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The political economy of U.S. economic performance: is the president responsible?

John Bohte · Uk Heo

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Abstract A recurring theme in electoral politics is that American voters hold the president responsible for the state of the economy. Ironically, many Presidency scholars argue that presidents are ill equipped to manage the economy because other variables compete with and complicate the effects of fiscal policy. These include international variables, private market forces, and monetary policy, among others. Using simultaneous equation methods, we examine the direct and indirect effects of fiscal policy on economic performance while controlling for a variety of other determinants of economic performance. We find that fiscal policy plays a significant role in influencing unemployment and economic growth in the United States, even after controlling for a variety of other determinants of economic performance. We close by discussing the importance of linking the econometric modeling literature with the literature on presidential management of the economy.

Keywords Fiscal policy · Economic performance · Presidential management of the economy

Introduction

American voters hold the president responsible for the state of the economy. A long line of research on presidential politics has consistently shown that citizens' evaluations of the president center heavily on their perceptions of how successful the president has been or will be in promoting favorable economic conditions (Chappell and Keech 1985; Fiorina 1981; Hetherington 1996; MacKuen et al. 1992). As Edwards and Wayne (1990, p. 400) put it "…the president is ritually blamed for the economy's poor performance and lauded for its success." Economic considerations play a much more limited role in midterm congressional elections (see Alesina and Rosenthal 1989; Erikson 1990), but voters can use them to express their views on how well the president's party in general has managed the economy (Jacobson 1992; Tufte 1978).

J. Bohte · U. Heo (✉)
University of Wisconsin-Milwaukee, Milwaukee, WI, USA
e-mail: heouk@uwm.edu

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Because of this link between economic conditions and electoral fortunes, both the president and Congress have sought to influence economic conditions using the tools of fiscal policy (Tufte 1978). While Democratic and Republican administrations often have different economic priorities (e.g., low unemployment vs. low inflation—see Beck 1982; Hibbs 1977), both parties have tried to achieve their policy goals through various tax policies and spending measures.

Simply because politicians try to use the tools of fiscal policy to influence economic conditions does not necessarily mean their efforts will be successful. An extensive body of research on the "political business cycle" finds only limited support for the idea that macroeconomic policy tools can be used to insure that favorable economic conditions coincide with elections (Alt and Chrystal 1983; Beck 1982; DeRouen and Heo 2000; Williams 1990). On the more specific issue of presidential control of the economy, prominent presidency scholars argue that presidents are limited in their ability to influence economic conditions because the economic policy decisions they make occur in the context of other forces, such as existing federal laws, private sector determinants of economic performance, and wars and other international variables that also influence the state of the U.S. economy (Edwards and Wayne 1990, pp. 399–400; Kettl 1991).

The extent to which the president is responsible for economic conditions in the United States is a perennial debate in American politics. Presidency scholars have made claims about a variety of factors that make it difficult for presidents to manage the economy via fiscal policy, yet the evidence for these claims consists mostly of plausible arguments about why certain variables *should* have an effect, rather than evidence of their *actual* effects. Gary King (1993) claims this is a common problem in presidency research. Specifically, he argues that Presidency scholars often study interesting questions, without taking the time "…to verify the prior empirical claims on which these questions stand (1993, p. 393)." King (1993, p. 393) further states that "studying the prior questions would not be as exciting, but they are essential."

Researchers studying presidential management of the economy certainly have not suggested that the fiscal policy decisions made by Congress and the president have no impact on the U.S. economy. Yet the general consensus in the literature is that forces largely out of the president's control complicate the effects of and compete with these policy decisions. These claims make good intuitive sense, but there has been surprisingly little systematic research devoted to disentangling the direct and indirect effects of fiscal policy while also taking the effects of these other forces into account.

