

The Puzzling Decline in State Sales Tax Collections

Introduction

This is the first of a series of papers that will investigate fiscal problems confronting the states. In spite of low unemployment rates, many states are experiencing little or negative revenue growth. In a number of states fiscal problems are so severe that they approach conditions usually only experienced during recessions.¹ This series of papers will investigate what factors may be depressing state revenue growth and how these factors and their impacts vary among the states.

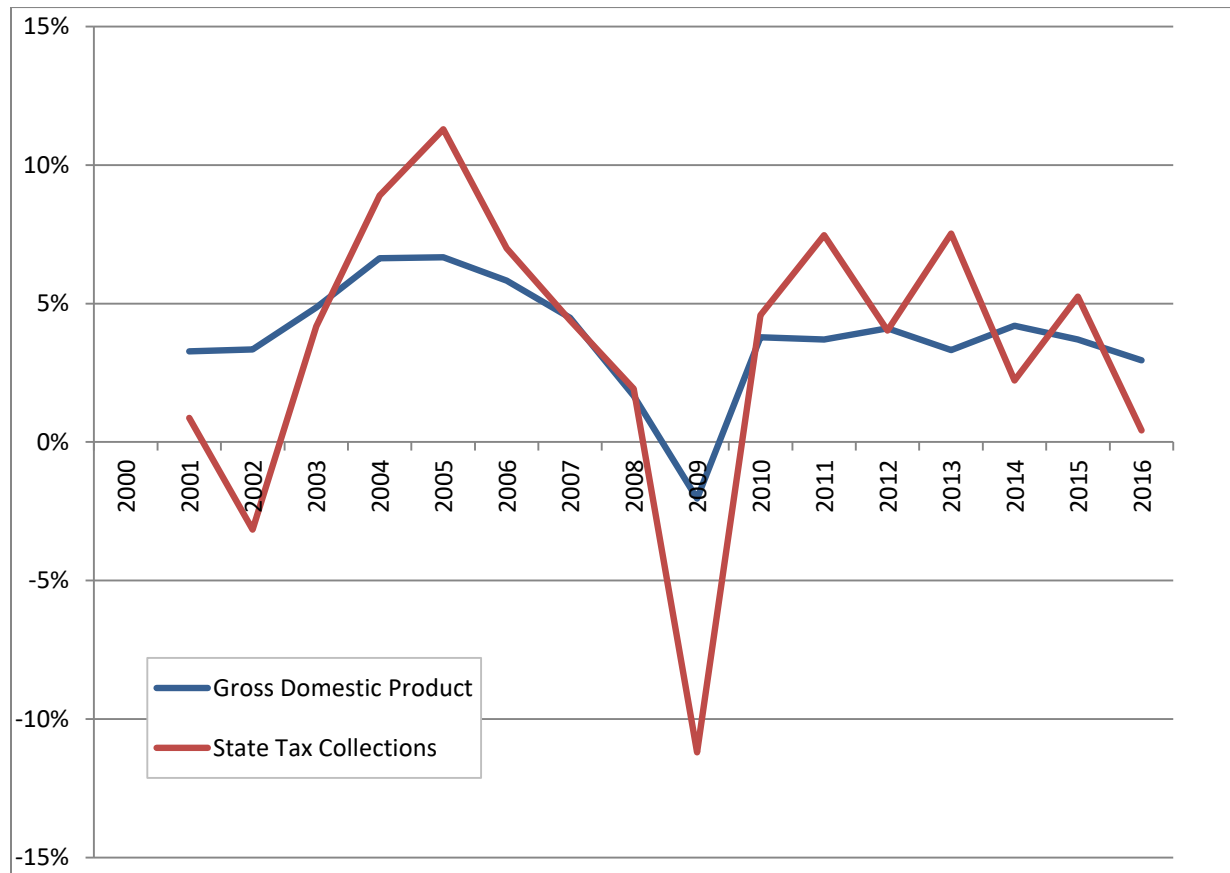
This first paper focuses on general sales and gross receipts taxes, which will be referred to simply as sales tax in the remainder of the paper. Tax collections derived from consumer purchases provide one of the most timely measures of the fiscal condition of the states. Also, this revenue source accounted for almost one-third (actually 31.5%) of state tax collections during 2016.²

But before targeting in on sales tax collections, a brief look at total tax collections is provided to illustrate the overall fiscal problem confronting the states. In spite of the national economy operating at near full employment, many states are experiencing only modest tax revenue growth. During 2016 all state tax collections increased by only \$3.9 billion (0.42%). When adjusted for inflation state tax collections actually decreased by \$7.8 billion (0.83%). Real economic growth during 2016 averaged 1.62%.³

Figure 1 shows that total state tax collections generally mirrored fluctuations in the national economy from 2000 through 2010, although tax collections exhibited greater volatility than did the nation's gross domestic product (GDP). But since 2010, while GDP has grown at a fairly consistent rate, state tax collections have jumped up and down but also they have noticeably trended downward. So, why are state tax revenues growing so slowly?

The energy states – North Dakota (-26.11%), Wyoming (-12.32%), Oklahoma (-10.17%), Montana (-7.51%), West Virginia (-7.16%), Texas (-5.65%) and New Mexico (-3.97%) – are definitely pulling down the overall average. But so are some non-energy states – Connecticut (-9.14%), Illinois (-5.94%), Maine (-3.85%) and New York (-3.85%). Among the 50 states, 24 experienced real (inflation adjusted) decreases in tax collections during 2016.

