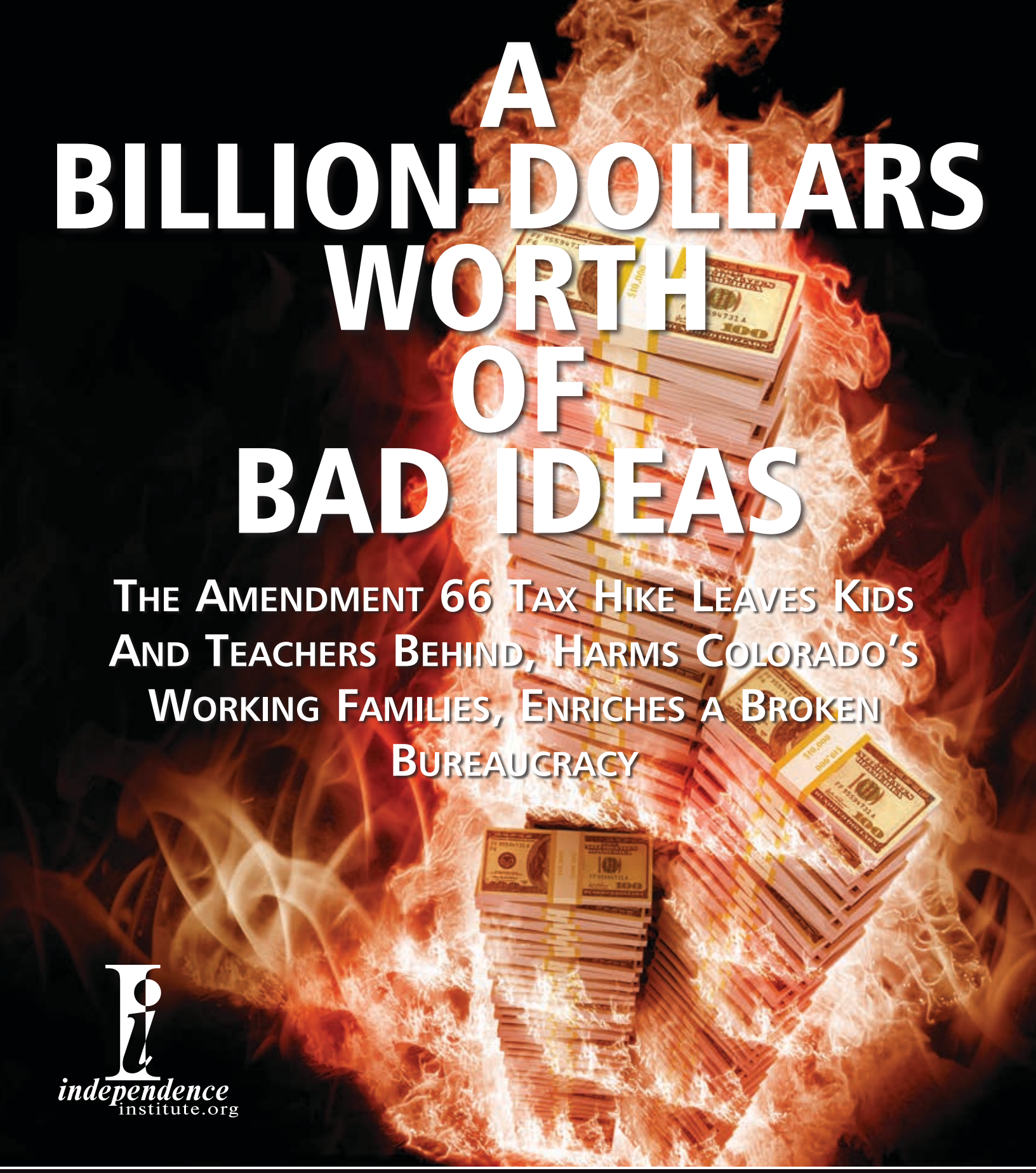

A BILLION-DOLLARS WORTH OF BAD IDEAS

The Amendment 66 Tax Hike Leaves Kids And Teachers Behind, Harms Colorado's Working Families, Enriches a Broken Bureaucracy

independence institute.org

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A Billion-Dollars Worth of Bad Ideas

Introduction

No matter how good the cause, raising state income tax rates is not a step to be undertaken lightly.

Table 1: Colorado Income Tax Rates if Amendment 66 Passes

Federal Adjusted Gross Income	New Tax Rate	Tax Rate Increase	Number of 2011 Filers in Income Range
Under $75,000	5.0%	8%	1,800,000
Over $75,000	5.9%	27%	594,272

Amendment 66 would replace Colorado's flat income tax of 4.63 percent of federal adjusted gross income with the two bracket system shown in Table 1. Passing Amendment 66 also passes SB13-213, the new 141-page state school finance law.

Raising income taxes makes work less rewarding. It substitutes spending on political goals and special interest groups for spending on personal goals. Instituting a different rate for people with different incomes gets rid of the essential fairness of a flat tax and opens the door to special interest pleading for different tax rates for favored groups.

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Advocates for Amendment 66 say that a tax increase is needed to support public schools. But over the last decade, public school funding has increased much faster than the incomes of those who pay for it. Inflation-adjusted per capita personal income in Colorado, the total compensation that people earn before they pay their taxes, increased by just 5 percent from FY 1999-00 to FY2010-11. Inflation-adjusted state spending on Colorado public schools increased by 47 percent.[1]

Amendment 66 raises two fiscal policy questions. The first is whether giving more money to the existing public school system will generate benefits that exceed the known harm caused by increases in tax rates.

