
Fiscal Realities for the States: Economic Causes and Effects

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The US economy has grown well since 2001, substantially improving state fiscal situations. The economy is the dominant short-to-medium run *cause* of state-local revenue growth, since taxes are keyed to volatile business cycle swings in personal income, consumer spending, home values, and business profits. The economy also exerts substantial influence on state-local expenditure growth, because the prices for goods and the wages for employees are partially beyond government control. But, the local economy also shows large and fundamental *effects* of state-local policy decisions. Taxes, regulations, and public programs strongly affect the attractiveness of one state versus another as a location for building a business or spending personal income. Now, as the national economy shows clear signs of slower growth, states need to understand quite systematically

- the dimensions of the economic forces that created their recent budgetary improvements and current situation
- the roles and magnitudes of their in-state policy choices during this same critical history
- and, with this foundation, the challenges slower growth and changing inflation may bring to their policy decisions in 2007 and the future

These topics are covered in sequence in this study, an update and extension of two earlier analyses (January 2002 and June 2003) of the state fiscal situation when the budgetary health was very troubled. As such, the guidance offered then has been tested to determine whether there are trustworthy, “evergreen” principles that can aid policy making now. The review reaches the following broad conclusions:

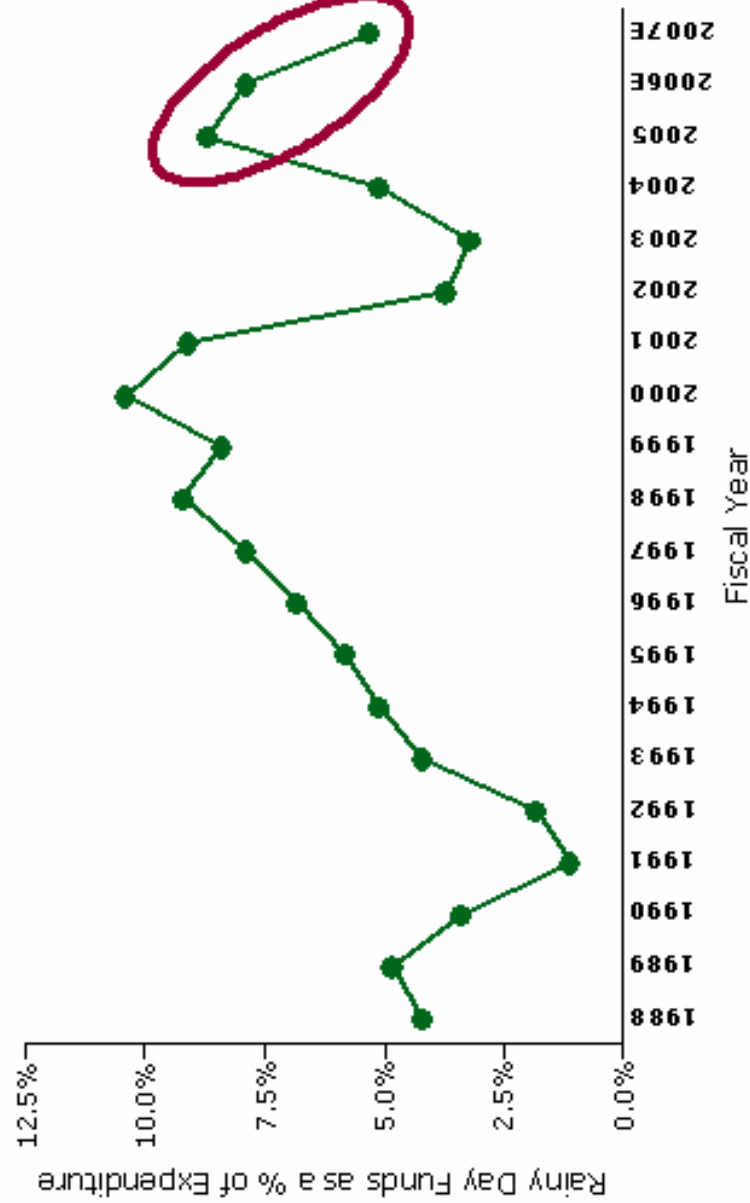
1. Within only four years after the last recession, national economic policies have reduced the US unemployment rate from over 6% to about 4.5%. Consumers and businesses responded as strongly as projected in our prior studies to monetary stimulus and federal tax cuts; the widespread fear of a deep recession following 9/11, and the subsequent worry about a “jobless recovery” were both unjustified.
2. Strong GDP growth brought outstanding, greater-than-proportional growth in state-local tax revenues. Indeed, the tax revenue response has been slightly greater than normal, amplifying our central conclusion that tax revenues are very sensitive to the economic cycle.
3. Also as forecasted in the two studies, this dual GDP and tax recovery was sufficiently strong that budget balance was restored far more rapidly than conventional wisdom feared, and draconian, economically-damaging tax rate increases were needed in very few states.
4. The major surprises or disappointments are that states have not appeared to understand these patterns fully, and thus have—at least in the aggregate—left themselves in a more vulnerable than necessary position today.

Specifically, at the peak of the economic boom in the current fiscal year, states are still just barely back to budgetary balance and many states are already spending from rather than bolstering their rainy day funds. Moreover, a totally controllable portion of problematic spending growth has come from wage increases state and local government have granted to their employees at a pace beyond that of the private sector. Finally, states also don’t appear to have sufficient awareness or concern that the housing slump has cooled economic growth, and that their revenue growth rates are about to unwind—as usual in a slump—in greater-than-proportional fashion.

Chart 1

“Rainy-Day Funds” Are Being Spent on Sunny Days

- The economy was still improving in FY 2006 toward a cyclical peak, so states should have been adding to their rainy-day funds instead of beginning to draw them down
- Current state projections indicate a further expected withdrawal equal to of 2.5% of expenditure in fiscal 2007



Source: NASBO Fiscal Survey of the States, June 2006

The modern US economy has never gone into recession unless the Federal Reserve has tightened monetary policy, and the economy has never failed to respond with slower growth to any Fed tightening. Two years ago, the Federal Reserve began boosting interest rates such that short-term rates are now well above inflation, and real GDP growth has now receded from the 4% rate of 2003-2005 to less than 3% recently. The only debate among economists is how much further deceleration will occur. In other words, the US is past the business cycle peak and rising unemployment is now more likely than falling unemployment.

