Economic Impact of Government Spending:

A 50-State Analysis

by Richard Vedder Ohio University

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National Center for Policy Analysis 12655 North Central Expressway Suite 720 Dallas, Texas 75243 (214) 386-6272

Executive Summary

During the 1980s state and local government spending more than doubled, growing much faster than state and local economies. The increase in government spending took a larger percentage of per capita income in taxes, then caused even greater harm to taxpayers by crowding out private sector spending, thereby retarding economic growth and reducing the increase in per capita income that would have otherwise occurred. The chief culprit was government employee compensation, which grew much faster than private sector wages in almost every state.

The total cost to the nation of excess spending by state and local governments was more than \$353 billion by 1990 — an average loss of more than \$1,400 for every man, woman and child in the United States.

- Personal income was lowered by almost \$292 billion by 1990 \$280 billion of it because of excess compensation to public employees.
- Direct costs in the form of added taxes amounted to another \$61 billion, of which \$47 billion can be traced to excess compensation.

If state and local government spending had increased at the same rate as per capita income during the 1980s, personal income in 1990 would have been more than 40 percent higher in the average state.

Only in Massachusetts and Hawaii was state and local government spending growth held at a level that imposed no additional burden on residents. Both states had healthy per capita income growth during the 1980s, and Massachusetts' was the second highest in the nation. By contrast, Alaska and Wyoming, with the highest excess burdens from state and local government spending, both had negative per capita income growth.

Econometric studies cast serious doubt on the benefit of most government spending. They show little relationship between most government spending — including education and highways — and economic growth. Specifically:

- There is a strong negative relationship between spending on public assistance and economic growth.
- The excess pay of public employees is the equivalent of a major income transfer program and has had a particularly debilitating impact on growth.
- Data from a study in Ohio show that spending on education has some positive (but diminishing) effects on learning when the money is spent for actual instruction, but administrative expenditures, which have been growing in relative importance, tend to have negative effects on learning.

Introduction: The Growth in State and Local Government

In 1902, when the first census of governmental activity was taken, American government at all levels spent less than 8 percent of the nation's total output. Today, government spending approaches 40 percent of the total output, and even that figure does not reflect government's full cost to the private sector.

State and local government accounted for almost two-thirds of total government spending at the turn of the century. By 1990, the proportion had fallen to less than half, and part of that was financed through federal revenues.² Yet state and local governments have expanded enormously, both in actual size and relative to the nation's productive capacity.

A State and Local Spending Spree. Although the private sector grew dramatically during the 1980s, state and local governments grew even faster.

- State and local government spending more than doubled during the 1980s, from \$434.1 billion in fiscal year 1980 to \$975.9 billion in 1990.3
- Adjusting for inflation, state and local government spending in real terms rose by 41.7 percent.⁴
- Adjusting for population growth, real spending per capita rose 29.1 percent, compared with a 17.8 percent growth in the nation's real per capita gross domestic product.

In other words, spending by state and local governments increased, on the average, more than half again as fast as the nation's output of goods and services.⁵ [See Figure I.]

Where the Money Went. As Table I shows, spending in some traditional service areas grew far less than overall spending.⁶

- While overall spending increased by 41.7 percent in real terms, spending on highways grew only 15.6 percent.
- Spending for police and fire protection rose only 15.3 percent.

Spending for interest on government debt and public welfare, on the other hand, grew far more than the average.

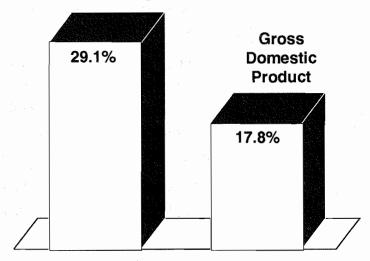
- Spending for interest went up 112.6 percent.
- Public welfare spending rose 53.0 percent.

"State and local government spending more than doubled during the 1980s."

FIGURE I

Growth of State Government vs. Growth of the Economy¹

State, Local Government Spending



¹ Measured as real growth per capita.

While these numbers show the increases by spending categories, they combine amounts spent both for real services and for government employees' compensation. Thus they conceal the primary reason why state and local government spending increased faster than per capita income: increased compensation of public employees.

How Special Interests Cause Government to Grow

Economists use the term "economic rent" to refer to income above and beyond the minimum amount necessary to employ people to produce goods and services. This excess income can be created by special interest legislation. Thus economic rent is simply a fancy term for the spoils of government. Rent-seeking is prevalent at every level of government, and among the most successful rent-seekers are government employees.⁷

Rents for Public Employees. Rents obtained by public employees played a much larger role in the growth of government in the 1980s than those obtained by other special interests. This is because, when other special interests succeed, they often create rents for the government employees who administer the expanded programs.

Rents for Other Special Interests. Special interest groups try to extract money from government in the form of cash grants, subsidies, tax

"Spending by state and local government grew half again as fast as the nation's output of goods and services." credits, loan guarantees, in-kind payments and so forth. Many special interests invest heavily in efforts to obtain such rents — hiring lobbyists, making political contributions, wining and dining politicians and staff. When government redistributes income, it almost by definition creates economic rents for various groups — the poor (via welfare programs), college students (via scholarships and loans), disabled people (via disability payments), corporations (via subsidized loans) and others. In most cases, it also creates economic rents for public employees.

How Excess Spending Harms the Private Sector

There is good evidence that government spending impedes economic development in two ways. First, when government exerts greater command over real resources it crowds out the private sector. This usually causes a shift of resources to less productive uses. Second, in order to buy more resources, government must impose taxes on capital and labor. Since taxation reduces the return to producers, it discourages work, savings and investment.

State And Local Spending¹
(In billions of 1990 dollars)

(AAI KAI	IIIOIAS OI 1770 GOI	Percent	
<u>Category</u>	1980^{1}	<u>1990</u>	Change
Education-Primary			
and Secondary	\$147.4	\$202.0	37.0%
Education-Higher	53.8	73.4	36.5%
Public Welfare	72.3	110.5	53.0%
Health, Hospitals	51.0	74.6	46.2%
Highways	52.8	61.1	15.6%
Police and Fire	38.0	43.8	15.3%
Insurance Trusts	45.7	63.3	38.6%
Utilities	53.3	74.9	40.5%
Sewers, Sanitation	21.0	28.5	35.7%
Interest on Debt	23.4	49.7	112.6%

Sources: Author's calculations based on data from U.S. Bureau of the Census, Governmental Finances, 1979-80 and Government Finances: 1989-90.

