

Vermont Education Funding System

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Vermont Association of Realtors
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Executive Summary

This study examines Vermont's education funding system, defined to include taxation, spending, and performance. It finds that

- Vermont's spending per student has risen dramatically in the last 15 years and today it is among the highest in the nation at 50% to 70% above the national average.
- The most important factor influencing the high level of spending is Vermont's low student-teacher ratio.
- Staffing levels and spending levels have both increased dramatically in the years since Act 60 was passed.
- The number of students in Vermont schools has been declining for 15 years and at the same time Vermont has experienced a very rapid rise in total spending on education, a rise that is greater than most other states, including those with rising enrollments.
- There is little evidence that low student-teacher ratios have any significant impact on student performance.
- Vermont student achievement levels are not appreciably better than other states with lower spending levels, especially after adjusting for income and demographic differences between Vermont and other states.
- The variation and differences in spending among towns have not been appreciably affected by Act 60, although that was one goal of the Act when it was passed in 1997.
- Vermont's education funding system benefitted tremendously from the rapid runup in housing values from the late 1990s through 2006. Without the additional property tax revenues that the housing boom generated, Vermont's education funding system has come under increasing stress. That stress will continue into FY15 and beyond unless current spending trends are limited.
- Vermont's education financing law encourages the growth of spending by removing the most important check to spending for a majority of voters, which is the tax increases which are required to finance rising spending levels.
- The increasing demands on public resources that come from education spending growth will put pressure on the financing of all other functions of government.
- There are options to control the rising cost of education, but all require leadership and political courage. There are no easy solutions.

I. Purpose and Outline of this Report

The purpose of this report is to analyze Vermont's education funding system as it relates to Vermont's spending and property taxes. We do this in three parts.

The report begins in Section II with a review and analysis of education spending in Vermont. We examine issues such as the level and rate of growth in spending, the relationship between spending and enrollment changes, spending and educational outcomes, spending and fairness, and other issues. In Section III we examine education property taxes in Vermont. This includes a review of how the current funding system is a significant break with past systems. We explain the reason behind the funding success of the current system, why problems have developed in recent years, new trends in the funding system, and offer an overall critique of the funding system.

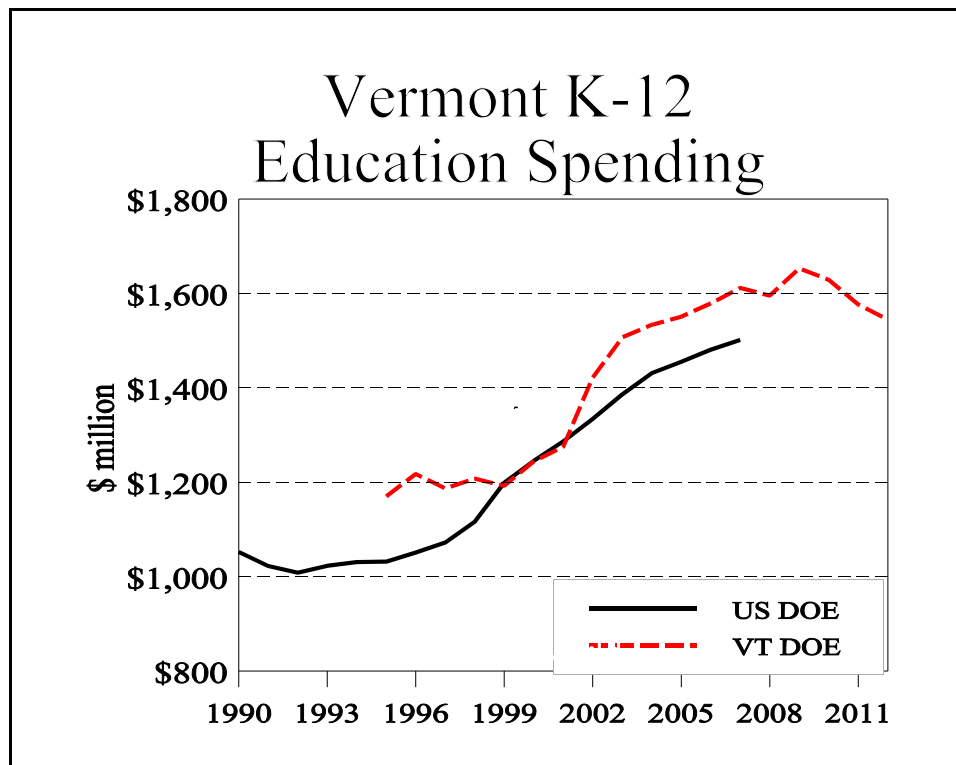
Finally, in Section IV we offer reform possibilities for lowering education spending and, hence, reducing property taxes.

II. Education Spending in Vermont

This section looks at total and per pupil spending in Vermont, how student enrollments have changed, cost drivers, and performance issues. We use a variety of data sources to examine these issues from a historical perspective and to make comparisons of current levels.

A. Spending for Public Education

The chart below shows Vermont's total K-12 education spending in inflation-adjusted dollars. We use two different sources for our measures of spending. The solid black line uses U.S. Department of Education (DOE) data. U.S. DOE data are somewhat dated as the most recent information is for school year 2009-10. The red dashed line uses Vermont Department of Education data, which is more current but does not go back as far as the U.S. DOE series. Nonetheless, both measures show similar levels and trends in the years for which we have data from both sources.¹



¹All dollar values are in inflation-adjusted 2012 dollars. We use the U.S. Consumer Price Index to convert from nominal to real dollars.

The graph shows that by the U.S. DOE measure, total spending in inflation-adjusted dollars was relatively flat in the early and mid 1990s, with state and local governments spending just over \$1 billion per year on K-12 education. Nearly all of that spending was financed by state and local tax dollars. The federal government currently provides only about ten percent of total education revenues and two decades ago it provided only about half that share of total revenues.²

Beginning in the late 1990s, spending began to rise and by the mid 2000s, by both measures inflation-adjusted spending had risen to about \$1.5 billion—a 50% increase in a decade by U.S. DOE measures and by one-third between 1996 and 2006 by the Vermont DOE measure. The Vermont state data show total education spending continued to increase until the Great Recession hit. Not surprisingly, the deepest recession to hit the nation since the Great Depression led to a decline in spending on education, with real spending falling by just under five percent between school year 2008-09 and 2011-12.

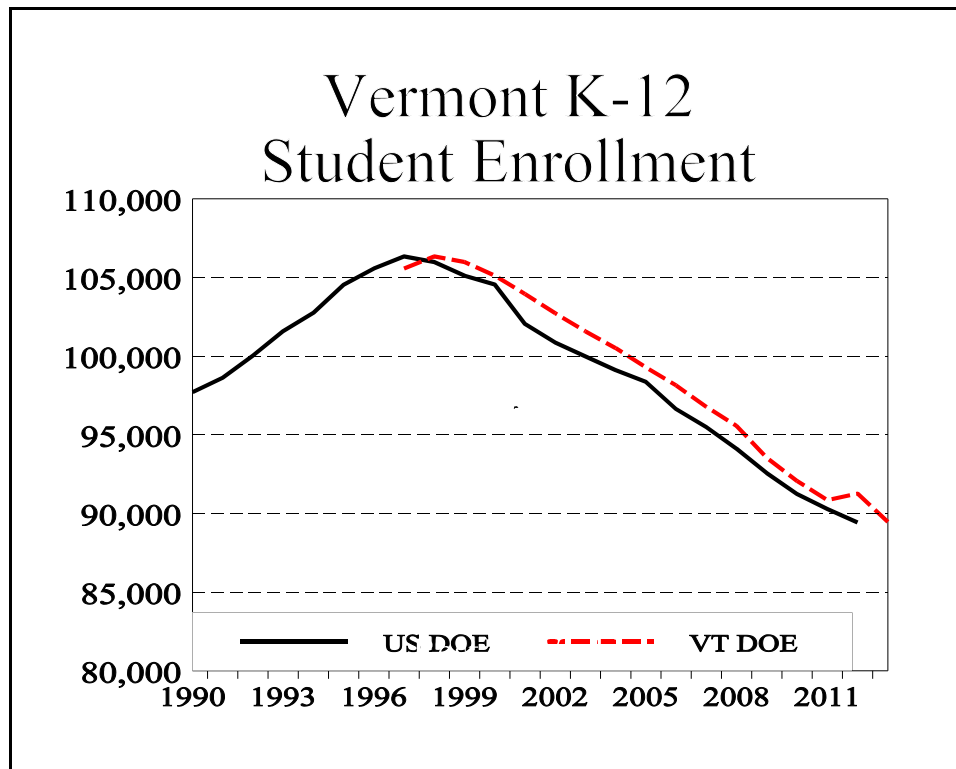
That decline has ended. We do not have data from the state or federal DOE on future spending or on current year spending. But data from the state of Vermont used for education budgeting purposes show that spending has increased in the last two years and will increase in school year 2013-14. The Vermont legislature's Joint Fiscal Office shows that budgeted education spending rose by 3.1% in FY13 and 5.0% in FY14. It is likely that spending will continue to rise in FY15 by as much as it did in FY14. After adjusting for inflation, which is running at somewhere below 2.0%, inflation-adjusted spending is now rising at between one and three percent per year.

²Vermont Department of Education, *Summary of the Annual Statistical Report of Schools* (December 2012).

B. Spending and Enrollment

1. Enrollment Issues

Total spending can increase because the number of students increases or because local schools spend more to educate each student, or a combination of the two. The graph below looks at the first of those issues. It shows that the number of students in Vermont rose in the 1990s, peaking at about 105,000 students in the latter part of the decade.



Beginning in 1997 the number of students began a steady decline that has continued to the present. From 1997 to 2012, student enrollments fell by about 15,000 students, a nearly 15% decline or about one percent per year. As the graph shows, the decline has been very steady, with almost no volatility on a year over year basis. Enrollments have been declining by about 1,000 students per year.

