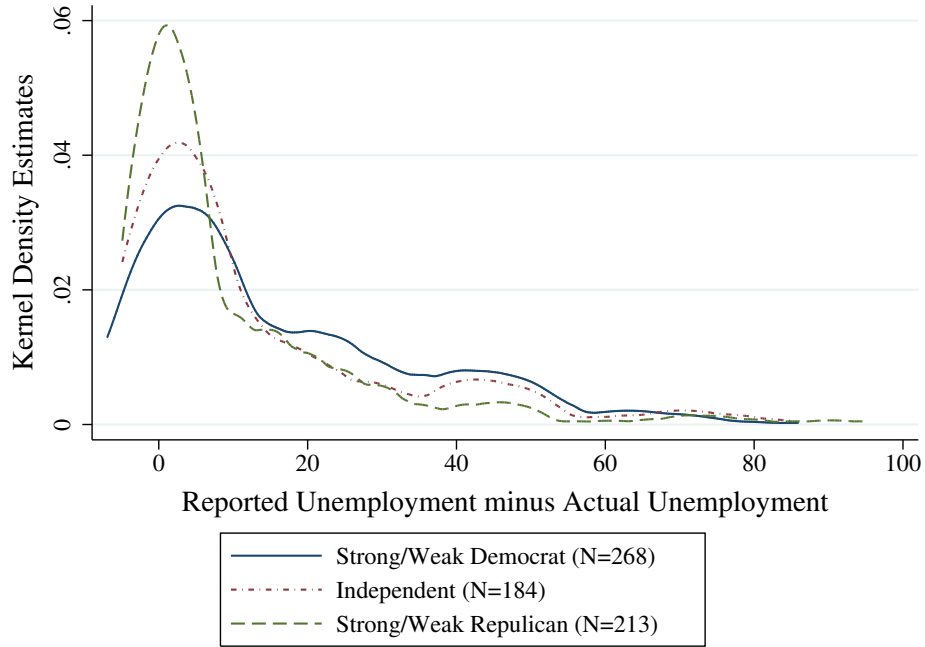


Figure 2: Respondent's estimates of gas prices do not show partisan bias.

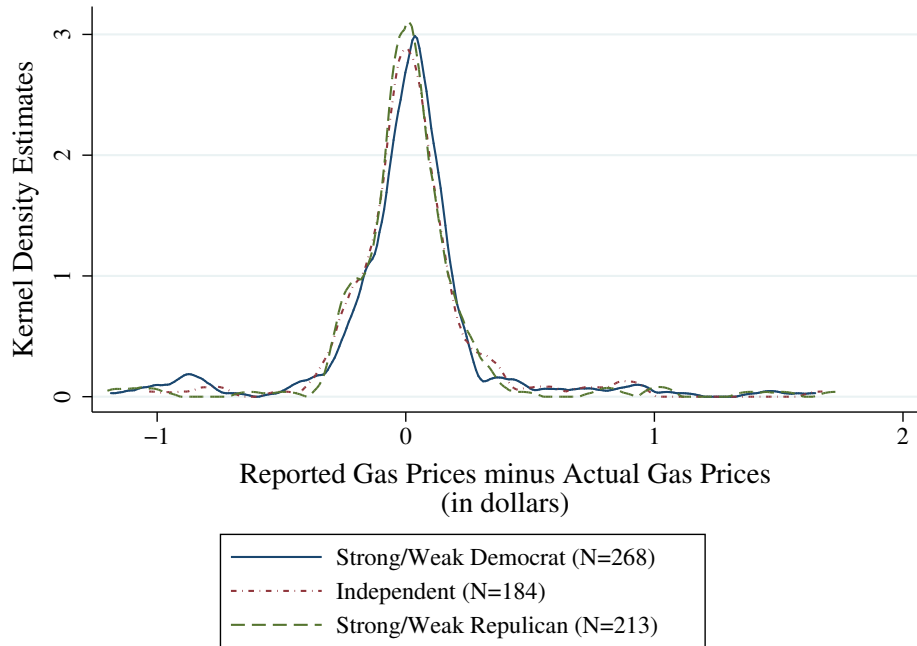


Table 1: Quantile Regressions: Dep. Var. is Reported State Unemployment Rate — State Unemployment Rate in 11/2006