[&]quot;While overall spending increased by 47 percent, spending on highways grew only 15.6 percent and spending on police and fire protection rose only 15.3 percent."

¹ 1980 amounts converted to 1990 dollars by use of the consumer price index for all urban consumers.

Some have argued that expanded government programs employ people who would otherwise remain unemployed, and that by putting people to work these programs expand the total income of all Americans. This argument is not persuasive. If anything, the reverse holds. For example:⁸

- From 1900 to 1929, the median annual unemployment rate was 4.3 percent at a time when governments absorbed, in most years, around 10 or 12 percent of total output.
- From 1970 to 1991, the median unemployment rate was 6.45 percent, half again as large at a time when governments were spending about three times the proportion of the nation's output as in the earlier period.

It is fashionable to characterize much government spending as "investment." However, the latest finding is that increased public capital spending has no effect on private sector output, productivity or capital formation.⁹ This issue is considered in detail below.

Measuring the Excess Burden of Government

Because the growth of government from 1980 to 1990 outpaced the growth in personal income, by 1990 government took about \$245 more out of each person's income — almost \$1,000 for a family of four. The vast bulk of this increase was caused by excess compensation of public employees, although there are important differences among the states.

Excess Compensation of Public Employees. The recent media attention given to New York City school janitors making almost \$60,000 a year without being required to keep buildings clean illustrated a national problem. Compensation of state and local government employees has been increasing faster than that of private sector employees — with no evidence of increased productivity — and that trend accelerated markedly in the 1980s:¹⁰

- From 1980 to 1990, state and local employees received \$47.3 billion more than they would have if their compensation had increased at the same rate as private sector pay.
- The phenomenon was widespread in all but two states, public employee pay rose faster than private sector pay, often by substantial margins.
- In 1990, this excess compensation took, on the average, an additional \$190 from every man, woman and child in the country.

"Because government grew faster, by 1990 it took away about \$245 more per person — almost \$1,000 for a family of four." "From 1980 to 1990, state and local government employees received \$47.3 billion in excess compensation." The fact that workers in the public sector received larger raises than those in the private sector does not in itself prove that they were paid above-market wages. However, comparisons of employee turnover, skill levels and other factors suggest that these payments to public sector employees were almost certainly economic rents.¹¹

The redistribution of income from the taxpaying public to public employees was sizable:

- In 14 states, the excess pay to public employees cost each man, woman and child more than \$250.
- In Alaska, the redistribution of income to state employees was \$1,038 per person, as falling oil prices depressed private wages but state pay continued to rise in real terms.
- In Louisiana, also pummeled by falling energy prices, the real average annual wage of private sector employees fell by \$2,772 in the 1980s, but the average state government employee wage *rose* \$2,472.¹²

Other Excess Spending. Although state governments tended to spend their extra income on employee compensation in the 1980s, other special interests also benefited. In some states, there was excess spending for both employee compensation and other programs. And in four states, the growth of other excess spending outpaced even the increase in excess compensation.

- In Arizona, where rapid population growth masked a belowaverage increase in per capita income, other excess spending cost \$389 per person by 1990 in addition to the \$212 cost of excess compensation.
- In Texas, another state with high population growth and low per capita income growth, other excess spending cost \$203 per capita in addition to \$134 for excess compensation.
- Florida and Wyoming, both with high costs for excess compensation, had even higher costs for other excess spending.

The Total Excess Burden. When both types of excess spending are considered, we find that:

 In 29 states, the rise in the size of state and local government relative to income growth was largely or entirely a consequence of giving government employees larger pay increases than private sector employees received.¹³

TABLE II

Direct Per Capita Cost of Excess Public Spending¹

(In 1990 Dollars)

	Excess Public Employee	Other	
<u>State</u>	Compensation	Excess Spending	Total
Alabama	\$ 151	\$ -25	\$ 126
Alaska	1,038	-897	141
Arizona	212	389	601
Arkansas	150	-82	68
California	183	151	334
Colorado	219	136	355
Connecticut	27 1	232	503
Delaware	389	-65	324
Florida	234	240	474
Georgia	133	57	190
Hawaii	-110	194	84
Idaho	121	52	173
Illinois	111	-47	64
Indiana	295	102	397
Iowa	368	-149	219
Kansas	202	-38	164
Kentucky	223	-215	8
Louisiana	272	135	407
Maine	134	8	142
Maryland	234	-216	18
Massachusetts	-70	50	-20
Michigan	251	-177	74
Minnesota	200	94	294
Mississippi	171	-84	87
Missouri	178	-83	95
Montana	265	-117	148
Nebraska	345	-120	225
Nevada	218	34	252
New Hampshire	144	31	175
New Jersey	146	24	170
New Mexico	180	121	301
New York	210	138	348
North Carolina	216	-23	193
North Dakota	230	-72	158
Ohio	286	43	339
Oklahoma	327	36	363
Oregon	251	-113	138
Pennsylvania	191	8	199
Rhode Island	100	74	174
South Carolina	140	100	240

"In 1990, excess compensation of public employees required an additional \$190 from every man, woman and child."

South Dakota	147	-223	-76
Tennessee	115	-35	80
Texas	134	203	337
Utah	56	-7	49
Vermont	57	53	110
Virginia	124	75	199
Washington	221	41	262
West Virginia	272	-170	102
Wisconsin	109	35	144
Wyoming	607	655	1,262
Average	190	56	246

¹ Negative numbers are used where per capita income increased at a faster rate than public spending per capita.

Source: See text.

- Total spending in seven states actually declined, but public employee compensation still grew faster than personal income.
- In Hawaii and Massachusetts, the relative size of government grew strictly because of spending other than excess compensation.

As Table II shows, Wyoming had the greatest total per capita excess burden — an amount equal to \$1,262 for every person living in the state.

Arizona was second with \$601, and Connecticut was third with \$503.

