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Does It Hurt a State To Introduce an Income Tax?

by David J. Shakow

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In the October 5 issue of *The Wall Street Journal*,¹ Arthur Laffer argues against the introduction of state income taxes in states that do not have them, a move that has been advocated by Bill Gates Sr., who supported the unsuccessful attempt to adopt an income tax for upper-income earners on Washington state's November ballot. Laffer buttresses his general arguments with an examination of 11 states that have introduced income taxes since 1960.² In each case, he compares the gross state product (GSP) (relative to total U.S. gross domestic product) in the year before the introduction of the income tax to the figure for 2008. He also compares personal income per capita in the year before introduction of the income tax and 2009. His table (next page)

¹The article can be accessed at <http://online.wsj.com/article/SB10001424052748703882404575520241519315372.html>.

²The 11 states (and year of introduction of the income tax) are: Connecticut (1991), Illinois (1969), Indiana (1963), Maine (1969), Michigan (1967), Nebraska (1967), New Jersey (1976), Ohio (1971), Pennsylvania (1971), Rhode Island (1971), and West Virginia (1961).

shows that, in every case, the item decreased from the year before the introduction of the income tax to the present.³

The suggestion that states such as Indiana, Illinois, and Michigan would have thrived if they had not introduced an income tax is laughable.

There are many problems with the proof Laffer offers in his article. For one thing, the decrease in product and income for the states in this historical sample is not convincingly linked to the income tax. The suggestion that states such as Indiana, Illinois, and Michigan would have thrived if they had not introduced an income tax is, well, laughable.

More generally, the issue of causation is much more complicated than Laffer suggests.⁴ Perhaps the states have introduced an income tax because their economies were not thriving, and the state governments were looking for new sources of revenue.⁵ Also, Laffer's argument looks only at the

³The source of the data is given as Laffer Associates. Except for the data for personal income per capita relative to U.S. per capita income before the introduction of a state income tax, the data are consistent with data published by the Bureau of Economic Analysis (BEA), available at <http://www.bea.gov/regional/>.

⁴For a recent survey of the issue, see Judea Pearl, "Causal Inference in Statistics: An Overview," 3 *Statistics Surveys* 96 (2009), available at <http://projecteuclid.org/DPubS?service=UI&version=1.0&verb=Display&handle=euclid.ssu/1255440554>.

⁵"Policymakers frequently raise taxes during economic downturns, and lower taxes during times of economic prosperity," W. Robert Reed, "The Robust Relationship between Taxes and U.S. State Income Growth," 61 *Nat'l Tax J.* 57, 76 n.29 (2008), (citing James M. Poterba, "State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics," 90 *J. Political Economy* 799 (Aug. 1994)).

Table 1.
The High Cost of State Income Taxes [Laffer's table]
Relative economic performance of the 11 states that adopted income taxes in the past 50 years.

	Gross state product relative to the U.S.		Personal income per capita relative to the U.S.	
	Before income tax	2008	Before income tax	2009
Connecticut	1.74%	1.53%	151%	139%
New Jersey	3.66%	3.35%	128%	126%
Ohio	5.42%	3.33%	115%	90%
Rhode Island	0.44%	0.33%	117%	104%
Pennsylvania	5.72%	3.91%	113%	101%
Maine	0.39%	0.35%	94%	92%
Illinois	6.52%	4.47%	133%	106%
Nebraska	0.67%	0.59%	108%	99%
Michigan	5.08%	2.70%	130%	87%
Indiana	2.61%	1.80%	114%	86%
West Virginia	N/A	0.44%	86%	81%

Source: Laffer Associates.

introduction of the income tax, not its presence. The states that have introduced the income tax over the past 50 years are not a robust bunch, located mostly in the Northeast and Great Lakes.

Nevertheless, underlying Laffer's article is a legitimate question: Does an individual income tax retard the growth of a state's economy? Rigorously answering a policy question like that requires substantial additional study, because many other factors (for example, labor force characteristics; percentage of the economy dependent on manufacturing, services, and agriculture; and infusion of federal funds) can affect the state's economic health (which, itself, is not easily defined).⁶ However, policymakers at every level must make decisions without the benefit of definitive studies on the issues.⁷ The danger is that one slice of the data may be misleading if it is not considered thoughtfully. We can begin to appreciate

⁶An example of a more thorough examination can be found in Reed, "The Determinants of U.S. State Economic Growth: A Less Extreme Bounds Analysis," 47 *Economic Inquiry* 685 (Oct. 2009). Reed examines more than 60 possible variables and concludes that 14 have some effect on his measure of economic growth. Four of the 14 have a tax aspect to them. For a review of the literature from a perspective that definitely supports the idea that taxes affect economic growth, see the Tax Foundation's latest State Business Tax Climate Index, which can be accessed at <http://www.taxfoundation.org/files/bp60.pdf>.