The second question is whether sound government includes putting a spending earmark in the state constitution. Amendment 66 requires that 43 percent of all state sales, excise, and income tax revenue be spent on the public schools in each and every year. In general, earmarks are unwise. This one is particularly pernicious because it invites waste. Even if new technologies substantially reduce the cost of education or falling birth rates leave the state with fewer children to educate, the fraction of state revenues claimed and spent by the public schools remain the same.

How Amendment 66 Will Misallocate and Waste Public Funds

Neither the initiative nor its underlying legislation guarantee that the money will be spent as advocates claim.[2]

SB13-213's 141 pages will create substantial new funding inequities, allocate funding on the basis of programs that are known to contain substantial amounts of fraud, and generate new incentives for educational failure.

Under current law, schools get more money for "at -risk" students, generally defined as those enrolled in the federal free and reduced-price school lunch (FRL) program. Enrollment in the FRL program is based on self-reported income. As will be shown below, the problem with using FRL enrollment as a basis for allocating school money is that there is clear evidence that these criterion will misallocate funds, reward failure, and invite corruption.

Given that subsidies tend to produce more of what they subsidize, it should come as no surprise that the proportion of the Colorado public school population classified as at-risk has risen much faster than the fraction of school-aged children in poverty.

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people aged 5-17 in families in poverty was roughly 13.9 percent in 1993. It rose to 15.9 percent by 2011, an increase of 14 percent.[3] Enrollment in free and reduced-prices lunches was 22.7 percent in FY 1994-95, growing to 36 percent in FY 2011-12, an increase of 58.6 percent.[4]

Under the new law, schools will receive 20 percent more state funding for each FRL student. They will also receive 20 percent more for each student identified as an English language learner (ELL). A student enrolled in both programs garners at least 40 percent more funding. Districts with high concentrations of low-income students or English language learners garner an even larger premium, giving schools a significant incentive to expand these classifications to their limits and beyond.

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The problem is that a major portion of the K-12 school curriculum is devoted to teaching English. Regardless of the languages spoken at home, all students should be designated as "English language learners." Under current rules, however, a student with poor command of English from an English-speaking household cannot trigger more state aid. ELL students are currently identified when someone reports that a language other than English is spoken at home and a student scores poorly on an English assessment test. A child who scores poorly on the assessment test even though English is the only language spoken at home cannot be eligible.

SB13-213 lengthens the time period for which the extra ELL aid can be received for the same student, up to seven years. This is a long time to pay the schools to teach someone English, especially given that their students are young, going to school to learn the language, and living in a place where everyone speaks it.

Lengthening the aid period unnecessarily increases the cost of public K-12 education. It gives schools a strong financial incentive to classify as many students as possible in the non-native speaker category, and to show slow English learning progress for students in that category. It may also compromise the education of students who have a perfectly fine command of English but who have no incentive to score well on a language test that might move them to more challenging coursework.

Allocating funds based on FRL enrollment is likely to unnecessarily increase the cost of public education by materially overestimating the number of poor students. In 2012, the Chicago Public Schools Inspector General's office calculated that Census data suggest that eligibility for free or reduced-price meals should be about 20 percent lower than was actually reported. In a test sample, it found that over 70 percent of those enrolled were receiving inappropriate benefits.[5] Twelve school officials were removed from their posts because they falsified school lunch eligibility data.

Audits from other states also document widespread fraud and abuse in the school lunch program.

Audits from other states also document widespread fraud and abuse in the school lunch program. In 2006, the Arizona state auditor's office audited eligibility in seven Arizona schools.[6] It was able to verify eligibility for only 43 percent of the students receiving free or reduced price meals.

In New Jersey, a 2013 state comptroller's report concludes that school districts "have a financial incentive to maximize the number of their students participating in NSLP, [and] aggressive efforts to encourage successful applications can result in additional instances of fraud. The large number of cases where benefits have been reduced or eliminated through the verification process indicates that this issue is more than theoretical."[7] The audit that compared lunch program enrollment in 15 school districts with a list of public employee salaries turned up 109 people, including 6 elected school board members, who made false statements on school lunch forms and were referred for criminal prosecution. Bloomberg news reported that after receiving the report New Jersey Gov. Chris Christie said that "I feel like an idiot—I'm apparently the only person not getting a free lunch."[8]

Educational research shows how to improve public schools--more spending is not the answer.

Educational research is clear about the kind of change that improves student achievement in public schools. Unfortunately, passing Amendment 66 likely would impede this kind of change, thereby unnecessarily condemning students in poor schools to a poor education. The problem is that Amendment 66 increases funding for the current public school establishment, and that increased funding is likely to further distract it from its primary mission of teaching children basic skills. What it does not do is reform the establishment's problematic culture, poor staffing policies, outdated work rules, and curricular insufficiency.[9]

The section that follows describes three experiments in public school reform. The first two, in Denver and Kansas City, follow the Amendment 66 template of simply giving existing schools more money. Student achievement either remained the same or declined. The third, in Houston, sought to inject the culture of exemplary charter schools into the worst performing schools in a Houston school district. Student achievement went up. The results suggest that staffing is the key to success in school reform, that there are no measures that can definitively predict how good a teacher an individual will become, and that no known measures of teacher effectiveness do a better job of identifying stellar teachers than competent principals.[10]

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The Colorado Spending Experiment

In 2010 and 2011, Colorado school districts received $26.6 million from the federal government to improve poorly functioning schools. *The Denver Post's* Jennifer Brown reported that as spending went up, achievement went down. The schools spent about 35 percent of the money on consultants. Six Pueblo city schools spent $185,748 on a "change leader." Westminster spent $24,000 for 10 principal "instructional leadership team sessions." Denver Public Schools spent most of its money on new staff, including deans of instruction who were supposed to evaluate teachers.[11] By any reasonable measure, the results of this experiment suggest that more money is not the key to success.