The Impact of Government Growth on Economic Growth

Because the growth of government spending exceeded the growth of income in the 1980s, the average family suffered. Not only did a greater share of the family's income go to state and local governments in direct taxes, but the expansion of government significantly retarded economic growth — lowering the family's pretax income.

The Growth Tax: Excess Compensation. Appendix A describes a statistical model that explains 80 percent of the variation in the rate of economic growth among states. The model shows a statistically significant negative relationship between increased government spending and economic growth, and the dramatic impact of excess employee compensation. Other things being equal, a 1 percent increase in the proportion of a state's per capita personal income going to public employee compensation lowers per capita income by more than 6 percent. This impact substantially hampered economic growth in the 1980s.

"In 29 states, the rise in the relative size of government was largely or entirely the result of overpayment of public employees."

- "Because excess compensation caused slower economic growth, personal income for the nation was lower by \$280 billion in 1990."
- By 1990, the average state had transferred 1.23 percent of per capita personal income to public employees in excess compensation since 1980.
- As a result, 1990 per capita income in the average state was
 7.42 percent lower because of excess compensation alone.
- Since the average state had a per capita income of \$15,108 (1990 dollars), the result was to lower per capita income by about \$1,121.¹⁴
- This means that personal income for the nation was lower by \$280 billion by 1990 as a consequence of slower growth due to excess compensation of public employees in the 1980s.

Such a finding is extraordinary. Income in the typical state, which grew slightly less than 18 percent in the 1980s, would have grown by more than 25 percent — an increase of 40 percent — had public employee pay stayed in line with private wages. Table III details, state-by-state, the loss in economic growth. As the table shows:

- In 31 states, the excessive pay premium to state and local employees is estimated to have cost each person in the state more than \$1,000 in income growth.
- The only two states that experienced a net loss of per capita personal income in the 1980s, Alaska and Wyoming, had the highest per capita burdens from excess compensation, \$6,259 and \$3,660 respectively, and both states would have enjoyed robust growth without the massive redistribution to public employees.¹⁵

The Growth Tax: Other Excess Spending. Although excess government spending for things other than compensation of employees was less damaging, its effect on economic growth was significant. In general, a 1 percent increase in the proportion of a state's personal income going to other state expenditures lowered income growth by 0.81 percent.

- By 1990, the average state had transferred 0.4 percent of per capita personal income to other excess spending.
- This reduced per capita income in the average state by .32 percentage points, or \$48.16
- This amounts to an additional \$11.9 billion in reduced personal income by 1990 because of other excess public spending in the 1980s.

Rising government expenditures for things other than compensation resulted in a loss in per capita income growth of more than \$200 per person in Arizona, Florida and Wyoming. In Arizona, we estimate that the state's growth rate would have been more than one-third higher had state and local expenditures other than compensation remained at the same proportion of personal income in 1990 as in 1980.

The Total Growth Tax. Taken together, the loss of almost \$280 billion from excess compensation and almost \$12 billion from other excess public spending means that personal income in the United States was lower by almost \$292 billion by 1990 because of excess public spending in the 1980s. The average per capita loss of income across the nation was \$1,169 — \$1,121 because compensation to public employees exceeded private sector compensation growth and \$48 because of other excess public spending.

"The total growth tax from excess public spending was almost \$292 billion in 1990."

The Impact on the Largest States. Figure II demonstrates the negative effects of excess spending on the eight largest states. It shows how much personal income would have grown if state and local government spending had risen at the same rate as income, compared to the actual increase. As the figure shows:

- The increase in per capita income in every large state except Illinois would have been at least 20 percent higher.
- In Texas, the growth of income would have been almost twice as high as it was.
- In Michigan and Indiana, income growth would have been more than 70 percent higher.

The Impact of Reducing Government Spending Growth. Only in Massachusetts and Hawaii did per capita income grow at a higher rate than state and local government spending. In both states, spending other than for employee compensation outpaced income growth, but public employee compensation grew slowly enough to more than balance the other spending. The effort by Massachusetts may help explain why per capita income there grew by 35.9 percent in the 1980s, the second highest increase in the nation.

Case Studies. Over the very long run, economic forces encourage low-income states to grow faster than high-income ones. ¹⁷ Businesses seeking to maximize profits move capital from high- to low-wage states. Workers seeking to maximize their wages move in the opposite direction. These movements reduce the differences in the amount of capital available for each worker among the states, which in turn reduces differences in productivity and in wages. Other things being equal, then, there is a natural tendency for per capita income in the states to converge. Yet in the 1980s, high-income states grew as much as low-income ones.

TABLE III

The Economic Growth Effect: Loss of Income Per Capita¹

(In 1990 Dollars)

Caused By Excess Public

	Employee	Caused By Other	
<u>State</u>	Compensation	Excess Spending	Total
Alabama	\$ 908	\$-21	\$ 887
Alaska	6,259	-769	5,490
Arizona	1,280	333	1,613
Arkansas	902	-71	831
California	1,104	129	1,233
Colorado	1,322	117	1,439
Connecticut	1,636	199	1,835
Delaware	2,345	-55	2,290
Florida	1,409	206	1,615
Georgia	802	49	851
Hawaii	-661	167	-494
Idaho	730	45	775
Illinois	670	-41	629
Indiana	1,780	87	1,867
Iowa	2,222	-128	2,094
Kansas	1,218	-33	1,185
Kentucky	1,345	-184	1,161
Louisiana	1,640	116	1,756
Maine	809	7	816
Maryland	1,413	-185	1,228
Massachusetts	-425	43	-382
Michigan	1,515	-152	1,363
Minnesota	1,208	80	1,288
Mississippi	1,031	-72	959
Missouri	1,074	-71	1,003
Montana	1,600	-100	1,500
Nebraska	2,078	-103	1,975
Nevada	1,315	29	1,344
New Hampshire	866	27	893
New Jersey	882	21	903
New Mexico	1,084	104	1,188
New York	1,267	118	1,385
North Carolina	1,301	-19	1,282
North Dakota	1,385	-62	1,323
Ohio	1,725	36	1,761
Oklahoma	1,973	31	2,004
Oregon	1,516	-97	1,419
Pennsylvania	1,155	7	1,162
•	•		,

"The average per capita income loss was \$1,169."

