

The President's Economy: A Response to Campbell

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In this response we reply to Campbell's criticisms of our article in the March 2012 issue of Presidential Studies Quarterly. We demonstrate algebraically that Campbell's preferred model of the economy, which includes a lagged value of the dependent variable, merely disguises the impact of the president on economic performance. We reject his other criticisms and stand by our article.

Professor Campbell performed a signal service by pointing out that analyses of economic performance under Republican and Democratic presidents must control for the ups and downs of the business cycle that are beyond a president's control. He correctly noted in particular that Republican and Democratic presidents of the postwar era took office under very different economic conditions (Campbell 2011, 15-20). We strongly concurred with these contentions (Comiskey and Marsh 2012, 41-45).

Unfortunately, Campbell rejects all means of controlling for those ups and downs that do not involve the use of a dependent variable lagged one or two quarters—a flawed practice for two reasons. The first flaw is that if a variable and its lagged value are closely related, one runs the risk of controlling for the dependent variable itself. The second difficulty is that controlling for the dependent variable lagged one quarter controls by extension for the factors that determined that dependent variable up to just three months ago. For these reasons, “lagged dependent variables can suppress the explanatory power of other independent variables” (Achen 2001, 1).

Campbell seeks to avoid the first of these dangers by claiming that economic variables and their lagged values are related to one another but not *really* related. On the

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one hand, Campbell writes—correctly—that “economic conditions are not neatly packaged into quarters. Since the economy is continuously in motion, the condition of the economy at time t should be expected to have an effect on the economy at time $t+1$ ” (Campbell 2012, 813). Yet Campbell also maintains that economic conditions in adjoining quarters are really not all that related “since the lagged measure is arrived at independently and is of economic activity over a nonoverlapping and significantly long period of time” (Campbell 2012, note 3; see also Campbell 2011, 11).

Campbell cannot have it both ways. As we noted previously, the fact is that economic conditions in quarters t and $t+1$ are not independent of each other (Comiskey and Marsh 2012, 45). If they were, then by the terms of his own argument Campbell would have no need to control for conditions in the preceding quarter. Campbell seeks to escape this dilemma by claiming that “the dependent economic variable and the lagged economy . . . are *analytically* independent of each other, but they are *empirically* related to one another” (emphasis in the original; Campbell 2012, note 6). This distinction strikes us as fanciful. They are analytically related for the reasons Campbell explains so well, and his statistical results demonstrate that they are also empirically related.¹

The second way a lagged dependent variable “can suppress the explanatory power of other independent variables” (Achen 2001, 1) is that the lagged variable controls for the factors that made the dependent variable what it was in period $t-1$ —the same factors that are impacting it in period t . In our case, one of those factors is the party of the president.

It can be shown algebraically that the lagged dependent variable in Campbell’s Model 2 (2012) simply disguises the impact of the president’s party on economic performance. In the following, Y denotes economic performance, D denotes the party of the president, and the parameters are those Campbell reports in Equation 2 of his Table 1. Going back n quarters from time t , Campbell’s model is

$$\hat{Y}_{(t)} = 1.89 + .43D + .37Y_{(t-1)} + \hat{e} \tag{1}$$

$$\hat{Y}_{(t-1)} = 1.89 + .43D + .37Y_{(t-2)} + \hat{e} \tag{2}$$

$$\hat{Y}_{(t-2)} = 1.89 + .43D + .37Y_{(t-3)} + \hat{e} \tag{3}$$

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$$\hat{Y}_{(t-n)} = 1.89 + .43D + .37Y_{[t-(n+1)]} + \hat{e} \tag{4}$$

1. In our data set, the simple correlation between the unemployment rate in quarter t and quarter $t+1$ is .77 ($p < .0001$). The correlations between the percentage growth of real GDP and its lagged value, and real disposable personal income per capita and its lagged value, are even higher.

