

MARGINAL TAX RATES AND U.S. GROWTH: FLAWS IN THE 2012 CRS STUDY

Jason E. Taylor and Jerry L. Taylor

In September 2012, seven weeks before the presidential election—one in which top marginal tax rates were a major policy difference between the two major-party candidates—the Congressional Research Service (CRS) published a paper (Hungerford 2012) suggesting that there is no empirical evidence that top marginal tax rates impact U.S. economic growth. After all, top marginal tax rates were above 90 percent during the 1950s and early 1960s when the economy experienced rapid growth. Furthermore, marginal tax rate cuts in 2001 and 2003 were followed by the worst financial crisis since the Great Depression. The CRS study was widely reported in blogs, newspapers such as the *New York Times*, and *The Atlantic* magazine. It was portrayed as evidence refuting Republican candidate Mitt Romney’s position that cutting the top marginal tax rate from 35 to 28 percent would spur economic growth and supporting Democratic President Barack Obama’s position that top marginal tax rates could be raised to 39.6 percent with no cost to economic growth (Leonhart 2012, Thompson 2012).

Republicans claimed that the study was methodologically flawed and asked that the CRS report be pulled. On November 1, 2012, five days before the election, the report was pulled, and its content, as

Cato Journal, Vol. 34, No. 1 (Winter 2014). Copyright © Cato Institute. All rights reserved.

Jason E. Taylor is Jerry and Felicia Campbell Professor of Economics at Central Michigan University, and Jerry L. Taylor is Professor of Economics and Finance at Kaplan University. The authors thank participants at the 2013 Economic and Business History Conference and anonymous referees for their comments, and also Thomas Hungerford for generously sharing his data.

well as the controversy surrounding it, were back in the headlines again. The *New York Times* quoted Sen. Charles Schumer (D-NY) saying, “This has hues of a banana republic. [Republicans] didn’t like a report, and instead of rebutting it, they had them take it down” Weisman (2012). The study was reissued by the CRS in an “updated” form on December 12, 2013, with no major changes to the original.

Entin (2013) claims that the CRS study’s model is flawed in that it does not control for several other factors that could have affected growth and thus “poisons its results by not holding other factors constant.” Furthermore, Entin notes that it takes years for firms to fully adjust to changes in tax structure and that looking only at the effects of tax changes one year out “misses the point.” In fact, the CRS study analyzes year-over-year changes rather than levels (because the data are not stationary), and hence it effectively asks whether GDP growth rates were different in years such as 1964, 1987, 1993, or 2003, when there was a change in the top marginal tax rate, relative to years in which there was no change in top marginal tax rates. But the key issue of interest is not whether a tax rate change has an effect on economic performance during that same year, but whether it changes the growth trajectory in subsequent years. Even very small changes in the rate of economic growth, if they are persistent, can have a very large impact on the size of the economy over time because of compounding.

Indeed, the vast literature examining tax rates and economic growth strongly suggests that marginal tax rates and GDP growth rates are negatively related. This result is well established both through the use of time series data for the United States and via large panels of international data. In this article, we employ the exact data and specifications from the CRS study but change the methodology to analyze how changes in top marginal tax rates affect growth over the following three to five years rather than just the year of the change. After this modification, the regressions suggest that tax cuts have brought faster economic growth in subsequent years in the postwar United States, consistent with the theoretical and empirical literature.

Literature Review: Marginal Tax Rates and Growth

A large literature exists in which the theoretical “optimal tax” is sought (Mirrlees 1971; Diamond and Mirrlees 1971; Saez 2001;

Mankiw, Weinzierl, and Yagan 2009). It is widely recognized in this literature that there is a tradeoff between income redistribution and efficiency. Proponents of progressive taxation (graduated taxes) argue that social welfare may rise when resources are more equitably distributed.¹ Furthermore, Conesa and Krueger (2006) argue that a progressive tax acts as a partial substitute for missing insurance markets. Still, taxes that vary with income distort behavior since they place a wedge between the market values of effort and reward. If taxes are highest on the successful drivers of growth, such as with a progressive tax, this will cause particularly large efficiency losses by distorting their labor supply and capital accumulation decisions. Along these lines, Cullen and Gordon (2002) suggest several avenues through which taxes affect entrepreneurial activity. Economists have long noted that a lump-sum tax, in which tax liabilities are independent of behavior, is the most efficient form of taxation since there is no distortive effect. Still, such a tax would be highly regressive, thus working strongly against the goal of fairness. Clearly the most efficient tax is unfair while taxes geared toward income redistribution are inefficient; high marginal taxes distort behavior and affect growth, even if they may be considered desirable from a perspective of income redistribution.