The Kansas City Spending Experiment

A common defense of failed spending experiments like the one in Colorado is that the spending increase was too small. This argument cannot be leveled at the experiment in Kansas City where in 1987, U.S. District Court Judge Russell Clark gave the school district carte blanche to spend as much as it wanted. The idea was to demonstrate how well the best and most modern educational thinking worked when combined with proper financial resources and the will to do things right.

A common defense of failed spending experiments like the one in Colorado is that the spending increase was too small. This argument cannot be leveled at the experiment in Kansas City where in 1987, U.S. District Court Judge Russell Clark gave the school district carte blanche to spend as much as it wanted.

Until the judge recused himself from the case in 1997, the 37,000-student school district got more money per pupil than any other major school district in the United States. The judge increased property taxes by 150 percent, imposed a 1.5 percent income tax surcharge, and ordered the state of Missouri to make up the rest of the budget. All in all, he spent $2.1 billion.

The district increased teacher pay by 40 percent. The ratio of students to instructional staff was 12 or 13 to 1. Every course imaginable was offered, including elementary school French from native speakers, Suzuki violin, garment design, ballet, drama, and physics. There were before- and after-school programs for children with working parents. The high school fencing team was coached by the former Soviet Olympic fencing coach and took field trips to Senegal and Mexico. The district built 15 new schools and renovated 54 others. Facilities included animation studios, a planetarium, and arboretum, a film studio, and a 25-acre wildlife sanctuary. The model United Nations program had simultaneous translation capability.[12]

Student achievement remained the same or worse. After spending four years in high school, seniors performed no better on standardized tests than they did in their freshman year.

Such depressing results are not limited to the Kansas City schools. A 2013 academic survey on the literature on helping struggling high schools finds results that are broadly consistent with the outcomes in the Kansas City experiment. As the authors concluded, "one result that does stand out from the existing literature is that increasing the overall level of resources is a blunt instrument for helping at-risk students." Spending money on technology and internet access has little effect on student achievement. There is no particular gain from attending a "high performing" rather than a "low performing" school, which might lead one to question the quality of the measures used to determine school performance. Finally, combining accountability testing with limited access to vocational subjects and an emphasis on college readiness may encourage low-ability students to drop out.[13]

The same survey found that student outcomes did improve in schools that emphasize increased instructional time, tutoring, and time-tested instructional practices using evaluative methods like unit tests, frequent quizzes, and specific problem solving that lets teachers know immediately whether students are understanding the material when these methods are embedded in a culture of high behavioral and academic expectations.

The Houston Experiment

The same survey found that student outcomes did improve in schools that emphasize increased instructional time, tutoring, and time-tested instructional practices using evaluative methods like unit tests, frequent quizzes, and specific problem solving that lets teachers know immediately whether students are understanding the material when these methods are embedded in a culture of high behavioral and academic expectations. Charter schools have been leading the way in implementing this kind of experiment, but as the survey points out, less than 0.1 percent of public school students are enrolled in this kind of charter school.

In the 2010-11 school year, an experiment was undertaken to see if exemplary charter school principles could be successfully injected into 9 of the lowest-performing public schools in Houston. The goal was to improve student achievement by creating a culture of high expectations coupled with increased instructional time, better human capital, more student-level differentiation, and the frequent use of data to inform instruction. Harvard economist Roland Fryer reports encouraging early results, with improvements in student achievement that were consistent with the results for exemplary charter schools.[14]

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Staffing was so important that the Houston experiment replaced all nine principals at participating schools. After a national search, 200 applicants passed the initial screening procedures and were interviewed to find the nine who best matched the characteristics shown by successful charter school leaders. Individual teachers were interviewed before the end of the 2009-10 school year to assess their attitudes toward student achievement and the educational cultures that the experiment was designed to create. Teachers hired for the schools were required to attend Saturday classes designed to increase instructional rigor in the fall of 2010. Those who remained were required to take part in a specific professional development program throughout the school year. In addition to normal attrition, 162 teachers were transferred out based on an analysis of their past performance. In all, about 52 percent of teachers were replaced.

What about improving achievement with early access to preschool?

Amendment 66 expands spending on early childhood education. Whether this improves children's achievement is questionable at best. Most discussions of the topic implicitly assume that substituting a formal classroom environment for the daily education that children receive from close contact with their parents and other adults as a part of their daily lives is an improvement. Unfortunately, the evidence suggests otherwise. Estimates of the benefit of early childhood education "have produced a distribution of impact estimates [that]

is extremely wide, and gains on achievement tests typically fade over time."[15]

Studies of the long-term effects of age at school enrollment suggest that children who are older when they start school later have better life-cycle outcomes. These include higher school achievement, a higher probability of attending college, and higher lifetime wages.[16] In the U.S., 5 percent of children enter kindergarten a year later than they are eligible to do so, and a large fraction of them are from the top quarter of the socioeconomic distribution. Some authors worry that "low socioeconomic children now make up a disproportionately large share of the relatively youngest quarter [of children in each grade], which is a cause for concern, since these children are now at two substantial disadvantages."[17] However, an examination of Census long form data from California and Texas finds that although school entry laws do increase educational attainment, and the youngest students have lower academic performance as measured by retention rates, there is no evidence of any difference in employment rates, wages, family income, home ownership, or marital status at ages 30 and 40.[18]

But proponents say that spending on smaller classes does improve achievement, what about that?

