

Are There Political Business Cycles in the United States?

Abstract: This paper describes and tests theories of political business cycles in the United States. Political business cycles are a set of models that theorize politicians will act opportunistically and time expansionary economic policy around elections in order to increase their probability of getting reelected. Partisan political business cycles, relatedly, argue that left-leaning parties are more likely to enact expansionary policies during their tenure, favoring increased inflation for less unemployment. This paper uses information on yearly gross domestic product (GDP) growth and presidential election timing dating back to 1789 to test if the United States exhibits either of these political business cycles at the national level. The main analysis is complemented by a state-level analysis from 1990-2017 of 5 key macroeconomic indicators: GDP, unemployment, inflation, budget deficits, and welfare expenditure to see if opportunistic political business cycles are found at the state-level. The results indicate no significant differences in changes in macroeconomic conditions in election years versus non-election years, providing no evidence in support of the theory of political business cycles in the United States. There is some evidence, however, that partisan business cycles may have existed during the 19th century, but no longer do.

Keywords: *Political business cycle, Retrospective voting, Partisan business cycle, Political Economy, Macroeconomy, Executive Politics*

Introduction

Political business cycles are a set of models that theorize incumbent political actors implement expansionary economic policies in close proximity to political elections in order to increase their probability of reelection. Rooted in the rich tradition of retrospective and economic voting (e.g., Key 1966; Fiorina 1981; Erikson 1989; Achen & Bartels 2016; Guntermann et al. 2021), which posits that voters base their choices on current and past economic prosperity, political business cycles have long intrigued both political scientists and economists. However, the empirical evidence supporting these models is mixed at best (Fox 2015). Since Nordhaus (1975) introduced the concept of an opportunistic political business cycle, scholars have found some supporting evidence for this phenomenon (e.g. Akhmedov & Zhuravskaya 2004; Garmann 2017; Cahan 2019) though largely outside of the United States. Many others have failed to find conclusive results, especially in the United States (e.g. Alt & Chrystal 1983; Alesina et al. 1997; and Faust & Irons 1999), but much of the existing work focuses on small time periods of the national government. In addition to the opportunistic model, the partisan business cycle theory posits that left-leaning parties, faced with the trade-off between higher unemployment or higher inflation, are more likely to enact expansionary policies that could increase inflation (Hibbs 1977). Empirical evidence for the partisan business cycle model is also weak, but some studies suggest that the U.S. economy performs better under Democratic presidents than Republicans (Alesina et al. 1997 and Faust & Irons 1999).

Using the longest possible U.S. time series, dating back to 1789 (Guntermann et al. 2021), this paper tests for opportunistic and partisan business cycles at the national level. The results indicate that election occurrence is not a significant predictor of increased economic activity, even under the most generous of models. Furthermore, using *Correlates of State Policy* data, this paper tests for opportunistic political business cycles across five key state-level macroeconomic variables from 1990 to 2017: GDP, inflation, unemployment, government debt, and welfare expenditure. The results reveal that elections do not significantly predict changes in any of these important economic indicators. Taken together, these findings suggest no empirical support for the idea that political actors opportunistically expand economic activity near elections to secure electoral success. Finally, the analysis shows that, partisan business cycles may have existed at the national level in early America, but no party outperforms any other during its tenure in office in the modern era. If partisan business cycles did once exist, they no longer do.

This paper contributes to the literature by casting a wide net and employing generous statistical models to detect even basic correlation evidence for political business cycles using as of yet unexplored data sources. This is the first paper, to my knowledge, to test theories of political business cycles throughout the entirety of U.S. history, and the first to look for cycles specifically in state-level government debt, welfare expenditure, and other macroeconomic indicators in the United States. Overall, this paper finds no evidence to suggest that the U.S. has an opportunistic political business cycle or has an active partisan business cycle. This paper precedes as follows: the next section summarizes the basic theoretical motivations of

political business cycles; the third section discusses the data and methodology of testing for political business cycles; the fourth section presents the results of the tests; and the final section offers a brief discussion and concluding remarks related to the empirics.

