Economic Voting in U.S. Presidential Elections: Who Blames Whom for What*

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Abstract

In United States presidential elections, the incumbent party's fortunes depend significantly on recent economic conditions, as numerous studies have shown. Many details of how economic voting takes place, however, are still not well understood. Here we present evidence on four issues. 1) Which is more important for determining people's votes, national or local economic conditions? 2) What time frame do people consider in economic voting? 3) Which demographic groups are most sensitive to the economy in their voting behavior? 4) How does economic voting depend on the political context—in particular, whether a candidate is running for re-election, and whether the incumbent party also controls Congress? Our study includes the first county-level analysis of economic voting in presidential elections. We find the answers to our four questions are: 1) national conditions, by far; 2) the most recent year; 3) blacks, females, and the non-elderly; and 4) no.

KEYWORDS: economic voting, president, presidential election

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"Next Tuesday is Election Day. Next Tuesday all of you will go to the polls, will stand there in the polling place and make a decision. I think when you make that decision, it might be well if you would ask yourself, are you better off than you were four years ago? Is it easier for you to go and buy things in the stores than it was four years ago? Is there more or less unemployment in the country than there was four years ago?"

—Ronald Reagan, Closing statement of presidential debate, October 28, 1980

I. INTRODUCTION

In United States presidential elections, the economy matters. The incumbent party's fortunes depend significantly on how the economy has performed recently. That statement has become a truism in American politics, and is indeed supported by a large research literature (see Lewis-Beck and Stegmaier, 2000, for a thorough review, or Fair, 1978, or Peltzman, 1990, for examples). The intent of much of the research is to produce forecasts of elections based on economic conditions and other factors. Many such forecasting models have been relatively sophisticated and successful in making predictions (e.g. Campbell, 1992), yet some details of how economic voting for president takes place are still not well understood.

Rather than attempt to construct an improved forecasting model, we focus narrowly on trying to further the understanding of four specific issues. 1) Which is more important for determining people's votes, national economic conditions or local economic conditions? 2) When people voted based on the economy, what time frame do they consider? 3) Which demographic groups show the most sensitivity to the economy in their voting behavior? 4) How does economic voting depend on the political context? In particular, is economic voting more pronounced when a candidate runs for re-election, and is it more pronounced when the incumbent party has also had control of Congress?

Understanding these issues better would clearly be useful for campaign strategists. From a broader societal perspective, the information could point to some potential welfare-enhancing interventions. For example, if people appear to be evaluating the economy in ways that are inconsistent with the actual ways that an incumbent party influences the economy (which are admittedly hard to determine), then society may benefit from activities to draw attention to more relevant information.

Related to the first issue, a recent finding is that national economic conditions are much more important than state level economic conditions in determining votes (Strumpf and Phillippe, 1999). Here we present what we believe is the first analysis of county level economic voting. We analyze data for the eight elections from 1972 to 2000. We would not necessarily expect county level conditions to be

relatively unimportant for presidential voting, as state conditions appear to be. Economic conditions at the county level may influence votes, independent of state or national conditions, because people may make their evaluations largely based on the conditions they see around them (e.g. local businesses' shutting down, friends' becoming unemployed, etc.) rather than on what they see in the state and national media. On the other hand, once the national economy is taken into account, voters may not blame or credit local conditions to federally elected officials such as the president. Indeed, our results suggest that for the period from 1972 to 2000, county economic conditions influence voting patterns only to a small extent, much less so than national conditions or even state conditions.

In his 1980 debate speech, Reagan encouraged voters to adopt a four-year time frame when considering changes in economic conditions. However, most previous work has not provided firm conclusions about what time frame voters actually consider. Most studies choose a relevant time frame a priori rather than attempt to compare different time possible time frames systematically. Some studies suggest that the economy during the most recent year or two of the incumbent party's term is most important (e.g. Strumpf and Phillippe, 1999; Campbell, 2001). Our analysis explores these issues by estimating specifications in which economic performance in each of the four years of an incumbent's term is allowed to have a different effect on voting patterns. The results suggest that the most recent year is most important at the national economy level (using data from 1932 to 2000), but at the county level each of the three most recent years are comparably important (data from 1972 to 2000). This difference may point to how people get their information about the economy on different geographic levels. For example they may acquire information on the national economy from recent media coverage, whereas their experiences over the last few years might shape their views of the local economy. This could also explain differences in the magnitude of the effects of national and local economic conditions. Media coverage of the national economy is likely to focus on the economic indicators we use in our analysis, while local experiences might be more loosely related to the objective local economic measures we use.

The third issue we consider is which demographic groups' voting behaviors are influenced most by economic conditions. Previous work offers some evidence on how demographic groups differ in the relationship between approval ratings and economic conditions (Winder, 1992). Little is known, however, about how demographic groups differ in terms of actual voting behavior in response to the economy. Our analysis is based on county level data from 1972 to 2000. The inclusion of county level and state-year fixed effects in the analysis allows us to eliminate a variety of possible unobserved confounding factors. We find that voting based on county income growth is more pronounced in counties with higher proportions of blacks, people under 65 years old, and females.

