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ABSTRACT

Given President Bush's popularity among relatively poor rural residents and lack thereof among wealthier urban dwellers in the 2004 presidential election, analysts have suggested that voters contradicted their economic self-interests. We investigate whether this conventional wisdom implied an absence of economic voting. Using exit poll data, we estimate whether a change in previous four-year financial status affected the propensity to vote for Bush. The main econometric concern is that underlying preferences for Bush might dictate financial status change responses. Beyond income and several other demographic variables, therefore, the regressions hold constant indicators for state and congressional district, religious affiliation, political philosophy and party, and Iraq war support. Even further controlling for approval of Bush's job performance, economic voting is statistically and quantitatively significant. Effects are asymmetric, with status worsening hurting Bush more than status improvement helped, and persist even among subgroups that provided particularly strong or weak support for Bush.

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I. Introduction

The conventional wisdom among political analysts following the 2004 presidential election was that the state of the economy played little role in the outcome. Many other issues not directly related to voters' economic well-being seemed to polarize supporters and detractors of President George W. Bush, with most of the latter group voting for Democratic candidate John Kerry. Among other considerations, voters debated the ability of the candidates to provide direction for the war in Iraq that had been ongoing for over a year and a half, defend the country from further terrorist attacks in the wake of 9/11, and offer solutions to the possible insolvency of Medicare and Social Security as the earliest baby boom cohort approached retirement. In addition, initiatives banning gay marriage were on the ballots of 11 states.

This last factor likely contributed to "moral values" being the issue most frequently cited among 6,503 respondents to the 2004 National Election Pool exit poll as that most relevant for determining which candidate received their vote (National Election Pool, 2004). One theory among commentators was that the decisive factor in Bush's reelection was unexpectedly high participation among relatively poor rural residents who disproportionately voted for Bush as the candidate whose policies best reflected their own values. In combination with opposing support of Kerry by many financially well-off urban residents, this suggests that many voters contradicted their economic self-interests, given that the candidates' economic policies reflected the traditional relative favoritism of the financially better-off by Republicans.

These circumstances do not necessarily imply that economic conditions were irrelevant to Bush's reelection. The economy was named the most important voting determinant by 22.5% of the above exit poll respondents, ranking behind only the 23.3% who listed moral values and ahead of the 19.3% who chose terrorism and the 16.3% who selected Iraq. In the 16 months

prior to the election, the seasonally adjusted national unemployment rate had declined from 6.3% to 5.4%, the lowest level since the month after 9/11. The literature on economic voting, which shows that recent economic performance is a major predictor of whether incumbents (or their political parties) win presidential elections, implies that some voters might have given Bush credit for the economic upswing simply by virtue of it occurring during the latter stages of his term in office.

This paper investigates whether the anecdotal evidence that economic factors were counterintuitively related with voter choice translated to an absence of economic voting. In a more widely distributed version of the exit poll referenced above, we capture economic voting using information regarding whether one's family financial situation is better, worse, or about the same as four years ago. This type of variable typically reflects "pocketbook" or "egocentric" voting (Campbell et al., 1960), a particular type of economic voting in which individuals focus on their own specific financial situation to evaluate the incumbent (or more generally his or her party). We use this measure in lieu of proxies for regional or national economic conditions, which are relevant if voters are "sociotropic," meaning that their evaluations of the incumbent are based on macroeconomic fluctuations (Kinder and Kiewiet, 1979). As a result, we do not distinguish between egocentric and sociotropic voting. Furthermore, we cannot say whether voters, who may use past changes in their personal financial situation to forecast future changes, are retrospective or prospective, i.e. backward- or forward-looking (Downs, 1957).

Our estimates of economic voting come from regressing an indicator of voting for Bush, as opposed to any other candidate, on an indicator for whether financial status improved over the last four years and another for whether it worsened. The main econometric concern with using this egocentric voting type of explanatory variable is the inherent possibility of bias from

unobserved heterogeneity. Specifically, Bush supporters might be more likely, ceteris paribus, to report economic improvements as an expression or rationalization of their support, while for reciprocal reasons Bush detractors might be more likely to report economic declines. If voter preferences are in this manner correlated with reported economic welfare changes, estimates of economic voting will be overstated, so that econometric estimates will be disposed towards showing economic voting even in its absence.

We empirically address this issue by including controls that are particularly likely to proxy for voter preferences and therefore absorb their spurious link with reported changes in economic well-being. Beyond standard demographic characteristics, the regressions hold constant family income so that economic voting effects are identified from income changes rather than levels, which could be correlated with attitudes toward economic policies specific to the two major political parties. Moreover, we control for political philosophy and party to account for opinions that determine voting decisions but are at least partially invariant to time and not specific to the candidates under consideration. Also, estimates are conditional on an Iraq war approval rating, which further reflects fundamental political views that might contaminate economic status responses and constitutes an explicitly time-varying confounding factor.

Most importantly, to directly yet parsimoniously account for underlying preferences that influence both votes and financial situation assessments, we enter into the regressions the rating that respondents assign to Bush's job performance. The occurrence of economic voting would imply that the change in a voter's economic situation directly affects how the voter evaluates the success of the incumbent's first term. Inclusion of the Bush approval measure will hence absorb some of whatever economic voting effects do exist, rendering conservative the resulting

estimates of economic voting. Indeed, the magnitudes of the economic voting coefficients fall considerably upon entering the job approval controls.

However, even in the complete specification, economic voting is highly significant and quantitatively relevant. Effects are asymmetric, with economic improvements helping Bush significantly less than declines hurt him. Additionally, they persist even for subgroups that predominantly support Bush, including rural residents, the upper income, Christians, political conservatives, Republicans, and those who approve of Bush's job performance.

II. Related Literature

Economic voting is based on the idea that voters rely, at least in part, on past economic performance to evaluate the incumbent (or his/her party) relative to alternative candidates. Aggregate data support the notion that in presidential and congressional elections, the incumbent gets credit for good economic times but is blamed for bad ones (Kramer 1971, 1983; Fair 1978; Kinder and Kiewiet 1981; Peltzman 1990; Eisenberg and Ketcham 2004; Leigh and Wolfers 2006). The positive effect of economic upswings on incumbent party vote shares, furthermore, is typically smaller in magnitude than the negative effect of economic downturns (Bloom and Price 1975, Claggett 1986).