Spending on U.S. public schools has exploded over the last two decades. A significant proportion of the money was used to reduce class size, a very expensive reform. Many people assume that more individual attention improves learning and therefore conclude that smaller classes always translate into more learning.

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Perhaps the most famous class size experiment was Project STAR, which randomly assigned Tennessee students and teachers to classes of various sizes (roughly 15 and 22 students) within the same school for grades K-3. Although STAR had serious methodological problems that compromised its randomized design, two published studies find some evidence that smaller classes were associated with college attendance and a small wage premium at age 27.[19]

Other results on class size come from abroad. An analysis of Swedish data finds that smaller classes (the basic class size distribution ranged from 31 to 15 with the mode at 25) are "beneficial for cognitive and noncognitive ability at age 13, and improve achievement at age 16." They also find improved educational completion, and wages and earnings for ages 27 to 42.[20] Data from Israel, at a time when classes had to be split when they reached 40 students, and the average class size was 31, suggest that though smaller class size improved student achievement, the gain was smaller than the estimates from Project STAR.[21]

Data from Texas also suggest that reductions in class size should be targeted at specific age groups. Researchers found that smaller classes improved both math and reading scores in 4th and 5th grade.[22] The gains were small in 6th grade. They disappeared in 7th grade and thereafter.

In 2012, Colorado public schools had an average pupil-to-teacher ratio of 18.1.[23] While this figure is not the same as class size, it shows that school districts already employ enough teachers to approach the size considered "small" in the studies described above. The real question that should be asked is why Colorado school data are so poor that they cannot give information on the actual class sizes in different grades.

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In addition to its cost, reducing class size involves some unpleasant tradeoffs for student achievement. Great teachers do not grow on trees. In response to state accountability tests like the CSAP (or more recently, TCAP), school administrators and parents have an incentive to increase the sizes of the classes taught by the most effective teachers in order to strategically improve public school performance on the accountability tests. Nathan Barrett and Eugenia Toma find that overall, more effective teachers tend

to have larger classes.[24] A careful study of Israeli schools found, like Barrett and Toma, that weaker students are allocated to smaller classes in public schools.[25] Unfortunately, their finding that class size may be determined by student ability and teacher quality calls into question all of the prior estimates of the benefits of class size.

In any case, existing evidence suggest that the effect of having a good teacher far outweighs the effect of a smaller class. Using data from a large U.S. urban school district, Eric Hanushek estimates that a year with a teacher near the top of the teacher quality distribution can advance a student by 1.5 academic years. A year with a teacher near the bottom will advance a student by just half of a year. For Texas schools, the lower bound estimate of the effect of teacher quality on student achievement is that having a teacher in the top 16 percent of the teacher quality distribution is equivalent to a 10-student reduction in class size.

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What do we know about the relationship between student achievement and increased spending on the public schools?

In a 1997 update of an earlier review, Hanushek finds over 300 studies examining whether, after family inputs are taken into account, there is a relationship between expanding school resources and improving student achievement in U.S. schools. Commonly used measures of school resources are teacher education, teacher experience, teacher-pupil ratios, expenditure per student, and teacher salaries.

The results suggest that U.S. schools are culture poor rather than resource poor. Only 27 percent of the studies show that expenditure per pupil has a positive effect on student achievement. Just 20 percent show that teacher salary has a positive effect. The rest either show no discernible impact or suggest a negative effect. This suggests that the distribution of effects tends to be centered close to zero and that, at current levels of spending, the way in which money is spent is much more important for student achievement than increases in the amount of money spent.[26]

Table 2: Percentage Distribution of Estimated Effect of Key Resources on Student Performance, Based on 377 Studies

		Statistically Significant			Statistically Insignificant		
Resources		#of Estimates	Positive	Negative	Positive	Negative	Unknown sign
Real Classroom Resources							
	Teacher-pupil ratio	277	15%	13%	27%	25%	20%
	Teacher education	171	9	5	33	27	26
	Teacher experience	207	29	5	30	24	12
Financial aggregates							
	Teacher salary	119	20%	7%	25%	20%	28%
	Expenditure per pupil	163	27	7	34	19	13

Source: Eric A. Hanushek. Summer 1997. "Assessing the Effects of School Resources on Student Performance: An Update," Educational Evaluation and Policy Analysis, 19, 2, Table 3, p. 144.

Many school reform advocates have suggested using teacher value-added (the improvement in student test scores measured by subtracting end of year test scores from those at the beginning of the year) as a cornerstone in teacher compensation, employment, promotion or assignment. However, proponents of value-added compensation plans have yet to resolve the host of serious methodological concerns that stand in the way of developing a fair and accurate value-added measurement.