Figure 1: Annual Percent Change in Gross Domestic Product and Nominal State Tax Collections



State Sales Tax Collections

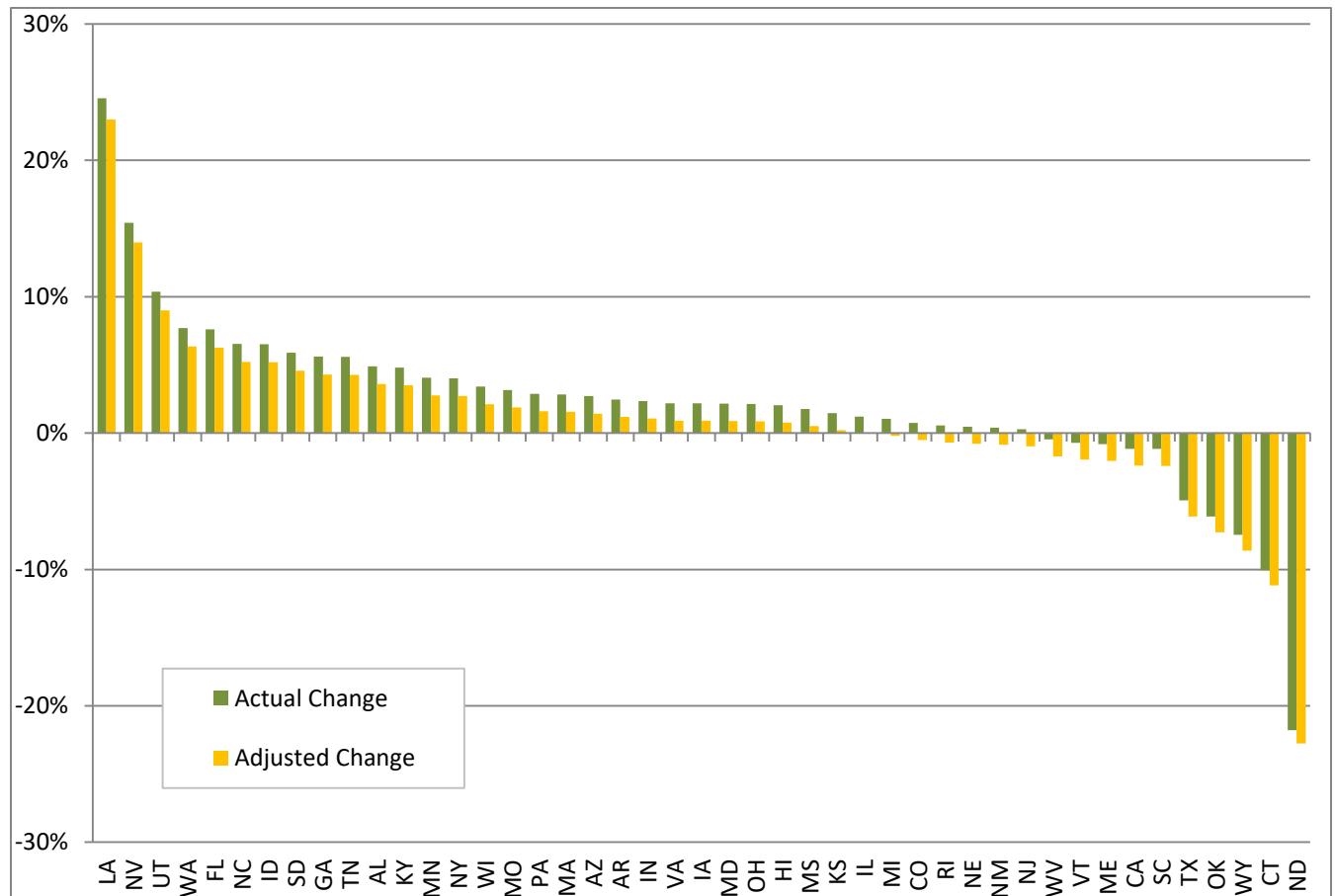
Forty-five states have either a general sales tax or a gross receipts tax. Sales taxes are imposed on consumers who make retail purchases within the state where the tax is imposed. States that impose sales taxes also impose complementary use taxes at the same rate on the purchases of goods and services from outside the state but brought into the state imposing the tax for use or consumption. Gross receipts taxes are imposed on transactions similar to those subject to sales and use taxes, but these taxes are imposed on the seller rather than the purchaser. Seven states impose gross receipts taxes – Alabama, Delaware, Florida, Hawaii, Nevada, New Mexico and Pennsylvania. Ohio imposes a Commercial Activity Tax that is similar to a gross receipts tax.

Currently, tax rates range from a low of 2.9% in Delaware to 7.25% in California. The average tax rate equals about 5.7%. The average rate in 2000 equaled approximately 5.2%. Since 2000, twenty-four states have increased their tax rates. Arkansas' tax rate has increased the most rising from 4.265% to 6.5% with rate increases imposed three times over the sixteen years.

Among the 45 states that have either a general sales tax or a gross receipts tax, collections from this revenue source increased by 1.95% between 2015 and 2016. When adjusted for inflation the increase averaged only 0.68%. Seventeen states experienced real declines in sales tax receipts. North Dakota experienced the greatest decrease seeing a 22.8% drop in sales tax receipts. Louisiana experienced the largest increase (23.0%), but this was due to a rate increase from 4% to 5% that went into effect in 2016. Figure 2 illustrates the array of actual and inflation adjusted changes in sales tax collections by state between 2015 and 2016.

Beside Louisiana, the only other state that experienced greater than a 10% inflation adjusted increase in sales tax receipts during 2016 was Nevada (14.0%). Only three other states realized real sales tax collection increases of greater than 5% - Utah (9.0%), Washington (6.4%) and North Carolina (5.2%). All three of these states are recognized for their strong technology sectors.