Individual survey data also suggest that voters reward incumbents or their parties for good economic times and punish them for bad ones. Specifically, individual voting outcomes vary with indicators of recent changes in personal financial situation, after controlling for other explanatory factors (Fiorina, 1978, 1981; Kinder and Kiewiet, 1979; Kiewiet, 1981; Lewis-Beck, 1988; Markus, 1988, 1992; Alvarez and Nagler, 1997; Gomez and Wilson, 2001; Nadeau and Lewis-Beck, 2001; Jordahl, 2006). Personal financial situation improvement is typically

associated with voting for the incumbent, and vice versa, although the magnitude and statistical significance of this association varies across elections and countries. Notably, voters tend to be more retrospective than prospective, particularly if an incumbent is on the ballot (Lanoue, 1994; Nadeau and Lewis-Beck, 2001).

To account for the possibility that latent preferences towards an incumbent candidate influence the voter's assessment of recent personal financial situation changes, the above studies typically include the voter's political ideology, party or both in their economic voting equations. However, our results suggest that these variables are unlikely to fully capture the spurious correlation between voter approval of a particular candidate and the voting choice. We contribute to knowledge regarding economic voting by demonstrating that egocentric voting occurs in the 2004 presidential election even among voters who express the same degree of approval for President Bush's job performance. To our knowledge, only Fiorina (1981), in his analysis of presidential elections in the 1950s, 1960s, and 1970s, implements an analogous strategy. Fiorina (1981) also shows, though, that egocentric voting effects are not stable across elections. Thus, the importance of economic voting, particularly of the egocentric variety, in the 2004 presidential election had remained an open question in the existing literature.

Studies of economic voting in survey data have typically imposed the condition of effect symmetry, i.e. that the beneficial impact on the incumbent vote share of improving financial conditions is equivalent in magnitude to the harmful impact of worsening conditions. Only Fiorina (1978, 1981) appears to have allowed for asymmetric effects. Yet, as mentioned above, several studies of aggregate data conclude that economic voting effects are asymmetric. Since Fiorina (1978, 1981) finds that egocentric voting effects vary across elections, it is unclear a priori whether the 2004 presidential election will exhibit similar asymmetry. In this respect, we

further contribute to the economic voting literature by allowing for the possibility that the negative impact on the likelihood that voters select Bush of diminishing financial resources is larger (or smaller) than the positive impact of increasing financial resources.

III. Data and Empirical Strategy

We study economic voting in 2004 exit poll data from the National Election Pool (National Election Pool, 2004), a collaboration of ABC News, the Associated Press, CBS News, CNN, Fox News and NBC News. Data for 50 states and the District of Columbia were collected through interviews conducted on Election Day, November 7, 2004, as voters left their polling places. A probability sample of precincts within each state was selected to represent geographic and party-specific voting diversity; within each precinct, voters were chosen throughout the day at a rate that gave all voters the same chance of being interviewed. From 22–31 October, telephone interviews were performed in 12 states with large populations of absentee and early voters (Arizona, California, Colorado, Florida, Iowa, Michigan, Nevada, New Mexico, North Carolina, Tennessee, Texas, and Washington) and in Oregon, where voting is done entirely by mail. These samples were selected using random-digit dialing, with one individual selected at random within each household. The Oregon sample was a dual design that also used registration lists in a way that ultimately represented every voter with a land-line telephone only once. Our analysis sample consists of 58,740 observations, as further documented below.

The regression model used to estimate the impact of (egocentric) economic voting is

$$vote\_bush = \beta_0 + \beta_1 fin\_better + \beta_2 fin\_worse + \mathbf{X}\boldsymbol{\beta}_3 + u\,.$$

Although this is a binary response model, we estimate it by OLS so that the marginal effects are easily interpretable. Probit and logit models yield identical inferences and marginal effects that

are somewhat larger using mean explanatory variable values, as we subsequently show for the probit case. We use sample weights and report heteroskedasticity-robust standard errors.

The dependent variable, *vote_bush*, is an indicator of whether the respondent voted for President Bush. Because anti-Bush economic voting might entail a vote for someone other than primary challenger John Kerry, the sample includes 825 respondents who voted for a candidate other than Bush or Kerry, although we later show that their omission does not alter the results.

The explanatory variables we use to test for economic voting are *fin_better* and *fin_worse*. These are indicators constructed from the question, "Compared to four years ago, is your family's financial situation better today, worse today or about the same?" Relative to the base group of voters whose economic status has remained unchanged during Bush's first term, therefore, coefficients β_1 and β_2 measure, respectively, how much more likely respondents are to vote for Bush when their economic status has improved or worsened. The economic voting hypothesis predicts $\beta_1 > 0$ and $\beta_2 < 0$, i.e. those faring better than four years ago will reward Bush with their votes while those faring worse will punish Bush by voting for another candidate.

The vector **X** contains many additional voting determinants, all of which are also binary indicators. We begin by controlling for three plausibly exogenous demographic characteristics, gender, age and race. Age is reported as being within one of nine groups: 18–24, 25–29, 30–39, 40–44, 45–49, 50–59, 60–64, 65–74, or 75 and over. Race is categorized as either white, black, Hispanic/Latino, Asian or other.

Next, we hold constant two types of geographic variables in order to alleviate heterogeneity arising if living in areas that heavily support or reject Bush produces peer effects on voting behavior. First, we add congressional district fixed effects, so that the economic voting coefficients are identified within congressional districts (which are themselves within

states). All of the 435 U.S. congressional districts are sampled except for 27 of 53 in California, 16 of 32 in Texas, 8 of 29 in New York, and one each in Georgia (of 13), Illinois (of 19), Maryland (of 8), Michigan (of 15), Ohio (of 18), and Washington (of 9).[1] The 4,677 participants interviewed by phone, including all Oregon residents, are grouped into state-specific residual categories because their congressional districts are unobserved. Second, we include indicators for urbanization level, which varies considerably even within many congressional districts. Respondents are reported as living in cities with populations over 500,000, between 50,000 and 500,000 or between 10,000 and 50,000, a rural area, or a suburb, with the latter defined as being within a metropolitan statistical area but outside the central city.

The exit poll reports categorical information on when respondents made their voting decision. We convert this into an indicator of whether voters had chosen the candidate for whom they voted within the last month or before that. Inclusion of this variable is warranted if the behavior of relatively late deciders is more or less reflective of economic voting for reasons stemming from omitted correlates of the decision timing.

