

Mulligan, Robert F., and Gary A. Lombardo, 2026. "Party and Progress 1949–2022: Economic Growth and Stability Under Contrasting Presidential Regimes." *Journal of Private Enterprise*, 41(1): 1-37.

Party and Progress 1949–2022: Economic Growth and Stability Under Contrasting Presidential Regimes

Robert F. Mulligan

American Institute for Economic Research
United States of America

Gary A. Lombardo

Independent Scholar
United States of America

Abstract

This paper statistically examines the relationship between the incumbent president's political party and the US economy from 1949 to 2024. Compared with Democrats, Republicans have delivered significantly lower GDP growth and greater growth in unemployment. Democratic presidents have significantly lowered unemployment, but Republican presidents have had no significant effect. Neither party has had a significant effect on the debt-to-GDP ratio. Increases in national debt predict lower unemployment after one year. Increased unemployment predicts lower GDP growth after one year but higher GDP growth after four years. GDP growth predicts lower national debt growth after one year. Higher national debt reduces GDP growth after four years. S&P 500 returns predict GDP growth, while higher Dow Jones Industrial Average returns predict lower GDP growth and higher GDP growth predicts higher Dow Jones returns. Presidential party predicts higher federal debt under Republicans after one year.

JEL Codes: D72; E01; E30; E32; P17

Keywords: political business cycle, election cycle, taxation, government spending, analysis of variance, Granger causality

I. Introduction

This paper examines the relationship between incumbent presidential political party and the national economy in the US from 1949 to 2024. We first discuss the relationship between the presidential party and the national economy. Our attention then turns to GDP and its relationship to unemployment and the national debt. Stock market performance, measured by the Standard and Poor's 500 (S&P 500) and

Dow Jones Industrial Average (DJIA), is also examined for each administration. Statistical analyses are used to assess presidential performance and its influence on the national economy. Presidential candidates fashion rhetoric around economic policy proposals to increase stock prices and GDP while decreasing national debt and unemployment. Invariably they decry their opponents' proposals, claiming they are destined to fail. However, although the rhetoric may sound promising, invariably the reality falls short.

Popular wisdom widely assumes that macroeconomic and investment performance is better under purportedly pro-business Republican administrations (Campbell 2011; Bartels [2008] 2016), though this preconception is not generally supported by the facts (Blinder and Watson 2016; Klebnikov 2020, 2022). Macroeconomic performance need not impose symmetric costs and benefits for incumbent or opposing candidates. Bloom and Price (1975) suggest that economic downturns tend to unseat incumbents, but positive macroeconomic performance does not confer corresponding security either to incumbent presidents or their party's legislative majority. To determine whether the incumbent president's party has any significant impact on the variables we examine, we use a variety of statistical tests. We test for differences in the change or percentage change of each variable with one-way analysis of variance (ANOVA) using presidential party as two alternative treatments (table 9). This approach tests and largely confirms Blinder and Watson's (2016) observation that macroeconomic performance has been significantly better under Democratic administrations. Their finding is not challenged by extending the period of examination to include the Obama, first Trump, and Biden presidencies.

Pairwise linear regressions identify simultaneous relationships between the variables of interest and the party in the White House (table 2). Heteroskedasticity-robust *t*-tests indicate Democratic presidents reduce unemployment but bear no statistically significant relationship with any of the other variables (table 3). For Republican presidents, none of the variables have a statistically significant relationship with presidential party. Pairwise Granger causality tests are used to identify lagged relationships (tables 4 and 5). Greater government debt generally lowers unemployment after one year (table 4, section I, test 2). GDP growth significantly increases unemployment after one year (table 4, section I, test 4). It also significantly decreases the debt-to-GDP ratio (table 4, section I, test 6), which is not surprising since GDP is the denominator.

Growth in stock market returns of both the S&P 500 and the DJIA significantly predicts increased GDP after one year (table 4, section I, tests 7 and 8), while GDP growth predicts lower DJIA returns (table 4, section I, test 10). One-way Granger causality tests find significantly higher government debt growth under Republican presidents after one and four years (table 5, section I, test 2; table 5, section II, test 2).

The rest of the paper is organized as follows: Section 2 reviews the political business cycle literature; section 3 introduces the data and presents empirical results; section 4 presents concluding observations.

II. Republican Versus Democratic Macroeconomic Performance and the Political Business Cycle

Some work on political business cycles has focused on the incumbent president's political party while other research has considered the political party controlling one or both houses of Congress. Although the Constitution does not identify the national economy as a governmental responsibility other than in the preamble's general welfare clause, presidents are widely expected to implement growth-enhancing policies in the public interest. Candidates attempt to articulate distinctive policies to enhance economic performance if elected or reelected. Presidents delivering annual State of the Union addresses invariably take credit for a well-performing economy and are either silent or blame forces beyond their control when the economy falters.

Nordhaus (1975) and MacRae (1977) introduced the idea that the business cycle can be driven by electoral outcomes and political maneuvering. Nordhaus posited that incumbents find it optimal to apply stimulative policy before elections to maximize their chances of reelection. In theory, pro-business, pro-free-market Republicans were assumed to pursue more hands-off economic policies, avoiding expansionary Keynesian fiscal stimulus. Democrats were assumed to prioritize social equity over economic growth and pursue regulatory intervention, income redistribution, and Keynesian stimulus while also supporting expansionary monetary policy (Alesina and Sachs 1988). To the extent that policy stimuli are effective, they lead to unsustainable expansion and ultimately reversal of economic fortune, and they eventually help the opposing party unseat incumbents. Some of the unfavorable effects of unsustainable expansion are accelerating inflation and an increasing trade deficit, even if expansionary policies are initially effective in delivering short-

run economic growth, stock market appreciation, and employment, perhaps temporarily helping incumbent presidents stay in office.

Kramer (1971), Tufte (1975), and Fair (1978, 1982, 1988, [2002] 2011) found that economic conditions are a significant determinant of congressional elections, though Stigler (1973) and Lee, Moretti, and Butler (2004) found the opposite. Lewis-Beck (1988) and Madsen (1980) found that economic performance helps incumbents stay in office in other countries. Okun (1973), Kramer, and Stigler examined whether macroeconomic performance systematically impacts election outcomes. Poor economic performance generally presents opportunities for opposition candidates to run on alternative policies. Arcelus and Meltzer (1975) found that poor macroeconomic performance drives voter participation but does not systematically benefit either party, and that short-run stimuli do not generally help incumbent parties either stay in office or strengthen legislative majorities. Lee, Moretti, and Butler found similar results for congressional elections.

Hibbs (1977) constructed a model featuring sharp partisan differences that could lead to cyclical outcomes. However, Hibbs (1977, 1994), Alesina, Roubini, and Cohen (1997), McCallum (1978), Paldam (1979), Abrams (1980), Golden and Poterba (1980), Beck (1982, 1984), Chapell and Keach (1986), Richards (1986), Tabellini and La Via (1986), Havrilesky (1987), and Lewis-Beck (1988) were all unable to find empirical support for Nordhaus's political business cycle model. In contrast, Frey and Schneider (1978), Tufte (1978), Laney and Willett (1983), Soh (1986), and Haynes and Stone (1989) found support for political business cycle models working primarily through disposable income and transfer spending, which acts as an automatic stabilizer, rather than through inflation and unemployment. Disposable income, for example, is boosted immediately by a tax cut. Transfer spending increases automatically with a recession, but accommodative policy boosts it further, often with some kind of sunset provision. Both kinds of expenditures are likely to meet with voter favor during a downturn, and opposition parties will often support bipartisan relief measures rather than risk voter ire.

Virtually all political business cycle models hypothesize some form of Phillips curve (a trade-off between inflation and unemployment), which was a standard fixture of macroeconomic modeling (Scarath 1988, pp. 53, 76, 172–73; McCafferty 1990, pp. 241–45). Thus, any statistical test of political business cycle models tests a joint hypothesis, and a disconfirming result may simply be due to the failure of the underlying Phillips curve hypothesis. This is likely to introduce endogeneity bias

from omitted variables (Eicker 1963, 1967; Huber 1967; White 1980; MacKinnon and White 1985). Though empirical support for any stable or exploitable inflation-unemployment trade-off remains elusive (Niskanen 2002; Reichel 2004; Moghaddam and Jensen 2008; Mulligan 2011, 2025), belief in such a trade-off persists. More importantly the Phillips curve continues to inform government policy and helps differentiate conservatives from progressives. Conservative candidates generally prioritize price stability and low inflation over economic stabilization and income redistribution, while progressive candidates generally tolerate higher inflation if that accompanies reduced unemployment or income inequality (Hibbs 1977, 1994). One problem with many political business cycle models is that stimulative policies that purportedly benefit the disadvantaged by lowering unemployment can only do so by increasing overall output, which simultaneously improves stock market performance and exacerbates income inequality.

The eight-year maximum for presidential tenure mandated by the Twenty-Second Amendment and, prior to that, by long-standing tradition broken only by Franklin D. Roosevelt's third and fourth terms, coincidentally corresponds to Clément Juglar's (1862) conjectured eight-year economic cycles. Frey and Schneider (1978) posited that presidential administrations pursue their own ideological preferences when their popularity and chance of reelection are high, but as their popularity ebbs they pursue less controversial policies to retain power as long as possible. This behavioral pattern confounds naive political business cycle models. Furthermore, as Beck (1984) noted, some administrations defy ideological generalizations, particularly the Kennedy administration, which followed fiscally conservative policies and cut taxes, and the second Nixon administration, which implemented new regulatory programs—including the Clean Air Act, Clean Water Act, and Environmental Protection Act—imposed wage and price controls, and abandoned the gold-exchange standard. To these must now be added the fiscally conservative Clinton administration and fiscally profligate Trump administration.

Early political business cycle models assumed adaptive expectations, and following the prevailing fashion in economic theory, Alesina (1987, 1988) introduced a political business cycle model incorporating rational expectations. However, Sheffrin (1989) and Faust and Irons (1999) found little evidence to support either monetary policy shocks or unanticipated inflation as major drivers of either a political business cycle or macroeconomic performance

generally. Rogoff (1990), Gonzalez (2002), and Shi and Svensson (2006) shifted away from the earlier political business cycle models based primarily on monetary policy, now emphasizing the more explicitly political fiscal budget. Ultimately, central bank independence may bow to political imperatives (Woolley 1984; Beck 1987), and clearly the executive branch can and often does influence monetary policy. Drazen (2000) summarized the state of the political business cycle literature in the quarter century after Nordhaus (1975) published his original study. He reviewed the mixed empirical support and wide variety of modeling assumptions, including adaptive versus rational expectations and contrasting emphases on monetary and fiscal policy.