A large empirical literature has arisen to ascertain the importance of tax rates in determining growth in the real world—that is, how much of a tradeoff there is between income redistribution and efficiency. For example, Koester and Kormendi (1989) examined the relationship between effective tax rates and GDP of 63 countries during the 1970s. They found that although marginal tax rates do not affect GDP growth rates, a 1 percent tax cut would raise the level of per capita GDP by between 0.6 and 1.3 percent—creating a parallel shift in a nation's growth path. Following up on Koester and Kormendi, Engen and Skinner (1992) examined 107 countries between 1970 and 1985 and found a negative correlation between average tax rates and economic growth. Padovano and Galli (2001) expanded the time frame to 1950 to 1990, and examined a panel of 23 OECD countries. They found that effective marginal income tax

¹This, of course, involves a value judgment and interpersonal utility comparisons. For the case against progressive taxation from a moral, rule of law, perspective, see Hayek (1960: chap. 20). Also see Blum and Kalven (1952).

rates are negatively correlated with economic growth. Lee and Gordon (2005) found that increases in corporate tax rates lead to slower economic growth. Some studies, such as Easterly and Rebelo (1993) do not find empirical evidence for any correlation between taxes and growth. Still, in a meta-analysis of 93 published studies on the effects of fiscal policies and long-run growth, Nijkamp and Poot (2004) conclude that there is broad empirical support for the hypotheses that higher taxes lead to slower growth. A more limited, but also more recent, review of tax studies by McBride (2012) found that 23 out of 26 studies have uncovered a negative relationship between taxes and growth while the other three found no significant relationship. With respect to tax rates and U.S. growth, Romer and Romer (2010), Barro and Redlick (2011), and Mertens and Ravn (2013) have further confirmed that changes in tax rates have a negative relationship with growth.

Studies of tax rates and growth have employed several different measures for taxes in their regressions. Theory suggests that *marginal* rates are particularly important since they distort relative prices and misallocate resources, resulting in welfare losses. An individual who is in the 50 percent marginal tax bracket gains only 50 cents on each extra dollar of income earned from work, saving, or investment, even if the average tax rate for that individual (total taxes paid divided by income) is only 20 percent. However, marginal effective tax rates are difficult to observe across the entire economy. Many studies, like Engen and Skinner (1992), have used average tax rates as a proxy by dividing tax revenues by GDP. However, Padovano and Galli (2001) estimated effective marginal tax rates by regressing total government revenues on gross domestic product, over 10-year intervals; the coefficient then yields the change in revenue for a one-dollar change in output. Another approach is to examine the top marginal tax rate, as Hungerford (2012) did in the CRS study. But that approach is not without its shortcomings, as it does not account for exemptions, deductions, evasion, and other strategies used by high-income earners in progressive tax regimes (Frenkel, Razin, and Sadka 1991).

Another aspect of the literature on the impact taxes have on growth examines differences in tax structures within the United States. Genetski and Chin (1978) found that growth in gross state product was negatively correlated with changes in state and local taxation. Dozens of studies have followed up or extended this seminal

work and the majority of them have concluded that state tax rates matter. Vedder (2001) provides a summary of this literature, while also concluding that states with lower tax burdens saw faster growth in the last half of the 20th century. Most recently, Laffer, Moore, and Williams (2012) have confirmed the consensus of this literature that low-tax states outperform high-tax states in terms of population growth, job growth, growth in gross state product, and growth in tax revenues.

Empirical Analysis: The CRS Study and Extensions

The motivation for this article is to explore the controversy behind the widely cited September 2012 CRS study by Hungerford suggesting that there is no evidence that changes in top marginal tax rates have impacted U.S. economic growth in the postwar era. Hungerford runs regressions in which the dependent variable is the growth rate of real per capita GDP and the independent variables include the change in the top marginal tax rate, the change in the top capital gains tax rate, the change in the percentage of the population who are college graduates, the change in the population growth rate, and the change in the real federal current expenditures ratio (real federal expenditures divided by potential real GDP).²