Even conditional on the factors listed thus far, and assuming there is no reverse causation running in the direction from the voting decision to reported financial situation change, the possibility remains that the economic voting estimates are biased by the opinions polled individuals have regarding the President. In particular, individuals who voted for Bush might be disposed to report economic status improvements simply because they believe that the first term of his presidency was successful. Conversely, voters who prefer Kerry or an alternative candidate might assess their economic status as having declined purely because they think Bush

[1] Omitted districts tend to be components of multi-district urban areas, but some, particularly in California, New York and Texas, constitute rural areas.

was ineffective as president. To address this more directly than do the controls already outlined, we include three additional sets of explanatory variables.

One is income level, manifested by a set of indicators for eight categories of total family income in 2003: under $15,000, $15,000–29,999, $30,000–49,999, $50,000–74,999, $75,000–99,999, $100,000–149,999, $150,000–199,999, and $200,000 or more. Separately from the impact of a *change* in income, the *level* of income could be related to candidate preference. Specifically, because of his representatively Republican policies regarding taxes, business and other economic factors, individuals with higher income are expected, ceteris paribus, to favor Bush. Economic voting coefficients are hence identified only within these narrow ranges of income, and level effects are largely netted out.

A second set of exit poll variables that more directly reflect candidate preferences is religious affiliation and political philosophy and party. Religion choices are Protestant, Catholic, Mormon, other Christian, Jewish, Muslim, something else or none. Respondents can also report whether they consider themselves liberal, moderate or conservative on most political matters, and whether they usually think of themselves as Democrat, Republican, Independent or something else. One could imagine that being Christian, conservative or Republican reflects core ideals that make voters who possess them inclined to further support the candidate who shares these characteristics and ideals, i.e. Bush, by rating their financial situation as having improved during his term. The opposite could just as well occur for voters with antithetical preferences. Accounting for these traits is thus a straightforward way to address the type of omitted variable bias that concerns us.

A limitation of these measures, though, is that they are largely time-invariant. Religious affiliations are often transmitted within families from generation to generation, and recent

evidence suggests that even political beliefs are at least partially hard-wired cognitively (Amodio et al., 2007). Particularly in the 2004 election, which took place in the wake of both an unprecedented terrorist attack on U.S. soil and an economic downturn that followed an unusually long period of record low unemployment, voters might have been susceptible to contradicting their traditional patterns. Put differently, attitudes regarding particular candidates do not necessarily match those towards the philosophies they hold, and this sort of divergence seems even more prone to have occurred in 2004. As evidence, nearly a fifth of respondents decided for whom to vote only within the preceding month, and 15 percent of poll respondents reported being Moderate and neither Republican nor Democrat.

To address this deficiency, we include constructs of two variables that directly capture approval of the incumbent and a major event that occurred during his first term. Specifically, survey participants were asked whether they strongly approve, somewhat approve, somewhat disapprove or strongly disapprove of the way Bush was handling his job as president and of the decision to go to war with Iraq. In our most complete empirical specification, we include indicators for three of the four categories for approval of both the President and the Iraq war. We argue that, if anything, this specification provides a conservative estimate of the prevalence of economic voting, i.e. significance of the financial situation variables in this model constitutes strong evidence that economic voting took place in the 2004 election.

The statement above contradicts the ambiguity inherent in our "kitchen-sink" style approach to controlling for unobserved heterogeneity by directly entering into the regression proxies for specific omitted factors. On the other hand, the Bush approval variable is the most direct measure possible of the exact unobservable that might cause problems for our estimates, loyalty (or disdain) towards the President that potentially influences the perceived change in

financial situation net of whatever change actually occurred. Moreover, approval of the incumbent is presumably the intermediate variable through which at least some economic voting operates: voters financially worse off since the beginning of the current term are expected to vote against the incumbent precisely because their loss of welfare reflects poorly on presidential job performance. Thus, the Bush approval variable almost certainly absorbs part of the causal component to economic voting.

We concede that by its discrete nature, the Bush approval measure, though a parsimonious summarization of the heterogeneity that prospectively biases our estimates, might not fully reflect preferences that could impact financial situation change responses. Offsetting this drawback is that it records both moderate and strong preferences towards Bush rather than simply reflecting endorsement or rejection. Furthermore, inclusion of the Iraq war approval indicators provides a supplementary control for analogous preferences, given that the war, especially by the time of the election, was seen primarily as a reflection of Bush rather than his administration or Congress. Beyond this, the Iraq, party, philosophy, and income variables could, albeit to a much lesser degree than the Bush approval variables, respond to perceived financial status changes and thus by their inclusion act to attenuate estimated economic voting effects. In our view, therefore, a statistical link between becoming financially better or worse off in the last four years and the probability of voting for Bush in the specification containing all documented explanatory factors would provide convincing evidence of economic voting.

Appendix A lists all analysis variables, other than the congressional district indicators. The left two columns display row-specific sample means, calculated using sample weights. Column 1 shows the proportion of respondents satisfying the condition given in the row heading, while column 2 shows the proportion of such respondents who voted for President Bush. The

full sample contains the 58,740 poll participants, out of 77,006 interviewed, that have complete information on all included variables.[2] Just over 51 percent of participants voted for Bush, and a slightly greater fraction reported being better off compared to four years ago than reported being worse off. The sample is disproportionately female, prime working age, white, suburban, early-deciders, middle-income and Christian. Frequency of representation is substantially higher for conservatives than liberals, yet virtually equal for Republicans and Democrats.

Unconditionally, a pattern consistent with economic voting is readily apparent: while almost exactly fifty percent of voters with an unchanged financial situation opt for President Bush, four-fifths of those whose financial situation has improved but only one-sixth of those whose situation has worsened do so. Beyond this, groups more likely to vote for Bush include males, whites, Christians, and those ages 30–74, not living in cities with population 50,000 or more, deciding before the last month, and with family incomes of at least $30,000. As expected, most conservatives and Republicans voted for Bush while most liberals and Democrats did not. A majority of moderates and those who are neither Republican nor Democrat voted for a candidate other than Bush.