Garfinkel and Glazer (1994) noted the tendency of economic agents to delay negotiations on term contracts including labor contracts until after an election. Logically, unions and management both benefit from negotiating when the policy environment in which their contract would be implemented—that is, under a pro-business Republican president or a pro-union Democratic one—is more certain. Alesina, Roubini, and Cohen (1997) found that in the post-Bretton Woods period (after 1973), inflation under Republican and Democratic presidents largely converged, with an average annual difference of only 1.8 percent, though they found it was lower under Democrats, a finding some may find counterintuitive. Blinder and Watson (2016) observed that “the US economy performs much better when a Democrat is president than when a Republican is” (p. 1015), noting further that this Republican-Democratic gap is not an outlier effect (p. 1017).

III. Data and Empirical Results

The challenge in evaluating a president’s performance is that the US economy is a dynamic and complex system influenced by a multitude of endogenous and exogeneous factors that cannot be attributed directly to presidential actions. Furthermore, presidential decisions typically represent compromises among numerous stakeholders including legislators, rent-seeking firms and interest groups, lobbyists, and interested citizens. Economic pledges by presidents and presidential candidates are tempered by the reality of evolving politico-economic conditions. Hypothesized statistical relationships among the presidents’ party and other variables of interest are indicated in table 1.

Table 1. Political significance of variables examined

Variable	Hypothesized effect	Short-run feedback	Long-run feedback
GDP growth ($\Delta \ln Y$)	Increase helps incumbent; decrease helps opponent	Increase tends to lower unemployment, debt/GDP, S&P 500, DJIA	
Unemployment (u)	Increase helps opponent; decrease helps incumbent	Increase tends to lower GDP growth, S&P 500, DJIA but raise debt/GDP	
National debt growth ($\Delta \ln D$); debt/GDP ratio (D/Y)	Increase helps incumbent in short run but opponent in long run; decrease helps opponent in short run but incumbent in long run	Increase tends to raise GDP growth, S&P 500, DJIA but lower unemployment	Increase tends to lower GDP growth, S&P 500, DJIA but raise unemployment
S&P 500, DJIA returns (SP, DJIA)	Increase helps incumbent; decrease helps opponent	Increase tends to lower unemployment, debt/GDP but increase GDP growth	

Notes: Only national debt and the debt/GDP ratio have different long-run and short-run feedback effects. Only the short-run effect can influence a given election in isolation, but once long-run feedback manifests itself, it can help an opposing party unseat an incumbent.

This study examines the political party holding the presidency and the resultant (1) GDP growth, (2) unemployment, (3) government debt and debt-to-GDP ratio, and (4) stock market performance. These variables were selected to provide broad and widely watched metrics of the national economy's performance. GDP, national-debt, and unemployment data are taken from the FRED (2023) website. GDP and debt growth are presented as annualized growth rates. Unemployment and the debt-to-GDP ratio are presented as annual changes. Stock market performance,

specifically the S&P 500 and the DJIA, are 1948–2022 annualized returns from the Macrotrends.net website.

Regressing each of these variables on a dummy variable ($R = 1$ for Republican presidents, $= 0$ for Democrats) over 1949–2024 indicates Republicans have delivered significantly lower GDP growth and greater unemployment growth but no significantly different impact on changes in government debt, the debt-to-GDP ratio, or stock returns (table 2). To counter potential endogeneity bias from omitted variables, we compute t -statistics with heteroskedasticity-consistent standard errors (Eicker 1963, 1967; Huber 1967; White 1980; MacKinnon and White 1985). We employ Davidson and MacKinnon's (1993, pp. 554–56) method substituting $\sigma_j^2 = [u_j / (1 - h_{jj})]^2$ as estimators for the variance of the j th error term, where u_j is the residual error and h_{jj} is the diagonal scalar value of the residual projection matrix. Davidson and MacKinnon find that this approach produces better results when the model being estimated suffers from heteroskedasticity.¹

¹ Two alternative approaches to overcoming the heteroskedasticity that may result from endogeneity, omitted variable bias, and simultaneity bias are (a) construction of a panel of macroeconomic variables for other OECD countries in order to control for endogenous global trends and (b) synthetic controls.

Table 2. Regression results: Variables of interest explained by political party

Regression equation	Adj R-square	Average LHS variable	Variable	Coeff	Std error	t-stat	P-value
$\Delta \ln Y = a + bP + e$	0.0323	0.0306	Intercept	0.0357	0.0037	9.5974	0.0000 ***
			Party	-0.0096	0.0051	-1.8723	0.0651 *
$\Delta(D/Y) = a + bP + e$	0.0132	0.4014	Intercept	-0.3087	0.6920	-0.4461	0.6568
			Party	1.3492	0.9539	1.4144	0.1614
$\Delta \ln D = a + bP + e$	0.0142	0.0344	Intercept	0.0263	0.0078	3.3675	0.0012 ***
			Party	0.0155	0.0107	1.4433	0.1532
$\Delta u = a + bP + e$	0.0529	0.0026	Intercept	-0.3250	0.1982	-1.6394	0.1054
			Party	0.6225	0.2733	2.2780	0.0256 **
S&P 500 annual return $= a + bP + e$	0.0057	0.0926	Intercept	0.1163	0.0273	4.2544	0.0001 ***
			Party	-0.0451	0.0377	-1.1967	0.2352
DJIA annual return $= a + bP + e$	-0.0083	0.0842	Intercept	0.0957	0.0257	3.7292	0.0004 ***
			Party	-0.0218	0.0354	-0.6172	0.5390

Notes: n = 76. Presidential Party dummy variable: Democrat = 0, Republican = 1. Particularly note the low R-squares. Standard errors and t-statistics computed with Davidson and MacKinnon (1993, pp. 554–56) heteroskedasticity-consistent standard errors substituting of $2 = [u_j / (1 - h_{jj})]^2$ for the variance of the jth error term. The significant negative coefficients in the ΔY and positive slope coefficient in the Δu regressions indicate Republican presidents deliver significantly lower real output growth and increased unemployment.

Although low R-squares suggest that the linear regressions have poor explanatory power, one-way ANOVA enables us to test for significantly different outcomes under the thirty-six annual observations for Democratic presidents and forty for Republicans. Both parties claim ownership of good economic performance and are silent when news is bad unless they can blame their opponents; however, there is no universally agreed causality running from the president's party to economic performance. Because of potential simultaneity bias and omitted variable bias, the regression results should be interpreted as purely descriptive and without any strong causal implications. Simultaneity bias occurs when causality runs simultaneously from x to y and from y to x (reverse causality). In other words, past realizations of the dependent variable can influence current realizations of one or more of the independent variables, thus introducing endogeneity issues. Our basic assumption is that the president's party is not material in determining macroeconomic performance. Thus, the null hypothesis is that the performance measures are the same under either a Democratic or Republican presidency.

Student's t -tests also yield interesting results (table 3). Here we test the average growth or percentage change in our macroeconomic and equity variables, both for differences from zero separately for Republican and Democratic presidencies and for differences across parties. GDP growth, growth in government debt, and stock market returns are all significantly different from zero for both parties, as shown in the left side of table 3. Democratic presidents have significantly lowered unemployment, but Republican presidents have had no significant effect. Neither party has had a significant effect on the debt-to-GDP ratio. The right side of table 3 presents tests for differences in macroeconomic performance under the two parties. GDP growth has been significantly higher, and increases in unemployment significantly lower, under Democrats. This result confirms Blinder and Watson's (2016) findings. In contrast, our failure to reject the null hypotheses regarding government debt, the debt-to-GDP ratio, and stock market returns mirrors Lee, Moretti, and Butler's (2004) finding that policy does not vary significantly by congressional election outcomes.

Table 3. Student’s t-tests of Democratic vs. Republican differences in average returns

	Null: Avg $\Delta = 0$					Null: Avg Dem $\Delta =$ Avg Rep Δ				
	Avg	Std dev	t-stat	p(t)	signif	Dem-Rep difference	Pooled variance	t-stat	prob(t)	Signif
Dem Δ lnY	0.0357	0.0217	9.8707	0.0000	***	0.0096	0.0005	1.8723	0.0651	*
Rep Δ lnY	0.0261	0.0223	7.3994	0.0000	***					
Dem Δ (D/Y)	-0.3087	4.2824	-0.4325	0.6679		-1.3492	17.2409	-1.4144	0.1614	
Rep Δ (D/Y)	1.0405	3.9231	1.6774	0.1013						
Dem Δ lnD	0.0263	0.0403	3.9131	0.0004	***	-0.0155	0.0022	-1.4433	0.1532	
Rep Δ lnD	0.0418	0.0509	5.1906	0.0000	***					
Dem Δ u	-0.3250	1.0776	-1.8095	0.0787	*	-0.6225	1.4148	-2.2780	0.0256	***
Rep Δ u	0.2975	1.2539	1.5006	0.1413						
Dem S&P 500	0.1163	0.1347	5.1813	0.0000	***	0.0451	0.0269	1.1967	0.2352	
Rep S&P 500	0.0712	0.1829	2.4626	0.0182	**					
Dem DJIA	0.0957	0.1201	4.7806	0.0000	***	0.0218	0.0237	0.6172	0.5390	
Rep DJIA	0.0738	0.1756	2.6587	0.0112	**					

Notes: Standard errors and t-statistics computed with Davidson and Mackinnon (1993, pp. 554–56) heteroskedasticity-consistent standard errors substituting of $2 = [u_i/(1 - h_{ij})]^2$ for the variance of the j th error term. It is especially interesting that the average annual change in the debt-to-GDP ratio is not statistically significant under either party. Democratic presidents have significantly lowered unemployment, but Republican presidents’ impact is not statistically significant. Democratic presidents have brought higher average stock market returns, but the difference is not statistically significant.

