

Sociotropic Voting and the Media: A Summary of Results from the 2006 ANES Pilot¹

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The literature on economic voting notes that voter's subjective evaluations of the overall state of the economy are correlated with vote choice, whereas personal economic experiences are not. Little is known about how voters acquire information about the general state of the economy, and how this information is then used to determine vote choice. To better understand this process, we asked a series of questions on the 2006 ANES Pilot to illicit respondents' perceptions of the unemployment rate and gas prices. We first analyze how individual characteristics are correlated with respondents' perceptions of gas prices and the unemployment rate. We then test how respondents' perceptions of gas prices and the unemployment rate are correlated with political preferences.

We find that perceptions of gas prices and unemployment rates derive from different sources of information. 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 there are significant demographic differences in respondents' perceptions of both gas prices and unemployment rates, only unemployment rates affect a respondent's political outlook. Moreover, perceptions of unemployment rates can be used to isolate the effect of economic evaluation on partisan preferences.

¹ Our proposal for the 2008 ANES Panel study is titled "Untangling Economic Voting."

Pilot Questions:²

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 with 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 with I don't know: What would be your best guess?

During a typical week, how many days do you watch news on TV, not including sports?

During a typical week, how many days do you listen to news on the radio, not including sports?

Would you say that over the past year the nation's economy has gotten better, stayed about the same, or gotten worse?

Do you approve, disapprove, or neither approve nor disapprove of the way George W. Bush is handling his job as president?

Do you approve, disapprove, or neither approve nor disapprove of the way George W. Bush is handling the economy?

Do you approve, disapprove, or neither approve nor disapprove of the way George W. Bush is handling our relations with foreign countries?

Do you approve, disapprove, or neither approve nor disapprove of the way George W. Bush is handling terrorism?

² Note that while our initial proposal did not ask for all of these questions, we have included all questions (other than demographic and party id questions) that are analyzed in this summary. Question wording is not exact as for some questions multiple phrasings were used. In particular, we did not list follow up questions that attempted to elicit the strength of feelings in one direction or another.

Why questions on objective knowledge about the state of the economy?

At the aggregate level, economic performance is an important predictor of candidate vote share.³ 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 Kewiet 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) attenuation bias caused by measurement error in survey questions. 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

³ 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).

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.^{4,5} As pointed out by Anderson et. al. (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 perceptions of the actual level of economic indicators. Possible explanations for variation in these perceptions include self-serving bias (Mullainathan and Shliefer, 2005), an exaggeration of

⁴ 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.

⁵ 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.

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.

Finally, questions about economic perceptions measure respondent's underlying perceptions with error. This measurement error would bias coefficients measuring the effect of economic performance on vote choice towards zero.

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.⁶ Figure 1 shows a kernel density plot of this difference broken down by partisan affiliation.⁷

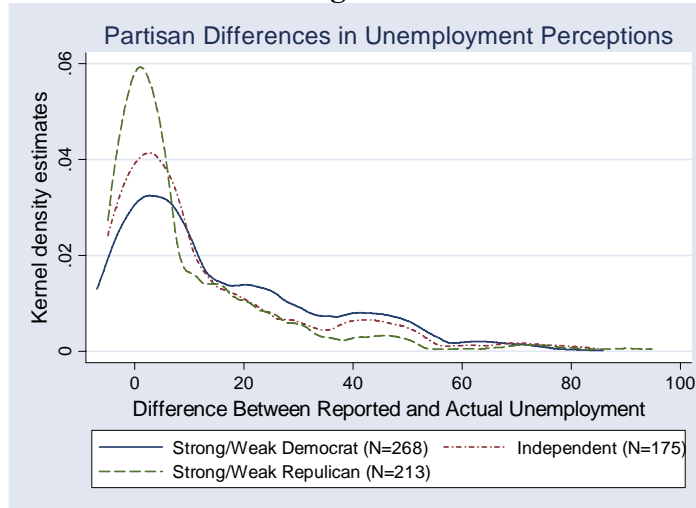
Overall, respondents' perceptions of the unemployment rate are much higher than the actual unemployment rate. Democrats' responses were significantly higher than those of Republicans or independents. While this is consistent with viewing the state of the economy

⁶ Unemployment figures are from <http://www.bls.gov/web/lauhsthl.htm>

⁷ To construct partisan identification we used the Party ID scale and coded 5 and 6 as Republican, 2-4 as independent, and 0-1 as Democrat.

through a partisan lens, we cannot distinguish this from Democrats perceiving that the economy is worse because of personal experience.

Figure 1



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.

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.⁸ Similarly, college graduates are less likely to be unemployed and have lower perceptions of unemployment.

