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No Access The Effects of Economic Policies on Votes for the Presidency: Some Evidence from Recent Elections

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THE EFFECTS OF ECONOMIC POLICIES ON VOTES FOR THE PRESIDENCY: SOME EVIDENCE FROM RECENT ELECTIONS*

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Three strands of thought and conjecture contribute to the belief that economic conditions play an important, and perhaps decisive role in elections. Recent theories of rational voting behavior—Buchanan and Tullock1 or Riker and Ordeshook2 are examples—treat votes and voting as the outcome of a rational calculation of marginal costs and benefits. Prosperity, rising real income and increased employment may, in this framework, yield benefits to the individual that can be translated into votes for the party or candidate. Related, yet distinct, is the growing body of conjectures about a “political business cycle.” High employment and low inflation in election years are followed by anti-inflation policies that temporarily lower employment and the rate of inflation in succeeding years. These policies work gradually and are replaced by policies to stimulate the economy, so the candidate or party can boast of prosperity and lower inflation at the next election. The conjecture arises also from casual and impressionistic evidence and from some studies of voting. Perhaps the most widely cited recent example is the Kennedy-Nixon election of 1960 when a small plurality and rising unemployment seemed to support the conjecture.

Econometric studies of voting behavior provide, at most, mixed support. Most of the evidence comes from time series studies of Congressional elections. Kramer, Stigler, and Arcelus and Meltzer used different methods and reached different conclusions.3

* We are indebted to the National Science Foundation for research support.

1 James M. Buchanan & Gordon Tullock, The Calculus of Consent (1962).
The great appeal of data from Congressional elections lies in the larger number of available time series observations. Recent Presidential elections, however, provide a stronger test for two reasons.

First, the Federal government did not formally accept responsibility for maintaining employment and "purchasing power" until the Employment Act of 1946. Earlier in the century, the gold standard committed the government and the society to policies that maintained the gold exchange value of the dollar. Fluctuations in employment were seen, and widely accepted, as a means to that end. There is, therefore, some difficulty in reconciling rational behavior, acceptance of the gold standard, and dissatisfaction with candidates who failed to "provide" or promise reduced unemployment.

Second, any effect of aggregate economic variables on election results should be most apparent in Presidential elections. The President much more than Congress receives praise or blame for the events that occur during his administration and the policies that are undertaken. Some of the costs or benefits of his policies may attach to his party even if the incumbent President does not seek reelection.

The four most recent Presidential elections provide a useful base for estimating the effect of aggregative economic variables on elections. An incumbent President or Vice-President was a candidate of one of the major parties in each election. Unemployment rates and inflation rates before elections vary over a considerable range, the former from less than 4 to more than 5 1/2 per cent, the latter from 1 to more than 4 per cent. Perhaps equally important, both unemployment and inflation rates changed from rising to falling before several elections. Further, so-called economic issues were major campaign issues in 1960 and 1972.

The past four elections include at least two elections in which redistribution of income was a major issue. In 1964, Goldwater opposed many of the social policies developed in the thirties and fifties. His campaign strategy has been described as an attempt to repeal the taxing and spending programs that promised to redistribute income directly or in the form of services. McGovern campaigned for increased redistribution in 1972. In the years 1960 to 1972, the share of government and the amount of transfers per capita increased. The four campaigns offer an opportunity to make some tentative estimates on the effects of income redistribution and tax payments on voting.

This paper estimates the effects of some measures of aggregate economic conditions, tax and income transfers on the popular votes for President of the United States in the elections of 1960, 1964, 1968 and 1972. Data on election returns and some economic and political conditions in the forty-eight contiguous states are used in the study. In the following section, we introduce a simple multi-variate model based on the classifications found useful in studies of voting at the Survey Research Center. 

ters for the combined sample and compare the overall result to the estimates for individual elections. A discussion of the principal findings and some comparison with the results from time series studies of Congressional elections complete the paper.

**VOTING IN PRESIDENTIAL ELECTIONS**

Our analysis of voting decisions adapts the model of Arcelus and Meltzer⁶ to Presidential elections. A voter decides whether to participate and for whom to vote. Both decisions depend on a comparison of perceived benefits and costs as in models of rational behavior.⁷ Voting involves the sacrifice of time to vote and in some cases to acquire information about past performance of candidates and parties or to form judgments about future performance.⁸

Many citizens do not vote. Others vote in every election. Surveys⁹ and analyses of voting statistics find confirmation for propositions advanced by Lazarsfeld and his associates. They found that: (1) "Half the people knew in May for which party they would vote and clung to this choice . . ."; (2) "Of those undecided in May, about half made up their minds after they knew who the nominees were and maintained this decision . . ."¹⁰ Presumably these voters are influenced very little by campaigns and specific issues like unemployment and inflation. Officeholders, party members and loyalists are part of this group. In the language of rational behavior, voters who decide early perceive positive net benefits from voting for a particular party. In the surveys, such voters are classified as strong partisans. Voters who decide after learning the name of the candidate include many weak partisans.