⁷I experienced that myself working on the Bankruptcy Tax Act of 1980 at Treasury. Because we anticipated proposing changes in the treatment of net operating losses in bankruptcy, we asked the Treasury economists whether there was evidence in the economics literature that would either support such a proposal or argue against it. The answer was that, at the time, there was no consensus in the economics literature as to whether bankruptcy itself was an economically

(Footnote continued in next column.)

that by examining the available data on this issue a little more carefully than Laffer did.

Laffer's Data

In discussing the states that have introduced an income tax, Laffer provides a table (Table 1) that purports to show that "[e]ach and every state that introduced an income tax saw its share of total U.S. output decline."

Income Per Capita

We note first that the data in one of the columns in Laffer's table, the data for personal income per capita relative to U.S. per capita income for the year before the year an income tax was introduced, is not consistent with the data from the most likely public source of this data, the Bureau of Economic Analysis (BEA). The other figures in the table are consistent with BEA data.⁸ Table 2 compares the Laffer figures with the BEA figures.

A comparison of per capita income for each pretax year with the figures for 2009 based on the BEA data is rather different from Laffer's. Of the 11 states that introduced a personal income tax, seven had increases in their per capita income relative to U.S. per capita income.

beneficial structure. Needless to say, we had to proceed with a proposal without the benefit of input from the economics literature.

⁸The per capita figures for 2009 and the GSP figures for 2008 in Laffer's table are exactly the same as those in the BEA data. The figures for income per capita before introduction of the income tax are very close to the BEA figures. The source given in Laffer's table is Laffer Associates.

Table 2.
Per Capita Income Versus U.S. for the Year Before an Income Tax Was Introduced and 2009

State	Year before tax	Laffer figure	BEA figure	2009
Connecticut	1990	151%	135%	139%
New Jersey	1975	128%	114%	126%
Ohio	1970	115%	100%	90%
Rhode Island	1970	117%	100%	104%
Pennsylvania	1970	113%	100%	101%
Maine	1968	94%	80%	92%
Illinois	1968	133%	113%	106%
Nebraska	1966	108%	95%	99%
Michigan	1966	130%	113%	87%
Indiana	1962	114%	98%	86%
West Virginia	1960	86%	73%	81%

Table 3.
Per Capita Income Versus Region for the Year Before an Income Tax Was Introduced and 2009

State	Year before tax	BEA figure	2009
Connecticut	1990	117%	115%
New Jersey	1975	104%	109%
Ohio	1970	97%	96%
Rhode Island	1970	92%	86%
Pennsylvania	1970	88%	88%
Maine	1968	75%	76%
Illinois	1968	107%	113%
Nebraska	1966	100%	101%
Michigan	1966	105%	93%
Indiana	1962	92%	92%
West Virginia	1960	99%	89%

The states in which income per capita decreased are Ohio, Illinois, Michigan, and Indiana. The economies of those Midwestern industrial states are in such serious trouble that it seems unlikely they would have done much better if they had not introduced an income tax. In any event, those are the only states in the group Laffer identifies in which income per capita decreased when compared with U.S. per capita income.

Perhaps comparing those states to the United States as a whole is unfair. The BEA groups states into eight geographic regions. It generally believes the states in each region have similar economic

characteristics.⁹ To the extent that each region includes states with similar economic problems, it seems relevant to see how these 11 states have fared when compared with the other states in their regions, rather than to the United States as a whole. I have calculated, for each state, its per capita income

⁹The regional classifications, which were developed in the mid-1950s, are based on the homogeneity of the states in terms of economic characteristics, such as the industrial composition of the labor force, and in terms of demographic, social, and cultural characteristics." See <http://www.bea.gov/regional/definitions/nextpage.cfm?key=Regions>. These groupings may not provide precise comparisons in all cases. To take a simple example, Hawaii and Alaska probably should not be included with any of the lower 48 states. In fact, Alaska and Hawaii generally are omitted in studies of U.S. state economic growth. Reed, *supra* note 5, at 60. Because those states' economies are relatively quite small, I did not attempt to eliminate them from the regional figures used later in this article.