Figure 2: Actual and Inflation Adjusted Sales Tax Collections Percent Change, 2015 – 2016



Looking Behind the Curtain

To obtain a better understanding of why the rate of growth of state sales tax collections is declining requires pulling back the curtain to reveal factors that are obscured by the nominal and inflation adjusted top line numbers. There are actually two curtains that must be opened. The first curtain must be opened wide enough to provide an adequate historical perspective. For this purpose the analysis looks back to the year 2000. The sixteen years from 2000 through 2016 covers two economic cycles, which allows the analysis to distinguish structural factors that have been influencing sale tax revenue collections. The second curtain that the analysis pulls back involves the removal of the impact of tax rate changes. As stated previously, 24 states have enacted rate changes since 2000.⁴

Figure 3 shows both the actual and tax rate change adjusted percent change in sales tax collections between 2000 and 2016 for each of the 45 states that impose sales taxes. The national average percent change in sales tax collections over this period equaled 65.3%. Adjusted for rate changes the national average sales tax collections growth equaled 51.6%.

North Dakota experienced the greatest increase in sales tax collections at 245.5%. The equal lengths of the two North Dakota bars in Figure 3 indicate it did not enact any tax rate changes over the 16 years. The driver for this extraordinary sales tax revenue growth was the state's oil boom that began around 2008. From 2000 through 2016 North Dakota's population increased by 18.0% and personal income in the state exploded by 149.9%.

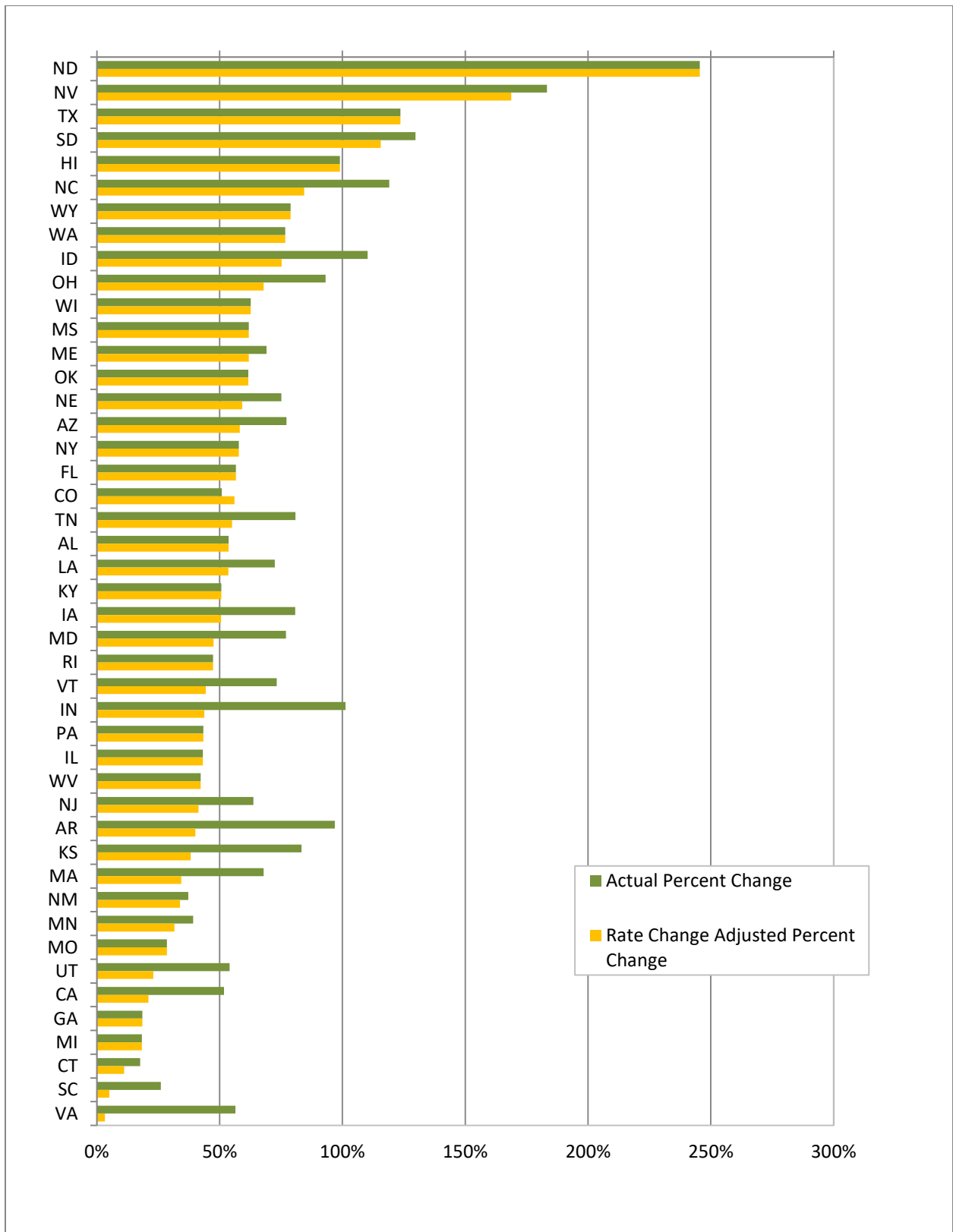
The five states that experienced the next highest rates of growth of sales tax collections adjusted for tax rate changes were Nevada (168.8%), Texas (123.6%), South Dakota (115.6%), Hawaii (98.9%) and North Carolina (84.4%). The economic sectors that propelled growth in these five states varied including energy, finance, retirement housing, technology and tourism. The various drivers of economic growth illustrate the diversity of the nation's state and regional economies.

The states that experienced the lowest rates of growth in tax rate adjusted sales tax revenue growth present a challenge to easy explanation. The five states that experienced the lowest rates of adjusted growth were Virginia (3.3%), South Carolina (5.0%), Connecticut (11.2%), Michigan (18.3%) and Georgia (18.5%).

Michigan is the only one of these states for which the explanation appears obvious, which is the decline of its motor vehicle manufacturing sector. From 2000 to 2016 Michigan was the only state that lost population, -24,150 (-0.2%). Nevertheless, its nominal personal income grew by 145.6%.