Rhode Island	601	63	837
South Carolina	843	86	1,168
South Dakota	886	-191	695
Tennessee	696	-30	666
Texas	807	174	981
Utah	336	-6	330
Vermont	345	45	390
Virginia	745	64	809
Washington	1,332	35	1,367
West Virginia	1,640	-146	1,494
Wisconsin	656	30	686
Wyoming	3,660	561	4,221
Average	1,121	48	1,169

¹ Negative numbers are used where per capita income increased at a faster rate than public spending per capita.

Source: See text.

One reason may be the large pay increases that many public employees extracted. The equalizing effect of competitive markets was offset by the income-reducing effects of redistributing income to government workers. Consider Illinois and neighboring Indiana:

- Although Illinois had a significantly higher per capita income than Indiana in 1980, it grew 19.1 percent in the 1980s compared to Indiana's 15.5 percent.
- The excess compensation of Indiana government employees absorbed 1.7 percent more of 1990 per capita income, compared with only 0.5 percent more in Illinois.
- This difference in excess compensation was enough to explain the difference in economic growth in the two states.

Two other sets of neighboring states provide similar examples:

- Texas, with relatively low rent payments, outdistanced Louisiana, where excess compensation was twice as high.
- Idaho, with less than half the excess compensation of Montana, outperformed its high-rent neighbor.

The Total Burden of Excess Government Spending

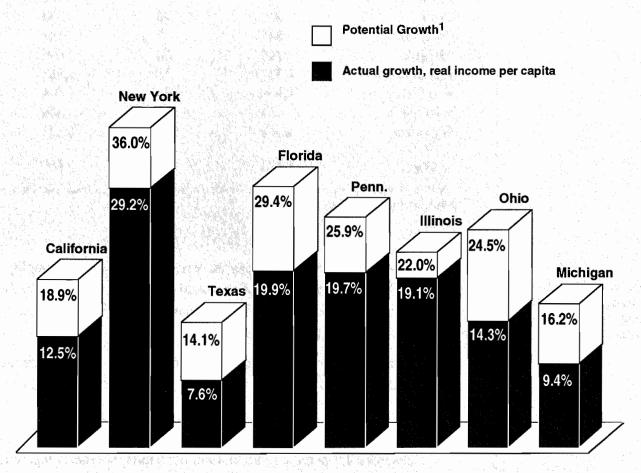
By 1990, as Table IV shows, taxpayers had to pay more than \$61 billion in taxes to fund excess spending by state and local governments. They also had almost \$292 billion less in pretax income than they would otherwise

[&]quot;Illinois grew faster than neighboring Indiana because of the difference in excess compensation."

FIGURE II

Actual vs. Potential Income Growth

(1980 - 90)



¹ Estimated growth if government and private sector spending had grown at same rate 1980-90.

"In Texas, the economic growth rate was cut in half."

have had. The total cost to the nation of excess government spending was more than \$353 billion. On the average, each person lost more than \$1,400 in income in 1990. Table V shows these costs state-by-state:

- In more than three-quarters of the states, including seven of the eight largest, the total burden on the average citizen from excess government spending was more than \$1,000 by 1990.
- In 12 states, the burden exceeded \$2,000.
- In Alaska and Wyoming the burden exceeded \$5,000.

The states with relatively high burdens were geographically dispersed. High spending burdens were observed in a number of oil-producing states, notably Alaska, Wyoming, Oklahoma and Louisiana. Only in two states did spending restraint result in citizens' actually being better off, and in both cases the gain was well under \$500. In Kentucky, Maryland, Michigan and West

Virginia, pay increases to public employees were largely offset by reductions in the proportion of income going for other spending. Even in these states, however, income redistribution to public employees caused a significant net burden.

Were There Benefits from the Excess Spending?

A large body of scholarly literature suggests that a negative relationship exists between the size of government and economic progress. Most of that literature focuses on the effect of taxes on either economic growth or production inputs. Several studies have concluded that tax increases reduce economic growth rates.¹⁸ Others have found that increased taxes reduce employment opportunities¹⁹ or encourage migration.²⁰ Still others have found that taxes can have an adverse impact on plant location decisions.²¹

The literature on the effect of government expenditures on economic growth is much less extensive. Two studies have observed a relatively strong negative relationship between public assistance expenditures and the eco-

TABLE IV

Total Cost of Excess Governmental Spending in the 1980s

(In 1990 Dollars)

	<u>Total Los</u> (\$Billions)	T
Direct Costs:	(\$Billons)	
Excess Compensation	\$ 47.3	\$ 190
Other Excess Spending	14.0	56
Income Loss from Reduced	Growth:	
Excess Compensation	280.0	1,121
Excess Spending	<u>11.9</u>	<u>48</u>
Total Cost	\$353.2	\$1,415

[&]quot;Excess government spending cost the nation more than \$353 billion in lost income."

TABLE V

Total Per Capita Cost of Excess Spending¹

(In 1990 Dollars)

(III 1270 Domits)			
<u>State</u>	Direct Tax	Growth Tax	Total Burden ²
Alabama	\$ 126	\$ 887	\$ 1,012
Alaska	141	5,490	5,632
Arizona	601	1,613	2,214
Arkansas	68	831	898
California	334	1,233	1,567
Colorado	355	1,439	1,795
Connecticut	503	1,835	2,338
Delaware	324	2,290	2,614
Florida	474	1,615	2,089
Georgia	190	851	1,040
Hawaii	84	-494	-409
Idaho	203	775	948
Illinois	64	629	693
Indiana	397	1,867	2,264
Iowa	219	2,094	2,313
Kansas	164	1,185	1,349
Kentucky	8	1,161	1,169
Louisiana	407	1,756	2,163
Maine	142	816	959
Maryland	18	1,228	1,246
Massachusetts	-20	-382	-403
Michigan	74	1,363	1,438
Minnesota	294	1,288	1,582
Mississippi	87	959	1,046
Missouri	95	1,003	1,098
Montana	148	1,500	1,649
Nebraska	225	1,975	2,200
Nevada	252	1,344	1,596
New Hampshire	175	896	1,068
New Jersey	170	903	1,074
New Mexico	301	1,188	1,489
New York	348	1,385	1,732
North Carolina	193	1,282	1,475
North Dakota	158	1,323	1,480
Ohio	339	1,761	2,090
Oklahoma	363	2,004	2,367
Oregon	138	1,419	1,558
Pennsylvania	199	1,162	1,362
Rhode Island	174	664	837
South Carolina	240	929	1,168
South Dakota	-76	695	619
Tennessee	80	666	746

[&]quot;On the average, every man, woman and child in America was \$1,400 worse off in 1990 because of the growth of state and local government in the 1980s."