Are Presidency scholars correct in reaching these generally pessimistic conclusions? Following King's (1993) suggestions, we revisit the literature on presidential management of the economy and provide a more systematic analysis of the forces that affect the president's ability to shape economic conditions in the United States. Since our objective is to systematically assess the limits presidents face in trying to shape economic performance by means of fiscal policy, we do not investigate the economic policy approaches of individual presidents. Our study also differs from research on partisan strategies at shaping the economy (Hibbs 1977; Tufte 1978), the political business cycle literature (Beck 1982; Jankowski and Wlezien 1993; Nordhaus 1975), and the referendum model approach (DeRouen and Heo 2000; Williams 1990) in that we are not so much interested in differing partisan approaches, election cycle explanations, or presidents' approval ratings, as we are in assessing the relative importance of fiscal policy after a variety of other determinants of economic performance are taken into account.

Although fiscal policymaking is obviously a shared responsibility of both Congress and the president, we focus mainly on the president since the public has consistently viewed the

president as the one political figure most responsible for the performance of the economy (Kettl 1991). In addition, the strongest claims about the difficulties politicians face in using fiscal policy to shape economic performance have generally been made by Presidency scholars, rather than congressional scholars.[1] Thus, in model specification, we focus on the variables that many Presidency scholars have identified as key impediments to presidential management of the economy. Principally, these include private sector economic forces, limits inherent in the federal budgeting process, political conditions (such as divided government), monetary policy, and international variables (such as wars and foreign trade). Our study covers the time period of 1947–2003. We use simultaneous equation methods to sort out both the direct and indirect effects of economic policies (including measures for both fiscal and monetary policy) on economic growth and unemployment while controlling for a wide range of other determinants of economic performance.

Presidential management of the economy

Presidents have traditionally relied on a mix of budgetary and tax policies to achieve key economic goals. The introduction of Keynesian economic theory in the 1930s suggested that presidents could use government spending, particularly deficit spending, to stimulate economic growth and lower unemployment.[2] Alternatively, some presidents have placed more faith in the idea that tax policies are the key to promoting favorable economic conditions. Regardless of which strategy a president favors, a variety of forces make it difficult for the president to control the economy.

A key argument in the literature on presidential management of the economy is that the effects of fiscal policy decisions are muted because these decisions interact with a variety of other variables that affect economic conditions but are not directly controlled by the president. In the *Postmodern President*, for example, Richard Rose (1991, p. 90) argues,

> The state of the economy reflects the interaction between what government does and what happens in the market, plus random and unpredictable events. The actions of business, unions, workers, and consumers have always imposed constraints on the policies of a modern president.

Many economists echo the sentiments of Rose concerning the impact of market forces on the U.S. economy. A common assertion in the economics literature is that economic growth is driven only in part by government policies and is influenced more by other variables such as productivity of the labor force, private sector investment, and personal consumption (Gill 1993, p 518; Gottheil 1996, p. 607). Economic commentators in the media made similar arguments during the 2004 presidential campaign, noting that claims about the president's responsibility for the state of the economy and unemployment in particular typically overstate the case for presidential control while ignoring the effects of private market forces (Samuelson 2004; Wessel 2004).

[1] Presidency scholars have consistently argued that the president's ability to shape the course of the U.S. economy is limited. Some of the representative studies that discuss the problems presidents face in trying to control the economy include Edwards and Wayne (1990) *Presidential Leadership*, Kettl in Pfiffner ed. *The Managerial Presidency* (1991), Porter, in Heclo and Salamon eds. *The Illusion of Presidential Government* (1981), Rockman (1984) *The Leadership Question*, and Rose (1991) *The Postmodern President*.

[2] Adherence to Keynesian ideals has gone down over time, especially since the 1970s. See Kettl (2003) and Stein (1994) for detailed analyses of the role Keynesian economics has played in economic policymaking over time.

In addition to private market forces, existing laws, political conditions, monetary policy, and international events are impediments to presidential control of the economy. In the case of existing laws, presidents are forced to work within a framework of budgetary policies, such as cost-of-living adjustments that automatically determine outlays for many important social programs (Edwards and Wayne 1990, p. 400). The federal budget has also become a less flexible tool for managing the economy because the proportion of federal spending devoted to mandatory entitlement programs has steadily increased over time. Roughly three-fourths of federal spending consists of "uncontrollable" expenditures, such as Social Security, Medicare, and Medicaid, where spending levels can only be changed by altering the laws that established these programs. Since the controllable portion of federal spending is for essential functions such as funding federal regulatory agencies, the president realistically does not have a great deal of latitude to dramatically alter the path of expenditures in either of these broad spending areas (Kettl 1991, pp. 240–243). The strictures imposed by long-standing spending commitments have turned presidential management of the budget into a process of "fringe tuning," where changes are mostly incremental, rather than dramatic departures from the past (Rose 1991, p. 203).