Theoretical Considerations

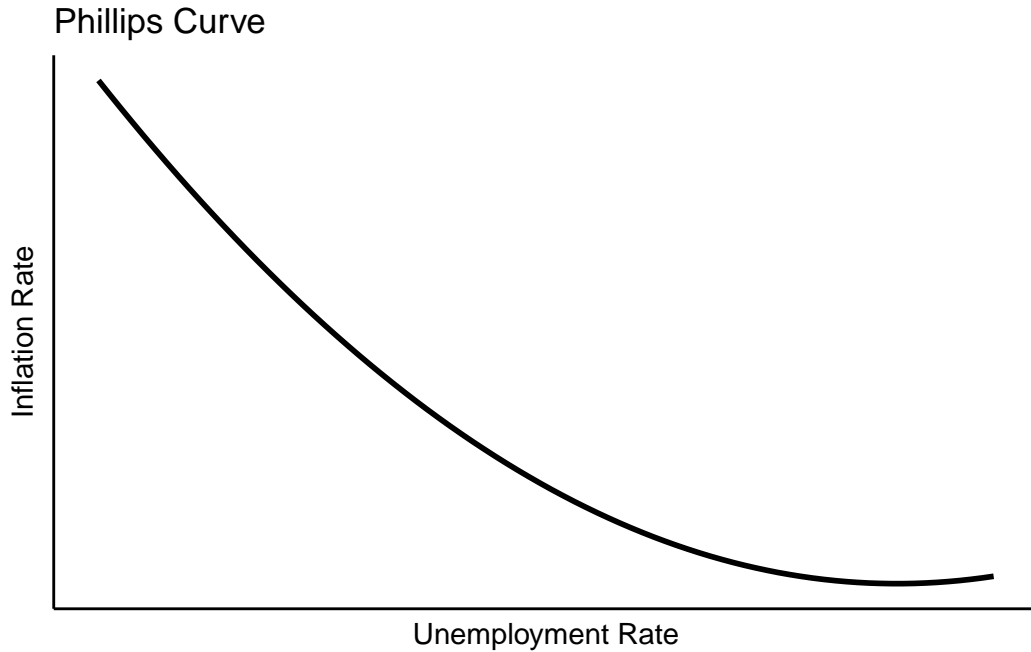


Figure 1: Phillips Curve

In a simplified and stylized economy, the government balances economic policy in managing the trade-off between unemployment and inflation. Expansionary economic policies, which inject money into the economy, can reduce unemployment but often lead to rising inflation. Conversely, contractionary policies, like raising interest rates or implementing austerity measures, reduce inflation but increase unemployment by slowing economic activity. This trade-off is commonly illustrated by the Phillips Curve, as shown in Figure 1. Higher rates of inflation are associated with fuller employment while high levels of unemployment are associated with lower inflation.

In a market economy, regular business cycles refer to the natural ebb and flow of economic activity, driven by factors such as supply and demand, interest rates, and investment patterns. These cycles, which consist of periods of expansion, peak, recession, and recovery, occur regardless of political intervention. In contrast, political business cycles emerge when politicians, particularly incumbents seeking reelection, exploit their control over fiscal or monetary policy to influence economic conditions near elections. Unlike the natural business cycle,

which reflects broader market forces, political business cycles represent intentional economic policy changes aimed at swaying voter sentiment by temporarily improving key indicators like unemployment or real income growth.

The political business cycle model suggests that as elections approach, incumbent politicians may time the adoption of expansionary policies to boost economic activity, thereby improving voter perception of their governance in the lead up to their elections. Although these policies may cause inflation and necessitate more restrictive measures in the early years of the next term, the incumbent has, at that time, already secured reelection and has time to address inflation before timing the next boom later in their election cycle. For governors, members of Congress, or state legislators without term limits, this cycle may be even more tempting, as their ongoing reelection prospects depend heavily on voter perceptions of their economic management. The most basic form of this trade-off in relation to incumbent reelection under economic based retrospective voting can be adapted from Drazen (2008):

$$L(U_t, I_t) = U_t + \beta \frac{I_t^2}{2}$$

where $L(U_t, I_t)$ is the loss function of the incumbent party depending on unemployment, U_t , and inflation, I_t , represented as a quadratic loss under the assumption that higher inflation rates lead to disproportionately larger losses, in time t and β is the weight that the electorate places on inflation (i.e. how much voters care about higher inflation). Thus, incumbent parties must balance inflation and unemployment in such a way to maximize economic activity in time t leading up to an election while avoiding the political fallout of high inflation. Considering the relationship between inflation and unemployment predicted by the Phillips Curve, minimizing this loss function sets an economy on a “boom-bust” cycle centered around election years where key economic indicators such as GDP growth, inflation, and unemployment rise and fall based on election timing.

Empirical Strategy

This paper uses long-run time series data on GDP growth and presidential election timing throughout the entirety of American history in addition to panel data on key state-level macroeconomic indicators and gubernatorial election timing to test if political business cycles exist in the United States. The historical data on economic performance is from Johnston & Williamson (2018) and the election year variable is from Guntermann et al. (2021). The relevant state-level economic data is from the *Correlates of State Policy* data repository and the governor election timing data was compiled by Cahan (2019). The date ranges and sources for the state-level economic variables can be found in Table 1.