Finally, some previous work suggests that the political context influences the extent of economic voting in some ways but not others. Specifically, economic voting appears to be more pronounced for incumbent candidates than for incumbent parties with new candidates, but economic voting is not affected by whether the incumbent president's party is the same as the party that controls Congress (Nadeau and Lewis-Beck, 2001). Their analysis was based on a subjective economic variable for 1956-1996: individuals are asked "are business conditions better, the same, or worse than a year ago?" Our approach uses similar analysis, but based on objective economic measures (for the time span 1932-2000 at the national level, and 1972-2000 at the county level). We find no evidence that economic voting depends on whether an incumbent candidate is running, although our statistical power to detect a difference is limited. Finally, as in Nadeau and Lewis-Beck (2001), the match between the incumbent party and Congress does not appear to make a difference for economic voting.

The remainder of the paper is organized as follows. In Section II, we outline the empirical approach and describe the data. In Sections III, IV, V, and VI, we address the various pieces of "Who Blames Whom for What." These four sections correspond to the four issues described above, in the same order. In Section VII we conclude.

II. Empirical Approach and Data

In the tradition of the existing body of literature, we analyze economic voting by focusing on variants of the following basic regression equation:

$$Dem_{rt} = \alpha + \beta g_{rt} I_t + \delta I_t + \varepsilon_{rt} \quad (1)$$

The variable *r* represents the geographic unit of analysis, which is either the nation or an individual county, in year *t*. *Dem* is the share of votes for the Democratic candidate divided by the sum of the shares for the Democrat and the Republican, i.e. the "two-party share." The variable *g* refers to economic performance, measured in a variety of ways we discuss in detail below. The dummy variable *I* denotes the party affiliation of the incumbent president; it equals 1 if the incumbent is a Democrat and -1 if Republican. Note that this framework imposes the assumption that economic conditions affect Democrats and Republicans symmetrically. We forego a more flexible specification because the statistical power to detect economic voting is already limited in this basic approach, as the standard errors in the results indicate.

Each of the regressions throughout our analysis is an extension of the basic equation above. In the county level analyses, for which we have data from 1972-2000 only, the basic equation we estimate is

$$Dem_{rt} = \alpha + \beta g_{rt} I_t + \delta I_t + \phi C_r + \gamma S_{rt} + \varepsilon_{rt} \quad (2)$$

C_r is a vector of dummy variables for each county. The second vector, S_{rt}, includes variables for a given state in a given year. Typically these are dummy variables for each state-year combination. These state-year dummies are included only in regressions that include county level economic variables alone (without state or national economic variables). In models with state or national economic variables—when we do not include the state-year fixed effects— S_{rt} is simply two variables indicating whether the county is in the home state of a presidential or vice presidential candidate (equal to 1 if Democratic, -1 if Republican). The net impact of including the county and state-year fixed effects variables is to estimate economic voting from the observations in which voting or economic performance in a given county-year deviates from that which would be expected in that county on average and in that state-year on average. This approach eliminates potential confounding factors. For example, the county fixed effects account for the possibility that counties that generally perform well economically may have a persistent tendency to favor one of the parties. The state-year dummies allow us to focus on the impact of county level economic conditions independently from that of higher-level economic conditions (state or national). Finally, for every county level regression we report robust standard errors clustered by county because each county-year dyad may not represent a truly independent observation.

Table 1 displays some of the data used for national level analysis. The data correspond to each of the 18 elections from 1932 through 2000. At the county level, a similar list of variables (not shown in Table 1) is employed for the eight elections from 1972 to 2000. Note that fewer economic variables are available at the county level; per capita income is available for 1969-2000, and unemployment rates are available for 1990-2000.

Data are collected from a variety of sources. All voting data are taken from a website database maintained privately by David Leip (www.uselectionatlas.org). Mr. Leip has built this database largely from primary sources, which are typically original publications produced by official election agencies in each state. Economic data derive from government sources, as follows. Real income and real disposable income is constructed using personal income, personal disposable income, and the Consumer Price Index data from the Bureau of Economic Analysis, and is measured on a per capita basis using Census population data. Unemployment data are from various Bureau of Labor Statistics publications and databases. Dow Jones Industrial Average values are from Dow Jones and Company. Political context information, such as the match between the incumbent's party and Congressional control, are constructed using information widely available in almanacs among other places.

Table 1: National Data, Selected Variables, 1932-2000 Elections

				National Economic Performance of the Election Year				
Year	Democrat	Republican	Democrat's Two-Party Vote Share	Real Per Capita Disposable Income Growth (%)	Real Per Capita Income Growth (%)	Unemployment Rate Change	Dow Jones Growth (%)	White House-Congress Party Match
1932	Roosevelt	Hoover	0.59	-15.7	-16.0	7.7	-14.6	-2
1936	Roosevelt	Landon	0.62	11.3	11.4	-3.2	23.0	2
1940	Roosevelt	Willkie	0.55	5.8	5.9	-2.6	-13.3	2
1944	Roosevelt	Dewey	0.54	6.4	6.0	-0.7	10.2	2
1948	Truman	Dewey	0.52	1.3	0.0	-0.1	-9.4	0
1952	Stevenson	Eisenhower	0.45	1.6	2.9	-0.3	6.4	1
1956	Stevenson	Eisenhower	0.42	3.4	3.9	-0.3	0.8	-1
1960	Kennedy	Nixon	0.50	0.4	0.9	0.0	-10.9	0
1964	Johnson	Goldwater	0.61	5.9	4.4	-0.5	13.1	2
1968	Humphrey	Nixon	0.50	3.3	4.4	-0.2	0.1	2
1972	McGovern	Nixon	0.38	3.9	5.3	-0.3	11.0	0
1976	Carter	Ford	0.51	3.0	3.7	-0.8	11.4	0
1980	Carter	Reagan	0.45	-2.7	-2.8	1.3	1.3	2
1984	Mondale	Reagan	0.41	6.1	5.6	-2.1	-7.7	-1
1988	Dukakis	GHW Bush	0.46	3.2	2.6	-0.7	7.4	0
1992	Clinton	GHW Bush	0.51	1.8	1.5	0.7	1.1	0
1996	Clinton	Dole	0.55	0.5	1.4	-0.2	22.4	0
2000	Gore	GW Bush	0.50	2.8	3.3	-0.2	-9.2	0