Connecticut is one of the wealthiest states in the nation with a 2016 median income of \$71,033, and although its population increased by only 4.8% from 2000 to 2016, its nominal personal income increased by 172.0%.

Figure 3: Actual and Rate Change Adjusted Percent Change in Sales Tax Collections, 2000 – 2016

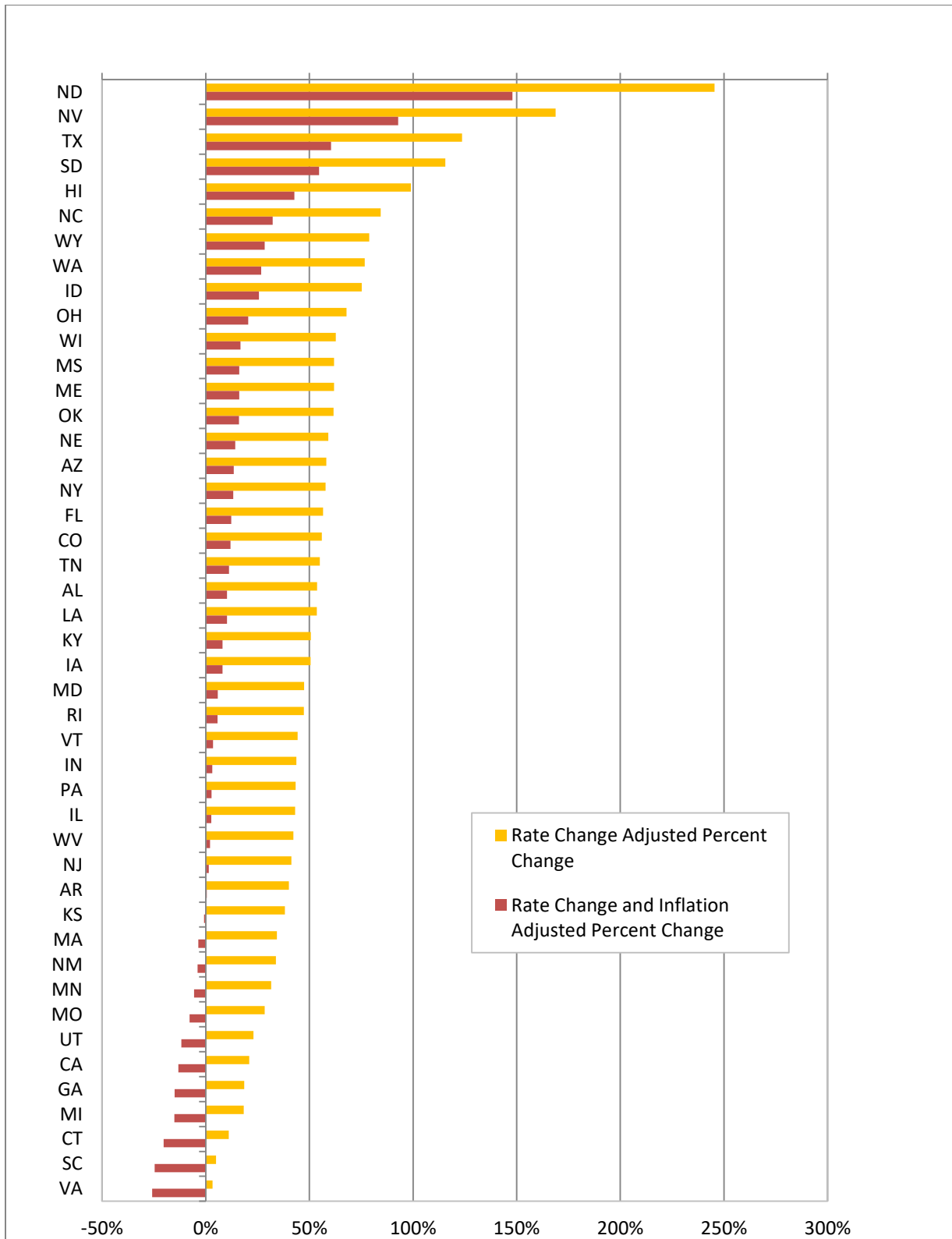


Georgia and Virginia are generally recognized to be two of the nation's fastest growing and most economically vital states. From 2000 to 2016 Georgia's population and nominal personal income grew by 25.3% and 182.4%, respectively. Virginia's population and nominal personal income grew by 18.4% and 194.4%, respectively, over the same period. South Carolina's economy performed comparably well over these years with its population growing by 23.3% and its nominal personal income growing by 195.2%.

The tax revenue problems confronting a number of states become more apparent when the sales tax collections amounts are adjusted for inflation. This adjustment reveals that twelve states experienced real sales tax collections declines since 2000 and that eleven other states realized real sales tax collection increases of less than ten percent. Figure 4 presents a comparison of tax rate adjusted and tax rate plus inflation adjusted sales tax collections by state from 2000 to 2016.

So, what is going on? The wide variation in sales tax collection growth rates over the past sixteen years indicates that there are likely many factors that influence the different states to varying degrees.