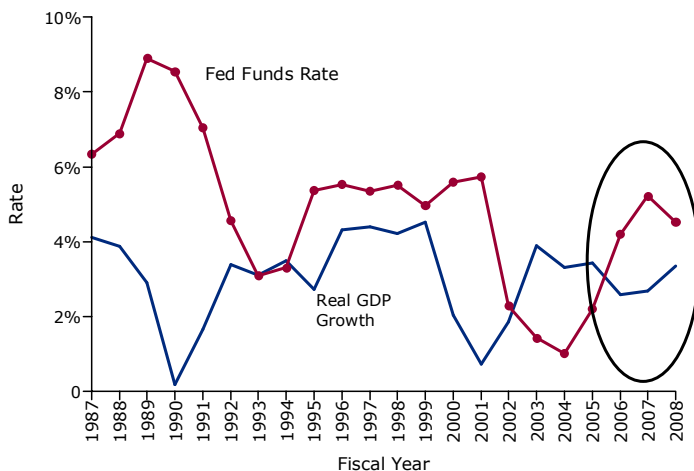
Rising unemployment, and the slower growth of incomes and retail sales that cause this “recession“, will be a problem of varying dimension across the fifty states. First, some states have built up more sizable emergency or “rainy day” funds. Second, the state economy growth slump will itself vary in magnitude, depending on the industry mix in each state and its long-term demographic trends. Third, the cyclical volatility of taxes differ by tax base (personal income, profits, retail purchases, or property values). In the initial sections of this study, we will examine the relationship of the economy to spending and to taxes aggregated across all fifty states. The identified patterns should be recognizable and useful for each individual state, given its own tax mix and current budget surplus or deficit. In the final section, we turn to state-by-state analysis of the historic impacts of their tax choices.

Chart 2

State Fiscal Situation

A Federal Funds Rate Increase in 2006 Precipitates a GDP Growth Drop-off in 2007

- A decline in GDP growth in 2007 will impact state tax revenue, further exacerbating states’ declining surpluses



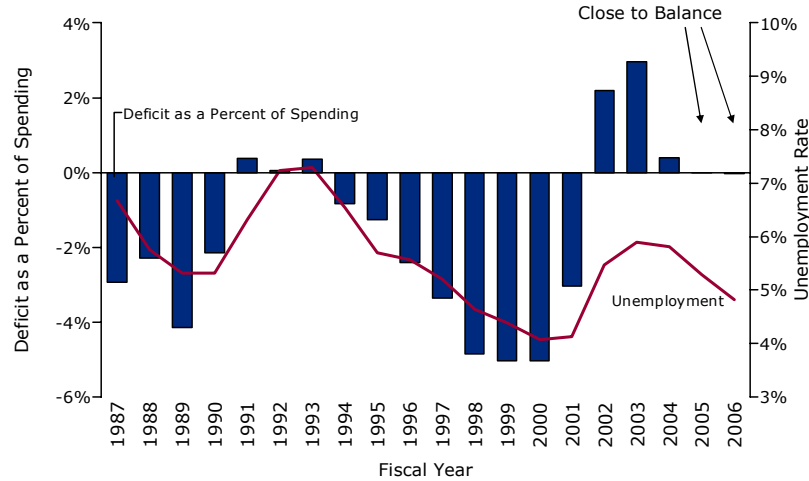
Note: Real GDP growth is lagged one year
Source: BEA; Parthenon Analysis

Chart 3

State Fiscal Situation

States Are Deviating from the Historical Pattern that a Surplus Should Exist under the Current Unemployment Rate

- As unemployment rates rise and fall, state-local deficits arise and recede
- Unfortunately, the normally large surplus (shown as a negative deficit) has not occurred in this cycle



Source: BEA; Parthenon Analysis

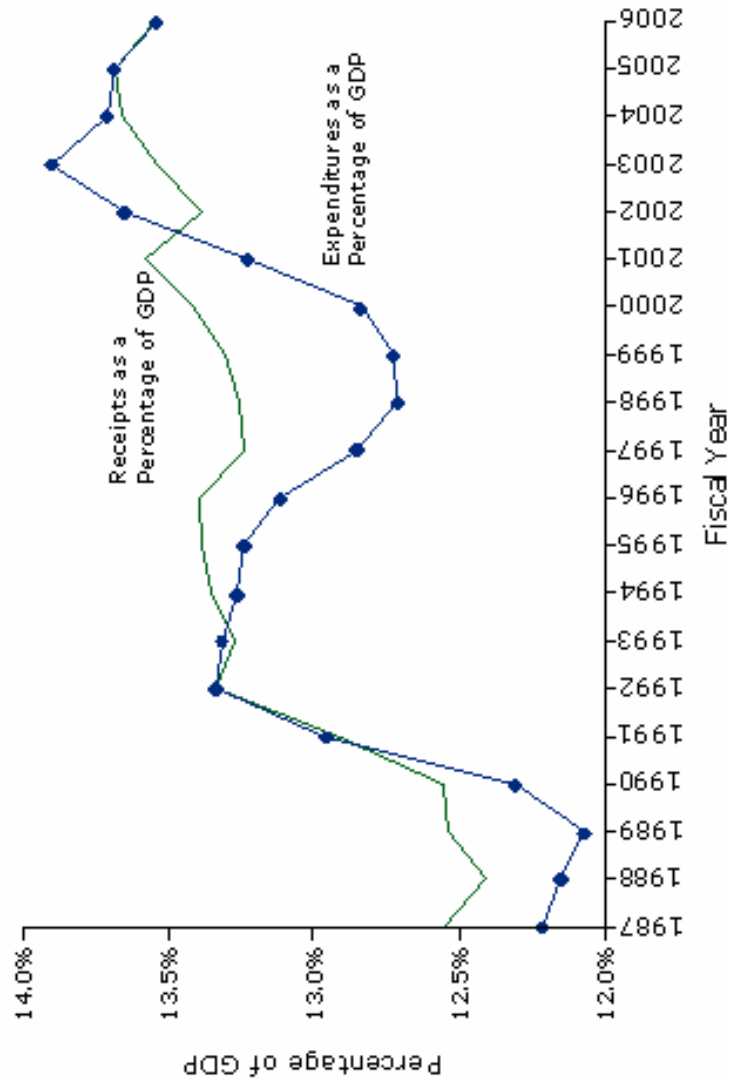
The troubling image presented by Chart 3 is the contrast between the aggregate budget balance at today's cyclical peak versus the normal cyclical surplus. Prior to 2000, states ran large surpluses; in good times, these dissipated to small deficits when the unemployment rate peaked in a recession cycle. Unfortunately, although the unemployment rate has now fallen to economic-boom-like levels under 5%, there is no material surplus. The chart suggests that a 4% surplus (that is, in terms of the graph, a negative deficit) would normally be aligned with the current unemployment rate; instead, the cumulative budget position of the past four fiscal quarters is a slight deficit.

Chart 4 gives a preliminary indication that the budget problem stems from rising state-local spending, and not from a growth failure of taxes and other funding sources. At the end of the 1980s' economic boom, spending was 12.1% of national GDP; at the end of the 1990s boom, it had ratcheted up to 12.7% of GDP, and now at the current boom, it has ratcheted up again to 13.5% of GDP. Clearly, either state and local governments are choosing not to live within their means, or the federal government is mandating new spending without paying for it.