III. LOCAL VERSUS NATIONAL ECONOMIC VOTING

We first consider whether voting decisions depend more on national, state, or county level economic conditions. Why might the local level economy determine presidential votes independently from the national economy? One reason is that people may intentionally hold the incumbent party accountable for the local economy, perhaps because they perceive the party's policies to affect certain industries that are important in their area. Second, people may intend to hold the incumbent party accountable only for the national economy but determine their evaluation of the national economy partly based on local conditions, including their own.

Focusing on national conditions is perhaps most logical from the perspective of a voter, because the incumbent presidential administration presumably influences the economy mostly on that scale, to the extent that it influences it at all. Previous work supports the idea that the national economy is an important determinant of the incumbent party's election success. Some results, however, support the idea that people also factor in their state's economic experience, although much less so than national conditions (Strumpf and Phillippe, 1999). To our knowledge, the only previous study related to the impact of sub-state level economic conditions on presidential voting patterns is a cross-sectional study of the relationship between MSA-level economic indicators and people's assessments of economic performance under George W. Bush (Books and Prysby, 1999). Here we conduct a longitudinal analysis of county level data using actual economic conditions and actual voting behavior.

We note that the dichotomy of local versus national economic voting is related, but not the same, as that of "pocketbook" versus "sociotropic" voting. Researchers have long debated whether individuals focus on their own economic conditions in "pocketbook" (or "egocentric") voting as some argue (Campbell et al., 1960, Kramer, 1971, 1983), or whether they focus on national economic factors and vote "sociotropically" (or "altruistically"), as others purport (Kinder and Kiewiet, 1979, 1981). Recent work suggests that both mechanisms are probably important (Nadeau and Lewis-Beck, 2001, and Markus, 1988). These estimates of pocketbook voting may be biased by the subjectivity of the individual economic measures, however. The individual economic measures are based on responses in the National Elections Studies to a question about whether one is better off, worse off, or the same financially compared to one year ago. Respondents' attitudes towards the incumbent administration may influence how they answer this question. We do not directly assess pocketbook voting, but we might expect that strong pocketbook voting effects would show up in county level economic voting effects.

Table 2a presents results from regressions using a range of economic variables, at the national, state, and county levels. The first four regressions use changes in real income while the second group of four uses the unemployment level.[1] For both income and unemployment, we report results using four different time frames, representing the most current year, or the two, three, or four year (geometric) averages.

The results in Table 2a show that economic voting based on per capita income growth is greatest at the level of the national economy, smaller but still substantial at the state level, and even smaller (but not trivial) at the county level. For example, the magnitudes can be interpreted as follows, focusing on two-year economic growth rates (second column in Table 2a). A one percent increase in *national* income growth corresponds to a 1.6 percentage point increase in county vote share for the incumbent party, a one percent increase in *state* income growth corresponds to a 1.1 percentage point increase in vote share, and a one percent increase in *county* income growth corresponds to a 0.08 percentage point increase in vote share.[2]

Voting based on changes in unemployment rates, on the other hand, appears to be significant only for national level unemployment. This national level effect, however, is large: for example, each one-point increase in the one-year change in unemployment rate predicts a 9.2 percentage point decline in incumbent vote share (column 5). The results for unemployment rates also indicate a small county-level effect in the unexpected direction. The rest of our findings in this paper do not confirm this counterintuitive result.

Table 2b focuses attention solely on *county* level economic voting by controlling for state and national level economic conditions through state-year fixed effects (one dummy variable for each state-year combination) and county fixed effects, as in equation 2 above. Again, the results indicate a small amount of county level economic voting based on income growth. Although the most recent year of unemployment is marginally significant and positive as before, the effect is about one-fourth the size of that in reported in Table 2, and the two-year effect is insignificant.

Based on the results in Tables 2a and 2b, we conclude that county level economic conditions are relatively small factors compared to state or national conditions in presidential elections. Even if a county experiences two-year income

[1] While in the income regressions we include the main effect of the incumbent party dummy, we omit it from the unemployment regressions because we only have four years of data for two elections (1996 and 2000), both with Democratic incumbents. We leave out the dummy from the specifications using only one and two years of unemployment for consistency. Including it does not meaningfully change the reported coefficients.

[2] Throughout the paper our terminology follows the standard distinction between "percent" and "percentage point." For example, an increase from 50 percent to 51 percent in vote share would be called a one *percentage point* increase, or alternatively a two *percent* increase.

Table 2a: Which Matters Most--National, State, or County Economic Conditions?