Table 4.
State GSP Versus United States and GSP Versus Region
Year Before Income Tax Was Introduced and 2008

State	Year before tax	State v. U.S.		State v. Region		State v. Rest of Region	
		Year before	2008	Year before	2008	Year before	2008
Connecticut	1990	1.74%	1.53%	29.26%	28.31%	41.36%	39.48%
New Jersey	1975	3.50%	3.35%	16.29%	18.23%	19.46%	22.30%
Ohio	1970	5.32%	3.33%	25.90%	23.78%	34.96%	31.19%
Rhode Island	1970	0.43%	0.33%	7.37%	6.20%	7.96%	6.61%
Pennsylvania	1970	5.64%	3.91%	23.93%	21.24%	31.46%	26.97%
Maine	1968	0.38%	0.35%	6.69%	6.51%	7.17%	6.96%
Illinois	1968	6.37%	4.47%	29.59%	31.96%	42.03%	46.96%
Nebraska	1966	0.68%	0.59%	9.11%	9.15%	10.03%	10.07%
Michigan	1966	5.12%	2.70%	23.24%	19.29%	30.27%	23.90%

relative to the region as a whole. Table 3 (previous page) compares the BEA figures for per capita income for each of the 11 states with the BEA's figures for per capita income for its region for the year before introduction of the income tax.

Now the results again are different. Only four states have increases in their per capita income after introducing an income tax, and five experience decreases. Using these rounded figures, two states have no change at all. More significantly, although unsurprisingly, given the economic similarities of states in each region, the changes experienced by the states are smaller than when the comparison is to the United States as a whole. Only two states experience a change of more than 6 percentage points. Using the U.S. figures in the previous table, seven states had changes that large. Even if this data reflected causation, as Laffer suggests, the point could easily be made that introducing the income tax had little effect on the per capita income of the state.

Gross State Product

What about Laffer's other measure, GSP?¹⁰ The figures show that every state that introduced an income tax experienced a decrease in its GSP from that date to the present, when compared with the U.S. gross domestic product. In evaluating how a

state's GSP has grown over time, regional considerations would seem to be of great importance. Thus, as with income figures, we should compare each state's gross product figures with figures for other states in its region, not just with the gross product of the United States as a whole. Table 4 does that. Furthermore, to avoid the effect of the state in question being included in the region's total, Table 4 also compares the state with the other states in its region (that is, eliminating the GDP of the state in question from the total for that region). That modification will generally increase the differences in the comparisons. Because the BEA data for GSP begins in 1963, it is not possible to make precise comparisons for Indiana (tax introduced in 1963) and West Virginia (tax introduced in 1961).¹¹

Although the comparisons to the United States as a whole show decreases in all cases, when the regional comparisons are made, we find that three of the states had increases in their GDP shares rather than decreases.¹² Equally significant, the extent of

¹¹At the time Laffer's article was published, the BEA figures for GSP went only through 2008. Since then, figures for 2009 have been issued, along with revisions of prior year figures. I note significant changes below. Although the BEA figures start in 1963, Laffer's table includes a comparison for Indiana. The figure for 1962 for Indiana is close to the figure for 1963 that comes from the BEA data.

¹²Using 2009 data, a fourth state, Connecticut, also has a small increase in its GSP. Indiana has a significant increase (above 11.5 percent) when 2009 is compared with 1963, the year after its income tax was introduced. I don't want to overstate the significance of the fact that some states had increases in GSP. Three of the nine states we are looking at come from the BEA's Great Lakes region. The only other states in that region are Indiana (which adopted an income tax in 1963, and so is one of the 11 states we looked at in connection with per capita income) and Wisconsin. Thus, it is unsurprising that one of those three states, Illinois, had an increase in GDP when compared with the rest of the region.

(Footnote continued on next page.)

¹⁰The BEA uses a slightly different measure for GSP through 1997 and thereafter. Through 1997, the BEA collected data using SIC (Standard Industrial Classification) classifications; starting in 1997, it began using NAICS (North American Industrial Classification System) classifications. See <http://www.bea.gov/regional/gsp/>. For a detailed discussion of the two systems as they affect the BEA data, see Robert E. Yuskavage, "Converting Historical Industrial Time Series Data from SIC to NAICS" (U.S. Dept. of Commerce, BEA 2007), available at http://www.bea.gov/papers/pdf/SIC_NAICS.pdf.

