INSTITUTE ON TAXATION AND ECONOMIC POLICY

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Arthur Laffer Regression Analysis is Fundamentally Flawed, Offers No Support for Economic Growth Claims

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A November 2011 report from the Oklahoma Council for Public Affairs (OCPA) in partnership with Arduin, Laffer & Moore, a consulting group headed by Arthur Laffer, explains the method that Laffer has been using to make the case that tax cuts lead to economic growth. The results he offers appear impressive, but his methods are flawed. Laffer is an economist whose work is disseminated through various free market policy networks such as the American Legislative Exchange Council (ALEC). He is also the founder of the Laffer Center for Supply Side Economics and a principal at Arduin, Laffer & Moore, which provides policy guidance for lawmakers around the country. Oklahoma Governor Mary Fallin relied on the report (Eliminating the State Income Tax in Oklahoma: An Economic Assessment) in crafting her proposal to repeal her state's personal income tax.[1]

Laffer's analysis makes some very precise predictions about how much economic growth would result from repealing the Oklahoma income tax between 2013 and 2022. Specifically, Laffer estimates that income tax repeal would more than double the rate of personal income growth (from 2.39 to 5.65 percent per year), and have a similar effect on state GDP growth (from 2.03 to 5.44 percent per year). The result would be $47.4 billion in new personal income, $53.4 billion in additional economic output, and 312,000 new jobs.

These numbers are derived from a regression analysis (a statistical operation used to explain the relationship between one set of variables and another). In the report's words, they show a "negative and highly significant" (a.k.a. inverse) relationship between state income tax rates and personal income growth.

Tax Rates are Measured Incorrectly

While the results are no doubt attention-grabbing, the underlying regression used to produce them is deeply flawed. For starters, the analysis uses a misleading measure of "tax rates" that includes federal rates, thereby distorting what is intended to be an analysis of state tax policy and economic performance.

The measure of "tax rates" used in Laffer's regression for each year between 2001 and 2008 is the top marginal combined state **and** federal tax rate in each state. Since the goal of the regression is to show how state tax rates affect economic growth, it's hard to see why Laffer et al. would muddy the waters by measuring the combined federal and state tax rate—that is, until you see how that choice affects their results. As noted, the Laffer regression finds a "negative and highly significant" relationship between the combined federal/state tax rate in a given state and economic growth over the 2001-2008 period—but that relationship actually becomes **positive and insignificant** when the model is corrected to include only variation in state tax rates. Put another way, when the noise created by changes in federal tax rates is removed, it becomes obvious that differences in state tax rates are not driving the economic predictions made by Laffer.

The top federal tax rate was substantially higher in 2001 (at 39.1 percent) and 2002 (38.6 percent) than in the 2003-2008 period (when the top rate was 35 percent). This, of course, is the result of the Bush era tax cuts signed into law in 2001 and 2003. By including the plummeting federal tax rate in their regression, Laffer and his associates essentially assume a 4.1 percentage point cut in every state's top marginal tax rate between 2001 and 2003—even though no state's tax rate was reduced by anywhere near this amount during this period.

Laffer Makes Waves In Other States

Oklahoma's Governor, Mary Fallin, is hardly alone in proposing tax changes based on Laffer's ideas. Kansas Governor Sam Brownback has proposed gradually repealing his state's income tax, and Missouri voters will have a chance to repeal the state's income tax through a ballot measure this fall. Meanwhile, the *Wall Street Journal's* editorial board has written enthusiastically about the wave of interest in income tax repeal. In each case, the most common talking point in support of repeal has been the same type of economic growth arguments that Laffer has tried to bolster through the flawed regression discussed in this report.

Furthermore, 2002 was by far the worst year for U.S. economic growth in the eight-year period in the analysis, and 2001 also saw low growth nationally. Following the deep post- 9/11 trough, personal income predictably grew at a relatively fast rate, just as cuts in federal tax rates were coincidentally going into effect.

By creating a bogus measure (federal and state tax rates combined) and mapping it onto an exceptional moment in economic history, Laffer creates the illusion that cuts in state tax rates between 2001 and 2003 fueled economic growth later in the decade.

Laffer Analysis Also Ignores Non-fiscal Factors

In addition to incorrectly measuring tax rates, the regression ignores a wide variety of other factors that more plausibly affect economic growth. Even if one replaces the combined federal and state tax rates with only state tax rates in this model, as described above, it doesn't remedy the basic problem that the Laffer regression makes no effort at all to measure the impact of other factors, from sunshine to oil production, that explain state economic growth. (See "High Rate" Income Tax States are Outperforming No-Tax States[2], also from the Institute on Taxation and Economic Policy.) Any serious analysis of the relationship between state income tax features and state economic growth requires a far more detailed and careful econometric approach than is given in Laffer's paper—or in this report for that matter.

As an example, an April 2011 working paper by James Alm and Janet Rogers, titled "Do State Fiscal Policies Affect State Economic Growth?"[3] tests the impact of more than 130 explanatory variables in attempting to explain state economic growth, including a variety of tax- and spending-related factors, but also including many geographic and demographic variables. Notably, the Alm and Rogers report does not include federal taxes among the many state tax variables used, and finds no significant impact of state income taxes on state economic growth.

The flaws in Laffer's analysis of Oklahoma tax rates and its economy are so fundamental that its findings cannot be taken seriously nor generalized. Lowering or repealing state personal income taxes does not result in economic growth.

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[1] OCPA and ALME, "Eliminating the State Income Tax in Oklahoma: An Economic Assessment," November 2011.

[2]Institute on Taxation and Economic Policy, "'High Rate' Income Tax States Are Outperforming No-Tax States," February 2012. http://www.itepnet.org/pdf/junkeconomics.pdf

[3]Alm, James and Janet Rogers, "Do State Fiscal Policies Affect State Economic Growth?" *Public Finance Review*: Vol. 39, Number 4, pp. 483-526. July 2011. http://econ.tulane.edu/RePEc/pdf/tul1107.pdf