Texas	337	981	1,317
Utah	49	330	379
Vermont	110	390	499
Virginia	199	809	1,008
Washington	262	1,367	1,629
West Virginia	102	1,494	1,596
Wisconsin	144	686	829
Wyoming	1,262	4,221	5,483
Average	246	1,191	1,437

 $^{^{1}}$ Negative numbers are used where per capita income increased at a faster rate than public spending per capita.

Source: Tables II and III.

nomic growth rate.²² This is consistent with literature on the labor supply effects of public assistance.²³ The author and his colleagues also have documented a negative relationship between public aid benefit levels (relative to wages) and the labor supply.²⁴

Education also has been examined extensively. Some studies purport to show a positive relationship between some forms of government spending on education and economic growth.²⁵ The author's reading of one study, however, suggests that the observed statistical relationship is weak.

Education. There is a voluminous literature on the relationship between student learning and education expenditures. Two surveys have concluded that, in general, the studies show little or no relationship between learning and expenditures. Certainly the most careful and extensive of the studies reaches this conclusion. Even if spending does have some positive impact on learning, it seems unlikely that the overall effect on economic growth is positive, since taxes levied to finance the spending almost certainly depress economic activity.

Using data on specific types of state and local government expenditures and a statistical model similar to the one used to obtain the above findings, we analyzed the relationship between changes in types of spending and economic growth in the 1980s. We concluded that there was no systematic relationship between education spending and economic growth. In fact, the evidence suggests that, for higher education, increases in spending were associated with reductions in economic growth.

Because education is such an important issue, the author and some colleagues examined the role of government spending in learning, using detailed data on 610 Ohio school districts. [See Appendix B.]²⁸ Among the conclusions:

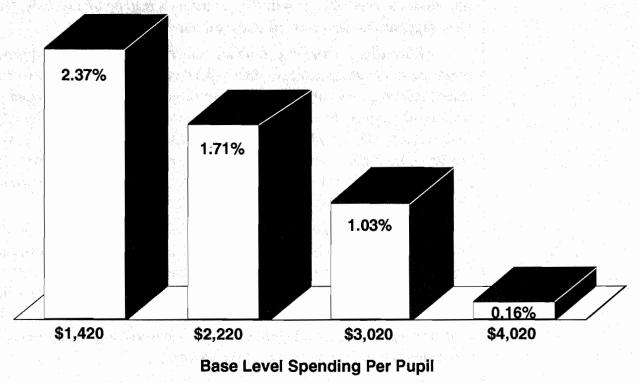
² Total may differ from individual costs due to rounding.

[&]quot;There is no relationship between education spending and economic growth."

- "Spending on actual instruction improved student performance, but the impact diminished as the level of spending rose."
- The relationship between overall spending and student achievement was very weak and statistically insignificant, consistent with dozens of other studies.
- Spending on actual instruction had a positive impact on student performance.
- Even that spending, however, was subject to diminishing returns: at low levels of spending, added expenditures brought increased learning, but at high levels of spending, such expenditures brought little or no more learning. [See Figure III.]
- There was either no relationship or a statistically significant negative relationship between school spending outside the classroom and student achievement.

The last two findings perhaps explain the failure to find a relationship between overall education spending and economic growth. A growing proportion of school spending supports things other than general instruction: special

Increase in Percent of Pupils Passing from a \$200 Spending Increase per Pupil



Note: The horizontal axis shows the level of per pupil instructional spending before an increase of \$200 occurs. For example, a district spending \$1,420 that had 30 percent pass four tests involved in the study might be expected to have 32.37 percent pass if instructional spending per pupil is increased by \$200.

and vocational education, school administration and support services (school transportation, librarians, guidance counselors, athletic programs and so forth). Also, as spending exploded in real terms in the 1970s and 1980s, the law of diminishing returns set in and reduced the effects of added spending.

Public Assistance. We observed an expected negative relationship between public assistance spending and economic growth. An increase of 1.0 percent in the proportion of personal income devoted to public aid lowered the economic growth rate by nearly 4 percentage points (e.g., from 16 to 12 percent). Thus the negative effects of welfare spending appear to be both real and relatively powerful, consistent with other studies and with economic theory.

In Indiana and Ohio, for example, the public welfare spending burden rose in the 1980s, whereas in neighboring Illinois and Pennsylvania it fell. Economic growth was greater in the states with a falling burden than in the states where welfare spending grew faster than personal income.

Highways. No category of state and local spending so purely fits the definition of infrastructure as highways, and one might expect a positive relationship between increased spending for highway construction and maintenance and the rate of economic growth. The experience of the 1980s, however, shows a slight negative relationship between increases in highway spending as a percent of personal income and the growth in real per capita income. This experience appears to contradict the conventional wisdom.

Other Spending. We also tested the effect of state and local spending on such things as hospitals, police protection, fire protection, parks and recreation, sewers and nonsewer-related sanitation services. With one exception, these forms of spending had a negative impact on economic growth. The exception was parks and recreation spending — in fiscal year 1990, less than 2 percent of total state and local direct general expenditures — where there was a consistently observed positive relationship between changes in spending and economic growth.

Conclusion

State and local government expenditures have risen dramatically in recent years. While many have defended the spending on the grounds that it meets human needs, a large part of the growth in the relative size of state and local government has resulted from successful rent-seeking activities on the part of government employees. The evidence is that this spending has strongly depressed U.S. economic growth, in many states lowering the growth of income by 5 to 10 percentage points during the 1980s.

"Welfare spending lowers economic growth."

"Most states can substantially increase personal income growth by curtailing the growth of government spending." Education spending has not had a measurable payoff in terms of economic growth, either. There is some evidence that this reflects in part the growing proportion of resources going into activities other than conventional instruction (e.g., administration and support services). There is clear evidence that public assistance spending has an adverse impact on the economic growth rate. Evidence on other spending is mixed, but on the whole it suggests a negative relationship between spending and economic growth.

