The Impact of Job Growth and Inflation on Presidential Voting Patterns

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December 7, 2023

Abstract

This study seeks to identify the economic forces and structural variables that influence the share of the popular vote received by incumbent political parties for the 17 elections over the 1956-2020 period. The regression findings suggest that percentage changes over differing time periods prior to the election in employment and the CPI are highly significant in explaining the share of the popular vote received by incumbent presidential candidates. Real GDP and the unemployment rate, however, were not significant. A structural variable that measured the impact of voter fatigue for a political party vying for a third or fourth consecutive presidential term in office was found to be highly significant. The study, however, found that the share of the popular vote received by third parties did not significantly affect the outcome of any of the presidential elections in our sample. A rigorous examination of the optimal lag in measuring the cumulative impact of the percentage change on employment and the CPI was also addressed. The findings suggest that voters have a longer recall for job versus price changes. Finally, several simulations are presented to forecast the share of the popular vote for the presidential candidate of the incumbent party in the 2024 election.

Electronic copy available at: https://ssrn.com/abstract=4657592

Note: Funding: No funding was received for this project.

Declaration of Interests: The authors declare no competing interests.

Keywords: economics, election, forecast, president, inflation, jobs

JEL Codes: H89; P16

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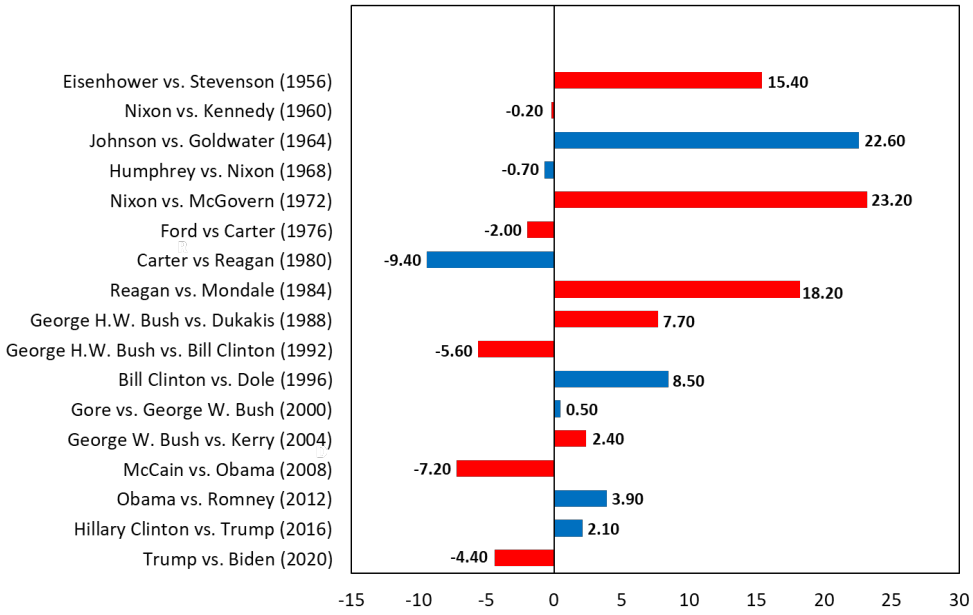
1 Introduction

The presidential candidate representing the incumbent party has received a higher percentage of the popular vote in ten of the 17 elections over the 1956 to 2020 period. In the 1956 election, for example, the presidential candidate for the incumbent Republican party, Dwight Eisenhower, received 57.4 percent of all votes, while the Democratic candidate, Adlai Stevenson, received 42.0 percent. That difference of 15.4 percent (57.4 percent for the candidate of the incumbent party less 42.0 percent for the candidate of the nonincumbent party) is shown below in Figure 1, along with the differences in the 16 subsequent presidential elections through 2020.

FIGURE 1
Difference in the Share of the Popular Vote for a Presidential Candidate of the Incumbent Party



The mean value for the differences shown in Figure 1 is 4.4 percent. There is wide dispersion, however, around that mean, as reflected by the standard deviation of the differences being 10.1 with a coefficient of variation of 229.5 percent.

It should be noted that the differences do not always reflect the candidate who wins the electoral vote and, therefore, the presidency. In the 2000 presidential election between Al Gore and George W. Bush, Gore, representing the incumbent party, won the popular vote by a difference of 0.50 percent (See Figure 1) but lost the election in electoral votes. Similarly, in 2016, the incumbent party candidate, Hillary Clinton, won the popular vote by a difference of 2.10 but lost the election in the electoral college.

This study will focus on identifying the economic and structural factors that explain the differences, as shown in Figure 1. In particular, we are interested in identifying economic variables over which a President has at least some influence that would benefit a President or his

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party heading into a Presidential election cycle. To attempt an answer, we need to create a forecasting model that makes use of data available at the time the President decides to implement a strategy. We need to determine the comparative salience of those variables.

None of the academic models for predicting Presidential election outcomes is ideal for our task. Their specific deficiencies are that 1) most ignore a third-party effect by using as the dependent variable the percentage of the two-party popular vote won by an incumbent President's party rather than the percentage of the overall popular vote; 2) most rely on quarterly data, often not available until after the crucial periods in which a President would make the tactical decision to manipulate an economic lever; 3) few allow for a different look-back period for some economic variables than others; and 4) most include polling data as an independent variable, thus confusing interpretation of the effect of the economic variables open to manipulation.

The circumstances of the 2024 election are especially sensitive for reasons that bear on these models' deficiencies.

--A third-party candidacy is likely in 2024. No Labels is proposing to run an "insurance policy" ticket of the President and Vice President from the two major parties but not the same party. No Labels argues it will not be a spoiler, but President Biden argues a No Labels candidate will hurt his chances.

--Exceptional economic factors characterized the early part of President Biden's term, but not the months heading into the election. We refer to high inflation now coming under control, a large boost in employment due to Covid-recovery, now largely spent, and Covid-stimulus checks starting at the end of the Trump Administration and continuing through the "Inflation Reduction Act" and infrastructure legislation, but with nothing new in the more recent months heading into the election. These facts suggest a focus on differential lagging effects for different economic variables leading up to the 2024 vote.

I. Third Party

Forecasts of US Presidential elections in the academic literature most frequently have used the percentage of the two major party votes cast for the party of the White House incumbent as the dependent variable. (See, e.g., Fair, 1996; Fair, 2014; Hibbs, 2000; Hibbs, 2012; Erikson and Wlezien, 2008; Abramowitz, 1988; Abramowitz, 2012; Cuzan, Heggen & Bundrick, 2021; Campbell 2012; the latter two collecting reports on many models; Strong & Kohli, 2019, regressing the two major-party vote share but including a dummy variable for a third-party candidate). This approach assumes votes for third-party candidates will be split among the two major-party candidates in proportion to the latters' relative votes (see Fair, 1996, p. 123.) An exactly proportional split of the third-party candidate's vote, however, is a probabilistic impossibility.

Ross Perot's presence in 1992 has been analyzed as hurting George H.W. Bush's totals, and Ralph Nader's vote in Florida in 2000 may have taken the state away from Al Gore. It is unrealistic to assume away this possibility for 2024. For the purposes of forecasting the outcome of the 2024 election, therefore, a dependent variable that takes into account the third-party vote seems especially timely.

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II. The need to use monthly data, not wait for quarterly data, in order to forecast

Our second departure from the standard model is similar to what Lewis-Beck & Rice noted in their original work: a desire to forecast rather than to explain (Lewis-Beck & Rice, 1984). The most common independent economic variable used to explain US Presidential elections is an estimate of real GNP per capita, measured over varying numbers of quarters prior to the election, sometimes as a snapshot (e.g., Abramowitz, 2012), sometimes as a cumulation from a date prior to the election up to the election (e.g., Cuzan, Heggen & Bundrick, 2021; Tien & Lewis-Beck, 2023; Wink, 2019, see Table 1, p. 204, for accumulation of studies).

