

# Electoral Victory and Statistical Defeat? Economics, Politics, and the 2004 Presidential Election

William Nordhaus

*Yale University, New Haven, CT*

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## ABSTRACT

The 2004 election has been interpreted as a resounding victory for conservative values. Was it in fact a mandate? The present analysis examines recent electoral outcomes and the 2004 election with particular reference to economic and political fundamentals. It compares the results of the 2004 election with predictions using voting models. Additionally, it identifies the trends for different socioeconomic groups. It concludes that the Republican incumbent candidate in 2004 did significantly worse than would be predicted based on economic and political variables such as incumbency and economic performance.

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The 2004 election has been interpreted as a resounding victory for Republicans and conservative values.<sup>1</sup> Despairing Democrats are weighing their strategies and considering whether to redesign themselves after the victors. Shortly after the election, President George W. Bush declared his mandate, “[T]here is a feeling that the people have spoken and embraced your point of view, and that’s what I intend to tell the Congress. . . . I earned capital in the campaign, political capital, and now I intend to spend it.”<sup>2</sup>

Was it in fact a mandate? Election results are deceptive because of their winner-take-all nature. Close margins in elections get magnified into alleged mandates and sweeping judgements. What in fact was the voters’ verdict in the 2004 elections? How well did

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<sup>1</sup> A preliminary version of this study appeared in William Nordhaus, “The Profile of An Election, 2004: Outcomes and Fundamentals,” *The Economists’ Voice* 2(2), 2005, Article 3. The author is grateful to Ray Fair, the editors, and two referees for helpful comments.

<sup>2</sup> Press conference, November 4, 2004, available at <http://www.whitehouse.gov/news/releases/2004/11/20041104-5.html>.

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Supplementary electronic data for this article is available at  
<[http://dx.doi.org/10.1561/100.00000014\\_supp.zip](http://dx.doi.org/10.1561/100.00000014_supp.zip)>

*MS submitted 1 August 2005; final version received 3 March 2006*

ISSN 1554-0626; DOI 10.561/100.00000014

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the victors and losers actually perform? How large was the balance in the President's political piggy bank?

The present analysis examines the electoral outcome with particular reference to economic and political fundamentals. By "fundamentals" is meant key variables affecting political attitudes, including economic growth, inflation, peace and war, incumbency, and political positions of major parties. The first section examines the incumbent performance in the 2004 election by historical standards. It concludes that the Republican incumbent did significantly worse than would be predicted based on economic and political fundamentals. The second section then disaggregates the analysis by looking at the performance by demographic group using exit polls since 1972. It shows that the poor performance of the incumbent in 2004 was pervasive across demographic groups. Full documentation with data, statistical programs, and regression files are available at [http://www.econ.yale.edu/~nordhaus/homepage/elec\\_qjps.htm](http://www.econ.yale.edu/~nordhaus/homepage/elec_qjps.htm).

## THE 2004 ELECTION USING AGGREGATE ELECTION EQUATIONS

### Baseline Equations and 2004 Outcome

While conservatives have claimed that the 2004 election was a victory for Republican and conservative values, in fact the election was very close by historical standards. We can examine Bush's performance using "voting equations" that estimate vote shares of different parties relative to underlying economic and political fundamentals.