The proportion of voters who approved of Iraq and President Bush's job performance is each 53 percent, although these groups are not perfectly overlapping. Perhaps not surprisingly, whether or not one approves of Iraq or Bush is a much stronger predictor of the voting outcome than is the distinction between somewhat and strongly approving of either, and voting prevalence by Iraq approval category is quite similar to that by Bush approval category. These facts suggest that Iraq approval is highly correlated with latent candidate preferences that prospectively induce

[2] Information on financial situation changes is missing for 9,434 observations, i.e. over half of the 18,266 that are dropped. Remaining omissions occur because of unreported information on, in order, the voting decision (611 observations), gender, age, race or urban residence (1,515 observations), family income (4,018 observations), religion (773 observations), political philosophy or party (1,416 observations), Iraq war approval (309 observations) and Bush job approval (190 observations).

the spurious appearance of economic voting, and thus might serve as a proxy for such preferences that is reasonable but more exogenous than is Bush approval.

IV. Results

Table 1 contains the main results of the analysis. Each column reflects a separate sample-weighted regression of the binary "voted for Bush" measure on a constant and the sets of variables indicated in the lower panel. Parentheses contain absolute values of heteroskedasticity-adjusted *t* statistics. The test of effect symmetry is simply the test for whether the two financial situation coefficients are equal in absolute value, i.e. the negative impact of being worse off after the Bush administration equals the positive impact of being better off, with each column showing the corresponding *F* statistic and *p*-value (in brackets).

The right-hand side of the column 1 specification includes only the two financial situation indicators and thus echoes the analogous information from column 1 of appendix A. The unconditional economic voting effects are huge: compared to those experiencing no change in financial situation during the first term, a vote for Bush is 30.5 percentage points more likely among respondents whose financial situation improved and 32.4 points less likely among those whose situation worsened. At the sample proportion of 51.1 percent who voted for Bush, this translates to semi-elasticities of 59.7% and 63.4%, respectively. The standard errors are sufficiently small to not only produce extremely large *t* statistics, but also to reject at the 10 percent level the hypothesis of coefficient symmetry, even though the absolute difference between them represents less than one-fifteenth of their magnitudes. This rejection, given the relative coefficient sizes, implies that financial deterioration takes away from Bush support more than financial betterment adds to it, an implication we discuss further below. By themselves, the

economic voting variables explain almost 25% of the sample voting variation. The perception of having become economically better or worse off is thus a powerful predictor of how one voted. On the flip side, the magnitudes of the coefficients and *t* statistics seem much too large to reasonably reflect causal economic voting effects.

Column 2 adds to the right-hand side the indicators for gender, age and race. These factors explain another five percent of the variation in voting and reduce the economic voting effects by 5–10%. The resulting coefficients differ in magnitude by only .005 and symmetry is consequently no longer rejected.

Columns 3 and 4 insert geographic controls. In column 3, holding constant the urbanization level indicators leaves the results virtually unchanged. Notably, adding congressional district indicators in column 4, upon which economic voting effects are identified only within state-specific congressional districts, explains another four percent of the variation in voting but has little impact on the financial situation coefficients. In heavily populated areas, a congressional district can be an individual county or even just part of a county. Although we do not directly investigate the level of aggregation in economic fluctuations to which voting responds, therefore, this result is consistent with that from Eisenberg and Ketcham (2004) regarding national economic conditions being more relevant for economic voting than county-level conditions. Symmetry is again rejected at 10 percent, because the minimal ensuing reduction in economic voting effects is almost entirely restricted to that from being better off.

Estimates remain similar in columns 5 and 6. For column 5 this simply means that voters who considered themselves better or worse off after President Bush's first term did not make their decisions to support or reject Bush, respectively, systematically early or late. The invariance of the coefficients to adding the family income indicators in column 6 is much more

striking. It implies that the impact of *changing* economic circumstances on voting occurs entirely within narrowly-defined categories for income *level*. Moreover, controlling for income level explains essentially no additional variation in voting outcomes, even before holding constant, in columns 7–12, the variables we suspect will most control for the unobserved heterogeneity that might create spurious evidence of economic voting. As we show later, the situation is quite different when the financial situation and income indicators are entered in the reverse order: even in the fully saturated model, estimated income level effects depend very much on whether the financial situation indicators are included.

Columns 7–9 add, in inverse order of their expected impact on both the financial situation coefficients and the vote, the three factors that we interpret as essentially fixed proxies for political preferences. In column 7, the religion indicators have a minor but perceptible impact, reducing the economic voting effects by 4–6% and explaining 2.5 percentage points of remaining voting variation. The political philosophy indicators have a much larger impact in column 8, decreasing the coefficients by another 17–25% and accounting for an additional 10 points of the residual deviation in voting outcomes. And in column 9, the effect of the political party indicators is even more substantial, as their inclusion brings about a further 30–40% drop in parameter size and raises *R*-squared by another 13 points. All told, then, three groups that heavily support Bush, Christians, conservatives and Republicans, are liable to report financial situation improvements, while three factions on the other end of the political spectrum, non-Christians, liberals and Democrats, are prone to perceive declines in their economic situations. If first term economic policies directly benefited Bush supporters and hurt Bush detractors, inclusion of these political preference measures results in understatement of economic voting, because some of the effect of financial situation changes are falsely attributed to the preference

factors. More likely, though, Bush loyalists simply tend to report economic improvements as a show of support or because they are more optimistic about the equivalent economic change, while the reverse is true for Bush critics.

Importantly, however, economic voting effects, though diminished in magnitude, remain highly significant and large. Becoming better off increases the probability of voting for Bush by 23%, while becoming worse off lowers that probability by 32%. In addition, the gap between the financial situation coefficients has risen to 4.1 points, i.e. one-third the size of the smaller coefficient and more than eight times the size of their standard errors. Consequently, the coefficient symmetry hypothesis is now soundly rejected: Bush is punished considerably more by those doing worse since he took office than he is rewarded by those doing better.

The final step in table 1 is to enter the two strongest preference controls, the indicators of Iraq war and Bush job performance approval. Columns 10 and 11 add each separately, without the other, and column 12 adds both. Assuming minimal attenuation occurs as a result of economic voting directly impacting attitudes towards Iraq, the column 10 model, which includes Iraq approval but not Bush approval, might informally be thought to provide a conservative upper bound for the true economic voting effect. The invasion of Iraq was clearly an important first term event that influenced the opinion many voters had towards Bush's job performance, as evidenced by the categorical versions of the Iraq and Bush approval variables (i.e. categories numbered 1–4, with 1 = strong approval, etc.) having a sample correlation of 0.82. However, views on Iraq seem sufficiently deep-seated to be largely outside the influence of personal financial gain or loss for most voters. We interpret the column 10 estimate as only an "informal" upper bound because preferences regarding other first-term Bush administration issues (e.g. gay marriage, terrorism apart from its perceived relationship to Iraq) are not explicitly held constant.

