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Academic Research Lacks Consensus on the Impact of State Tax Cuts on Economic Growth

A Reply to the Tax Foundation

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Some policymakers, organizations, and individual economists assert that a consensus exists in the academic literature that state tax cuts boost state economies and that state tax increases harm them, but no such consensus exists.

• Numerous academic studies find no correlation between state tax levels and various measures of state economic performance (for example, income growth, firm formation, job creation, and net household migration).

• Other studies find that higher taxes are actually associated with better economic performance when they finance higher-quality education and better infrastructure needed and desired by businesses and households.

• Some studies find that taxes have no effect in one time period and a negative effect in another, a positive effect on one measure of state economic performance and a negative effect on a different measure, and/or different effects depending upon how tax levels are measured and the time frames under examination. But there is no consistency in the findings as to which time periods or measurements matter.

• Nor are there consistent findings as to which taxes matter most for economic growth. Some studies find that state corporate income taxes don’t affect economic growth but state personal income taxes do, and others conclude precisely the opposite.

• Finally, some studies conclude that while taxes’ effect on economic performance is statistically significant, the effect should be viewed as of such little economic significance that it should not be allowed to drive decisions as to whether taxes should be increased or cut.

In short, the research landscape fails to support claims that lower state and local taxes are always better for state economies. But in a recent review of the economic literature on the impact of taxes on economic growth, the Tax Foundation asserted that “nearly every empirical study of taxes and economic growth published in a peer-reviewed academic journal finds that tax increases harm
economic growth." In recent testimony to the North Carolina legislature supporting tax cuts, the Tax Foundation went further, asserting that "rarely does empirical economic literature speak so strongly in unison as it does about the effect of taxes on economic growth." In support of these assertions, the Tax Foundation's review cites seven articles that find a "negative effect" of state and local taxes on state economic performance. (The other studies the Tax Foundation cited in its review looked at U.S. federal government taxes or cross-nation studies.) However:

- The Tax Foundation mischaracterized or exaggerated the findings of three of the seven articles it cited, and the conclusions of a fourth article it cited are contradicted by a much more recent paper by the exact same author (which the Tax Foundation failed to include in its review).

- The Tax Foundation omitted from its review at least 20 relevant articles that have been published in major journals or edited compilations since the beginning of 2000, 18 of which either conclude that state and local tax levels have essentially no effect on various measures of state economic performance or suggest that adverse impacts are minimal or limited to particular taxes or time periods.3

The Tax Foundation's statement that "empirical economic literature speak[s] ... strongly in unison" on this topic is simply false. To the contrary, there is no clear research evidence that lower taxes help state economies grow.

**A Few Studies the Tax Foundation Cites Support Its Claims; Others Do Not**

To test the Tax Foundation's assertion that the economic literature supports a link between state taxes and economic growth, we reviewed the seven articles cited in the Tax Foundation's review to determine if their conclusions were accurately characterized. We also reviewed 20 articles published since 2000 on this topic that the Tax Foundation omitted. (Many of these articles were published in the same academic journals as the articles in the Tax Foundation review.)4

Among those cited by the Tax Foundation, some confirm its findings but others do not. Specifically, three of seven studies cited by the Tax Foundation find clearly that lower taxes lead to better state economic growth. The three are John Mullen and Martin Williams, "Marginal Tax Rates and State Economic Growth," *Regional Science and Urban Economics*, 1994; Randall G. Holcombe and

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3 We developed this longer list of relevant articles by doing a complete review of post-1999 articles appearing in major journals that frequently publish articles on state and local taxation, and then using the bibliographies of relevant articles to find others. We then used Google Scholar to identify all relevant post-1999 journal articles that cited any of the papers we initially identified. We acknowledge that despite these efforts we may have missed a few relevant articles that could support the Tax Foundation's claims. Our list is limited to post-1999 articles that have appeared in academic journals and, in one case, a compilation in book form edited by three leading economists. Numerous non-peer-reviewed working papers on the issues addressed here also exist. In some cases we omit studies published earlier by the same authors that use similar methodologies and reach the same conclusions.

4 Throughout this paper we only present direct quotes from the studies so that readers can see for themselves what the authors have said rather than rely on our characterization of the findings. We do italicize text in some longer or technical quotes to help identify the key language, and in a few cases we insert words or comments for clarity. These additions are disclosed.