	Real per Capita Income Growth (%) 1972-2000 Elections				Unemployment Rate Change 1992-2000 Elections		Unemployment Rate Change 1996-2000 Elections	
	Past Year	Past 2 Years	Past 3 Years	Past 4 Years	Past Year	Past 2 Years	Past 3 Years	Past 4 Years
Incumbent Party	-0.0234	-0.0325	-0.0428	-0.0285				
	[0.0058]***	[0.0056]***	[0.0063]***	[0.0083]***				
National Econ * Incumbent	0.0065	0.0163	0.0178	0.0046	-0.092	-0.0472	-0.1311	-0.1136
	[0.0027]**	[0.0038]***	[0.0048]***	[0.0053]	[0.0174]***	[0.0077]***	[0.0072]***	[0.0059]***
State Econ * Incumbent	0.0077	0.0114	0.0137	0.0076	0.0034	0.0077	-0.0045	-0.0021
	[0.0015]***	[0.0028]***	[0.0038]***	[0.0053]	[0.0103]	[0.0076]	[0.0046]	[0.0030]
County Econ * Incumbent	0.0003	0.0008	0.0027	0.0026	0.0035	0.003	-0.0001	0.0002
	[0.0002]	[0.0004]**	[0.0006]***	[0.0008]***	[0.0013]***	[0.0009]***	[0.0005]	[0.0005]
Home State, Pres. Candidate	0.0975	0.0966	0.0921	0.0883	0.0514	0.0494	0.0531	0.0525
	[0.0351]***	[0.0313]***	[0.0301]***	[0.0305]***	[0.0300]*	[0.0273]*	[0.0030]***	[0.0032]***
Home State, VP Candidate	0.0278	0.0259	0.0298	0.0319	0.0287	0.0274	0.0286	0.0265
	[0.0234]	[0.0214]	[0.0212]	[0.0243]	[0.0325]	[0.0286]	[0.0068]***	[0.0062]***
Observations	24,422	24,421	24,420	21,368	9,324	9,324	6,216	6,216
R-squared	0.65	0.713	0.704	0.696	0.874	0.888	0.973	0.972

Each regression includes county and state*year fixed effects

Robust standard errors (clustered by county) in brackets

* p< .10 ** p < .05 *** p < .01

Table 2b: Focus On County Level Economic Voting (Using State*Year Fixed Effects)

	Real per Capita Income Growth (%) 1972-2000 Elections				Unemployment Rate Change 1992-2000 Elections		Unemployment Rate Change 1996-2000 Elections	
	Past Year	Past 2 Years	Past 3 Years	Past 4 Years	Past Year	Past 2 Years	Past 3 Years	Past 4 Years
Incumbent	0.0887 [0.0004]***	0.0751 [0.0009]***	0.037 [0.0006]***	-0.0237 [0.0001]***				
County Econ * Incumbent	0.0001 [0.0001]	0.0006 [0.0002]***	0.0014 [0.0003]***	0.0013 [0.0003]***	0.0009 [0.0005]*	0.0002 [0.0004]	0.0001 [0.0004]	0.0004 [0.0004]
Observations	24,422	24,421	24,420	21,368	9,324	9,324	6,216	6,216
R-squared	0.924	0.924	0.925	0.926	0.969	0.969	0.982	0.982

Each regression includes county and state*year fixed
Robust standard errors (clustered by county) in
* p< .10 ** p < .05 *** p < .01

growth 10 percentage points below the expected level, the incumbent party is only predicted to experience a 0.6-0.8 percentage point decrease in its two-party vote share. Additional non-linear specifications (available on request) confirm that even counties experiencing remarkably tough economic times (e.g. in the bottom one percentile of county economic performance) do not appear to punish the incumbent party significantly at the polls.

Evidently, voters believe the president has little effect on their local economy, and they do not form their evaluation of the national economy based on surrounding conditions. This finding suggests that people form their opinions of the national economy based on non-local factors, such as the national media.

IV. TIME FRAME FOR ECONOMIC VOTING

In this section we consider the time frame that voters use when considering economic performance. We address this issue by examining each of the four years in a presidential term separately. Because we are examining four economic measures simultaneously with a relatively small number of elections in the sample, the analysis has limited power, but should be informative nevertheless.

Table 3a presents results from national regressions that include each of the previous four years of economic data separately.[3] In terms of equation 1 above, g is a vector with four economic variables, one for each year of the presidential term. Consistent with previous studies, the results show that the most recent year is most important for national level economic voting. Only the most recent year of economic performance significantly determines the incumbent party's vote share. Below the regression results we report the "long-run propensity" indicating the size and significance of the economic variable over the four years (Wooldridge, 2003). Comparing these results supports the view that the most recent year explains a vast majority of the impact of economic performance.

The county-level results in Table 3b present a different pattern. Voters appear to consider each of the three most recent years' income growths about equally. The results for unemployment are insignificant as before. The fourth year back (the first year of the presidency) has a significant effect in the opposite direction. This may result from voters' using that initial year to set a standard by which later years are judged. Alternatively, it could be that voters ascribe that year at least in part to the prior administration.

Why would voters implicitly take a longer-range view when considering local, as opposed to national, conditions? One explanation is that voters draw their information related to the national economy largely from media reports, which

[3] Note that these regressions only include 17 elections (1936-2000) because the necessary data are not all available for the 1932 election.