Table 1: Data Sources for State-level Macroeconomic Indicators

Indicator	Years	Source
GDP Growth	2001-2016	Sorens et al. (2008)
Inflation Rate	1990-2017	Hazell et al. (2020)
Unemployment Rate	1990-2017	BLS (2012) & UKCPR (2019)
Change in Debt	1990-2017	Klarner (2013) & U.S. Census Bureau
Change in Welfare Spending	1990-2006	Hayes & Vidal (2015)

This paper’s main empirical strategy is to evaluate theories of political business cycles with simple, straight-forward statistical models to detect even modest evidence of election induced expansionary economic policy. The most basic political business cycle empirical model is:

$$Y_t = aY_{t-1} + \beta_0 + \beta_1 E_t + \epsilon_t$$

where Y_t is the macroeconomic indicator of interest; Y_{t-1} is the autoregressive lagged term of that macroeconomic indicator, and E_t is the dichotomous indicator for whether or not year t is an election year. The partisan model takes the form:

$$Y_t = aY_{t-1} + \beta_0 + \beta_1 P_t + \beta_2 \sum_{i=1}^n T_t + \beta_3 [P_t \times \sum_{i=1}^n T_t] + \epsilon_t$$

where P_t is the incumbent party in time t ; T is the number of years that party has been in office; and β_3 is the key quantity of interest that captures whether or not economic performance is different under certain parties dependent on their length in office. As I expect significant autocorrelation, I use Newey-West standard errors for these models. I test both of these models with the aforementioned historical real GDP Per Capita, GDP growth, and presidential election data. The result is as comprehensive as possible a test of the political business cycle theory in America as it includes every year of GDP growth and presidential election in U.S. history.

In addition to the long-run federal analysis, I include a series of state-level models testing the opportunistic political business cycle theory using gubernatorial elections. While the state models have a far more limited time series, only roughly 1990-2017 depending on the specific macroeconomic indicator, the variation between states and the inclusion of 4 additional economic indicators – unemployment, inflation, debt, and welfare expenditure – allows for a more holistic analysis of political business cycles. These models take the form:

$$\Delta Y_{it} = \beta_0 + \beta_1 E_{it} + \alpha_i + \tau_t + \epsilon_{it}$$

which is essentially the same as the national models but now includes state, α_i , and year, τ_t , fixed effects. $\Delta Y_{it} = \frac{Y_{it} - Y_{it-1}}{Y_{it-1}}$ is the yearly percent change in economic indicator. Since

the treatment, election timing, is set by the state, I cluster standard errors at the state-level (Abadie et al. 2023). In sum, I compare yearly percent changes in GDP growth, unemployment rate, inflation rate, government debt, and welfare expenditure in state i when state i has and does not have an election. In other words, I see if a state exhibits significant differences in changes in economic indicators in election years compared to non-election years.

Results

Opportunistic Political Business Cycles

Table 2: U.S. Opportunistic Political Business Cycle Models, 1789-2019

Dependent Variables: Model:	GDP Growth % (1)	Real GDP PerCap (2)
<i>Variables</i>		
Constant	1.8** (0.37)	32.2 (43.7)
Election Year	-0.49 (0.70)	24.9 (75.4)
Real GDP Per Capita t-1		1.0** (0.003)
<i>Fit statistics</i>		
Observations	226	226
R ²	0.00	1.00

Newey-West (L=3) standard-errors in parentheses
*Signif. Codes: **: 0.01, *: 0.05*

The historical national GDP growth models are summarized in *Table 2*. Column (1) shows the results of the change model specification with percent GDP growth as the dependent variable and column (2) displays the traditional autoregressive GDP model. This gives us two different yet related specifications to test the political business cycle hypothesis. Neither models, however, are statistically significant at conventional thresholds. Using the full time span of U.S. history, there is no significant difference in GDP growth in presidential election years compared to non-election years. In Appendix C, I test these models using different periods of time including before the two-party system was in place and before the creation of the Federal Reserve as well as a model that limits the data to the modern era of polarization and partisan competition. Not a single one of those models provides support for the opportunistic political business cycle hypothesis. Additionally, Appendix B includes a simple power analysis that suggests this study is sufficiently powered to detect small-to-moderate effect sizes and that the null results observed here are not due to the limited sample size and small R^2 seen in column (1).