Yet, one might simultaneously think of this upper bound as "conservative" because any of the political preference factors added in columns 7–10 could in principle respond to economic situation changes.

Meanwhile, given the inherent collinearity of Bush approval with the decision whether or not to vote for Bush, as reflected in the regression of the vote indicator on only the Bush approval variables having an *R*-squared of 0.77 (not shown), we consider the estimate in column 12, which controls for both Bush and Iraq approval, to be a strong test of the economic voting hypothesis. Given that the Bush approval indicators are a flexible way to control for exactly the type of heterogeneity that could artificially inflate the estimated economic voting effects, yet seem likely to soak up some of the true economic voting effects, significance of the financial situation variables in the model controlling for these as well as the Iraq approval indicators would seem to represent convincing evidence that economic voting does indeed occur.

Indeed, the financial situation coefficients are larger in column 10 than 12, with those in column 11, which holds constant the indicators for Bush approval but not Iraq approval, having intermediate values. The column 10 "upper bound" estimates, though substantially smaller than those in the initial columns, are still quite large. Even conditional on political preferences and attitudes on Iraq war policy, financial improvements during Bush's first term increase the likelihood of voting for Bush by 9.6%, while financial declines lower that likelihood by 17.2%. More importantly, our column 12 "lower bound" estimates, though somewhat diminished even from those in column 10, are still highly significant and quantitatively meaningful. Adding to the above controls our "ultimate" heterogeneity proxy, the Bush approval indicators, an improved economic situation raises the propensity to vote for Bush by 3.5% while a worsened

situation lowers that propensity by 7.6%. Once again, to us this signifies persuasive evidence of a causal economic voting effect.

One way to affirm the quantitative importance of the column 12 coefficients is to simulate the effect of a "reasonable" change in reported financial situation. An ordered categorical version of the financial situation measure, with categories 1 = worse off, 2 = neither and 3 = better off, has a weighted standard deviation of 0.78. Almost exactly one-third of the weighted sample perceived themselves as better off. The supposition that 78% of the better off voters had instead responded that they were neither better nor worse off hence simulates a one-third standard deviation change in this variable In column 12, this minor modification translates to a reduction in the proportion of votes for Bush by $0.78 \cdot 0.018 = 0.014$. Assuming from the analogous population figure that 98% of these votes went to Kerry, this would have shifted the overall popular vote to Kerry by a 49.7% to 49.3% margin. The predicted vote shift would be even greater if we instead assumed some of the financial situation change involved more voters becoming worse off, used the column 10 or 11 estimates, or simulated a larger change.

The column 12 *R*-squared means that the voting determinants for which we control account for more than four-fifths of the observed voting pattern. The implication that little residual variation remains to be potentially explained by omitted correlates of financial situation change is encouraging for our desired causal interpretation of the economic voting estimates. However, as mentioned above, an auxiliary regression in which the Bush approval indicators are the only included right hand side variables yields an *R*-squared of 0.77. Since the financial situation variables and, as we document shortly, many other factors subsequently enter the regression significantly but only explain another four percentage points of the variation in voting outcomes, presumably the scope persists for other voting determinants to do so as well. Yet, in

an unreported regression in which the Bush and Iraq approval indicators are the only additional included variables, the coefficients of the financial situation indicators are 0.028 and –0.049, i.e. close to their column 12 values, and these are arguably already conservative because of reverse causation from financial situation to Bush approval.

The other result from columns 10–12 in table 1 is the very highly significant asymmetry in economic voting effects: the incumbent has much more to lose from voters perceiving a loss in economic welfare during his administration than he has to gain from the opposite. Because Bush received just over one-half of the vote, this asymmetry persists when evaluated in terms of proportions voting for or against Bush. This finding is consistent with the aforementioned conclusions from aggregate data that economic downturns hurt the incumbent party, but economic upswings do not help it (Bloom and Price 1975, Claggett 1986). A plausible explanation is that economic voting implies expectations of improved personal financial situations; incumbents are not rewarded nearly as much for fulfilling those expectations as they are punished for not doing so. Alternatively, voters may credit themselves for improvements in their financial situations, but blame the government when things go wrong. Either way, factors in this specific election that might have augmented such behavior include the ideological nature of issues that seemed to be at the voting margin for many (including Iraq, terrorism and gay marriage) and that Bush's approval ratings had been on a downward trajectory heading into the election. Moreover, Amodio et al. (2007) find that liberals tend to exhibit behavior that is more flexible (or indecisive) than that of conservatives. For all these reasons, Bush supporters might have been a relatively more rigid group in their political opinions than were his detractors.

Column 3 of Appendix A shows the full set of estimates from the regression of column 12 in table 1. These mostly reflect the relationships apparent from the earlier cross-tabulations.

Groups more likely to vote for Bush include respondents age 30 and above, compared to those age 18–24; whites, compared to blacks and Hispanics; those making their decision prior to the last month; Christians relative to the non-religious; and the non-religious relative to Muslims and Jews. Even controlling for Iraq and Bush approval, voting propensities differ by 6–7 percent for liberals and conservatives compared to moderates and by 18–19 percent for Republicans and Democrats compared to others. The voting difference between those who strongly approve and strongly disapprove of Iraq policy is comparable to that between Republicans and Democrats, with much smaller but still significant discrepancies between those who feel strongly and less strongly one way or the other. The huge effects of Bush disapproval, even compared to those for political party and Iraq approval (and while controlling for those factors), reiterate the importance of job performance rating as a determinant of the vote and thus a control for unobserved heterogeneity. Results that contradict those predicted by the summary statistics include males and residents of mid-sized cities being more likely to vote for Bush than females and residents of large cities, respectively.