Table 1: Quantile Regressions
Dep. Var.: Reported State Unemployment Rate – State Unemployment Rate 11/2006

Quantile	0.25	0.5	0.75
Independent (Party ID = 2, 3, 4)	-0.59 (0.52)	-0.01 (1.18)	-0.59 (1.76)
Republican (Party ID = 5, 6)	-1.16** (0.49)	-2.24** (1.12)	-3.42** (1.64)
Black	8.75*** (0.71)	16.60*** (1.60)	24.23*** (2.33)
Female	0.97** (0.42)	4.60*** (0.97)	10.86*** (1.43)
College Graduate	-1.17*** (0.44)	-4.02*** (0.98)	-9.56*** (1.39)
Senate Race in State	-0.19 (0.49)	-1.02 (1.12)	-5.58*** (1.63)
Days Per Week - TV News	0.62 (0.67)	2.44* (1.49)	3.84* (2.11)
Days Per Week - Radio News	-0.74 (0.52)	-2.18* (1.20)	-3.48** (1.72)
Days Per Week - Newspaper	-0.33 (0.53)	-0.50 (1.20)	-1.10 (1.76)
Days Per Week - Internet News	-0.01 (0.52)	0.64 (1.20)	-0.84 (1.78)
Constant	0.94 (1.10)	1.24 (2.60)	9.93** (4.07)

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis. N = 644

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.⁹

⁸ While in official unemployment figures males and females have similar unemployment rates, this does not account for the fact that more females drop out of the labor force.

⁹ Both of these variables are statistically significant at the 50th and 75th percentile regressions. Entering these coefficients one-by-one produces the same results, eliminating concerns of multi-collinearity between the media variables.

A surprising finding is that the presence of a Senate race in the respondents' state made their assessment of the unemployment rate more accurate. This is consistent with Gelman and King (1993) who argue that campaigns enlighten voters through the media.¹⁰

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 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.¹¹

Using Unemployment Responses to Eliminate Measurement Error

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 like "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 that responded that the nation's economy

¹⁰ Anderson, Tilly, and Heath (2005) find such a pattern in the levels of political knowledge by respondents on the British Election Panel Study

¹¹ Stevenson and Vavreck (2000) find that economic performance is a more important determinant of vote choice the longer the political campaign.

has stayed about the same in 2006 may have instead answered that the economy got better had a Democrat been president.

Table 2: Determinants 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	Terror	Foreign Relations
Retrospective Economic Evaluation (1=Better, 0=Same, -1=Worse)	0.386*** (0.040)	0.257*** (0.042)	0.256*** (0.043)
Reported Unemployment Rate	-0.010** (0.005)	0.002 (0.005)	0.002 (0.005)

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis. Regressions also include party and state fixed effects. The first and second row are from different regressions. Reported unemployment rate is top coded at 20 percent. N = 656 – 661.

The first row of Table 2 examines how individuals’ retrospective assessments of the economy relate with their assessment of George W. Bush’s performance in three policy areas: the economy, foreign affairs, and the war on terror. It finds that individuals’ retrospective evaluations of the economy are statistically significantly related to evaluations of the president in all three domains. The significant relationship between retrospective economic evaluations and approval of Bush’s terror and foreign relation policies suggests that retrospective economic evaluations capture more than respondents’ perceptions of the economy. In particular, those who generally support President Bush are likely to perceive the economy is doing better than those who generally support President Bush. As a result it is not appropriate to refer to the coefficient on retrospective economic evaluations as the casual effect of the economic perceptions on vote choice.

The second row of Table 2 examines how individuals’ perceptions of unemployment relate to their assessment of George W. Bush’s performance in the same three policy areas. Note that this variable is only related to respondent’s assessment of the Presidents handling of the

economy, and not the President’s handling of terror and foreign affairs. 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.

Table 3: Determinants 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		
	Retrospective Econ. Evaluation	Economy	Terror	Foreign Relations
Reported Unemployment Rate	-0.020*** (0.004)			
Retrospective Economic Evaluation (1=Better, 0=Same, -1=Worse)		0.505** (0.221)	-0.138 (0.246)	-0.086 (0.255)

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis. Regressions also include party and state fixed effects. Reported unemployment rate is top coded at 20 percent. N = 656 – 659.

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 column 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 handling of other issues.

Asking About Gas Prices

Aside from the specific hypothesis we wish to test, questions that measure objective knowledge about the economy would give scholars the opportunity to study the effects of partisanship, gender, education, race and media bias on the accuracy of economic information, and the effect of economic information on subjective evaluations of the economy and vote choice. It may be that certain groups of respondents (by race, age, gender, or urban/rural environment) all give similar, but incorrect, numbers - these would be precise but inaccurate evaluations. Similarly, some groups may give answers that are in the aggregate accurate, but have a large dispersion around the true answer, that is these answers are not precise. The pattern of such information in the population is largely unknown. For example, Ansolabehere, Snowberg and Snyder (2005) found that, perhaps counter-intuitively, higher educational attainment was inversely correlated with the accuracy of information about campaign finance.