As reported in *Table 3*, the results of the state-level panel models are essentially the same as the national time series findings. Across an array of macroeconomic indicators, election

Table 3: Political Business Cycles in the American States

Dependent Variables: Model:	GDP Growth % (1)	Unemployment Change (2)	Inflation Change (3)	Debt Change (4)	Welfare Spending Change (5)
<i>Variables</i>					
Election Year	0.003 (0.006)	-0.006 (0.009)	0.06 (0.34)	0.03 (0.02)	0.02 (0.01)
<i>Fixed-effects</i>					
State	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
<i>Fit statistics</i>					
Observations	803	1,394	668	1,507	913
R ²	0.39	0.55	0.15	0.36	0.28

Clustered (State) standard-errors in parentheses
*Signif. Codes: **: 0.01, *: 0.05*

years are not associated with significant differences compared to non-election years. The coefficient is considerably small for each and lacks statistical significance at standard levels. As government spending and welfare expenditure are perhaps more easily directly controlled by governors than GDP growth or inflation and unemployment, I include models for those two variables to allow for a wider test of an opportunistic political business cycle. Changes in state GDP growth, unemployment, inflation, budget deficits, and welfare expenditure in election years, however, are indistinguishable from changes in non-election years, again providing no empirical evidence of an opportunistic political business cycle in the American economy. In Appendix A, I test these models with different standard error estimators, including naive iid standard errors, and the results are the same as what is reported in Table 3. Even using an expanded sample with all of the unique variation in the American states, this paper finds no support for the opportunistic political business cycle theory.

Partisan Business Cycles

The partisan political business cycle models, though, tell a slightly different story. Columns (1) and (2) of Table 4 show the results of the partisan business cycle model with the full panel, 1789-2019. Column (1) reports the GDP percent change model and column (2) reports the traditional autoregressive model. The non-Whig party variables, as well as the most of the interactions between party and length of tenure, are statistically significant in both of the full panel models. The results indicate that all parties outperformed Washington’s first term when he had no official party, which is the reference category for party in columns (1) and (2). This is perhaps a misleading variable, though, as it essentially only indicates under which parties was GDP growth momentarily the largest, which even includes the first year of a president’s term. For a more direct test of the partisan business cycle hypothesis that shows how GDP growth changes over a parties full tenure in office, the coefficients on all *party* \times *incumbency* variables are negative and most are statistically significant. This result suggests that, in terms of GDP growth, the Whigs, the reference category, outpaced all other parties later in their tenures in office. The effect size for the other parties are all roughly the same, indicating there may not be much variation between non-Whig parties as length of tenure increases. The Whigs only

Table 4: U.S. Partisan Political Business Cycle Models

Dependent Variables:	GDP Growth % Real GDP PerCap 1789-2019		GDP Growth % Real GDP PerCap 1945-2019	
	(1)	(2)	(3)	(4)
<i>Variables</i>				
Constant	-3.6* (1.6)	-133.1** (41.7)	2.3** (0.80)	437.5 (220.2)
Length of Party Tenure	2.2** (0.52)	49.8** (13.9)	-0.07 (0.17)	-0.34 (18.3)
Democrat Inc	5.4** (1.8)	181.4 (107.8)		
Federalist Inc	10.6** (2.8)	201.2** (52.1)		
Republican Inc	6.4** (1.7)	241.2* (94.4)	-0.67 (1.0)	-148.5 (258.3)
Rep-Dem Inc	4.1* (1.7)	120.0** (42.6)		
Whig Inc	0.10 (0.70)	21.5 (18.6)		
Length of Dem Tenure	-2.1** (0.54)	-37.8 (26.8)		
Length of Fed Tenure	-2.6** (0.57)	-55.6** (14.2)		
Length of Rep Tenure	-2.4** (0.54)	-65.8** (17.7)	0.06 (0.20)	0.17 (37.3)
Length of Rep-Dem Tenure	-2.2** (0.52)	-49.9** (13.9)		
Real GDP Per Capita t-1		1.0** (0.004)		1.0** (0.006)
<i>Fit statistics</i>				
Observations	226	226	71	70
R ²	0.05	1.00	0.01	1.00

*Signif. Codes: **: 0.01, *: 0.05*

Note: The reference category for party is 'no party' for George Washington's first term and the reference category for the length of tenure interaction is the Whigs.

had two presidential administrations, both in close proximity to one another: Harrison-Tyler and Taylor-Fillmore, so these results may need to be taken with a grain of salt.