It seems to us important for forecasting purposes that our model uses the most recent economic data as soon as they are available, whereas earlier studies, focused on explaining rather than predicting, have used data that became available only after an election. The US Department of Commerce Bureau of Economic Analysis GNP estimates, for example, are published quarterly. Other economic measures have also been used as independent variables. We could have made use of any of those alternatives, provided the data were available on a monthly basis. In an effort to preserve degrees of freedom in our final tests, we use only two economic variables: the change in employment numbers and the change in the consumer price index.

III. Allowing for different dissipation of memory of past economic events

Memories of an adminstration's economic performance fade. We propose a simple way of testing how that phenomenon works. From the October before the election, we go backwards month by month, accumulating two economic statistics (price level and employment). We stop where the best fit of the model indicates: nine months back for prices, twenty-one months back for employment.

This approach contrasts with other studies. Fair (2014) used a cumulation of real growth per capita over the three quarters prior to the election and the growth rate in the GDP deflator from the start of the current term up to three quarters prior to the election. (Fair 2014). Sinha, Nagarnaik, et al. (2016) followed the identical lag structure. This approach seems internally inconsistent. Cutting off the accumulation of real growth numbers three quarters before the election reflects a model that voters forget earlier parts of a presidential term; but accumulating the price variable from the start of the term reflects a belief that voters do not forget. We think it advisable to allow for memories to fade on both economic measures—but not necessarily at the same rate.

Most other studies, however, simply assumed that whatever the proper measuring moment, it was the same for all independent variables. See, e.g., Czasonis & Kritzman, 2021 (growth in real GDP, government debt, and stock indices over 4-year term); Lewis-Beck & Rice, 1984 (growth in real per capita GNP in the second quarter of the election year, business sentiment index at same point); and Tien & Lewis-Beck, 2023 (same); and Cuzan, Heggen et al., 2000 (growth in real GDP during first fifteen quarters of a term; same period for growth in inflation.)

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Other studies used only a single economic variable but measured at different time periods with a weighted lag structure (Erikson and Wleizien (2008); Tien & Lewis-Beck (2023); Hibbs (2000) who found no significant difference from an equally weighted measure). Some measured a single economic variable but taken at a snapshot in time rather than accumulated over a time period (Wink, 2019; Loewy, Singh, Gallagher, 2020).

IV. Inclusion of polling data

The great majority of presidential prediction models incorporate some measure of popular approval of the candidates, such as Gallup polling, or favorability indices. This is the case for every model we studied, except Cuzan, Heggen, et al. (2000), Fair (2014), and Hibbs (2000) (2012). The problem we see with including popularity is the obvious interconnectedness of popularity (largely out of the President's control) and eventual popular vote, resulting in a confused interpretation of the economic signals that are within the President's ability to influence, if not control.

Therefore, we set out to create a model to predict the presidential popular vote, using data available on a monthly basis, relying on two economic variables, each with its own lag structure, and not including polling data. No other academic model we uncovered has those characteristics.

2 Theoretical Model

The upward-sloping line, P, in Figure 2 points to a positive relationship between improving economic conditions and support for the incumbent party as measured by its percentage margin of victory or loss in the popular vote in a presidential election (m).

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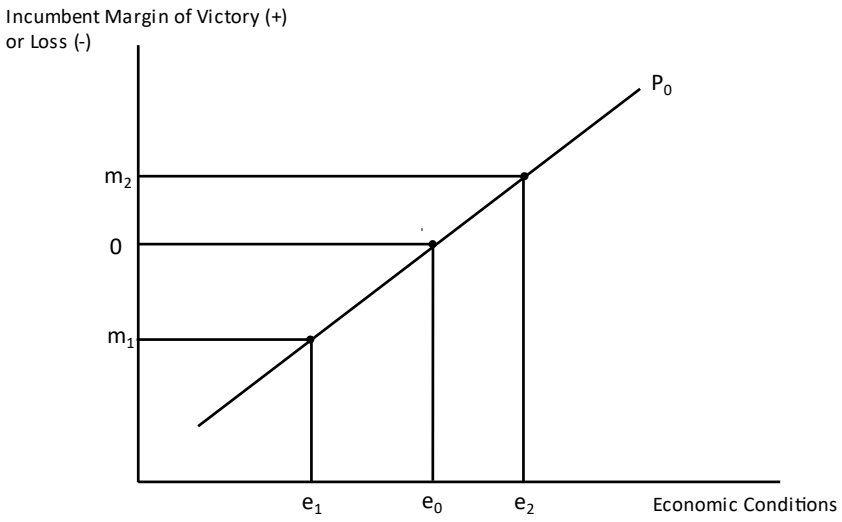
FIGURE 2
Relationship between Economic Conditions and the Percentage Margin of Victory (+) or Loss (-1) for the Incumbent Political Party



If, for example, economic conditions are at e_0, the intersection with the P_0 line suggests that the percentage of votes received by the incumbent party will be equal to the nonincumbent party, resulting in a margin of victory at zero. But if economic conditions lead the electorate to lose support for the incumbent party so that e_0 moves to e_1, the incumbent party will experience a lower percentage of votes than the nonincumbent party, leading to a margin of loss given by m_1. If, however, economic conditions lead to an increase in political support from e_0 to e_2, the incumbent party will experience a higher percentage of votes than the nonincumbent party, leading to a margin of victory given by m_2.

In addition to movements along the P_0 line, shifts in the P_0 line can occur when structural factors lead to an increase or decrease in an incumbent party's margin of victory (m). If, for example, the electorate is negatively influenced by an incumbent party seeking a third consecutive presidential term (e.g., the republican candidate, Gerald Ford, seeking the presidency in 1976 following two consecutive terms by a Republican, Richard Nixon), the P_0 line will shift to P_1 as shown in Figure 3. This "time for a change" effect has been modeled in several preceding academic papers (See, e.g., Wink, 2019; Loewy, Singh, Gallagher, 2020; Sinha, Verma, Shah, 2020; Czanois, Kritzman, Turkington, 2021).

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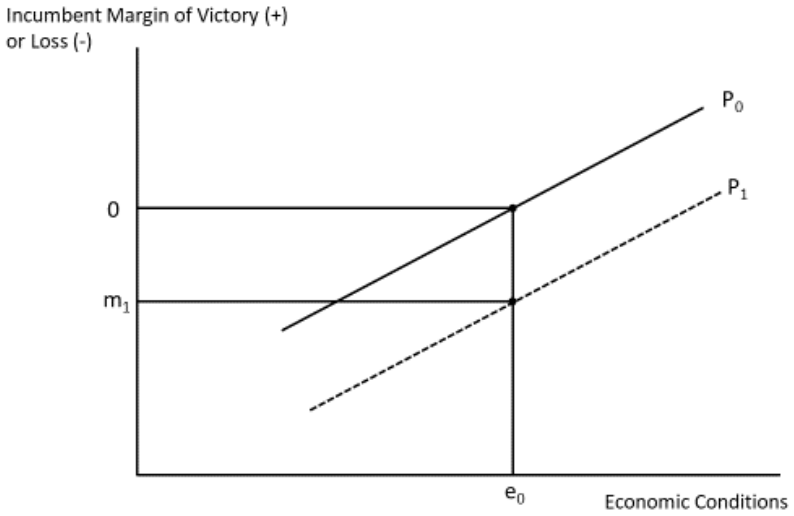
FIGURE 3
Relationship between Political Support and the Percentage Margin of Victory (+) or Loss(-) for the Incumbent Political Party



In Figure 2, economic conditions at e_0 produced an equal percentage of votes for the incumbent and nonincumbent parties, leading to a zero margin of difference. The shift in the P curve from P_0 to P_1 in Figure 3 caused by an incumbent party's bid for a third consecutive term now leads to a margin of loss given by m_1. Similarly, if third-party candidates in a presidential election draw more votes from the incumbent party candidate than the nonincumbent party, the P_0 line will shift to the right. But if third-party candidates draw more votes from the nonincumbent party, the P curve will shift to the left.