We divide voters into four classes according to the kinds of factors that influence decisions to participate and selection of candidates and parties. Two groups are unaffected by economic variables. Partisan or habitual voters are not influenced by either issues or candidates. Their decisions are independent of contemporaneous events. A weak partisan group is induced to vote by the candidate or type of election. Presidential elections and reelection campaigns of incumbent Presidents increase participation in Congressional elections.¹¹ These are "coat-tail" effects. In Presidential elections there can be a "reverse coat-tail" from lower officeholders to the President if voters use the endorsement of the candidate by local officials as information...

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⁸ We abstract here from the institutional requirement of voter registration which forces citizens to make a preliminary participation decision. In most states, registration is a once-and-for-all choice at a given residence.
⁹ Angus Campbell, *et al.*, *supra* note 5.
relevant for their decisions. In addition, incumbency increases the number of job holders, supporters and other weak partisans.

We postulate that economic variables affect participation and voting decisions in two ways. One is "vote buying." Voters are induced to vote (or abstain) by taxing and spending programs. The other is the much discussed effect of aggregate economic variables on votes and voting.

"Vote buying" consists of designing redistribution programs that appeal to uncommitted voters, non-voters or opponents. Election campaigns remind the voters about who supported and who opposed transfers. An alleged benefit of participation in organized groups is the redistribution of income, the services and lower tax rates or exemptions the group obtains or retains. Voting or campaigning for the party or candidate that promises or enacts legislation favorable to a voter is part of the cost of obtaining the service or benefit. On the other end of the spectrum are the voters who oppose candidates that offer welfare programs or services that they regard as wasteful of resources or too costly. Goldwater made a major effort in the 1964 campaign to increase participation by the group of voters alleged to be disaffected by the higher spending and higher taxes proposed by candidates of both major parties in previous elections.12

The last group of voters we consider is affected by issues. The only issue we consider is the performance of the economy as measured by unemployment, inflation, and real income. Campaign rhetoric often emphasizes this issue, but there is dispute about its importance.13 In dispute is the marginal effect or perhaps the size of the effect on participation rates and on the two parties. The problem is to separate the marginal effect on voting from the use of current events for partisan purposes.

A Formal Model

To formalize the model, we define \( V_{k} \) as the percentage of voters in state \( i \) during election year \( j \) that are in one of the four groups—\( k = 0, \ldots, 3 \)—described as strong partisans, weak partisans, program voters and economic issue voters. Our hypothesis is that participation in Presidential elections is the sum of the four components plus an additive error term representing weather, personality of the candidates and other random factors.

Strong partisans vote regularly. Their decisions are independent of economic and other issues. The total size of the group changes, however, with changes in the characteristics of the voting population such as age, composition and location. We have chosen two characteristics to summarize the many ways in which the composition of the electorate affects participa-

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13 War, foreign policy, defense, pollution are other issues that might be studied in a similar way. Omitting these effects may bias our estimates.
EFFECTS OF ECONOMIC POLICIES ON VOTES

One recognizes that participation is lower in the South than elsewhere. The other measures the effect of a lower voting age after passage of the 26th amendment. The strong partisans are described by three components. Superscripts for state and year are omitted.

\[ V_0 = V_{00} + \Delta V_{01} \text{SOUTH} + \Delta V_{02} \text{YOUTH} \]

where

\( \text{SOUTH} = 1 \) in 11 Southern states and 0 elsewhere.
\( \text{YOUTH} = 1 \) in 1972 for the 46 states that lowered voting age and 0 elsewhere.

Weak partisans vote less regularly than strong. A principal factor affecting their participation is the appeal of the party or candidate. The effect works through two variables. One represents the influence of Presidential incumbents, the other the influence of state or local incumbents on voting in Presidential elections. There are many ways in which we can measure the latter effect. We used the composition of the state Congressional delegation (COMP). COMP rises with the share of Democrats in the delegation. The two effects of incumbency are:

\[ V_1 = V_{10} \text{COMP} + \Delta V_{11} \text{RERUN} \]

where

\( \text{RERUN} = 0 \) if an incumbent seeks reelection (1964, 1972) and 1 elsewhere.

One problem with this section of our model is that there are “special factors” in every election. By choosing dummy variables we select a few as “important.” The election of a Catholic, the war in Vietnam, the incumbent party rather than the incumbent President, any of these might have been selected for special attention. Plausible arguments can be made for each. Dummy variables are, at best, crude devices for measuring the changes that are of interest. We, therefore, estimated the parameters for each election separately to compare with the estimates for the four elections. In the cross-section results for each year, YOUTH and RERUN are always zero.

For strong partisans and to a lesser extent, for weak partisans, the benefits of voting exceed the cost. The remaining groups we have identified are induced to vote by programs, policies and outcomes that raise benefits above costs. Some voters may be sufficiently astute or informed to relate programs or policies to outcomes. Cell has argued that such a requirement is exces-

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14 Georgia and Kentucky permitted persons younger than 21 to vote in the four elections we analyze. The remaining 46 contiguous states were affected in the 1972 election. The states designated Southern are listed in the appendix.
sively restrictive.\textsuperscript{15} It is sufficient for voters to reward candidates or parties that produce results they like. Rational candidates will work to produce desired outcomes and eliminate undesired outcomes.