Chart 4

State Fiscal Situation

State Budget Pressures Are Due to a Strong Upward Trend in Spending; Receipts are Close to a Record Share of GDP



Source: BEA; Parthenon Analysis

ECONOMIC FORCES ON STATE-LOCAL SPENDING

Chart 5 decomposes state and local government spending into three components:

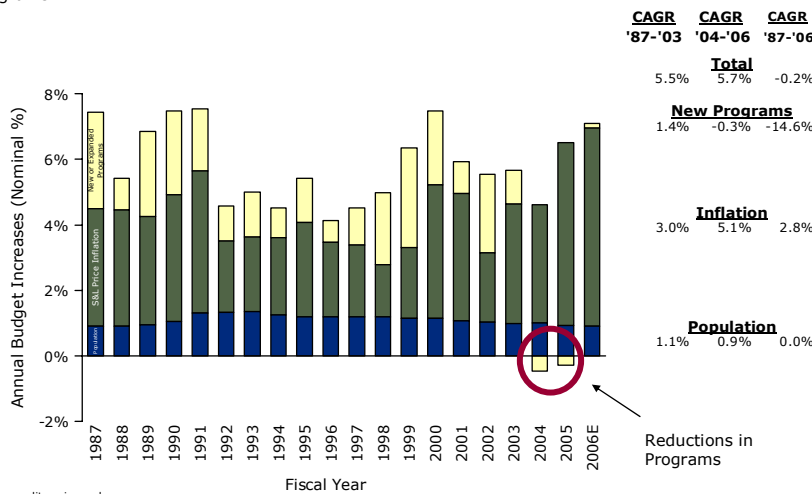
- Blue bar: Population growth
- Green bar: Inflation in the goods and services purchased or contracted for by these governments
- Tan bar: Implicit development of new programs, or expansion of the parameters of old programs, that drives spending beyond the cost of providing the same services to more people (the population component) or paying more for the same services (the inflation component)

Chart 5

State Fiscal Situation

High Inflation Has Precluded New Programs

- Historical budget growth averaged 6%; roughly 1% from population growth, 3.5% from inflation, and 1.5% was accounted for by new and expanded programs
- Exceptionally high inflation at the state and local levels has eliminated the opportunity for new or expanded programs



As the circled area of the lower right of Chart 5 indicates, the fiscal crisis of the past four years prevented states from adding many programs. The surprise is the heavy burden of inflation. Chart 6 compiles the key factors affecting state spending, and compares them to national norms for the private sector. For consumers, energy costs have been a recent problem, but state inflation at 4.0% per year for the past 5 years has far outstripped consumer price inflation of 2.7%, when for decades there was virtually no difference. The reason *is not* the probable suspect, medical costs. Indeed, states spend about the same share of their budgets on medical costs (14%) as does the nation relative to GDP (15%).

A closer examination of state spending highlights two inflation problems that have not been recognized in public debate. First (as shown in Charts 6C and 7), state pay increases have been substantially more generous (rising 4.3% annually) than those in the private sector (3.6%) during the past five years. States created a similar problem for themselves in the 1980s, when they granted total compensation increases at 6.4% vs 5.6% per year in the private sector. Since pay accounts for 50% of state spending, this generosity is putting a major burden on budgets.

Second, the construction boom coupled with worldwide commodity price inflation has greatly increased building cost inflation (Chart 6D). This has averaged 5% for both public and private buyers of nonresidential construction, but this is over 12% of state-local spending but only 2% of the nation's.

Chart 6

Employee Compensation and Construction Expenses Explain Exceptionally High Inflation

A. Total Inflation for All Goods and Services				
	1981-1990	1991-2000	2001-2006	Forecast* 2007-2011
National Production (GDP) Prices	4.5%	2.1%	2.5%	2.1%
Consumer Prices (National CPI)	5.0%	2.9%	2.7%	2.0%
Medical Prices	7.6%	3.8%	3.4%	3.0%
S & L Prices Paid for all Goods and Services	5.2%	2.8%	4.0%	2.6%

Key Problem

B. Medical Expense Burdens				
	1981-1990	1991-2000	2001-2006	Forecast 2007-2011
National Medical Outlay Share of GDP	8.9%	11.9%	13.6%	14.8%
S & L Medical Outlay Share of Spending	7.3%	12.6%	15.0%	16.0%
S & L Medical Outlay Share of Spending (Net of Federal Aid)	NA	5.4%	6.2%	6.8%

C. Relative Employee Compensation Burdens				
	1981-1990	1991-2000	2001-2006	Forecast 2007-2011
Employment: National	1.9%	1.8%	0.5%	1.3%
: S & L Government	1.2%	1.7%	1.3%	1.1%
Compensation per Employee: National	5.6%	3.5%	3.6%	3.3%
: S & L Government	6.4%	3.5%	4.3%	3.5%
Share of Spending: National (% of GDP)	58.0%	57.1%	57.7%	57.1%
: S & L Government (% of Total)	49.0%	47.1%	44.4%	43.2%

State-local pay inflation far beyond private sector

D. Construction Expense Burdens				
	1981-1990	1991-2000	2001-2006	Forecast 2007-2011
National Building Outlay Share of GDP	2.9%	2.2%	1.9%	2.0%
S & L Construction Outlay Share of Spending	12.0%	10.9%	11.9%	12.6%
National Building Price Paid	4.5%	3.1%	4.9%	3.1%
S & L Construction Price Paid	4.2%	2.9%	4.9%	2.4%

Shared problem of rapid construction inflation

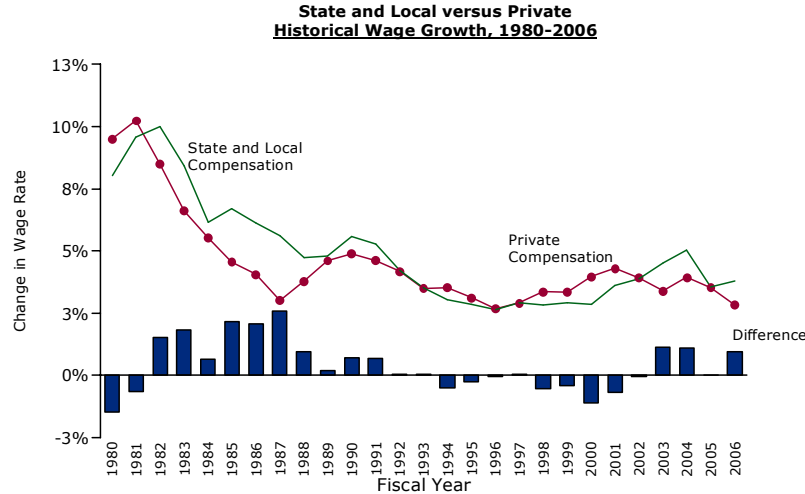
* Baseline forecast of Global Insight, assuming corrective actions taken by the state and local sectors