Table 4 presents pairwise Granger causality tests among the macroeconomic variables and equity returns. These have the general form $y_t = \beta_0 + \beta_1 y_{t-n} + \beta_2 x_{t-n} + \varepsilon_t$, where the x 's and y 's are annualized changes in the various macroeconomic growth and equity-return series. Regressions are estimated with one- and four-year lagged explanatory data, with results shown in sections I and II of the table, respectively. Results are interpreted as follows: Increases in government debt predict (that is, Granger-cause) lower unemployment after one year (section I, tests 1 and 2). Increased unemployment predicts lower GDP growth after one year (section I, tests 3 and 4) but higher growth after four years (section II, tests 3 and 4), which is consistent with the approximately two-year labor market recovery following a recession. GDP growth predicts lower debt growth after one year (section I, tests 5 and 6). Higher national debt acts as a brake on GDP growth after four years (section II, tests 5 and 6). Higher S&P 500 returns predict higher GDP growth after one year (section I, tests 7 and 9). Higher DJIA returns predict lower GDP growth after one year (section I, test 10), while higher GDP growth predicts higher DJIA returns (section I, test 8). Unsurprisingly, there appears to be no predictive relationship between GDP growth and stock returns after four years (section II, tests 7–10).

Table 4. Pairwise Granger causality tests

I. 1-year lags							
Test	Adj R-square	Variable	Coeff	Std error	t-stat	prob(t)	Signif
1. u→D	0.3438	Intercept	0.0152	0.0055	2.7537	0.0075	*
		$\Delta \ln D(-1)$	0.5756	0.0968	5.9448	0.0000	***
		$\Delta u(-1)$	0.0032	0.0037	0.8574	0.3941	
2. D→u	0.0625	Intercept	0.2352	0.1675	1.4040	0.1646	
		$\Delta u(-1)$	0.0933	0.1131	0.8248	0.4122	
		$\Delta \ln D(-1)$	-7.7114	2.9374	-2.6252	0.0106	***
3. u→Y	0.1721	Intercept	0.0105	0.0059	1.7794	0.0794	*
		$\Delta \ln Y(-1)$	0.6739	0.1762	3.8242	0.0003	***
		$\Delta u(-1)$	0.0133	0.0033	4.0679	0.0001	***
4. Y→u	0.0363	Intercept	0.6512	0.3402	1.9144	0.0595	*
		$\Delta u(-1)$	-0.3093	0.1889	-1.6373	0.1059	
		$\Delta \ln Y(-1)$	-22.1588	10.1715	-2.1785	0.0326	**
5. D→Y	0.0009	Intercept	0.0250	0.0051	4.8562	0.0000	***
		$\Delta \ln Y(-1)$	0.1261	0.1172	1.0757	0.2856	
		$\Delta \ln D(-1)$	0.0662	0.0565	1.1705	0.2456	
6. Y→D	0.4072	Intercept	0.0336	0.0084	4.0247	0.0001	***
		$\Delta \ln D(-1)$	0.5346	0.0918	5.8245	0.0000	***
		$\Delta \ln Y(-1)$	-0.5555	0.1903	-2.9186	0.0047	***
7. S&P500→Y	0.4072	Intercept	0.0214	0.0040	5.3558	0.0000	***
		$\Delta \ln Y(-1)$	0.1103	0.0989	1.1145	0.2688	
		SP500(-1)	0.0698	0.0137	5.0834	0.0000	***
8. DJIA→Y	0.2534	Intercept	0.0210	0.0040	5.2290	0.0000	***
		$\Delta \ln Y(-1)$	0.1252	0.0989	1.2666	0.2094	
		DJIA(-1)	0.0749	0.0146	5.1177	0.0000	***
9. Y→S&P500	0.0155	Intercept	0.1422	0.0339	4.1984	0.0001	***
		SP500(-1)	-0.0996	0.1162	-0.8576	0.3940	
		$\Delta \ln Y(-1)$	-1.3260	0.8370	-1.5842	0.1175	
10. Y→DJIA	0.0309	Intercept	0.1382	0.0315	4.3879	0.0000	***
		DJIA(-1)	-0.1259	0.1147	-1.0974	0.2761	
		$\Delta \ln Y(-1)$	-1.4247	0.7745	-1.8396	0.0699	*

Notes: n = 75 (section I) or 72 (section II). Interpretation of results: Debt (D) reduces unemployment (u). GDP (Y) Granger-causes higher unemployment (u) and lower debt (D). Stock market returns cause higher GDP, but GDP causes lower S&P 500 and DJIA returns.

Table 4. Pairwise Granger causality tests (*continued*)

II. 4-year lags							
Test	Adj R-square	Variable	Coeff	Std error	t-stat	prob(t)	Signif
1. u→D	0.0751	Intercept	0.0266	0.0065	4.1074	0.0001	***
		$\Delta \ln D(-4)$	0.3119	0.1120	2.7849	0.0069	***
		$\Delta u(-4)$	-0.0033	0.0045	-0.7347	0.4650	
2. D→u	-0.0284	Intercept	0.0004	0.1780	0.0020	0.9984	
		$\Delta u(-4)$	-0.0214	0.1242	-0.1720	0.8640	
		$\Delta \ln D(-4)$	0.4259	3.0747	0.1385	0.8902	
3. u→Y	-0.0286	Intercept	0.0290	0.0067	4.3641	0.0000	***
		$\Delta \ln Y(-4)$	0.0196	0.1962	0.1000	0.9206	
		$\Delta u(-4)$	0.0000	0.0038	0.0096	0.9924	
4. Y→u	0.0118	Intercept	-0.5560	0.3677	-1.5121	0.1351	
		$\Delta u(-4)$	0.2724	0.2093	1.3011	0.1975	
		$\Delta \ln Y(-4)$	18.2168	10.8387	1.6807	0.0973	*
5. D→Y	0.0364	Intercept	0.0347	0.0048	7.1629	0.0000	***
		$\Delta \ln Y(-4)$	-0.0347	0.1103	-0.3146	0.7540	
		$\Delta \ln D(-4)$	-0.1139	0.0528	-2.1575	0.0345	**
6. Y→D	0.0725	Intercept	0.0317	0.0103	3.0880	0.0029	***
		$\Delta \ln D(-4)$	0.2790	0.1121	2.4887	0.0152	**
		$\Delta \ln Y(-4)$	-0.1367	0.2344	-0.5832	0.5616	
7. S&P500→Y	-0.0285	Intercept	0.0292	0.0045	6.4405	0.0000	***
		$\Delta \ln Y(-4)$	0.0175	0.1113	0.1573	0.8755	
		S&P(-4)	-0.0014	0.0157	-0.0878	0.9303	
8. DJIA→Y	-0.0286	Intercept	0.0291	0.0046	6.3874	0.0000	***
		$\Delta \ln Y(-4)$	0.0180	0.1115	0.1611	0.8725	
		DJIA(-4)	-0.0002	0.0165	-0.0113	0.9910	
9. Y→S&P500	0.0147	Intercept	0.0724	0.0351	2.0632	0.0429	**
		S&P(-4)	0.2115	0.1217	1.7383	0.0866	*
		$\Delta \ln Y(-4)$	-0.0864	0.8611	-0.1003	0.9204	
10. Y→DJIA	0.0432	Intercept	0.0535	0.0324	1.6515	0.1032	
		DJIA(-4)	0.2684	0.1177	2.2816	0.0256	**
		$\Delta \ln Y(-4)$	0.1706	0.7932	0.2151	0.8303	

Notes: n = 75 (section I) or 72 (section II). Interpretation of results: Debt (D) reduces unemployment (u). GDP (Y) Granger-causes higher unemployment (u) and lower debt (D). Stock market returns cause higher GDP, but GDP causes lower S&P 500 and DJIA returns.

Table 5 presents similar Granger causality tests for the presidential party Granger-causing the macroeconomic and stock market variables. Since the *Party* dummy is set to 1 for Republican presidents and 0 for Democrats, the sign indicates the difference. We do not test whether the variables Granger-cause the dummy because it is widely assumed that poor performance contributes to a subsequent change in presidential party, but to the extent this is true it is symmetric for both parties (Arcelus and Meltzer 1975). Results are as follows: Presidential party does not help predict GDP growth, unemployment, or stock returns after either one or four years (sections I and II, tests 1, 3, 4, and 5), but party predicts higher federal debt after one year under Republicans, with no significant impact after four years (sections I and II, test 2).

Table 5. Granger causality tests on presidential party

I. 1-year lags							
Test	Adj R-square	Variable	Coeff	Std error	t-stat	prob(t)	Signif
1. $P \rightarrow Y$	-0.0181	Intercept	0.0285	0.0057	4.9732	0.0000	***
		$\Delta \ln Y(-1)$	0.0931	0.1182	0.7879	0.4333	
		$Party(-1)$	-0.0004	0.0054	-0.0741	0.9411	
2. $P \rightarrow D$	0.3672	Intercept	0.0075	0.0066	1.1478	0.2548	
		$\Delta \ln D(-1)$	0.5310	0.0987	5.3809	0.0000	***
		$Party(-1)$	0.0172	0.0093	1.8510	0.0683	*
3. $P \rightarrow u$	-0.0253	Intercept	-0.0846	0.2099	-0.4028	0.6883	
		$\Delta u(-1)$	0.0112	0.1194	0.0942	0.9253	
		$Party(-1)$	0.1061	0.2924	0.3629	0.7178	
4. $P \rightarrow S\&P500$	-0.0139	Intercept	0.1130	0.0300	3.7684	0.0003	***
		$S\&P500(-1)$	-0.0925	0.1179	-0.7849	0.4351	
		$Party(-1)$	-0.0228	0.0386	-0.5901	0.5570	
5. $P \rightarrow DJIA$	-0.0117	Intercept	0.1019	0.0277	3.6744	0.0005	***
		$DJIA(-1)$	-0.1111	0.1171	-0.9486	0.3460	
		$Party(-1)$	-0.0163	0.0359	-0.4524	0.6524	

Table 5. Granger causality tests on presidential party (continued)

II. 4-year lags							
Test	Adj R-square	Variable	Coeff	Std error	t-stat	prob(t)	Signif
1. P → Y	-0.0180	Intercept	0.0253	0.0057	4.4555	0.0000	***
		ΔlnY(-4)	0.0942	0.1221	0.7719	0.4428	
		Party(-4)	0.0028	0.0052	0.5313	0.5969	
2. P → D	0.0685	Intercept	0.0261	0.0080	3.2794	0.0016	***
		ΔlnD(-4)	0.2849	0.1174	2.4263	0.0179	**
		Party(-4)	0.0023	0.0113	0.2032	0.8396	
3. P → u	-0.0284	Intercept	0.0082	0.2202	0.0374	0.9703	
		Δu(-4)	0.0220	0.1256	0.1749	0.8617	
		Party(-4)	0.0100	0.3011	0.0332	0.9736	
4. P→S&P500	-0.0161	Intercept	0.1071	0.0315	3.4045	0.0011	***
		S&P500 (-4)	-0.0997	0.1206	-0.8272	0.4110	
		Party(-4)	-0.0162	0.0402	-0.4036	0.6878	
5. P → DJIA	-0.0131	Intercept	0.0977	0.0292	3.3479	0.0013	***
		DJIA(-4)	-0.1163	0.1197	-0.9711	0.3349	
		Party(-4)	-0.0116	0.0375	-0.3095	0.7579	

The Granger causality test regressions in table 5 measure the impact of the presidential party on macroeconomic growth and equity returns at one-year and four-year intervals. Republican presidents significantly increase government spending at rates faster than Democrats. However, the president’s party has had no significant impact on output growth, unemployment, or stock market returns.