3 Empirical Model

The percentage margin of victory or loss in the popular vote for a presidential candidate of the incumbent party is given by the dependent variable, INCMAR. Economic conditions postulated to have an explanatory effect on INCMAR, as shown in Figure 1, are measured in the first stage of tests by year-to-year percentage changes in real GDP, PRGDP; year-to-year percentage changes in the consumer price index, PCPI; year-to-year percentage changes in payroll jobs, PNTO; and year-to-year absolute changes in the unemployment rate, CUNP. The year-to-year changes in each of these variables refer to the mean values of the variables in the year prior to the presidential election to the mean values during the election year.

A shift in the P curve caused by an incumbent party vying for a third consecutive term is given by a dummy variable, CONSEC, and the shift caused by third-party presidential candidates, as measured by the percentage of votes received by these candidates, is named THIRD. See Table 1 for definitions and sources.

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Table 1. Dependent and independent variables used in this study

Sample Period: Election Years from 1956 to 2020

Dependent variable

Description	Name	Mean	Std. Dev	Coefficient of variation	Minimum	Maximum	Source
Difference in the share of the total popular vote for a presidential party candidate of the incumbent political party less the share received out of the total popular vote for the non incumbent party candidate	INCMAR	4.41	10.12	229.48	-9.40	10.12	https://www.statista.com/statistics/1035521/popular-votes-republican-democratic-parties-since-1828/
Independent variables							
I. Economic Variables							
Real GDP, percentage change from year ago	PRGDP	3.12	2.53	81.09	-2.8	7.26	https://fred.stlouisfed.org/series/GDPC1
All Employees, Total NonFarm, percentage change from year ago	PNTO	1.71	2.34	136.84	-5.79	4.71	https://fred.stlouisfed.org/series/PAYEMS
Consumer Price Index, percentage change from year ago	PCPI	3.53	2.88	81.59	1.30	13.50	https://fred.stlouisfed.org/series/CPIAUCSL
Unemployment Rate, level change from year ago	CUNP	0.24	1.76	733.33	-2.90	2.20	https://fred.stlouisfed.org/series/UNRATE
II. Structural Factors							
Incumbent political party vying for a third or fourth consecutive presidential term, dummy variable =1 when true; otherwise zero	CONSEC	0.47	0.51	108.51	0	1	https://www.statista.com/statistics/1035521/popular-votes-republican-democratic-parties-since-1828/
Cumulative percentage of popular vote received by third parties	THIRD	4.40	5.54	125.91	0.40	19.60	https://www.statista.com/statistics/1035521/popular-votes-republican-democratic-parties-since-1828/

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The hypothesized signs of association for the political and structural independent variables are shown in the following equation:

$$\text{INCMAR}_t = f\ (\underbrace{\overset{+}{\text{PRGDP}_t};\ \overset{-}{\text{PCPI}_t};\ \overset{+}{\text{PNTO}_t};\ \overset{-}{\text{CUNP}_t}}_{\text{Economic Variables}};\ \underbrace{\overset{-}{\text{CONSEC}_t};\ \overset{?}{\text{THIRD}_t}}_{\text{Structural Variables}}) \quad (1)$$

The linear functional form in the following equation will be tested.

$$\text{INCMAR}_t = b_0 + b_1\,\text{PRGDP}_t + b_2\,\text{PCPI}_t + b_3\,\text{PNTO}_t + b_4\,\text{CUNP}_t + b_5\,\text{CONSEC}_t + b_6\,\text{THIRD}_t \quad (2)$$

where the dependent and independent variables are as defined in Table 1.

The subscript t refers to the 17 presidential election years from 1956 to 2020.

b_0 ….. b_6 are parameters to be estimated.

Note: Display of error terms is suppressed.

4 Empirical Findings

The ordinary least squares (OLS) estimates of Equation (2) are shown in Table 2. All the variables that were significant at the 0.10 level or higher had the expected signs of association, as shown in Equation (1). Because they were not significant at least at the $p < 0.10$ level in Table 2, Regression 1, the variables PRGDP, CUNP, and THIRD were not included in Table 2, Regression 2. Unlike inflation-adjusted variables like PRGDP_t, PNTO_t is already in real terms and does not require an inflation adjustment, which reduces the potential for collinearity with our inflation variable, PCPI_t. In Regression 2, the R-squared dropped from 0.86 to 0.82, but the adjusted R-squared increased slightly from 0.78 to 0.79, and the S.E. of the regression declined from 4.88 to 4.79.

In Table 2, Regression 2, the empirical results suggest that a one percent increase (decrease) in PNTO will lead to a 2.92 increase (decrease) in INCMAR. A one percent increase in PCPI will lead to a 1.67 decrease (increase) in INCMAR.

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Table 2. Regression Results

	Regression 1	Regression 2
Number of observations	17	17
R-squared	0.85	0.82
Adj. R-squared	0.77	0.78
S.E. of Regression	4.89	4.75
F-Statistic	9.74	19.85
Dependent Variable		
INCMAR		
Constant	9.03	10.19
	(2.94) ***	(4.44) ***
I. Economic Variables		
PRGDP	1.1	
	(1.12)	
PNTO	1.59	2.83
	(1.42) *	(5.57) ***
PCPI	-1.28	-1.56
	(-2.72) **	(3.77) ***
CUNP	-0.61	
	(-0.79)	
II. Structural Variables		
CONSEC	-10.11	-10.90
	(-3.98) ***	(-4.70) ***
THIRD	-0.31	
	(-1.20)	

Note: t values are in parentheses where *p < 0.10 ; **p < 0.05 ; ***p<0.01

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The only structural variable that was significant was "CONSEC," where the dummy variable "1" was used in those election years where the incumbent party was seeking a third or fourth consecutive term in office. The empirical results point to a 10.19 percent decrease in INCMAR when the third or fourth consecutive term was being sought. This occurred during the presidential elections of 1960, 1968, 1976, 1988, 1992, 2000, 2008 and 2016.

A comparison of the actual incumbent party margins of victory (+) or loss (-) with that fitted by Table 2, Regression 2, is shown in Table 3. A graphical comparison is presented in Figure 3. Notice that the regression equation correctly predicted whether the incumbent party would win or lose the popular vote margin in 15 of the 17 presidential elections between 1956-2020, as indicated by the actual and fitted values having the same signs of association. The only miscalls were the 1960 and 1968 presidential elections. In 1960, the incumbent Republican party candidate, Richard Nixon, lost in an extremely tight race against JFK. The actual margin of loss (INCMAR) for Nixon in 1960 was 0.20 percent. Table 3, however, predicted a 1.87 percent margin of victory (INCMAR). Doubt remains about the legitimacy of the vote count in Illinois and Texas in 1960. In any event, Table 3 correctly called for a close popular vote margin.

Table 3. Comparison of Actual and Fitted Incumbent Party Margin of Victory (+) or Loss (-)
Fitted Values derived from Table 2, Regression 2

Election Year	Incumbent Party vs. Nonincumbent Party	Actual Margin	Fitted Margin	Residual	Residual Plot
1956	Eisenhower vs. Stevenson	15.40	17.54	-2.14	| . * | . |
1960	Nixon vs. Kennedy	-0.20	1.87	-2.07	| . * | . |
1964	Johnson vs. Goldwater	22.60	16.32	6.28	| . | .* |
1968	Humphrey vs. Nixon	-0.70	1.74	-2.44	| . * | . |
1972	Nixon vs. McGovern	23.20	14.81	8.39	| . | . *|
1976	Ford vs. Carter	-2.00	-0.78	-1.22	| . * | . |
1980	Carter vs. Reagan	-9.40	-8.99	-0.41	| . *| . |
1984	Reagan vs. Mondale	18.20	16.70	1.50	| . | * . |
1988	Bush vs. Dukakis	7.70	1.96	5.74	| . | .* |
1992	Bush vs. Clinton	-5.60	-4.45	-1.15	| . * | . |
1996	Clinton vs. Dole	8.50	11.49	-2.99	| . * | . |
2000	Gore vs. Bush II	0.50	0.13	0.37	| . |* . |
2004	Bush II vs. Kerry	2.40	9.08	-6.68	| * . | . |
2008	McCain vs. Obama	-7.20	-8.19	0.99	| . |* . |
2012	Obama vs. Romney	3.90	11.72	-7.82	| * . | . |
2016	Clinton vs. Trump	2.10	2.32	-0.22	| . * . |
2020	Trump vs. Biden	-4.40	-8.27	3.87	| . | *. |