Substituting Equation (4) into the equation before it, and substituting the resulting equation into the one before that, etc., and continuing back to Equation (1), we have

$$\hat{Y}_{(t)} = c + .43D + (.37)(.43D) + (.37^2)(.43D) + (.37^3)(.43D) + (.37^4)(.43D) + (.37^5)(.43D) + \dots + (.37^n)Y_{(t-n)} + (.37)^{(n-1)}\hat{e} \quad (5)$$

where c is some constant. When n becomes sufficiently large, $.37^n$ and $.37^{(n-1)}$ approach zero, and Equation (5) becomes

$$\hat{Y}_{(t)} = c + .43D + (.37)(.43D) + (.37^2)(.43D) + (.37^3)(.43D) + (.37^4)(.43D) + (.37^5)(.43D) + \dots \quad (6)$$

It can be seen at this point that $\hat{Y}_{(t)}$ is simply a function of D —the party of the president. It can further be seen that $\hat{Y}_{(t)}$ is in fact a simple function of D in the form of Campbell's Model 1. Multiplying both sides of Equation (6) by $.37$ yields:

$$(.37)(\hat{Y}_{(t)}) = (.37)c + (.37)(.43D) + (.37^2)(.43D) + (.37^3)(.43D) + (.37^4)(.43D) + (.37^5)(.43D) + \dots \quad (7)$$

Subtracting Equation (7) from Equation (6) yields

$$.63\hat{Y}_{(t)} = .63c + .43D \quad (8)$$

Solving for $\hat{Y}_{(t)}$ by dividing both sides by $.63$ yields

$$\hat{Y}_{(t)} = c + .68D \quad (9)$$

Hence Campbell's Model 2 can be reduced to the form of his Model 1. One cannot simultaneously argue, as Campbell does, for his Model 2 but against his Model 1. And why should anyone estimate these equivalent models in the form of his Model 2, which includes a lagged dependent variable that merely disguises the dependence of $\hat{Y}_{(t)}$ on D , the party of the president?

The second of Professor Campbell's objections we consider concerns the alleged dependence of our findings on a few observations. He writes in his footnote 2:

This apparent party difference [in economic performance] is also quite fragile. It is very sensitive to a few cases. Its estimated effect fails to reach conventional significance levels ($p < .05$, one-tailed) when only two of the 256 quarters are set aside. The economy in the first three quarters of 1950 under Truman during the Korean War grew at rates of between 13 and 17%. Median growth across the series is about three percent. Even without controls for the lagged economy, party differences fail to reach conventional significance levels when just two of these three quarters are excluded. (Campbell 2012)

Our check of robustness does not agree with Campbell's. Because we used a Yule-Walker autoregressive procedure, we could not simply delete two or three observations from the data set; instead we reestimated the models in our Tables 6 and 7 for the period from the second quarter of 1951 through the end of 2009. This method eliminates from our data set all three of the highest observations for real gross domestic product (GDP) growth: 1950:3, 1950:4, and 1951:1. The results appear in Tables 1 and 2 below, which parallel Tables 6 and 7 in our article (Comiskey and Marsh 2012, 51-52).

With one exception, the results are similar to those in our article. As before, the Democratic PRESIDENT variable is significant at the .05 level in Models 1, 2, and 5, where the dependent variables are the percentage growth of real GDP, the percentage growth of real disposable personal income per capita, and the unemployment rate. In Model 4, where the dependent variable is the *level* of real disposable personal income per capita, the Democratic PRESIDENT variable is insignificant, as it was before. The lone difference between these results and our previous findings is that in Model 3, where the dependent variable is the *level* of real GDP, the Democratic PRESIDENT variable is now statistically insignificant. But that variable is still significant in the models for overall economic growth and unemployment (Models 1 and 5).