Table 6. Regressions in real output growth rates

		Variable	Coeff	Standard error	t-stat	prob(t)	Signif
1. P explained by $\Delta \ln Y$, $\Delta \ln Y^2$, and $\Delta \ln Y^3$							
		Intercept	0.7027	0.1191	5.8979	0.0000	***
Adjusted R-square	0.0097	$\Delta \ln Y$	-2.6370	5.7725	-0.4568	0.6492	
F	prob(F)	$(\Delta \ln Y)^2$	-143.2056	256.2361	-0.5589	0.5780	
1.2461	0.2994	$(\Delta \ln Y)^3$	1530.1061	2842.0579	0.5384	0.5920	
2. $\Delta(D/Y)$ explained by $\Delta \ln Y$, $\Delta \ln Y^2$, and $\Delta \ln Y^3$							
		Intercept	2.2312	0.7026	3.1756	0.0022	***
Adjusted R-square	0.5020	$\Delta \ln Y$	-202.8778	34.0414	-5.9597	0.0000	***
F	prob(F)	$(\Delta \ln Y)^2$	6865.8671	1511.0698	4.5437	0.0000	***
26.2035	0.0000	$(\Delta \ln Y)^3$	-76011.2946	16760.1201	-4.5352	0.0000	***
3. $\Delta \ln D$ explained by $\Delta \ln Y$, $\Delta \ln Y^2$, and $\Delta \ln Y^3$							
		Intercept	0.0292	0.0102	2.8517	0.0057	***
Adjusted R-square	0.1677	$\Delta \ln Y$	-1.4630	0.4961	-2.9489	0.0043	***
F	prob(F)	$(\Delta \ln Y)^2$	79.4533	22.0218	3.6079	0.0006	***
6.0390	0.0010	$(\Delta \ln Y)^3$	-889.4636	244.2559	-3.6415	0.0005	***
4. Δu explained by $\Delta \ln Y$, $\Delta \ln Y^2$, and $\Delta \ln Y^3$							
		Intercept	1.3097	0.1507	8.6900	0.0000	***
Adjusted R-square	0.7320	$\Delta \ln Y$	-76.2348	7.3022	-10.4400	0.0000	***
F	prob(F)	$(\Delta \ln Y)^2$	1056.1130	324.1369	3.2582	0.0017	***
69.2911	0.0000	$(\Delta \ln Y)^3$	-6837.4910	3595.1840	-1.9018	0.0612	*
5. S&P500 returns explained by $\Delta \ln Y$, $\Delta \ln Y^2$, and $\Delta \ln Y^3$							
		Intercept	0.0959	0.0395	2.4299	0.0176	**
Adjusted R-square	-0.0134	$\Delta \ln Y$	-2.6118	1.9117	-1.3662	0.1761	
F	prob(F)	$(\Delta \ln Y)^2$	81.6222	84.8586	0.9619	0.3393	
0.6705	0.5729	$(\Delta \ln Y)^3$	-566.5456	941.2142	-0.6019	0.5491	
6. DJIA returns explained by $\Delta \ln Y$, $\Delta \ln Y^2$, and $\Delta \ln Y^3$							
		Intercept	0.0986	0.0369	2.6690	0.0094	**
Adjusted R-square	-0.0225	$\Delta \ln Y$	-2.0315	1.7895	-1.1352	0.2600	
F	prob(F)	$(\Delta \ln Y)^2$	46.2851	79.4349	0.5827	0.5619	
0.4492	0.7186	$(\Delta \ln Y)^3$	-257.3879	881.0565	-0.2921	0.7710	

Cointegration tests are presented in table 7.

Table 7. Johansen (1991) tests for cointegration

	Max rank	Params	Log L	Eigen-value	Crit trace stat	5% crit value
lnY dY lnd u lnsplndj	2	62	366.7074	0.33675	42.4297*	47.21
lny dy lnd u	1	27	186.2879	0.46125	19.9115*	29.68
lnsplndj	0	6	130.8752	.	6.7364*	15.41
lny lnd u	2	20	302.8363	0.15893	2.7284*	3.76
lny u	0	6	109.6279	.	38.9621	15.41
	1	9	125.8149	0.35057	6.5879	3.76
	2	10	129.1089	0.08409		
lny dy	1	9	3.441735	0.26145	0.1092*	3.76
lny lnd	1	9	339.2304	0.23755	1.3712*	3.76
lny lnspl	0	6	222.9874	.	12.0858*	15.41
lny lndj	0	6	247.1004	.	12.0038*	15.41
dy lnd	1	9	-16.3629	0.22239	1.8578*	3.76
dy u	1	9	-282.373	0.32515	0.0214*	3.76
dy lnspl	1	9	-165.175	0.23846	1.7679*	3.76
dy lndj	1	9	-136.199	0.24759	2.0968*	3.76
lnd dy	1	9	-16.3629	0.22239	1.8578*	3.76
lnd u	1	9	45.92934	0.20674	1.7828*	3.76
lnd lnspl	0	6	171.9439	.	15.2582*	15.41
lnd lndj	1	9	206.4523	0.18159	2.1338*	3.76
u dy	1	9	-282.373	0.32515	0.0214*	3.76
u lnd	1	9	45.92934	0.20674	1.7828*	3.76
u lnspl	0	6	-76.2606	.	11.7715*	15.41
u lndj	0	6	-47.9207	.	10.8617*	15.41

Notes: The trace test concerns the null hypothesis that the number of cointegration vectors is $r = r^* < k$, vs. the alternative that $r = k$. The first nonrejection of the null is taken as an estimate of r , indicated by *. Trend: Constant number of obs = 75. Sample: 1950 thru 2024. Number of lags = 2.

Cointegration tests suggest that each pair of variables included in the Granger causality tests in table 5, section I are cointegrated, except GDP and unemployment, GDP and DJIA returns, GDP and S&P 500 returns, government debt and S&P 500 returns, unemployment and S&P 500 returns, and unemployment and DJIA returns.

A. Gross Domestic Product

There have been twelve recessions over the 1949–2024 period (History.com 2026), varying from mild (for example, 1969–70 and 2001) to severe (for example, the Great Recession). The incumbent president and their party are identified for the start of each recession in table 8. The 1960–61 recession (during the Eisenhower administration), the 1990–91 recession (during the George H. W. Bush administration), and the 2020 COVID recession (during the first Trump administration) had serious implications for the subsequent Democratic administrations of Kennedy, Obama, and Biden.

Table 8. Postwar US recessions

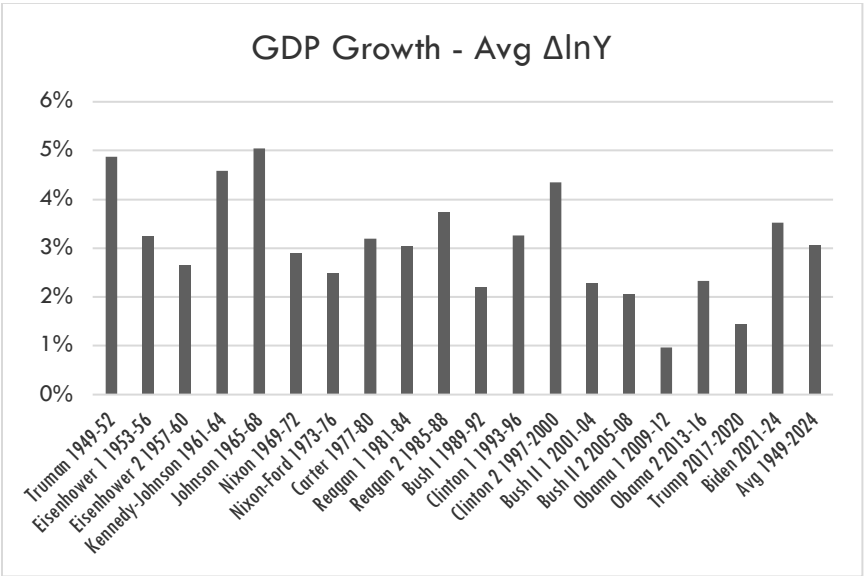
President	Presidential party at start	Recession
Harry S. Truman	Democrat	November 1948 to October 1949: Postwar consumer spending slows
Dwight D. Eisenhower	Republican	July 1953 to May 1954: P ost-Korean War recession
Dwight D. Eisenhower	Republican	August 1957 to April 1958: Asian Flu pandemic
Dwight D. Eisenhower	Republican	April 1960 to February 1961: The recession that cost Nixon an election
Richard M. Nixon	Republican	December 1969 to November 1970: Putting the brakes on 1960s inflation
Richard M. Nixon	Republican	November 1973 to March 1975: The oil embargo
James (Jimmy) E. Carter	Democrat	January to July 1980: Second energy crisis and inflationary recession
Ronald W. Reagan	Republican	July 1981 to November 1982: Double-dip recession
George H. W. Bush	Republican	July 1990 to March 1991: S&L crisis and Gulf War recession
George W. Bush	Republican	March to November 2001: The dot-com crash and 9/11
George W. Bush	Republican	December 2007 to June 2009: The Great Recession
Donald J. Trump	Republican	February–April 2020: The COVID-19 Recession

Source: Prepared by Gary A. Lombardo based on information presented in History.com (2026).