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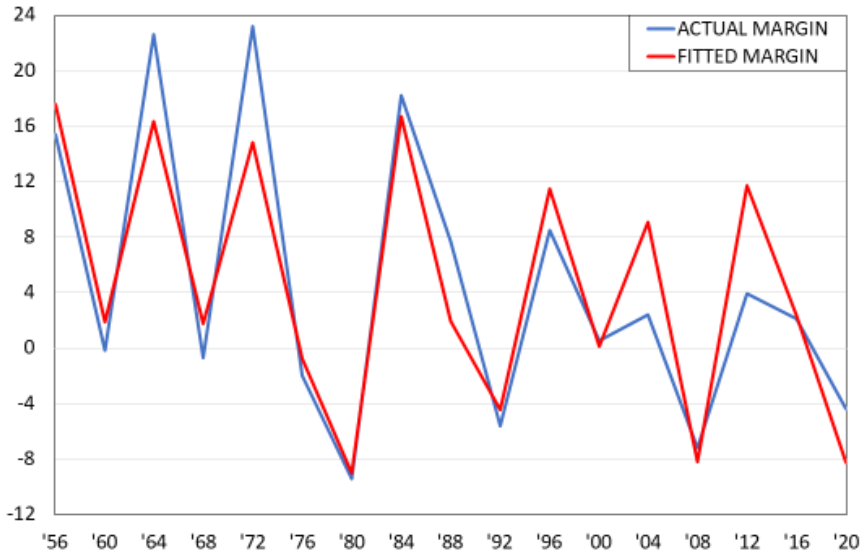
The other miscall was the 1968 election, where the loss of the incumbent party candidate, Hubert Humphrey, was a narrow -0.70 percent as compared to the fitted value of 1.74 percent. As in the case of the 1960 presidential election, the regression was correct in predicting a close race. Some have argued that the presence of the third-party candidacy of Alabama Governor George Wallace, who garnered 13.5 percent of the popular vote, drew more votes from the incumbent party candidate, Hubert Humprey, than Richard Nixon. The fact, however, that the variable representing a third party's vote share (THIRD) was not significant in Table 2, Regression 1 does not lend support to that argument. In that regression, where the third party variable, THIRD, was included, the actual margin (INCMAR) for the incumbent party candidate, Humphrey, was -0.70 as compared to a fitted value of 0.75. So, even with a third-party variable, the signs of the actual and fitted values for INCMAR do not match.

Similarly, some have argued that George H.W. Bush lost against Bill Clinton in the 1992 presidential election occurred because of various third-party candidates that year that totaled 19.6 percent of the popular vote, the highest vote share received by third-party candidates in our 1956-2020 sample. The empirical findings in this study do not support that argument. As shown in Table 3, a loss of -4.45 was predicted for the incumbent party candidate (Bush) as compared to an actual loss of -5.60. Table 3 suggests that Bush's loss is more likely related to voter fatigue with the Republican presidential administration. In 1992, the incumbent Republican party was vying for a fourth consecutive term after the two terms of Ronald Reagan and George H.W. Bush's first term.

FIGURE 4
Actual and Fitted Values for Margin of Victory or Loss for Incumbent Party



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5 Testing the Lag Structure of PNTO and PCPI

The empirical results in the previous section are based on the percentage change in the mean values of payroll jobs (PNTO) and the consumer price index (PCPI) from the year preceding the election year. We now attempt to identify the optimal look-back (lag) for both PNTO and PCPI. Our approach in the first stage of testing is to measure the cumulative change in payroll jobs for a minimum of six months for PCPI and hold that lag constant while increasing the lag for PNTO in gradations of 3-month intervals where the lagged variables are identified by PCPI6 and PNTO6, PNTO 9 …… PNTO30, where, for example, PNTO9 measures the cumulative percentage change in jobs from nine months before an election, while PNTO30 measures the cumulative change over the 30 months prior to an election. The resulting t-stats and adjusted R-squared are presented in Table 4, where the lag in the regression with the highest measured t-stat for PNTO is shaded in Regression 5 (lag = 18 months).

Table 4. First Stage Analysis of Lag for PNTO Holding PCPI6 Constant

	Dependent Variable: INCMAR				
Regression	Explanatory Variables			Measured t-stat for PNTO	F-Stat
1	PNTO6	PCPI6	CONSEC	4.65	12.35
2	PNTO9	PCPI6	CONSEC	5.34	15.66
3	PNTO12	PCPI6	CONSEC	6.12	19.97
4	PNTO15	PCPI6	CONSEC	7.06	25.98
5	PNTO18	PCPI6	CONSEC	7.62	29.93
6	PNTO21	PCPI6	CONSEC	7.16	26.66
7	PNTO24	PCPI6	CONSEC	5.27	15.32
8	PNTO27	PCPI6	CONSEC	4.25	10.62
9	PNTO30	PCPI6	CONSEC	3.50	7.83

Similarly, in the first stage of testing, Table 5 holds PNTO6 constant while varying the lag of PCPI from PCPI6, PCPI9 …… PCPI30. In Table 5, the regression with the highest measured t-stat for PCPI is shaded. In this case, the relevant equation is Regression 3 (lag = 12 months).

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Table 5. First Stage Analysis of Lag for PCPI Holding PNTO6 Constant

	Dependent Variable: INCMAR				
Regression	Explanatory Variables			Measured t-stat for PCPI	F-Stat
1	PNTO6	PCPI6	CONSEC	-3.05	12.33
2	PNTO6	PCPI9	CONSEC	-3.40	13.99
3	PNTO6	PCPI12	CONSEC	-3.39	13.98
4	PNTO6	PCPI15	CONSEC	-3.29	13.48
5	PNTO6	PCPI18	CONSEC	-3.11	12.63
6	PNTO6	PCPI21	CONSEC	-3.18	12.95
7	PNTO6	PCPI24	CONSEC	-3.17	12.91
8	PNTO6	PCPI27	CONSEC	-3.17	12.87
9	PNTO6	PCPI30	CONSEC	-3.03	12.21

In our second stage of testing, we used the empirical results shown in Table 5 to identify a constant lag for PCPI of 9 months (PCPI9). Holding PCPI9 constant and varying the lags for PNTO from PNTO6, PNTO9 …. PNTO30 shown in Table 6, Regression 6 that a lag of 21 months for PNTO (PNTO21) has the highest measured t-stat and F-Stat.

Table 6. Second Stage Analysis of Lag for PNTO Holding PCPI9 Constant

	Dependent Variable: INCMAR				
Regression	Explanatory Variables			Measured t-stat for PNTO	F-Stat
1	PNTO6	PCPI9	CONSEC	4.74	13.99
2	PNTO9	PCPI9	CONSEC	5.36	17.21
3	PNTO12	PCPI9	CONSEC	6.02	21.13
4	PNTO15	PCPI9	CONSEC	6.61	24.89
5	PNTO18	PCPI9	CONSEC	7.20	29.09
6	PNTO21	PCPI9	CONSEC	7.47	31.14
7	PNTO24	PCPI9	CONSEC	5.86	20.13
8	PNTO27	PCPI9	CONSEC	4.76	13.90
9	PNTO30	PCPI9	CONSEC	3.97	10.52

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A graphical presentation of the F-Stats in Table 6 based on different lags for PNTO while holding PCPI9 constant is presented in Figure 5. Note the sharp dropoff in significance for PNTO when the lag extends beyond 21 months.