To test whether or not the modern era sees partisan political business cycles, I limit the sample to the post-World War II and Bretton Woods Era. Columns (3) and (4) show the results with the shortened panel, 1945-2019. The partisanship variables, and their interactions with a party's length of tenure in office, are not statistically significant, suggesting that if partisan business cycles existed at one time, they no longer do. In addition to the lack of statistical significance, the coefficient on the partisanship variables, especially in the GDP change model, is extremely small and, therefore, if there was a difference between Democrats and Republicans in terms of GDP growth throughout their tenures in office, it would be minuscule. In Appendix C, I test three additional models: pre Democratic and Republican party dominance, pre creation of the Federal Reserve, and post 1980 when partisan competition in Congress heated up (Lee 2016). The results of those models are substantively the same as the results reported in Table 4.

Discussion & Conclusion

While the potential for political actors to exploit their economic policymaking powers as part of their reelection strategies is a valid concern, robust evidence supporting the existence of a political business cycle remains limited. Although politicians may have incentives to manipulate markets for electoral gain, institutional and political barriers often prevent direct economic control. For example, despite questions surrounding its true independence (Binder & Spindel 2017), the Federal Reserve operates without government funding and has a Board of Governors with staggered terms, providing a buffer against political pressures. Additionally, many federal and state-level bureaucrats and economic policymakers benefit from civil service protections and statutory safeguards, insulating them from political influence that could push for policy changes—such as lowering interest rates close to elections—to aid incumbents. While these protections are not absolute, they do act as constraints. Furthermore, as partisanship and polarization intensify in American politics, voter loyalty based on party and ideology may outweigh the influence of short-term economic booms. Considering these mechanisms that may limit or change the calculus of political actors' manipulation of economic policy for electoral purposes and the empirical results of this paper, credible evidence of a political business cycle in the United States is scarce.

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Apenndix

Appendix A: Time Series Diagnostics & Standard Error Estimators

This appendix discusses serial autocorrelation in the national models and reports results from the state-level models with different standard error estimators. Running a Durbin-Watson test on the iid standard errors from the national opportunistic business cycle models in the main paper results in a DW stat of 1.4 for the change model and 1.2 for the lagged dependent variable model, both statistically significant. These results indicate that both models exhibit positive autocorrelation. The main paper contends with serial autocorrelation in the national models by conducting hypothesis testing with Newey-West calculated standard errors. This section estimates the opportunistic business cycle models using the Cochrane-Orcutt method of purging autocorrelation by directly transforming the variables in the model. The results of the Cochrane-Orcutt models are substantively the same as the models from the main paper and can be found below. The DW stats following Cochrane-Orcutt transformation are 1.95 for the change model and 1.93 for the lagged dependent variable model, neither statistically significant. Thus, after purging autocorrelation either through the use of Newey-West standard errors as done in the main paper or through using a Cochrane-Orcutt model, election timing is not a statistically significant predictor of macroeconomic changes.

Table 5: Cochrane-Orcutt Model

	<i>Dependent variable:</i>	
	Growth	Real GDP
	(1)	(2)
Election Year	-0.566 (0.548)	12.156 (58.624)
Real GDP Per Capita t-1		1.014*** (0.003)
Constant	1.836*** (0.411)	45.889 (65.579)
Observations	226	226

Note: *p<0.1; **p<0.05; ***p<0.01

As for the state-level models, the choice of standard error estimator is crucial when working with time series cross-sectional data. Accordingly, this appendix reports the results of the state fixed effects models with two different types of standard errors to show that the

null results are not due to standard error choice. I report results with two way clustered on state and year standard errors and iid standard errors. Regardless of standard error estimator, election timing is never a significant predictor of changes in key state-level macroeconomic indicators.

Table 6: Political Business Cycles in the American States Twoway SEs

Dependent Variables: Model:	GDP Growth % (1)	Unemployment Change (2)	Inflation Change (3)	Debt Change (4)	Welfare Spending Change (5)
<i>Variables</i>					
Election Year	0.003 (0.006)	-0.006 (0.009)	0.06 (0.27)	0.03 (0.02)	0.02 (0.01)
<i>Fixed-effects</i>					
State	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
<i>Fit statistics</i>					
Observations	803	1,394	668	1,507	913
R ²	0.39	0.55	0.15	0.36	0.28

Clustered (State & Year) standard-errors in parentheses
*Signif. Codes: **: 0.01, *: 0.05*

Table 7: Political Business Cycles in the American States iid SEs

Dependent Variables: Model:	GDP Growth % (1)	Unemployment Change (2)	Inflation Change (3)	Debt Change (4)	Welfare Spending Change (5)
<i>Variables</i>					
Election Year	0.003 (0.01)	-0.006 (0.009)	0.06 (0.26)	0.03 (0.02)	0.02 (0.010)
<i>Fixed-effects</i>					
State	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
<i>Fit statistics</i>					
Observations	803	1,394	668	1,507	913
R ²	0.39	0.55	0.15	0.36	0.28