Hungerford's empirical analysis uses first-differenced data since the data in levels are not stationary and thus can lead to spurious results. However, he only asks whether the growth rate of real per capita GDP was different in years in which the top marginal tax rate changed. Table 1 reports the top marginal income tax rate from 1913, the year the income tax began, to 2013. Years in between the ones listed had the same rate as the prior year. The way Hungerford's regressions are specified, the tax rate variables take a zero value for all years when the top marginal tax rate did not change (and, hence, are not listed in the table). But this methodology is an oversimplification of the model: it suggests that changes in marginal tax rates only affect GDP growth in the year during which they were enacted. In fact, in many cases, tax rates were changed deep into the year in

²Hungerford also runs regressions with three other dependent variables: change in private savings ratio, change in private fixed investment ratio, and change in labor productivity growth rate. In no case does he find that the primary variable of interest—change in the top marginal tax rate—is statistically significant.

TABLE 1
TOP MARGINAL INCOME TAX RATES AND THE YEAR
THEY WENT INTO EFFECT

Year	Top Marginal Rate (%)
1913	7
1916	15
1917	67
1918	77
1919	73
1922	58
1924	46
1925	25
1932	63
1936	79
1941	81
1942	88
1944	91
1964	77
1965	70
1982	50
1987	38.5
1988	28
1991	31
1993	39.6
2001	39.1
2002	38.6
2003	35
2013	39.6

NOTE: From 1968 to 1970, a Vietnam War surcharge was assessed on top rates as well. If these are considered, the top marginal rate was 75.25, 77, and 71.75 percent, respectively, during these three years. Some years during the late 1940s and 1950s were subject to maximum effective rate limitations equal to between 85.5 and 90 percent of “taxable income.” In some cases this may have slightly altered the effective top marginal rate. SOURCES: Data are from “Personal Exemptions and Individual Tax Rates, 1913–2002” (www.irs.gov/pub/irs-soi/02inpetr.pdf) and “Federal Individual Income Tax Rates History, Nominal Dollars, Income Years 1913–2013” (taxfoundation.org/sites/taxfoundation.org/files/docs/fed_individual_rate_history_nominal.pdf).

which they (often retroactively) took effect. One way to overcome this weakness is to examine whether or not GDP growth rates were different in the three, four, or five years after a change in top marginal tax rates occurred.

Table 2 reports the results of five regressions, which, following Hungerford, use 61 observations of annual data from 1950 to

TABLE 2
DEPENDENT VARIABLE: GROWTH RATE IN
REAL GDP PER CAPITA

	(1)	(2)	(3)	(4)	(5)
Constant	0.022059 (4.34) ^{***}	0.01779 (3.57) ^{***}	0.01038 (1.77) [°]	0.01594 (3.30) ^{***}	0.01554 (3.54) ^{***}
1-Top Rate	-0.098 (-0.96)				
1-Cap Gains	-0.043 (-0.61)				
Percentage	-0.2699	-0.2351	0.2337	0.1997	0.1629
College Grad	(-0.32)	(-0.32)	(1.44)	(1.69) [°]	(1.47)
Population	-5.83	-5.7948	-0.0622	-0.0419	-0.0499
Growth	(-1.55)	(-1.59)	(-1.37)	(-1.25)	(-1.71) [°]
Fed Expenditures	-0.532	-0.5138	-0.1326	-0.0586	-0.0064
Ratio	(-0.95)	(-0.92)	(-1.17)	(-0.82)	(-0.09)
<i>Tax Cut Dummy</i>		0.01014	0.01157	0.01203	0.01027
4 Years		(1.78) [°]	(2.02) ^{**}	(2.65) ^{***}	(2.25) ^{**}
<i>Tax Increase Dum</i>		0.00259	0.0027	0.0039	0.0046
4 Years		(0.43)	(0.50)	(0.95)	(1.26)
Growth Rate				-0.0772	-0.0779
Monetary Base				(-6.27) ^{***}	(-6.29) ^{***}
Change Stock				-0.0534	-0.0496
Mrk Return				(-5.03) ^{***}	(-4.37) ^{***}
Growth Labor					0.9408
Force/POP					(1.75) [°]
R-squared	0.0838	0.088	0.129	0.431	0.464
F-Statistic	1.01	1.06	1.62	5.72	5.65

NOTES: T-statistics reported in parentheses. ° Indicates statistical significance at the 10 percent confidence interval. ** Indicates statistical significance at the 5 percent confidence interval. *** Indicates statistical significance at the 1 percent confidence interval. Specifications (1) and (2) use the first difference of percentage of college graduates, population growth, and the federal expenditures ratio, while specifications (3), (4) and (5) use the log difference, or growth rate, of these variables.