Column 4 of Appendix A mimics column 3, except that the right hand side *excludes* the two financial situation indicators that are the focus of the analysis. We do this to highlight the effect on voting of family income, the only factor for which coefficients are notably different in columns 3 and 4. In column 3, when financial situation change is held constant, the voting outcome is unrelated to family income. None of the income indicators are significant at 10 percent, and the F-statistic for their joint significance is 0.81 ($p = 0.58$). However, with the financial situation indicators excluded in column 4, family income becomes an important voting determinant. Voting for Bush is more likely by nearly three percent among respondents with family incomes of $50,000–149,000 and six percent among those with incomes above $150,000,

and the set of income indicators is jointly significant with an F-statistic of 3.29 ($p = 0.002$). Thus, the conventional wisdom that economic status did not affect voting behavior is true but misleading: income level did not matter conditional on the change in status, which very much did. Column 4 is also misleading in the sense that column 3 shows it would be incorrect to conclude that voters made decisions based on the impact of policies that have income level-specific effects, i.e. higher income voters favoring Bush because of lower income tax rates.

Finally, table 2 shows results for alternative specifications (panels A.– B.) and samples (panels C.–P.). Columns 1–2 and 3–4 pertain to the specifications from columns 10 and 12, respectively, of table 1, with odd (even) numbered columns displaying estimates for becoming better (worse) off. Panel A. shows that weighting the data does not drive the results other than to produce smaller coefficients for financial improvement, even though Bush actually received fewer votes than did Kerry in the unweighted sample. In panel B., conclusions are unchanged when a probit model is used to account for the discrete nature of the dependent variable. However, probit marginal effects, evaluated at the explanatory variable means, are much larger than are those from OLS. This is a function of the dependent variable mean being very close to 0.5, so that small probit coefficient changes translate to large changes in probability, and provides another sense in which the OLS estimates that include the approval indicators are conservative. Panel C. indicates that removing the 825 respondents who voted for a candidate other than Bush or Kerry makes no difference to the analysis.

Panels D.–P. list economic voting effects for stratified samples. A theme that emerges is that doing better (worse) financially has little effect among voters that heavily (dis)favor Bush, in that effect sizes tend to be proportionate to the size of the group that might change its vote in response to economic situation changes. For example, in column 1 of panel P., the effect of

becoming better off is only 0.008 among those who approve of Bush, but this represents a sizable fraction, i.e. 10%, of the few in that group who did not vote for Bush. Overall, financial situation coefficients are always significant at the 5% level in columns 1 and 2, and are only occasionally insignificant at the 10% level in columns 3 and 4. In this latter specification that holds constant Bush approval, when one of the two financial situation coefficients is not significant at 5%, the other is always highly significant. This means that even controlling for Bush approval, economic voting effects persist even among groups that exhibit very strong or weak support for Bush.

V. Conclusion

Our analysis has found what we view as strong evidence of economic voting in the 2004 presidential election. Holding constant attitudes towards President Bush and his Iraq war policy as well as political party and philosophy, religious affiliation, family income, congressional district and several additional personal characteristics, becoming financially better off during Bush's first term raised the likelihood of voting for Bush by 3.5% while becoming worse off lowered that likelihood by 7.6%. Simply omitting the controls for opinions on Bush's job performance yields analogous effects of 9.6% and 17.2%, respectively. These results hold up even among voters who strongly supported or rejected Bush. Moreover, the harm to Bush from experiencing an economic decline was statistically larger than the benefit he enjoyed from an economic improvement. We conclude that in spite of conventional wisdom to the contrary, economic voting, particularly of the egocentric variety, was still quite important.

A limitation of our study is that if our strategy indeed provides, as we believe, a strong test for economic voting, it might inherently not provide the most precise point estimates. If becoming financially worse off prompted voters to both disapprove of Bush's job performance

and vote against Bush, or vice versa for becoming better off, then the effect of economic voting is partially absorbed by the coefficients on the Bush approval indicators. On the flip side, it is impossible to argue, without achieving an *R*-squared of unity, that our strategy eliminates the influence of all further potentially confounding factors. Although many factors work in our favor, including the reverse causation issue above, it is not totally inconceivable that a voting determinant we cannot observe is correlated with reported financial situation change.

One question begged by our results is the extent to which the egocentric economic voting we have uncovered reflects responses to changes in local or national economic conditions. As noted above, the invariance of the financial situation coefficients to the inclusion of congressional district indicators suggests that the effects captured by our analysis do not vary by localities. Our data, though merely cross sectional, allow for a more direct test of the impact that economic conditions have on voting. In particular, the percentage of state voters opting for Bush would seem to be a parsimonious proxy for state-level factors that might spuriously correlate state-level economic conditions and voting decisions. Preliminary results from DeSimone and LaFountain (2007) show that larger increases in the state unemployment rate during Bush's first term reduce the propensity to vote for Bush, and this effect is relatively robust to holding constant ecocentric economic voting of the type estimated here.

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Table 1: Economic voting effects (*n* = 58,740)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Financial situation	.305	.289	.288	.271	.269	.273	.257	.194	.120	.049	.026	.018
better than 4 years ago	(49.5)	(47.9)	(48.1)	(46.0)	(45.4)	(45.8)	(43.8)	(35.3)	(24.6)	(12.2)	(7.75)	(5.66)
Financial situation	–.324	–.294	–.294	–.290	–.290	–.293	–.282	–.235	–.161	–.088	–.044	–.039
worse than 4 years ago	(51.3)	(47.2)	(47.3)	(47.3)	(47.3)	(47.4)	(46.3)	(40.9)	(31.8)	(19.8)	(11.7)	(10.6)
Test of effect symmetry	2.91	0.26	0.23	3.16	4.11	3.62	6.15	19.9	26.8	33.7	11.1	15.3
	[.088]	[.613]	[.634]	[.076]	[.043]	[.057]	[.013]	[.000]	[.000]	[.000]	[.001]	[.000]
R-squared	.243	.292	.299	.338	.339	.341	.366	.467	.601	.716	.805	.813
Includes indicators for:												
Gender, age and race	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Urbanization	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Congressional district	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Decided in last month	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family income	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Religion	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Political philosophy	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Political party	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Iraq approval	No	No	No	No	No	No	No	No	No	Yes	No	Yes
Bush approval	No	No	No	No	No	No	No	No	No	No	Yes	Yes

Coefficients are from OLS regressions in which the dependent variable is an indicator of whether the respondent voted for Bush, and are relative to the omitted category "financial situation is about the same as four years ago." Parentheses contain absolute values of heteroskedasticity-adjusted *t* statistics. *F* statistics for the hypothesis that the two financial situation coefficients are equal in absolute value are shown for tests of effect symmetry, with *p*-values given in brackets. Row headings reflect sets of indicator variables as listed in Appendix A.