Among the effects of government programs are the redistribution of income between states, groups and income classes. We measure these effects by the size of the transfer programs from the federal to state and local governments, the taxes paid (net of refunds) and by the rates of change of tax and redistribution programs.\textsuperscript{16} The difference between the rate of change for each state and the rate of change of the national average is denoted \( \dot{G} \). \( V_2 \) summarizes the effects of redistribution.

\[ V_2 = V_{20}G + V_{21}\dot{G} \]

The measurement of the transfer and tax payments raises a number of questions we have not resolved. These include the proper treatment of corporate taxes, social security payments and other transfers to individuals. Although we have used nominal rather than real values for taxes and intergovernmental transfers, we would use real values if more adequate price data were available by states. Further, we believe that the relevant variables are the present values of the transfers and taxes, not the current flows, but we have found no way to determine whether voters act as if economic growth and progressive taxation produce more government spending and redistribution or lower tax rates. Further, we have taken account of neither the government's contingent liabilities, important for analyzing the financing of housing, nor the tax credits and deductions that should have effects similar to transfers.

The last set of variables we consider are measures of aggregate economic performance. Unemployment is one of the most commonly used variables in time series studies of the effect of aggregate economic variables on voting. High unemployment is expected to hurt the incumbent. An alternative argument is that rising and falling unemployment rates have more influence on voters and candidates than high or low unemployment.\textsuperscript{17} The reason is that rising or falling unemployment is an indicator of future conditions. Herbert Hoover may be remembered for the 23.6 per cent unemployed when he ran for reelection in 1932, but Franklin Roosevelt had large pluralities despite a 17 per cent unemployment rate in 1936 and a 14.6 per cent unemployment rate in 1940. \( V_3 \) summarizes the response to economic variables.

\[ V_3 = V_{30}E \]

Economic aggregates, \( E \), also include the rate of inflation and the rate of change of per capita personal income. The latter includes transfers, payments and personal taxes.

\textsuperscript{15} Donald C. Cell, Policy Influence without Policy Choice, 82 J. Pol. Econ. 1017 (1974).
\textsuperscript{16} All variables are more exactly defined, and sources of data are reported, in the appendix.
\textsuperscript{17} Francisco Arcelus & Allan H. Meltzer, supra note 3.
Combining terms, we obtain an equation for the percentage of voters participating in an election. The error term \( e_{ij} \) is assumed to have the usual properties.

\[
V_P^{ij} = \sum_{k=0}^{3} V_k^{ij} + e^{ij} \tag{1}
\]

The Democratic and Republican candidates obtain shares of the vote in each state and election.

\[
V_D^{ij} = d^{ij} V_P^{ij} \tag{2}
\]

and

\[
V_R^{ij} = r^{ij} V_P^{ij} \tag{3}
\]

The total vote is distributed over the parties, so the "third-party" vote is a residual, \( V_T^{ij} \), obtained by subtraction.

**EMPIRICAL RESULTS**

We estimated equations (1) to (3), using ordinary least squares regression, for the four Presidential elections in 1960 to 1972. Data for the 48 contiguous states are described in the appendix. Estimates were obtained for the four elections and for each election separately.

Table 1 shows the parameters estimated from the pooled data for the four elections. Several findings merit attention.

There is a group of consistent voters, the habitual voters, consisting of approximately 50 per cent of the eligible voters. The group is divided unequally between Democrats and Republicans. In the four elections, the Republicans held a slight advantage among habitual voters. This suggests that a smaller share of the Republican vote depended on economic variables or redistribution. This finding is consistent with an earlier study of Congressional voting.\(^8\) Time series data suggests that 55 per cent of the eligible voters participated in Congressional elections in the Presidential election years from 1932 to 1968. The Democrats had a large share of the traditional voters in Congressional elections, but the Republican vote was changed less by measures of aggregate economic performance.

The dummy variable used to measure the effect of 18 year old voting in 1972 shows a small effect on participation but a large shift between parties. Special factors associated with the McGovern candidacy are likely to be combined with the effect of the 18 year old vote. We examine this issue again when we discuss the individual elections.

Incumbency has two effects. There is a vanishingly small, but statistically significant effect of the composition of state Congressional delegations (COMP). The mean of the variable is approximately 58 per cent, so at the mean there is a reduction of 2.5 to 3.0 per cent in participation almost according to the text.
entirely at the expense of the Republicans. Presidential incumbency appears to have a more substantial effect on the distribution of the vote, but like 18 year old voting, the effect is confounded with other factors, the low Republican vote in 1964, and the low Democratic vote in 1972.