2010. Also following Hungerford, all regressions use Newy-West corrected standard errors that allow for heteroskedastic and autocorrelated error terms. Specification (1) duplicates Hungerford's result. The primary variables of interest in Hungerford's regression are 1 minus the top marginal income tax rate and 1 minus the top capital gains tax rate; thus, they represent the leftover percentage of marginal income an earner in the top bracket would keep. The change in the percentage of the population who are college graduates, change in the population growth rate, and the change in the real federal current expenditures ratio are control variables. The r-squared is very low, as is the F-statistic on the regression. Additionally, as widely reported in the media, the coefficients on the tax variables are not statistically different from zero.

In response to the claim that the CRS study was flawed because it did not allow enough time for tax changes to have effects on behavior, specification (2) replaces the tax variables with two dummy variables: *Tax Cut Dummy 4 Years* takes on a value of 1 the year the top marginal tax rate is cut and the three years that follow, while *Tax Increase Dummy 4 Years* takes on a value of 1 the year of an increase in the top marginal rate and the three years that follow.³ The coefficient on the *Tax Cut* dummy is positive and significant at the 10 percent level. The coefficient suggests that real per capita GDP grew about 1 percentage point faster in the four years following a tax cut (counting the year of the cut as the first year). The *Tax Increase* dummy is insignificant. Again the r-squared and F-statistic are low.

An alternative would be to look at *growth rates* in the control variables rather than just the year-over-year difference in them. Specification (3) is identical to specification (2) except that it examines the log difference of the control variables rather than just the difference. The *Tax Cut* dummy remains positive and statistically significant, now at the 5 percent level. The r-squared and F-statistics rise, but are still very low.

³The dummies turn on when the top marginal rate changes by more than 1 percentage point. The *Tax Cut* dummy takes on a value of 1 during 1964–67, 1982–85, 1987–90, and 2003–2006. The *Tax Increase* dummy takes on a value of 1 during 1951–54, 1968–71, and 1991–97.

Entin's (2013) major criticism of the CRS study was that it suffered from an omitted variables bias—namely, it did not control for enough other factors (such as monetary policy) that could affect real GDP growth, and thus isolate the effect of tax changes. Specifications (4) and (5) are an attempt to alleviate at least some of this concern. In specification (4), we add two new control variables—the growth rate in the monetary base and the growth rate in the S&P stock market—with the goal of explaining more of the variation in the growth of real per capita GDP. The r-squared jumps considerably as does the F-statistic, which is now statistically significant. This specification suggests that in the four years after a tax cut, the growth rate in real per capita GDP is 1.2 percentage points higher than in years in which no cut occurs. This result is significant at the 1 percent confidence interval. Finally, specification (5) adds the growth rate of the labor force to population ratio, to help control for demographic trends (women entering the labor force, changes in working age population structure) that could have affected the real per capita GDP growth rate. Again the *Tax Cut* dummy variable is positive and significant at the 5 percent confidence level.

To test the robustness of the finding that tax cuts brought faster growth in the postwar United States, we also tried dummy variables that controlled for 3 and 5 years around a tax change, rather than four, and the results were similar. In each case, the coefficient on the *Tax Cut* dummy was positive and significant at the 10 percent level or better, except in the case of using the differences (specification 2) for the 5-year dummy. Another issue is that Hungerford used tax data from the IRS that included some tax increases in 1951 and 1968, when the statutory top rates were not changed but surtaxes and surcharges were imposed. For example, 1968 to 1970 included Vietnam War surcharges that applied to the highest tax rate. We ran the regressions again with an *Alternative Tax Increase* dummy that only took on a value of 1 from 1991 to 1996, which were the years of and after the tax increases of 1991 and 1993. The major results are unchanged: the coefficient on the *Tax Cut* dummy remains positive and statistically significant at the same confidence interval, or better, in each specification. We also tried including the growth rate of real federal transfers as a percentage of potential GDP, and found that tax

cuts brought faster economic growth in the years following the tax change.⁴

Certainly, a dummy variable approach also has its shortcomings as it assumes that all tax cuts (large and small) are empirically identical. For another important robustness check, we replaced the 1s in the binary dummy variables with the change in the top marginal tax rate in the year of the change and the three following years. For example, for 1964 to 1967, rather than the *Tax Cut* variable taking on a value of 1, it took on a value of 14 for 1964 (reflecting the cut from 91 percent to 77 percent) and then a value of 21 for 1965, 1966, and 1967 (reflecting the cut from 91 to 70 percent once fully phased in). Consistent with the earlier results, the coefficients on the *Tax Cut* variable were positive and statistically significant at the 10 percent confidence level or better in specifications (2) through (5).