Overall, the evidence suggests that most states can substantially increase personal income growth by curtailing the growth of government spending.

NOTE: Nothing written here should be construed as necessarily reflecting the views of the National Center for Policy Analysis or as an attempt to aid or hinder the passage of any bill before any state legislature.

Notes

- ¹ Spending by all governments in the United States totaled \$1.66 billion in 1902, which is 7.7 percent of gross national product that year. See U.S. Department of Commerce, *Historical Statistics of the United States, Colonial Times to 1970* (Washington, DC: Government Printing Office, 1975), pp. 224, 1120.
- ² Historical Statistics of the United States, pp. 1126-27; U.S. Bureau of the Census, Government Finances: 1989-90 (Washington, DC: Government Printing Office, 1991), p. 2.
- ³ U.S. Bureau of the Census, *Governmental Finances in 1979-80* (Washington, DC: Government Printing Office, 1981), p. 30; and *Government Finances: 1989-90*, p. 2.
- ⁴ Throughout this study, current dollars are adjusted to dollars of constant purchasing power by use of the consumer price index for all urban consumers, compiled by the U.S. Department of Labor, Bureau of Labor Statistics.
- ⁵ Excluding some business operations of state and local governments such as utilities and liquor stores, the general expenditures of government grew during the decade by 30.5 percent on a real per capita basis. Over the same period, per capita personal income grew 23.7 percent and per capita personal spending grew about the same, 23.0 percent. The use of alternative price indices would show slightly different results, but still with more rapid growth for government spending than for overall economic activity. Local and state government spending grew at about the same rate.
- ⁶ All spending data are derived from the U.S. Bureau of the Census, 1981 or 1991.
- ⁷ Anne O. Krueger, "The Political Economy of the Rent-Seeking Society," *American Economic Review*, 64, June 1974; and James M. Buchanan, Robert D. Tollison and Gordon Tullock, eds., *Toward a Theory of the Rent-Seeking Society* (Ann Arbor: University of Michigan Press, 1980).
- ⁸ Richard Vedder and Lowell Gallaway, *Out of Work: Unemployment and Government in 20th-Century America* (Oakland, CA: Independent Institute, 1992).
- ⁹ For a review of the literature and empirical estimates, see John A. Tatom, "Public Capital and Private Sector Performance," *Federal Reserve Bank of St. Louis Review*, May/June 1991, pp. 3-15.
- ¹⁰ See Wendell Cox and Samuel A. Brunelli, "America's Protected Class II: The Widening Public/Private Pay Gap," in *Serving the States* (Washington, DC: American Legislative Exchange Council, 1992), pp. 209-67.
- ¹¹ Ibid.
- ¹² This was a decrease of 10.7 percent in real private sector pay per employee and an increase of 11.6 percent in state employee pay.
- ¹³ Table C-1 in the appendix categorizes states according to the change in the relative size of employee compensation, other spending and total spending.
- ¹⁴ \$15,108 multiplied by 7.42 percent.
- ¹⁵ Table C-2 in the appendix categorizes states by the rate of income growth during the 1980s. Table C-3 in the appendix shows actual and potential income growth percentages during the 1980s for each state.
- ¹⁶ \$15,108 multiplied by 0.32 percent.
- ¹⁷ This is the "factor price equalization theorem."
- ¹⁸ See Robert Genetski and Young Chin, "The Impact of State and Local Taxes on Economic Growth," Harris Bank, Chicago, 1978; Richard Vedder, "State and Local Economic Development Strategy: A Supply-Side Approach," staff study for the Joint Economic Committee of Congress, 1981; Vedder, "State and Local Taxes and Economic Performance," Southern Business & Economic Journal, 15, October 1991; L. J. Helms, "The Effect of State and Local Taxes on Economic Growth: A Time-Series-Cross-Section Approach," Review of Economics and Statistics, 67, November 1985; Bruce L. Benson and Ronald N. Johnson, "The Lagged Impact of State and Local Taxes on Economic Activity and Political Behavior," Economic Inquiry, 24, July 1986; Victor Canto and Robert Webb, "The Effect of State Fiscal Policy on State Relative Economic Performance," Southern Economic Journal, 54, July 1987; and Gerald Scully, "How State and Local Taxes Affect Economic Growth," National Center for Policy Analysis, NCPA Policy Report No. 161, April 1991.
- ¹⁹ See Michael Wasylenko and Therese McGuire, "Jobs and Taxes: The Effect of Business Climate on States' Employment Growth Rates," *National Tax Journal*, 38, December 1985.

- ²⁰ See Richard Cebula, "Local Government Policies and Migration: An Analysis for SMSAs in the United States, 1965-1970," *Public Choice*, 17, Fall 1974; and William A. Niskanen, "The Case for a New Fiscal Constitution," *Journal of Economic Perspectives*, 6, Spring 1992.
- 21 See Dennis W. Carlton, "The Location and Employment Choice of New Firms: An Econometric Model with Discrete and Continuous Endogenous Variables," *Review of Economics and Statistics*, 65, August 1983; Robert Premus, "Location of High Technology Firms and Economic Development," staff study for Joint Economic Committee of Congress (Washington, DC: Government Printing Office, 1983); James A. Papke and Leslie E. Papke, "Measuring Differential State-Local Tax Liabilities and Their Implications for Business Investment Location," *National Tax Journal*, 38, September 1986; and Timothy J. Bartik, "Small Business Start-Ups in the United States: Estimates of the Effects of Characteristics of States," *Southern Economic Journal*, 55, April 1989.
- Helms, "The Effect of State and Local Taxes on Economic Growth"; and Alaeddin Mofidi and Joe A. Stone, "Do State and Local Taxes Affect Economic Growth?" *Review of Economics and Statistics*, 72, November 1990.
- ²³ For the most comprehensive survey of this literature, see Robert Moffit, "Incentive Effects of the U.S. Welfare System: A Review," *Journal of Economic Literature*, 30, March 1992, p. 56.
- ²⁴ Lowell Gallaway, Richard Vedder and Robert Lawson, "Why People Work: An Examination of Interstate Variations in Labor Force Participation," *Journal of Labor Research*, 12, Winter 1991.
- ²⁵ Helms, "The Effect of State and Local Taxes on Economic Growth"; and Mofidi and Stone, "Do State and Local Taxes Affect Economic Growth?"
- ²⁶ Eric Hanushek, "The Economics of Schooling," *Journal of Economic Literature*, 24, September 1986, and "The Impact of Differential Expenditures on School Performance," *Educational Research*, 18, May 1989.
- ²⁷ James S. Coleman, Research for Tomorrow's Schools (New York: Macmillan, 1969); James S. Coleman, Sally Kilgore and Thomas Hoffer, High School Achievement: Public and Private Schools Compared (New York: Basic Books, 1982); James S. Coleman, Public and Private High Schools: The Impact of Communities (New York: Basic Books, 1987); and John Chubb and Terry Moe, Politics, Markets and America's Schools (Washington, DC: Brookings Institution, 1990).
- ²⁸ Luther Boggs, Richard Vedder and Alfred Eckes, "Testing and Educational Achievement: Ohio and the Nation," research paper, Contemporary History Institute, Athens, OH, 1992.