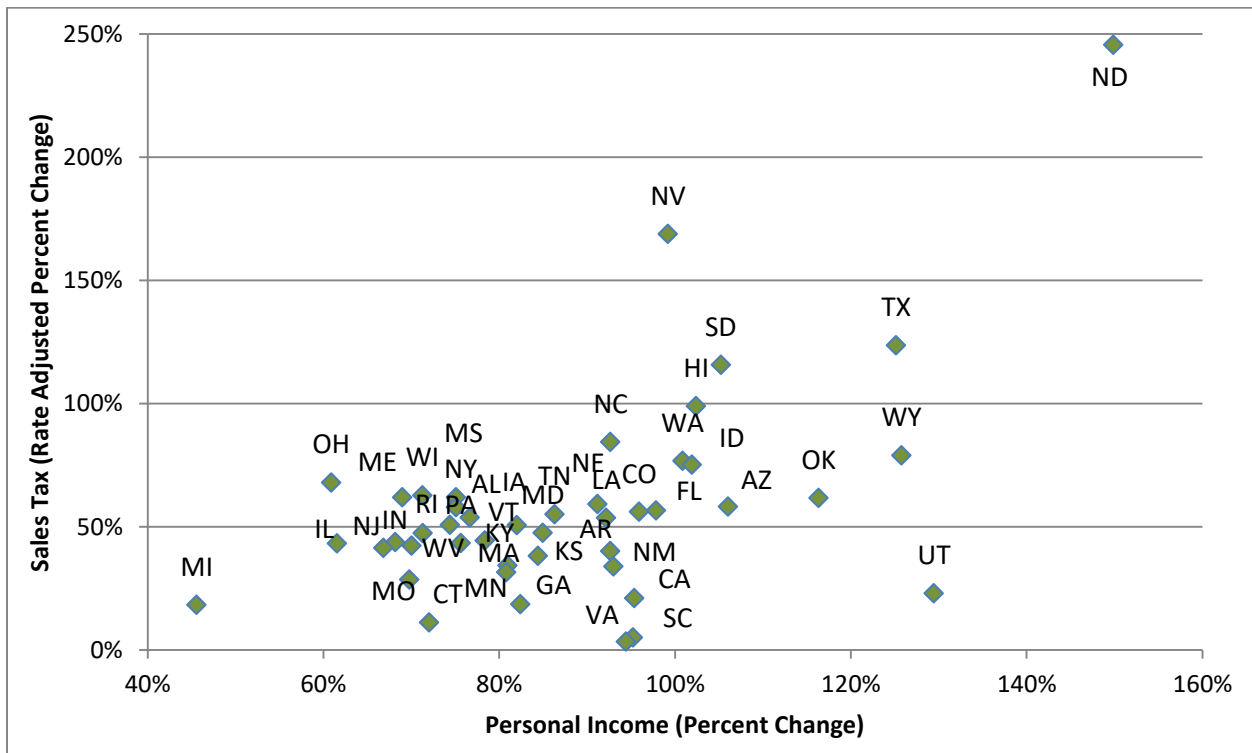
Figure 4: Rate Adjusted and Rate plus Inflation Adjusted Percent Change in Sales Tax Collections, 2000 – 2016



Looking for Answers

The variation among the states in terms of population and economic growth provides part of the answer. The change in total personal income incorporates both of these factors. As shown in Figure 5, there is a positive correlation between the percent changes in tax rate adjusted sales tax collections and personal income over the years 2000 to 2016. However, the correlation, which equals 0.56, is only moderately strong meaning other factors explain the variation in changes of sales tax collections among the states.

Figure 5: Percent Change in Rate Adjusted Sales Tax Collections vs Personal Income