Table 3a: Time Frame for National Level Economic Voting (1936-2000)

	Real Per Capita Disposable Income Growth (%)	Real Per Capita Income Growth (%)	Real Per Capita GDP Growth (%)	Unemployment Rate Change	Dow Jones Growth (%)
Incumbent Party	-0.0043	-0.0072	-0.0032	0.0194	0.0225
	[0.0167]	[0.0206]	[0.0209]	[0.0148]	[0.0212]
Econ * Incumbent					
Past Year	0.0138	0.0138	0.0103	-0.0324	0.002
	[0.0047]**	[0.0053]**	[0.0043]**	[0.0123]**	[0.0017]
2nd Year Back	0.0007	0.0001	0.0028	0.0021	0.0002
	[0.0036]	[0.0042]	[0.0045]	[0.0114]	[0.0014]
3rd Year Back	-0.0013	-0.0023	-0.0015	-0.0034	0.0008
	[0.0027]	[0.0030]	[0.0028]	[0.0063]	[0.0008]
4th Year Back	-0.0024	-0.0007	-0.0021	0.0029	0.0002
	[0.0030]	[0.0038]	[0.0037]	[0.0088]	[0.0006]
Observations	17	17	17	17	17
R-squared	0.595	0.506	0.428	0.39	0.452
4-Year Propensity	0.0107	0.0109	0.0095	-0.0309	0.0032
	[0.0042]**	[0.0051]*	[0.0048]*	[0.0167]*	[0.0019]

Standard errors in brackets
* p< .10 ** p < .05 *** p < .01

typically focus on the most recent indicators, whereas they draw their information about the local economy more from personal observation. The information people process from media reports may be more subject to "recency bias" than that from personal observation.

Overall, the results suggest some potentially troubling patterns on the national level. Specifically, incumbent parties appear not to be held responsible for the initial three years of national economic performance under their watch, whereas they are highly accountable for the year prior to the election. Such voting behavior provides incumbents and their parties with incentives to focus on short-term election-year stimulation at the expense of the three years following the election, as outlined in the well-known concept of a political business cycle (Nordhaus, 1975, MacRae, 1977). Interventions to redirect the focus of voters to the longer time frame may be welfare enhancing for society. Such interventions might be informed by further investigation of why voters appear to take a longer view of local economic conditions.

Table 3b: Time Frame for County Level Economic Voting

	Real per Capita Income Growth (%) 1972-2000 Elections	Unemployment Rate Change 1992-2000 Elections
Incumbent Party	0.0176	
	[0.0002]***	
Econ * Incumbent		
Past Year	0.0003	0.0011
	[0.0001]**	[0.0009]
2nd Year Back	0.0003	0.0006
	[0.0002]*	[0.0006]
3rd Year Back	0.0004	-0.0012
	[0.0001]***	[0.0010]
4th Year Back	-0.0003	0.0007
	[0.0001]***	[0.0008]
Observations	21,368	6,216
R-squared	0.927	0.982
4-Year Propensity	0.0007	0.0012
	[0.0003]**	[0.0017]

Each regression includes county and state*year fixed effects
Robust standard errors (clustered by county) in brackets
* p< .10 ** p < .05 *** p < .01

V. ECONOMIC VOTING BY DEMOGRAPHIC GROUP

We next analyze how the voting response to economic conditions varies by race, age, and sex. Economic voting may vary by demographic group for a variety of social, economic, or cultural reasons. For example, on average, elderly people may be less concerned about worsening unemployment conditions than younger people, or females may be more concerned about the economy because they are more likely than males to be the heads of single-parent households. Our regression equation is

$$Dem_{rt} = \alpha + \beta_1 g_{rt} I_t + \beta_2 g_{rt} I_t D_{rt} + \delta I_t + \phi C_r + \gamma S_{rt} + \varepsilon_{rt} \quad (3)$$

which is identical to equation 2 with the addition of a demographic mix variable *D* for county *r* in election year *t* interacted with the incumbent party-economic variable interaction. We estimate these regressions first using county economic performance (Table 4a) and second using national economic performance (Table 4b). In the specifications with county economic variables we include all four years' of economic data separately because the results in Table 3b suggest each

year is important. For the specifications with national economic variables, we restrict our analysis to only the most recent year of economic performance because previous findings (including ours in Table 3a) suggest this is the timeframe relevant to voters.

The results show whether counties with higher or lower proportions of certain demographic groups are more responsive to changes in the economy, thereby providing some evidence regarding the characteristics of the marginal economic voter. These differentials are identified by estimated coefficients β_2 in equation 3. Our specific demographic measures are the proportion of the county population that is black, the proportion over age 65, and the proportion of adults (ages 18 and over) that are male.

The county level regressions in Table 4a show that counties with higher proportions of black residents have greater changes in voting behavior as a result of county income. Counties with higher proportions over 65 years old, on the other hand, show less response. The results give some evidence that counties with greater proportions of adults who are male vote less based on income three and four years prior to the election, but in the most recent two years and over the course of the time in office (as shown by the four year propensity) the effects are insignificant. The results for county-level unemployment suggest that counties with greater proportion over 65 are less responsive to unemployment in the most recent year but more responsive to unemployment three years before the election. However, the four-year propensities do not suggest that voting in response to unemployment varies by the age of the population or either of the other demographic characteristics we consider.

In Table 4b we report responsiveness to national economic conditions by county demographic characteristics. As in Table 4a, the results indicate that counties with higher proportions of black residents have greater responses to national income. For example, results in the first column imply that a 0.10 increase in the county's black population proportion increases the magnitude of the voting response to national income by 0.00168 in absolute terms, which translates to an 8.2 percent relative increase in economic voting[4]. Similarly, a 0.10 increase in the proportion over 65 years old translates to an 8.4 percent relative *decrease* in voting based on income and a 6 percent decrease in voting in response to unemployment. A 0.10 increase in the proportion of males translates to relative decreases of 12.1 percent in response to income, 8.5 percent in response to unemployment, and 23.3 percent in response to changes in the Dow. Thus all three of these demographic characteristics play a role in determining the extent that the incumbent party's share of the county's votes varies with national economic conditions.