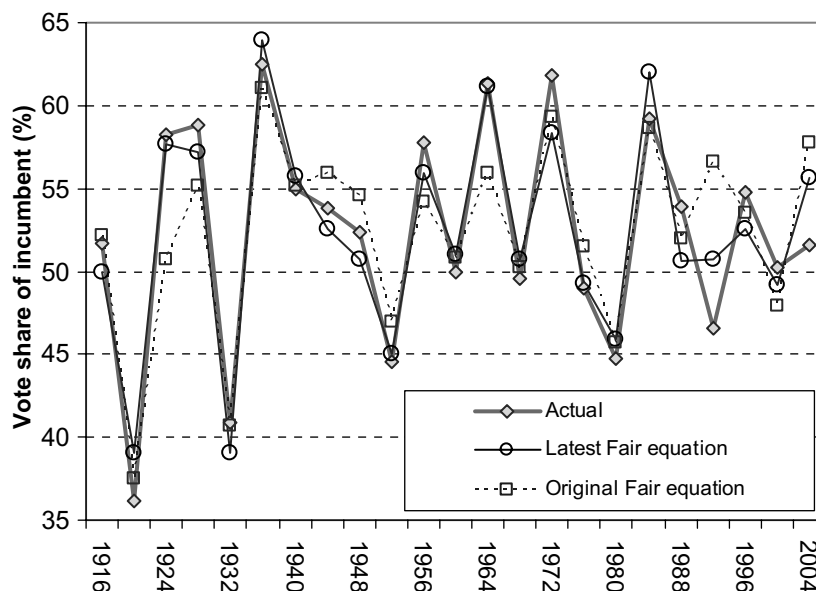
In choosing a baseline voting equation, it is desirable that the equation have a long track record, that the variables be limited to fundamental variables and exclude approval or voter sentiments, and that the equation has objectively measured variables. As I discuss later in this section, few equations meet these tests. The most useful example is that of Ray C. Fair.<sup>3</sup> Fair's approach is to use history as a guide to predict the share of the incumbent in the two-party total, basing his prediction on fundamentals such as the performance of the economy, party,<sup>4</sup> and incumbency.<sup>4</sup> This model has

<sup>3</sup> The germinal empirical study in this area is Gerald H. Kramer, "Short-Term Fluctuations in U.S. Voting Behavior, 1896–1964," *The American Political Science Review* 65 (March 1971), 131–43; Fair's original estimates are in Ray C. Fair, "The Effect of Economic Events on Votes for President," *The Review of Economics and Statistics*, (May 1978), 159–73. A full discussion of Fair's estimates with the most recent estimates can be found at <http://fairmodel.econ.yale.edu/vote2004/index2.htm>.

<sup>4</sup> Fair's latest pre-2004 equation, with coefficients (and standard errors of coefficients in parentheses) is:

$$\begin{aligned} \text{VOTE} = & 0.69 (0.10) \text{GROWTH} - 0.78 (0.29) \text{INFLATION} + 0.84 (0.27) \\ & \text{GOODNEWS} + 3.25 (1.30) \text{PERSON} - 3.63 (1.19) \text{DURATION} - 2.71 (0.58) \\ & \text{PARTY} + 3.85 (2.63) \text{WAR} + 49.6 (2.74) \text{constant.} \end{aligned}$$

The definitions of the variables is as follows: VOTE = Incumbent share of the two-party presidential vote; PARTY = 1 if there is a Democratic incumbent at the time of the election and -1 if there is a Republican incumbent; PERSON = 1 if the incumbent is running for election and 0 otherwise; DURATION = 0 if the incumbent party has been in power for one term; 1 if the incumbent party



**Figure 1.** Incumbent share of Presidential vote, actual and predicted from Fair's original and latest election equations, 1916–2004. This figure shows the track record of the original (1978) and the latest (pre-2004-election) Fair Presidential vote equation. By either standard, the incumbent margin in 2004 was surprisingly small. (These estimates use a sample period of 1916–2004.)

been used continuously since 1978, although the specification has evolved over the last three decades.

Figure 1 shows both the predictions from latest Fair equation (the light solid line with circles), the original Fair specification (the dashed line with squares), and the actual outcomes (the heavy lines with diamonds). Fair's current voting equation forecast that President Bush would win the 2004 election by a large margin of 15.4 percentage points of the two-party vote. According to Fair's analysis, Bush's large forecast margin was based on the fact of his incumbency (worth 6.4 percentage points), the fact that he was a

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has been in power for two consecutive terms, 1.25 if the incumbent party has been in power for three consecutive terms, 1.50 for four consecutive terms; WAR = 1 for the elections of 1920, 1944, and 1948 and 0 otherwise; GROWTH = growth rate of real per capita GDP in the first three quarters of the election year (annual rate); INFLATION = absolute value of the growth rate of the GDP deflator in the first 15 quarters of the administration (annual rate) except for 1920, 1944, and 1948, where the values are zero; GOODNEWS = number of quarters in the first 15 quarters of the administration in which the growth rate of real per capita GDP is greater than 3.2% at an annual rate except for 1920, 1944, and 1948, where the values are zero.