IID standard-errors in parentheses
*Signif. Codes: **: 0.01, *: 0.05*

Appendix B: Power Analysis

Since it is certainly possible that the null results of national models in the main paper are due to insufficient power since the sample size is only 226, I discuss power in this appendix. As shown in Figure 2, using $\alpha = .95$, I would need $n > 150$ to reach the commonly used 80% power threshold. The change in GDP growth models I reported in column (1) of Table (2) and columns (3) and (4) in the main paper have R^2 s approaching zero, a cause for concern. To remedy this, I include a lagged dependent variable to increase model fit with the results reported in column (2) in those same tables. Both have extremely high R^2 values, and with sample sizes over 200, are more than sufficient to detect a significant effect if there was one.

Further, other than the inflation rate model, the state-level models have decently sized R^2 values ranging from .28 up to .55 with sample sizes from 803-1,507, meaning these models are quite well-fitted by social science standards and have more than large enough sample sizes to power models to detect the effect of election timing. These models have much larger sample sizes than the national models, but all of the models point toward the same conclusion that there is no effect of election timing on macroeconomic indicators.

Considering the sufficient power of the analysis, the results from the models in the main paper are less likely to be due to a Type II error, reinforcing the main conclusion that opportunistic political business cycles do not occur in the United States.

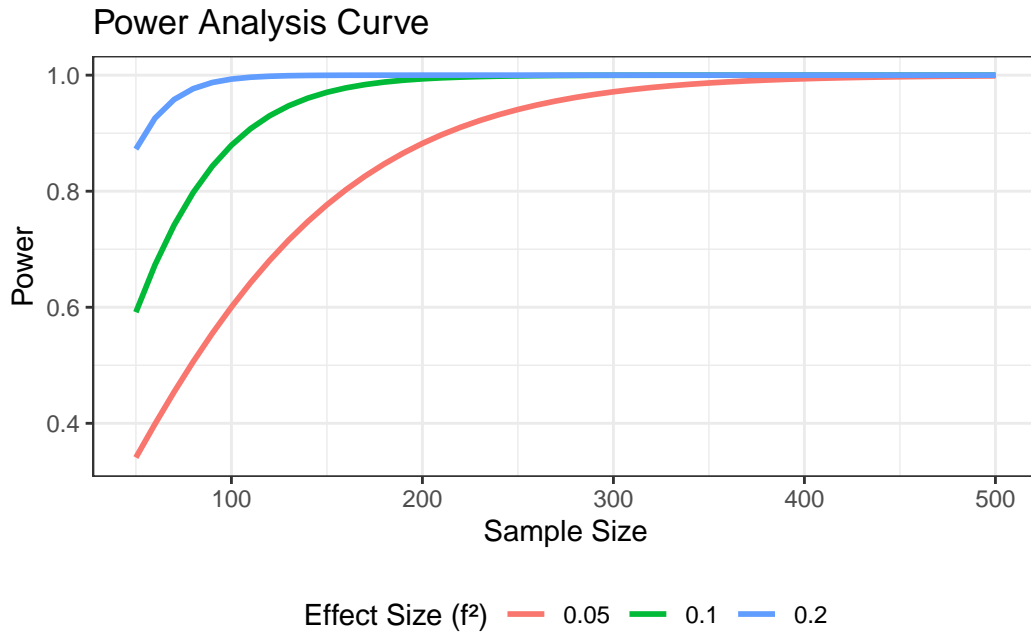


Figure 2: Power Analysis

Appendix C: Testing Different Time Series

Using such a long time series, while capturing all of the variation in GDP growth by year in U.S. history, has the downside of comparing starkly different time periods. It is possible that political business cycles arose out of the intense two-party competition that started to characterize Congress in 1980s and 1990s (Lee 2016), or that presidents could only exert sufficient influence over the economy before the creation of the Federal Reserve in 1913. If this was the case, specific periods where political business cycles flourished could be lost in the longer time series. To ensure this is not the case, this section reports models from 4 periods: (1) pre-Republican and Democratic two-party system which I define as before 1853 since Milliard Fillmore, a Whig, was elected in 1852 and Whigs had some success until the election of Buchanan in 1856; the pre-Federal Reserve Era, 1789-1913; the Modern Era, 1946-2019, which I define as post-World War II and Bretton Woods, and the Partisan Competition Era, 1980-2019, which I set as 1980 since the Republicans won the Senate, for the first time in many years, in 1980, setting up for a Republican capture of the House in 1994 and subsequent increased competition in Congress with the long-time more powerful Democratic party. The Tables showing these results, including both the opportunistic and partisan political business cycle models, are reported in this appendix. Across these models, there is no evidence that the U.S. has an opportunistic political business cycle.