Chart 7A

State Fiscal Situation

State Wage Increases Are Outpacing Private Sector Increases

- With the exception of '92-'01, state and local government wage rates have increased more rapidly than the private sector



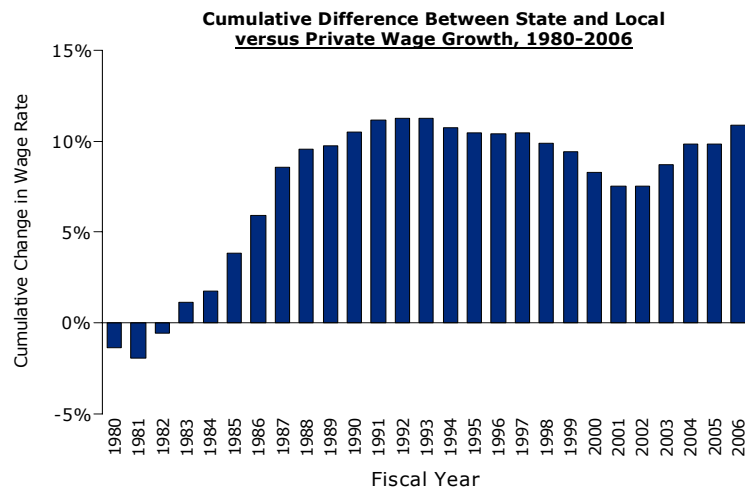
Source: NASBO Fiscal Survey of the States, June 2006; BEA; NIPA Database

Chart 7B

State Fiscal Situation

Continued Rapid Growth in State Wages Could Intensify Budget Problems

- Compared to 25 years ago (1979), state and local pay has risen 12% beyond private sector pay increases
- Pay restraint would provide great budget relief



Source: NASBO Fiscal Survey of the States, June 2006; BEA; NIPA Database

RELIABLE PATTERNS FOR FORECASTING REVENUE GROWTH

As noted earlier, this study builds upon two prior studies issued in 2002 and 2003. An additional 4 years of evidence strongly supports the patterns identified then. The key analytical conclusions presented at that time were:

- quite reliable patterns dominate short-run and long-run state revenues
- short-run variations in tax revenue are keyed to state-by-state employment and unemployment statistics, with logically different sensitivities dependent on the type of tax (income, sales, excise, or business profits)
- the reactions of each of these revenue sources to variations in unemployment are far greater than is often understood, because traditional modeling often inadequately distinguishes between shifts due to legislative changes versus shifts due to the economy. Legislated changes are often designed to offset economic tides, thus simple correlations will certainly understate the pure impact of the economy
- the stock market plays a dramatic role in income tax revenues but useful, long-standing forecasting patterns should have been recognized to avoid surprises

The short-run patterns for revenues

It might seem logical to expect state revenues to rise and fall in direct proportion to national income, otherwise known as GDP or gross domestic product. Thus, a budget director hearing in 2000 that GDP growth was likely to slow two percentage points from 4% in FY 2005-6 to 2% by 2007 might have anticipated a loss of 2% of revenues per year. Experienced budget directors know the impacts are more extreme, but often don't have well-tuned formulas to make useful translations from an economic outlook to a revenue forecast. The past years' tax collections have validated the rules-of-thumb suggested in our prior reports.

Today, we conclude that *each one percentage point deviation in inflation-adjusted GDP growth below its trend:*

- *cuts income tax receipts by about 2%.* A 2.2% swing is created directly by normal wages, plus an additional loss of over 1% from induced swings in the stock market (generating both capital gains and "ordinary income" from option exercises). Progressive tax structures, prevalent in most states due to large exemptions and standard deductions or to graduated rates, contribute to this sharp sensitivity.
- *cuts general sales and excise taxes by 1.6%.* This response is greater the more the tax focuses on durables and exempts food and other necessities.
- *cuts business tax receipts by 6% on average.* Higher impacts are seen when profits rather than sales are the focus because the profit margin of most businesses rises and falls with the economic cycle. In addition, withholding is often excessive early in a downturn, leading to doubly large shortfalls thereafter.
- These impact elasticities are slightly higher than previously estimated for income and business taxes, emphasizing the cyclical vulnerability of key revenues. On the other hand, it is now possible to detect a deteriorating trend in the equation linking sales taxes to GDP, no doubt due to the rising penetration of internet-based sales often escaping taxation.

Unfortunately, state-by-state GDP data is not available to budget officers on a timely basis for use in revenue forecasting. Instead, the best available state data relates to employment and unemployment, drawn from surveys they manage in collaboration with the U.S. Department of Labor. Fortunately, equivalent patterns are just as reliably estimated. We have adjusted total state-local tax revenue by type of tax for legislated changes reported each year by the NASBO. This allows us to estimate the pure effect of the economy on revenues.

Each *one percentage point deviation in the unemployment rate above its historic average*:

- *cuts income tax receipts by about 4% within one year and an additional 3% with a one-year lag. This is almost twice the sensitivity previously estimated, presumably reflecting the rising importance of options and bonuses.*
- *cuts general sales and excise taxes by 3% versus a 4% elasticity previously estimated.*
- *cuts business tax receipts by 11%, the same impact elasticity found in prior studies.*
- *Total revenues fall 5.0% for each 1% rise in the national unemployment rate. This is a slightly higher cyclical response than previously estimated, when we found a 4.5% swing per point of unemployment.*
- *Symmetric benefits occur as unemployment declines.*

As noted in the earlier work, these magnitudes are roughly twice the “elasticities” quoted for taxes with respect to real GDP. The explanation for the doubling is that it takes a 2% swing in real GDP to shift the national unemployment rate by 1%.*

The “Golden Rule of Thumb” for short-run forecasting:

- *Expect each 1 percent rise in the state unemployment rate to cut over 5 percent from trend revenue growth.*
- *5:1 is the average impact. States with a greater reliance on sales and excise taxes or business profit taxes are more vulnerable, and their golden rules would have notably higher multipliers. California, for example, has a multiplier of 8.*