Blinder and Watson (2016) study the relationship between the president’s party and real GDP growth. Their conclusion is that Democratic presidencies enjoy an advantage because of “more benign oil shocks, superior total factor productivity, a more favorable international environment, and perhaps more optimistic consumer expectations about the near-term future” (p. 1015). Table 9 shows average GDP growth has been higher under Democratic presidents than under Republicans by more than 1 percentage point annually on average—that is, over 50 percent higher.

As shown in figure 1, the best-performing administrations are all for Democratic presidents (indicated in blue). Although the worst-performing one is Obama 1, seven out of ten Republican administrations had GDP growth below the postwar average, while seven out of nine Democratic administrations were above average.

Figure 1. Average annual GDP growth by presidential administration, 1949–2024



Overall annual GDP growth can be examined more closely by computing the average annual GDP growth percentage during each presidential administration and presenting the results as an ordinal ranking (table 9). Democratic presidents were ranked in the first through fourth, sixth, and twelfth positions out of thirteen. Obama, in the twelfth position, might argue that his ranking was due to the

Great Recession—inherited from George W. Bush—and generally it seems plausible that the poor economic performance that contributes to a change of presidential party also starts the next incumbent off with poor performance. Poor economic performance cannot generally be changed overnight, especially when candidates campaign on revolutionary change in economic policy more for show than substance. One pattern that can be observed from figure 1 is that Republicans invariably lost the presidency whenever GDP growth fell from term to term, which happened from Eisenhower 1 to 2, Nixon to Nixon-Ford, Reagan 2 to George H. W. Bush, and George W. Bush 1 to 2. Democrats lost the presidency several times despite favorable GDP growth: Kennedy-Johnson to Johnson, Clinton 1 to 2, and Obama 1 to 2.

**Table 9. Average annual GDP growth percent:
Ordinal ranking by administration**

Term	Avg $\Delta \ln Y$	Party
1. Johnson 1965–68	5.0466%	Dem
2. Truman 1949–52	4.8788%	Dem
3. Kennedy-Johnson 1961–64	4.5875%	Dem
4. Clinton 2 1997–2000	4.3526%	Dem
5. Reagan 2 1985–88	3.7444%	Rep
6. Biden 2021–24	3.5275%	Dem
7. Clinton 1 1993–96	3.2542%	Dem
8. Eisenhower 1 1953–56	3.2510%	Rep
9. Carter 1977–80	3.1919%	Dem
10. Reagan 1 1981–84	3.0388%	Rep
11. Nixon 1969–72	2.9052%	Rep
12. Eisenhower 2 1957–60	2.6458%	Rep
13. Nixon-Ford 1973–76	2.4980%	Rep
14. Obama 2 2013–16	2.3236%	Dem
15. Bush II 1 2001–04	2.2925%	Rep
16. Bush I 1989–92	2.2071%	Rep
17. Bush II 2 2005–08	2.0671%	Rep
18. Trump 2017–2020	1.4497%	Rep
19. Obama 1 2009–12	0.9662%	Dem
Average 1949–2024	3.0647%	

In table 10 we report the results of one-way ANOVA testing for significantly different outcomes under the thirty-two annual observations for Democratic presidents and forty for Republicans. The Democratic presidencies' average annual GDP growth is significantly higher than that of Republicans, while increases in unemployment are significantly lower under Democrats. ANOVA indicates no significant differences in debt growth, S&P 500 returns, or DJIA returns under Democrats versus Republicans. However, the debt-to-GDP ratio has risen significantly slower, or even fallen, under Democrats.

Table 10. Democratic vs. Republican ANOVA summary table

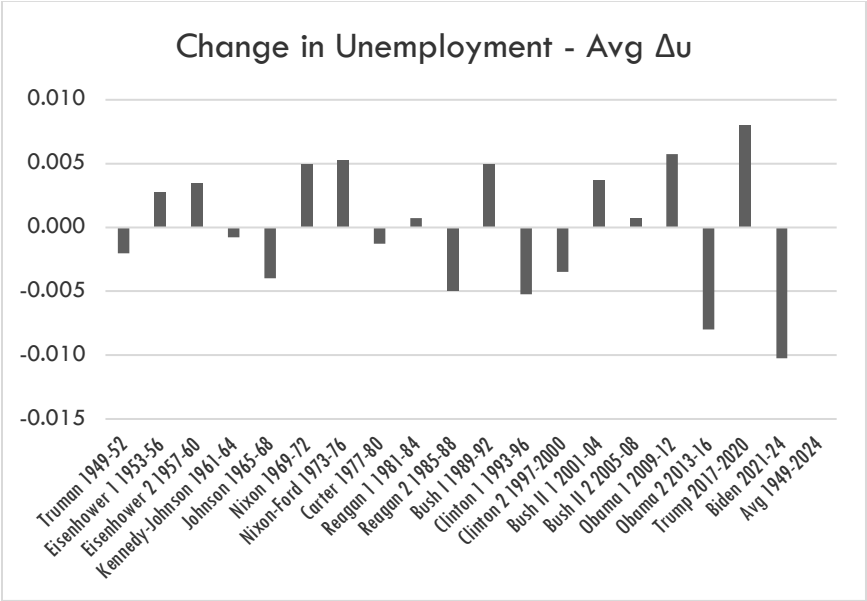
Source of variation	SS	df	MS	F	P-value	5% F crit	Sig
1. Dem vs Rep $\Delta \ln Y$ ANOVA							
Between groups	0.0017	1	0.0017	3.5054	0.0651	3.9702	*
Within groups	0.0369	74	0.0005				
Total	0.0386	75					
2. Dem vs Rep $\Delta(D/Y)$ ANOVA							
Between groups	34.4916	1	34.4916	2.0006	0.1614	3.9702	
Within groups	1275.8273	74	17.2409				
Total	1310.3188	75					
3. Dem vs Rep $\Delta \ln D$ ANOVA							
Between groups	0.0046	1	0.0046	2.0831	0.1532	3.9702	
Within groups	0.1620	74	0.0022				
Total	0.1665	75					
4. Dem vs Rep Δu ANOVA							
Between groups	7.3422	1	7.3422	5.1895	0.0256	3.9702	**
Within groups	104.6973	74	1.4148				
Total	112.0395	75					
5. Dem vs Rep S&P500 return ANOVA							
Between groups	0.0386	1	0.0386	1.4322	0.2352	3.9702	
Within groups	1.9921	74	0.0269				
Total	2.0307	75					
6. Dem vs Rep DJIA return ANOVA							
Between groups	0.0090	1	0.0090	0.3810	0.5390	3.9702	
Within groups	1.7528	74	0.0237				
Total	1.7618	75					

B. Unemployment

During the 1949–2022 period, GDP was inversely related to unemployment. Table 10 compares average changes in unemployment under Republicans versus Democrats.

Unemployment increased over all but one Republican administration (Reagan 2) and decreased over eight out of ten Democratic administrations (figure 2).

Figure 2. Average annual changes in unemployment by presidential administration, 1949–2024



The overall average unemployment rate under Democratic and Republican presidencies can be examined more closely by computing the average annual unemployment rate by presidential term and the average annual unemployment rate change and presenting the results as ordinal rankings (table 11). As the table shows, the unemployment rate fell during each of the six Democratic presidents’ administrations but only two of the seven Republican administrations. President Obama inherited an especially high unemployment rate when he took office in 2009.

Table 11. Average annual unemployment rate and average annual unemployment rate percent change during each presidential term: Ordinal ranking by administration

Average unemployment			Average annual change in unemployment		
Term	Avg u	Party	Term	Avg Δu	Party
1. Johnson 1965–68	3.93%	Dem	1. Biden 2021–24	-1.03%	Dem
2. Biden 2021–24	4.15%	Dem	2. Obama 2 2013–16	-0.80%	Dem
3. Eisenhower 1 1953–56	4.25%	Rep	3. Clinton 1 1993–96	-0.53%	Dem
4. Truman 1949–52	4.40%	Dem	4. Reagan 2 1985–88	-0.50%	Rep
5. Clinton 2 1997–2000	4.40%	Dem	5. Johnson 1965–68	-0.40%	Dem
6. Bush II 2 2005–08	5.03%	Rep	6. Clinton 2 1997–2000	-0.35%	Dem
7. Nixon 1969–72	5.03%	Rep	7. Truman 1949–52	-0.20%	Dem
8. Trump 2017–2020	5.03%	Rep	8. Carter 1977–80	-0.13%	Dem
9. Bush II 1 2001–04	5.50%	Rep	9. Kennedy-Johnson 1961–64	-0.08%	Dem
10. Eisenhower 2 1957–60	5.53%	Rep	10. Reagan 1 1981–84	0.08%	Rep
11. Kennedy-Johnson 1961–64	5.78%	Dem	11. Bush II 2 2005–08	0.08%	Rep
12. Obama 2 2013–16	5.95%	Dem	12. Eisenhower 1 1953–56	0.28%	Rep
13. Clinton 1 1993–96	6.00%	Dem	13. Eisenhower 2 1957–60	0.35%	Rep
14. Bush I 1989–92	6.33%	Rep	14. Bush II 1 2001–04	0.38%	Rep
15. Reagan 2 1985–88	6.48%	Rep	15. Nixon 1969–72	0.50%	Rep
16. Carter 1977–80	6.58%	Dem	16. Bush I 1989–92	0.50%	Rep
17. Nixon-Ford 1973–76	6.68%	Rep	17. Nixon-Ford 1973–76	0.53%	Rep
18. Reagan 1 1981–84	8.60%	Rep	18. Obama 1 2009–12	0.58%	Dem
19. Obama 1 2009–12	8.98%	Dem	19. Trump 2017–2020	0.80%	Rep
Avg 1949–2024	5.71%		Avg 1949–2024	0.00%	

The results of the ANOVA for unemployment are given above in table 10. The *F*-test indicates that the lower unemployment under Democratic presidents is statistically significant.