Republican (worth 5.4 percentage points), and the fact that in 2004 America had better than average economic growth and inflation (worth 3.4 percentage points).

In fact, Bush won by the narrow margin of 3.2 percentage points, or 12.2 percentage points less than the historical margin that would be predicted by Fair's current equation. Not only was this a large underperformance; it was the largest forecast error in the entire sample period.

### Alternative Specifications

There is a small industry of researchers who have produced statistical election forecasts over the last three decades. What is the verdict of other statistical estimates?

One family of alternatives comes from the literature on election forecasting widely used in the political-science literature. In October 2004, for example, Campbell reviewed seven forecasts of the 2004 election by leading political scientists, and he found that the median forecast margin for 2004 was 7.6 percentage points.<sup>5</sup> These forecasts suggest a smaller error in 2004 than the Fair equation. The problem with these forecasts for our purpose is that they all contain approval or other attitudinal variables.<sup>6</sup> While useful for predictions, equations with approval or attitudinal variables cannot be used as structural estimates of the impact of economic and political fundamentals.

The reason equations with attitudinal variables cannot be used for our purposes is that approval depends upon economic and political fundamentals such as incumbency, economic conditions, and party in power. From a statistical point of view, therefore, attitudinal variables are correlated with included fundamental variables (such as output growth) and thus lead to biased estimates. To illustrate, suppose that approval is a function of both fundamental variables and unobserved "charisma" variables, and further suppose for expositional purposes that approval perfectly predicts election outcomes. In this case, statistical estimates including both approval and fundamentals would (incorrectly) lead to the conclusion that fundamentals were unimportant in election outcomes.

In looking for alternatives, there are three sets of candidates to use for comparison: the Hibbs "bread and peace model," employment variants to output growth, and rolling regressions and alternative specifications of the Fair model. I examine each of these briefly.

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<sup>5</sup> James E. Campbell, "Introduction – The 2004 Presidential Election Forecasts," *PSOnline*, October 2004.

<sup>6</sup> To cite some prominent examples, the following are among the approval variables in the equations used in the analyses: Lockerbie used consumer sentiment (Brad Lockerbie, "A Look to the Future: Forecasting the 2004 Presidential Election," *PSOnline*, www.apsanet.org, October 2004, XXXVII(4); Norpoth used primary votes, indicating approval among that population (Helmut Norpoth, "From Primary to General Election: A Forecast of the Presidential Vote," *ibid.*); Wlezien and Erikson included approval ratings (Christopher Wlezien and Robert S. Erikson, "The Fundamentals, the Polls, and the Presidential Vote," *ibid.*); Lewis-Beck and Tien used approval ratings (Michael S. Lewis-Beck and Charles Tien, "Jobs and the Job of President: A Forecast for 2004," *ibid.*); Abramowitz used approval ratings (Alan I. Abramowitz, "When Good Forecasts Go Bad: The Time-for-Change Model and the 2004 Presidential Election," *ibid.*).

One of the few empirical studies of voting equations based entirely on fundamentals is Douglas Hibbs's "bread and peace" model.<sup>7</sup> His approach combines an economic variable ("bread" being the recent growth in real disposable income) with a war variable (the cumulative number of American military personnel killed-in-action in Korea and Vietnam during the presidential terms preceding the 1952 and 1968 elections). The "bread and peace" model has larger errors than the Fair approach for most election years back to 1952. However, the forecast error for the incumbent margin for 2004 was only 4 percentage points and therefore much smaller than Fair's equation.<sup>8</sup>

Hibbs's model is a serious alternative to Fair's approach for interpreting the poor incumbent performance in 2004. According to Hibbs's approach, most of the poor incumbent performance is due to the economy, with a modest contribution due to the war in Iraq. While this is a reasonable alternative, it has three shortcomings. First, his forecasts have a shorter track record and a shorter sample period than the Fair equation. Second, the peace variable is somewhat arbitrary as it is not scaled to the population and would probably include non-linearities. Third, it seems unlikely that the variable would survive employment during and before World War II, when casualties were an order of magnitude higher and political attitudes were different.<sup>9</sup> A state-by-state analysis of casualties and voting patterns by Karol and Miguel estimated that the Iraq war subtracted between 3 and 4 percentage points from Bush's margin, compared to an estimate of around 1.3 percentage points using Hibbs's equation.<sup>10</sup>

A second alternative specification reflects the poor performance of employment growth during the 2001–2004 period that was emphasized by the Democratic candidate. We can substitute 12-month employment growth for real GDP growth for the 1948–2004 subperiod and use the balance of the variables in the standard Fair specification. The out-of-sample forecast for 2004 is virtually identical to that of output.