But the Tax Foundation mischaracterizes or exaggerates the findings of three of the seven state/local tax studies it cites. It characterizes them as showing clearly that higher state and local taxes have “negative effects” on state economic growth, but the actual findings do not support such a flat assertion.

The Tax Foundation misleadingly characterizes the following:


  “Results based on pooled time series and cross section data are presented, which indicate that state and local tax increases significantly retard economic growth when the revenue is used to fund transfer payments. However, when the revenue is used instead to finance improved public services (such as education, highways, and public health and safety), the favorable impact on [business] location and production decisions provided by the enhanced services may more than counterbalance the disincentive effects of the associated taxes. These findings underscore the importance of considering the incentives provided by a state’s expenditures as well as by its taxes.” [Emphasis added.]


  “The results indicate that higher tax rates negatively influence short-run state economic growth, which lowers state output levels. However, *long-run growth is unaffected by changes in state tax rates*. . . Nor do changes in state spending rates and federal aid permanently alter state growth rates, implying that *state fiscal policies have only transitory effects on state growth*.”

  “The coefficients on [personal] income tax rate and property tax rate are statistically insignificant.”

  “Subsidizing state revenues and expenditures into individual components therefore reinforces the lack of impact of individual [income] tax rates on long-run state economic growth. . . .”

  “[A]llowing state taxation and expenditure policy at the same time does not result in long-run growth effects. Thus all [econometric] models [used in this study] support the statement by [Jay] Helms (1985) that if policy makers increase tax rates to fund tangible state spending projects, long-run growth will not be negatively affected.” [Emphasis added.]


  “Barro-style models of endogenous growth imply that economic growth will initially rise with an increase in taxes directed toward economically “productive” expenditures (e.g., education, highways, public safety), but will subsequently decline — consistent with a “growth hill” — as the rising tax share depresses the net return to private capital . . . Based on estimates for U.S. states, the incremental effect of taxes directed toward publicly provided productive inputs is initially positive, but eventually turns negative, consistent with a growth hill.”

  “Overall in our sample, the average state appears to be underinvesting tax revenues in productive government services, relative to the maximum growth rate. However, by 2004 many more states were within
the confidence interval for the growth peak. Still, for many reasons, we are hesitant to place too
much emphasis on our particular point estimates. The confidence interval for the peak of the growth hill
is large. Our categories for state-local budgets are broadly defined, so that one cannot distinguish, for example,
highways from schools or water systems from airports. Similarly, the revenue side is also broadly defined, so that
one cannot distinguish among taxes, fees, or inter-governmental revenues.” [Emphasis added.]

The seventh study the Tax Foundation cites for the proposition that “progressivity of income
taxes negatively affects [gross domestic product] growth,” (Howard Chernick, “Tax Progressivity
and State Economic Performance,” Economic Development Quarterly, 1997) has been effectively
contradicted by a more recent study by the same author, which the Tax Foundation omitted from its
literature review:

• Howard Chernick, “Redistribution at the State and Local Level: Consequences for Economic
  Growth,” Public Finance Review, 2010. Relevant findings:

“The progressivity of a state’s tax structure does not have a statistically significant effect on the
rate of growth of personal income.”

“Income tax burdens do not have a [statistically] significant effect on growth. . . .”

“The most striking policy implication of this study is that tax cuts for high-income taxpayers
cannot be justified in terms of growth in state income. Although such cuts may benefit current
taxpayers, there is no evidence of a spillover or trickle-down effect to the overall state
economy.”

“By contrast, progressivity provides a positive spillover to neighboring states, causing a small
increase in their rates of growth.”

Numerous Recent Studies Omitted from Tax Foundation
Review Contradict Its Claims

Beyond mischaracterizing half of the studies it cites, the Tax Foundation has omitted from its
literature review 20 recent studies on this topic. Of those 20 studies, nine contradict the Tax
Foundation’s assertion, nine neither clearly support or contradict it, and only two support it.

Nine Studies Contradict Tax Foundation’s Assertion

The following nine studies published in economic journals or edited compilations since 2000
conclude that state and local taxes have no significant negative impact on various measurements of
state economic growth:

• Stephen T. Mark, Therese J. McGuire, and Leslie E. Papke, “The Influence of Taxes on
  Employment and Population Growth: Evidence from the Washington, D.C. Metropolitan

  “Taxes on individuals (personal income, sales, and residential property taxes) and non-welfare
  public spending levels are not estimated to be important influences on residential [location]
  choice.”