Table 5.
Percent Changes in GSP From Year Before Introduction of Income Tax to 2008

State	Year before tax	State v. U.S.			State v. Region			State v. Rest of Region		
		Year before	2008	% Change	Year before	2008	% Change	Year before	2008	% Change
Connecticut	1990	1.74%	1.53%	-12.07%	29.26%	28.31%	-3.25%	41.36%	39.48%	-4.55%
New Jersey	1975	3.50%	3.35%	-4.29%	16.29%	18.23%	11.91%	19.46%	22.30%	14.59%
Ohio	1970	5.32%	3.33%	-37.41%	25.90%	23.78%	-8.19%	34.96%	31.19%	-10.78%
Rhode Island	1970	0.43%	0.33%	-23.26%	7.37%	6.20%	-15.88%	7.96%	6.61%	-16.96%
Pennsylvania	1970	5.64%	3.91%	-30.67%	23.93%	21.24%	-11.24%	31.46%	26.97%	-14.27%
Maine	1968	0.38%	0.35%	-7.89%	6.69%	6.51%	-2.69%	7.17%	6.96%	-2.93%
Illinois	1968	6.37%	4.47%	-29.83%	29.59%	31.96%	8.01%	42.03%	46.96%	11.73%
Nebraska	1966	0.68%	0.59%	-13.24%	9.11%	9.15%	0.44%	10.03%	10.07%	0.40%
Michigan	1966	5.12%	2.70%	-47.27%	23.24%	19.29%	-17.00%	30.27%	23.90%	-21.04%

Table 6.
Per Capita GSP Versus U.S. and Region for the Year Before An Income Tax Was Introduced and 2008

State	Year before tax	State v. United States		State v. Region	
		Year before	2008	Year before	2008
Connecticut	1990	132.27%	132.60%	117.59%	116.06%
New Jersey	1975	102.82%	117.79%	94.83%	100.64%
Ohio	1970	101.56%	87.88%	97.90%	95.68%
Rhode Island	1970	91.46%	96.60%	92.08%	84.55%
Pennsylvania	1970	97.31%	94.61%	86.15%	80.83%
Maine	1968	77.20%	80.94%	78.30%	70.84%
Illinois	1968	115.47%	106.02%	106.70%	115.43%
Nebraska	1966	90.72%	100.41%	99.46%	103.71%
Michigan	1966	117.57%	82.18%	106.34%	89.47%

the changes are all substantially moderated, as the figures for percentage change in Table 5 show.

However, the comparison with the United States as a whole, as I have suggested before, is also overdrawn, because the Great Lakes region had the smallest growth of the eight regions the BEA identifies. Its inflation-adjusted growth was 214 percent. The next smallest was the Mideast (Delaware, the District of Columbia, Maryland, New Jersey, New York, and Pennsylvania), at 253 percent. The greatest growth was in the Southwest (Arizona, New Mexico, Oklahoma, and Texas). (GDP data is from the BEA data cited before. I derive the inflation rate from Consumer Price Index data. The data can be accessed at <http://data.bls.gov:8080/PDQ/outside.jsp?sUrvey=cu>.) If you were to derive figures for Indiana and West Virginia by using the state's GDP for the first year it is available from BEA, 1963, the U.S. comparison would show decreases of 30.5 percent for Indiana and 42.86 percent for West Virginia. The regional comparisons would show an increase of 7.89 percent for Indiana and a decrease of 57.48 percent for West Virginia. Note that I am not suggesting that

(Footnote continued in next column.)

Using the regional comparisons, the largest percentage change (for the state of Michigan) is just over 21 percent, rather than over 47 percent when the comparison is to the United States as a whole. When the comparison was to the whole country, five of the increases were over 23 percent.

In any event, one may question whether it would not be better to use a per capita measure of gross domestic product rather than comparing the totals for each state. A state could increase its GSP simply

income taxes do not play a role in a state's economic development, but only that it is foolish to use Laffer's simple analysis to decide what that effect might be.

Table 7.
Changes in Per Capita GDP From Year Before Introduction of Income Tax to 2008

State	Year before tax	State v. U.S.			State v. Region		
		Year before	2008	Percent Change	Year before	2008	Percent Change
Connecticut	1990	132.27%	132.60%	0.25%	117.59%	116.06%	-1.30%
New Jersey	1975	102.82%	117.79%	14.56%	94.83%	100.64%	6.13%
Ohio	1970	101.56%	87.88%	-13.47%	97.90%	95.68%	-2.27%
Rhode Island	1970	91.46%	96.60%	5.62%	92.08%	84.55%	-8.18%
Pennsylvania	1970	97.31%	94.61%	-2.77%	86.15%	80.83%	-6.18%
Maine	1968	77.20%	80.94%	4.84%	78.30%	70.84%	-9.53%
Illinois	1968	115.47%	106.02%	-8.18%	106.70%	115.43%	8.18%
Nebraska	1966	90.72%	100.41%	10.68%	99.46%	103.71%	4.27%
Michigan	1966	117.57%	82.18%	-30.10%	106.34%	89.47%	-15.86%