That decline is occurring for two reasons. One is that Vermont has a very low fertility rate by national standards (it is the second lowest in the nation, with only Maine having a lower fertility rate) and fewer births mean fewer children in schools six years later.³ The second is that there is very little in-migration into Vermont. Indeed over the past several years the Census Bureau population estimates show that more people are leaving Vermont for other states than are moving into Vermont from other states. These two factors combined result in a slow, steady decline in the number of students in the state. That is likely to continue, as we will discuss later.

This enrollment decline is not happening nationwide. Student enrollments nationally have risen by seven percent since 1997, although a total of 23 states have experienced enrollment declines since 2000. Vermont experienced the third largest decline in school enrollments, only exceeded by Maine and New Hampshire. If the number of students in Vermont had increased at the national rate of 7%, we would have 112,000 students enrolled in Vermont today, 25% more than the actual student count.

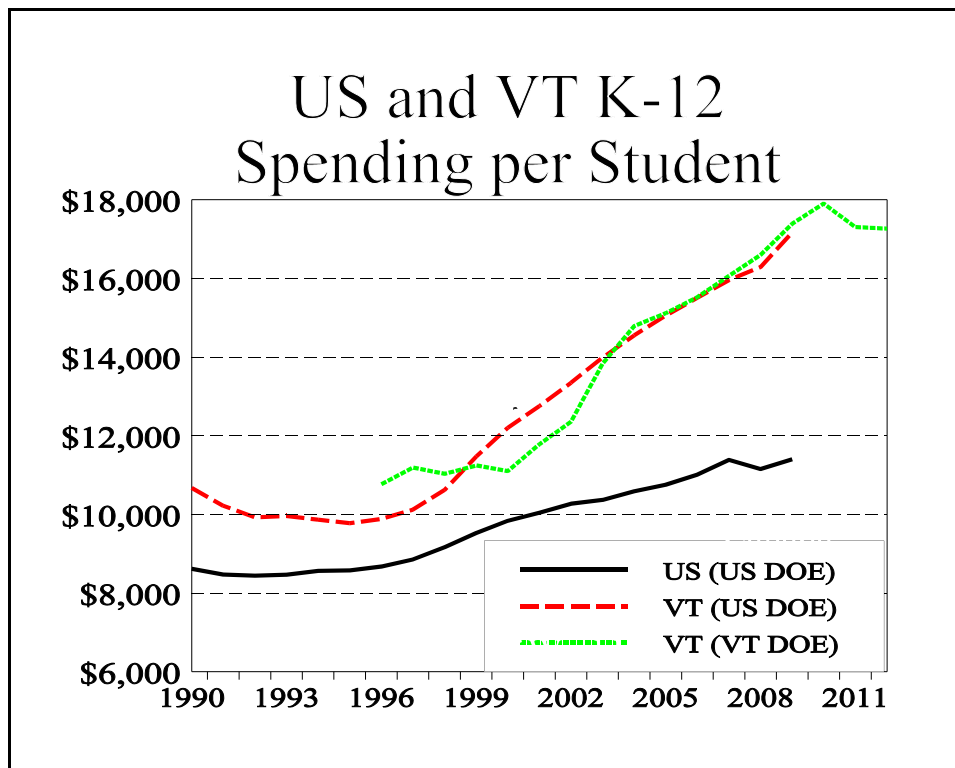
2. Per Pupil Spending

We have not compared Vermont's total spending to the U.S. spending because of the different numbers of students in each area. The best way to compare education spending levels across states and to the national average is to normalize spending by the number of students in each state. That is, we examine spending per pupil to take account of different population sizes. The graph below shows inflation-adjusted spending per pupil in Vermont and compares it to the U.S. The solid black line shows per pupil spending for the U.S. as a whole and it can be compared to the dashed red line, which shows per pupil spending in Vermont. Both rely on data from the U.S. Department of Education. Unfortunately, the US DOE data have only been published through school year 2009-10. But they clearly show that Vermont's spending is well above the U.S. average and in addition, that the gap between Vermont and the U.S. has been growing over time. In the mid 1990s, Vermont's per pupil spending was about ten percent above the U.S. level. In 2000, Vermont's per pupil spending was twenty percent above the national average. By the end of the decade Vermont was spending half again as much as the national average. Vermont's spending is growing faster than in most states, which means the spending gap between Vermont and the U.S. is accelerating.

The 2012 study of Vermont's education financing system by Picus and Associates used National Education Association (NEA) data and found that Vermont's per pupil spending in school year

³U.S. Centers for Disease Control, *Births: Final Data for 2010* (December 2012). In 2010, only Rhode Island had a lower fertility rate than Vermont.

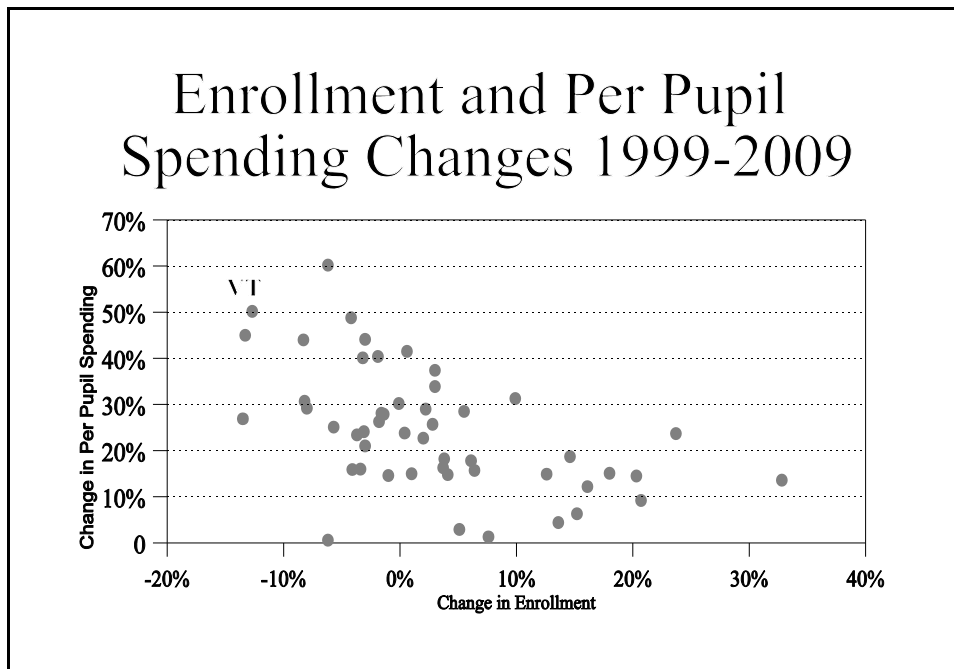
2010-11 was 61% above the national average.⁴ Preliminary data from the U.S. Census Bureau show that Vermont's per pupil spending in school year 2010-11 was 51% higher than the national average. Updated NEA data estimate Vermont's per pupil spending was 71% above the national average in school year 2011-12. We do not yet have data for school year 2012-13 or the current 2013-14 school year with which to compare Vermont to the nation. But we do have Vermont Department of Education data for more recent years. The Vermont DOE numbers in the dotted green line show that Vermont's per pupil spending is now more than \$17,000. It tracks the U.S. DOE numbers very well so when the U.S. DOE data become available, it is likely to show the gap between Vermont and the national average will remain very high.



Per Pupil spending grew rapidly beginning in the late 1990s, although it declined in the recent recession and has been flat since then. According to the Vermont DOE, inflation-adjusted per pupil spending increased from about \$11,000 in the late 1990s to \$17,000 in 2011-12. That translates into an increase of 60% over the last decade and a half, or just under three percent per year in inflation-adjusted dollars.

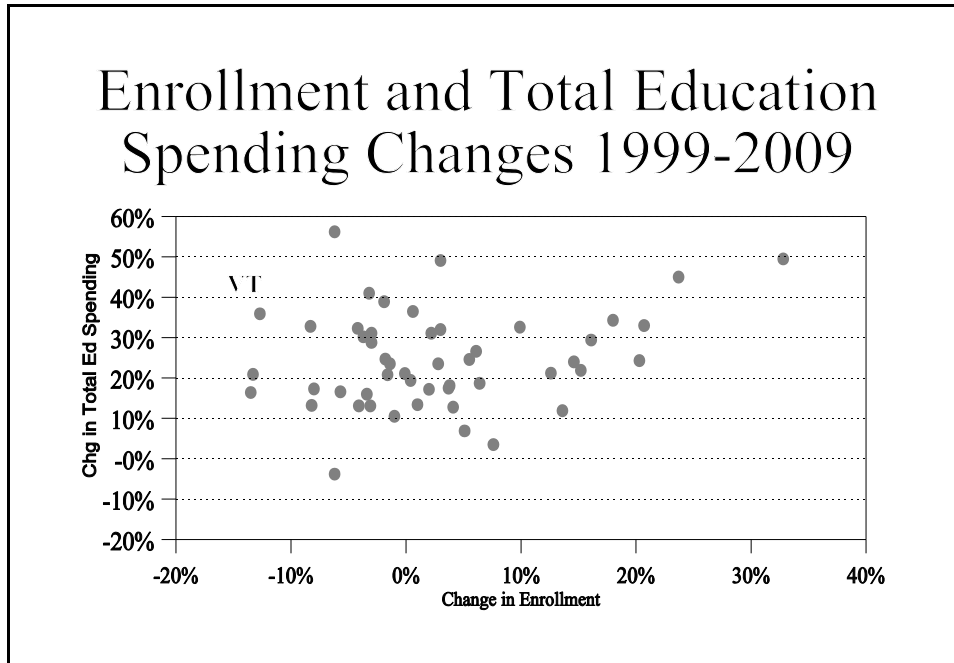
⁴An Evaluation of Vermont's Education Finance System, Lawrence O. Picus and Associates, (January 2012).