Our measures of the distribution of taxes and expenditures and deviations in relative growth rates for states have very little effect on voting percentage or on the distribution of the vote. Although coefficients are often statistically significant, the data show no strong effects of tax and expenditure variables on average voting shares. As an alternative, we estimated the effect of taxes minus transfers. The result for the combined effect was a shift of .48 per cent away from the Republican per hundred dollars of net taxes per capita. The shift was divided between the Democrats and non-voters. The Democrats gained .25 per cent, and the participation rate dropped .23 per cent.

In contrast, the results in Table 1 suggest that the taxes and transfers do

<table>
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<tr>
<th>Parameter</th>
<th>VP</th>
<th>VD</th>
<th>VR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constant</strong></td>
<td>71.35*</td>
<td>38.83*</td>
<td>38.64*</td>
</tr>
<tr>
<td></td>
<td>(23.63)</td>
<td>(15.49)</td>
<td>(16.14)</td>
</tr>
<tr>
<td><strong>SOUTH</strong></td>
<td>-21.22*</td>
<td>-14.80*</td>
<td>-10.60*</td>
</tr>
<tr>
<td></td>
<td>(15.61)</td>
<td>(9.84)</td>
<td></td>
</tr>
<tr>
<td><strong>COMP</strong></td>
<td>-0.05*</td>
<td>-0.00</td>
<td>-0.04*</td>
</tr>
<tr>
<td></td>
<td>(2.97)</td>
<td>(2.68)</td>
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<tr>
<td><strong>PYMNTS</strong></td>
<td>-0.00</td>
<td>-0.03*</td>
<td>0.03*</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(2.26)</td>
<td></td>
</tr>
<tr>
<td><strong>TXS</strong></td>
<td>-0.00</td>
<td>0.00</td>
<td>-0.00</td>
</tr>
<tr>
<td></td>
<td>(1.51)</td>
<td>(2.51)</td>
<td></td>
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<tr>
<td><strong>PYMNTS</strong></td>
<td>0.06</td>
<td>0.10*</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(1.51)</td>
<td>(0.48)</td>
<td></td>
</tr>
<tr>
<td><strong>TXS</strong></td>
<td>0.05</td>
<td>0.07</td>
<td>-0.00</td>
</tr>
<tr>
<td></td>
<td>(0.64)</td>
<td>(0.01)</td>
<td></td>
</tr>
<tr>
<td><strong>UNN</strong></td>
<td>-0.05</td>
<td>0.80*</td>
<td>-1.29*</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(3.61)</td>
<td></td>
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<tr>
<td><strong>UNN</strong></td>
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<td>-0.05</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.53)</td>
<td></td>
</tr>
<tr>
<td><strong>PRRIX</strong></td>
<td>-1.38*</td>
<td>-1.39*</td>
<td>-2.53*</td>
</tr>
<tr>
<td></td>
<td>(1.82)</td>
<td>(4.22)</td>
<td></td>
</tr>
<tr>
<td><strong>PF</strong></td>
<td>0.31</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(1.36)</td>
<td>(0.80)</td>
<td></td>
</tr>
<tr>
<td><strong>RERUN</strong></td>
<td>2.80*</td>
<td>-5.78*</td>
<td>7.30*</td>
</tr>
<tr>
<td></td>
<td>(1.83)</td>
<td>(6.11)</td>
<td></td>
</tr>
<tr>
<td><strong>YOUTH</strong></td>
<td>-0.80</td>
<td>-9.39*</td>
<td>15.30*</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(9.07)</td>
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<tr>
<td><strong>R²</strong></td>
<td>.67</td>
<td>.72</td>
<td>.59</td>
</tr>
<tr>
<td><strong>D-W</strong></td>
<td>1.98</td>
<td>2.13</td>
<td>1.79</td>
</tr>
</tbody>
</table>

* Starred values are statistically different from zero at 5% level in one-tail tests.
not have identical effects. The transfers appear to shift votes from the Democrats to the Republicans, on average, and taxes shift votes from the Republicans mainly to non-voters. There appears to be evidence in support of the thesis that high tax rates discourage voting and particularly Republican voting, but the effect has been small on average. Table 2 shows the effect on voting percentages at the mean values of the variables in the four election years.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Mean Value</th>
<th>VD</th>
<th>VR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PYMNTS</td>
<td>98 *</td>
<td>-2.90</td>
<td>+2.90</td>
</tr>
<tr>
<td>TXS</td>
<td>551 *</td>
<td>+0.30</td>
<td>-2.20</td>
</tr>
<tr>
<td>PYMNTS</td>
<td>1.74</td>
<td>+0.17</td>
<td>+0.30</td>
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<tr>
<td>TXS</td>
<td>0.87</td>
<td>+0.06</td>
<td>0</td>
</tr>
<tr>
<td>UNN</td>
<td>4.82</td>
<td>3.85</td>
<td>-6.21</td>
</tr>
<tr>
<td>PRIX</td>
<td>2.60</td>
<td>-3.61</td>
<td>-6.60</td>
</tr>
</tbody>
</table>

If the values in the table are reliable estimates, inflation and unemployment have a more important influence on voting than taxes and transfers. Inflation has a large, statistically significant effect on voting participation and on party votes. The pooled data suggest that the Republicans lose more from inflation. In addition the Republicans lose and the Democrats gain, on average, from unemployment.