[4] 0.10 * 0.0168 = 0.00168; 0.00168 / 0.0205 = 8.2 percent.

Table 4a: County Economic Voting by Demographic Group

	Real per Capita Income Growth (%) 1972-2000 Elections			Unemployment Rate Change 1992-2000 Elections		
	Black	Over 65	Male	Black	Over 65	Male
Incumbent Party	0.0835	-0.0214	0.0176			
	[0.0010]***	[0.0007]***	[0.0003]***			
% Demographic Group	0.7091	0.1213	-0.2373	0.3947	0.0344	-0.1901
	[0.0468]***	[0.0676]*	[0.0545]***	[0.0535]***	[0.0730]	[0.0405]***
Econ * Incumbent						
Past Year	0.0002	0.0012	0.0014	0.0013	-0.0053	-0.0065
	[0.0001]	[0.0003]***	[0.0014]	[0.0013]	[0.0031]*	[0.0088]
2nd Year Back	0.0003	0.0009	-0.0022	0.0005	0.0019	0.0176
	[0.0002]*	[0.0005]*	[0.0018]	[0.0008]	[0.0031]	[0.0108]
3rd Year Back	0.0004	0.0019	0.0028	-0.0008	0.0075	0.0021
	[0.0001]***	[0.0005]***	[0.0014]**	[0.0013]	[0.0041]*	[0.0102]
4th Year Back	-0.0005	0.0003	0.0029	0.0009	0.0052	-0.0051
	[0.0001]***	[0.0002]	[0.0014]**	[0.0009]	[0.0047]	[0.0093]
Econ * Incumbent * % Demographic Group						
Past Year	0.0021	-0.0042	-0.0022	-0.0011	0.0295	0.0157
	[0.0009]**	[0.0013]***	[0.0029]	[0.0037]	[0.0147]**	[0.0188]
2nd Year Back	-0.0008	-0.0029	0.0051	0.0002	-0.0068	-0.0354
	[0.0010]	[0.0018]	[0.0038]	[0.0023]	[0.0147]	[0.0228]
3rd Year Back	0.0006	-0.007	-0.0048	-0.0017	-0.0422	-0.0069
	[0.0010]	[0.0021]***	[0.0027]*	[0.0032]	[0.0187]**	[0.0215]
4th Year Back	0.0038	-0.0034	-0.0065	-0.0004	-0.0223	0.0118
	[0.0012]***	[0.0012]***	[0.0028]**	[0.0043]	[0.0211]	[0.0190]
Observations	21,363	21,363	21,363	6,216	6,216	6,216
R-squared	0.931	0.927	0.927	0.982	0.982	0.982
4 year Propensities						
Econ * Incumbent	0.0004	0.0044	0.0049	0.0018	0.0094	0.0081
	[0.0003]	[0.0010]***	[0.0037]	[0.0021]	[0.0073]	[0.0175]
Econ * Incumbent*	0.0056	-0.0175	-0.0084	-0.0031	-0.0418	-0.0148
% Demographic Group	[0.0027]**	[0.0045]***	[0.0075]	[0.0060]	[0.0340]	[0.0373]

Each regression includes county and state*year fixed effects
Robust standard errors (clustered by county) in brackets
* p< .10 ** p < .05 *** p < .01

Several different explanations exist for these results by demographic characteristic. First, cyclical changes in economic conditions affect demographic groups differently. For example, those over 65 are less likely to be affected by changes in wages or employment, because they are less likely to be in the

workforce.[5] Also, some previous research suggests that employment, earnings, and incomes of non-whites and low-skilled women are disproportionately affected by changing economic conditions (e.g. Hoynes, 1999). For women who head single-parent households, wage earnings may be especially important to their family's welfare, and yet they may have a more tenuous attachment to the labor force, on average.

A second potential explanation is that demographics are related to the size of the group that does not have strong affiliations with one party. That is, the set of marginal voters may be smaller for some demographic groups than others. For example, party affiliations may be more firmly established for older voters, and therefore older voters are less responsive to economic conditions.

A third important factor to consider is the role of voter turnout. While previous research has found few average differences in turnout across race, once other factors such as income and education are taken into account, economic conditions may have different effects on different groups' turnout rates (see Tate, 1991 for example). Our data do not allow us to examine this possibility.

A fourth possibility is the level of "political sophistication" among these various demographic groups. Gomez and Wilson (2001) apply attribution theory to economic voting and find support for their hypothesis that voters with low sophistication hold the president and his party highly accountable for national economic factors but not their own economic well-being because they blame themselves for that. Those with high sophistication, however, assign more moderate blame to presidents and their parties based on a balance of both national and personal economic conditions. If this type of sophistication varies across demographic groups, we would observe differences in county responsiveness.

Some previous literature has looked at the relationship between approval ratings and economic conditions across a number of demographic characteristics including race, sex, age, and income (Winder, 1992). Other research has focused solely on differences between men and women, using subjective economic evaluations to find that women appear to be more likely to vote sociotropically while men are more likely to engage in pocketbook voting and that women hold systematically more negative views of the national economy (Welch and Hibbing, 1992, Chaney Alvarez, and Nagler, 1998). Here we present the first work to our knowledge that examines economic voting longitudinally based on actual voting behavior and objective measures of economic conditions.