Similar to the main paper results, though, the partisanship variables reveal that there is some heterogeneity in GDP growth by party and tenure in the late 19th and early 20th centuries, but, there is no conclusive evidence that partisan business cycles still occur today. The length of tenure variable for Democrats in the since 1980 model is significant at the $p < .05$ level in a single model, so while there may be some evidence that Democrats do better, this result is not robust to even the most basic checks like the GDP change model specification.

Table 8: U.S. Political Business Cycle Models, 1789-1852

Dependent Variables:	GDP Growth %	Real GDP PerCap	GDP Growth %	Real GDP PerCap
	Opportunistic PBC		Partisan PBC	
Model:	(1)	(2)	(3)	(4)
<i>Variables</i>				
Constant	1.5** (0.41)	3.4 (47.5)	-3.6* (1.6)	-122.3 (73.1)
Election Year	-0.47 (0.80)	-5.3 (15.2)		
Real GDP Per Capita t-1		1.0** (0.03)		1.0** (0.05)
Length of Party Tenure			2.2** (0.54)	50.0** (14.9)
Democrat Inc			7.8** (1.8)	200.0** (65.4)
Federalist Inc			10.6** (2.9)	200.9** (55.9)
Rep-Dem Inc			4.1* (1.8)	124.5* (50.3)
Whig Inc			0.10 (0.74)	32.4 (57.5)
Length of Dem Tenure			-2.6** (0.56)	-59.9** (15.1)
Length of Fed Tenure			-2.6** (0.60)	-55.4** (15.4)
Length of Rep-Dem Tenure			-2.2** (0.55)	-50.0** (14.9)
<i>Fit statistics</i>				
Observations	62	62	62	62
R ²	0.01	0.98	0.42	0.99

Newey-West (L=2) standard-errors in parentheses

*Signif. Codes: **: 0.01, *: 0.05*

Note: The reference category for party is 'no party' for George Washington's first term and the reference category for the length of tenure interaction is the Whigs.

Table 9: U.S. Political Business Cycle Models, 1789-1913

Dependent Variables:	GDP Growth % Real GDP PerCap Opportunistic PBC		GDP Growth % Real GDP PerCap Partisan PBC	
	(1)	(2)	(3)	(4)
<i>Variables</i>				
Constant	1.8** (0.39)	36.5 (38.1)	-3.6* (1.6)	-105.1* (51.6)
Election Year	-1.4 (0.80)	-69.4 (39.5)		
Real GDP Per Capita t-1		1.0** (0.01)		0.99** (0.02)
Length of Party Tenure			2.2** (0.53)	50.3** (15.0)
Democrat Inc			4.9* (2.1)	173.6* (78.3)
Federalist Inc			10.6** (2.8)	200.4** (55.1)
Republican Inc			6.8** (1.8)	294.6** (92.6)
Rep-Dem Inc			4.1* (1.7)	131.7** (47.1)
Whig Inc			0.10 (0.71)	49.7 (32.8)
Length of Dem Tenure			-2.3** (0.57)	-52.7** (16.6)
Length of Fed Tenure			-2.6** (0.59)	-55.0** (15.3)
Length of Rep Tenure			-2.3** (0.55)	-55.5** (16.8)
Length of Rep-Dem Tenure			-2.2** (0.53)	-50.2** (15.0)
<i>Fit statistics</i>				
Observations	123	123	123	123
R ²	0.03	0.99	0.10	0.99

Newey-West (L=3) standard-errors in parentheses

*Signif. Codes: **: 0.01, *: 0.05*

Note: The reference category for party is 'no party' for George Washington's first term and the reference category for the length of tenure interaction is the Whigs.

Table 10: U.S. Political Business Cycle Models, 1945-2019

Dependent Variables:	GDP Growth % Real GDP PerCap Opportunistic PBC		GDP Growth % Real GDP PerCap Partisan PBC	
	(1)	(2)	(3)	(4)
<i>Variables</i>				
Constant	1.5** (0.47)	312.1 (195.9)	2.3** (0.80)	437.5 (220.2)
Election Year	0.84 (0.66)	161.5 (170.6)		
Real GDP Per Capita t-1		1.0** (0.007)		1.0** (0.006)
Length of Party Tenure			-0.07 (0.17)	-0.34 (18.3)
Republican Inc			-0.67 (1.0)	-148.5 (258.3)
Length of Rep Tenure			0.06 (0.20)	0.17 (37.3)
<i>Fit statistics</i>				
Observations	71	70	71	70
R ²	0.02	1.00	0.01	1.00

Newey-West (L=2) standard-errors in parentheses

*Signif. Codes: **: 0.01, *: 0.05*

Note: The reference category for party is 'no party' for George Washington's first term and the reference category for the length of tenure interaction is the Whigs.

