

Political business cycles before the Great Depression

Jac Heckelman, Robert Whaples*

Department of Economics, Wake Forest University, Winston-Salem, NC 27109, USA

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Abstract

We test for the existence of political business cycles using annual data for the period from 1869 to 1929, finding only weak supportive evidence.

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An extensive literature tests the hypothesis of political business cycle theory that incumbent politicians attempt to boost their chances of re-election by stimulating the economy so that elections will be held in a favorable macroeconomic environment. In the case of post-war America, “empirical support for the electoral-cycle idea is generally weak” (Keech, 1995, p. 61). The same holds true for most other countries (Alesina et al., 1992) especially when the ruling party is able to determine the election date (Heckelman and Berument, 1995).

Owing to data limitations and the belief that political business cycles could not have existed before the development of the Keynesian paradigm, researchers have not tested for the possibility that political business cycles existed in the United States before the Great Depression. However, now that consistent macroeconomic series have been extended back to 1869, there are good reasons to test this hypothesis. First, empirical models of electoral outcomes indicate that macroeconomic variables have played a substantial role in voting behavior going back to the turn of the century (Fair, 1978). Second, macroeconomic policy (especially monetary policy) was at the center of important debates throughout the period between the Civil War and the Great Depression (Friedman and Schwartz, 1963). Third, there is evidence that politicians’ spending priorities were tied to their re-election efforts during this period (see Skocpol, 1992, on veterans’ benefits). Although post-war evidence is weak and the federal government’s share of GNP and its control over the economy were much smaller

* Corresponding author: Tel.: 910-759-4916; fax: 910-759-4809; e-mail: whaples@wfu.edu.

before the New Deal than they have been since then (Higgs, 1987), the possibility of pre-New Deal political business cycles should not be dismissed without testing.

In this paper we test for the existence of political business cycles in the pre-New Deal era using annual estimates of nominal GNP, real GNP, and the price deflator, which were recently constructed by Balke and Gordon (1989) and Romer (1989). The two series extend back to 1869. Quarterly estimates are not available.

Although the long-run trends in the Balke–Gordon and Romer series are virtually identical, annual fluctuations in the three macroeconomic variables often differ substantially. Both use earlier estimates of commodity output and producer prices to anchor their own series. Romer's procedure is to estimate the relationship between GNP and commodity output for a later period, and apply this relationship to the period for which only commodity output is available. Balke and Gordon integrate measures of output in the transportation, communications and construction sectors and estimates of the consumer price index into the earlier series. Both Romer's and Balke–Gordon's series are superior to earlier series, which assumed that total output valued in consumer prices (including the value added in transportation, distribution, and services) moved proportionately with commodity output (agriculture, manufacturing and mining) valued in producer prices. However, there is no consensus about which new series better measures the actual macroeconomic trends. Hence, we use both in our analysis.

We lack the data to test a structural macroeconomic model of the period between 1869 and the start of the Great Depression. Instead, we assume that each of the three macroeconomic indicators follows a covariance stationary process, which can be estimated by a finite autoregressive regression. The appropriate length of each time series' lag structure is determined using the Amemiya (1980) procedure, which minimizes the unconditional mean square prediction error. In addition, we include a dummy variable to control for the impact of World War I. Research on American presidential elections shows that historically the incumbent party benefits from higher levels of election-year real GNP growth, but is harmed by higher inflation (Fair, 1978). Thus, the final independent variable in this simple intervention model is a dummy for the years in which presidential elections were held. Our assumption is that election year effects are independent of the stochastic path of the macroeconomy.

Tables 1 and 2 present regression results from models using the change of the natural log in real GNP, nominal GNP, and the price deflator as the dependent variables. The specification in Table 1 assumes that the election-year effects were uniform for the entire period. In Table 2, this assumption is weakened. A second dummy variable for elections before 1896 is included. This specification makes allowance for the possibility that the election-year macroeconomic effect was different before 1896 than it was for that election and afterward. Many political historians point to the election of 1896 as a critical national political realignment (Key, 1955). Elections before 1896 were typically very close in both popular vote and in the electoral college. Afterward, they were not.

As the tables show, there is only weak support for the hypothesis that real GNP rose in anticipation of presidential elections, and virtually no support for the hypothesis that the inflation rate changed. In all six specifications using the Balke–Gordon data, none of the electoral dummy variables approaches statistical significance. However, the electoral variables achieve conventional measures of statistical significance when the Romer data are employed in

Table 1
Autoregressive stochastic model of macroeconomic indicators, 1869–1929, with single dummy for election years

	Romer			Balke and Gordon		
	GNP	Deflator	Real GNP	GNP	Deflator	Real GNP
Intercept	3.119 (2.898)	-0.737 (-0.943)	4.363 (2.735)	3.066 (2.706)	-0.634 (-0.980)	6.548 (3.348)
{ $t-1$ }	0.023 (0.173)	0.108 (0.803)	0.064 (0.439)	0.063 (0.474)	0.347 (2.695)	-0.136 (-0.917)
{ $t-2$ }		0.072 (0.577)	-0.252 (-1.764)		-0.090 (-0.757)	-0.143 (-0.987)
{ $t-3$ }			0.037 (0.248)			-0.170 (-1.175)
{ $t-4$ }			0.013 (0.099)			-0.076 (-0.517)
{ $t-5$ }			-0.135 (-1.041)			-0.272 (-1.860)
{ $t-6$ }			0.172 (1.306)			0.068 (0.461)
World War I	8.313 (2.825)	8.102 (3.234)	-1.007 (-0.709)	8.629 (2.761)	8.126 (4.104)	-1.644 (-0.765)
ELECTION	1.642 (0.877)	1.821 (1.247)	-0.865 (-0.852)	0.202 (0.099)	1.126 (0.956)	-0.491 (-0.311)
Degrees of freedom	55	53	45	55	53	45
R^2	0.426	0.302	0.637	0.379	0.464	0.454

Note: Dependent variables are natural logs of growth rates compared with previous year; t -statistics in parenthesis; { $t-i$ } is the dependent variable lagged i times; number of lags determined by Amemiya Prediction Criteria.