A third alternative is motivated by the revisions in the specification of the Fair equation since its original publication (1978). To test for the possibility of data mining, I have run four alternative sets of estimates. These involve two alternative forecasting approaches and two different specifications. The forecasting alternatives are: (A) use rolling regressions and forecast the last year of the sample period; (B) use rolling regressions and forecast the first year of the out-of-sample forecast. In addition, I have used two different specifications of the model and have extended the sample period back to 1880. (1) The first alternative is Fair's original 1978 specification without the time trend; it therefore

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<sup>7</sup> Douglas A. Hibbs, Jr, "Bread and Peace Voting in U.S. Presidential Elections," *Public Choice*, 104: 149–180, 2000. His updates can be found at <http://www.douglas-hibbs.com/>. Another approach which uses only fundamentals is Alfred G. Cuzán and Charles M. Bundrick, "Deconstructing the 2004 Presidential Election Forecasts: The Fiscal Model and the Campbell Collection Compared," *PSOnline*, April 2005. This is a variant of the Fair equation and uses many of the Fair equation variables. It has too short a track record to be used for our purposes.

<sup>8</sup> See <http://www.douglas-hibbs.com/>.

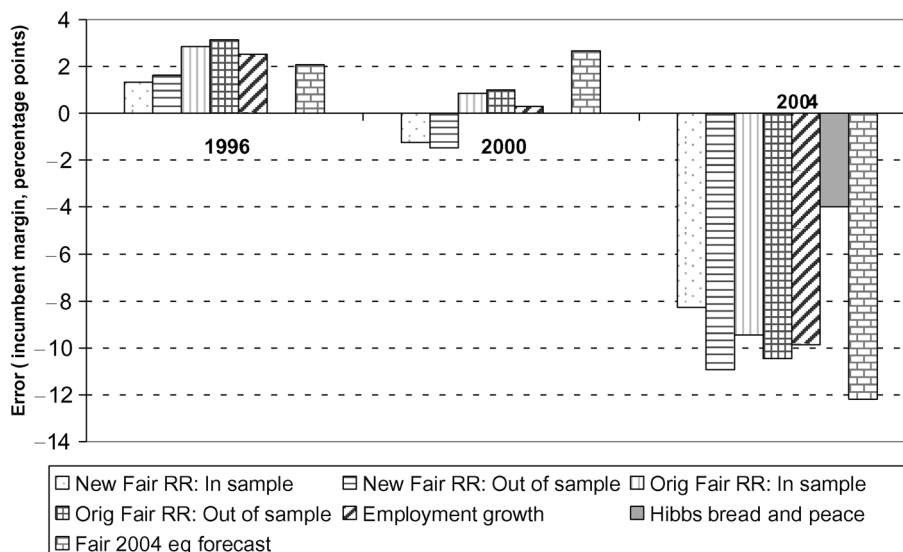
<sup>9</sup> An attempt to extend Hibbs's equation back to 1916 found that the "peace" variable became insignificant.

<sup>10</sup> David Karol and Edward Miguel, "Iraq War Casualties and the 2004 U.S. Presidential Election," August 2005, presented at the annual meetings of the American Economic Association, January 2006.

includes incumbency, party, growth in real output, and inflation. (2) The second alternative is Fair's current specification as of 2004 (incumbency, party, growth in real output, inflation, a "good times" variable, a "duration" variable, and a "war" dummy).

The specifications are straightforward, but the use of rolling regressions requires some elaboration. For each of these, I estimated the equation through a given year (from 1880 through, say, 1980). I then forecast the last year of the sample (this being the in-sample forecast for 1980); and the first year of the out-of-sample period (this being 1984 for this example). For all estimates, I use the current (2005) economic data on economic growth and inflation. Hence, the rolling regressions represent the latest in-sample and first out-of-sample forecasts of elections as of the time of the election.