• Todd M. Gabe and Kathleen P. Bell, “Tradeoffs between Local Taxes and Government
“Local government spending on items other than public education has a positive and significant effect on business location. A 10 percent increase in spending, financed by an increase in local taxes is associated with an average of 3.59 percent ([econometric model] 1P) and 3.37 percent ([econometric model] 1NB) additional investments per [Maine] municipality-[per] industry, and 3.48 percent ([econometric model] 2P) more business openings per municipality. Our results also suggest that establishments are attracted to municipalities with high spending on education instruction and operations . . . A 10 percent increase in spending on education instruction and operations leads to 6.90 percent ([econometric model] 1P) and 5.88 percent ([econometric model] 1NB) more business openings per municipality-[per] industry, and 6.86 ([econometric model] 2P) additional investments per municipality.”

“If education subsidies [from the state of Maine and federal government] are held constant, a 5 percent decrease in local taxes would require a $41.00 per-capita decrease in local spending on items other than education or a $166.2 per pupil decrease in school spending. The reduction in non-education spending, needed in each municipality to balance a 5 percent decrease in taxes, would lead to an average of 4.82 percent ([econometric model] 1P), 4.53 percent ([econometric model] 1NB), and 4.68 percent ([econometric model] 2P) fewer investments than under the baseline scenario. Likewise, reductions in expenditures on education instruction and operations associated with a 5 percent decrease in taxes, result in a decrease in the number of business openings. These low-tax, low-spend fiscal policy experiments suggest that reductions in certain types of government spending, required by a tax cut, have an adverse effect on business location.”

“In this article, where we find that a high-tax, high-spend fiscal policy may actually lead to more business investments than a low-tax, low-spend strategy, it appears that the benefits of public services may be even more important than the costs as a determinant of business location.”


• The Whitman administration’s 30% reduction in New Jersey’s personal income taxes from 1994 to 1996 is prominently cited as a role model for state fiscal policy. The authors investigate whether the growth benefits attributed to the Whitman tax cuts are warranted. Panel data methods are applied to annual observations of county-level employment growth from New Jersey and the surrounding economic region. This study’s analysis does not support the hypothesis that tax cuts stimulated employment growth in New Jersey. Although New Jersey did experience substantial employment growth subsequent to the tax cuts, most of this growth was shared by the nearby Economic Areas.” [Emphasis added.]


“The top [corporate] [income] T[ax] rate does not have a statistically identifiable effect on private-sector economic activity.”


“This paper has sought to estimate the extent to which interstate migration thwarts attempts by states to reduce inequality via more redistributive taxes. Using a Gini-based index of tax redistribution for U.S. states over the period 1977–2002, I find little evidence that — in aggregate —
more redistributive state taxes lead to a more unequal distribution of pre-tax hourly wages. [That is, employers are not forced to pay higher wages to prevent high-income workers from migrating out of a state that increases their taxes.] This remains true when alternative measures of redistribution are used, placing more weight on the bottom or on the top of the distribution. Evidence from population flows helps corroborate this: overall, more redistributive state taxes do not appear to have a substantial impact on the composition or volume of interstate migration. Given that the pre-tax wages distribution does not adjust to offset the effect of redistributive taxes, it should be unsurprising that more redistributive taxation is associated with a more equal distribution of post-tax hourly wages. Regarding the efficiency cost of taxation, I find no evidence that states with more redistributive taxes experience slower growth in per capita personal income. [If anything, states with redistributive taxes grow faster.]” [Emphasis added.]


“In attempting to promote economic development, states often pursue either a race-to-the-bottom approach focused on lowering business costs or a more investment-based, race-to-the-top approach that aims to increase productivity, innovation, and entrepreneurship. Whether either approach promotes growth and produces broad-based economic gains across the population is the subject of this paper. The novelty of our approach is that an extensive array of variables representing examples of the two economic development approaches are examined for their effects on various indicators of state economic performance... over the 2000-07 period. We find that lower taxes are statistically insignificant in explaining state economic performance, and that targeted tax incentives and financial assistance — as currently practiced — are more likely to harm growth.” [Emphasis added.]