Overall the results in this section provide evidence that the voting decisions of blacks, females, and those under 65 are more sensitive to changes in economic

[5] We did not include any measures of incumbents' (or their opponents') effects on the generosity of benefits programs, which should directly impact the economic wellbeing of those over 65. At the national level, these would include changes such as ending the tax on social security income or extension of Medicare benefits to cover prescription drugs.

Table 4b: National Economic Voting by Demographic Group (1972-2000 Elections)

Election Year:	Real Per Capita Income Growth (%)			Unemployment Rate Change			Dow Jones Growth (%)		
	Black	Over 65	Male	Black	Over 65	Male	Black	Over 65	Male
Incumbent Party	-0.0082	-0.0097	-0.0111	0.014	0.0169	0.0214	0.0841	0.0861	0.0837
	[0.0003]***	[0.0005]***	[0.0001]***	[0.0011]***	[0.0001]***	[0.0005]***	[0.0004]***	[0.0007]***	[0.0004]***
% Demographic Group	0.5428	0.0541	-0.1767	0.5526	0.0799	-0.1759	0.5551	0.0924	-0.1996
	[0.0441]***	[0.0510]	[0.0507]***	[0.0506]***	[0.0513]	[0.0481]***	[0.0511]***	[0.0530]*	[0.0528]***
Econ * Incumbent	0.0205	0.0258	0.0518	-0.0473	-0.0574	-0.1278	-0.0015	-0.0019	0.0042
	[0.0002]***	[0.0014]***	[0.0051]***	[0.0014]***	[0.0032]***	[0.0168]***	[0.0000]***	[0.0003]***	[0.0012]***
Econ * Incumbent *	0.0168	-0.0217	-0.0628	-0.0146	0.0366	0.1092	0.0029	0.0016	-0.0098
% Demographic Group	[0.0038]***	[0.0073]***	[0.0108]***	[0.0124]	[0.0184]**	[0.0341]***	[0.0011]***	[0.0016]	[0.0025]***
Observations	24,854	24,854	24,854	24,854	24,854	24,854	24,854	24,854	24,854
R-squared	0.929	0.925	0.925	0.927	0.924	0.924	0.928	0.924	0.925

Each regression includes county and state*year fixed effects
Robust standard errors (clustered by county) in brackets
* p< .10 ** p < .05 *** p < .01

conditions, suggesting that individuals with these demographic characteristics are more likely to be marginal economic voters in US presidential elections. Future research should consider the sources of the differences, such as the role of economic factors on voter turnout by race.

VI. Political Context and Economic Voting

Finally, we consider how the political context affects voting responses to economic conditions. Specifically, we examine whether voters tend to hold incumbent *candidates* as opposed to *parties* responsible, and whether economic voting is magnified when the incumbent party also controls Congress, as is the case in 2004.

Most previous research has not considered the incumbent candidate separately from the incumbent party. However, from the voter's perspective, past economic performance may be a better predictor of future performance for a given candidate, rather than simply the candidate's party. As a result, we might expect voters to hold incumbent candidates more accountable than incumbent parties.

In addition, if a single party controls both Congress and the White House, voters may be more likely to hold that party accountable on a general level. Alternatively, voters may think the president has greater control over the economy if he works with a like-minded Congress. Both mechanisms suggest that economic voting should be greater when a single party controls both the executive and legislative branches.

Previous work on economic voting according to political context was described briefly in Section I (Nadeau and Lewis-Beck, 2001). Our analysis extends this work most notably in two ways. First, we use objective economic data, and second, we use a longitudinal sample. Both of these features may help address possible biases in the estimated effects.

We report national results in Table 5a. These regressions include dummy variables for an incumbent party, an incumbent candidate[6], and their interactions with the most recent year of a given economic performance measure. The disposable income regression (column 1) suggests that voters hold incumbent parties responsible, and do not confer additional accountability on incumbent candidates. The lack of statistically significant coefficients in the other regressions underscores the limited power to address this issue. At the least, the

[6] The incumbent candidate variable is defined similar to the incumbent party variable. The incumbent candidate variable equals –1 if an incumbent Republican is running, 1 if an incumbent Democrat is running, and 0 otherwise. Three exceptions are when a vice president assumed office midterm, in which case the variable was defined as .5 for Democrats (1948 and 1964) and -.5 for Republicans (1976).

Table 5a: Whom Do We Blame, the Incumbent Party or Candidate?

	National Economic Performance of the Election Year				
(1932-2000 Elections)	Real Per Capita Disposable Income Growth (%)	Real Per Capita Income Growth (%)	Real Per Capita GDP Growth (%)	Unemployment Rate Change	Dow Jones Growth (%)
Incumbent Party	-0.0519	-0.0077	-0.0103	-0.005	0.0018
	[0.0338]	[0.0432]	[0.0364]	[0.0315]	[0.0275]
Incumbent Candidate	0.0729	0.0296	0.0263	0.0466	0.026
	[0.0358]*	[0.0459]	[0.0393]	[0.0345]	[0.0356]
Econ * Incumbent Party	0.0233	0.0042	0.0064	-0.0283	0.0003
	[0.0126]*	[0.0142]	[0.0135]	[0.0796]	[0.0030]
Econ * Incumbent Candidate	-0.0144	0.0047	0.0026	0.0079	0.0019
	[0.0127]	[0.0143]	[0.0138]	[0.0803]	[0.0034]
Observations	18	18	18	18	18
Adjusted R-squared	0.69	0.618	0.549	0.547	0.177

Standard errors in brackets
* p< .10 ** p < .05 *** p < .01

evidence shows that there is no drastic difference in economic voting when an incumbent candidate is running.