FIGURE 5
F-Stats for PNTO6 … PNTO30 Holding PCPI9 Constant

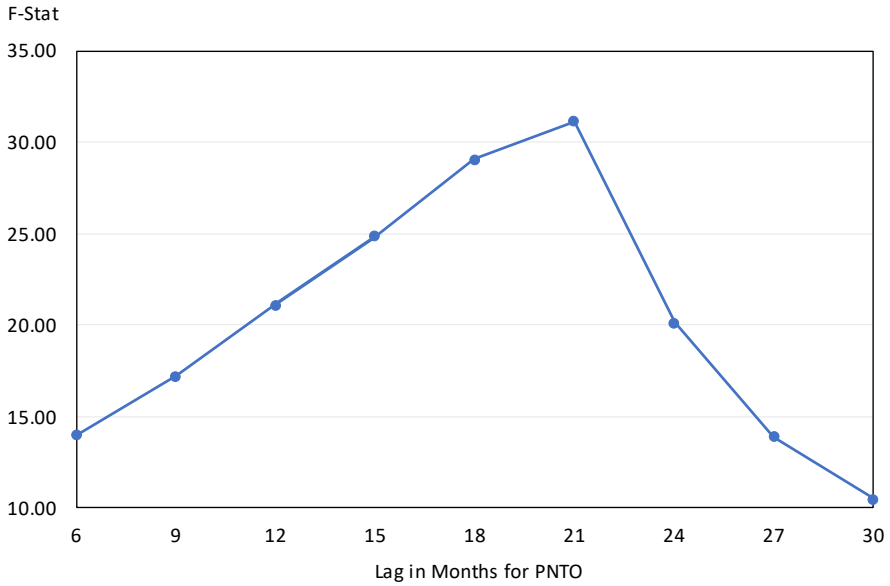

Table 7 holds constant the lag of 21 months for PNTO, as identified in Table 6, while varying the lag for PCPI from PCPI6, PCPI9 … PCPI30. The lag of 9 months for PCPI (PCPI9) exhibits the highest measured t-stat and F-Stat.

Table 7. Second Stage Analysis of Lag for PCPI Holding PNTO21 Constant

	Dependent Variable: INCMAR				
Regression	Explanatory Variables			Measured t-stat for PCPI	F-Stat
1	PNTO21	PCPI6	CONSEC	-4.13	26.66
2	PNTO21	PCPI9	CONSEC	-4.63	31.14
3	PNTO21	PCPI12	CONSEC	-4.15	26.84
4	PNTO21	PCPI15	CONSEC	-4.08	26.25
5	PNTO21	PCPI18	CONSEC	-3.74	23.52
6	PNTO21	PCPI21	CONSEC	-3.80	23.88
7	PNTO21	PCPI24	CONSEC	-3.58	22.31
8	PNTO21	PCPI27	CONSEC	-3.34	20.52
9	PNTO21	PCPI30	CONSEC	-3.17	19.45

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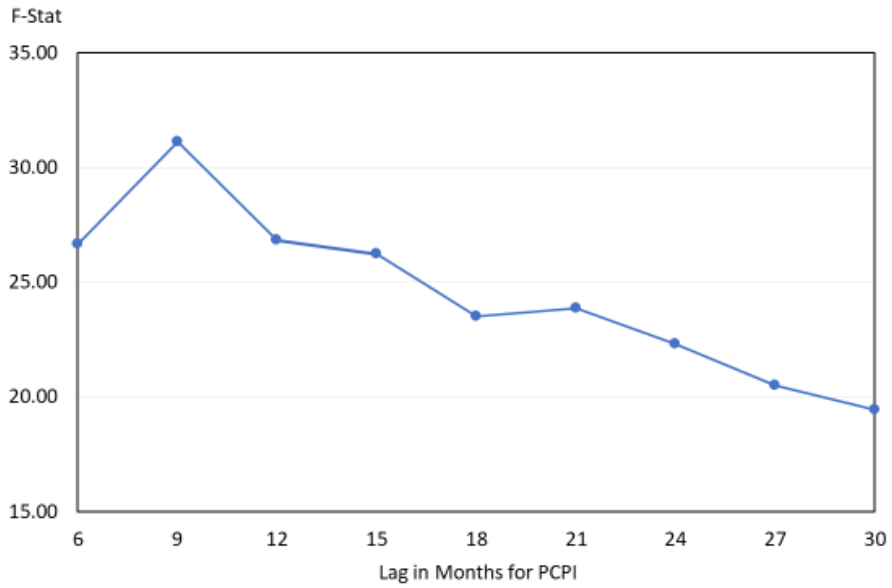
A graphical comparison of the measured t-stats in Table 7 based on different lags for PCPI while holding PNTO21 constant is presented in Figure 6.

FIGURE 6
F-Stats for PCPI6 ... PCPI30 Holding PNTO18 Constant



The regression results, where INCMAR is a function of PNTO21, PCPI9, and the structural variable CONSEC, are presented in Table 8. As shown in Table 2, the variables representing the change in the level of unemployment (CUNP) and the total percentage of popular votes received by third-party candidates are insignificant. When those variables are dropped in Table 8, Regression 2, the significance of each lagged value, PNTO21 and PCPI9, is higher than those obtained in Table 2, Regression 2.

As in the case of Table 2, Regression 2, Table 8, Regression 2 correctly predicted the percentage difference in the popular vote for the incumbent party presidential candidate in 15 of the 17 elections (See Table 9). The greater explanatory power of Table 8, Regression 2, however, is reflected by the adjusted R-squared value increasing from 0.78 in Table 2, Regression 2, to 0.86. In addition, the S.E. of the regression in Table 8, Regression 2, as compared to Table 2, Regression 2 decreased from 4.75 to 3.92 while the F-Statistic increased from 19.85 to 31.14.

The improvement in using the optimal lag structure in Table 8, Regression 2, can be seen by comparing the residuals in Table 9 with those in Table 3. Notice that the residuals derived from Table 2, Regression 2, as shown in Table 3, include a residual of 6.05 in the 1988 George H.W. Bush (incumbent party) vs. Dukakis (nonincumbent party) election. That residual was reduced to 3.71 (See Table 9) by using the optimal lag equation (Table 8, Regression 2). Similarly, in the 2004 George W. Bush (incumbent party) vs. Kerry (nonincumbent party), the residual was reduced from -6.72 in Table 2 to -2.72 in Table 9. In the Trump vs. Biden race in 2020, the residual dropped from 4.02 to 1.48.

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Table 8. Regression Results

	Regression 1	Regression 2
Number of observations	17	17
R-squared	0.88	0.88
Adj. R-squared	0.82	0.85
S.E. of Regression	4.24	3.92
F-Statistic	16.01	31.14
Dependent Variable		
INCMAR		
Constant	7.94	7.86
	(3.12) ***	(3.70) ***
I. Economic Variables		
PNTO21	2.44	2.46
	(6.09) ***	(7.47) ***
PCPI19	-2.50	-2.57
	(-3.93) ***	(-4.63) ***
CUNP	0.02	
	(0.03)	
II. Structural Variables		
CONSEC	-8.65	-8.89
	(3.96) ***	(-4.65) ***
THIRD	-0.07	
	(-0.33)	

Note: t values are in parentheses where *p < 0.10 ; **p < 0.05 ; ***p<0.01

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The explanatory power of Table 8, Regression 2, an equation with only two economic variables (PNTO21 and PCPI19) and one structural variable (CONSEC), can be observed by examining several of the elections when the margins of victory for the incumbent party as shown in Table 9 were above 9 percent (1956; 1964; 1972; 1980; 1984).

In the 1956 election (Eisenhower vs. Stevenson), the wide margin of victory of 15.4 for the incumbent candidate, Eisenhower is often explained by the fact that "IKE" was the revered Supreme Commander of the Allied Expeditionary Force in Europe during WWII, while Adlai Stevenson was a little known Governor of Illinois. Those ad hoc factors which are not objective economic measures do not enter into Table 8, Regression 2. Yet, that equation produced a fitted margin of 17.64, actually larger than IKE's huge margin of victory. Examining the factors in the equation that led to the fitted value of 17.64 shows that most of it occurred because cumulative job growth over the 21-month period from January 1955 to October 1956 (PNTO21) was an impressive 6.63 percent, which was the second highest of all elections compared to a much lower mean PNTO21 of 3.07 for the 17 elections in our sample.