“Drawing on a comprehensive set of microdata on individual income taxes in New Jersey — a near census of top income earners — this study examines the impact of a new progressive state income tax. Do progressive state income taxes cause tax flight among the wealthy? The New Jersey millionaire tax experiment offers a potent testing ground, given the magnitude of the policy change and the relative ease of relocating to a different state tax regime without leaving the New York or Philadelphia metropolitan areas. Using a difference-in-differences estimator, we find a minimal effect of the new tax on the migration of millionaires. Using the 95th–99th percentiles of the income distribution as a “non-taxed” control group, we find that the 99th percentile (those subject to the new tax) show much the same trends in migration patterns after enactment of the millionaire tax. There are small subsets of the millionaire population that are more sensitive to state taxation. Nonetheless, the broad conclusion holds even when looking at the richest 0.1 percent of households.”

“Raising the top marginal tax rate by 2.6 percentage points led to a loss of less than one-tenth of 1 percent of the stock [preexisting number] of millionaires.”

“In summary, the differences-in-differences [statistical] estimates indicate that the effect of the new tax bracket is negligible overall. Even among the top 0.1 percent of income earners, the new tax did not appreciably increase out migration.”
“[T]he migration of business owners is a salient issue because their moves directly imply the migration of employment opportunities. . . [However, statistical] Model 8 shows that for most millionaire business owners, the new tax had no [statistically] significant effect.”


“Over the last 40 years, state income tax breaks targeting the elderly have grown, often justified by arguments that the elderly move across state lines in response to such tax preferences. Using two complementary sources of elderly migration data and several measures of elderly income tax breaks, we investigate the relationship between these tax breaks and migration. . . . Our results are overwhelming in their failure to reveal any consistent effect of state income tax breaks on elderly interstate migration.”


“Using a 50-state panel of tax policy information spanning the years 1989 through 2002, our analysis reveals that state tax policies generally do not appear to have quantitatively important effects on entrepreneurial activity.”

“We find no evidence of an economically significant effect of state tax [policy] portfolios on entrepreneurial activity . . .”

Additional Studies’ Findings Are Inconsistent

The following nine recent studies partially support Tax Foundation claims about the impact of state and local taxes on state economic performance. The studies find that only certain state and local taxes appear to have an adverse impact on state economic growth, or only during certain periods, or the authors themselves conclude that the adverse impacts should be viewed as small. Moreover, taken together, the nine studies undermine rather than support the Tax Foundation’s claims, because their findings are not consistent with each other.


“[T]he present study finds that a state’s personal tax rate has a negative effect on firm location but that a state’s corporate tax rate has no statistically significant effect on firm location.” [Emphasis added]


“We consider the mix of taxes chosen by state government to minimize reductions in employment growth. The optimal mix of taxes requires that the decrease in employment growth for an additional dollar of revenue is equal for all taxes. We test this prediction using state-level data from 1980-1994. We find the corporate income tax has a [statistically] significant negative impact on employment while the sales and individual income taxes do not . . .” [Emphasis added]

“Although the most recent literature finds that increased state and local government spending slows economic growth, those findings are likely the result of the strong increases that occurred in the 1980s. The growth of state and local government has moderated since then, and the size of state and local government is likely closer to that which would maximize private sector growth.”


“This paper provides a theoretical and empirical investigation of the simultaneous effects of taxes and government spending on long-run economic growth... The theoretical model is estimated using annual panel data from North Carolina counties.”

“The average-marginal income tax... is statistically significant and positive.” [That is, the study found that higher income taxes are associated with higher, not lower, economic growth.]

“[T]he property tax produces no statistically significant effect on growth.”

“Suppose the corporate income tax... is increased by one percentage point and the additional revenue is spent on higher education spending... The net effect is a reduction in the growth rate by 0.0022 percentage points.” [Emphasis added.]


“We find evidence of statistically significant effects of state [income] tax rates on the residential location decision of movers to multistate metropolitan areas. The strongest effects appear to be in metropolitan areas that span states with income tax rate differences of 1.5 percent or more, and where the states do not have reciprocity agreements. In the aggregate, the economic and fiscal significance of our results are modest, at least on an annual basis. Multistate [Metropolitan Statistical Areas] present arguably the greatest opportunity for choosing a low tax state, but collectively account for only around 600,000 in-movers annually. Since only around five percent of U.S. households move between counties each year, and state income tax rates exert but one influence on choice of state, the magnitude of the annual effect of tax rate differentials on state tax bases is small. In most high tax states, the effect is likely to be only a few hundred potential taxpayers lost per year.” [Emphasis added.]