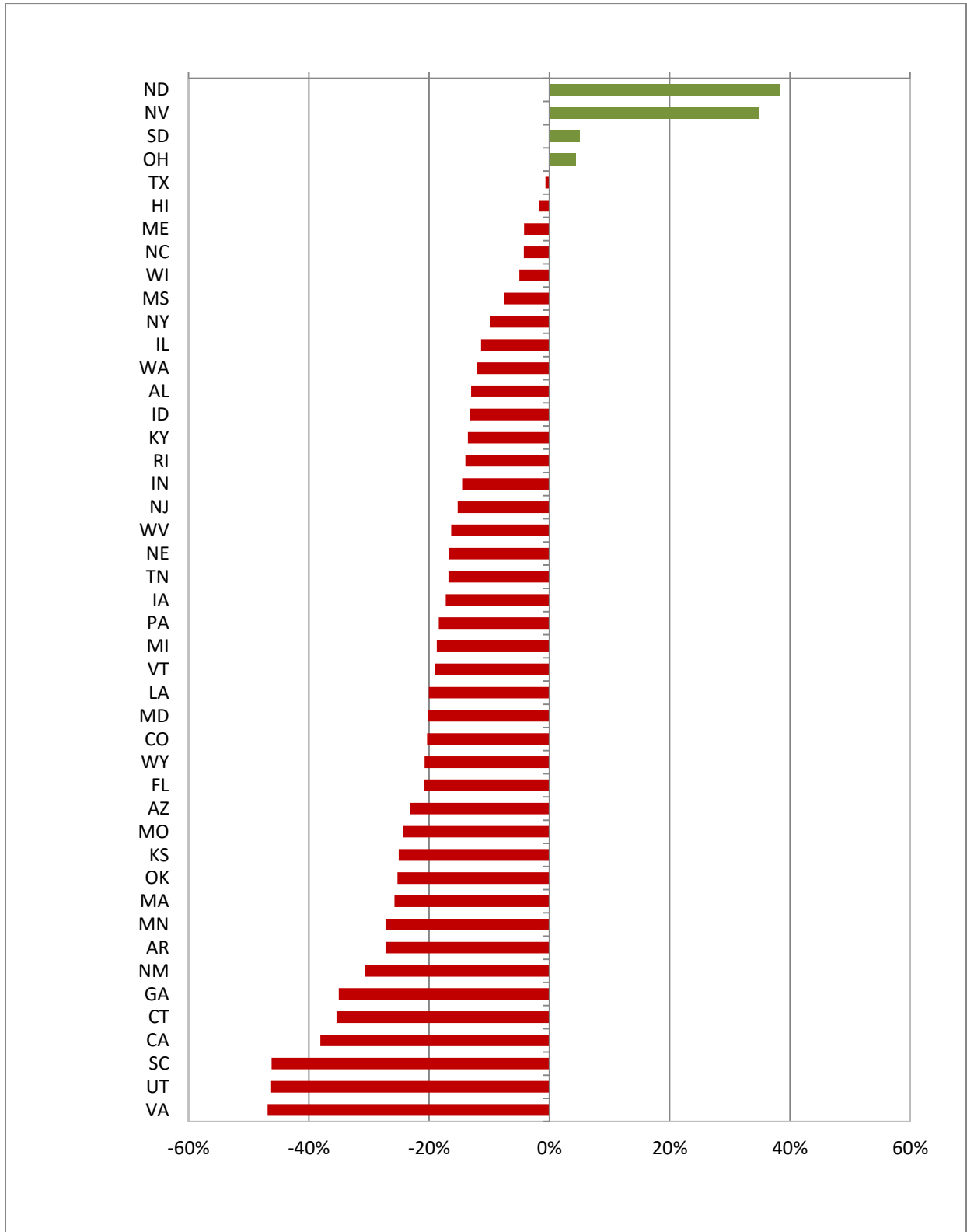


Another measure that reveals the extent to which sales tax collections are badly lagging population and economic growth in most states involves the comparison of tax rate adjusted sales tax collections per million dollars of personal income in 2016 to the same ratio for 2000 by state.

As Figure 6 shows, only four states – North Dakota, Nevada, South Dakota and Ohio – possess positive ratios meaning that their sales tax collections adjusted for tax rate changes outpaced their growth in population, per capita personal income and inflation.

The fact that all of the remaining 41 states are experiencing decreasing amounts of sales tax revenues per million dollars of personal income begs the question - WHY?

Figure 6: Percent Change in Tax Rate Adjusted Sales Tax Collections per \$1 Million of Personal Income



Also, the fact that there exists substantial variation in the amount of tax collected per \$1 million of personal income by each state suggests that the factors influencing these collections differ among the states.

Some of the demographic and economic factors that most likely have depressed sales and gross receipts tax revenue growth over the past sixteen years include:

- The continued shift of consumer purchases from tangible goods to services
- The stagnation of real per capita disposable income
- The increased concentration of income
- The aging of the nation's population
- The slowdown in the rate of household formation
- The growth of Internet enabled consumer purchases

All of these factors have previously been suggested as likely causing the erosion of the tax bases for state sales taxes, but little research has been done to measure the magnitude of the impact of these factors. Nor has there been much effort made to explore how the impacts of these factors vary among the states.

Another factor that has received almost no attention is the impact of legislation that has resulted in shrinking tax bases. This factor likely has had the greatest impact for at least some states. For example, in Iowa there have been 28 changes to statutes related to the imposing of sales tax on goods and services since 2000. Most of these law changes have involved the granting of exemptions or the providing of refunds in association with the awarding of economic development incentives.

The purpose of this paper has been to illustrate the magnitude of tax revenue problems confronting the states by focusing on sales and gross receipts taxes. This paper presents the magnitude of the problem from both a short-term and long-term perspective. By stripping away the impacts of tax rate, population, and economic changes that vary among the states and general price changes that impact all states, the severity of the decline in sales and gross receipts taxes as has been revealed.

The paper concludes by identifying many likely causes of the deterioration of sales and gross receipts tax collections. Subsequent papers will explore the impact of these factors both in terms of how they vary among the state and in terms of their relative impacts.

Appendix 1: Data Table

State	Percent Change, 2000 - 2016			
	Nominal Sales Tax Collections	Tax Rate Adjusted Sales Tax Collections	Tax Rate & Inflation Adjusted Sales Tax Collections	Nominal Sales Tax Collections per \$ Million Personal Income
United States (excl D.C.)	65.3%	51.6%	8.7%	-18.3%
Alabama	53.7%	53.7%	10.3%	-13.0%
Alaska				
Arizona	77.2%	58.2%	13.5%	-23.2%
Arkansas	96.9%	40.1%	0.5%	-27.3%
California	51.8%	21.0%	-13.2%	-38.1%
Colorado	50.9%	56.1%	12.0%	-20.3%
Connecticut	17.6%	11.1%	-20.3%	-35.4%
Delaware				
Florida	56.6%	56.6%	12.4%	-20.9%
Georgia	18.5%	18.5%	-15.0%	-35.0%
Hawaii	98.9%	98.9%	42.7%	-1.7%
Idaho	110.3%	75.2%	25.7%	-13.2%
Illinois	43.2%	43.2%	2.7%	-11.4%
Indiana	101.3%	43.8%	3.2%	-14.5%
Iowa	80.7%	50.6%	8.1%	-17.3%
Kansas	83.3%	38.2%	-0.9%	-25.1%
Kentucky	50.7%	50.7%	8.1%	-13.6%
Louisiana	72.4%	53.6%	10.2%	-20.1%
Maine	69.1%	61.9%	16.1%	-4.2%
Maryland	77.0%	47.5%	5.8%	-20.3%
Massachusetts	67.9%	34.3%	-3.6%	-25.8%
Michigan	18.3%	18.3%	-15.1%	-18.7%
Minnesota	39.2%	31.6%	-5.6%	-27.2%
Mississippi	61.9%	61.9%	16.2%	-7.5%
Missouri	28.5%	28.5%	-7.8%	-24.3%
Montana				
Nebraska	75.1%	59.2%	14.2%	-16.7%
Nevada	183.3%	168.8%	92.8%	34.9%
New Hampshire				
New Jersey	63.7%	41.4%	1.4%	-15.3%
New Mexico	37.2%	33.8%	-4.0%	-30.7%
New York	57.8%	57.8%	13.2%	-9.9%
North Carolina	119.0%	84.4%	32.3%	-4.3%