Political conditions further impede presidential attempts at shaping the economy because the president does not always find eager support for his policies in Congress. Partisan differences force legislative compromises, making it more difficult for presidents to enact their preferred spending and tax policies into law fully intact. President Reagan, for example, had very bold budgetary and tax proposals but had to tone them down to gain enough support from Democrats in Congress before they could be enacted into law (Edwards and Wayne 1990, p. 399). Since the late 1960s, Congress and the president have also found it increasingly difficult to come to agreement during the budget process. A common reality in the modern budgeting process is the inability to have all thirteen appropriations bills enacted into law by the start of the next fiscal year (Kettl 1991, p. 244).

Aside from these policy and political constraints, fiscal policy is only one part of the economic policymaking environment. Policy decisions made by the Federal Reserve also have a tremendous amount of influence in shaping the course of the U.S. economy. Kettl (1991) argues that growing budget deficits and growth in uncontrollable spending have together weakened the president's ability to use fiscal policy effectively, thus increasing the power of the Federal Reserve in shaping the course of the U.S. economy. Furthermore, presidents cannot always count on the Federal Reserve to coordinate monetary policy with fiscal policy because policies designed to manage the long-term health of the U.S. economy do not always coincide with the policy objectives or electoral concerns of the president (Beck 1982; Stein 1994, pp. 335–345).

Finally, with about 20 % of goods and services crossing national borders (Goldstein 2005), economic globalization and international events have made presidential management of the U.S. economy more difficult over time. The U.S. economy is part of the larger global economy and is thus affected by the economic and trade policies of other countries as well as the economic health of key trading partners (Porter 1981, pp. 206–207). Wars also have a strong effect on the U.S. economy particularly because of their impact on fiscal policy. Wars are typically funded through higher deficit spending, higher taxes, or a combination of both (Stein 1994; Witte 1986).

Problems assessing presidential efforts at managing the economy

As noted earlier, a common problem in Presidency research lies in what Gary King (1993) describes as the lack of attention scholars have given to studying "prior questions" before

making conclusions about how various aspects of the presidency really works. The manner in which fiscal policy interacts and competes with other determinants of economic performance is a clear example of an area where little attention has been devoted to examining a variety of important prior questions. Presidential scholars have made mostly qualitative assessments about all of the variables that make presidential management of the economy difficult, but have provided little empirical evidence on how fiscal policy interacts with these variables and how this entire system of variables (including fiscal policy) affects economic conditions in the United States.

Although the qualitative case study approach has been used to answer many important questions about the Presidency, this approach is simply not designed to deal with the complex methodological issues (such as endogenous relationships) that commonly arise when studying hypotheses involving relationships among fiscal and monetary policies and macroeconomic variables (Hall and Taylor 1988; Maddala 1992). For instance, what is the relative impact of fiscal policy on economic growth and unemployment after controlling for a variety of other forces known to shape the U.S. economy? Are the effects of fiscal policy on economic growth and unemployment direct, or do they show up indirectly through their impact on other variables, such as consumption? More broadly, what kinds of methodological issues must be considered when studying these questions? In addition, what kind of empirical evidence can we get to support the claims the qualitative case studies have made? Our goal in answering these questions is to establish a more systematic approach for evaluating the obstacles presidents face in their quest to influence economic conditions in the United States.