In one final robustness check, we combined the *Tax Increase* and *Tax Cut* variables into one *Tax Change* variable. This variable duplicated the earlier results, but took on negative values for tax cuts (e.g., -21 for 1965) and positive values for tax increases (e.g., 3 for 1991), again for the year of the cut and the following three years. This variable's coefficient was negative and statistically significant in specifications (2) through (4), generally confirming the notion that tax rates and growth are inversely related. In sum, when we allow for a time lag, the result that cuts in marginal tax rates brought faster growth in the postwar United States is quite robust, even using the exact data employed by the CRS study.

⁴While Hungerford's main regression dealt with the impact of tax rates on growth in real per capita GDP, he ran three other regressions whereby the dependent variables were change in the private saving as a percentage of potential GDP, change in fixed private investment as a percentage of potential GDP, and change in the labor productivity growth rate. For the investment and savings ratio regressions, change in AAA bond rates, and change in the S&P Stock market return were used as control variables. The investment regression also had lagged investment while the savings regression had change in disposable personal income. The productivity regression had only two controls: change in college graduates as a percentage of the population, and the change in the ratio of federal transfer payments as a percentage of potential GDP. We duplicated all these regressions replacing Hungerford's change in 1 minus the top marginal income and capital gains tax rates with our *Tax Cut* and *Tax Increase* dummies for four years. Consistent with Hungerford's findings, the tax dummies in these regressions were not statistically significant, meaning that from these specifications we cannot reject the null hypothesis that a change in marginal tax rates has no effect on these three variables, holding the specific controls constant.

Conclusion

In September 2012, a Congressional Research Service study claimed that there is no evidence that changes in top marginal tax rates have had any impact on economic growth in the United States since World War II. In the weeks leading up to the election, the CRS study was spun as evidence that President Obama's proposal to raise the top marginal tax rate to 39.6 percent could "spread the wealth around" without forgoing economic growth.⁵

Republican presidential candidate Mitt Romney's economic platform centered on cutting marginal tax rates to spur growth in order to help solve the nation's short- and long-run debt and demographic problems. The mainstream media, politicians, and political groups favoring higher taxes on the wealthy widely cited the CRS study as evidence against Romney's economic program and in favor of President Obama's plan to raise top marginal rates. Republicans claimed that the study was driven by ideology rather than economics and asked that it be pulled from the *Congressional Record*, which it was five days before the November 6 election. Critics accused Republicans of suppressing the study because they did not agree with its findings.

We find that the CRS study does have a serious methodological flaw—it examines differenced data so that the coefficients on the tax variables are zero except during the year in which the top marginal tax rate is changed. By employing this methodology, the CRS study does not allow tax changes to have lagged effects on growth. Economic theory, however, suggests that a change in marginal tax rates can impact the economy in the time frame beyond just the calendar year in which it goes into effect. We use the CRS study's data and find that if dummy variables are used for the three to five years around a tax change, rather than using the one-year growth rate in the top marginal rate, there is strong empirical evidence that real per capita GDP grows faster in the years after a tax cut. This finding is robust to several additional modifications in the empirical approach, including one that addresses another major criticism by adding more control variables that help explain GDP growth.

⁵While campaigning in September 2008, Obama told Joe Wurzelbacher, a small business owner who had become known as "Joe the Plumber," that "when you spread the wealth around, it's good for everybody" (Hardwood 2011).

Our results are consistent with what economists have long understood: that a tradeoff exists between income redistribution and economic growth.