The following graph shows the relationship between enrollment change and increases in per pupil spending by state between 1999 and 2009. It shows a negative correlation between enrollment changes and spending changes. That is, states with declining enrollments tended to



have higher rates of per pupil spending growth. It is easier for states with rising enrollments to put students in existing classrooms without hiring new teachers, thus leading to a reduction in per pupil spending. The opposite happens when enrollments fall. It is more difficult for schools that are experiencing declining enrollments to reduce staff. This results in higher per pupil spending. As is clear from the graph, Vermont had one of the biggest declines in enrollments, and also one of the largest increases in per pupil spending.

But what drives the revenues and tax changes needed to pay for education are not changes in per pupil spending, but changes in total spending on education. When we look at the relationship between enrollment changes and changes in total spending on education, we find that Vermont is clearly an outlier. Only seven states had a bigger increase in total education spending between 1999 and 2009 than Vermont, yet Vermont had the third largest decline in student enrollments among the fifty states. This tells us that the growth in per pupil spending is not just a function of the decline in the number of students coupled with flat or modestly increasing total spending. Rather, at the same time that Vermont was losing students, it was increasing its total education spending faster than most other states. And at the start of the period under investigation, in school year 1999-2000, Vermont was not a low spending state. Vermont's per pupil spending was 9th highest in the nation in that year, and spending was 20% above the national average.

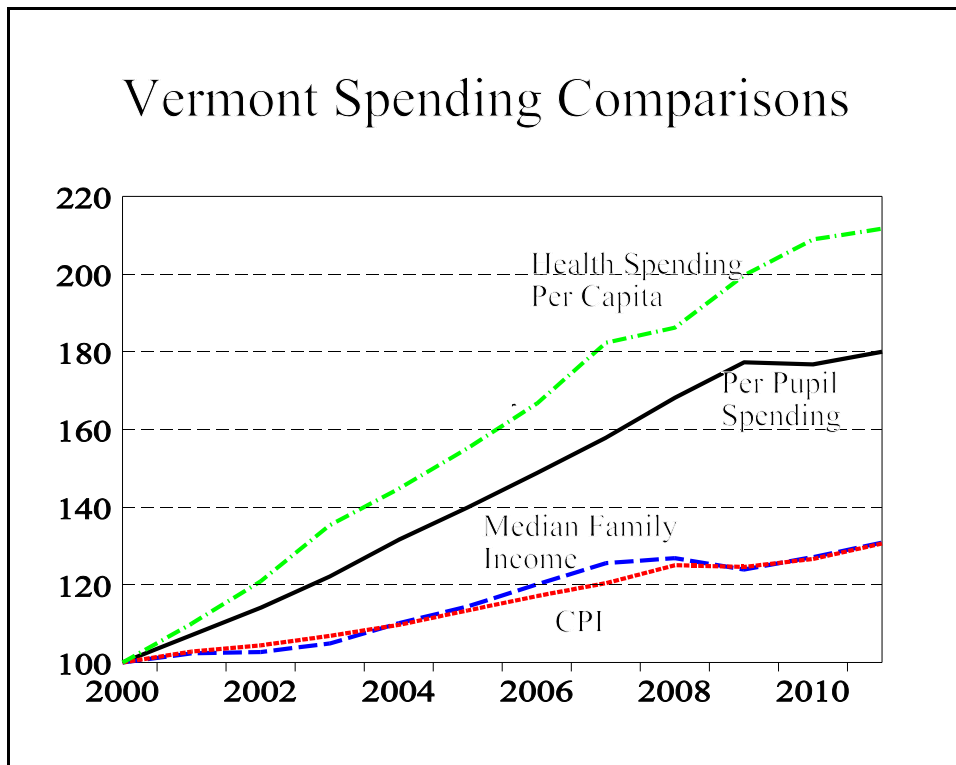


Clearly, part of Vermont’s education funding and taxing problem is rapidly rising spending. It is not due to just a declining student population.

3. Per Pupil Spending in Context

Vermont has devoted an increasing amount of resources to education over the past decades. In this section we examine how education spending has changed compared to spending on other items, and to prices in general. The graph below shows, using nominal dollars, that Vermont median family income rose by about 25% between 2000 and 2011, nearly identical to the rise in prices in general. Vermont’s education spending per pupil rose by 80% over the same time period. Spending on health care per person in Vermont increased by 110% over that period.

It is clear from the graph that per pupil spending has grown much faster than median family income and much faster than prices in general. Indeed, median family incomes have only kept pace with inflation in the economy over the past decade. That's not true for education spending or health care, both of which have risen much faster than either incomes or prices in the economy. Total spending on both of these are large. In 2011 total spending on K-12 education



in Vermont was \$1.5 billion and total spending on health care was \$5.0 billion. Both are very large sums in a state economy with a GDP of \$26 billion.

C. Spending and Crowding Out the Rest of Government

1. Observations on Spending

The bottom line is that Vermont has experienced a significant decline in its student enrollment over the past fifteen years. That could have been an opportunity for state and local spending on education to decline, or at least to grow more slowly. Instead, just the opposite happened. Vermont's total spending on education and per pupil spending grew rapidly as enrollment was falling. Rather than seeing a fiscal benefit from declining enrollments, total spending rose. Vermont's per pupil spending soared from ten percent above the national average in the late 1990s to somewhere between 50% and 70% above the national average today, depending on which data source we use.

Among the fifty states, Vermont ranks among the top five in per pupil spending, depending on the year and data source chosen. According to U.S. Census Bureau data for school year 2010-11, Vermont's per pupil spending of nearly \$16,000 was higher than every state except New York, Alaska, and New Jersey. The National Education Association puts Vermont's school year 2011-12 per pupil spending at \$18,571, higher than every state but New York.

Vermont also spends a higher share of its income on K-12 education than most other states. Vermont is an average income state. Only three states spend a higher share of state personal income on education.⁵

In FY2011, the most recent year for which we have federal government spending data for the 50 states, Vermont spent \$1.47 billion on K-12 education. As noted earlier, nearly all of the revenues to support that spending came from state and local sources, not the federal government. The state and local governments in Vermont raised a total of \$3.14 billion in taxes in FY11, which means 47% of all taxes raised in Vermont went to support public education.⁶

⁵Personal income is measured by the U.S. Commerce Department as total income earned by residents of the state. The three states that spend a higher share of income on education are Alaska, Wyoming, and New Mexico.

⁶U.S. Census of Governments, *Census of State and Local Governments 2011*
<<http://www.census.gov/govs/local/>>

2. Why is Vermont’s Spending so High?

a. Staffing and Students

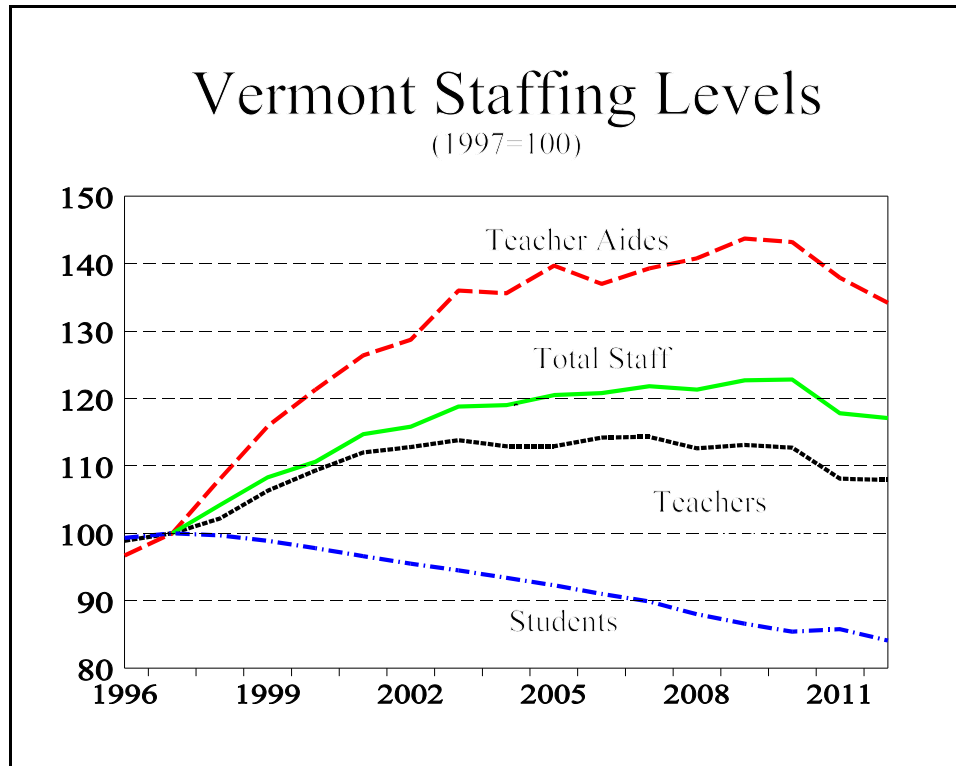
Many factors contribute to education spending levels, but the most important is personnel costs. According to the Vermont Department of Education, 60% of school spending is for the category “direct instructional services,” which is primarily salaries and benefits. Any discussion of spending must therefore examine the number of school personnel and their salaries.

Full-Time Equivalent Staffing Levels in Vermont Schools			
	1997	2012	% Change
Teachers	7,750	8,364	7.9%
Aides	3,107	4,171	34.2%
Total Staff	15,783	18,482	17.1%
memo: Students	106,341	89,465	-15.9%
Source: Vermont Department of Education, <i>Summary of the Annual Statistical Report of Schools</i> (December 2012)			

As the table shows, staffing levels in Vermont’s schools have increased over the past fifteen years despite a significant drop in the number of students. The number of teachers has increased by eight percent over that period of time and the number of teacher aides by more than one-third. Total staffing levels have increased by seventeen percent despite a sixteen percent decline in the number of students.