North Dakota	245.5%	245.5%	147.9%	38.3%
Ohio	93.1%	67.9%	20.5%	4.4%
Oklahoma	61.7%	61.7%	16.0%	-25.3%
Oregon				
Pennsylvania	43.4%	43.4%	2.9%	-18.4%
Rhode Island	47.3%	47.3%	5.7%	-14.0%
South Carolina	26.0%	5.0%	-24.6%	-46.2%
South Dakota	129.8%	115.6%	54.7%	5.1%
Tennessee	80.9%	55.0%	11.2%	-16.8%
Texas	123.6%	123.6%	60.5%	-0.7%
Utah	54.1%	23.0%	-11.7%	-46.4%
Vermont	73.2%	44.4%	3.6%	-19.1%
Virginia	56.5%	3.3%	-25.9%	-46.9%
Washington	76.7%	76.7%	26.8%	-12.0%
West Virginia	42.3%	42.3%	2.1%	-16.3%
Wisconsin	62.7%	62.7%	16.7%	-5.0%
Wyoming	78.9%	78.9%	28.4%	-20.8%
Washington, D.C.	105.8%	105.8%	47.6%	-1.9%

Alaska, Delaware, Montana, New Hampshire and Oregon do not impose sales or gross receipts taxes.

Appendix 2: Iowa Sales and Use Tax Case Study

During 2000 Iowa collected \$1.747 billion in sales and use tax revenues. By 2016 sales and use tax collections reached \$3.157 billion.⁵ This equaled a nominal increase of \$1.410 billion (80.7%) over the seventeen years. Adjusting for inflation, sales and use tax collections increased by \$722.6 million (29.7%) over this period.

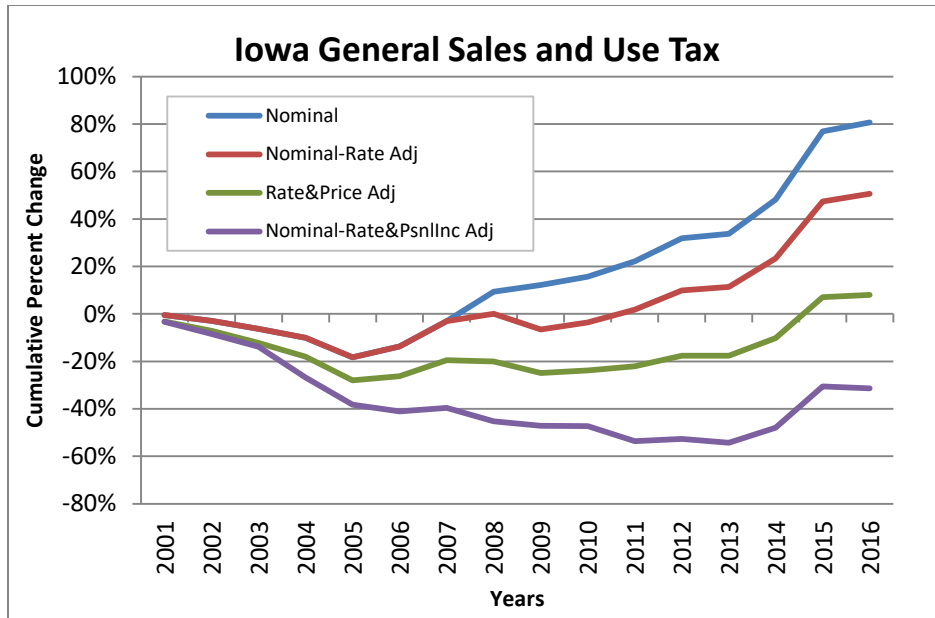
During these years Iowa enacted a rate increase that raised the sales and use tax rate from 5.0% to 6.0% effective July 1, 2008. This charge converted a local option tax intended to provide funding for public school infrastructure improvements to a statewide tax restricted to the same uses. Although technically this was a state tax increase, the only new revenue came from applying the additional 1 percentage point of the tax rate to use tax as well as to sales tax.⁶ Backing out the effect of this rate change and adjusting for inflation, Iowa's state sales and use tax collections increased by only \$235.7 million (8.1%) over the seventeen years.

In addition to the rate increase, Iowa enacted many other law changes that impacted sales and use tax collections between 2000 and 2016. Twenty-eight bills provided exemptions from sales and use tax or provided total or partial refunds of sales and use tax paid tied to economic development projects.⁷ Among the major enacted exemptions that had the greatest impact on sales and use tax collections were:

- Residential Utility Purchases (-\$127.1 million)
- Manufacturing Consumables (-\$40 to -\$100 million)
- Computer and Internet Access Charges (-\$55.9 million)
- Web Search Portal and Data Center Equipment and Electricity (-\$35.3 million)
- Digitally Delivered Goods (-\$17.0 million)

One way of illustrating the impact of policy changes, which include tax law and administrative rule changes, is by looking at the cumulative growth of sales and use tax collections.

The top line (blue) of the following chart shows the cumulative percentage growth of the nominal value of Iowa sales and use tax collections. The second line (red) is the cumulative percentage growth in sales and use tax collection with the impact of the 2008 rate increase netted out. The third line (green) shows the cumulative growth of sales and use tax collections both adjusted for the 2008 tax rate increase and for inflation. This line shows from 2000 through 2015 real growth in Iowa's sales and use tax collections remained below their 2000 level. The bottom line (purple) presents the cumulative percentage growth of sales and use tax collections net of the 2008 rate increase and adjusted for Iowa personal income growth. By adjusting for personal income growth this final line can be viewed as roughly reflecting changes in sales and use tax collections net of the impact of policy actions. With this adjustment Iowa sales and use tax collections in 2016 are 31.4% below their 2000 level.



Since Iowa collects data on both gross and taxable sales by businesses that hold sales tax permits, another way of gauging the impact of policy actions (exclusive of rate changes) is by looking at changes in the ratio of taxable sales to gross sales. In 2000 this ratio equaled 43.4% and it dropped to 29.7% in 2016. This equals a 31.6% drop in the share of gross sales that were taxable, which is a very close match to the impact estimated by adjusting nominal sales and use tax collections for the rate change and personal income growth presented in the chart.