References

- Barro, R., and Redlick C. J. (2011) "Macroeconomic Effects of Government Purchases and Taxes." *Quarterly Journal of Economics* 126: 51–102.
- Black, W. K. (2013) "Robert Reich Is a Good Man but He Falls into the Austerity Trap." *Alternet* (www.alternet.org/economy/robert-reich-good-man-he-falls-austerity-trap).
- Blum, W. J., and Kalven Jr., H. (1952) *The Uneasy Case for Progressive Taxation*. Chicago: University of Chicago Press.
- Brownlee, E. (2004) *Federal Taxation in America: A Short History*. 2nd ed. Cambridge: Cambridge University Press.
- Conesa, J. C., and Krueger, D. (2006) "On the Optimal Progressivity of the Income Tax Code." *Journal of Monetary Economics* 53: 1425–50.
- Cullen, J. B., and Gordon R. H. (2002) "Taxes and Entrepreneurial Activity: Theory and Evidence for the U.S." NBER Working Paper No. 9015.
- Diamond, P. A., and Mirrlees, J. A. (1971) "Optimal Taxation and Public Production I: Production Efficiency." *American Economic Review* 61: 8–27.
- Easterly, W., and Rebelo, S. (1993) "Marginal Income Tax Rates and Economic Growth in Developing Countries." *Journal of Monetary Economics* 50: 409–17.
- Engen, E. M., and Skinner, J. (1992) "Fiscal Policy and Economic Growth." NBER Working Paper No 4223.
- Entin, S. J. (2013) "CRS Study on Tax Rates and Growth Still Flunks the Test." Washington: Tax Foundation. Available at <http://taxfoundation.org/sites/taxfoundation.org/files/docs/ff350.pdf>.
- Frenkel, J. A.; Razin, A.; and Sadka, E. (1991) *International Taxation in an Integrated World*. Cambridge, Mass.: MIT Press.
- Genetski, R. J., and Chin, Y. D. (1978) *The Impact of State and Local Taxes on Economic Growth*. Chicago: Harris Bank.
- Hardwood, J. (2011) "'Spreading the Wealth' in Democrats' Favor." *New York Times* (27 November).

- Hayek, F. A. (1960) *The Constitution of Liberty*. Chicago: University of Chicago Press.
- Hungerford, T. (2012) “Taxes and the Economy: An Economic Analysis of the Top Tax Rates Since 1945.” Washington: Congressional Research Service (14 September).
- Koester, R. B., and Kormendi, R. C. (1989) “Taxation, Aggregate Activity and Economic Growth: Cross-Country Evidence on Some Supply-Side Hypotheses.” *Economic Inquiry* 27: 367–86.
- Laffer, A. B.; Moore, S.; and Williams, J. (2012) *Rich States, Poor States*. 5th ed. Washington: American Legislative Exchange Council.
- Lee, Y., and Gordon, R. H. (2005) “Tax Structure and Economic Growth.” *Journal of Public Economics* 89: 1027–1043.
- Leonhart, D. (2012) “Do Tax Cuts Lead to Economic Growth?” *New York Times* (16 September).
- Mankiw, N. G.; Weinzierl, M.; and Yagan, D. (2009) “Optimal Taxation in Theory and Practice.” *Journal of Economic Perspectives* 23: 147–74.
- McBride, W. (2012) “What Is the Evidence on Taxes and Growth?” Tax Foundation Special Report No. 207. Available at <http://taxfoundation.org/sites/taxfoundation.org/files/docs/sr207.pdf>.
- Mertens, K., and Ravn, M. (2013) “The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States.” *American Economic Review* 103: 1212–47.
- Mirrlees, J. A. (1971) “An Exploration in the Theory of Optimal Income Taxation.” *Review of Economic Studies* 38: 175–208.
- Nijkamp, P., and Poot, J. (2004) “Meta-Analysis of the Effect of Fiscal Policies on Long-Run Growth.” *European Journal of Political Economy* 20: 91–124.
- Padovano, F., and Galli, E. (2001) “Tax Rates and Economic Growth in the OECD Countries (1950–1990).” *Economic Inquiry* 39: 44–57.
- Romer, C., and Romer, D. (2010) “The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks.” *American Economic Review* 100: 763–801.
- Saez, E. (2001) “Using Elasticities to Derive Optimal Income Tax Rates.” *Review of Economic Studies* 68: 205–29.
- Shlaes, A. (2010) “Obama Threatens to Follow in FDR’s Economic Missteps.” *Washington Post* (8 July).

- Thompson, D. (2012) "Tax Cuts Don't Lead to Economic Growth, a New 65-Year Study Finds." *The Atlantic* (September).
- Vedder, R. K. (2001) *Taxes and Economic Growth: Should States Adopt a Safehaven Strategy of Low Tax Burdens to Foster Growth, Capital Formation and Innovation?* Cedarburg, Wis.: Taxpayers Network.
- Weisman, J. (2012) "Nonpartisan Tax Report Withdrawn after G.O.P. Protest." *New York Times* (2 November).