Technical Appendix A

To explain variations in growth rates between the states, we used an ordinary least squares regression model. With respect to government expenditures, we used two variables: RENTS, which is the amount of excess compensation payments to public employees 1980-90 as a percent of 1990 personal income as measured by Cox and Brunelli (1992), and OTHEREXP, which is the amount of change in expenditures other than for the public employee pay premium factor. For example, if state and local expenditures as a percent of personal income grew by 1.50 percentage points from 1980 to 1990 (say from 20 to 21.5 percent), and if the excess compensation payments equaled 1.10 percent of personal income in 1990, OTHEREXP would be 0.40 percent (1.50 percent minus 1.10 percent).

Variations in economic growth might be caused by factors unrelated to state and local fiscal policies. Therefore, for control purposes, six other independent variables were introduced: STATE AGE, the number of years the state had been in existence; SUNSHINE, the percent of days annually the sun shines in the state; FUEL80, the output of minerals (mostly fuels) as a percent of personal income in 1980; INCOME80, personal income per capita in 1980; ATLANTIC, a dichotomous variable that takes the value of one for states bordering on the Atlantic Ocean and zero for other states; and % UNION, which is the percentage of the nonagricultural labor force belonging to labor unions in 1982. All data are from standard

TABLE A-1

Variations in State Economic Growth, 1980-90: Regression Results

Constant Term,	Control of the Control	
Variable or Statistic	Coefficient	T-Statistic
Constant	113.9088	3.491
RENTS	-6.0298	-6.095
OTHEREXP	-0.8571	-1.713
STATE AGE	-0.0386	-2.026
SUNSHINE	-0.2405	-1.961
FUEL80	-0.0004	-2.815
INCOME80	0.0003	0.452
ATLANTIC	8.2419	4.094
% UNION	-0.3205	-2.560
\mathbb{R}^2	0.7948	
S.E.R.	4.5311	
F-Statistic	24.7260	

Note: See the text for definitions of the variables.

government sources, chiefly the U.S. Department of Commerce, 1991 Statistical Abstract of the United States (Washington, DC: Government Printing Office, 1991). The control variables were chosen through a careful reading of the literature.

Table A-1 gives the statistical results for the model. On the whole, it explains about four-fifths of the very considerable variation in real per capita income and produces robust statistical results. With respect to the critical expenditures variables, an extremely strong and statistically significant negative relationship between RENTS and economic growth is apparent.

The expected negative relationship between OTHEREXP and economic growth was obtained and was statistically significant at the 5 percent level using a one-tailed test. More spending on things other than increased rents for employees meant lower growth. However, this variable had a much smaller impact.

The other variables in the model were introduced in order to equalize other factors that might influence growth. The expected negative relationship between INCOME and income growth was not obtained.

In Table A-2, we show the estimated percentage point impact on the rate of economic growth over the decade of the 1980s of a one standard deviation increase in each variable (except the Atlantic Coast variable). One standard deviation change in the control variables typically impacted on output about two percentage points, with the union variable having a somewhat stronger impact than the other factors. The

"other expenditure" variable's impact was slightly less than for some of the control variables. It is important to remember, however, that some of the control variables (e.g., the age of a state, the amount of sunshine) were beyond the control of state and local policymakers, whereas "other expenditures" were within their control.

TABLE A-2

Estimated Effect of a One Standard Deviation Increase in EachVariable on Growth in Real Per Capita Income, 1980-90

	Estimated Effect on		
<u>Variable</u>	Growth of Per Capita Income		
RENTS	-5.01%		
OTHEREXP	-1.46		
STATE AGE	+1.86		
SUNSHINE	-2.10		
FUEL80	-2.02		
INCOME80	+0.40		
% UNION	-2.41		

Note: See the text for the definitions of the variables.

Appendix B

The author initially introduced two education variables: the change in state and local spending for primary and secondary education as a percent of personal income from 1980 to 1990, and the similar change in spending for higher education. In the initial regression, a negative relationship was observed between both variables and the measure of economic growth, although the results were not statistically significant.

A problem with such analysis is that the investment in learning cannot be expected to pay off for many years. A first-grade student in 1980 will be a high school junior in 1990, and even if increased spending dramatically improved the schools the economic payoff would not come until the individual entered the labor force.

Accordingly, for both educational variables we used a lagged relationship. We looked at the change in the proportion of personal income devoted to each form of education from 1965 to 1980 as it related to economic growth from 1980 to 1990. The results again were extremely weak and statistically insignificant, with the college spending variable remaining negative (higher spending, lower growth). Additional manipulations with the model (adding and subtracting variables, excluding Alaska and Hawaii, running both contemporaneous and lagged versions of education spending, etc.) generally led to the same conclusion: there is no systematic relationship between educational spending and economic growth. With primary and secondary education, some of the regressions recorded positive relationships, but generally weak and statistically insignificant. With higher education, there was a consistent negative relationship, and one that in some regressions was statistically significant.