Table 2: Economic voting effects in alternative specifications and samples

	Bush approval included?	No		Yes	
	Financial situation is:	Better	Worse	Better	Worse
	Specification/sample	(1)	(2)	(3)	(4)
A.	Unweighted	.058	–.086	.024	–.038
	(*n* = 58,740; 49.0% voted for Bush)	(19.5)	(27.5)	(9.88)	(14.5)
B.	Probit marginal effects	.131	–.218	.065	–.148
	(*n* = 58,740; 51.1% voted for Bush)	(11.1)	(18.1)	(4.77)	(10.3)
C.	Voted for Bush or Kerry	.050	–.088	.019	–.038
	(*n* = 57,915; 51.6% voted for Bush)	(12.4)	(19.7)	(5.80)	(10.4)
D.	Female	.050	–.089	.021	–.040
	(*n* = 31,698; 49.0% voted for Bush)	(9.30)	(16.0)	(4.70)	(8.36)
	Male	.048	–.087	.014	–.040
	(*n* = 27,042; 53.4% voted for Bush)	(8.03)	(12.6)	(3.12)	(7.09)
E.	Age 18–24	.030	–.086	–.002	–.041
	(*n* = 6,423; 41.2% voted for Bush)	(2.26)	(7.27)	(0.15)	(4.34)
	Age 25–44	.066	–.078	.031	–.040
	(*n* = 24,041; 52.2% voted for Bush)	(10.3)	(10.5)	(5.90)	(6.17)
	Age 45–64	.045	–.094	.015	–.038
	(*n* = 22,309; 52.4% voted for Bush)	(7.00)	(13.7)	(3.27)	(6.79)
	Age 65+	.032	–.089	.012	–.041
	(*n* = 5,967; 51.2% voted for Bush)	(2.84)	(7.35)	(1.36)	(4.20)
F.	White	.044	–.100	.013	–.044
	(*n* = 47,606; 57.9% voted for Bush)	(10.8)	(19.3)	(4.00)	(10.5)
	Nonwhite	.073	–.055	.041	–.026
	(*n* = 11,134; 25.6% voted for Bush)	(5.81)	(6.26)	(3.96)	(3.42)
G.	City with population 50,000+	.052	–.067	.028	–.029
	(*n* = 16,940; 42.7% voted for Bush)	(6.74)	(8.87)	(4.42)	(4.56)
	Suburb	.055	–.084	.016	–.038
	(*n* = 21,583; 52.3% voted for Bush)	(8.68)	(11.8)	(3.19)	(6.74)
	Rural area or city with population < 50,000	.039	–.120	.013	–.052
	(*n* = 20,217; 58.9% voted for Bush)	(5.85)	(14.4)	(2.60)	(7.37)
H.	Northeast	.054	–.083	.021	–.035
	(*n* = 9,403; 43.4% voted for Bush)	(5.06)	(7.79)	(2.51)	(3.92)
	Midwest	.049	–.085	.015	–.036
	(*n* = 15,454; 51.1% voted for Bush)	(6.70)	(10.4)	(2.61)	(5.45)
	South	.048	–.102	.020	–.050
	(*n* = 19,014; 56.0% voted for Bush)	(7.75)	(14.1)	(4.00)	(8.13)
	West	.044	–.075	.014	–.032
	(*n* = 14,869; 49.7% voted for Bush)	(4.68)	(7.06)	(1.85)	(3.76)
I.	States that Bush won	.048	–.101	.021	–.050
	(*n* = 36,468; 56.7% voted for Bush)	(10.2)	(17.6)	(5.38)	(10.2)
	States that Kerry won	.051	–.075	.016	–.029
	(*n* = 22,272; 44.8% voted for Bush)	(7.54)	(11.1)	(2.93)	(5.24)

Table 2 (continued): Economic voting effects in alternative specifications and samples

	Bush approval included?	No		Yes	
	Financial situation is:	Better	Worse	Better	Worse
	Specification/sample	(1)	(2)	(3)	(4)
J.	Decided prior to last month	.036	–.075	.010	–.026
	(*n* = 46,633; 52.9% voted for Bush)	(9.32)	(16.6)	(3.30)	(7.21)
	Decided in last month	.102	–.122	.056	–.078
	(*n* = 12,107; 43.2% voted for Bush)	(8.01)	(10.2)	(5.04)	(7.48)
K.	Family income less than $30,000	.027	–.100	.002	–.052
	(*n* = 13,441; 40.6% voted for Bush)	(2.73)	(12.0)	(0.28)	(7.28)
	Family income $30,000–99,999	.056	–.093	.022	–.041
	(*n* = 35,047; 53.3% voted for Bush)	(11.0)	(15.8)	(5.37)	(8.45)
	Family income $100,000 or more	.045	–.055	.017	–.019
	(*n* = 10,252; 55.9% voted for Bush)	(5.25)	(4.81)	(2.59)	(2.16)
L.	Protestant or Catholic	.041	–.092	.011	–.036
	(*n* = 32,242; 57.5% voted for Bush)	(8.05)	(14.3)	(2.70)	(7.00)
	Other Christian	.059	–.112	.029	–.061
	(*n* = 14,738; 55.3% voted for Bush)	(7.91)	(12.2)	(4.51)	(7.62)
	Other religion	.075	–.040	.041	–.012
	(*n* = 5,301; 24.3% voted for Bush)	(4.81)	(3.93)	(3.56)	(1.40)
	No religion	.062	–.054	.031	–.029
	(*n* = 6,459; 28.4% voted for Bush)	(4.41)	(4.83)	(2.74)	(3.06)
M.	Liberal	.073	–.026	.037	–.014
	(*n* = 12,571; 13.8% voted for Bush)	(7.10)	(4.22)	(4.31)	(2.53)
	Moderate	.068	–.098	.026	–.040
	(*n* = 27,141; 44.0% voted for Bush)	(9.99)	(14.9)	(4.76)	(7.21)
	Conservative	.017	–.109	.006	–.054
	(*n* = 19,028; 83.3% voted for Bush)	(3.48)	(10.4)	(1.45)	(6.66)
N.	Republican	.013	–.095	.001	–.036
	(*n* = 21,039; 92.8% voted for Bush)	(3.14)	(8.49)	(0.18)	(3.88)
	Democrat	.081	–.050	.040	–.029
	(*n* = 21,996; 11.9% voted for Bush)	(8.52)	(9.86)	(5.11)	(6.68)
	Neither Democrat nor Republican	.070	–.096	.034	–.037
	(*n* = 15,705; 46.3% voted for Bush)	(7.83)	(10.5)	(4.71)	(5.06)
O.	Approve of Iraq war	.028	–.166	.006	–.079
	(*n* = 30,593; 86.4% voted for Bush)	(6.33)	(17.0)	(1.78)	(10.1)
	Disapprove of Iraq war	.063	–.036	.030	–.014
	(*n* = 28,147; 10.5% voted for Bush)	(7.79)	(8.01)	(4.46)	(3.57)
P.	Approve of Bush's handling of job	.008	–.083	.007	–.082
	(*n* = 30,119; 92.0% voted for Bush)	(2.17)	(9.36)	(1.83)	(9.27)
	Disapprove of Bush's handling of job	.025	–.018	.022	–.012
	(*n* = 28,621; 4.9% voted for Bush)	(3.66)	(5.15)	(3.38)	(3.37)