C. National Debt and Debt-to-GDP Ratio

Democratic administrations reduced the annual average ratio of national debt to GDP by 2 percent more than Republican administrations (table 12). Although 2 percent may not seem major, in the context of multitrillion-dollar budgets the difference is substantial.

Annual percentage growth in the national debt is shown by presidential administration in figure 3. The debt-to-GDP ratio is shown in figure 4.

Figure 3. Average annual percent change in government debt by presidential administration, 1949–2024

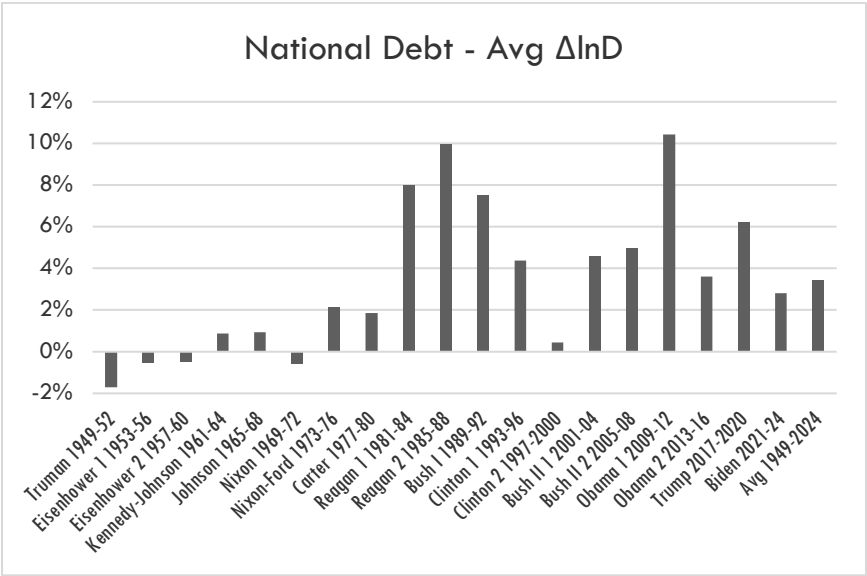
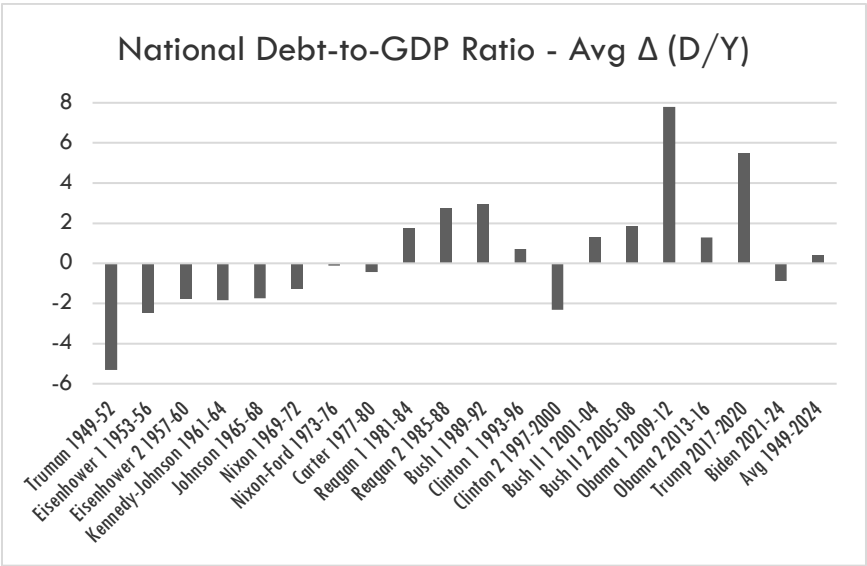


Figure 4. Average annual change in debt-to-GDP ratio by presidential administration, 1949–2024



It is generally expected that Democratic presidents prioritize economic equity, redistribution, and regulation while Republicans prioritize growth (Alesina and Sachs 1988). Government debt and the ratio of national debt to GDP can be examined more closely by computing the debt percentage change and the debt-to-equity percentage change for each presidential administration and displaying the results as an ordinal ranking (table 12). As the table shows, Democratic presidents occupied five of the top six positions in terms of debt-to-GDP changes. The Obama presidency, perhaps because it dealt with the Great Recession when Obama entered the Oval Office, was ranked next to last among the thirteen administrations. Also, the data seem to indicate that there may have been an unspoken norm not to raise the debt substantially during the early years of the period under investigation.

Table 12. National debt percent change and national debt-to-GDP percent change: Ordinal ranking by administration

National debt percentage Change			National debt-to-GDP percentage change		
Term	Avg $\Delta(D/Y)$	Party	Term	Avg $\Delta \ln D$	Party
1. Truman 1949–52	-5.32%	Dem	1. Truman 1949–52	-1.71%	Dem
2. Eisenhower 1 1953–56	-2.46%	Rep	2. Nixon 1969–72	-0.59%	Rep
3. Clinton 2 1997–2000	-2.32%	Dem	3. Eisenhower 1 1953–56	-0.51%	Rep
4. Kennedy-Johnson 1961–64	-1.84%	Dem	4. Eisenhower 2 1957–60	-0.48%	Rep
5. Eisenhower 2 1957–60	-1.78%	Rep	5. Clinton 2 1997–2000	0.45%	Dem
6. Johnson 1965–68	-1.75%	Dem	6. Kennedy-Johnson 1961–64	0.88%	Dem
7. Nixon 1969–72	-1.28%	Rep	7. Johnson 1965–68	0.95%	Dem
8. Biden 2021–24	-0.88%	Dem	8. Carter 1977–80	1.84%	Dem
9. Carter 1977–80	-0.44%	Dem	9. Nixon-Ford 1973–76	2.13%	Rep
10. Nixon-Ford 1973–76	-0.13%	Rep	10. Biden 2021–24	2.81%	Dem
11. Clinton 1 1993–96	0.70%	Dem	11. Obama 2 2013–16	3.60%	Dem
12. Obama 2 2013–16	1.29%	Dem	12. Clinton 1 1993–96	4.37%	Dem
13. Bush II 1 2001–04	1.32%	Rep	13. Bush II 1 2001–04	4.59%	Rep
14. Reagan 1 1981–84	1.73%	Rep	14. Bush II 2 2005–08	4.97%	Rep
15. Bush II 2 2005–08	1.85%	Rep	15. Trump 2017–2020	6.24%	Rep
16. Reagan 2 1985–88	2.73%	Rep	16. Bush I 1989–92	7.50%	Rep
17. Bush I 1989–92	2.93%	Rep	17. Reagan 1 1981–84	7.97%	Rep
18. Trump 2017–2020	5.49%	Rep	18. Reagan 2 1985–88	9.95%	Rep
19. Obama 1 2009–12	7.78%	Dem	19. Obama 1 2009–12	10.44%	Dem
Average 1949–2024	0.40%		Average 1949–2024	3.44%	

ANOVAs for annual debt percentage change and changes in the debt-to-GDP ratio are given in table 10. These *F*-tests indicate no significant difference in debt growth under Republican versus Democratic presidents but significantly greater reductions (or lower increases) in the debt-to-GDP ratio under Democratic presidents.

D. Stock Market Performance

Although the stock market responds to GDP growth over the long run, it is more volatile, with transitory changes often leading GDP and responding to changes in fundamentals more rapidly and preceding short-run overcorrections. Economists who have studied the relationship between the president's party and stock market performance have long known that annual average appreciation is generally greater under Democratic presidents than Republicans. But the conventional wisdom among the public is that the Republican Party enacts policies and legislation that benefit the nation's economy more than Democrats do. For example, Arthur Stein Financial (2012) reports surprise from readers of J. P. Morgan's June 2012 *Guide to the Markets* observation that 1940–2008 stock market performance was better when a Democrat was president.

Republican presidencies are viewed as more favorable to business than Democrats. However, stock market performance captured by the S&P 500 and DJIA is incontrovertible (table 13). Although various studies use different start and ending dates, the results tend to be consistent. French (2023) finds the S&P 500 annual return from 1926 to 2019 during the forty-eight years of Democratic presidencies was 14.94 percent, while the average annual return during the forty-six years of Republican presidencies was only 9.12 percent. The average annual premium of 5.82 percent for a Democratic presidency is substantial, especially when compounded over 48 years.

Pastor and Veronesi (2019) investigate stock market performance during Democratic and Republican presidential administrations, calling the subject a presidential puzzle and emphasized that the phenomenon can be explained by the “endogeneity of election outcomes.” Their argument is that the president's actions are irrelevant; what is relevant is when the president is elected. They posit that Democrats tend to be elected when expected future returns are high and, conversely, Republicans are elected when future expected returns are low.

Stock returns under different presidential administrations are shown in figure 5 for the S&P 500 and figure 6 for the DJIA. The whole of the first year of each administration is attributed to the president's party, even though they do not take office until January 20.