LBJ's victory margin over Barry Goldwater of 22.60 was the second-highest margin for all 17 elections. That huge margin of victory for LBJ is often attributed to Goldwater's perceived extreme right-wing political stance as well as political ads that suggested he would be reckless in the use of nuclear weapons. Perhaps some of that factored into the 1984 election results. But most of the 22.60 percent margin of victory for LBJ can be explained by Table 8, Regression 2, that produced a fitted value of 18.10 percent, the largest fitted value in all 17 elections. The reason it was so large was the fact that PNTO21 over the 21-month period between January 1963 to October 1964 was 4.77 percent as compared to an average of 3.07 percent. Even more important in the wide margin of victory for LBJ was the fact that inflation over the nine months before the election, as measured by PCPI9, was a scant 0.58 percent as compared to an average of 2.65 percent for all 17 elections.

The largest margin of victory of all 17 elections was Nixon's 23.58 margin of victory over McGovern. Many noneconomic explanations have been given for Nixon's huge victory margin, including Mc Govern giving his acceptance speech too late in the evening after most people had gone to bed. There was also the rather sad circumstance regarding McGovern's initial choice of Thomas Eagleton as his running mate who withdrew after revelations of his mental health became public. Table 8, Regression 2 ignores those issues. Its fitted value of a double-digit victory for Nixon of 15.06 percent is mainly explained by rapid job growth over the previous 21 months as measured by a PNTO21 value of 5.37 percent, the third highest of all 17 elections.

One doesn't have to look far to explain Jimmy Carter's margin of loss of -9.40 percent to Ronald Reagan in 1980. The fact that Table 8, Regression 2, was almost a bulls-eye of -9.61 percent is explained by cumulative inflation over the previous nine months as measured by PCPI9 of 8.59 percent, the highest inflationary rate of all 17 elections. In fact, the second highest was a distant PCPI9 value of 3.76 percent in 1976. Ironically, a relatively high rate of inflation in 1976 was the principal economic factor that helped explain Jimmy Carter's presidential win over Gerry Ford.

The next largest margin of victory after Nixon's 23.58 win over McGovern and LBJ's 22.6 win over Goldwater was Ronald Reagan's 18.2 percent trouncing of Walter Mondale in 1984 when

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he was elected to a second term in office. Interestingly, inflation hit a double-digit rate of 10.3 percent one year after his election to his first term in office. But over the next three years, it steadily dropped to 2.4 percent during the election year for his second term. The cumulative inflation rate over the 9-month period from January 1984 to October 1984 for the price variable PCPI9, used in Table 8, Regression 2, PCPI9, was only 2.94 percent, close to the mean for PCPI9 of 2.64. So, in spite of the double-digit inflation early in Reagan's first term, it was close to the average rate during the nine months prior to the election, a period in which we have found that inflation matters most to voters. What really helped Reagan generate that 18.2 margin of victory was on the jobs side. Cumulative job growth over the 21-month period from January 1983 to October 1984, as measured by PNTO21, was 7.46 percent, the highest growth rate for PNTO21 during any of the 17 elections.

The fact that the outlier margins of victory or loss by incumbent parties over the 17 presidential elections since 1956 can be explained mainly by only two economic variables (PNTO21 and PCPI9) provides strong empirical support for James Carville's famous phrase coined in 1992, "It's the economy, stupid."

Table 9. Comparison of Actual and Fitted Incumbent Party Margin of Victory (+) or Loss (-)
Fitted Values derived from Table 8, Regression 2

Election Year	Incumbent Party vs. Nonincumbent Party	Actual Margin	Fitted Margin	Residual	Residual Plot
1956	Eisenhower vs. Stevenson	15.40	17.64	-2.24	| . * | . |
1960	Nixon vs. Kennedy	-0.20	3.45	-3.65	| .* | . |
1964	Johnson vs. Goldwater	22.60	18.11	4.49	| . | * |
1968	Humphrey vs. Nixon	-0.70	2.36	-3.06	| .* | . |
1972	Nixon vs. McGovern	23.20	14.82	8.38	| . | . *|
1976	Ford vs. Carter	-2.00	-2.39	0.39	| . |* . |
1980	Carter vs. Reagan	-9.40	-9.62	0.22	| . * . |
1984	Reagan vs. Mondale	18.20	18.63	-0.43	| . *| . |
1988	Bush vs. Dukakis	7.70	3.99	3.71	| . | *. |
1992	Bush vs. Clinton	-5.60	-7.17	1.57	| . | * . |
1996	Clinton vs. Dole	8.50	10.82	-2.32	| . * | . |
2000	Gore vs. Bush II	0.50	0.92	-0.42	| . *| . |
2004	Bush II vs. Kerry	2.40	5.12	-2.72	| .* | . |
2008	McCain vs. Obama	-7.20	-8.99	1.79	| . | * . |
2012	Obama vs. Romney	3.90	10.76	-6.86	| * . | . |
2016	Clinton vs. Trump	2.10	2.43	-0.33	| . *| . |
2020	Trump vs. Biden	-4.40	-5.88	1.48	| . | * . |

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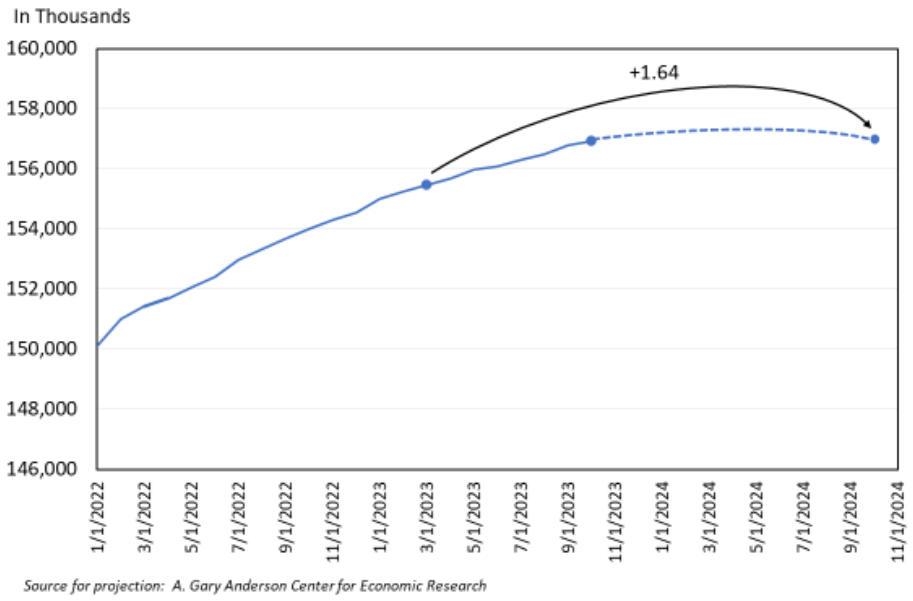
6 Forecasting the 2024 Presidential Election

In order to forecast the 2024 election using Table 2, Regression 2, it will be necessary to have projected values for PNTO21 and PCPI9. Since the incumbent Democratic party has been in office for one term since the 2020 election, the dummy variable for CONSEC will equal zero for the 2024 election forecast.

The projection for PNTO21, using the forecast issued by the A. Gary Anderson Center for Economic Research (*Economic & Business Review*, Volume 42, December 2023) calls for 157,600 employees by October 2024. Using that forecast, the cumulative percentage change for PNTO21 over the 21-month period from January 2023 to October 2024 is 1.64 percent, as shown in Figure 7.

FIGURE 7
Employees, Total Nonfarm



Source for projection: A. Gary Anderson Center for Economic Research

A comparison of PNTO21 in October 2024 with PNTO21 for all of the other election years since 1956 is shown in Figure 8. The 1.64 percent projection for PNTO21 in October 2024 compares to a mean value of 3.07 for all 17 presidential elections from 1956-2020.