Appendix 3: Illinois Sales and Use Tax Case Study

During SFY 2000 Illinois collected \$8,055.9 million in state sales and use tax revenues (6.25 percent rate). By 2016 sales and use tax collections reached \$11,091.1 million. This equaled a nominal increase of \$3.0 billion (37.7%) over the seventeen years. Adjusting for inflation, sales and use tax collections decreased by \$137.0 million (1.2%) over this period.

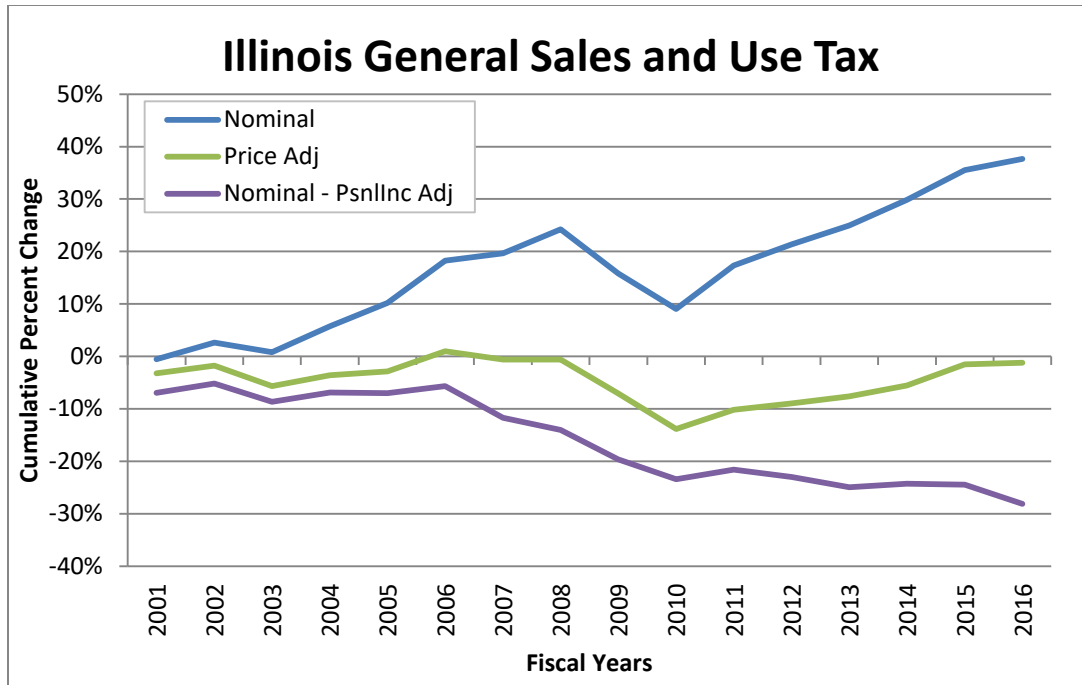
During this time the tax rate remained constant at 6.25 percent. The only major base change occurred on September 1, 2009 when the base was expanded to include soft drinks, personal grooming and hygiene products, and candy. At the time the estimated increase in sales tax revenue associated with this change was \$62.5 million at the 6.25 percent rate.

In contrast to Iowa and perhaps as a result of Illinois' precarious fiscal position, there have been very few changes/additions to Illinois' sales tax exemptions. However, one significant change was in the methodologies used to estimate the value of sales tax exemptions. While this is a continuing improvement process, major changes were made in 2008. In SFY 2000 the sales and use tax revenue loss associated with sales tax exemptions at the 6.25 percent rate was \$3.7 billion. In 2008 the associated estimate equaled \$4.2 billion, while the comparable figure for 2015 was \$4.7 billion.

In the early 2000s there was much concern about how much in sales tax losses the state was incurring as a result of the ever increasing growth in internet sales. Current estimates for the sales tax loss associated with remote sales are \$270 million for SFY2016. This estimate is significantly lower than in previous years as Amazon started collecting and remitting use tax in February 2016. However, in spite of this factor, after accounting for this sales tax loss we still see Illinois experiencing weak nominal sales tax growth and negative real sales tax growth.

One factor that has to be considered when examining Illinois' sales tax trends is that Illinois is one of only a handful of states that includes gasoline in its sales tax base. Gas prices spiked in 2007 and remained at historically high levels for most of the succeeding period through 2015 when they fell by almost a \$1 per gallon. For 2015 through today gas prices remain well below the average price since 2008.

In summary, the ratio of real sales tax to personal income was relatively stable until SFY 2007. In that year the ratio declined by almost one full percentage point (in spite of higher than average gas prices) and it has never recovered. Factors contributing to this trend include the volatility of gas prices, growing internet sales, tax expenditures growing at a faster rate than sales tax, and an acceleration of the changing behavior of consumers purchasing services in favor of tangible personal property. The next step in this research is to try to isolate the impact each one of these factors is having on Illinois' declining real sales tax revenues.



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¹ During March 2017, 22 states had unemployment rates of under 4 percent and 20 more states had rates between 4 and 5 percent. During 2016, 16 states experienced negative nominal revenue growth.

² The primary data source for the analysis presented in this paper is the Quarterly State Tax Collections reports compiled by the U.S. Census Bureau. What the paper refers to a total tax collections includes both taxes and fees as reported by the U.S. Census Bureau.

³ Nominal GDP growth during 2016 equaled 2.95%.

⁴ Information on tax rate changes was obtained from the Tax Policy Center web site at <http://www.taxpolicycenter.org/statistics/sales-tax-rates-2000-2017>

⁵ The tax collection amounts presented in this case study are from the Census of Government.

⁶ Iowa local option taxes do not apply to out of state purchases and so there is no local option use tax.

⁷ The estimated impacts of sales and use tax legislation are derived either from fiscal notes or from the 2015 Iowa Tax Expenditure Study.