Problems that have yet to be resolved include difficulties in determining the true quantity of education delivered when only parts of it are measured by standardized tests, adjusting for possible variations in individual test scores that can occur just because someone has a bad day, the inability to account for unobservable differences in students, the sorting that occurs as people move to be near particular schools, the classroom sorting that occurs as parents strive to ensure that particular children have particular teachers, and the fact that students may be uninterested in performing well on yet another test.

At their current stage of development, value-added measures should be only a part of a subjective evaluation system done by supervisors, if they are used at all.

People of all political stripes often support increasing the input requirements for teacher certification. They reason that increasing the course work for teacher certification, requiring specific types of undergraduate degrees, and requiring that teachers pass specific tests will produce more able and better prepared teachers. Unfortunately, little evidence supports these claims, and the tradeoff is that increasing the time it takes to become a teacher increases the cost of producing teachers and thus reduces the supply of them. In view of some of the criticisms directed toward course content in traditional schools of education, serious consideration should also be given to the possibility that many otherwise able people consider courses in education useless and boring. They may simply refuse to consider teaching as a career if they are required to take them in order to become a teacher.

Higher Taxes Equal More Money for the Public School Bureaucracy But Less Income and a Lower Standard of Living for Everyone Else.

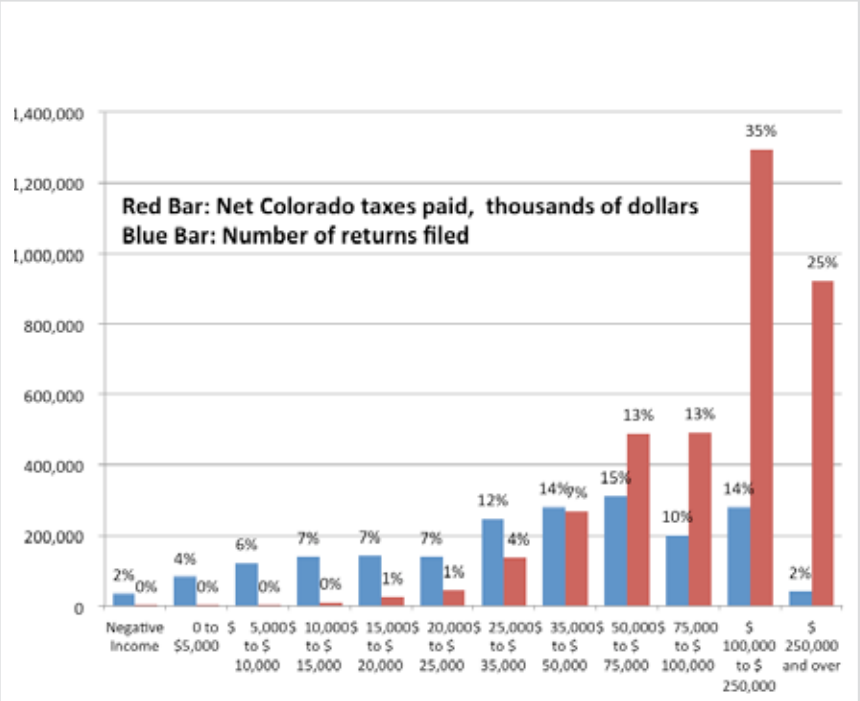
Though there is little evidence that more school spending will benefit taxpayers by improving student education and achievement, there is a lot of evidence suggesting that raising taxes will harm Colorado taxpayers by reducing employment, earnings, and the general standard of living.

In discussions of Amendment 66, its backers often act as if taking money from the private sector is a simple matter of raising the tax rate. Once this is done, they claim, more money will flow to the public schools without any changes in Colorado employment, earnings, and income. These kinds of arguments embrace static analysis, the assumption that people will keep working and earning the same amount no matter how much the state takes from them in taxes.

According to the Fiscal Note for SB13-213, the new school finance law triggered by Amendment 66 will require an additional $1.12 billion in revenue from Colorado's private sector, roughly $225 in additional tax from every man, woman, and child in the state. Decades of research in public finance suggests that people will resist having this much money taken from them, and that they will behave dynamically, changing their behavior to avoid paying more Colorado taxes.

For the U.S. as a whole, the evidence suggests the dynamic response to income earners in the highest tax categories is immediate and strong. If true, such a response could pose substantial problems for Colorado school finance. Most of Colorado's income taxes are paid by high-income earners. Data from the Division of Revenue show that taxpayers with

Figure 1:
In Colorado, high income filers pay over half of the state's individual income taxes.



Source: Colorado Division of Revenue and author's calculations.

over $100,000 in federal adjusted gross income filed 16 percent of Colorado's individual returns in 2009, and paid roughly 60 percent of all Colorado income taxes.

There are a variety of ways for both high- and low-income taxpayers to reduce their earnings. They can substitute untaxed leisure for taxed work by simply working less, a response that is particularly pronounced when taxes are increased on low-income families. Female participation in the labor force is roughly 5 times more sensitive to taxes than male participation according to recent estimates, with a 1 percent increase in taxes resulting in a 3.5 percent decrease in labor supply.[27] As recent events in California have shown, both families and businesses will move if they believe that a state is taking too much of their income.[28]

Even without considering the state's recent inclination to load more regulation and higher electricity costs on productive industries, Colorado's business climate has been worsening over the past 10 years. In the Tax Foundation's annual ranking of state and local tax burden, Colorado ranked 41st in 2004, with only 9 other states enjoying a lower overall tax burden. By 2010, the latest year for which the ranking is available, Colorado's increasing tax burden put it at 32nd. In the Tax Foundation's 2008 annual index of states' business tax climates, Colorado had the 13th best business tax climate. By 2013, its business tax climate had deteriorated to 18th place.[29]

According to the Tax Foundation's William McBride, the academic literature finds that when it comes to the types of taxes mostly likely to retard growth, increasing corporate income taxes does the most damage, followed by increasing individual income taxes. Amendment 66 would raise both.