Our results distinguish between alternative hypotheses about the effects of unemployment. High unemployment appears to be more important than rising unemployment in shifting votes from Republicans to Democrats. On average, high unemployment helps the Democrats and hurts the Republicans. This finding is contrary to the frequently stated proposition that economic performance helps or hurts the incumbent candidate or party.

Table 3 compares the results for the four elections we studied. All coefficients significantly different from zero at approximately the 5 per cent level in a one-tail test are shown. In addition, we show estimates of the coefficients for principal variables that do not meet this test. They are set apart to separate the results of significant tests.¹⁹

¹⁹ The relatively high R² combined with the high standard errors of the coefficients (low t-values) suggests that multi-collinearity may be present. Our main use of the estimates is for comparison of the responses to variables at different times. We do not rely on the efficiency of the estimates.
Unemployment helps the Democrats and hurts the Republicans in each of the elections, and frequently both effects are estimated to be statistically significant. Inflation also lowers the Republican vote and raises the Democratic vote. An exception is 1972 when inflation was at the highest level of any of the four elections, but the Republicans appear to have benefited and the Democrats to have suffered.

This finding suggests that there is a major weakness in time series estimates. Rational voters should be more concerned about future inflation than current or past inflation. Past events are an imperfect guide to future events and least useful when the party changes direction.

If our estimates are correct, economic factors contributed heavily to the Nixon victory in 1972 and his defeat in 1960. The 1972 plurality on the inflation issue, at the mean rate of inflation, is approximately 25 per cent (4.41 + 1.58 multiplied by 4.1). In 1960, our measure of the mean inflation rate is much lower, 1.2 per cent, but the coefficients are very different. Kennedy's net margin on the inflation issue is 16 per cent, according to our estimates.

The habitual vote for the Democrats is more stable but is usually smaller than for the Republicans. Our estimates for individual elections support the pooled regression results in this respect. The 1968 election is an exception, however. The combination of war and a third-party candidate appears to have shifted many traditional or habitual Democrats away from Humphrey. By 1972 many of them had returned to the Democratic candidate. Summing the constant terms in the VD and VR regressions gives percentages close to the percentage shown in VP. Both suggest a decline in the numbers and proportion of habitual voters.

Part of the decline in habitual voters has been offset by an increase in the coefficient for the South. Southern voting in Presidential elections has increased, partly offsetting the decline in habitual voting elsewhere.

The regression results also suggest that in most elections the voters do not distinguish between the two parties on taxing and spending issues. There is no sign of the much discussed "taxpayers revolt" in 1968 and 1972.

The 1964 election is an exception. Taxes were reduced early in the year, and the coefficient on the distribution of tax burdens rises from its low level in other elections. Both parties gain votes, but the Democrats benefited more. To explore these and other effects on the voting margin, we discuss the results for the 1960 and 1964 elections in greater detail.

The 1960 and 1964 Election Returns

The 1960 and 1964 elections were won by the Democrats by different margins. The 1960 election was one of the closest elections in U.S. history; Johnson's plurality in 1964 was one of the largest ever. In this section, we use our estimates to analyze the change. Previous studies of voting patterns for
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<td>.05</td>
<td>-.07</td>
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<td></td>
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</tr>
<tr>
<td>PYMNTS</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>TXS</td>
<td>.25</td>
<td>.15</td>
<td>(-.01)</td>
<td>.12</td>
<td>.19</td>
<td>.26</td>
<td>.15</td>
<td>(-.03)</td>
<td>.08</td>
<td>(-.14)</td>
<td>(-.03)</td>
<td>(.01)</td>
<td></td>
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<tr>
<td>UNN (.21)</td>
<td>.52</td>
<td>(.01)</td>
<td>.32</td>
<td>(.01)</td>
<td>.32</td>
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<td>(.08)</td>
<td>(-.14)</td>
<td>(-.03)</td>
<td>(.01)</td>
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<tr>
<td>PRÈX (0.04)</td>
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<td>(.20)</td>
<td>(.05)</td>
<td>(.05)</td>
<td>(.05)</td>
<td>(.05)</td>
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<td>(.05)</td>
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<tr>
<td>PI (.46)</td>
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</tr>
<tr>
<td>R²</td>
<td>.80</td>
<td>.75</td>
<td>.62</td>
<td>.65</td>
<td>.63</td>
<td>.72</td>
<td>.61</td>
<td>.49</td>
<td>.81</td>
<td>.40</td>
<td>.77</td>
<td>(.40)</td>
<td></td>
</tr>
</tbody>
</table>

All coefficients for which estimated $t > 1.60$ are shown on the line with the name of the variable. The effects of economic and distribution variables with $t < 1.60$ are shown below the line for comparison of point estimates.
1960 and 1964 by Key\(^{20}\) and Polsby and Wildavsky\(^{21}\) are available, so we compare our findings to theirs.