The graph below shows the pattern of staffing changes over that decade and a half period. The number of teachers rose dramatically in the five years after 1996, then was stable until the Great Recession hit, when the number declined by five percent. The number of teacher aides also increased dramatically between 1996 and 2003, then kept increasing through 2009, albeit at a slower rate. Since the recession, the number of aides has also declined.

We can’t tell whether the decline in the number of teachers, aides, and other staff is the beginning of a trend, or just a response to budgetary and financial pressures brought on by the Great Recession. Given the trends over the past fifteen years, we think it is likely that the staffing declines of the past few years are more of a cyclical phenomenon than the beginning of a trend. Our best estimate based on past trends is that staffing levels may remain constant but are unlikely to continue to decline.



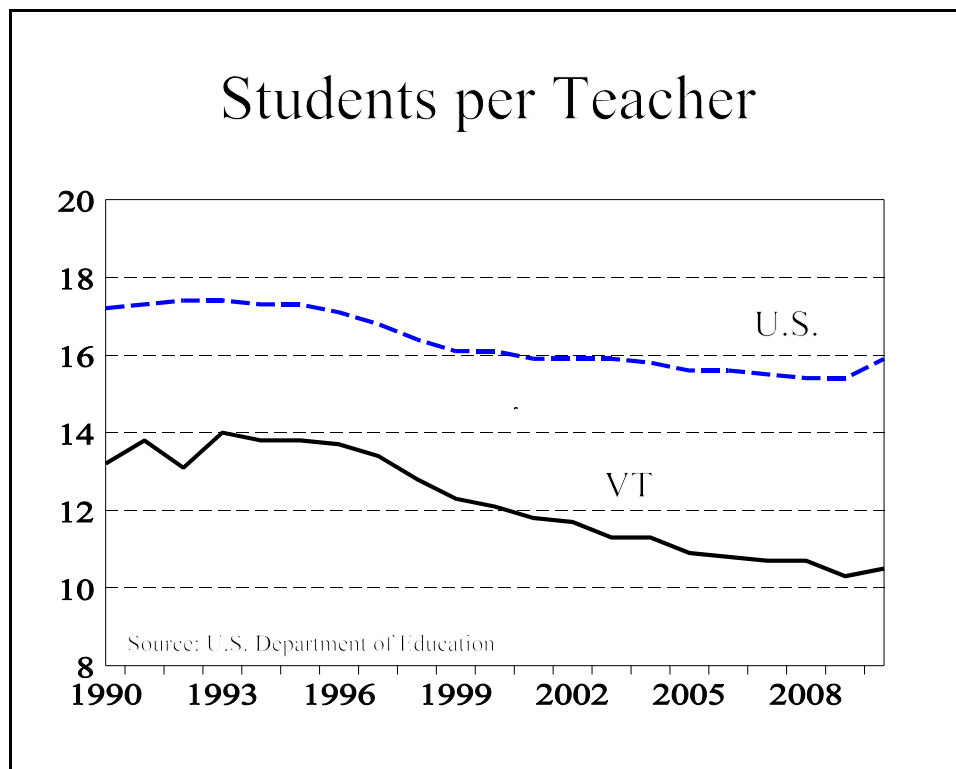
Next, we look at teacher salary levels in Vermont. We find that Vermont teacher salaries are slightly below national average salary levels. According to National Education Association data, the average starting salary for Vermont teachers was \$34,709 in 2011-12, three percent below the national average of \$35,672. The average for all Vermont teachers for 2012-13 was \$52,526, seven percent below the national average of \$56,383.

Vermont Teacher Salaries			
	Vermont	U.S.	Vermont Rank
Starting Salary (2011-12)	\$34,709	\$35,672	18
Average Salary (2012-13)	\$52,526	\$56,383	24
Source: National Education Association, <i>Rankings and Estimates</i> (December 2012)			

That means that although the number of teachers and other staff are contributing factors to Vermont’s higher than average level of spending, teacher salaries do not contribute to Vermont’s high spending level. Rather, if Vermont’s teacher salaries were at national levels, our total spending and per pupil spending would be even higher than they actually are.

We next turn to a comparison of how Vermont's staffing levels compare to national averages. We use U.S. DOE data for this. The DOE data are useful because they allow us to compare Vermont to other states and because the data go back in history.

The data in the following graph show that over the past two decades, Vermont has always had a low student-teacher ratio. Indeed the most recent data we have shows that Vermont has the lowest student-teacher ratio of all 50 states. Through the first half of the 1990s, student-teacher ratios for both the U.S. and Vermont were flat, although even then Vermont's ratio was twenty percent below the national average. Beginning in the late 1990s, the ratio began to decline for both Vermont and the U.S., although the decline moderated significantly for the U.S. by the early 2000s. In Vermont, the decline continued as student enrollments fell and the number of teachers remained stable, as the graph above showed. By the mid 2000s, Vermont's student-teacher ratio had risen to thirty percent below the national average. Clearly, one of the drivers of Vermont's high per student spending is our high staffing levels relative to the national average.



b. Does Class Size Matter?

If smaller class sizes leads to better-prepared students, then Vermont's low student-teacher and student-staff ratios may lead to a better outcome. Is this the case? As two Brookings Institution scholars put it:

Despite there being a large literature on class-size effects on academic achievement, only a few studies are of high enough quality and sufficiently relevant to be given credence as a basis for legislative action.⁷

The paper concludes that, based on one policy experiment in Tennessee,

that very large class-size reductions, on the order of magnitude of 7-10 fewer students per class, can have significant long-term effects on student achievement and other meaningful outcomes. These effects seem to be largest when introduced in the earliest grades, and for students from less advantaged family backgrounds.

Vermont's current student-teacher ratio is 9.9 while the U.S. average ratio is 14.3.⁸ If having 7-10 fewer students per class makes a difference, then Vermont is halfway there, as our student-teacher ratio is 4.4 students below the national average. But the Brookings study also noted that these class size reductions have a benefit primarily when they are in the early primary grades and for students from "less advantaged family backgrounds." In Vermont, the low student-teacher ratio is across the board—in all grades and for all students.

As the paper notes

Class-size reduction has been shown to work for some students in some grades in some states and countries, but its impact has been found to be mixed or not discernable in other settings and circumstances that seem similar. It is very expensive.

⁷Grover Whitehurst and Matthew Chingos, *Class Size: What Research Says and What it Means for State Policy*, Brookings Institution, May 11, 2011 at <<http://www.brookings.edu/research/papers/2011/05/11-class-size-whitehurst-chingos>>

⁸There is a difference between the student-teacher ratio, which we report here, and average class sizes. The student-teacher ratio is simply the number of students in a school (or state) divided by the number of teachers. Teachers include librarians, music and art teachers, physical education teachers, who are not classroom teachers. There are few measures of average class size in any given classroom. The U.S. Department of Education reports that the average Vermont class has four fewer students than the average size nationally, about the same as the difference in the student-teacher ratio, and is among the states with the smallest class sizes in the nation (*Schools and Staffing Survey, 2007-08*).

We have documented that low student-teacher ratios is very expensive in Vermont. Later we provide evidence that there is little or no discernible evidence that this has any large effect on student performance.

Eric Hanushek, perhaps the dean of economists who study education, is less optimistic than Whitehurst and Chingos. Hanushek analyzed 400 studies of student performance and finds that any effects of smaller class sizes, especially in early grades, disappear by the time a student is in later grades.⁹

In Hanushek's view, merely putting more resources into education, in total or on a per student basis (for example by lowering the student-teacher ratio or spending more per student), will not materially change student performance unless the incentive structure within the school changes. As he puts it

If the object of policy is student achievement, simply changing the resources available to schools, while retaining the existing decision-making in schools is unlikely to have the desired effects. Its main impact will be to increase the costs of schools.

3. Crowding Out

Vermont's higher-than-average education spending means there is either less public money available for other functions of government or that Vermont's taxes have to be higher to support spending levels equivalent to other states. The table below shows alternative scenarios of how much taxpayers would save if Vermont's per pupil spending was reduced by different percentages. Those savings could either remain in taxpayers' pockets or those funds could be diverted to other governmental uses.

⁹Eric A. Hanushek, *Assessing the Effects of School resources on Student Performance: An Update*, Educational Evaluation and Policy Analysis, Summer 1997 (Vol. 19, No. 2) 141-164.

Education Spending and Dollar Savings From Spending Reductions			
	Per Pupil Spending	National Spending Per Pupil Rank	Reduction in Spending
Current Spending	\$18,571	2	--
10% Decrease	\$16,714	5	\$166.1 million
20% Decrease	\$14,857	9	\$332.3 million
30% Decrease	\$13,000	15	\$498.4 million
Source: National Education Association, <i>Rankings and Estimates</i> (December 2012), Northern Economic Consulting estimates			

As the table shows, even a modest ten percent reduction in per pupil spending would still leave Vermont spending more than all but four states and would free up \$166 million to be used for other purposes or to reduce taxes. A more significant 30% reduction in per pupil spending would free up nearly five hundred million dollars in tax revenues and still leave Vermont with the 15th highest per pupil spending level in the nation. Vermont's per pupil spending would be 20% above the national average of \$10,834 and Vermont would be spending more per pupil than two-thirds of all the states.

D. Spending and Quality

1. Quality Issues

It is clear that Vermont teachers teach fewer students than most teachers in the U.S. and that Vermont devotes a lot more resources to education than nearly every other state. Does this result in better educated students in Vermont? That is a very difficult question to answer because it is hard to define quality in education. Nonetheless, over the past several decades, the federal and state governments have tried to answer it. For the past few years, Vermont has used the New England Common Assessment Program (NECAP) to test students in all Vermont schools. Unfortunately, the test is only used in three other states (Maine, Rhode Island, and New Hampshire) so it is not very useful in interstate comparisons, although it can be used to compare performance across schools within Vermont since all students take the test.