Increasing state income taxes now will make life much more difficult for the Colorado families and businesses that pay them. After an unusually deep recession, they are trying to adjust to both a variety of regular federal tax increases and the tax increases and expensive regulations in Obamacare. As the state and federal governments take more and more individual income, less is left to live on, and there is a smaller remaining pool of business profits to maintain and expand existing enterprises.

According to the Tax Foundation's William McBride, the academic literature finds that when it comes to the types of taxes mostly likely to retard growth, increasing corporate income taxes does the most damage, followed by increasing individual income taxes.[30] Amendment 66 would raise both. In addition, it raises taxes on sole proprietorships, the S-corporations that file as individuals, and partnerships.

Table 3: Comparing Top Marginal Effective Tax Rates in Colorado and Neighboring States.

State	Wages	Taxable Interest	Qualified Dividends	Capital Gains	Sole Proprietorship and Partnership	S-Corp
Colorado	46.7%	47.4%	27.8%	27.8%	46.6%	43.6%
Texas	**42.8↘**	**43.4↘**	**23.8↘**	**23.8↘**	**42.6↘**	**39.6↘**
Utah	46.9↘	47.6↘	28.0↘	28.0↘	46.8↘	43.8↘
Kansas	46.9↘	48.2↘	28.6↘	27.9↘	46.7↘	43.7↘
Wyoming	42.8↘	**43.4↘**	**23.8↘**	**23.8↘**	**42.6↘**	**39.6↘**
Arizona	**46.7↘**	**47.3↘**	27.7↘	27.7↘	**46.5↘**	**43.5↘**
New Mexico	46.9↘	47.5↘	27.9↘	**26.5↘**	46.7↘	43.9↘
California	51.9	52.6	33.0	33.0	51.8	48.8

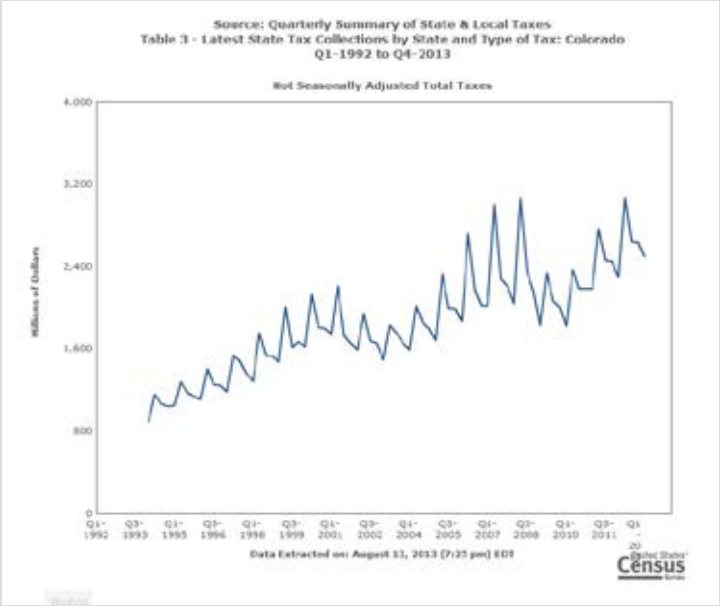
Bold indicates lower rates with current tax rates. ↘ indicates rates that will be lower if Colorado's top marginal tax rate is increased.

Table 3 lists the top effective combined marginal tax rates for state and federal taxes on various types of income. In 2013, federal and state taxes on wages will take more than 46.7 cents of each additional dollar earned by Colorado taxpayers in the highest rate categories. These were calculated by Gerald Prante and Austin John, who note that the American Tax Relief Act of 2012 resulted in a substantial increase from the 40.3 percent marginal rate that applied in 2012.

...the 27 percent increase in Colorado's top marginal income tax rate will boost the state's top effective marginal rates above those in neighboring states.

A brief study of the rates for Colorado and neighboring states makes it clear that the 27 percent increase in Colorado's top marginal income tax rate will boost the state's top effective marginal rates above those in neighboring states. With the exception of California,

Figure 2:
Colorado state and local tax revenues, 1992-2013



all neighboring states would have lower top marginal rates if Colorado voters adopt Amendment 66. Rates that would be lower than Colorado's after the income tax is increased are indicated by a ↘.

A short history of Colorado tax policy

In the 1980s, farsighted state officials campaigned for fair treatment for all taxpayers, and Colorado has prospered as a result of their efforts. In 1986, people making more than $11,000 (equal to about $23,435 in 2013 dollars) faced a top state tax rate of 8 percent. In 1987, a flat tax of 5.0 percent was introduced. It was reduced to 4.75 percent in 1999 and to 4.63 percent in 2000.

As the Census data in Figure 2 show, a low flat tax has produced rising tax revenues for Colorado state government. Colorado tax revenues rose steadily, falling only in the recessions of 2001 and 2007-2009.