Deletion of those three exuberant quarters reduces the estimated impact of a Democratic presidency on the annual real GDP growth rate from the additional 1.04% we reported earlier to an additional .82% here. But the .22 difference is well within our original estimated standard error of .38 (Comiskey and Marsh 2012, 51). And with the unemployment rate as the dependent variable, the coefficient on PRESIDENT changes

TABLE 1
Growth of Real Gross Domestic Product (GDP) and Real Disposable Personal Income (DPI) per Capita, 1951:2-2009:4

	<i>Model 1</i> <i>Real GDP (% Growth)</i>	<i>Model 2</i> <i>Real DPI (% Growth)</i>
Democratic PRESIDENT	.82** (.36)	.66** (.35)
QTROUGH	-.06*** (.01)	-.01 (.01)
QPEAK	.05*** (.01)	.01 (.01)
Oil Price (Lagged)	-3.42*** (.80)	-1.18* (.78)
WAR	.16 (.31)	.18 (.30)
ELECTION	.31 (.27)	.48** (.25)
Constant	3.96*** (.38)	2.16*** (.37)
Regress R^2	.21	.06
Total R^2	.78	.67

* statistically significant at .10 level, ** at .05 level, *** at .01 level.

TABLE 2

Levels of Real Gross Domestic Product (GDP), Real Disposable Personal Income (DPI) per Capita, and Unemployment Rate, 1951:2-2009:4

	<i>Model 3</i> <i>Real GDP</i>	<i>Model 4</i> <i>Real DPI</i>	<i>Model 5</i> <i>Unemployment Rate (%)</i>
Democratic PRESIDENT	44.19 (40.66)	-136.60 (120.49)	-1.35*** (.23)
Oil Price (lagged)	-346.66*** 77.74	41.83 (253.07)	1.54*** (.48)
WAR	3.45 (30.26)	9.16 (101.91)	-.04 (.17)
ELECTION	4.75 (11.19)	120.47*** (38.12)	-.11* (.07)
Trough 1949:4	25.82* (15.71)	43.09 (47.72)	.0002 (.09)
Peak 1953:2	-13.87 (25.98)	-14.06 (84.15)	.20 (.16)
Trough 1954:2	9.08 (21.40)	28.79 (67.25)	-.26** (.12)
Peak 1957:3	-21.53 (23.22)	-71.75 (74.15)	.30** (.14)
Trough 1958:2	24.98 (24.74)	40.07 (79.92)	-.15 (.15)
Peak 1960:2	-24.97 (24.78)	-46.06 (79.63)	.14 (.15)
Trough 1961:1	40.65** (20.37)	137.99** (63.79)	-.29*** (.12)
Peak 1969:4	-15.93 (19.01)	-24.15 (58.47)	.12 (.10)
Trough 1970:4	18.10 (21.46)	40.25 (66.48)	-.06 (.12)
Peak 1973:4	-26.26* (19.75)	-126.37** (59.61)	.20** (.11)
Trough 1975:1	34.84** (17.89)	103.60** (53.48)	-.19** (.10)
Peak 1980:1	-39.42* (25.10)	-186.16*** (77.91)	.25** (.15)
Trough 1980:3	30.66 (30.20)	115.83 (97.73)	-.14 (.19)
Peak 1981:3	-24.52 (26.58)	93.10 (85.92)	-.07 (.16)
Trough 1982:4	37.61** (16.44)	-16.66 (49.58)	-.17** (.09)
Peak 1990:3	-73.68*** (23.62)	-308.45*** (71.67)	.66*** (.13)
Trough 1991:1	96.53*** (23.14)	323.56*** (70.02)	-.57*** (.13)
Peak 2001:1	-8.83 (20.40)	193.78*** (62.58)	.06 (.11)
Trough 2001:4	23.01 (20.97)	-187.15*** (63.94)	-.14 (.11)
Peak 2007:4	-115.29*** (15.76)	-120.61*** (46.60)	.47*** (.08)
Trough 2009:2	14.80 (26.92)	-7.30 (86.98)	.33** (.17)
Constant	1952.00*** (202.18)	9077.00*** (608.74)	4.18*** (1.18)
Regress R^2	.99	.99	.77
Total R^2	.99	.99	.96

* statistically significant at .10 level, ** at .05 level, *** at .01 level.

only slightly, from -1.43 percentage points in our original estimate to -1.35 percentage points here (Comiskey and Marsh 2012, 52). Overall, then, deletion of those three extraordinary quarters does not change the estimated impact of a Democratic presidency by much.