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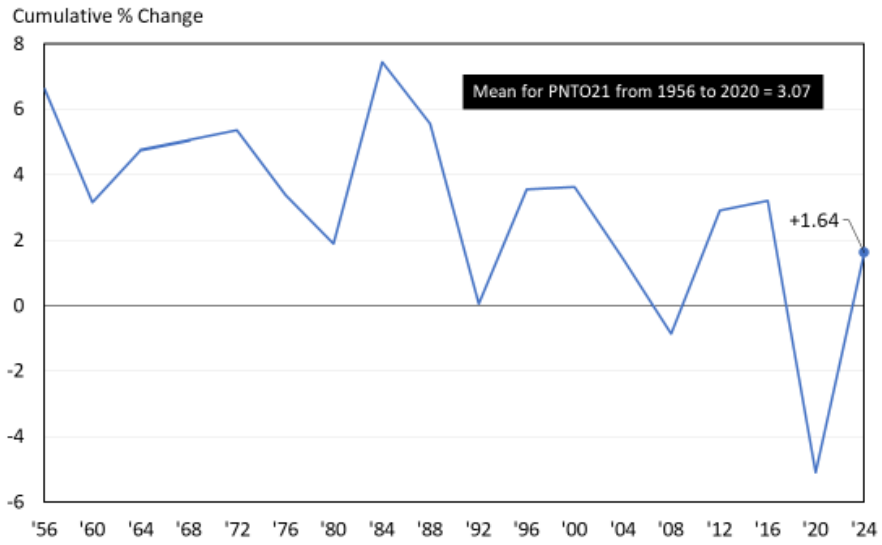
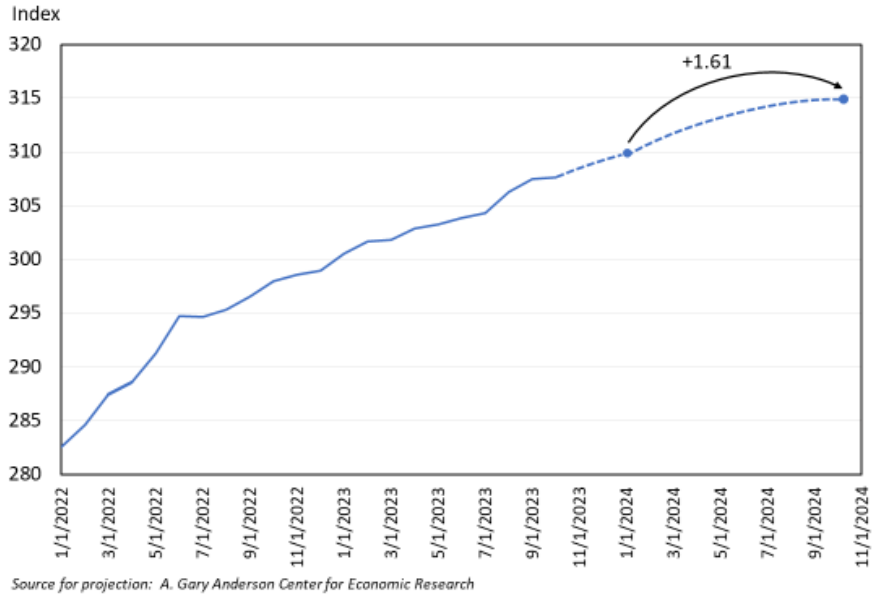
FIGURE 8
PNTO21 During Elections Years



The projection for PCPI9, using the forecast issued by the A. Gary Anderson Center for Economic Research (*Economic & Business Review*, Volume 42), in December 2023, calls for the CPI to increase from 310 in January 2024 to 315 in October 2024. The cumulative percentage change for PCPI9 over that 9-month period is 1.61 percent, as shown in Figure 9.

FIGURE 9
Consumer Price Index



Source for projection: A. Gary Anderson Center for Economic Research

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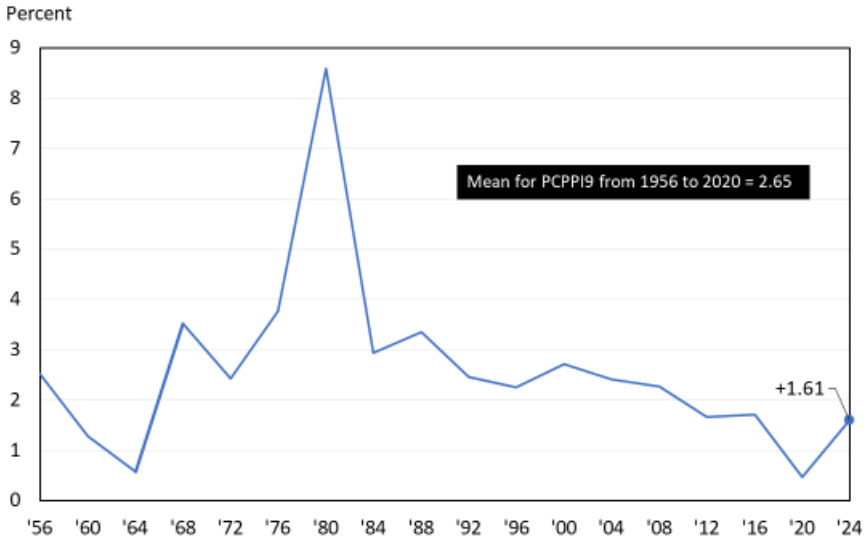
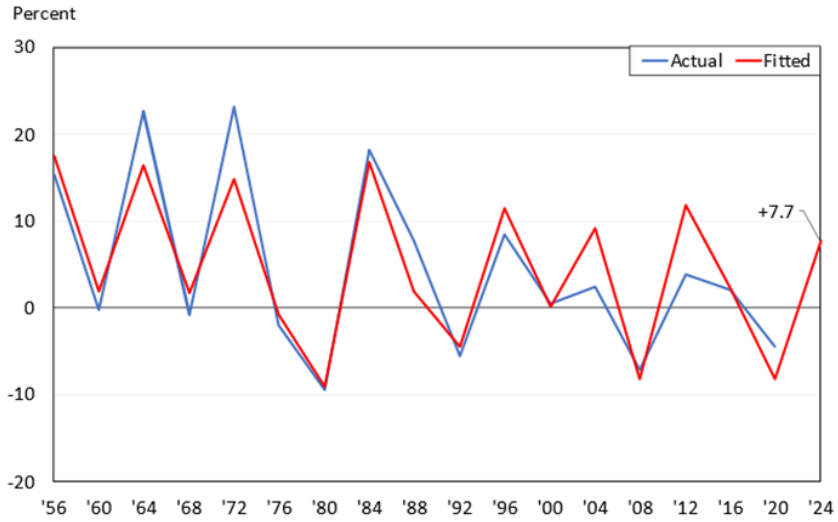
A comparison of PCPI9 in October 2024 with PCPI9 for all of the other election years since 1956 is shown in Figure 10. The 1.61 percent projection for PCPI9 in October 2024 compares to a mean value of 2.65 for PCPI for all other presidential elections from 1956-2020.

FIGURE 10
PCPI9 During Election Years



Substituting the projections of 1.64 for PNTO21 and 1.61 for PCPI9 results in a forecast of an election victory for the incumbent Democratic party of 7.7 percent. This forecast is shown in Figure 11, which also includes the actual and fitted values for INCMAR over the 17 presidential elections between 1956-2020.

FIGURE 11
Incumbent Party's Percentage of Popular Vote Less Nonincumbent Party's Percentage of Popular Vote (INCMAR)