Table 4 shows the computed effect of each of the variables we use. The numbers are obtained by multiplying the point estimate by the mean value of the variable for the year. Many of the estimates are small and contribute very little in either election.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1960</th>
<th></th>
<th>1964</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nixon</td>
<td>Kennedy</td>
<td>Margin</td>
<td>Goldwater</td>
</tr>
<tr>
<td>Habituals</td>
<td>38.74</td>
<td>10.40</td>
<td>-28.34</td>
<td>29.65</td>
</tr>
<tr>
<td>COMP</td>
<td>-4.76</td>
<td>-0.63</td>
<td>+4.13</td>
<td>-0.93</td>
</tr>
<tr>
<td>PYMNTS</td>
<td>0.52</td>
<td>0.42</td>
<td>-0.10</td>
<td>0.75</td>
</tr>
<tr>
<td>TXS</td>
<td>0.08</td>
<td>0.01</td>
<td>-0.07</td>
<td>1.75</td>
</tr>
<tr>
<td>PYMNTS</td>
<td>0.42</td>
<td>-0.22</td>
<td>-0.64</td>
<td>0.20</td>
</tr>
<tr>
<td>TXS</td>
<td>0.10</td>
<td>0.84</td>
<td>+0.74</td>
<td>0.38</td>
</tr>
<tr>
<td>UNN</td>
<td>-5.29</td>
<td>5.66</td>
<td>+10.95</td>
<td>-5.29</td>
</tr>
<tr>
<td>UNN</td>
<td>0.16</td>
<td>-0.48</td>
<td>-0.64</td>
<td>0.46</td>
</tr>
<tr>
<td>PRIX</td>
<td>-12.05</td>
<td>3.85</td>
<td>+15.90</td>
<td>-5.31</td>
</tr>
<tr>
<td>PI</td>
<td>0.21</td>
<td>-0.56</td>
<td>-0.77</td>
<td>3.88</td>
</tr>
<tr>
<td>Total</td>
<td>18.13</td>
<td>19.29</td>
<td>1.16</td>
<td>13.88</td>
</tr>
</tbody>
</table>

Adjusted\(^*\),
Estimate of
Vote Share (%): 48.1 51.1 3.0 31.7 67.9 36.2

Actual Share (%): 49.5 49.7 0.2 38.5 61.1 22.6

\(^*\)The party totals expressed as percentage of their sum adjusted by the proportion of two party vote to total vote for President.

One main conclusion drawn from the data is the importance of aggregate economic variables in determining the outcome. Based on our estimates, it appears that the Democrats gained more of their vote margin from inflation in 1960 and from unemployment in 1964 than from any other variable. These measures of aggregate economic performance appear to have a much larger effect than the growth of personal income, spending or distribution. An exception is taxes in 1964 following the tax cut, discussed previously.

In 1960 and 1964, and in other elections, the Republicans start with a large, but variable, margin of regular voters. The Democrats must offset the

\(^{20}\) V. O. Key, Jr., The Responsible Electorate (1966).

\(^{21}\) Nelson W. Polsby & Aaron B. Wildavsky, supra note 4.
margin, and expected performance of the economy is one of their principal appeals. If our measures of unemployment and inflation can be interpreted as measures of expected performance, in 1960 the appeal brought a 26.85 per cent margin, almost equal to the Republican advantage. In 1964 the Republican edge was smaller; economic performance gave the Democrats almost the same margin as in 1960, 27.5 per cent. In 1972 these issues benefited the Republicans, the only time in the four elections that the Republicans had this advantage.

Our findings are similar to the conclusion reached by Key. Key found that answers to the question, “Which party will keep the country prosperous in the years ahead?”, gave a 3 to 2 edge to the Democrats in 1960. Moreover, twenty per cent of those sampled in the Gallup poll chose inflation or unemployment as the most important issue. Many of these voters voted for Kennedy in 1960.

In 1964 Goldwater campaign on a number of redistributional issues, particularly the role of government in economic affairs and to a lesser extent the effect of taxation on incentives. His campaign attracted a number of voters, according to our estimates. The Democrat’s margin on PYMNTS and the relative rates of change of taxes are lower than in 1960. The gain on these issues is more than offset by the loss on other issues, including the level of per capita taxes, the growth of personal income, and the distribution of government payments. More importantly, Goldwater lost an estimated 18 per cent of the margin we classify as “habitual.” The data show a substantial switch, 9 per cent, from 1960 Republicans to 1964 Democrats.

Polsby and Wildavsky argue that Johnson was able to “detach a significant portion of that [Republican] party’s traditional supporters.” Johnson was able “to make gains on two issues—prosperity and poverty—even while playing down an aggressive pro-welfare stand . . . .” Our findings generally support these conclusions but suggest that the “prosperity” issue was more important.

Tests of a Modified Hypothesis

The estimated responses of voters to economic conditions and to distribution policies are highly variable. Signs change from one election to the next, and there are large changes in magnitude as well. In the hope of finding more stable coefficients, we modified the hypotheses.

Habitual voters, or partisans, vote for the same party and vote regularly. The constant term of the regression was used as a measure of the partisan vote. An alternative measure is the vote for the party candidate in the previous election. Table 5 shows the estimated coefficients of the regressions.