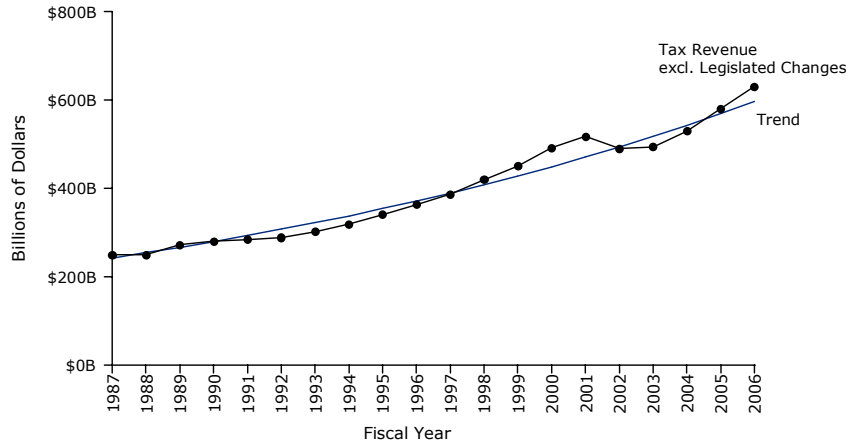
* The unemployment rate response to GDP is buffered by three factors. First, employers reduce payroll less than proportionately to output to avoid severance and rehiring costs and in recognition of the fixed role of some overhead or management positions. Second, some job losses or gains are second jobs held by the same person and thus do not affect the “unemployment rate” at all, for this is the proportion of those either working or actively seeking work who have no job at all. Finally, potential employees return to school or drop out of the labor force in discouragement when times get tough; if they are no longer actively seeking employment, they are not counted as “unemployed.” The same phenomenon works in reverse, drawing workers back into the ranks of the officially “unemployed,” when the economy begins to visibly improve.

Chart 8A

Tax Receipts and the Economy

Tax Revenue Is Highly Cyclical around Its Long Term Trend

- Tax revenues increase over time due to increasing income, population, and long-term economic growth
- Beyond this upward trend, there are pronounced cycles in revenue that correlate to volatile consumer spending, business profits and capital gains



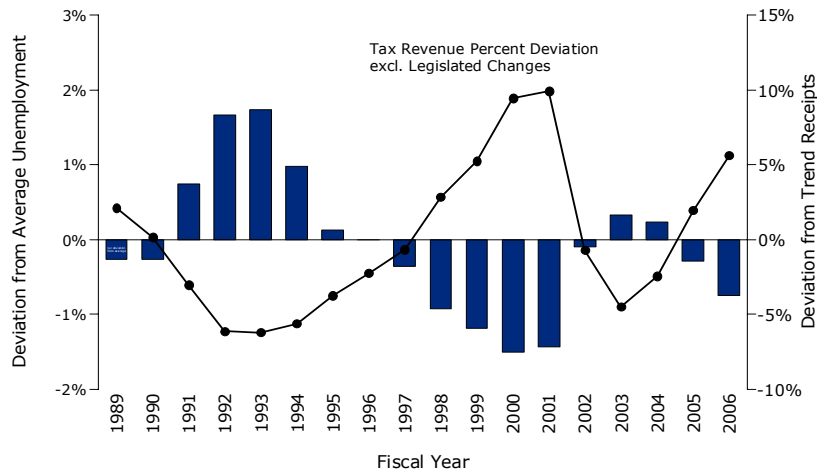
Note: Includes tax receipts from personal income, sales, corporate, alcohol, tobacco and motor fuel
Source: NASBO Fiscal Survey of the States, June 2006; Parthenon Analysis

Chart 8B

Tax Receipts and the Economy

Excluding Legislated Changes, Each 1% Rise in Unemployment Cuts 5% from State Tax Revenues

- States relying on business taxes experience the greatest volatility
- Note: the right (tax gap) scale = 5 x the left (unemployment gap) scale



Note: Average taken from 1987 to 2006; includes tax receipts for personal income, sales, corporate, alcohol, tobacco and motor fuel
Source: BEA; NASBO Fiscal Survey of the States, June 2006; Parthenon Analysis

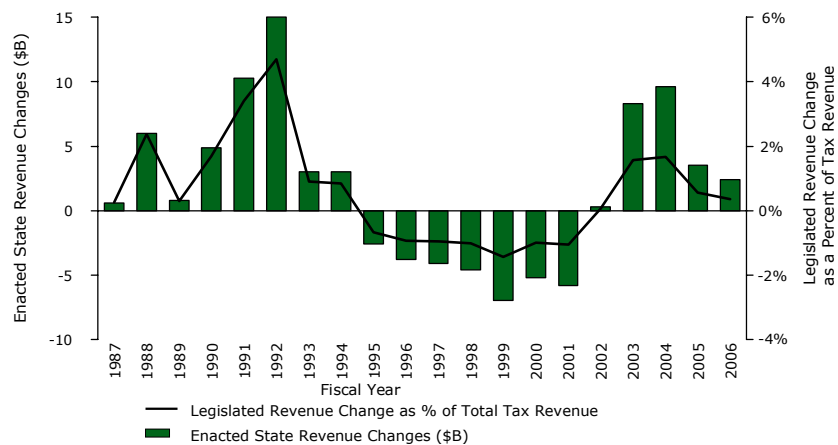
As noted, these revenue formulas exclude the typical pro-cyclical changes in tax rates due to legislation. By that we mean that states would sharply raise tax rates in the midst of recession and early recovery years. In 2001 and 2002, states were able to do somewhat less of this because of the reserves they had wisely accumulated after the 1990-1991 recession and the ability to use tobacco settlement funds. But, substantial tax increases were still pursued in many states, and this materially weakened the national economic recovery. A far better strategy would be to build up large rainy day funds to permit state tax cuts during recessions.

Chart 9A

Tax Receipts and the Economy

Substantial Tax Increases Weakened Economic Recovery in Many States

- Despite economic improvements since 2003, states have continued to legislate increased taxes
 - However, recent tax increases are smaller than those from 2002 to 2004 and are a much smaller percentage increase than the tax increases enacted in the 1991 economic downturn

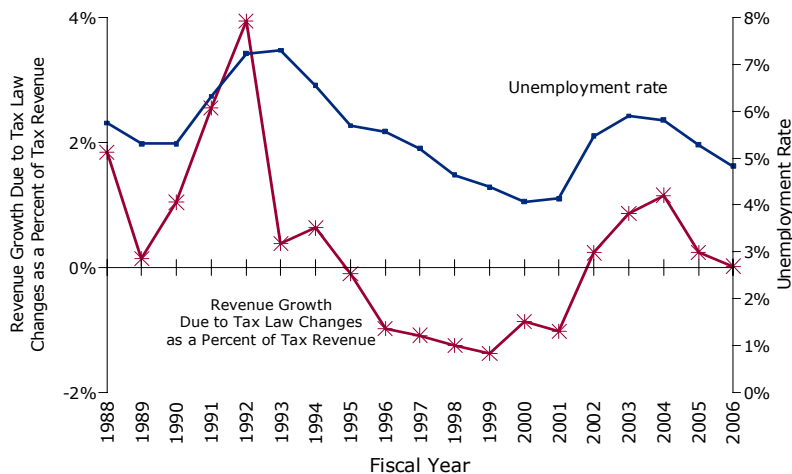


Note: Data includes alcohol, tobacco, gas and other taxes in addition to sales, personal and corporate income
Source: NASBO Fiscal Survey of the States, June 2006