Research design

Modeling macroeconomic performance is a difficult task because of the endogeneity embedded in macroeconomic indicators (see Samuelson and Nordhaus 1985, pp. 88–97). To address this issue, we use three endogenous variables to measure economic performance. The first endogenous variable is economic growth, which is expressed as the annual percentage change in Gross Domestic Product (GDP). Economic growth is one of the broadest and most commonly used measures of economic performance. The second endogenous variable is the seasonally adjusted average annual unemployment rate. Presidents are particularly concerned about unemployment because this is a key metric used by both the public and the media to evaluate presidential management of the economy (Tufte 1978). Our final endogenous variable is private consumption. Private consumption accounts for 65–75 % of the U.S. GDP, which is greater than any other component of GDP (National Income and Product Accounts, various years). Moreover, private consumption is the driving engine of job growth and is essential to enhancing aggregate demand.[3] In summary, private consumption creates jobs, which stimulates the economy. At the same time, good economic performance leads to higher consumption and lower unemployment.

The predetermined variables selected for the analysis include fiscal and monetary policy variables as well as other variables Presidency scholars have viewed as key impediments to

[3] Private investment is also a possible economic indicator. However, private investment is much smaller than consumption in terms of the proportion of GDP and thereby, the impact of private investment on unemployment and growth would be smaller than that of consumption. Since private investment and consumption are highly correlated (0.755), it is imperative to choose one rather than having both in the equation system.

presidential control of the economy. We include three fiscal policy variables and one monetary policy variable in the analysis. Presidency scholars have argued that the ability of presidents to use spending to achieve fiscal policy goals is limited because the growth in mandatory expenditures has made the budget a less flexible tool for controlling the economy (Edwards and Wayne 1990; Kettl 1991). We use annual federal outlays, expressed as a percentage of GDP, to test this proposition. Annual deficit spending is the second fiscal policy variable. Budget deficits are often used to stimulate the economy and create jobs. They also capture the essence of political conflict over spending decisions because they reflect power struggles between Congress and the president over the proper size of federal programs and of government itself (Kettl 2003, p. 148). The last fiscal policy measure is a variable for tax policy, measured as the top marginal tax rate for personal income taxes. Debate over the proper level of marginal tax rates has been a central issue in tax policy over time. The strategy of using tax cuts to stimulate the economy has also played a prominent role in both Keynesian and "supply-side" economic theories (Alt and Chrystal 1983, p. 60; Stein 1994, p. 260). We lag this variable because the effects of changes in tax rates on consumer behavior and the economy are not immediate and unfold over time. Finally, our measure for monetary policy is the discount rate. Changes in the discount rate reflect the Federal Reserve's general orientation toward tightening or loosening the supply of money in the U.S. economy. We also use the lagged value of interest rates because it often takes several quarters before changes in interest rates affect economic performance (Sims 1980).

Two variables for political conditions are included in the analysis. The first variable is a measure for divided government. Divided government affects the president's ability to manage the economy using budgetary and tax policies because it can make it more difficult for the president to push key budgetary and tax policies through Congress. Divided government is measured as a dummy variable, coded one when the president and the majority party in the House of Representatives are from the same party and zero if not. We focus on partisan control in the House since the House plays a leadership role in drafting appropriations legislation. The second variable for political conditions is an election year dummy variable, coded one for presidential election years, and zero for all other years. While the evidence supporting the political business cycle is not very strong, the literature suggests that presidents are especially concerned about stimulating economic growth and reducing unemployment during election years (Mayer 1995; Tufte 1978).

The impact of international forces is assessed with variables for war and trade. The first variable is a war dummy variable, coded one for years in which the United States is involved in wars and zero for all other years. Significant increases in GDP occur when the United States is involved in wars (Gottheil 1996, p. 608). Wars have an impact on the federal budget because they stimulate higher government expenditures, especially in the area of defense spending. Wars have also been the cause of nearly all major tax increases during the twentieth century (Witte 1986, p. 165). The second international variable is the trade deficit. The trade deficit is one of the broadest indicators of how dependent the U.S. economy is on foreign markets and foreign products (Porter 1981, p. 206). Trade deficits also affect unemployment because higher consumption of foreign goods can contribute to the loss of domestic jobs (Kettl 2003, p. 38).

Figure 1 summarizes the theoretical relationships among these variables.

Empirical model

Monetary policy, private sector market forces, political conditions, and international forces have all been labeled as impediments to management of the economy via fiscal policy.