The U.S. Department of Education administers the National Assessment of Educational Progress (NAEP) test to students in all states. The NAEP test is only given to a sample of students, so it cannot be used to examine performance across schools, but it can be used to compare Vermont to other states and the nation as a whole.

The NAEP test is given to students in grades 4 and 8 in science, math, reading and writing. The NAEP test scores do not have much intuitive meaning, but the U.S. Department of Education categorizes the results into two basic categories. The DOE's definition of these categories is

Basic: This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.

Proficient: This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real world situations, and analytical skills appropriate to the subject matter.¹⁰

In the table and discussion that follows, we report the NAEP test results as the percent of students achieving a score that ranks them as proficient or better on the test.

Here we only look at 8th grade math test results as a case study. At first glance, it appears that

¹⁰U.S. Department of Education, National Assessment of Educational Progress: *How Results Are Reported* at <<http://nces.ed.gov/nationsreportcard/about/nathowreport.asp>>. The percent of students achieving advanced status is also reported, but we include those students within the proficient category.

Vermont students do very well on the tests, performing well above national averages and achieving one of the highest scores of any state in the nation. But Vermont differs from many states in the nation in a variety of ways. Vermont is rural, it has a highly educated population, it has lower poverty levels than most states, and, as we have noted earlier, the state spends a lot more on education than most states.

2013 NAEP 8th Grade Math Test Results: Percent of Students Proficient or Better	
Vermont	47%
United States	35%

One of the most significant ways Vermont differs from other states is that it is the most rural state in the nation. In the table that follows we look at how Vermont compares to the 11 most rural states in a variety of measures that may impact educational performance.¹¹ The states are listed in the table from most to least rural. Two of the most rural states are in New England, five are in the south or border states, two are in the Plains, and one is in the mountain west. It is somewhat curious that seven of the states are northern states and five are so northerly that they border Canada.

Rows 2 and 3 show some characteristics of the adult population that may influence student performance. Highly educated parents are more likely to have a home environment that fosters educational achievement than parents with lower levels of education. Row two shows that the southern states have much higher shares of their adult population without at least a high school education and row three shows that Vermont has a high share of its adult population who have completed college.

Four of the eleven states, including Vermont, have very small minority student populations and three have minority student populations close to the national average. In the United States, nearly half of all students are eligible to receive free or reduced price lunches, an indicator that these students come from low income or poor families. Among the eleven states, only New Hampshire and Massachusetts have a smaller share of low income students than Vermont, although the Dakotas and Maine have close to Vermont's share. Only two states in this group have seen increases in student enrollments over the 1999-2009 period, with Maine and South Dakota experiencing declines on a par with Vermont.

¹¹We use the top 11 rural states so as to include New Hampshire, the 11th most rural state, because it borders Vermont and it is in New England. We also provide data for the U.S. as a whole and for Massachusetts, which we use later in this report.

Population, Education Cost, and Education Quality: 2013 8th Grade Math NAEP Test

	U.S.	VT	Maine	W. VA.	Miss.	Mont.	Ark	SD	KY	Ala	ND	NH	MA
Population Characteristics													
1 Percent Rural Population (2010)	19.3%	61.1%	61.3%	51.3%	50.7%	44.1%	43.8%	43.4%	41.6%	41.0%	40.1%	39.7%	8.0%
2 Population Over 25 With Less than HS Education	14.1%	10.2%	9.0%	16.0%	18.6%	7.7%	16.3%	9.7%	17.1%	17.1%	9.1%	8.4%	10.7%
3 Population over 25 With BA or More	28.6%	32.4%	27.8%	18.3%	20.0%	28.8%	20.3%	26.4%	21.1%	22.5%	27.3%	33.7%	39.2%
Education Characteristics													
4 Percent Minority Students (2009)	45.9%	6.5%	6.6%	7.6%	53.9%	16.9%	34.7%	18.7%	15.7%	41.3%	15.5%	9.2%	30.9%
5 Percent Students on Free or Reduced Lunch (2009-10)	47.5%	34.6%	41.6%	52.0%	70.7%	40.0%	59.7%	37.6%	54.9%	54.9%	37.6%	23.5%	32.9%
6 Percent Change in Enrollment AY2000 - AY 2010	4.8%	-12.7%	-13.5%	-1.6%	-1.8%	-8.2%	3.0%	-5.7%	3.8%	-3.7%	-13.3%	-4.2%	-0.1%
7 Spending per Pupil 2009-10	\$12,136	\$16,881	\$13,692	\$12,000	\$8,841	\$11,487	\$10,916	\$10,398	\$10,309	\$10,058	\$12,126	\$13,963	\$15,731
8 Spending per \$1,000 of Personal Income	\$45.89	\$59.16	\$50.25	\$56.20	\$46.68	\$47.56	\$56.69	\$40.38	\$47.80	\$47.13	\$43.06	\$47.82	\$38.83
Percent Students Proficient or Above on 8th Grade NAEP Math Test 2013													
9 All Students	35%	47%	40%	24%	21%	40%	28%	38%	30%	20%	41%	47%	55%
10 Eligible for Free or Reduced Price Lunch (Low Income)	20%	27%	24%	15%	15%	26%	16%	22%	16%	8%	23%	27%	31%
11 Not Eligible for Free or Reduced Price Lunch	49%	59%	51%	35%	36%	48%	43%	48%	44%	35%	48%	53%	69%

Sources: U.S. Department of Education, Census Bureau

Row 7 shows that Vermont had the highest spending level per student of any of the rural states. It was higher even than New Hampshire and Massachusetts, the only non-rural state in the table. Those two are among the 50 states with the highest per capita incomes.¹² Having higher incomes makes it easier to spend money on education (or anything else). Despite not being a wealthy state, row 8 shows that no state devotes as high of a share of the income its residents earn to education as does Vermont.

The last three rows show the student performance metric that was discussed above, the percent of students scoring proficient or better on the eighth grade math NAEP test in 2013. At the aggregate level, Vermont does well compared to most states, with nearly half the state's students scoring proficient or better compared to just over one-third for the nation. Among the states we examine, only New Hampshire and Massachusetts do as well or, in the case of Massachusetts, better than Vermont. It is worth noting that both states spend less per pupil than Vermont. Massachusetts, a wealthy state, spends \$1,000 less to educate each student than Vermont and New Hampshire spends nearly \$3,000 less.

Row 10 shows that low income Vermont students also do better than the low income students nationwide, but only one-quarter of Vermont's low income students achieve a level of proficient or better, which means three quarters do not. This is higher than the 20% of low income students nationally who score proficient, but the gap between Vermont and the nation is not that large. Neither Vermont nor the nation do a very good job of educating low income students.

In Montana, as well as New Hampshire and Massachusetts, low income students do as well as or better (in the case of Massachusetts) than Vermont low income students. Montana educates its students at a very low cost, spending two-thirds of what Vermont does per student. That translates into a savings of \$5,000 per student compared to Vermont. In three states, Maine and the Dakotas, low income students' performance is slightly below Vermont's, but still above the national average. Per student spending in those three states is between \$3,000 and \$6,000 less than Vermont's. The southern states, all with per pupil spending levels between \$4,000 and \$8,000 less than Vermont's, exhibit significantly worse performance by low income students than Vermont or the national average.

To summarize this table, Vermont students' performance is significantly better than rural southern states, but that is not an unexpected finding. Vermont student performance is somewhat better than the non-southern states, but that comes with several caveats. First, low income students perform worse than middle and upper income students in Vermont and the other states. Second, the gap in performance between Vermont and the nation narrows when differences in student incomes are controlled for. Third, student performance in several states in the group is not much below Vermont's once income differences are identified. Finally,

¹²Massachusetts ranks second in per capita income, New Hampshire 9th, and Vermont is 21st (U.S. Bureau of Economic Analysis).

Massachusetts' students performance is better than Vermont's across all groups. And all of these states spend less per student than Vermont, including urban Massachusetts, where costs in general are higher.

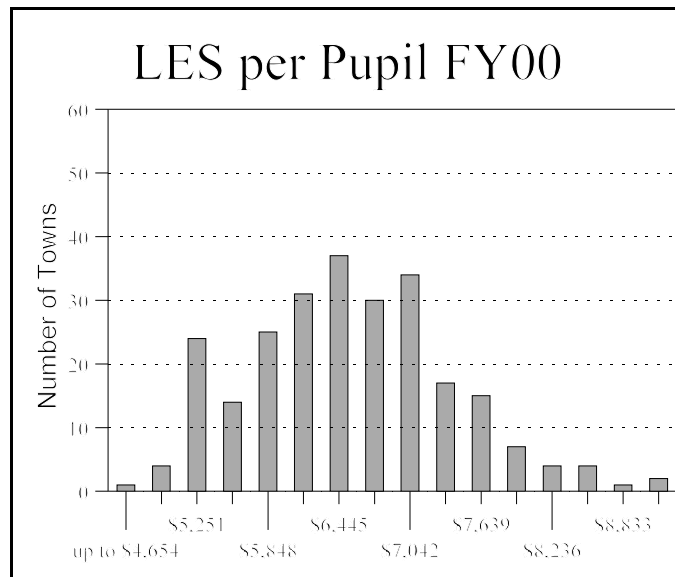
E. Spending and Fairness

One of the main goals of Act 60 was to reduce the disparity in education spending. A central mechanism in today's education financing system (which allows all town's to spend the same dollar amount per pupil for the same tax effort) was designed to reduce this disparity. In this section, we examine the distribution of spending at three points in time to see what happened to spending across Vermont's school districts. We begin with FY00, the first year that the spending data gathered by the Department of Education can be considered reliable. We end with FY12, the most recent year data are available. And we consider FY06, the middle of this time period.