Chart 9B

Tax Receipts and the Economy

States Intensify the Business Cycle through Their Tax Increases; Taxes Are Raised as Unemployment Rises, and Cut in Prosperity



Note: Includes tax receipts from personal income, sales and corporate
Source: NASBO Fiscal Survey of the States, June 2006; BEA

The striking pattern of raising taxes during recessions clearly hurts the *short-run* economic recovery of a state, but the *long-run* damage is even greater if a state establishes itself as a significantly higher tax location than competing states. Long-established economic theory and our empirical analysis demonstrates the particularly damaging effects of corporate profits, sales, and excise taxes. These taxes motivate the location of business activity and the location of consumer purchasing. In contrast, income taxes are far less influential for two reasons. First, the elasticity of labor supply to after tax wages is very low. Research has consistently found that prime-age workers do not vary their hours in response to pay. Second, much of any cyclical response to lower income is borne by the out-of-state producers of the goods since no state supplies much of its consumer's needs.

In the long-run, business formation and expansion is clearly discouraged by state-local taxes on their profits and sales. They must compete with businesses in other states and nations who enjoy more favorable tax treatment. Entrepreneurs have complete freedom of location when they launch their new ventures. And the executives running existing businesses have almost equally great freedom as they decide in which state or nation they should build a modernized facility, locate new employees to meet rising demands, or simply relocate an existing business to seek a material cost and tax advantage. Sales and excise tax increases would do substantially more damage than income tax increases. ***The differences are important in the short-run in terms of cyclical impacts, but they are even more pronounced in the long-run. Business location decisions do not appear to be significantly influenced by personal income tax burdens, but they are definitely influenced by profit and excise taxes.***

Short-run, cyclical differences

- First, all sales and excise taxes feed directly into official consumer price indexes, so such increases create inflation spike. This worries not only citizens, but also the Federal Reserve who is then inclined to raise interest rates
- Second, state income taxes are deductible from federally defined taxable income, while a parallel deduction is only useful for sales taxes in states with low or non-existent income taxes. Excise taxes are almost always non-deductible, hence citizens pay the full burden, sharing none of it with "Uncle Sam." While it is true that this federal tax deductibility only applies to households itemizing their deductions, this group pays the majority of state and federal taxes and does so at high marginal federal tax rates. Therefore, it should not go unnoticed in state tax strategy debates today that Uncle Sam will effectively "subsidize" a substantial sum of new or temporary taxes collected via state income taxes surcharges.

A set of simulations of the *Global Insight, Inc. (GII)* Model of the US Economy was used to size the comparative short-run impacts. Two scenarios were compared to the *Global Insight, Inc. (GII)* baseline forecast.

1. All states were assumed to increase marginal personal tax rates by one percentage point. The median maximum rate today is 6.7 percent on a tax base of approximately \$9 trillion dollars. The tax increase, before acknowledging losses from a weaker economy, would be \$90 billion.
2. All states were assumed to boost sales taxes by slightly more than one percentage point to achieve a comparable revenue gain. National magnitudes of business cycle losses flowing from these actions would be slightly smaller than the national losses created by narrow excise taxes raising the same revenues; that is, they would create about the same inflation and income problems except to the extent that taxpayers in a few states would enjoy a sales tax, but not an excise tax, deduction. Moreover, narrow excises would concentrate the pain on specific industries and consumers.

The results are striking. The higher inflation created by the equal-sized retail sales tax changes, plus the absence of a federal offset in lower taxes by “deducters,” more than doubles the economic pain created by higher income taxes. In the second year, at the peak impact, the income tax increases cut national employment by 345,000 while same-sized sales or excise tax increases would cut jobs by an estimated 901,000. Any such combination of retail tax increases would boost inflation by a full percentage point, setting off a painful vicious cycle of weaker confidence, lower spending, and fewer jobs.

Chart 10

The Short-Run Impact of Sales Taxes Is Far Worse than that of Personal Income Taxes

Comparison of a one-percentage point increase in state tax income tax rates to a comparable increase in states' sales or excise tax rates

Simulated Impacts during Next 4 Years

The Economy				
	2007	2008	2009	2010
Real GDP Losses (% relative to base)				
Income Tax	-0.4%	-0.5%	-0.5%	-0.5%
Sales and Excise Taxes	-1%	-1.2%	-1%	-0.9%
Consumer Prices (% relative to base)				
Income Tax	0%	-0.1%	-0.2%	-0.3%
Sales and Excise Taxes	1.2%	1.1%	1%	0.7%
Unemployment Rate				
Income Tax	0.2%	0.2%	0.2%	0.2%
Sales and Excise Taxes	0.4%	0.6%	0.6%	0.4%
Household Employment (thousands)				
Income Tax	-204	-340	-352	-345
Sales and Excise Taxes	-508	-877	-838	-705
Federal Funds Rate				
Income Tax	4.9%	4.5%	4.7%	4.8%
Sales and Excise Taxes	5.3%	4.9%	5%	4.6%
Consumer Sentiment (% relative to base)				
Income Tax	-1.8%	-1.7%	-1.3%	-1.2%
Sales and Excise Taxes	-5.2%	-4.4%	-2.7%	-1.5%

State and Local Revenue				
	2007	2008	2009	2010
S&L Total Tax Receipts (\$ billion)				
Income Tax	82	85	89	93
Sales and Excise Taxes	83	84	89	95
S&L Personal Tax Receipts (\$ billion)				
Income Tax	87	90	95	100
Sales and Excise Taxes	-2	-10	-16	-22
S&L Sales and Excise Tax Receipts (\$ billion)				
Income Tax	-3	-5	-6	-2
Sales and Excise Taxes	87	95	106	117

Source: Simulation of the Global Insight, Inc. Model of the US Economy

Long-run growth responses to state tax rates and tax changes

The database we have compiled of state-by-state, year-by-year legislated changes in state taxes since 1985 allows us to evaluate the long-run implications of state actions on job growth and output expansion. Specifically, we have estimated econometric equations explaining growth over the past decade (1996-2006) in *a*) total employment growth, and *b*) total inflation adjusted output (gross state product) growth. As explanatory factors, we included:

- The marginal tax rate levels for personal income, sales, and business activity
- The cumulative, legislated increases in each of these revenue sources as a percent of total current state revenues
- The cumulative, legislated increases in excise taxes on alcohol, tobacco, or gasoline as a percent of total current state revenues
- Filters for climate and industry mix differences

Clearly there are other factors that drive state performance, but it is striking that this very simple model is able to explain a strikingly large proportion of the growth differential across states (Charts 11, 12) -- 73% of the employment variation and 62% of the real state product growth variation. We tested for significantly differential effects among “business” taxes—corporate, sales, and excise—but found none. For example, in the state product model, the coefficients for these three individual increases ranged from -.60 to -.69 versus the composite answer of -.66.