22 V. O. Key, Jr., supra note 20, at 127-31.
23 Nelson W. Polsby & Aaron B. Wildavsky, supra note 4, at 201.
24 Id. at 202.
### TABLE 5
Cross Section Estimates With Augmented Regressions

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
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</tr>
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<tbody>
<tr>
<td>Constant</td>
<td>21.57</td>
<td>12.58</td>
<td></td>
<td></td>
<td>20.43</td>
<td></td>
<td></td>
<td></td>
<td>23.21</td>
<td>25.88</td>
<td>52.55</td>
<td></td>
</tr>
<tr>
<td>Vₐ, lagged</td>
<td>.71</td>
<td>.78</td>
<td>.73</td>
<td>.79</td>
<td>.64</td>
<td>1.13</td>
<td>.66</td>
<td>.71</td>
<td>.33</td>
<td>.37</td>
<td>.43</td>
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<tr>
<td>SOUTH</td>
<td>-2.02</td>
<td></td>
<td>-5.61</td>
<td>-4.79</td>
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<td>-5.39</td>
<td></td>
<td></td>
<td>-12.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.05</td>
<td>.03</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PYMNTS</td>
<td>-.01</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TXS</td>
<td>-.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIX</td>
<td>-.43</td>
<td>-.84</td>
<td>[.34]</td>
<td>-.15</td>
<td>.54</td>
<td>.72</td>
<td>.56</td>
<td>.31</td>
<td>-.35</td>
<td>-.78</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>PⅥ</td>
<td>[.15]</td>
<td>-.07</td>
<td>[.21]</td>
<td>[.01]</td>
<td>[.86]</td>
<td>.94</td>
<td>.86</td>
<td>.83</td>
<td>.55</td>
<td>.47</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.88</td>
<td>.97</td>
<td>.85</td>
<td>.92</td>
<td>.86</td>
<td>.94</td>
<td>.86</td>
<td>.83</td>
<td>.55</td>
<td>.47</td>
<td>.80</td>
<td></td>
</tr>
</tbody>
</table>
for VP, VD and VR with a lagged dependent variable included. Results were obtained for three elections, 1964, 1968, and 1972.

The introduction of the lagged dependent variable improves the fit. There appears to be consistency in voting patterns. About 70 or 80 per cent of the voters in the preceding election vote again. The proportion of Democrats who vote for the candidate of the same party in the next election is greater than the proportion of Republicans. About 33 to 43 per cent of Republicans vote Republican again, while more than two-thirds of the Democrats repeat.

Redistribution variables again have little significant impact in these regressions. The level of transfer payments has a consistently positive, but miniscule, effect on the Republican vote, and a mixed effect on the Democratic vote. Rising transfer payments (the combined effect of rising payments and falling taxes) reduced the Republican vote in 1964, but helped the Republicans in 1968 and 1972, relative to the Democrats. Again the marginal effects were small and not statistically significant.

The magnitude of the effects of inflation and unemployment are lessened by the addition of lagged dependent variables, but the coefficients remain variable from one election to the next. High levels of unemployment hurt the Republican candidate, as before, but do not consistently aid the Democratic nominee. Inflation lowers the Republican vote and increases the Democrats' vote, except in the election of 1972. Changes in personal income is the only variable to show stronger effects in the modified regressions than in the initial regressions. Growth of personal income increased the Democratic vote and reduced the Republican vote in 1964 and 1968.

Evaluation of the contributions of economic variables (at their mean values) to vote totals (see Table 6) again suggests that economic variables are important determinants of election outcomes. In 1964, Goldwater held a slight edge over Johnson among habitual and repeating voters with a margin of about one per cent. Much of the estimated 18.8 per cent victory margin for the Democrat in that year can be attributed to the combined effects of unemployment, inflation and rising personal income. Again in 1968, these variables contributed strongly to the Democratic vote, but the effect was not large enough to offset a strong habitual Republican vote, perhaps the manifestation of Republican partisans returning to the fold after the election of 1964. In the Nixon-McGovern contest inflation especially, and also the unemployment level and the rate of change of personal income, had a large effect on the vote. Nixon was apparently able, however, to reverse the direction of the inflation and unemployment effects, achieving much of his large victory margin on these two issues.