The third of Professor Campbell's objections is that our variable for party of the president assigns partial responsibility for the economy as soon as a president's first year in office. We believe that our variable has three advantages over those used by Campbell (2011, 2012) and Bartels (2008). First, it phases in a new president's responsibility gradually, unlike the dummy variables used by Campbell and Bartels. As Campbell himself has written, "there is some period in which the effects of a current president considerably overlap with those of his predecessor" (2011, 4). If one assumes, as we do, that presidents generally bear little responsibility for the economy in their first year in office but considerable responsibility thereafter, the period, say, from mid-1953 to mid-1954 belongs half to Democrat Harry Truman and half to Republican Dwight Eisenhower. And that is how we specified it. A second feature of our variable for partisan control is that, as Campbell acknowledges (2012), our variable does not assign full economic responsibility to a new president until the fourth quarter of his second year, and in this respect actually provides a new president a *longer* period of at least partial absolution from responsibility than Campbell and Bartels do. (Their variables assign full responsibility to a new president after one year in office.) Finally, as we have written (Comiskey and Marsh 2012, 47-48), this longer lag for attribution of full responsibility for the economy is more consistent with the history of policy actions the postwar presidents took early in their terms and with the economic literature on the lag between enactment of economic policies and their eventual effects on the economy.

In any event, our specification of the presidential party variable did not produce our results, which were virtually identical to those of Bartels (2008), who specified his presidential variable as Campbell did, and similar to the results of all other studies of this topic other than Campbell's (Alesina and Rosenthal 1995; Hibbs 1977, 1987).

Professor Campbell's penultimate objection is that in comparing economic growth in Republican presidents' second terms to other years, which we found to be unfavorable to Republican presidents, we chose the wrong years for comparison. He finds that counting the last two years of Republican presidents' first terms as Republican second-term years produces an average rate of economic growth in these redefined Republican "second terms" that is equivalent to other years.² But this reworked result may be an artifact of the variable Campbell has chosen to compare (we compared both economic growth and unemployment in Republican second terms to other years) and the way Campbell has readjusted the years for comparison. As our Table 3 demonstrates, the Republican third and fourth years Campbell adds to his redefined second terms are precisely the years in which Republican presidents did relatively well on the growth measure (Comiskey and Marsh 2012, 49).

2. Like Campbell, we counted the first year after Republican presidents left office as a Republican second-term year, reflecting a one-year lag in presidential responsibility for the economy.

Finally, we stand by our contention that we did not induce autocorrelation in the data we analyze in our original Table 6 and in our Table 1 above, and we note that we did correct for the autocorrelation we encountered in the data (Comiskey and Marsh 2012, 46, 50-55).³

The Nonconundrum

We close by addressing the question of whether the disjunction between the Democrats' success at managing the economy and their relative lack of success in presidential elections, where they lost nine of 15 from 1952 to 2008, poses a conundrum for political scientists (Bartels, 2008, 98-126). Professor Campbell claims that it does not, because Democratic and Republican presidents managed the economy equally well (2011, 24; 2012).

We, not surprisingly, answer differently. As we noted previously, an economic issue that Campbell and we do not consider—inflation—clearly helped torpedo Democrat Jimmy Carter in 1980 and may have tipped the scales against the Democrats in 1968 (Comiskey and Marsh 2012, 55-58).

More to the point, however, sluggish economies have repeatedly cost the Republicans at the polls. There have been four Republican “eras” in the presidency since World War II: those of Eisenhower, Richard Nixon–Gerald Ford, Ronald Reagan–George H. W. Bush, and George W. Bush. The voters ended all four of these eras in a period of sluggish or negative economic growth and high or rising unemployment (in 1960, 1976, 1992, and 2008). These four elections combine with the four the Democrats lost largely on noneconomic issues—Korea in 1952, Vietnam in 1968, the Electoral College in 2000, and the terrorism issue in 2004—to explain the outcome in a majority of those 15 elections. Hence, the conundrum may disappear, but not for the reason Professor Campbell thinks.

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3. We also note that we could not conceivably have induced autocorrelation in the data we analyze in our Table 7 (2012, 52) and our Table 2 above, as they are simple quarterly numbers.

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