They suggest that, for example, a 1% point increase in the sales tax rate can cut about 2.6% from state output growth over a decade. A comparable increase in income tax rates would reduce such growth by only 0.2%. The much larger impacts of taxes on business activity as opposed to taxes on personal income certainly match theoretical expectations. As noted earlier, corporations choose their locations with a keen eye on comparative costs, and taxes are a substantial, easy-to-measure cost. Similarly; consumers choose their buying locations to find relative bargains; if they can escape a tax by hopping across a nearby border to buy goods with lower excise or sales taxes, they will do so. Many other studies have found strong evidence of cross-border retail impacts, and these simple regressions confirm the state-wide damage that can be caused.

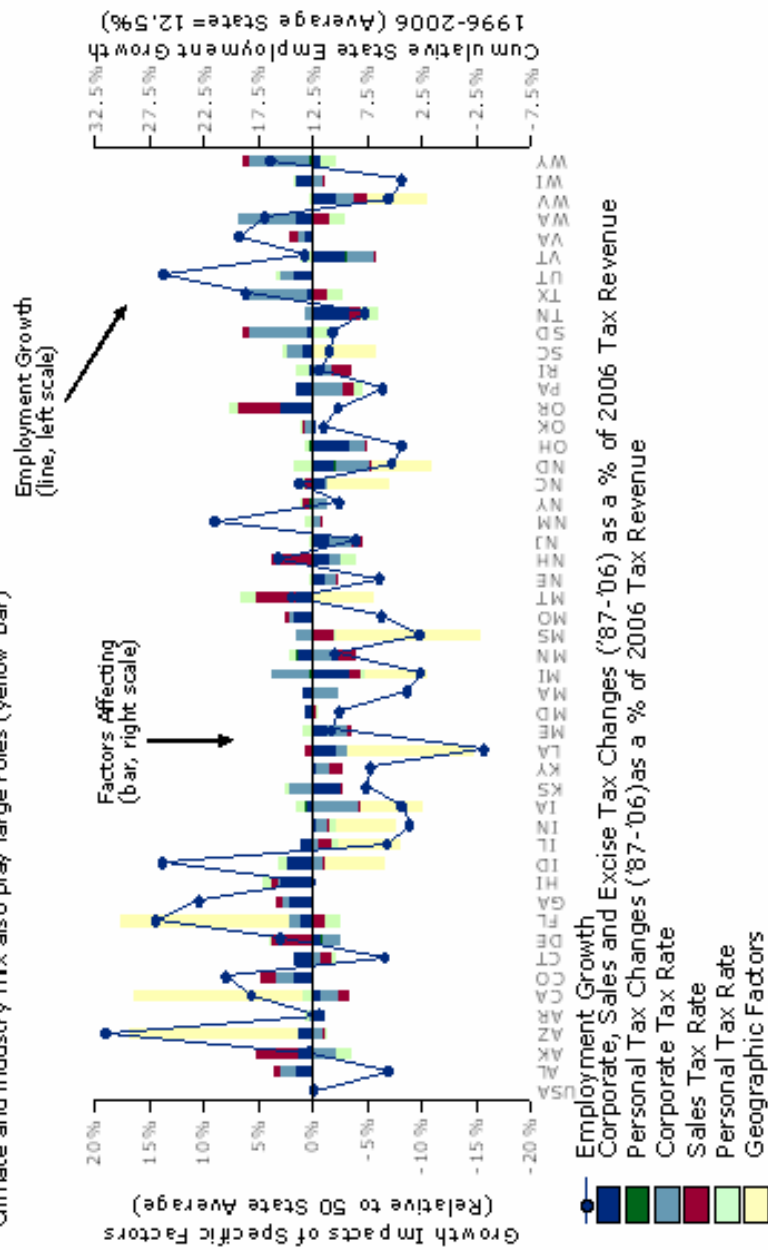
In contrast, an income tax would only impact a business location decision if the employees affected demanded higher pre-tax wages to compensate for the tax. But countless scholarly articles have demonstrated that this does not occur. Economists refer to labor supply as being very “inelastic,” or changing very little in response to pre- or post-tax wages. First, prime age adults are committed to working. Second, they have little freedom to bargain for the length of their work week: this is established by national competitive norms. Finally, and most important, there are logically offsetting “income” and “substitution” motivations in the potential response to a higher offered wage. The substitution effect argues for an increase in hours, reflecting the higher opportunity cost of leisure. The income effect argues for the reverse, a reduction in hours, because a targeted standard of living can be achieved with fewer hours worked at the higher pay.

The model does not include the relative quality of state services—education, infrastructure, law enforcement—that are paid for by taxes. If measures of these could be found, they would improve the model’s explanatory power or “fit”, much as the climate and industry mix filters do. But apparently, there is not a perfect correlation between high taxes and high-quality services; if there were, the included tax variables would not show the negative impacts. Indeed, to the extent that higher taxes do provide for more services, the equations pick this up and the tax coefficients should be regarded as the net effects of differential taxation after allowing for any correlation with service differentials.

Tax Receipts and the Economy

Sales Tax Changes Affect Employment Growth More Drastically than Income Tax Changes

- The tax factors creating the greatest growth differentials are business, excise and sales taxes (blue bar)
- Climate and industry mix also play large roles (yellow bar)



The Basic Model Fully Explains 73% of Employment Growth Differences Across the 50 States