Estimates of possible dynamic responses to the Amendment 66 tax increase

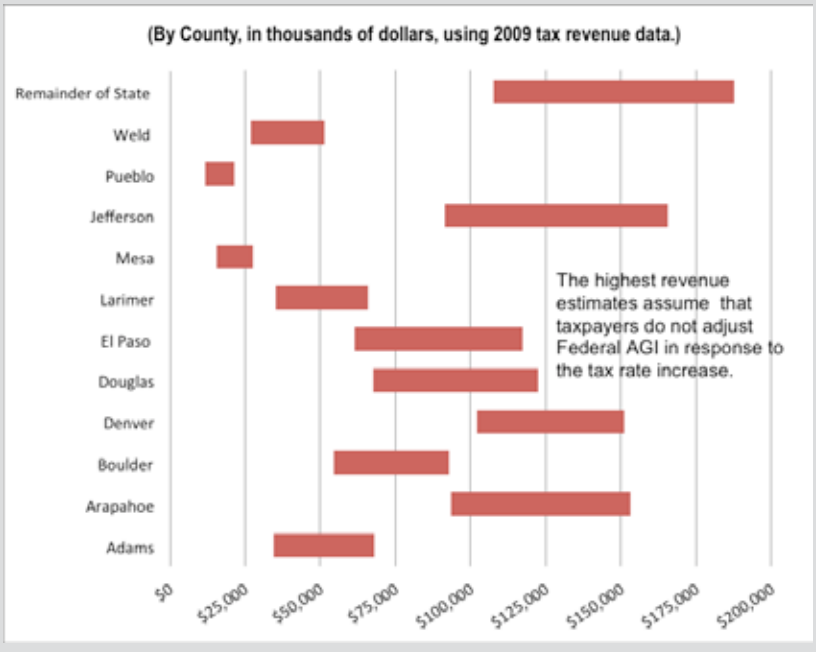
Because higher income taxpayers both pay such a large fraction of Colorado's individual income taxes and respond so strongly to increases in tax rates, any estimate of changes in tax revenues resulting from the increase is by nature imprecise. The following section provides a range of estimates for selected counties, and for the state as a whole, using 2009 Division of Revenue tax filing data.[31] A more detailed explanation of the calculations is available in the Appendix. If the lower bound estimates are correct, the lavish school spending proposed in SB13-213 will exceed available revenues and another tax increase will soon be in order.

If the lower bound estimates are correct, the lavish school spending proposed in SB13-213 will exceed available revenues and another tax increase will soon be in order.

As Figure 3 shows, the distribution of taxes to support public schools will vary by county. Taxpayers in counties outside of the Front Range will provide substantial amounts of revenue.

The upper bound revenue estimates assume that taxpayers do not change their behavior in response to an income tax rate increase. The estimates also assume that Colorado state government receives

Figure 3:
Potential Effects of Proposed Income Tax Increase:
Range of estimated Additional Revenues



additional amounts of tax revenues equal to the increase in the tax rate times the total amount of federal adjusted gross income reported for their county in their income range. Even if there is no dynamic adjustment, this method will tend to overestimate revenues as Colorado deductions and credits tend to reduce the share of federal adjustable gross income received by the state to a level below the 4.63 percent tax rate.

The lower range of the estimates assumes that taxpayers with federal taxable incomes below $75,000 do not change their behavior, that taxpayers with incomes between $75,000 and $100,000 respond to a 1 percent change with a .11 change in taxable income, and that taxpayers with incomes at $100,000 and above are assumed to change their taxable incomes by 0.63 percent. As was the case in the upper bound estimates, federal adjusted gross income is used as the starting point, and applicable Colorado tax credits or deductions are assumed to be zero.

Income tax revenues from Colorado's C corporations are not included in individual income tax statistics, but they are relatively small compared to revenues from the individual income tax. In 2009, the state collected $0.27 billion of $268 billion from the state's 13,277 C corporations. Assuming no income adjustments in response to the tax increase, Amendment 66's 27 percent increase on corporations reporting more than $75,000 in income would increase state tax revenues from C corporations by roughly $0.07 billion. In 2009, about half of the state's C corporations had less than $10,000 in taxable income.

Given what is known about taxpayer behavioral changes, the upper end estimate is unlikely. It is therefore possible that Amendment 66 will not raise enough money to fund the ambitious spending plan contained in SB13-213.

Using 2009 filing data, state revenues raised by Amendment 66's tax increase range from roughly $0.7 billion to $1.2 billion. Between 2009 and 2012, total individual income tax collections increased by about 11 percent. Increasing the estimates by 11 percent to account for the trend produces upper and lower bound estimates of $0.78 billion and $1.33 billion. Given what is known about taxpayer behavioral changes, the upper end estimate is unlikely. It is therefore possible that Amendment 66 will not raise enough money to fund the ambitious spending plan contained in SB13-213.

Conclusion

As a result of the tax increase, Colorado will become less attractive to profitable businesses and productive workers. Those who are here may consider moving, and those considering moving to the state may reconsider their options. Colorado will recover more slowly from the 2007-09 recession, and its standard of living may remain below past peaks. There is little evidence that any of the proposals contained in SB13-213 will improve student achievement in the public schools or that the money raised will be spent as advocates promise.

If Amendment 66 passes, SB13-213 will pour money into a public school bureaucracy that is expert at wasting it, redistributing funds from counties with productive populations to those that host the largest number of free and reduced price school lunch enrollees, and rewarding school districts that take up to 7 years to teach their students English.