“[T]he negative effect of state own-source revenues on economic growth diminished between 1985 and 2003, likely because tax policy convergence has lowered individual and firm responsiveness to tax policy. More specifically, results indicate that a $1,000 (adjusted to 2003 prices) increase in tax collections per capita decreased private sector employment growth by 0.32 percentage points in 1985, but actually increased employment growth by a small amount in 2003. Also, the same increase in tax collections per capita decreased private sector [gross state product, GSP] by 1.15 percentage points in 1985, but had virtually no effect by 2003. When measuring the tax burden as a share of personal income, results indicate that a 1-percentage-point increase in own-source revenues decreased private sector employment growth by 0.1 percentage points and private sector GSP growth by 0.4 percentage points in 1985, but the effect on either measure of economic growth diminished to zero by 2003. Results are robust to a consideration of combined state and local revenues [rather than just state revenues alone].” [Emphasis added.]

“This article uses annual state (and local) data for the years 1947 through 1997 for the [48] contiguous states to estimate the effects of a large number of factors, including taxation and expenditure policies, on state economic growth.”

“The response variable in our basic specifications [i.e., the measure of state economic growth used] is the annual growth rate in per capita personal income...”

“[The correlation between total tax revenue] (expressed as real dollars per capita or as a percent of total state income) [and state economic growth] is quite sensitive to the other variables that are included [in the statistical analysis] and also to the specific measures of tax and other variables... [and] to the period of the estimation... [The correlation] is sometimes [statistically] significantly negative, sometimes significantly positive, and sometimes not significant at all.”

[That is, the statistical results indicate that higher total taxes are sometimes associated with higher economic growth, sometimes associated with lower economic growth, and sometimes not statistically significant in explaining economic growth.]

“Corporate income taxation... is represented as a per capita amount, as a percent of income, or as a percent of total tax revenue. It might be expected that greater reliance on the corporate income tax would have a negative effect on economic growth. However, the [measured effect of corporate income tax levels in the statistical analysis] is never [statistically] significantly negative and is frequently [statistically] significantly positive... Similar results are found for the individual income tax variable... The estimated coefficient is never [statistically] significantly negative... but its coefficient is often significantly positive [i.e., indicates that higher state personal income taxes are associated with higher state economic growth].” [Emphasis added.]


“Interestingly, although individual tax rates... appear to matter [i.e., to have an impact on relative rates of economic growth], corporate tax rates... do not in our estimates.”

“Taken as a unit, our results provide strong support for the idea that lower tax burdens tend to lead to higher levels of economic growth. Among tax variables, individual income taxes matter most... In terms of the matching exercise, this restrictive sample comes the closest to producing a comparison of ‘twin’ states, such as Kentucky and Tennessee and New Hampshire and Vermont. Policy analysis based on these states would indicate that higher tax burdens and, in particular, higher individual income-tax rates... promote higher growth...” [Emphasis added.]


“This paper... evaluate[s] the effects of tax policy on state-level growth. We find that property and sales tax rates have negative effects on long-run income growth, while income tax rates have no impact.”

**Just Two Recent Studies Support Tax Foundation Assertion**

We identified only two additional post-1999 studies that support the Tax Foundation’s assertion that state and local taxes adversely affect state economies:

"This article examines the effects of state corporate income taxes on the location of foreign direct investment in the United States... I find the tax elasticity to be consistently about -1... A corporate income tax elasticity of -1 means that a 1 percent increase in a state corporate tax rate would decrease, on average, the share of FDI received in a state by 1 percent, [all other things held constant]."


"This study investigates, using state-level data for the period 2000-2005, the Tiebout hypothesis... of "voting with one's feet."

"The coefficient on the nominal per capita state personal income tax burden is negative, as hypothesized... Thus, it appears that ceterus paribus [i.e., all other things being equal] consumer-voters have an aversion to higher personal income tax burdens."

**Conclusion**

Organizations advocating lower and less progressive taxes can find some studies by reputable economists that find that above-average state and local taxes have a measurable and consistently adverse impact on state economic performance. However, many equally reputable studies reach the opposite conclusion, and the results of many more are mixed, ambivalent, or show that any adverse impacts are small. There is simply no consensus whatsoever that cutting taxes is a good strategy to boost state economic growth and create jobs.