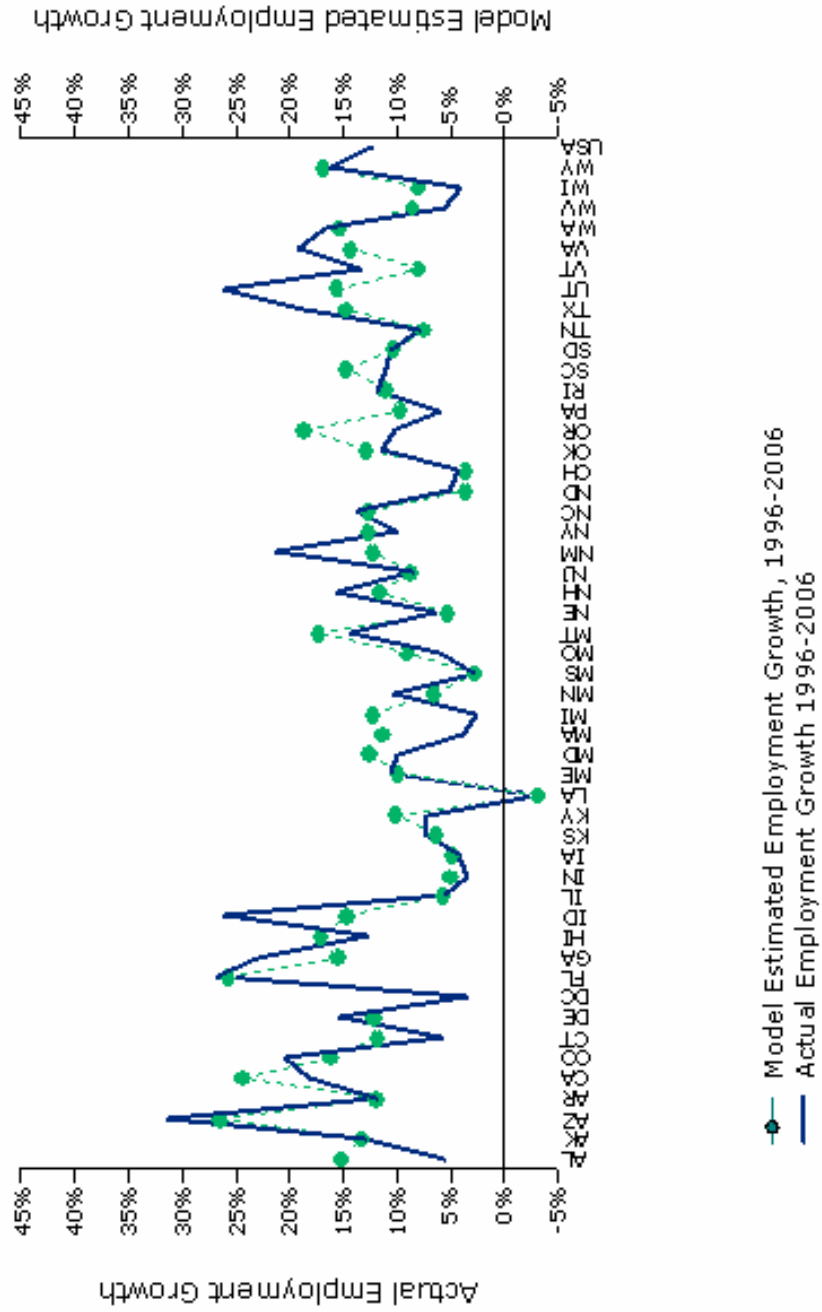


Chart 12

Sales Taxes Have the Most Negative Effect on the Economy

The Level of Tax Rates by Type (2001 midpoint)			
	<i>Percentage Per Point In Tax Rate</i>		<i>Implication Example</i>
	<i>Job Growth</i>	<i>Output Growth</i>	
Sales	-.77*	-2.43**	Each percentage point increase in marginal sales tax rate cuts employment by .77%
Corporate Income	-.70*	-.46	Each percentage point increase in marginal corporate tax rate cuts employment by .70%
Personal Income	Insignificant positive coefficient of .28	-.13	Each percentage point increase in the marginal personal income tax rate cuts output growth by .1%

Legislated Tax Rate Increases (1986-2006) as a Percent of State Revenue in 2006			
	<i>Percentage per Point in Aggregate Tax Rate</i>		<i>Implication Example</i>
	<i>Job Growth</i>	<i>Output Growth</i>	
Corporate, Sales and Excise	-.33**	-.66**	The dollar increase in taxes raised by type was divided by total tax revenue. The coefficient indicates the percent loss in employment or output growth during the decade for each percentage point of total state revenue increased due to a tax rate increase from the indicated revenue source
Personal Income	-.12	-.05	

Climate and Industry Mix Filters			
	<i>Growth Rate Difference Relative to Typical State</i>		<i>Implication Example</i>
	<i>Job Growth</i>	<i>Output Growth</i>	
Key Sunbelt States			Variables were introduced equal to 1 for the indicated states and 0 for all other states
FL, TX, AZ	.13**	.26**	
NV	.31**	.37**	
Midwest Agricultural States	-.06**	-.07*	
Katrina States			
LA	-.15**	-.27**	
MS	-.10*	-.14*	

Model Statistics		
	<i>Job Growth</i>	<i>Output Growth</i>
R-Squared	72.6%	62.3%
S.E. of Regression	5.1%	10.8%
Mean of dependent variable	12.3%	35.8%
Standard Deviation of Dependent Variable	8.6%	15.6%

* t-statistic >1
 ** t-statistic >2

Source: Parthenon Analysis

Fairness and other tax policy dimensions

The prior studies also concluded that sales and excise taxes were inferior to broad-based income taxes, adding dimensions of fairness to the analysis, as shown below. Sales taxes fare poorly when judged from an equity perspective, and narrow excises on gasoline, tobacco, or alcohol are even worse offenders. Even with exemptions for necessities such as groceries, retail purchases as a percent of income fall as income increase slightly from middle to upper income ranges, thus broad taxes on retail activity are somewhat “regressive”. Taxes on cigarettes and beer are clearly sharply regressive in that their consumption is even more highly skewed to lower income households. Moreover, the primary distinction between an excise tax and a retail tax intrinsically makes them even more unfair: excise taxes are very narrow in scope, hitting only those who purchase a particular item and often subjecting these consumers to exceptionally high tax rates, whereas non-consumers make no payment. In the case of cigarettes, the societal health costs are used as a justification, but this doesn’t apply to most other excises to justify their existence or high rates.

Optimal Tax Strategies

		Rating Criteria		
		Fairness and Progressivity	National Recession Impact	Net Burden on State
Tax Options	Personal Income Tax:	Best	Best	Best
	General Sales Tax:	Average	Worst	Average
	Business Profit Tax:	Average	Average	Worst
	Specific Excise Tax:	Worst	Worst	Worst

- Scaled in proportion to:
 - 1) Breadth of population paying tax
 - 2) Extent to which burden is minimized for lowest income households
- Scaled by national “reverberations” beyond immediate tax burden such as higher inflation created by sales and excise taxes
- State income tax increases reduce federal tax liability
- Scaled by probability of employment and sales relocating to neighboring states

KEY PRESCRIPTIONS FROM A STUDY OF STATE FISCAL REALITIES

The analysis of economic causes and effects suggests a prudent fiscal framework for the next five years.

1. Recognize the strong cyclical risks to your revenues.
Even if unemployment increases from 4.5% today to just 5%, your revenue growth will drop 2.5 points. This is the “Golden Rule” conclusion.
2. Restrain pay increases for state and local employees to match rather than exceed pay increases of citizens in the private sector
3. Budget for high construction cost escalation: although the US economy is slowing, the world is not, and material costs will probably not recede
4. Collaborate with the private sector to restrain medical cost inflation
5. Apply these empirical principles to craft smart tax policy, overcoming biases that work against optimizing state economic performance.

As unpopular as income tax increases are with voters, excise taxes and business taxes on sales or profits cause substantially greater long-run job and output growth losses.