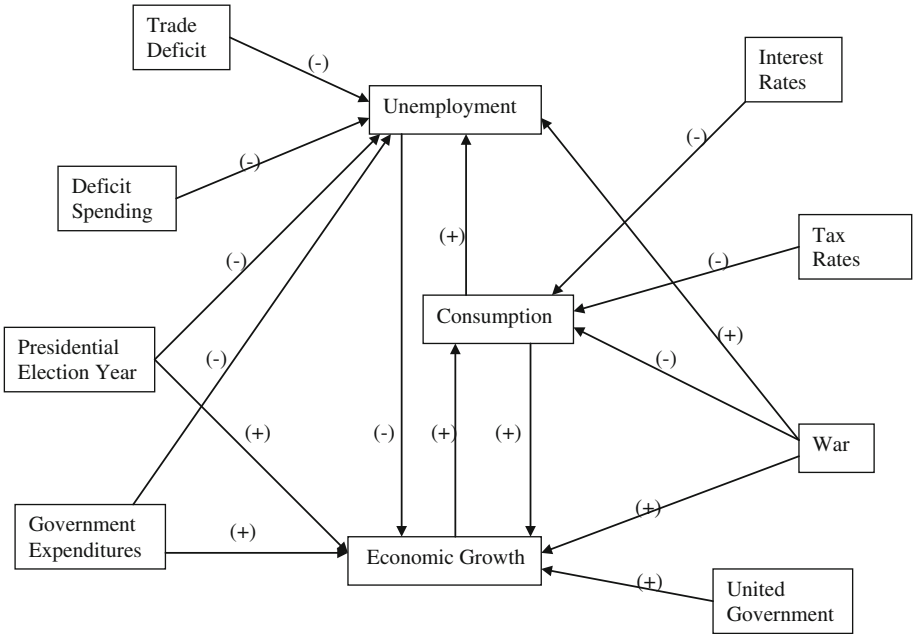

Fig. 1 Theoretical relationship of variables

Aside from claims that these variables compete with fiscal policy in determining economic conditions, current research on presidential management of the economy offers little guidance on how this system of variables should be modeled empirically.

Based on theoretical descriptions of the variables discussed above, we develop a system of simultaneous equations. According to macroeconomic theories (e.g., Maddala 1992), endogenous relationships are common among macroeconomic variables. The appropriate modeling strategy in this case is to develop structural equation models in a simultaneous system. As discussed earlier, we have three endogenous variables: Consumption, Unemployment, and Economic Growth. Private sector investment is not included in the system of models because it is highly correlated with consumption (0.755). This high level of correlation inflates standard errors and causes collinearity problems. Moreover, investment is highly sensitive to erratic fluctuations the unpredictable nature of technological changes, whereas consumption is fairly stable over time (Gottheil 1996, p. 544). Since both personal income tax and interest rate policies are targeted to improve unemployment by stimulating private consumption (see Maddala 1992), consumption better fits with the objectives of our study as well. Our models are:

$$\frac{\Delta CONt}{Y_t} = \alpha_1 + \beta_{11}\frac{\Delta Y_t}{Y_t} - \beta_{12}\Delta TAX_{t-1} - \beta_{13}\Delta INT_{t-i} + \beta_{14}WAR_t + e_1$$

$$\Delta UNE_t = \alpha_2 + \beta_{21}\frac{\Delta CON_t}{Y_t} - \beta_{22}\frac{\Delta GOV_t}{Y_t} - \beta_{23}\frac{\Delta DEFC_t}{Y_t} - \beta_{24}PELEC_t - \beta_{25}WAR_t + e_2$$

$$\frac{\Delta Y_t}{Y_t} = \alpha_3 + \beta_{31}\frac{\Delta CON_t}{Y_t} - \beta_{32}\Delta UNE_t + \beta_{33}\frac{\Delta GOV_t}{Y_t} + \beta_{34}\frac{\Delta TRDEFC_t}{Y_t} + \beta_{35}WAR_t + \beta_{36}UNITED_{t-1} + \beta_{37}PELEC_t + e_3$$

where *Y* is the gross domestic product, *CON* the private consumption, *TAX* the tax rate, *INT* the interest rate, *GOV* the federal government expenditures, *DEFC* the government deficit, *PELEC* the presidential election year, *WAR* the war involvement, *UNE* the unemployment rate, *TRDEFC* the trade deficit, and *UNITED* the united/divided government.