Figure 2 shows the forecast errors for the margin of the incumbent party (Democratic, Democratic, Republican) for the elections of 1996, 2000, and 2004. These estimates indicate that the 2004 election was indeed a large outlier for all alternative specifications.



**Figure 2.** Prediction errors for alternative specifications. This figure shows the prediction errors for the margin of the incumbent party for seven different specifications. The "RR" specifications are rolling regressions in which the equation is estimated from 1880 through year  $T$  and then forecast for year  $T$  ("in sample") or for year  $T + 4$  ("out of sample"). The two alternative specifications are the original Fair specification for 1978 ("Original Fair") and the latest specification ("New Fair"). The "employment growth" specification substitutes 12-month employment growth for growth in per-capita GDP growth. The Hibbs bread and peace model is described in the text. The "Fair 2004 eq forecast" is Fair's last pre-election forecast. (These estimates use a sample period starting in 1880 to provide sufficient observations for the rolling regression.)

However, the error is smaller for the rolling regressions than for Fair's pre-2004-election prediction. The forecast errors of the four rolling regressions for 2004 are between 8.1 and 11.4 percentage points (instead of the current Fair equation's 12.2 percentage points). If I had to choose the estimates that represented the most consistent and parsimonious pre-election specification, it would be (B)(1): the rolling out-of-sample forecasts using the original specification. For this specification, the forecast error is 11.4 percent points in 2004. This figure also shows the 2004 Hibbs forecast, which has a smaller prediction error of the incumbent margin than the other specifications.

In summary, there are clearly many potential variants to the Fair equation. Most of those in the intellectual market place include attitudinal variables and therefore are not useful for evaluating Bush's performance relative to the economic and political fundamentals. Alternative specifications I have examined result in large forecast errors in 2004, although most are smaller than those in Fair's pre-election prediction. The verdict seems clear that the Republican election margin in 2004 was significantly smaller than the historical baseline for incumbent Republican Presidents running with a healthy economy.

#### FURTHER EVIDENCE FROM EXIT POLLS

Aggregate results such as those examined in the previous section hide the details for different groups in the population. We can dig further into the 2004 election results by examining exit polls, which are available for most groups for elections since 1972. What were the strengths and weaknesses of the candidates in 2004 for different demographic groups relative to historical trends?<sup>11</sup>

The ideal data to examine these questions would be a panel of exit-poll voters over different elections. Unfortunately, these do not exist except for very small groups. As a substitute, I look instead at quasi-panels formed by aggregating demographic groups over different elections. More specifically, I selected 30 demographic groups for all elections since 1972.<sup>12</sup> The data are available from the author's website.<sup>13</sup> I excluded those groups

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<sup>11</sup> There is a substantial literature examining trends among major demographical groups. For example, Jeff Manza and Clem Brooks, *Social Cleavages and Political Change*, Oxford, UK: Oxford University Press, 1999 has an extensive analysis of trends for different groups using the National Election Survey (NES) over the period 1952–1992. The NES is attractive because of its consistency in survey design but has a smaller sample than exit polls (3,000 for the periods studied by Manza and Brooks as compared to around 200,000 for the 2004 election exit polls).

<sup>12</sup> The data come from [www.newyorktimes.com/weekinreview/07conn.html](http://www.newyorktimes.com/weekinreview/07conn.html). The page is <http://www.nytimes.com/2004/11/07/weekinreview/07conn.html>. The data are unfortunately no longer made available gratis on the site. The source is described as follows: "This portrait of the 2004 electorate emerges from interviews with 13,600 voters conducted by Edison Media Research and Mitofsky International for the National Election Pool, a consortium of ABC News, The Associated Press, CBS News, CNN, Fox News and NBC News." Exit polls have many flaws, such as the voluntary nature of the responses. They are a unique source of data for matching actual voters to social, economic, and demographic data.

<sup>13</sup> See item three at [http://www.econ.yale.edu/~nordhaus/homepage/elec\\_qjps.htm](http://www.econ.yale.edu/~nordhaus/homepage/elec_qjps.htm).

with self-designated party or ideological identifications because these labels are hard to separate from voting preferences and actual votes. Note as well that these are overlapping groups, including, for example, both women and suburban women.