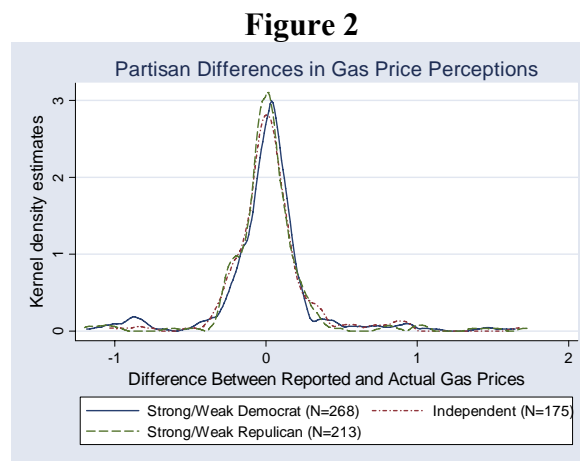


Figure 2 shows that there are no discernable partisan differences in the perception of gas prices, and that the population is, on the whole, very well calibrated to the actual gas prices. This figure obscures some important differences, however.

Table 4: Bias and Accuracy of Respondent’s perceptions of gas prices
(Dependent variables measured in cents)

Dependent Variable	Reported – Actual gas price	Reported – Actual gas price
Republican	1.10 (2.74)	1.10 (2.17)
Male	-0.09 (2.50)	-2.29 (1.99)
Hispanic	6.88 (6.06)	17.5*** (4.81)
Black	4.45 (4.05)	17.9*** (3.22)
Drive – Number of Times per week	-1.46** (0.61)	-1.39*** (0.49)
Notice Gas Prices – Number of times per week	-0.50 (0.35)	-1.01*** (0.28)
Constant	18.80 (11.4)	21.0 (9.06)

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis. Regressions also include controls for independent party ID and education. N = 665

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. Blacks’ and Hispanics’ perceptions of gas prices deviate by 18 cents more from the true price on average than other ethnic groups. 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.¹² This is perhaps intuitive as information about gas prices is readily available from everyday experience, whereas information about unemployment rates is not.

¹² Results available from the author’s upon request.

Table 5: Determinants of Δ Partisan Identification – Linear Regression
 Δ Partisan Identification is Partisan ID '06 – Partisan ID '04
Generally speaking, do you usually think of yourself as a _____ ?

Reported Gas Prices	0.014 (0.172)	0.019 (0.172)	0.057 (0.165)	0.064 (0.165)
Reported Unemployment Rate	-0.022*** (0.008)	-0.031*** (0.010)	-0.020** (0.008)	-0.029** (0.011)
Reported Unemployment Rate X 2004 Party ID = 0, 1, or 2		0.020 (0.015)		0.019 (0.015)
Bush Approval (1 = Approve, 0 = Neither, -1 = Disapprove)			0.557*** (0.073)	0.558*** (0.073)
Retrospective Economic Evaluation (1=Better, 0=Same, -1=Worse)			0.166** (0.072)	0.160** (0.072)
Female Dummy			-0.059 (0.105)	-0.046 (0.105)
Black Dummy			-0.062 (0.182)	-0.106 (0.185)
College Graduate Dummy			0.041 (0.108)	0.042 (0.108)

Notes: ***, **, * denote statistical significance at the 1%, 5% and 10% level. Standard errors in parenthesis. Regressions also include 2004 party id and state fixed effects. Party ID measured as: 0 = Strong Dem., 1 = Weak Dem., 2 = Ind. – Leans Dem., 3 = Ind., 4 = Ind. – Leans Rep., 5 = Weak Rep., 6 = Strong Rep. N = 644 - 649.

Table 5 examines the effects of both gas prices and unemployment perceptions on changes in party identification between 2004 and 2006. The regression includes 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.¹³ 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 Democrats, the effect holds across the political spectrum. This is true even

¹³ This might be thought of as a regression to the mean or censoring problem.

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. It should be noted that this finding is only suggestive as what may be politically important are changes in perceptions of gas prices, rather than the level of perception. Because gas prices tend to be lower in November than during the summer, it may be that elections (and election studies) are conducted at the wrong time for this issue to be salient.

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? 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, how does the accuracy and consistency of perceptions about economic aggregates map into subjective evaluations of the economy and vote choice? For example, 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 observing these responses across time, scholars will also be able to eliminate a large amount of measurement error from respondent's subjective and objective evaluations (Ansolabehere, Rodden and Snyder, 2006).

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