Figure 5. Annual percent return on the S&P 500 by presidential administration, 1949–2024

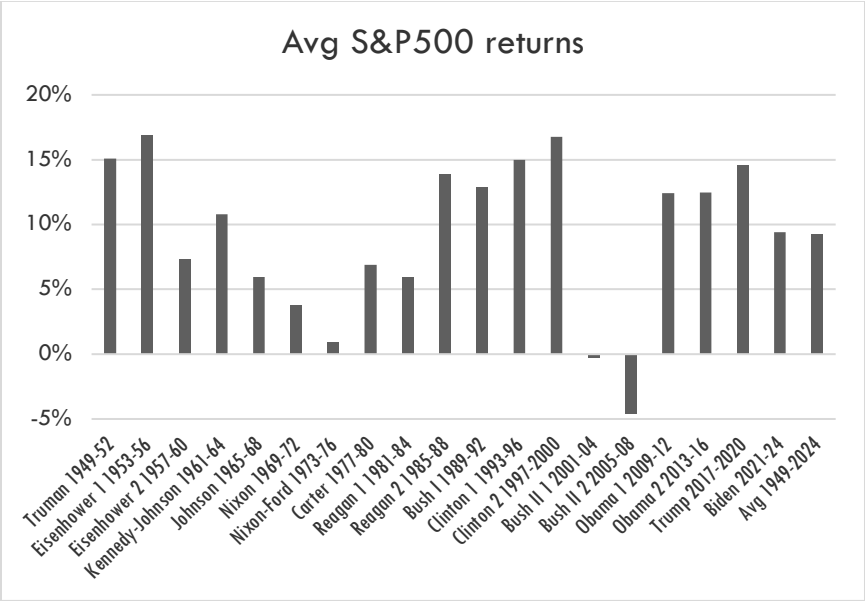
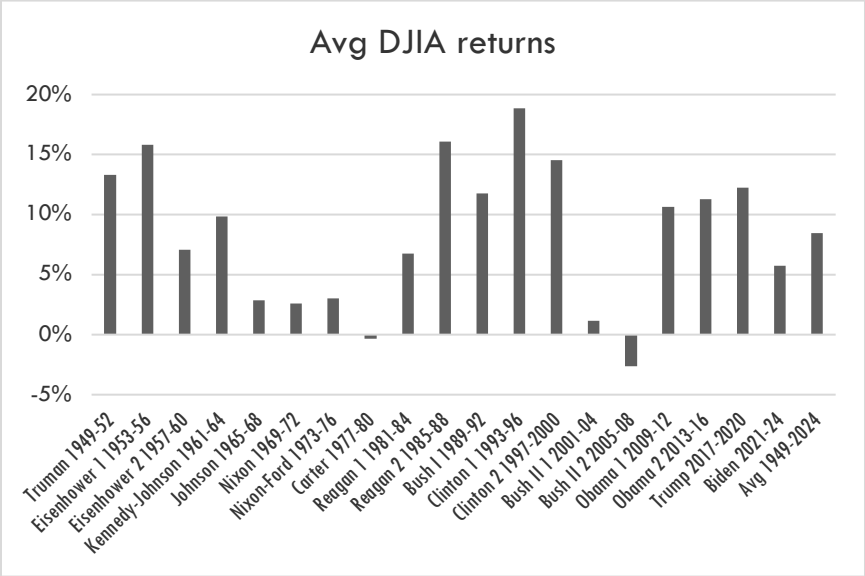


Figure 6. Annual percent return on the DJIA by presidential administration, 1949–2024



The average annual appreciation under Democratic and Republican presidencies can be examined more closely by computing the average annual appreciation under each presidential administration and presenting ordinal rankings (table 13). Although the results are mixed at the individual level, Democratic presidents collectively enjoyed higher S&P 500 and DJIA returns than did Republican presidents. Notably, the stock market performance advantage enjoyed by Democratic presidents is markedly greater with the broader S&P 500 than with the narrower DJIA.

**Table 13. Average annual S&P 500 and DJIA appreciation:
Ordinal ranking by administration**

S&P 500 average annual appreciation			DJIA average annual appreciation		
Term	Avg S&P500 ret	Party	Term	Avg Δ DJIA return	Party
1. Eisenhower 1 1953–56	16.86%	Rep	1. Bush II 2 2005–08	-2.63%	Rep
2. Clinton 2 1997–2000	16.77%	Dem	2. Carter 1977–80	-0.33%	Dem
3. Truman 1949–52	15.07%	Dem	3. Bush II 1 2001–04	1.15%	Rep
4. Clinton 1 1993–96	14.97%	Dem	4. Nixon 1969–72	2.58%	Rep
5. Trump 2017–2020	14.58%	Rep	5. Johnson 1965–68	2.85%	Dem
6. Reagan 2 1985–88	13.85%	Rep	6. Nixon-Ford 1973–76	3.01%	Rep
7. Bush I 1989–92	12.87%	Rep	7. Biden 2021–24	5.71%	Dem
8. Obama 2 2013–16	12.45%	Dem	8. Reagan 1 1981–84	6.73%	Rep
9. Obama 1 2009–12	12.41%	Dem	9. Eisenhower 2 1957–60	7.06%	Rep
10. Kennedy-Johnson 1961–64	10.80%	Dem	10. Kennedy-Johnson 1961–64	9.87%	Dem
11. Biden 2021–24	9.40%	Dem	11. Obama 1 2009–12	10.66%	Dem
12. Eisenhower 2 1957–60	7.32%	Rep	12. Obama 2 2013–16	11.30%	Dem
13. Carter 1977–80	6.91%	Dem	13. Bush I 1989–92	11.78%	Rep
14. Johnson 1965–68	5.93%	Dem	14. Trump 2017–2020	12.26%	Rep
15. Reagan 1 1981–84	5.93%	Rep	15. Truman 1949–52	13.33%	Dem
16. Nixon 1969–72	3.79%	Rep	16. Clinton 2 1997–2000	14.52%	Dem
17. Nixon-Ford 1973–76	0.90%	Rep	17. Eisenhower 1 1953–56	15.81%	Rep
18. Bush II 1 2001–04	-0.26%	Rep	18. Reagan 2 1985–88	16.09%	Rep
19. Bush II 2 2005–08	-4.59%	Rep	19. Clinton 1 1993–96	18.83%	Dem
Avg 1949–2024	9.26%		Avg 1949–2024	8.45%	

Although presidents of both political parties invariably take credit for an appreciating stock market and blame bear markets on their opponents, there is no consensus on causality running from the president to stock performance; hence we suggest these results should be interpreted as purely descriptive with very limited causal implications. Our basic assumption is that the president's party is not material to stock market performance. Thus, the null hypothesis is that stock market performance is the same under either a Democratic or Republican presidency. Table 10 presents ANOVA tests for differences in S&P 500 and DJIA performance under Democrats versus Republicans and finds no significant difference.

This finding is reminiscent of Ferreira and Gyourko's (2009) finding of no significant differences in outcome with regard to party in municipal elections. Though not statistically different, the difference between the 7 percent average return under Republican presidents and 11 percent under Democrats is quite dramatic and best understood by comparing their impact on retirement savings. Consider an investor who saves \$12,000 annually starting at age thirty-five and doubles their contributions at age fifty. A compounded 7 percent return provides \$1,559,533 by age 65, but an 11 percent return provides over twice as much, \$3,133,237. This makes it as curious that Republicans are misperceived as being favorable to business and the investment community as Democrats' persistent fixation on income inequality—which they have contributed more to aggravate in practice.

IV. Conclusion

Exogenous shocks such as the September 11, 2001, terrorist attack and the COVID-19 pandemic affect the national economy. Timely regulatory action headed off contagion from the Silicon Valley Bank and Republic Bank failures in 2023. Many analysts would criticize the Fed's inflation-fighting policy—tightening the money supply and hiking interest rates—as aggravating the insolvency of overleveraged enterprises, but one could equally well point to the decade-long debt monetization that facilitated these firms' overleveraging. Macroeconomic and stock market performance respond to myriad influences that render simple causality elusive. However, every president who claims that their actions and policies led to prosperity should be held accountable for poor stock performance and economic downturns. Although definitive causality cannot be established, a preponderance of circumstantial evidence indicates that the DJIA and S&P 500 have

appreciated more under Democratic presidents, who also reduce the likelihood of recession (Comiskey and Marsh 2012; Deitrick and Goldfarb 2012; Klebnikov 2020, 2022).

Conventional wisdom holds that Republicans are more likely to deliver stock appreciation because they call for tax cuts, tax reform, and deregulation (Bartels [2008] 2016). However, overwhelming evidence indicates that the national economy has performed better under Democratic presidents. A rising stock market contributes to investor optimism and greater real balances, increasing investment and total output. To the extent that this expansion is sustainable, it represents secular growth. Unsustainable growth leads inevitably to recession, retrenchment, and resource reallocation.

It may seem ironic that in the postwar era, the president who added the most (160 percent) to the national debt was Republican Ronald Reagan. In terms of lowering the debt-to-GDP ratio, the only Republicans who did so are Eisenhower and Nixon, and the only Democrats who did not are Clinton and Obama (table 12). Although Republican rhetoric tends to emphasize fiscal restraint, the actual conduct of Republican presidents has been quite different. Given the party's conduct and the economy's performance, Republicans' presentation of themselves as fiscal conservatives has proven little more than performance art. Automatic stabilizers and the policy and bailout stimuli that generally accompany economic downturns generally cause government debt and the debt-to-GDP ratio to rise during recessions. In the case of the debt-to-GDP ratio, the denominator falls during a recession even if the numerator is not increased. However, stimulus spending tends to boost GDP in the short run, even if this output growth is not sustainable. This provides incumbent parties a perverse incentive to increase spending to generate the unsustainable growth that helps keep them in office (Wagner and Buchanan 1977).

References

- Abrams, Burton. 1980. "The Influence of State-Level Economic Conditions on Presidential Elections." *Public Choice*, 35(5): 623–31.
- Alesina, Alberto, and Jeffrey Sachs. 1988. "Political Parties and the Business Cycle in the United States, 1948–1984." *Journal of Money, Credit and Banking*, 20(1): 63–82.
- Alesina, Alberto, N. Roubini, and G. Cohen. 1997. *Political Cycles and the Macroeconomy*. Cambridge, MA: MIT Press.
- Alesina, Alberto. 1987. "Macroeconomic Policy in a Two-party System as a Repeated Game." *Quarterly Journal of Economics*, 102(3): 651–78.