We can use the exit polls to determine how the overall incumbent weakness in 2004 was reflected across different demographic groups. This question is complicated because the factors affecting groups may differ across time and elections, and the panel is too short to undertake extensive experimental data analysis. The approach here is to examine two different voting equations for individual groups for the 1972–2004 period. I first list the equations and define the variables. I then explain each equation.

The estimated equations are the following

$$(Inc_{j,t} - Noninc_{j,t}) = c_j + \alpha_j Party_t + \varepsilon_{j,t}^{(1)} \quad (1)$$

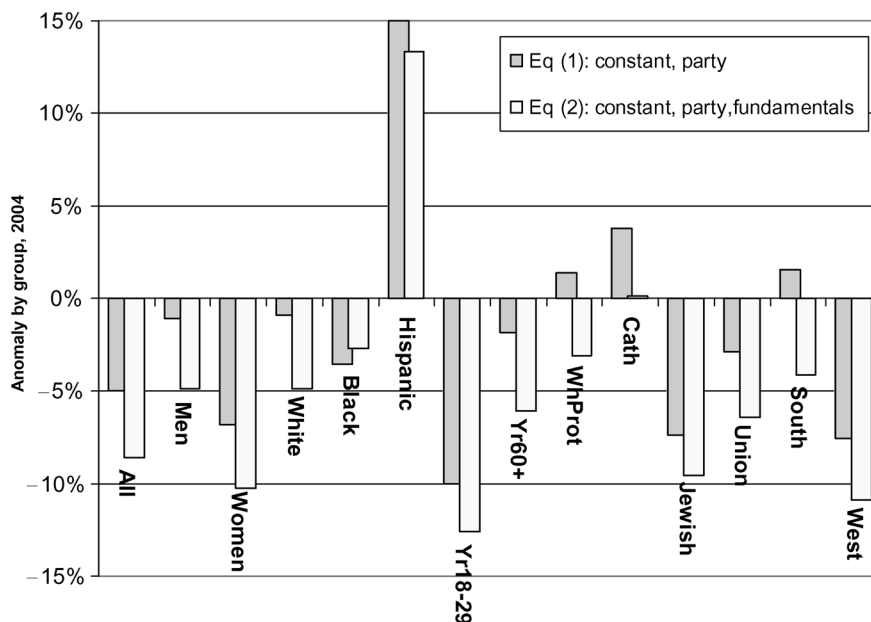
$$(Inc_{j,t} - Noninc_{j,t}) = c_j + \alpha_j Party_t + \beta_j Fund_t + \gamma Party_t^* Fund_t + \varepsilon_{j,t}^{(2)} \quad (2)$$

The variables are as follows:  $(Inc_{j,t} - Noninc_{j,t})$  is the vote margin of the incumbent party relative to the non-incumbent party by demographic group  $j$  in year  $t$ ;  $Party_t$  is a variable that depends upon the incumbent party; and  $Fund_t$  is an estimate of the aggregate vote going to the incumbent according to the original Fair equation described in the first section.<sup>14</sup> Other variables are:  $c_j$  is a group effect;  $\alpha_j$  and  $\beta_j$  are regression coefficients that depend upon demographic group  $j$ ;  $\gamma$  is a single regression coefficient; and  $\varepsilon_{j,t}^{(k)}$  is the regression residual for demographic group  $j$  in year  $t$  for equation  $k = 1$  or 2. The deviation of a group's voting in 2004 relative to its voting patterns predicted by the equation is called its "anomaly." The anomalies examined here are equal to the 2004 residuals,  $\varepsilon_{j,2004}^{(k)}$ , that is, the difference between the actual and predicted margin.

Some intuition on each equation is as follows. Equation 1 asks how different groups voted in 2004 relative to their average voting behavior over the 1972–2004 period. This equation allows only for party preferences for each demographic group.

Equation 2 adds economic and political fundamentals to Equation 1. In other words, it asks how different groups voted relative to their average when taking into account political and economic fundamentals as measured by the Fair equation's prediction of the overall vote margin. This equation allows fundamentals to enter differently for different groups and includes an interaction term that is constant across groups. A hypothetical example may help explain Equation 2. Suppose that higher economic growth in a particular year added an estimated 2 percentage points to the incumbent margin for the aggregate. Suppose that the group has 1½ times the average sensitivity to fundamentals (its  $\beta_j = 1.5$ ). Then the equation calculates voting margins after taking into account that the incumbent is predicted to get an extra three-point margin in that year for that group.