Estimation method

We have three equations that are simultaneously related with highly correlated variables.

These equations interact with each other due to the endogeneity of some of the explanatory variables. We address the endogeneity issue using the instrumental variable technique.[4] Since the error terms of the equations in the system are contemporaneously correlated (Breush–Pagan Lagrange Multiplier test $\chi^2 = 21.5$, significant at 0.01 level), we modeled this system of variables using three-stage-least-squares (3SLS) estimation

All of the economic variables, except those for taxes and interest rates, are expressed as shares of GDP because this places all of the variables in the same unit. According to Granger and Newbold (1974), time series regression results may be spurious if any variable in the equation is integrated. Following Granger and Newbold, each variable was tested for the presence of a unit root with the augmented Dickey–Fuller test. The test results reveal that all the economic variables, with the exception of economic growth, are integrated in the first order (grth $= -5.85$; inv $= -2.34$; con $= -0.29$; intr $= -2.002$; gov $= -1.84$; taxrate $= -2.25$; defc $= -2.32$; une $= -2.71$; trdefc $= -2.54$).[5] Accordingly, all of these variables were differenced. Differencing makes sense theoretically as well as methodologically because differencing allows us to test the impact of the changes in independent variables on the changes in the dependent variable (Table 1).

Findings

The estimation results are reported in Table 2.

The R^2 values for the Growth, Consumption, and Unemployment equations are 0.84, 0.73, and 0.56, respectively. The signs for key independent variables are generally as expected across all three models. For instance, private consumption shows a positive and

[4] To obtain instrumental variables, we used all the exogenous variables as follows:

$$\frac{\Delta CON_t}{Y_t} = \alpha_1 + \beta_{11}\frac{\Delta TRDEFC_t}{Y_t} + \beta_{12}\frac{\Delta GOV_t}{Y_t} + \beta_{13}\frac{\Delta DEFC_t}{Y_t} + \beta_{14}PELEC_t - \beta_{15}\Delta TAX_{t-1} + \beta_{16}UNITED_{t-1} - \beta_{17}\Delta INT_{t-i} + \beta_{18}WAR_t + e_1$$

$$\Delta UNE_t = \alpha_2 + \beta_{21}\frac{\Delta TRDEFC_t}{Y_t} + \beta_{22}\frac{\Delta GOV_t}{Y_t} + \beta_{23}\frac{\Delta DEFC_t}{Y_t} + \beta_{24}PELEC_t - \beta_{25}\Delta TAX_{t-1} + \beta_{26}UNITED_{t-1} - \beta_{27}\Delta INT_{t-i} + \beta_{28}WAR_t + e_2$$

$$\frac{\Delta Y_t}{Y_t} = \alpha_2 + \beta_{21}\frac{\Delta TRDEFC_t}{Y_t} + \beta_{22}\frac{\Delta GOV_t}{Y_t} + \beta_{23}\frac{\Delta DEFC_t}{Y_t} + \beta_{24}PELEC_t - \beta_{25}\Delta TAX_{t-1} + \beta_{26}UNITED_{t-1} - \beta_{27}\Delta INT_{t-i} + \beta_{28}WAR_t + e_2$$

[5] Differencing insures that all of the variables are *I*(0), which leads to robust estimation results. However, these results come at the price of losing long-term effects. The Error-correction method is recommended for dealing with non-stationarity while still preserving long-term effects. Since one of the endogenous variables, growth, does not have a unit root and since the estimation technique is three-stage-least-squares, the Error-correction method is not appropriate for this study. For a detailed discussion of this issue, see Maddala (1992, chap. 14).