Regressions have the specifications (panels A and B) or include only the subsamples (panels C through P) indicated in the row heading. The models for columns 1–2 correspond to column 10 of table 1, while those for columns 3–4 correspond to column 12 of table 1. Parentheses contain absolute values of heteroskedasticity-adjusted *t* statistics.

Appendix A: Variable means and full model OLS estimates (*n* = 58,740)

Variable	Mean	Voted for Bush	OLS estimates: controls for financial situation change?	
			Yes	No
	(1)	(2)	(3)	(4)
Voted for Bush	.511			
Financial situation better than 4 years ago	.336	.804	.018 (5.7)	
Financial situation same as 4 years ago	.382	.499		
Financial situation worse than 4 years ago	.282	.175	–.039 (10.6)	
Female	.525	.490		
Male	.475	.534	–.013 (5.1)	–.013 (4.9)
Age 18–24	.100	.412		
Age 25–29	.087	.449	.003 (0.5)	.005 (0.8)
Age 30–39	.190	.530	.022 (4.1)	.022 (4.2)
Age 40–44	.117	.565	.026 (4.5)	.025 (4.3)
Age 45–49	.118	.530	.022 (3.8)	.019 (3.3)
Age 50–59	.190	.512	.029 (5.4)	.026 (4.8)
Age 60–64	.078	.544	.036 (5.6)	.033 (5.2)
Age 65–74	.081	.532	.032 (4.9)	.030 (4.6)
Age 75 and over	.040	.470	.021 (2.7)	.022 (2.8)
White	.787	.579		
Black	.109	.131	–.047 (8.0)	–.048 (8.1)
Hispanic	.069	.388	–.041 (5.7)	–.040 (5.7)
Asian	.016	.365	–.019 (1.3)	–.020 (1.3)
Other race	.020	.402	–.002 (0.2)	–.003 (0.3)
City with population over 500,000	.107	.341		
City with population 50,000–500,000	.195	.475	–.017 (1.8)	–.020 (2.1)
Suburb	.447	.523	.002 (0.3)	–.000 (0.0)
City with population 10,000–49,999	.085	.582	–.006 (0.6)	–.009 (0.9)
Rural area	.166	.592	–.002 (0.2)	–.004 (0.5)
Decided before last month	.811	.529		
Decided within last month	.189	.432	–.027 (6.0)	–.028 (6.1)
Family income less than $15,000	.075	.364		
Family income $15,000–29,999	.141	.428	.001 (0.2)	.004 (0.6)
Family income $30,000–49,999	.221	.502	.002 (0.4)	.008 (1.3)
Family income $50,000–74,999	.227	.551	.004 (0.7)	.013 (2.2)
Family income $75,000–99,999	.143	.552	.002 (0.4)	.014 (2.3)
Family income $100,000–149,999	.114	.540	–.000 (0.1)	.014 (2.1)
Family income $150,000–199,999	.040	.568	.012 (1.5)	.028 (3.4)
Family income $200,000 or more	.040	.604	.011 (1.4)	.029 (3.5)

Appendix A (continued): Variable means and full model OLS estimates (*n* = 58,740)

Variable	Mean	Voted for Bush	OLS estimates: controls for financial situation change? Yes	No
	(1)	(2)	(3)	(4)
Protestant	.319	.629	.013 (2.6)	.014 (2.6)
Catholic	.256	.508	.008 (1.5)	.008 (1.4)
Mormon	.020	.771	.036 (2.7)	.036 (2.7)
Other Christian	.214	.533	.020 (3.7)	.020 (3.7)
Jewish	.027	.211	–.018 (2.0)	–.018 (1.9)
Muslim	.006	.121	–.042 (2.2)	–.042 (2.2)
Other religion	.058	.269	–.003 (0.5)	–.003 (0.5)
No religion	.100	.284		
Liberal	.206	.138	–.030 (7.9)	–.029 (7.5)
Moderate	.456	.440		
Conservative	.338	.833	.035 (10.1)	.036 (10.4)
Democrat	.369	.119	–.096 (21.9)	–.098 (22.1)
Republican	.376	.928	.090 (19.5)	.092 (20.1)
Neither Democrat nor Republican	.255	.463		
Strongly approve war with Iraq	.294	.947		
Somewhat approve war with Iraq	.240	.762	–.029 (7.3)	–.032 (7.9)
Somewhat disapprove war with Iraq	.156	.232	–.151 (19.7)	–.156 (20.3)
Strongly disapprove war with Iraq	.310	.042	–.173 (21.9)	–.181 (22.7)
Strongly approve Bush performance	.325	.964		
Somewhat approve Bush performance	.205	.852	–.017 (3.6)	–.021 (4.6)
Somewhat disapprove Bush performance	.124	.154	–.535 (54.2)	–.546 (55.7)
Strongly disapprove Bush performance	.346	.012	–.606 (65.1)	–.623 (67.9)
Constant	1		.864 (72.8)	.865 (73.6)

All variables are binary indicators. Column 1 shows the proportion of respondents characterized by the row heading, column 2 shows the proportion characterized by the row heading that voted for Bush, and columns 3 and 4 show coefficients and absolute values of heteroskedasticity-adjusted *t* statistics (in parentheses) from OLS regression of whether the respondent voted for Bush on the variables listed and congressional district fixed effects, with financial situation indicators excluded from the column 4 specification. All parameters in the table were calculated using sample weights.