Appendix C

TABLE C-1

Government Spending Compared to Personal Income 1980-90¹

All Spending Higher ²	Compensation, Total Spending Higher ³	Compensation Higher, Total Lower ⁴	Compensation Lower, Total Higher ⁵
Arizona	Alabama	Arkansas	Massachusetts
California	Delaware	Kentucky	Hawaii
Colorado	Illinois	Maryland	
Connecticut	Iowa	Michigan	
Florida	Kansas	South Dakota	
Georgia	Mississippi	West Virginia	
Idaho	Missouri	Alaska	
Indiana	Montana		
Louisiana	Nebraska		
Maine	New Hampshire		
Minnesota	North Carolina		
Nevada	North Dakota		
New Jersey	Oregon		
New Mexico	Tennessee		
New York	Utah		
Ohio			
Oklahoma			
Pennsylvania			
Rhode Island			
South Carolina			
Texas			
Vermont			
Virginia			
Washington			
Wisconsin			
Wyoming			

¹ All calculations based on expenditures as a percent of personal income.

Source: Author's calculations, from U.S. Bureau of the Census data.

² Governments' excess compensation, other excess spending and total spending grew more than per capita income.

³ Governments' excess compensation and total spending grew more than per capita income, but other spending grew less.

⁴ Governments' excess compensation grew more than per capita income, but other spending and total grew less.

⁵ Governments' excess compensation grew less than per capita income, but other excess spending and total grew more.

TABLE C-2

Income Growth¹ 1980-90

Little or No Growth	Moderately Low Growth	Average Growth	Moderately High Growth	Very High Growth
(less than 10%)	(10-15%)	(15-20%)	<u>(20-30%)</u>	(over 30%)
Arizona	California	Arkanasas	Alabama	Connecticut
Louisiana	Colorado	Florida	Delaware	Maine
Michigan	Idaho	Illinois	Georgia	Massachusetts
Montana	Iowa	Indiana	Maryland	New Hampshire
Nevada	Kansas	Kentucky	New York	New Jersey
Oklahoma	New Mexico	Minnesota	N. Carolina	Vermont
Texas	N. Dakota	Mississippi	Rhode Island	
West Virginia	Ohio	Missouri	S. Carolina	
Wyoming	Oregon	Nebraska	S. Dakota	
Alaska	Utah	Pennsylvania	Tennessee	ryana beli da silingi.
Washington		Virginia		Approximate the state of the st
Wisconsin		Hawaii		

¹ Measured by growth in real personal income per capita.

Source: Author's calculations from U.S. Department of Commerce data.

TABLE C-3

Actual and Potential Per Capita Income Growth, 1980-90

		Estimated % Growth, Assuming No:			
	Actual %	Excess Pub.	Excess Other	Total	
<u>State</u>	Growth	Employee Pay 1	Spending	Excess ²	
Alabama	23.15	29.19	22.88	28.93	
Alaska	-1.09	27.76	-5.49	23.35	
Arizona	9.51	17.47	13.06	21.02	
Arkansas	19.83	26.19	18.92	25.27	
California	12.54	17.84	13.61	18.91	
Colorado	12.28	19.27	13.34	20.33	
Connecticut	33.09	39.52	34.68	41.12	
Delaware	24.92	36.53	24.39	36.00	
Florida	19.86	27.40	21.89	29.43	
Georgia	28.70	33.38	29.26	33.94	
Hawaii	20.55	17.32	22.06	18.83	
Idaho	11.80	16.56	12.30	17.06	
Illinois	19.07	22.34	18.71	21.99	
Indiana	15.54	26.04	16.45	26.95	
Iowa	14.83	27.65	13.53	26.36	
Kansas	14.91	21.62	14.60	21.32	
Kentucky	18.38	27.34	16.16	25.11	
Louisiana	4.86	16.17	6.13	17.45	
Maine	32.90	36.06	33.01	36.14	
Maryland	27.48	33.92	25.84	32.28	
Massachusetts	35.94	34.06	36.33	34.45	
Michigan	9.44	17.66	8.01	16.23	
Minnesota	17.80	24.22	18.57	24.99	
Mississippi	18.72	26.75	17.71	25.74	
Missouri	18.73	24.87	18.00	24.13	
Montana	8.84	19.20	7.76	18.13	
Nebraska	19.45	31.32	18.38	30.25	
Nevada	6.00	12.78	6.25	13.03	
New Hampshire	35.88	40.04	35.62	39.78	
New Jersey	37.06	40.60	37.23	40.77	
New Mexico	14.93	22.51	16.16	23.75	
New York	29.25	34.97	30.30	36.02	
North Carolina	28.54	36.51	28.31	36.29	
North Dakota	13.48	22.53	12.78	21.83	
Ohio	14.31	24.12	14.67	24.48	
Oklahoma	3.56	16.33	3.87	16.64	
Oregon	10.34	19.11	9.40	18.17	
Pennsylvania	19.86	25.85	19.75	25.93	
Rhode Island	23.05	26.24	23.68	26.87	
South Carolina	25.85	31.40	26.93	32.48	
South Dakota	22.08	27.66	19.84	25.42	
Tennessee	24.82	27.00 29.19	24.46	28.83	
Texas	7.55	12.36	9.25	14.06	
Utah	11.13	13.52	11.06	13.45	
Vermont	30.87	36.88	31.38	37.39	
Virginia	26.14	29.90	26.77	30.53	
Washington	10.12	17.15	10.43	30.33 17.46	
11 ashnigidh	10.14	17.13	10.43	1/.90	

West Virginia	8.04	20.00	6.29	18.25
Wisconsin	13.00	16.72	13.29	17.01
Wyoming	-10.95	11.62	-6.27	16.30

¹ Public sector pay growing the same percent as private sector pay.

About The Author

Richard Vedder is a Distinguished Professor of Economics and faculty associate of the Contemporary History Institute at Ohio University. He has served as a visiting scholar on the Joint Economic Committee of the U.S. Congress. Dr. Vedder received his Ph.D. in economics from the University of Illinois. He has taught at the University of Colorado, Claremont Men's College and Mara Institute of Technology, and has held Rockefeller and Liberty Fund fellowships. He is the author of several books and most recently coauthored *Out of Work: Unemployment and Government in 20th-Century America*. He is a contributor to numerous scholarly journals, including the *American Economic Review* and the *Journal of Political Economy*. He has also written extensively on public policy issues for the *Wall Street Journal*, *Christian Science Monitor*, *National Review*, *Policy Review* and *Society*.

² Cumulative effect of the two previous colums.

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