Table 1 Correlation matrix of variables

	grth	con	inv	une	gov	defc	trdefc	unite	pelec	tax	intrate	war
grth	1.00											
con	0.801	1.00										
inv	0.811	0.755	1.00									
une	−0.863	−0.642	−0.700	1.00								
gov	−0.076	−0.195	−0.428	0.107	1.00							
defc	0.206	−0.005	0.312	−0.391	−0.449	1.00						
trdefc	−0.234	−0.419	−0.396	0.185	0.032	−0.056	1.00					
unite	−0.021	−0.130	−0.081	0.116	0.312	−0.088	0.195	1.00				
pelec	0.120	0.131	0.143	−0.167	0.036	0.142	−0.123	−0.112	1.00			
tax	0.224	0.148	0.243	−0.168	0.022	−0.032	−0.110	0.194	−0.112	1.00		
intrat	0.303	0.156	0.436	−0.431	−0.216	0.317	0.101	−0.104	0.187	0.121	1.00	
war	0.143	0.031	−0.043	−0.042	0.310	−0.190	0.137	0.238	−0.112	0.194	−0.104	1.00

Table 2 Three-stage-least-squares analysis results

	Growth	Consumption	Unemployment
Constant (standard errors)	0.0127 (0.0072)**	0.0093 (0.0023)***	−51.5465 (15.569)***
Growth		0.4019 (0.0714)***	
Consumption	0.7849 (0.3086)***		−51.5465 (15.5690)***
Unemployment	−0.0096 (0.0022)***		
Government expenditures	−0.1662 (0.2398)		−4.6287 (17.6823)
Tax_{t-1}		−0.0004 (0.00015)***	
$\text{Interest rate}_{t-1}$		−0.0016 (0.0006)***	
$\text{Trade deficits}_{t-1}$	−0.2872 (0.2912)		20.4027 (12.9553)*
War	0.0055 (0.0028)**	−0.0024 (0.0016)*	−0.2282 (0.2146)
United government	0.0056 (0.0023)***		
Presidential election	0.0005 (0.0027)		−0.2923 (0.2165)*
Deficit spending			−24.1976 (6.4489)***
$N = 55$	$R^2 = 0.84$	$R^2 = 0.73$	$R^2 = 0.56$

* Significant at 0.1 level, one-tailed; ** significant at 0.05 level, one-tailed; *** significant at 0.01 level, one-tailed

significant impact on growth whereas unemployment has a negative and significant effect. Given that consumption and employment are the two key variables in enhancing aggregate demand, the results are consistent with general macroeconomic theory. United government also has a positive and significant impact on growth. This relationship means that the US economy enjoys good performance during the period that the president and the majority of the House are from the same party. This is reasonable since the House is likely to support the president's fiscal policy decisions under these conditions.[6] Presidential elections hardly affect economic growth, which shows the lack of empirical support for the political business cycle argument.

Government expenditures have no statistically significant impact on growth. One possible explanation for the finding is that a large proportion of government spending is for entitlement programs, including Social Security, Medicare, and Medicaid. High levels of mandatory spending make it difficult for the federal government to spend heavily on policies aimed at stimulating economic growth (such as spending on science and technology). This is consistent with the argument that the growth in mandatory spending has made the budget a less flexible and useful tool for managing the economy (Edwards and Wayne 1990, p. 400).

In the case of international variables, wars have a statistically significant and positive effect on economic growth. The economy also seems to perform better during the war period due to stimulative fiscal policies used to help finance war efforts. Trade deficits, on the other hand, do not have a statistically significant impact on growth. Trade deficits may have a long-term negative impact on growth, but due to the short-term nature of our model, the negative effects might not have been captured.

[6] We tested this argument by creating two interaction terms: one with tax rates and united government and the other with deficit spending and united government. Both interactive variables are significant in the expected directions when they are substituted for the original tax and deficit spending variables (results are available from the authors upon request). However, if both the interaction variables and the original policy variables are included in the model, the interaction terms become insignificant, most likely as a result of the correlation among these variables.

Turning to the consumption equation, as expected, economic growth increases private consumption while involvement in wars reduces consumption. A strong economy often leads to increases in personal income, which in turn stimulates private consumption. Despite the expansion of fiscal policies, private consumption shrinks during wars due to uncertainties about the future economy. Both taxes and interest rates have a negative and significant effect on consumption. As taxes increase, consumers have less money to spend, so personal consumption declines. Consumption declines as interest rates go up because individuals and private firms have less incentive to borrow. Even when other determinants of consumption are taken into account, the findings reveal that tax rates have a significant impact on consumption. This suggests that unlike government expenditures, tax policy is an area where presidents may have some leverage in shaping economic conditions.