The introduction of a lagged dependent variable may introduce bias and, in the presence of serial correlation of the residuals, the estimators are not consistent. We have made no attempt to overcome these problems or to determine whether there is bias. There is, however, no evidence of serial correlation in the estimates show in Table 1.
TABLE 6
ESTIMATED VOTE SHARES AND CONTRIBUTIONS OF ECONOMIC VARIABLES

<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1968</th>
<th>1972</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VD (1)</td>
<td>VR (2)</td>
<td>Margin (3)</td>
</tr>
<tr>
<td>Estimated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>37.22</td>
<td>25.38</td>
<td>11.84</td>
</tr>
<tr>
<td>Contribution of UNN, PI and PRIX</td>
<td>4.01</td>
<td>-11.14</td>
<td>15.15</td>
</tr>
<tr>
<td>Adjusted Estimate of Vote Share (%)</td>
<td>59.2</td>
<td>40.4</td>
<td>18.8</td>
</tr>
<tr>
<td>Actual Vote Share (%)</td>
<td>61.1</td>
<td>38.5</td>
<td>22.6</td>
</tr>
</tbody>
</table>

CONCLUSION

Our study produces some evidence of the effect of economic variables on the outcome of Presidential elections. We find little evidence in our work of the raw material for a predictive theory. As in sample surveys, we find that the influence of variables shifts, presumably with the importance voters assign to a particular issue. The performance of the economy was, by our criteria, no worse in 1960 than in 1972. Inflation was much higher—4.1 compared to 1.2—and average unemployment about the same in 1972 and 1960. Yet, the same Republican candidate can be described as having lost the earlier election and won the later election on the issues of prosperity and inflation.

What applies to aggregate economic variables applies to other variables also. The 1964 tax cut contributed more than enough to win a close election contest (Table 4). In other elections, tax rates have a smaller effect on the winner’s margin. Our results do not show that voters distinguish the two parties. Both parties campaign on the issue of lower taxes, at times, but neither appears able to convince the voters that the issue is a partisan issue. Even in 1972, when tax reform and tax levels were discussed more than is generally true, our estimates show a 1 to 2 per cent net margin for the Democrats on this issue.
APPENDIX

DEFINITION OF VARIABLES AND SOURCES OF DATA

Participation Rate and Party Strength

VP = percentage of persons eligible to register who actually cast votes.

1972: computed as VOTE/ELIGIBLE where VOTE is total vote for
President 1972, from American Votes 10, at 13 (Richard M.
Scammon ed. Gov't Affairs Inst., 1973) and ELIGIBLE is
population of voting age (18 years and over) in 1972, U.S.
Bureau of the Census, Current Population Reports, tab. 2, at 6

VD = percentage of persons eligible to register who cast votes for the Democratic
Presidential candidate. Calculated as (VP × DEM)/100, where DEM =
percentage of total vote to the Democratic candidate, American Votes 10,
supra at 7, 9, 11 & 13.

VR = similar to VD, but in the Republican vote; same source.

Measures of Economic Conditions

UNN = total unemployment as a percentage of the total work force.


PI = per capita personal income, from Survey of Current Business, Aug. 1973,
tab. 2, at 43.

PRIX = state composite price index, a weighted average of national farm prices and
consumer prices in standard metropolitan statistical areas. Calculated as

\[ \frac{\sum \text{FARM} \times (\text{POP} - \sum \text{SPOP}_j) + \sum \text{SCPI}_j \times \text{SPOP}_j)}{\text{n}} \]

where

FARM = prices paid by farmers, family maintenance only, national average from

POP = estimated state population as of July 1.

460, tab. 1, at 8 (sen. P-25).

SPOP_j = SMSA populations as of July 1.

1962, 1963: (14 cities) Current Population Reports, supra (various num-
bers).
1967-1972: (21 cities) id.


n = number of cities in a state for which consumer price data are available. The
summations in the above formula are taken over the n such cities in a state.
For 27 states \( n = 0 \) in all years, so that the state price index, \( \text{PRI}X \), is identical to the national FARM price index.

\[ \text{UNN, } \frac{\text{d} \text{PI}}{\text{d} t}, \frac{\text{d} \text{PRI}X}{\text{d} t} = \text{percentage rates of change of the above variables, from the year preceding a Presidential election to the election year.} \]

**Government Tax and Expenditure Measures**

\( \text{TXS} = \text{total internal revenue collections less refunded taxes, per capita. Net tax collections from U.S. Dep't Treasury, Annual Report of the Secretary on the State of Finances (various years).} \)

\( \text{PYMTS} = \text{federal aid payments to state and local governments, total grant payments.} \)


\( \text{TXS} = \text{deviation of rate of change in TXS for a state from the national average rate of change per capita net taxes. Calculated as:} \)

\[ (\text{TAX} - C) - (\text{NTAX} - C) \]

where

\( \text{TAX}-C = \text{percentage rate of change of TXS, from year preceding a Presidential election to the election year.} \)

\( \text{NTAX}-C = \text{national average of TAX}-C. \)

\( \text{PYMTS} = \text{as above, but for PYMTS.} \)

**Dummy Variables and Other Non-Economic Measures**

\( \text{COMP} = \text{percentage of Democrats in state delegations to the U.S. House of Representatives. Calculated as number of Democrats seated divided by the number of Democrats and Republicans seated, times one-hundred. From Statistical Abstract of the U.S. (various years).} \)

\( \text{RERUN} = \text{zero during elections in which an incumbent President sought reelection (1964, 1972); one otherwise.} \)

\( \text{YOUTH} = \text{one in 1972 in all states except Georgia and Kentucky; zero otherwise.} \)

\( \text{SOUTH} = \text{one for all four election years for eleven Southern states, Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, and Florida.} \)