If Amendment 66 passes, SB13-213 will pour money into a public school bureaucracy that is expert at wasting it, redistributing funds from counties with productive populations to those that host the largest number of free and reduced price school lunch enrollees, and rewarding school districts that take up to 7 years to teach their students English. Based on past experience, there is little chance that the spending will improve student achievement. However, it will swell the number of people who work for the public schools in various capacities and enrich the consultants that they like to hire.

Appendix

The economic literature has proposed various ways to estimate how federal tax revenues change in response to changes in tax rates[32]. Gruber and Saez (2002) provide estimates for the elasticity of taxable income for states. They found that for the U.S. as a whole, people who have incomes above $100,000 a year will reduce their taxable income by 0.57 percent when taxes increase by 1 percent. While overall federal revenues changed by 0.4 percent when taxes went up by 1 percent, state taxes changed by 0.63 percent when taxes went up by 1 percent. In general, those with incomes between $50,000 and $100,000 are much less responsive, changing their incomes by just 0.11 percent when taxes go up by 1 percent. Those with incomes between $10,000 and $50,000 are more responsive than middle income people, and respond to a 1 percent increase in tax by reducing their incomes by .18 percent.[33]

These calculations use elasticity of taxable income estimates from Gruber and Saez (2002) and tax and income data from the Colorado Division of Revenue from 2009, the latest available. The elasticity of taxable income measures how taxpayers respond to tax changes by reducing or increasing their reported taxable income.

Following Saez (2004),[34] the total change in tax revenue expected from a change in tax rate can be written as

$$dR = Ndt(z - \bar{z}) \cdot \left[1 - e \cdot \frac{z}{(z - \bar{z})} \cdot \frac{t}{(1 - t)}\right]$$

Where t equals the marginal tax rate, z is before tax income, and $\bar{z}$ is the threshold above which people with high incomes face marginal tax rate t. In Colorado's case, $\bar{z}$ would be equal to $75,000. N is the number of taxpayers in the top bracket and dt is the proposed change in the tax rate.

The estimates reported here assume that taxpayers with incomes under $75,000 do not alter their behavior in response to an increase in the tax rate. Research at the national level has shown that taxable income in lower income brackets is considerably less responsive to changes in tax rates than income in higher brackets. In reality, some people do alter their behavior, perhaps by working less or adjusting their mortgage deduction, so this assumption is likely to produce an overestimate of tax revenues. However, people in this tax category paid less than 25 percent of Colorado individual income taxes in 2009. The expected change in tax revenues for this group is obtained by assuming that e is zero and that the change in revenues can be calculated by multiplying the Federal adjusted gross income (AGI) reported for each group by the 0.0037 proposed increase in Colorado income tax for this group.

For taxpayers with incomes from $75,000 to $100,000, is assumed to be 0.11, in line with estimates for the elasticity of taxable income for federal taxes. This is likely to overestimate the tax revenues produced, as taxpayers at the state level have more options to minimize tax payments by moving income among states than they do at the federal level. Other estimates of state taxpayers responsiveness in these income ranges are as high as 0.4.

For taxpayers with incomes above $100,000, e is assumed to be 0.63, the estimate for state tax responsiveness provided by Gruber and Saez (2002).[35] If people are less responsive, the estimate of additional tax revenues will be too low. If they are more responsive, the estimate of additional tax revenues will be too high. The estimate is based on a sample of roughly 46,000 federal tax returns from different states for the years 1979 to 1990.

For those with incomes above $75,000, the threshold above which people face a higher tax rate, $\bar{z}$, is assumed to be $75,000, the income level at which Amendment 66 would raise the tax rate. To calculate z, the total federal AGI reported in each income category is divided by the number of filers in that category to produce the average before tax income to which the Colorado tax increase will be applied. The base tax rate, t, is assumed to be the existing flat tax, 0.0463. The change in the tax rate, dt, is the difference between the existing tax rate and the proposed one of 0.059, 0.0127.

It should be noted that the tax revenue that Colorado actually receives is not equal to 4.63 percent of the federal AGI, as the state allows a number of credits and deductions. The fraction of Colorado net tax

revenues to Federal AGI ranges from 0.0006 for those with federal AGIs less than $10,000 to 0.036 for those with federal AGIs at or above $250,000. As the highest income categories come closest to paying the current 4.63 percent tax rate, it is assumed that the incremental tax increase applies to Federal AGI directly, with no reductions for Colorado credits or itemized deductions. If the state continues to expand economic development credits, this assumption will result in tax revenue estimates that are too high.

These calculations were performed for each county listed (with a group of counties combined as the "Rest of State"), and the amounts for each county were summed to create a state total.

The range of estimated additional revenues from the proposed individual income tax increase shown for the individual counties was calculated by subtracting the likely change in tax revenues calculated above from the static result, the tax revenues that would be paid if taxpayers made no move to minimize their taxes and the reported Federal AGI in each income category. It also assumes that taxpayers paid Colorado exactly the amount of the tax increase. For those reporting Federal AGIs of $75,000 or less, this means that the maximum additional tax was calculated as (Federal AGI for the income group) * (the incremental tax increase of 0.0037). For those reporting Federal AGIs of more than $75,000 the maximum additional tax was calculated as (Federal AGI for the income group) * (the incremental tax increase of 0.0127).

Finally, the state total was calculated by summing the county and rest of state totals.

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