- Alesina, Alberto. 1988. "Macroeconomics and Politics." In *NBER Macroeconomics Annual*, ed. Stanley Fischer. Cambridge, MA: MIT Press.
- Arcelus, F., and A. Meltzer. 1975. "The Effect of Aggregate Economic Variables on Congressional Elections." *American Political Science Review*, 69(4): 1232-39.
- Arthur Stein Financial. 2012. "Who Better Stock Market: Democrats or Republicans?" *Arthur Stein Financial Blog*, September 9.
- Bartels, Larry M. (2008) 2016. *Unequal Democracy: The Political Economy of the New Gilded Age*. 2nd ed. Princeton, NJ: Princeton University Press.
- Beck, N. 1987. "Elections and the Fed: Is There a Political Monetary Cycle?" *American Journal of Political Science*, 31(1): 194-216.
- Beck, Nathaniel N. 1982. "Does There Exist a Political Business Cycle: A Box-Tiao Analysis." *Public Choice*, 38(2): 205-09.
- Beck, Nathaniel N. 1984. "Domestic Political Sources of American Monetary Policy: 1955-82." *Journal of Politics*, 46(3): 786-817.
- Blinder, Alan S., and Mark W. Watson. 2016. "Presidents and the U.S. Economy: An Econometric Exploration." *American Economic Review*, 106(4): 1015-45.
- Bloom, H., and H. Price. 1975. "Voter Response to Short-Run Economic Conditions: The Asymmetric Effect of Prosperity and Recession." *American Political Science Review*, 69(4): 1240-54.
- Campbell, James E. 2011. "The Economic Records of the Presidents: Party Differences and Inherited Economic Conditions." *The Forum*, 9(1): 1-29.
- Chappell, Henry W., and William R. Keech. 1986. "Party Differences in Macroeconomic Policies and Outcomes." *American Economic Review*, 76(2): 71-74.
- Comiskey, Michael, and Lawrence C. Marsh. 2012. "Presidents, Parties, and the Business Cycle, 1949-2009." *Presidential Studies Quarterly*, 42(March): 40-59.
- Davidson, R., and J. G. MacKinnon. 1993. *Estimation and Inference in Econometrics*. New York: Oxford University Press.
- Deitrick, Bob, and Lew Goldfarb. 2012. *Bulls, Bears, and the Ballot Box*. Charleston, SC: Advantage Media Group/Forbes Books.
- Drazen, Allan. 2000. "The Political Business Cycle after 25 Years." In *NBER Macroeconomics Annual 2000*, ed. Ben S. Bernanke and Kenneth Rogoff, 15: 75-138. Cambridge, MA: MIT Press.
- Eicker, Friedhelm. 1963. "Asymptotic Normality and Consistency of the Least Squares Estimators for Families of Linear Regressions." *Annals of Mathematical Statistics*, 34(2): 447-56.
- Eicker, Friedhelm. 1967. "Limit Theorems for Regressions with Unequal and Dependent Errors." *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability*, 1: 59-83.
- Fair, Ray C. 1978. "The Effect of Economic Events on Votes for President." *Review of Economics and Statistics*, 60(2): 159-72.
- Fair, Ray C. 1982. "The Effect of Economic Events on Votes for President: 1980 Results." *Review of Economics and Statistics*, 64(2): 322-35.
- Fair, Ray C. 1988. "The Effects of Economic Events on Votes for President: 1984 Update." *Political Behavior*, 10(2): 168-79.
- Fair, Ray C. (2002) 2011. *Predicting Presidential Elections and Other Things*. 2nd ed. Palo Alto, CA: Stanford University Press.
- Faust, J., and J. Irons. 1999. "Money, Politics, and the Post-War Business Cycle." *Journal of Monetary Economics*, 43(1): 61-89.

- Ferreira, Fernando, and Joseph Gyourko. 2009. "Do Political Parties Matter? Evidence from U.S. Cities." *Quarterly Journal of Economics*, 124(1): 399–422.
- FRED. 2023. "Unemployment Rate (UNRATE)." Federal Reserve Bank of St. Louis.
- French, Bob. 2023. "Are Republicans or Democrats Better for the Stock Market?" *Retirement Researcher*, September 27.
- Frey, Bruno, and Friedrich Schneider. 1978. "An Empirical Study of Politico-Economic Interaction in the United States." *Review of Economics and Statistics*, 60(1): 174–83.
- Garfinkel, Michelle, and Amihai Glazer. 1994. "Does Electoral Uncertainty Cause Economic Fluctuations?" *American Economic Review*, 84(2): 169–73.
- Golden, David G., and James M. Poterba. 1980. "The Price of Popularity: The Political Business Cycle Reexamined." *American Journal of Political Science*, 24(4): 696–714.
- Gonzalez, Maria de los Angeles. 2002. "Do Changes in Democracy Affect the Political Budget Cycle? Evidence from Mexico." *Review of Development Economics*, 6(2): 204–24.
- Havrilesky, Thomas. 1987. "A Partisan Theory of Fiscal and Monetary Regimes." *Journal of Money, Credit and Banking*, 19(3): 308–25.
- Haynes, Stephen E., and Joe A. Stone. 1989. "An Integrated Test for Electoral Cycles in the U.S. Economy." *Review of Economics and Statistics*, 71(3): 426–34.
- Hibbs, D. 1977. "Political Parties and Macroeconomic Policy." *American Political Science Review*, 71(4): 1467–87.
- Hibbs, D. A. 1994. "The Partisan Model of Macroeconomic Cycles: More Theory and Evidence for the United States." *Economics & Politics*, 6(1): 1–23.
- History.com. 2026. "How the US Got Out of 13 Economic Recessions Since World War II."
- Huber, Peter J. 1967. "The Behavior of Maximum Likelihood Estimates Under Nonstandard Conditions." *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability*, 1: 221–33.
- Johansen, Søren. 1991. "Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models." *Econometrica*, 59(6): 1551–80.
- Juglar, Clément. 1862. *Des Crises commerciales et leur retour periodique en France, en Angleterre, et aux Etats-Unis*. Paris: Guillaumin.
- Klebnikov, Sergei. 2020. "Historical Stock Market Returns Under Every US President." *Forbes*, July 23.
- Klebnikov, Sergei. 2022. "We Looked at How the Stock Market Performs During Midterm Election Years—Here's How 2022 May Be Worse." *Forbes*, January 19.
- Kramer, G. 1971. "Short-Term Fluctuations in U.S. Voting Behavior, 1896–1964." *American Political Science Review*, 65(1): 131–43.
- Laney, Leroy, and Thomas Willett. 1983. "Presidential Politics, Budget Deficits, and Monetary Policy in the United States; 1960–1976." *Public Choice*, 40(1): 53–69.
- Lee, David S., Enrico Moretti, and Matthew J. Butler. 2004. "Do Voters Affect or Elect Policies? Evidence from the U.S. House." *Quarterly Journal of Economics*, 119(3): 807–59.

- Lewis-Beck, M. 1988. *Economics and Elections*. Ann Arbor, MI: University of Michigan Press.
- MacKinnon, James G., and Halbert White. 1985. "Some Heteroskedastic-Consistent Covariance Matrix Estimators with Improved Finite Sample Properties." *Journal of Econometrics*, 29(3): 305–25.
- MacRae, C. Duncan. 1977. "A Political Model of the Business Cycle." *Journal of Political Economy*, 85(2): 239–63.
- Madsen, H. 1980. "Electoral Outcomes and Macroeconomic Policies: The Scandinavian Cases." In *Models of Political Economy*, ed. P. Whitely, 15–46. London: Sage.
- McCafferty, Stephen. 1990. *Macroeconomic Theory*. New York: Harper & Row.
- McCallum, Bennett T. 1978. "The Political Business Cycle: An Empirical Test." *Southern Economic Journal*, 44(3): 504–15.
- Moghaddam, M., and J. E. Jenson. 2008. "On the Death of the Resurrected Short-Run Phillips Curve: A Further Investigation." *Cato Journal*, 28(1): 139–45.
- Mulligan, R. F. 2011. "An Austrian Rehabilitation of the Phillips Curve." *Cato Journal*, 31(1): 87–98.
- Mulligan, R. F. 2025. "Output-Inflation Tradeoffs in the Twenty-First Century: Reassessing the Phillips Curve in Terms of Austrian Business Cycle Theory." Working paper.
- Niskanen, W. A. 2002. "On the Death of the Phillips Curve." *Cato Journal*, 22(2): 193–98.
- Nordhaus, William D. 1975. "The Political Business Cycle." *Review of Economic Studies*, 42(2): 169–90.
- Okun, A. 1973. "Comments on Stigler's Paper." *American Economic Review*, 63(2): 172–77.
- Paldam, M. 1979. "Is There an Electional Cycle? A Comparative Study of National Accounts." *Scandinavian Journal of Economics*, 81(3): 323–42.
- Paldam, M. 1979. "Is There an Electoral Cycle? A Comparative Study of National Accounts." *Scandinavian Journal of Economics*, 81(2): 323–42.
- Pastor, Lubos, and Pietro Veronesi. 2019. "Political Cycles and Stock Returns." NBER Working Paper No. 23184, National Bureau of Economic Research.
- Reichel, R. 2004. "On the Death of the Phillips Curve: Further Evidence." *Cato Journal*, 24(3): 341–48.
- Richards, Daniel J. 1986. "Unanticipated Money and the Political Business Cycle." *Journal of Money, Credit and Banking*, 18(4): 447–57.
- Rogoff, Kenneth. 1990. "Equilibrium Political Budget Cycles." *American Economic Review*, 80(1): 21–36.
- Scarth, William M. 1988. *Macroeconomics: An Introduction to Advanced Methods*. New York: Harcourt Brace Jovanovich.
- Sheffrin, S. 1989. "Evaluating Rational Partisan Business Cycle Theory." *Economics & Politics*, 1(3): 239–59.
- Shi, Min, and Jakob Svensson. 2007. "Political Budget Cycles: Do They Differ Across Countries and Why?" *Journal of Public Economics*, 90(8-9): 1367–89.
- Soh, Byung Hee. 1986. "Political Business Cycles in Industrialized Democratic Countries." *Kyklos*, 39(1): 31–46.
- Stigler, George. 1973. "General Economic Conditions and National Elections." *American Economic Review*, 63(2): 160–67.

- Tabellini, Guido, and Vincenzo La Via. 1986. "Money, Deficit and Public Debt: An Empirical Investigation." *Proceedings*, Federal Reserve Bank of San Francisco.
- Tufte, E. 1975. "Determinants of the Outcomes of Midterm Congressional Elections." *American Political Science Review*, 69(3): 812–26.
- Tufte, E. 1978. *Political Control of the Economy*. Princeton, NJ: Princeton University Press.
- Wagner, Richard E., and James M. Buchanan. 1977. *Democracy in Deficit: The Political Legacy of Lord Keynes*. Indianapolis, IN: Liberty Press.
- White, Halbert. 1980. "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity." *Econometrica*, 48(4): 817–38.
- Woolley, J. T. 1984. *Monetary Politics: The Federal Reserve and the Politics of Monetary Policy*. Cambridge, UK: Cambridge University Press.