In the unemployment equation, consumption has a negative and significant impact on unemployment, which supports the idea that private consumption is a key force in creating jobs. Given that tax and interest rate policies have a significant impact on private consumption, both of these policy tools indirectly help create jobs and stimulate the economy through their direct effects on consumption. Unemployment also declines slightly during presidential election years. Deficit spending has a significant impact in lowering unemployment. This supports the view of deficit spending as a classic countercyclical approach for addressing high unemployment (Krause 2000). This finding needs to be interpreted with caution, however, because deficit spending in the long run leads to higher interest rates, which in turn reduces private investment and consumption. This is likely to lower growth over time (Stiglitz 1997, pp. 468–469).

Total government expenditures, on the other hand, have no statistically significant effect on unemployment. This divergence in the effectiveness of total government expenditures and deficit spending is plausible because overall spending is a rather clumsy tool for stimulating the economy, whereas deficit spending can be more precisely targeted toward measures expected to grow the economy and lower unemployment.

Surprisingly, wars show little impact on unemployment. The likely reason is that the wars (Korean War, Vietnam War, Gulf War, and the US war against Iraq) included in the model are rather limited wars and did not involve the same level of troop mobilization as in WWII. Trade deficits have a moderately negative impact on unemployment, which generally supports the view that increased dependence on imports has a negative impact on American jobs.

Conclusion and discussion

One of the limits of the literature on presidential management of the economy is that assessments about the difficulties presidents face when trying to manage the economy through fiscal policy are generally vague about how policy-related variables and a variety of other forces interact with each other and together shape economic conditions in the United States. Presidency scholars have made provocative hypotheses about how various domestic and international forces complicate and compete with fiscal policy. However, little effort has gone into empirically modeling this complex system of variables. Knowledge of how all of these variables behave is an essential task for making more informed assessments about the overall effectiveness of fiscal policy. It also helps to clarify the extent to which political leaders deserve credit or blame for favorable or unfavorable economic conditions.

Our goal here is to suggest an approach for conducting more systematic empirical tests of some of the hypotheses that Presidency scholars have made about the forces that make presidential management of the economy difficult. For years, political scientists and economists have used sophisticated econometric modeling techniques to study the behavior of the U.S. economy. However, scholars studying presidential management of the economy have generally not embraced this literature as an avenue for conducting more systematic evaluations of questions related to presidential management of the economy. We have taken some fundamental themes from the econometric modeling literature and have bridged them with findings from the more case-study oriented research on presidential management of the economy. There is good reason for Presidency scholars to embrace the econometric modeling literature, since complex statistical issues typically need to be addressed when dealing with research questions that involve relationships among macroeconomic variables.

The core finding presented here is that fiscal policy plays a significant role in influencing unemployment and economic growth in the United States, even after controlling for a variety of other determinants of economic performance. Higher marginal tax rates suppress personal consumption, and deficit spending reduces unemployment. Given that private consumption has a significant impact on growth and is the largest portion of GDP, the fiscal tools available to Congress and the president directly and indirectly shape economic performance. In contrast to these positive findings, total government expenditures do not have a significant impact on economic growth or unemployment. In summary, our analysis shows that Presidency scholars are partly right in claiming that presidents face limits in managing the economy on the grounds that other factors influence economic performance. Yet given that deficit spending and tax rates have significant economic effects, presidents do have effective fiscal policy tools at their disposal.

Of course the skill individual presidents have applying these tools is a different matter altogether. While our results generally support the view that tax policies and deficit spending are potentially effective economic management tools, they do not speak to the issue of how effective individual presidents are at navigating their preferred fiscal policy choices through Congress. Our findings are limited in that they focus mostly on the degree to which fiscal policy affects the economy when a variety of other forces are taken into account. Yet they reinforce King's (1993) argument about the value of studying "prior questions" in Presidency research. A sound understanding of the manner in which fiscal policy interacts with a wide variety of other forces is necessary before making prescriptive statements about the strategies presidents should use in their efforts to manage the economy.

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