1. Per Pupil Spending in FY00

In FY00, Act 60 determined school property tax rates based on local education spending (LES) per pupil. The distribution of this spending is shown below.

The average spending level across all towns was \$6,390 with a range from \$4,654 to \$9,131. As the graph, shows most spending was centered around the average.



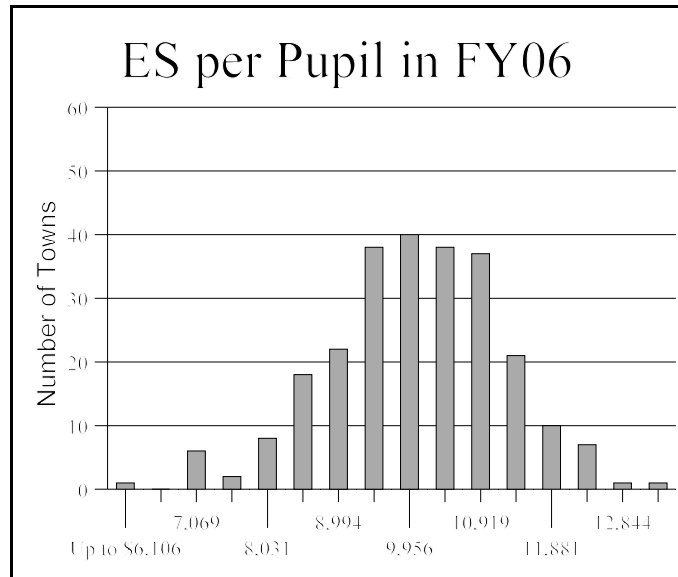
- The spending of 144 of the 250 towns fell within plus or minus 10% of the average. The town at the bottom end of this range was spending \$5,571 per pupil, 18% less than the town at the top end of this range which was spending \$7,029 per pupil.
- The spending of 210 of the 250 towns fell within plus or minus 20% of the mean. The town at the bottom end of this range was spending \$5,112 per pupil, 33% less than the town at the top end of this range which was spending \$7,668 per pupil.

- The coefficient of variation was 0.133. The coefficient of variation is the standard deviation divided by the average and is a commonly used statistical measure of dispersion.

2. Per Pupil Spending in FY06

In FY06, Act 68 determined school property tax rates based on education spending (ES) per pupil. The graph below shows the distribution of this spending in FY06.

The average spending level across all towns was \$9,792 with a range from \$6,106 to \$13,325. As the graph shows most spending was centered around the average.



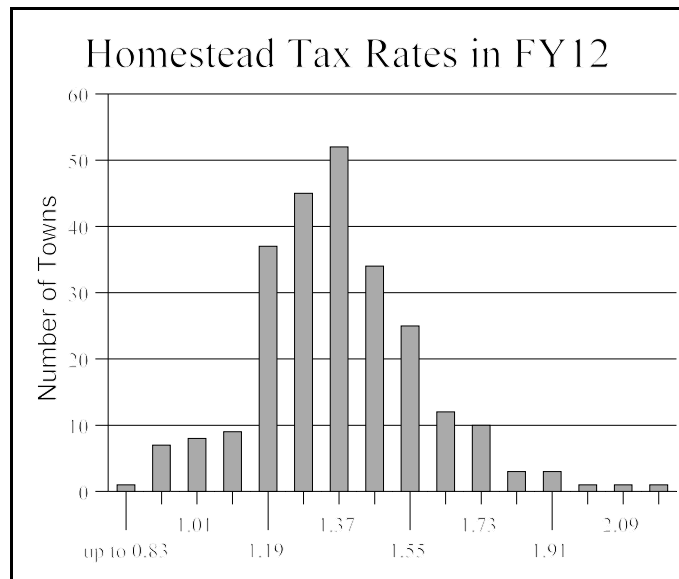
- The spending of 148 of the 250 towns fell within plus or minus 10% of the mean. This was little changed from FY00. The town at the bottom end of this range was spending \$8,813 per pupil, 18% less than the town at the top end of this range which was spending \$10,771 per pupil.
- The spending of 225 of the 250 towns fell within plus or minus 20% of the mean. The number of towns within this group increased from FY00. The town at the bottom end of this range was spending \$7,834 per pupil, 33% less than the town at the top end of this range which was spending \$11,751 per pupil.
- The coefficient of variation was 0.122, down slightly from FY00.

Comparing the FY06 distribution to the FY00 distribution shows that number of outliers at both the high and low end of spending decreased.

3. Homestead Tax Rates in FY12

In FY12, Act 68 and Act 130 determined school property tax rates based on education spending (ES) per pupil but recognized union districts separately from the towns. This meant no single spending level per town was calculated. Therefore, the best way to compare spending across towns is to compare homestead school tax rates. The graph below shows the distribution of homestead school tax rates in FY12.

The average tax rate across all towns was \$1.32 with a range from \$0.83 to \$2.18. As the graph shows most of the rates were centered around the average.



- The tax rate of 127 of the 248 towns fell within plus or minus 10% of the average. The number of towns in the 10% range was down from 144 and 148 in FY00 and FY06, respectively. The town at the bottom end of this range had a rate of \$1.19, 18% less than the town at the top end of this range which had a rate of \$1.46.¹³
- The tax rate of 224 of the 248 towns fell within plus or minus 20% of the average. The number of towns within this range was similar to FY06 and greater than FY00. The town at the bottom end of this range had a tax rate of \$1.05, 67% of the town at the top end of this range which was \$1.59.
- The coefficient of variation was 0.161, up significantly since FY06. This means there was a wider disparity of tax rates (and therefore spending levels) in 2012 than in either 2000 or 2006.

¹³ We are comparing distributions of spending in FY00 and FY06 to distributions of tax rates (dependent on spending) in FY12. When we reproduced the FY06 graphs in tax rates instead of spending, we reach the same conclusions we do here. The coefficient of variation in FY06 with tax rates is 0.123, nearly identical to the 0.122 level using spending levels.

4. Conclusions to Spending and Fairness

One of Act 60's central goals was to decrease the variation in school spending among Vermont's towns. Our analysis of spending and tax rates in FY00, FY06, and FY12 shows that the distribution of spending narrowed slightly from FY00 to FY06, then increased from FY06 to FY12.

We do not find this necessarily a surprising result. Education spending in a town depends on several factors: its cost, the ability of the town to carry the cost (its residents' income and wealth), and the preferences of townspeople for education spending. Act 60 and Act 68 changed the cost of education to Vermont's towns but not town income, wealth or preferences for education spending.

Most of the narrowing of the spending distribution with the adoption of Act 60 likely occurred within a few years after its immediate adoption (that is from before FY99 to about FY00), something the lack of reliable spending data prior to Act 60 does not allow us to measure. The narrowing of the distribution may have continued for a few years more as towns continued to adapt to Act 60 (as receiving towns spent relatively more and sending towns spent relatively less). But after sufficient time, this adjustment ran its course and the distribution of spending remained much as it was before Act 60 was enacted.

F. Equalized Spending and An Equalized Education

Again, one of the main goals of Act 60 was to narrow the difference in education spending across Vermont's school districts. As we noted above, the success of this effort has been limited. Further, we note that the goal of most observers of Vermont's education system is not equalized spending but equalized education opportunities across school districts.

In January 2012 the authors of this report examined the equality of education opportunities across Vermont's school districts at the request of the Town of Dover.¹⁴ The analysis clearly showed that larger high schools in Vermont offer greater education opportunities in core academic courses, fine arts, athletics, and extra-curricular activities than do smaller high schools. In addition, while under Act 60/68 the same school tax rate will allow the same dollar spending per pupil across Vermont towns, the same school tax rate has not brought about equal education opportunities.

¹⁴ See *The Local Impacts of Vermont's Education Finance System* by Richard Heaps and Arthur Woolf, January 6, 2012 available at several sites on the internet.

III. Tax System to Finance Education Spending

A. A Very Brief History of Vermont's Education Funding Systems

Vermont historically has always funded public school education primarily through the property tax. Recognizing that some towns with low property wealth would not be able to fund an acceptable level of educational opportunities, the state adopted various reforms targeting state funds to the neediest districts. In 1969 Vermont created the Miller formula, followed by the Morse-Guiliani formula in 1982, and then the foundation formula in 1988.

All of these formulas failed for at least two reasons. One, rising school spending outstripped the increase in state aid through the formulas, and property taxes increased. Voters pressed the legislature for relief. Every new reform included a large amount of new state monies which allowed a temporary reduction in property taxes. Then the process repeated. Two, spending differences across school districts remained wide and did not close with the reforms. The spending disparity was challenged in court, leading to the *Brigham vs. Vermont* decision.

The legislature responded to *Brigham* in 1997 with Act 60 which was fully implemented in school year 2001-2002. This was a major break with the past in that the primary responsibility for funding education was transferred to the state. The main components of Act 60 were:

- A state block grant per pupil was set with the intention to cover the majority of education expenses. This was guaranteed to every town and financed with an equalized school tax rate of \$1.10.
- Education spending above the block grant was financed by local-share property taxes. The rate was intended to float to raise the needed revenue. Every town spending the same amount per pupil would have the same tax rate, regardless of their tax base.
- Property values were equalized annually by the state.
- Homestead education property tax adjustments for school property tax relief were enacted for households earning \$75,000 or less. They could choose to pay the lesser of 2% of their income or the education property tax assessed on their homestead after reducing its assessment by \$15,000.

Then in 2003 with the enactment of Act 68, three changes were made to Act 60.

- The sharing pool was eliminated for spending above the block grant. Instead the homestead property tax rate was set proportional to local spending.
- Different tax rates were set for homestead and non-homestead property. While the homestead tax rate was determined by local education spending, the statewide non-homestead tax rate was set by the legislature.
- Towns that spent more than 135% above the previous year's per pupil average (reduced to 125% in FY07) were subject to an additional tax rate. This was an effort to reduce the disparity in spending across school districts and to reduce spending levels in high-spending towns.