Percentile :	25%	50%	75%
Independent (Party ID = 3, 4, 5)	-0.696 (.616)	0.313 (.924)	-1.10 (2.34)
Republican (Party ID = 6, 7)	-1.49** (.601)	-1.90** (.891)	-4.21* (2.21)
TV News—Days per Week	1.43* (.840)	3.63*** (1.23)	5.55* (3.04)
Radio News—Days per Week	-0.585 (.651)	-1.54 (.956)	-3.47 (2.39)
Newspaper—Days per Week	-0.097 (.664)	-0.131 (1.00)	0.166 (2.56)
Internet—Days per Week	-0.443 (.622)	-0.076 (.957)	-2.51 (2.45)
Democratic Governor	-0.439 (.494)	-0.997 (.745)	1.07 (1.87)
United Government (State)	-0.664 (.517)	0.528 (.772)	1.05 (1.92)
Age	-0.090 (.092)	-0.203 (.133)	-0.829*** (.318)
Age Squared	0.004 (.001)	0.001 (.001)	0.008*** (.003)
Male	-1.01** (.507)	-4.84*** (.763)	-11.4*** (1.92)
Black	8.83*** (.864)	16.5*** (1.25)	22.7*** (3.13)
Hispanic	-0.738 (1.20)	-1.14 (1.87)	-2.85 (4.53)
College Graduate	-1.30** (.536)	-3.84*** (.771)	-8.25*** (1.90)
Union Member	-0.357 (.618)	-0.345 (.920)	3.01 (2.23)
Constant	6.17*** (2.19)	15.1*** (3.22)	44.6*** (7.71)
Pseudo $R^2$	0.048	0.120	0.202
n	643	643	643

Notes: \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis.

Table 2: Correlates of Bush Approval Linear Regression Does [respondent] approve or disapprove of Bush handling of -----? (1 = Approves, 0 = Neither Approve/Disapprove, -1 = Disapprove)

Dependent Variable:	Economy	Overall	Terror	Foreign Relations
Retrospective Economic Evaluation (1=Better, 0=Same, -1=Worse)	0.384*** (.042)	0.216*** (.039)	0.239*** (.045)	0.271*** (.044)
Reported Unemployment Rate	-0.007** (.003)	0.004 (.003)	0.005 (.004)	-0.006 (.004)

Notes: \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level with standard errors in parenthesis. Each cell is a different regression that also contains: state and party fixed effects, age, age squared, race, ethnicity, gender, education and whether or not the respondent is a union member.  $n = 641 - 659$ .



Table 3: Correlates of Bush Approval IV Regression Does [respondent] approve or disapprove of Bush handling of .....? (1 = Approves, 0 = Neither Approve/Disapprove, -1 = Disapprove)

Dependent Variable:	First Stage	Second Stage			Foreign Relations
	Retrospective Econ. Eval.	Economy	Overall	Terror	
Reported Unemployment Rate	-0.008*** (.003)				
Retrospective Economic Evaluation (1=Better, 0=Same, -1=Worse)		0.850** (.431)	-0.454 (.450)	-0.555 (0.520)	0.020 (.414)
Independent (Party ID = 3, 4, 5)	0.129* (.074)	0.291** (.102)	0.381*** (.104)	0.441*** (.124)	0.272*** (.414)
Republican (Party ID = 6, 7)	0.558*** (.070)	0.653 (.262)	1.41*** (.272)	1.47*** (.316)	0.990*** (.254)
Age	-0.019* (.010)	0.013 (.014)	0.012 (.014)	0.001 (.017)	0.001 (.013)
Age Squared	0.0002* (.0001)	-0.0001 (.0001)	-0.0001 (.0001)	0.000 (.000)	0.000 (.000)
Male	0.272*** (.060)	-0.140 (.150)	0.161 (.157)	0.409** (.181)	0.017 (.144)
Black	-0.222** (.106)	0.129 (.169)	-0.194 (.179)	-0.286 (.204)	-0.156 (.166)
Hispanic	-0.025 (.155)	-0.143 (.177)	0.089 (.184)	-0.121 (.214)	-0.221 (.173)
College Graduate	0.093 (.063)	-0.094 (.103)	-0.026 (.094)	0.025 (.108)	-0.123 (.087)
Union Member	-0.121 (.076)	-0.072 (.103)	-0.145 (.107)	-0.139 (.125)	-0.025 (.101)
Constant	0.226 (.262)	-0.202 (.933)	-1.82** (.756)	-0.809 (.881)	-0.990 (.711)
$R^2$	0.246	0.320	0.153	0.052	0.301
n	640	640	642	641	641