Table 8.
Weighted Percent Changes in Per Capita GSP From Year Before Introduction of Income Tax to 2008

State	Percent change	2008 GDP	Change in dollars
Connecticut	-1.30%	\$216,174	-\$2,813
New Jersey	6.13%	\$474,936	\$29,098
Ohio	-2.27%	\$471,508	-\$10,692
Rhode Island	-8.18%	\$47,364	-\$3,873
Pennsylvania	-6.18%	\$553,301	-\$34,168
Maine	-9.53%	\$49,709	-\$4,736
Illinois	8.18%	\$633,697	\$51,848
Nebraska	4.27%	\$83,273	\$3,558
Michigan	-15.86%	\$382,544	-\$60,688
Totals		\$2,912,506	-\$32,465
Percent change			-1.11%

by having an influx of population, even if its GSP per person decreased. Table 6 shows the GSP per person for these nine states.¹³

¹³I did not attempt to compare each state with the rest of its region. To do so, although it is possible, would require recalculating the per capita figures in each case. Note that the BEA has information on real GDP per capita starting in 1990. This data is based on the BEA's tables of real GDP using "linked 2000 dollars." Because that data uses a state-specific formula for calculating the "real" dollars for years before and after 2000, it is unhelpful to the extent one wishes to make comparisons among different states. The data based on linked 2000 dollars is particularly accurate to the extent one wishes to make comparisons over time for a single state, without making comparisons among states. In any event, because the data goes back only to 1990, it is not possible to make use of it for our purposes. For a more detailed explanation of the

Using this analysis, even when the comparison is made to the United States as a whole, five states that introduced an income tax increased their per capita gross domestic product, while the per capita gross domestic product of four decreased. Interestingly, when the comparison is made to the regional figures, only three had increases while six had decreases. The two that shifted from increases to

BEA's method, see "Gross Domestic Product by State: Estimation Methodology," which can be accessed at <http://bea.gov/regional/pdf/gsp/GDPState.pdf#page=25>. If we adjust the figures in the tables we are dealing with by total U.S. inflation, it will have no effect on our results, because we are working with ratios of figures in the table for a single year. Those ratios will not change when the numerator and denominator are each adjusted by the same inflation figure. Inflation adjustments would be relevant if we were measuring the dollar increases or decreases in the figures in the tables.

(Footnote continued in next column.)

decreases were Connecticut and Rhode Island,¹⁴ the two New England states. As before, when we use the regional figures, as is done in Table 7, the percentage changes in the GSP figures for each state are reduced.

These changes are unsurprising, because the states that are included in this sample are mostly located in regions (such as the Great Lakes) that are generally suffering economically. Moreover, although most of the nine states for which BEA data is available have had reductions in their GSP per capita when measured against the GSP per capita of the regions they are in, the ones that have experienced increases are among the larger of these states in terms of their economies. That can be seen in Table 8, in which we weight these percentage

changes by the 2008 total GSP of those states. When we do that, we find that the total decrease is on the order of 1.1 percent.¹⁵

Conclusion

Laffer's argument is flawed because it assumes an argument of causation can be made from a statistical correlation. But even if something suggestive might emerge from a clear correlation, examination of the data Laffer relies on leaves the issue of correlation up in the air. The conclusion to be drawn from all this is that a persuasive use of correlations requires a more nuanced consideration of the data that is being examined. That is the reason we are wise to accept the reality that correlation does not imply causation.

However, it must be noted that Initiative 1098, the proposal that would have taxed the income of wealthy residents of Washington state, was defeated by the voters by almost a 2-1 vote. Perhaps Laffer gets the last laugh after all. ☆

¹⁴ By 2009, Connecticut's GSP compared with that of its region was higher than it had been before the income tax was introduced.

¹⁵ Again, we can add Indiana and West Virginia to the comparisons by using as a base the first year the BEA data is available, 1963. The decrease of per capita GDP when compared with the United States as a whole is 15.61 percent for Indiana and 9.84 percent for West Virginia. When compared with the region as a whole, Indiana has a 0.67 percent increase while West Virginia has a 20.55 percent decrease. The weighted change in Table 8 is reduced further from -1.11 percent to -1.35 percent. When we extend the analysis to 2009, the weighted change is about -0.3 percent, whether or not we include Indiana and West Virginia — that is, there is virtually no change.