<sup>14</sup> Specifically, the fundamental variable in Equation 2 is defined as  $Fund_t = 0.49 + 0.0085G_t - 0.0043 Pi_t + 0.049 Incum_t - 0.020 Dem_t$ , where  $G_t$  = rate of growth of real per capita GDP,  $Pi_t$  = CPI inflation,  $Incum_t$  = incumbent person running for President,  $Dem_t$  = 1 if incumbent is Democratic and 0 if incumbent is Republican.



**Figure 3.** Difference between the incumbent margin and predicted incumbent margin for different groups, 2004. The bars show the anomaly or regression error for 13 demographic subgroups for 2004 and two different specifications. The two bars show the anomalies for Equations 1 and 2 in the text. The largest anomaly was for Hispanic voters, which had residuals of 15 and 13 percentage points for 2004. Each group has nine observations, representing all elections from 1972 to 2004. Key to non-obvious demographic groups is in footnote 14.

Figure 3 shows the anomalies of a subset of the demographic groups for the two equations for 2004.<sup>15</sup> First, examine the results for Equation 1, which are anomalies without fundamentals. As shown in the figure, most of the anomalies for these two equations are negative, indicating that the incumbent had a lower vote share than average. The major positive anomaly is for Hispanic voters, indicating a sharp trend and incumbent-vote swing in 2004. The negative anomalies were large for women, young, Jewish, and Western voters.

Next, examine the results for Equation 2, which adds economic and political fundamentals. This equation takes into account that the incumbent party had several positive factors in its favor in 2004 as discussed above. The results here are that the anomalies are more negative, reflecting the impacts of incumbency, a favorable economy, and party.

<sup>15</sup> Non-obvious categories are “Yr18-29” is voters between 18 and 29 years of age; “Yr60+” = voters 60 years and older; “WhProt” = white Protestants; “Cath” = Catholic voters; “Jewish” = Jewish voters; “Union” = union members; “South” and “West” are voters voting in those regions.

The negative impact of fundamentals holds for all demographic groups except black voters. The graph and the regression analyses show that blacks are the only major demographic group whose voting patterns are virtually unaffected by political and economic fundamentals. It is also interesting to note that two groups who are usually thought to be safely tucked into the Republican fold, white Protestants and whites in the South, are actually more sensitive to fundamentals than the average.<sup>16</sup>

The major result of the analysis of the individual demographic groups is that the negative errors for the election of 2004 are spread broadly among the population. With the exception of the Hispanic subgroup (which shows a strong positive Republican trend and anomaly) and the Catholic subgroup (with a small anomaly), there were small to medium-sized negative anomalies for most demographic groups. Examining the residuals from Equation 2, 26 of 30 groups had negative anomalies in 2004. The median anomaly across the groups was  $-6.6$  percentage points. It appears, then, that the small margin of the Republican incumbent in 2004 was not concentrated in a small part of the population but was broadly spread among the different groups.

## CONCLUSION

The major conclusion of the present analysis is that the margin of the incumbent President in 2004 was small by historical standards. To put this point in context, the vote margin of the last 10 incumbents who ran for office without facing the unfavorable winds of a recession was 15 percentage points of the two-party vote. The margin of the last four non-recession Republican incumbents was 19 percentage points. The smallest margin of *any* prior non-recession incumbent since World War I was 4.7 percentage points. By contrast, the Bush margin of 3.2 percentage points is small.

The results are robust to alternative specifications with one exception. A Hibbs-type “bread and peace” specification, including only growth and a war variable, has a negative error margin in 2004 but one that is smaller than that for the other equations. Finally, an examination of the election results by demographic groups indicates that the 2004 anomaly was widely spread among the population.

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<sup>16</sup> This can be seen in the coefficients of the incumbent margin on fundamentals in Equation 2. The coefficient of blacks is  $-0.16$ ; the coefficient of whites in the south is 1.42; and the coefficients of white Protestants is 1.32. By construction, the coefficient of all voters is 1.00.