Table 11: U.S. Political Business Cycle Models, 1980-2019

Dependent Variables:	GDP Growth % Real GDP PerCap Opportunistic PBC		GDP Growth % Real GDP PerCap Partisan PBC	
	(1)	(2)	(3)	(4)
<i>Variables</i>				
Constant	1.5** (0.36)	1,245.2 (732.0)	-0.05 (1.2)	1,177.5 (850.6)
Election Year	0.49 (0.77)	308.5 (249.3)		
Real GDP Per Capita t-1		0.98** (0.02)		0.97** (0.02)
Length of Party Tenure			0.35 (0.22)	188.4* (81.6)
Republican Inc			1.9 (1.5)	613.2 (564.7)
Length of Rep Tenure			-0.37 (0.26)	-199.6 (101.9)
<i>Fit statistics</i>				
Observations	37	36	37	36
R ²	0.01	0.99	0.08	0.99

Newey-West (L=2) standard-errors in parentheses

*Signif. Codes: **: 0.01, *: 0.05*

Note: The reference category for party is 'no party' for George Washington's first term and the reference category for the length of tenure interaction is the Whigs.

Appendix D: State-level Phillips Curves

This appendix discusses another potential mechanism for the lack of a political business cycle in the United States: the fact that Phillips Curves rarely, if ever, actually look as theorized when using real data. Consider Figure 3 which depicts Phillips Curves using actual state-level observations for a series of years across the panel included in the main paper. While some years, especially 2017, have something close to the general theorized curve, the relationship between unemployment and inflation is not neat, questioning whether the trade-off between inflation and unemployment is truly the best place to search for political business cycles. This shortcoming was the motivation to search for cycles in government debt and welfare expenditure that were included in the main paper. The goal was to see if political spending and financial policy is a better avenue to find actual cycles as they are more in direct control of the government than other indicators. Despite this wider net, no evidence of a political business cycle was found in the main paper.

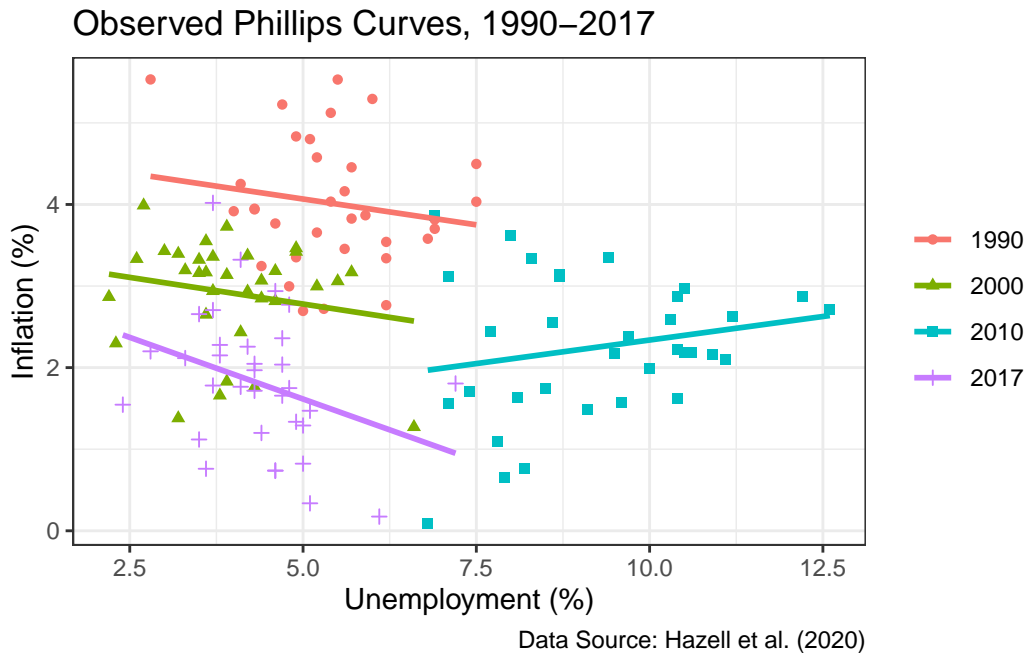


Figure 3: State-level Phillips Curves