Though further modifications were made to the education financing system, the basic system as set by Act 60 and Act 68 remains in place.

B. Key Elements of Today's Education Financing System

Understanding all the details of Vermont's education financing system is difficult. The system is complex. But the key elements are:

- The decision of how much to spend on education rests with the local school district. While the resulting tax rates and tax bills depend directly or indirectly on the amount of spending, the local tax bills don't have to balance a local school budget.
- More than 60% of Vermont homeowners are protected from paying the full homestead property tax by the income-sensitivity provision of Act 60. Additional voters are insulated by the renter rebate program.
- Paying for public school education is the duty of the state. It must raise the funds needed to finance the spending voted on by the towns through transfers from the General Fund (essentially raised from income and sales taxes) and by setting the property tax rates and the income-sensitivity percentage.
- The state can and has shifted the burden of the property tax between residential and non-residential property owners when setting tax rates. It, however, must balance total education spending with total revenues.

C. Success of the Financing System

Act 60 went into full effect in FY02 and Act 68 made important modifications in 2003. But the basic structure of today's system has been in place now for close to fifteen years. With education spending rising during this period and, therefore, school property taxes rising, the question is how has the system escaped major calls for reform like all previous funding systems?

One major reason is that the tax base increased at growth rates well beyond anything expected, allowing the system to raise additional property tax revenues while the legislature could cut nominal tax rates. Consider the chart below.

Vermont Education Grand List (in \$billion)				
Tax Year	Listed	% Chg	Equalized	% Chg
1999	\$35.5	-	\$37.2	-
2000	\$36.3	2.3%	\$38.7	4.0%
2001	\$37.4	3.0%	\$41.3	6.7%
2002	\$39.0	4.3%	\$44.6	8.0%
2003	\$41.6	6.7%	\$48.8	9.4%
2004	\$44.5	7.0%	\$54.1	10.9%
2005	\$52.0	16.9%	\$61.5	13.7%
2006	\$59.2	13.8%	\$69.1	12.4%
2007	\$65.2	10.1%	\$75.8	9.7%
2008	\$71.5	9.7%	\$80.9	6.7%
2009	\$74.4	4.1%	\$82.6	2.1%
2010	\$76.3	2.6%	\$81.3	-1.6%
2011	\$77.8	2.0%	\$79.6	-2.1%
2012	\$78.4	0.8%	\$78.5	-1.4%

Beginning in tax year 2001 the statewide equalized education grand list grew at a very fast rate, mostly due to the housing price bubble of that decade. Growth rates were near 10% or more for

essentially five years from 2003 through 2007. Growth in the grand list, particularly the equalized grand list (essentially an estimate of the current dollar value of all properties), allows the needed tax revenues to be raised more easily. If the grand list rises fast enough, it allows more revenues to be raised even with a reduced tax rate. That is very advantageous to politicians wishing to spend more but not requiring them to explicitly vote to raise tax rates.

During this period, Vermont's education tax rates were able to be reduced in spite of rising education spending. For example, Rutland City was able to reduce its homestead tax rate from \$1.32 in tax year 2004 to \$1.14 in tax year 2007 while increasing revenues from \$4.2 million to \$5.6 million. This occurred in towns across Vermont.

Take a hypothetical situation that shows how this works: Suppose a house was worth \$200,000 in 2004 and the education property tax rate was \$1.30. The homeowner (ignoring income sensitivity issues) would face a tax bill of \$2,600. Two years later the home appreciated by 25% and was now worth \$250,000. The legislature is able to lower the statewide tax rate to \$1.20. The homeowner would now pay \$3,000. The legislature could take credit for lowering the tax rate, but the homeowner's tax bill increased due to the housing bubble.

The housing bubble in Vermont came to an end in about 2006, but Vermont's equalized grand list continued to rise for another three years due to the lag in the state's equalization process. However, in tax year 2010 the grand list started to fall with declining real estate values. The education fund quickly spent the excess funds it had accumulated in its stabilization reserve. Then in FY14 the legislature was left without any options but to raise tax rates, and raise them substantially, never a popular action.

D. Raising School Taxes for FY14 - A New and Disturbing Trend

Once again, in spite of having fewer students to educate, public school spending for FY14—the budgets which passed on Town Meeting Day in 2013—jumped by more than 5%. This rapid increase in spending coupled with a 1.4% decline in the grand list forced the legislature to raise school property tax rates. But how tax rates were raised for FY14 was different from in the past.

In prior years the state raised both the homestead and non-homestead tax rates as well as the tax rate on household income by roughly the same proportion. For FY14, the legislature voted to raise the homestead and non-homestead tax rates by five cents and six cents, respectively, but left the tax rate on household income unchanged. This meant essentially no change in taxes for sensitized homeowners if their incomes did not change. But this was not true for non-sensitized homeowners or the owners of non-residential property, such as businesses and vacation home owners.

Why did the legislature do this? We can only assume the legislature wanted to protect most of their constituents at the expense of higher income taxpayers (the non-sensitized “rich”), businesses, and second home owners. But it removed the burden of the tax increase off of the very local voters who approved the tax increase.

The effect of this was that the average spending-adjusted tax rate for non-sensitized homeowners rose nearly 7% and for businesses and second home owners it increased more than 4%. The income-sensitized homeowners saw their average tax rate on household income rise by less than 1%.

The burden of increased school spending was shifted from the voters onto non-voters (businesses and second home owners) and the non-sensitized higher income owners. The structure of the current school financing system, with its split grand lists and an income-sensitivity program that protects sixty percent of homeowners from property tax hikes, allows this to be easily done. It could not have been done in the past.

The mechanism by which the increased spending in FY14 was financed is one that can easily be repeated and is likely to be. The current financing system leaves the spending decision to local voters at Town Meeting. With a majority of them knowing they are income sensitized and won't have to pay much for the increased spending, there is a limited constraint on continued spending increases. If the legislature follows suit next year and holds the sensitized household income tax rate nearly fixed (but raises the property tax rates), they can remind their constituents that they protected them from school tax increases. And the voters can reward their legislators with another term. And spending will continue to increase.

D. Critique of Today's Financing System

The most salient feature of Vermont's current education financing system is its complexity. It is highly doubtful that more than a very small number of voters truly understand how all of its key aspects work and are interconnected. Under previous financing systems, voters knew when they were making a decision on additional educational spending, that they (the district) would pay for it, what it most likely meant for school tax rates, and for their own tax bills. Today, voters have to trust the spreadsheets and estimates passed out at Town Meeting Day plus estimate what their own incomes will be in the future. Needless to say, it is a daunting and confusing task.

Under past financing systems, when voters approved \$50,000 in spending for an additional math teacher, they knew the town would have to raise \$50,000 in taxes. Today, that additional spending is not directly connected to the amount of revenues that will be raised in the town. The

percentage increase in education spending in the past was related to the percentage increase in the tax rate. But since only a minority of residents pay for education based on the property tax rate, that doesn't affect them. Rather the percentage increase in the income sensitivity rate matters. And how the legislature will be changing those rates is not always known by Town Meeting Day.

The second most important feature of today's financing system that affects spending is that most of the residents in a town (voters on the budget) are protected from the full impact of any spending increase by either the income sensitivity provision or the renter rebate. Basic economic theory tells us that if you lower the price of something, people will buy more of it. That is precisely what happened with Vermont's current financing system. The price of education got cheaper for most voters and they responded by buying more of it. Unless other dramatic events unfold (we are unlikely to see a repeat of the Great Recession) spending will continue to increase.

These two characteristics, complexity and subsidies to residents, has created a system that produced high levels of spending, and ultimately, high levels of taxation. There is nothing built into the structure of the current education financing system to slow this process.

IV. Options to Reduce Spending and Property Taxes

Reducing education spending, or at least the growth rate of spending, is the surest way to reduce education property taxes. Opposition to the call for reduced spending will certainly claim that it will reduce educational quality in the state, something no one wants to do. Reducing spending significantly is possible as Vermont is one of the highest spending states yet it achieves only average results.

We discuss three ways of reducing education spending in Vermont, concentrating just on those ways that we see hold out the chance for significant savings.

A. Demographically Induced Spending Reduction Opportunities

1. Capturing Savings from Falling Enrollments

Enrollments in Vermont's public school system have declined markedly in the last twenty years. Enrollment has declined from 105,000 students to 90,000 in fifteen years, a 15% reduction in the number of students schools need to educate. The state lost the opportunity to reduce spending significantly during this period. However, the recently released state population projection calls for this trend to continue.¹⁵ Therefore, the opportunity for spending control based on decreasing enrollments still exists.

The population projections show the number of school-age children will decline by between 11% and 14% over the period 2010 to 2030, with most of the decline coming in the current decade. We show the population numbers from the projection's Scenario B below.¹⁶

¹⁵ *Vermont Population Projections: 2010 - 2030*, August 2013, prepared by Ken Jones, Economic Research Analyst, Vermont Agency of Commerce and Community Development.

¹⁶ The same conclusions would be drawn from Scenario A. We find Scenario B to be the more probable of the two scenarios at this time.

Vermont Population Projection: School-Age Children			
Age Cohort	2010	2020	2030
5 to 9 years	34,654	31,532	31,184
10 to 14 years	37,637	35,328	32,711
15 to 19 years	46,012	38,773	35,282
5 to 17 years	95,267	86,247	81,536
Change from 2010		- 9%	-14%

The population projections show the number of school-aged children in the state will decline by another 9,000 from 2010 to 2020. Then in the following decade, school enrollments will fall by another 5,000. At the 2012 per pupil cost of \$17,000 in Vermont, this means a savings of \$153 million could be achieved by 2020 and \$238 million by 2030 from just holding per pupil spending constant.