Sources: Balke and Gordon (1989) and Romer (1989).

the second specification of real GNP. In this regression both the election-year dummy and the pre-1896 election-year dummy have t -statistics of about 1.7, which yields 90% confidence that the coefficients are different than zero. However, an F -test yields only 83% confidence that the coefficients are both different than zero. If we are willing to accept the hypothesis that the coefficients for real GNP in Table 2 using Romer's data are not zero, this implies that politicians had great success in achieving economic growth in election years preceding 1896. Real growth was almost two-thirds higher than otherwise expected in these years. Growth in election years from 1896 onward was only a little above average. So, perhaps politicians

Table 2

Autoregressive stochastic model of macroeconomic indicators, 1869–1929, with dummy and interaction for election years

	Romer			Balke and Gordon		
	GNP	Deflator	Real GNP	GNP	Deflator	Real GNP
Intercept	3.082 (2.833)	-0.713 (-0.916)	4.604 (2.933)	3.090 (2.700)	-0.622 (-0.958)	6.664 (3.356)
{ <i>t</i> - 1}	0.031 (0.227)	0.101 (0.750)	0.086 (0.600)	0.058 (0.430)	0.332 (2.546)	-0.143 (-0.952)
{ <i>t</i> - 2}		0.050 (0.393)	-0.285 (-2.021)		-0.099 (-0.828)	-0.147 (-1.009)
{ <i>t</i> - 3}			0.043 (0.296)			-0.171 (-1.166)
{ <i>t</i> - 4}			-0.066 (0.468)			-0.081 (-0.546)
{ <i>t</i> - 5}			-0.095 (-0.738)			-0.277 (-1.874)
{ <i>t</i> - 6}			0.152 (1.177)			0.057 (0.376)
World War I	8.354 (2.817)	8.105 (3.246)	-0.863 (-0.619)	8.582 (2.721)	8.165 (4.110)	-1.577 (-0.727)
ELECTION	1.053 (0.455)	3.001 (1.684)	-2.056 (-1.689)	0.691 (0.273)	1.864 (1.247)	-0.997 (-0.727)
ELECTION* PRE 1896	1.471 (0.438)	-2.994 (-1.150)	3.231 (1.697)	-1.203 (-0.332)	-1.773 (-0.811)	1.395 (0.503)
Degrees of freedom	54	52	44	54	52	44
<i>R</i> ²	0.428	0.330	0.659	0.380	0.471	0.457

Note: ELECTION * PRE1896 is interaction of ELECTION and PRE1896 dummies. See also note for Table 1.

subsequently stopped pursuing this goal after the period of close elections ended (on this point see Frey and Schneider, 1978). However, we do not have much confidence in this interpretation.

A second political business cycle hypothesis is that stimulative effects may have spilled over into the year following the election year because of the crudity of macroeconomic policy. Additional regressions (not reported here) find no support for this hypothesis either.

Our conclusion is not surprising. There is only weak evidence of a political business cycle in the United States in the period between the Civil War and the Great Depression.

References

- Alesina, A., G. Cohen and N. Roubini, 1992, Macroeconomic policy and elections in OECD democracies, *Economics and Politics* 4, 1–30.
- Amemiya, T., 1980, Selection of regressors, *International Economic Review* 21, 331–354.
- Balke, N. and R. Gordon, 1989, The estimation of prewar gross national product: Methodology and new evidence, *Journal of Political Economy* 97, 38–92.
- Fair, R., 1978, The effects of economic events on votes for President, *Review of Economics and Statistics* 60, 159–173.
- Frey, B. and F. Schneider, 1978, An empirical study of politico-economic interaction in the United States, *Review of Economics and Statistics* 60, 174–183.
- Friedman, M. and A. Schwartz, 1963, *A monetary history of the United States, 1867–1960* (Princeton University Press, Princeton).
- Heckelman, J. and H. Berument, 1995, Political business cycles and endogenous elections, Manuscript.
- Higgs, R., 1987, *Crisis and Leviathan: Critical episodes in the growth of American government* (Oxford University Press, Oxford).
- Keech, W., 1995, *Economic politics: The costs of democracy* (Cambridge University Press, Cambridge).
- Key, V., 1955, A theory of critical elections, *Journal of Politics* 17, 3–18.
- Romer, C., 1989, The prewar business cycle reconsidered: New estimates of gross national product, 1869–1908, *Journal of Political Economy* 97, 1–37.
- Skocpol, T., 1992, *Protecting soldiers and mothers: The political origins of social policy in the United States* (Harvard University Press, Cambridge, MA).