To attempt to obtain more precise estimates, in Table 5b we report the analogous regressions at the county level, focusing on economic performance in the past year. These results again show no significant differences between incumbent candidates and parties, perhaps as a result of the restricted number of elections for which county level economic data are available. Results are similar when we look at economic performance going further back than the past year (available on request).

We also examine whether economic voting is amplified when the incumbent party controls both Congress and the White House. The specification of these national regressions is a variation of equation 1:

$$Dem_{rt} = \alpha + \beta_1 g_{rt} I_t + \beta_2 g_{rt} I_t M_t + \delta I_t + \varepsilon_{rt} \quad (4)$$

where *M* is a variable indicating the party match between congressional control and the Presidency. Because we use only the most recent year of economic performance, we also define the match variable on the basis of the most recent (two year) Congressional session. The match variable ranges from -2 to 2, and is calculated as the number of chambers (House, Senate) that match the presidential

Table 5b: Whom Do We Blame? County Level Analysis

	County Economic Performance of the Election Year	
	Real per Capita Income Growth (%) (1972-2000 Elections)	Unemployment Rate Change (1992-2000 Elections)
Incumbent Party	0.0287	
	[0.0011]***	
Incumbent Candidate	-0.053	0.0174
	[0.0011]***	[0.0001]***
Econ * Incumbent Party	0.0005	0.0014
	[0.0004]	[0.0012]
Econ * Incumbent Candidate	-0.0005	-0.0006
	[0.0004]	[0.0013]
Observations	24,422	9,324
R-squared	0.924	0.969

Each regression includes county and state*year fixed effects
Robust standard errors (clustered by county) in brackets
* p< .10 ** p < .05 *** p < .01

party multiplied by the presidential party dummy (1 for Democrat, -1 for Republican).

Contrary to our hypothesis, the results in Table 6 indicate that voters do not hold incumbent parties more responsible when the party also controls Congress. In unreported results we perform this same analysis with county level income and unemployment, again finding no significant effect of Congressional control.

The political context does not appear to have a strong impact on economic voting in the two ways examined here. The evidence suggests that incumbent candidates are not held more responsible than incumbent parties, and incumbent parties are not held more responsible when they also control Congress. Due to the small sample size at the national level, however, we cannot confidently rule out small political context effects.

VII. CONCLUSIONS

The focus of our work is to understand certain marginal effects rather than to provide overall predictions for elections. Thus, we leave the predictions for the 2004 race to other experts[7], and provide some less ambitious thoughts on how our

[7] For example, Ray Fair's model currently predicts a landslide victory for Bush (http://fairmodel.econ.yale.edu/vote2004/index2.htm). As another example, James Campbell has noted a strong correlation between second quarter (of election year) real GDP growth rates above 2.5 percent and incumbent party victories (Campbell, 2001). Second quarter growth for 2004 should be known in August.

Table 6: Is Economic Voting Heightened by Incumbent/Congress Match? (1932-2000)

	National Economic Performance of the Election Year				
	Real Per Capita Disposable Income Growth (%)	Real Per Capita Income Growth (%)	Real Per Capita GDP Growth (%)	Unemployment Rate Change	Dow Jones Growth (%)
Incumbent Party	0.001	-0.0006	-0.0011	0.0156	0.0187
	[0.0161]	[0.0176]	[0.0186]	[0.0174]	[0.0230]
Match of incumbent and Congress	-0.0016	0.0023	0.002	0.006	0.0051
	[0.0153]	[0.0165]	[0.0180]	[0.0163]	[0.0211]
Econ * Incumbent	0.0099	0.0093	0.0094	-0.0241	0.0026
	[0.0021]***	[0.0022]***	[0.0024]***	[0.0067]***	[0.0015]
Econ * Incumbent * Match	0.0013	0.0009	0.0006	-0.0032	-0.0003
	[0.0014]	[0.0015]	[0.0017]	[0.0040]	[0.0012]
Observations	18	18	18	18	18
R-squared	0.701	0.649	0.618	0.611	0.342

Standard errors in brackets
* p< .10 ** p < .05 *** p < .01

results might apply to the 2004 election. Our results suggest that Bush should not be counted out in counties or states that have been hit hardest by the recent recession. Local economic conditions have a very small impact relative to national conditions. Second, overall the economy may benefit Bush as much as it hurts him. The most important economic factor appears to be national performance in the most recent year, and these indicators in 2004 to this point are favorable. Third, to the extent that the economy is an issue in the election, it may be most salient for black, female, and non-elderly people. Fourth, that Bush is an incumbent candidate and that the Republicans control Congress should not necessarily heighten the degree to which the economy plays a role in this election.

The results of our study suggest a variety of potentially interesting areas for future research. For example, does the relative unimportance of county level economic conditions suggest that individual economic conditions are also unimportant? A large-scale study using objective individual economic variables—as opposed to subjective individual assessments that may be confounded by feelings towards the incumbent party that are unrelated to the economy—has yet to be done. Also, why do areas with higher proportions of females, blacks, or non-elderly exhibit more sensitive economic voting? Although economic voting is a well-researched topic, these questions and others remain unanswered.

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