Notes: \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level with standard errors in parenthesis. Each regression that also contains state fixed effects

Table 4: Bias and Accuracy of Respondent's Perceptions of Gas Prices

Dependent Variable:	Reported—Actual Gas Prices	Reported—Actual   Gas Prices
Independent (Party ID = 3, 4, 5)	0.002 (.031)	-0.012 (.024)
Republican (Party ID = 6, 7)	0.014 (.030)	0.005 (.024)
Drive— Number of Times per week	-0.025*** (.006)	-0.018*** (.005)
Notice Gas Prices Number of Times per week	-0.004 (.003)	-0.009*** (.003)
TV News—Days per Week	0.0003 (.041)	-0.035 (.033)
Radio News—Days per Week	0.020 (.032)	0.029 (.026)
Newspaper—Days per Week	0.055 (.624)	0.012 (.027)
Internet—Days per Week	-0.008 (.032)	0.025 (.025)
Age	0.008* (.004)	-0.0004 (.004)
Age Squared	-0.0001*** (.00004)	0.000 (.000)
Male	0.001 (.025)	-0.027 (.021)
Black	0.026 (.041)	0.175*** (.033)
Hispanic	0.041 (.062)	0.157*** (.050)
College Graduate	-0.043 (.026)	-0.009 (.020)
Union Member	-0.021 (.31)	-0.014 (.024)
Constant	0.066 (.108)	0.351 (.086)
$R^2$	0.057	0.112
n	662	662

Notes: \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis.

Table 5: Correlates of Changes in Party Identificaion

Dependent Variable:	$\Delta$ Party ID = Party ID 2006 – Party ID 2004			
Gas Price Perception	0.080 (.178)	0.090 (.176)	0.077 (.172)	0.087 (.172)
Unemployment Perception	-0.016*** (.005)	-0.025*** (.006)	-0.013** (.006)	-0.022*** (.007)
Bush Approval (1 = Approve, 0 = Neither, -1 = Disapprove)			0.550*** (.075)	0.555*** (.075)
Retrospective Economic Evaluation (1=Better, 0=Same, -1=Worse)			0.166** (.074)	0.150** (.074)
Reported Unemployment Rate $\times$ 2004 Party ID = 1 or 2		0.027** (.011)		0.027*** (.010)
Age			-0.006 (.018)	-0.006 (.018)
Age Squared			0.000 (.000)	0.000 (.000)
Male			0.061 (.109)	0.052 (.108)
Black			-0.037 (.193)	-0.092 (.192)
Hispanic			-0.011 (.275)	0.025 (.274)
College Graduate			0.054 (.111)	0.050 (.110)
Union Member			0.056 (.136)	0.059 (.135)
Constant	-0.818 (1.38)	-0.935 (1.37)	-1.48 (1.38)	-1.21 (1.38)
$R^2$	0.100	0.110	0.200	0.209
n	632	632	629	629

Notes: \*\*\*, \*\*, \* denote statistical significance at the 1%, 5% and 10% level with standard errors in parenthesis. Each column is a linear regression that includes fixed effects for state and for 2004 Party ID.