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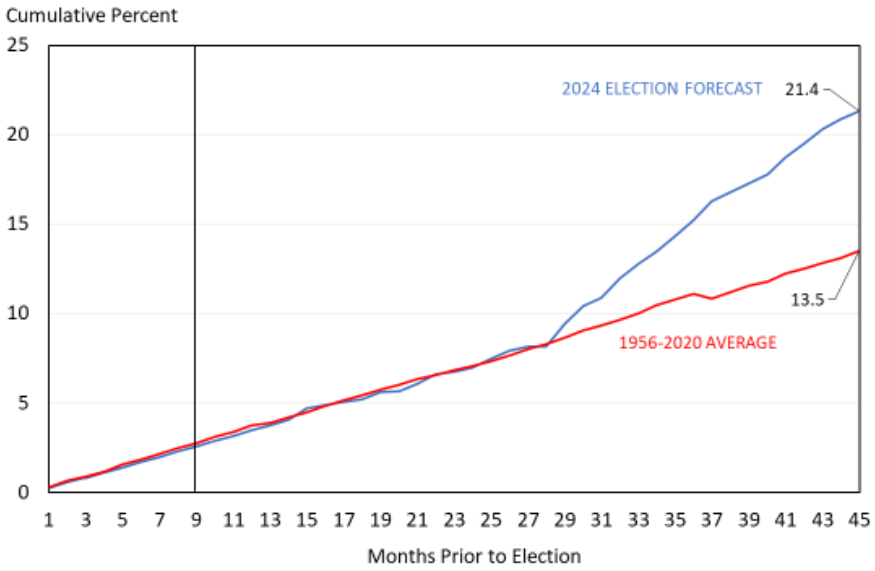
One might question how the incumbent presidential candidate can garner a winning margin of 7.7 percent in light of the relatively high inflation over President Biden's term of office. As shown in Figure 12, the cumulative rate of inflation over Biden's term is forecasted at 21.4 percent, significantly higher than the average cumulative inflation for all 17 previous terms of 13.5 percent. Our empirical findings, however, show that the measure for inflation that has the most significant impact on voters is the cumulative inflation over the nine months prior to the recession. Figure 12 shows that the PNTO9 for the incumbent Democratic party in 2024 is the same as the average for all previous elections. In fact, the forecast for PNTO9 in 2024 of 2.58 is close to the average PNTO9 of 2.78. Rather than inflation hurting the incumbent Democratic party in the 2024 election, our analysis suggests that it will have virtually no impact. But if a recession hits, the table will turn.

FIGURE 12
Cumulative Increase in the CPI from 1 to 45 Months Prior to Election



The forecast of a 7.7 percent margin of victory for the incumbent Democratic party in 2024 is based on a 2024 forecast of relatively weak but nonrecessionary growth in PNTO as well as a continuing decline in inflationary pressure PCPI. Table 2, Regression 2 can also be simulated to project INCMAR under recessionary conditions. If, for example, an unanticipated pickup in inflation leads the Fed to tighten in 2024, resulting in a recession, the projected values for PNTO21 and PCPI9 would obviously change from those shown in Figures 8 and 9.

Assuming an average recession similar to that experienced in 1973-1974, PNTO21 is projected at -1.20 percent instead of the nonrecessionary rate of 1.64 percent, as shown in Figure 8. In addition, PCPI9 would hit 3.00 percent instead of the 1.61 percent rate shown in Figure 9. Such a recessionary scenario would lead INCMAR in 2024 to be -2.8 percent instead of the 7.7 percent value shown in Figure 11. Instead of a popular vote margin of victory for the incumbent

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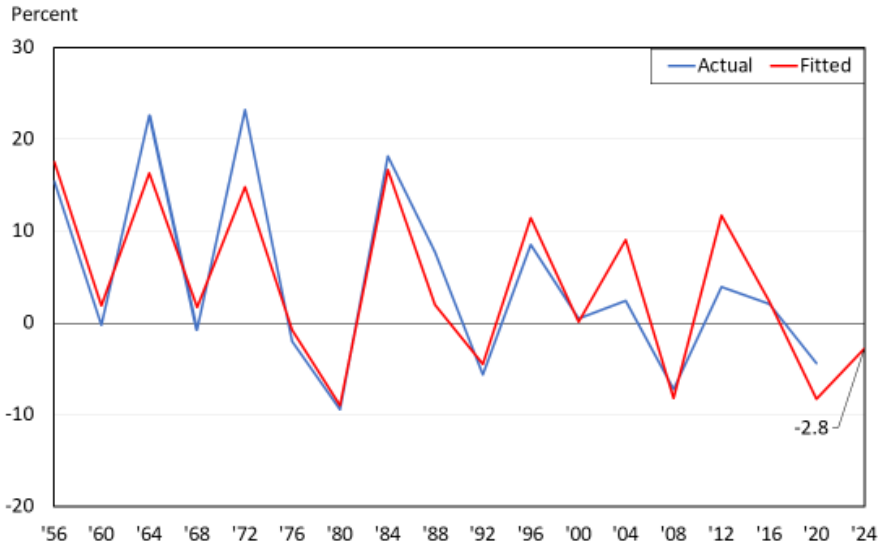
Democratic party of 7.7 percent, a recession would lead to a Democratic party loss of -2.8 percent, as shown in Figure 13.

FIGURE 13
Incumbent Party's Percentage of Popular Vote Less Nonincumbent Party's Percentage of Popular Vote (INCMAR)



7 Policy Implications and Summary

Policy Implications. It is obvious that an incumbent President will be tempted to take any action he can to improve the economic statistics that are predictive of his popular re-election vote. One such attractive anti-inflationary policy today might be to lower gasoline prices by emptying the strategic petroleum reserve, with a positive or negligible effect on employment. Where trade-offs have to be made, however, our findings indicate where President Biden is likely to go this late in his term.

As of today, the relevant employment numbers are already "baked in" for eleven of the twenty-one months before the election. Inflation, by contrast, is salient only starting in January, nine months before October 2024. If President Biden could increase employment growth by one-tenth of a standard deviation over the remainder of his term, it would increase his predicted vote percentage by 0.37 of a percentage point [standard deviation = 3.02, coefficient 2.46, halfway through the relevant time period]; but if that caused inflation to grow by one-tenth of one standard deviation, the trade-off would not be worth it to him, since the inflation effect would lower his likely vote percentage by almost half a point (0.46) [standard deviation = 1.79, coefficient -2.57, measured over the entire relevant time period].

Of course, we would have to take into account whether President Biden could, in fact, affect either employment or price levels by any contemplated policy move. Our principal finding, however, suggests employment enhancement will take a back seat to curbing inflation in a President's last nine months. If so, the implications in the current environment would be to stop

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the administrative "workaround" regarding student loan repayments, not to accelerate payments on multi-year government contracts, and not to jaw-bone the Federal Reserve to lower interest rates (as President Trump had done). He could also direct his Secretary of the Treasury to be restrictive in her regulatory oversight role, thereby lowering the velocity of money. All those steps would reduce inflation, even at a cost of slowing employment growth.

There are also implications for the President at the start of a term in January 2025, whether first or second. Inflation early in the term will be forgotten, employment effects less so. Thus, we should predict a flurry of new spending early in a new President's term, with inflation-fighting being postponed to the re-election year, 2028.

Summary. The focus of this study was to identify the economic and structural variables that determine the difference in the percentage of the popular vote received by presidential candidates representing the incumbent political party (INCMAR) for the 17 presidential elections between 1956 and 2020. A theoretical model was presented to explain the functional relationships tested in this study.

The initial regression tests revealed a significant positive empirical relationship between the annual average change in employment in the year prior to the election to the election year and INCMAR. The study also showed a negative relationship between the percentage change in the CPI and INCMAR. A structural dummy variable representing an incumbent party vying for a third or longer consecutive term was found to affect the incumbent party's presidential candidate negatively. Other economic and structural variables we tested, including the percentage of the popular vote received by third parties, were not found to be significant.

In subsequent rounds of testing, we rigorously examined the lag structure for the two significant economic explanatory variables. Our findings suggest that the optimal lag for employment is the cumulative percentage changes in employment from 21 months prior to October of the election year. The optimal lag for price change is the cumulative change in the CPI nine months prior to October of the election year. Utilizing these lags resulted in greater explanatory power for our regression equation as reflected by a higher adjusted R-squared, lower standard error of the regression, and a higher F-Statistic. As in our initial tests, our best-fit equation correctly called the percentage margin of victory or loss for the incumbent presidential candidate in 15 of the 17 elections included in our sample.

We used our final regression (Table 8, Regression 2) to forecast the incumbent party's (Democratic) popular vote margin (INCMAR) in the upcoming 2024 election. Using nonrecessionary forecasts for employment growth and price change over the lagged periods identified in this study pointed to a positive popular vote margin of 7.7 percent over the nonincumbent party candidate. Our regression was also able to simulate the impact of recessionary forces on employment and price change. That simulation pointed to a loss in the popular vote margin for the incumbent candidate of -2.8 percent.

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Acknowledgments

The authors wish to gratefully recognize the excellent statistical research support provided by Dorothy Farol and Laura Neis. We also wish to express our appreciation to Essra Nawar for her invaluable bibliographical assistance.

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