To achieve these savings calls for oversight and discipline in the education financing system. It is not something which occurs automatically or easily. The decline in enrollments each year is small and easily absorbed into a school's budget. With no discipline to capture the savings, the opportunity easily slips by. As pointed out earlier in this report, the same opportunity existed during the period 1997 to 2012 when enrollments fell by 15,000 pupils. The opportunity for savings was lost.

The State of Vermont will need to take the lead in trying to capture this potential savings as recent history shows all the individual school districts acting independently were not able to do so. New mechanisms would need to be developed with leadership from the governor's office.

2. Age Structure of Vermont Teachers

Vermont's population is going through a demographic transition that presents a host of potential benefits and costs to state programs. Not only is the number of school-age children declining, but the age structure of Vermont's teachers is changing. The Baby Boom teachers are retiring in large numbers. Those are teachers who were born from 1946 to 1964 and today are aged 49 to 67. Over the period 2010 to 2030 all of these teachers will pass the typical retirement age.

This phenomenon is not particular to Vermont but is observed nationwide. A recent study, *Profile of Teachers in the U.S. 2011*, shows that 31% of public school teachers were aged 50 and over.¹⁷ This is down from 42% in 2005 and the numbers will continue to decline in the near term.

More of these retiring teachers will be at the top end of the payroll step schedule, much higher than their replacement hires. While this may represent a small savings for an individual school, it is a potentially large savings for the state as a whole. According to the Vermont State Teachers Retirement System over 500 teachers have retired in each year from 2010 to 2012.

If a retiring teacher with 23 years of experience and a master's degree plus 15 hours is replaced by a teacher with 6 years experience and a bachelor's degree plus 20 hours, the savings would be approximately \$15,000.¹⁸ Over the entire school system, this implies an annual savings in excess of \$7.5 million per year from 500 retirees. Over the next five years, a program to capture these savings in the state education finance system could save in the neighborhood of \$35 million.

If a school district saves \$15,000 by hiring a new, cheaper teacher to replace the more experienced teacher who retires, it would be easy for the school board to spend that \$15,000 on anything else in the budget. Taking that \$15,000 savings and actually using it to reduce total expenditures may not happen.

As with the savings from declining enrollments, the State of Vermont will need to take the lead in trying to capture this potential savings as recent history shows all the individual school districts acting independently were not able to do so. New mechanisms to do this could be developed with leadership from the governor's office.

¹⁷ *Profile of Teachers in the U.S., 2011*, by C. Emily Feistritzer, National Center for Education Information, 2011.

¹⁸ We draw this example from the salary step schedule of the Washington Central Supervisory Union. Similar savings are available throughout Vermont.

B. Reducing Spending through Modifications to the Financing System

In our earlier critique of the current financing system, we noted that the system drives spending by protecting the majority of voters from the consequences of their spending decisions. Simply put, if voters knew that a larger, rather than a smaller, share of the cost of increasing spending is going to come out of their pockets, they would be more likely to vote for spending restraint than otherwise. This can be done several ways.

1. Reduce Income Sensitivity

Currently, Vermonters pay their school taxes based on their income if their income and home value is below certain levels. The income cutoff is \$90,000 (with a phased reduction in assistance through approximately \$99,000). In addition, only the homestead value up to \$500,000 is allowed this tax break.¹⁹

As noted earlier, the income cutoffs are well above the average household income in the state. Median household income in Vermont in 2012 was about \$53,000. This has the effect of reducing property taxes for approximately sixty percent of Vermont's homeowners. (Note that others pay reduced taxes through circuit breaker and the renter rebate programs.)

A simple reform would be to reduce the income cutoff for sensitivity. This could be done quickly and simply by legislative vote. It would call for a very significant reduction to bring most voters back into the fold of paying the full cost of their school spending decisions.

An additional simple reform is to reduce the maximum valuation allowable for the homestead. Today, it is \$500,000. This number could also be easily reduced.

2. Require Tax Rates to Move Proportionally

Prior to the adoption of Act 68, the state (through the towns) maintained one grand list and all property owners faced the same tax rate. Once the grand list was split into two parts, residential and non-residential properties, this gave the state the ability to levy a different tax rate on the homes of Vermont residents versus vacation homes and business properties. Further, with most resident homeowners benefitting from the income sensitivity program, the state could further shield residents from tax increases.

¹⁹ There are additional complications to these limits. However, for the majority of Vermonters these figures hold. The simplest way to think of this is that Vermonters with incomes under \$90,000 and who live in homes worth less than \$500,000 are insulated through income sensitivity.

As previously discussed, in FY14 the legislature used changed property tax rates, but not the income sensitivity rate, to cover its funding obligations. This resulted in increased taxes on businesses, second home owners, and high income Vermonters but not on more than 60% of Vermont homeowners. This contributed to the increase in education spending.

A simple reform is to require property tax rates and income tax rates to be raised together to more equally spread the burden increased spending. In order to control spending, voters need to face the consequences of their spending decisions.

3. Expand the Two-Vote Provision

Section 563 (11)(B) of Title 16 requires a school district to present its proposed budget as two questions on the town ballot if the district's spending was too high and the increase in the budget exceed inflation plus one percent.²⁰ The point was to give notice to voters that the district was a very high spending district and hope that they would control spending by voting down the excess spending while still being able to vote in the affirmative on the basic school budget.

The potential success of this strategy is unknown. Nothing prevents a town from just approving both ballot items as easily as they would have a single item. However, the reluctance of school boards to face this type of vote suggests it would be a deterrent to higher spending.

The state could attempt to control costs by keeping this provision in place and tightening the two-vote thresholds.

²⁰ In FY12 the spending limit was the FY11 statewide education spending per equalized pupil of \$12,203.99.

C. Direct Spending Reductions

If the state wished to reduce property taxes substantially, the most direct way is to reduce the overall level of spending. As pointed out earlier in his report, Vermont is the third highest spending state (on a per pupil basis) in the nation. If it wishes to reduce this to tenth highest, it could save about \$300 million annually. The magnitude of these savings is huge, as will be the resulting tax savings.

The question is how can the state do it? Since the state is mandated to raise the funds for local schools, it needs the legislative authority to withhold funding from school districts that spend above a targeted amount. There are several ways this could be accomplished. A new policy could target the student-teacher ratio in Vermont, which is the lowest in the country and is ultimately the cause of Vermont's high education spending. The education formula could be modified to require school districts to meet a target for its student-teacher ratio or withhold state funds for the proportionate spending above that level.

This would most likely be seen as a harsh policy. However, if Vermont continues to spend at the levels that it does, the taxes used to finance that spending will continue to give Vermont a total tax burden among the highest in the country.

D. Potential Administrative Savings

According to the Vermont 2012 Summary of the Annual Statistical Report of Schools 9.3% of current education expenditures in FY11 were for the categories General Administration and School Administration.²¹ Suppose consolidating school districts could reduce administrative expenses by half. That would mean a savings of approximately 4.7% of total spending in Vermont, or about \$75 million. Given total spending that year of \$1.5 billion, consolidation would reduce total spending by about \$75 million and per pupil spending by a little over \$800. Vermont's per pupil spending would still rank it sixth highest in the nation, down from fourth highest. Even if consolidation of districts could save 10% of total spending, Vermont would still rank sixth highest in the nation.

But it is unlikely that school district consolidation by itself would achieve any significant reduction in school spending, either per pupil or in total. Consolidating districts may mean one less superintendent or other administrator, but it may just lead to an additional assistant superintendent in the consolidated district.

There may be other benefits to district consolidation. If districts consolidate their administrative functions, it might be easier to consolidate schools and classrooms. For example, two neighboring schools with low enrollments in each grade could join together and have one class for each grade. This consolidation would make it easier to reduce teaching staff, especially in the face of declining enrollments. As this study has noted, the major factor influencing Vermont's high per pupil expenditures is the staffing level in Vermont schools.

E. Does the Excess Spending Threshold Keep Spending Down?

One part of the state's education funding formula makes towns that spend above a certain amount per pupil pay a tax on the "excess spending." For the current school year, that amount is \$14,841. Only eight towns have spending that exceeds that threshold, and two of those are very small towns that tuition all their students to other schools which, by statute, means they are not subject to the excess spending threshold. Another eight towns are within \$100 of the threshold, and two of those towns are \$1 below it. Two more towns are between \$100 and \$200 below the threshold and six are between \$200 and \$300 below it. Although the excess spending threshold may serve as a check to high spending, it does not appear that a large number of towns are clustered just below the threshold.

²¹http://education.vermont.gov/documents/EDU-SARS_12_Web_updated_version.pdf

F. Massachusetts as an Example for Vermont

In the discussion of demographics and education outcomes in the rural states, for several reasons Massachusetts was included. Massachusetts's students performance on the 8th grade math NAEP test was the best in the nation. In addition, the performance of low income students was also significantly above the national average and better than Vermont. Per pupil spending in Massachusetts is about \$1,000 below Vermont's level.²² Massachusetts is a highly urbanized state with a higher cost of living than Vermont, which means one would expect relatively cost expenditures on education compared to a rural state like Vermont. This latter point is not the case.

Massachusetts spends less per pupil than Vermont and achieves better student outcomes. If Vermont could emulate how Massachusetts schools obtain the quality they do, and if Vermont could at the same time spend what Massachusetts spends, Vermont could save nearly \$100 million in school expenditures (or \$200 million if the Census Bureau per student spending figures are accurate) and student performance would increase. We believe this is well worth further investigation.

²²Although we use the U.S. Department of Education data here for school year 2009-10, the U.S. Census Bureau estimates that per pupil spending in school year 2010-11 is \$2,000 less in Massachusetts than Vermont. <http://www2.census.gov/govs/school/elsec11_sttables.xls> The National Education Association estimates that Vermont's per pupil spending was \$3,600 more than Massachusetts in school year 2011-12. (NEA, op. cit.)