

**A Warning for All Who Would Listen:
America's Public Schools Face a Forthcoming Fiscal Tsunami**

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A 100-year era of perpetual per-pupil fiscal growth will soon slow or stop. The causes of this situation are far more fundamental than the current recession. Schools should start buckling their seat belts now.

This article has two major points. First, even when controlled for inflation, school spending has been increasing substantially for a century. Second, political and fiscal pressures will soon coincide to reverse this condition. Issues of productivity and performance will become paramount.

Historically, year over year public schools per-pupil, real-dollar revenues have almost always increased. Moreover, these added dollars have kept coming even when the economy (as measured by Gross Domestic Product—or GDP) turned down. The number of school employees relative to the number of students has followed a similar trajectory for past five decades. Only in the Great Depression and in the midst of World War II were there significant slowdowns in per-pupil spending and in added personnel, and these slow growth periods lasted only a short time.

Teacher salaries, while not benefitting proportionately from historic per-pupil revenue gains, increased more than 42 percent in constant dollars over the past half-century. Moreover, educators' working conditions, health benefits and retirement arrangements have become ever more commodious. Education's stable fiscal condition has stood in contrast to the volatility in virtually every other economic sector.

A unique set of constitutional, structural, financial and political arrangements has, up to now, ensured that school systems and professional educators are buffered from revenue losses when the economy declines. Other sets of state rules surrounding local school district budgeting procedures contribute to the opposite impression, making it appear to the public that schools are in a perpetual financial crisis.

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Such was the past. The future appears quite different; the nation's long-standing positive funding trend appears about to slow and possibly reverse itself.

The Obama Administration's stimulus injection of unprecedented billions in additional federal funding likely ensures that education's comfortably cushioned resource condition will continue for the current economic downturn.

However, the stimulus injection may have dramatically added to the federal function in education. Unlike ever before in history, the federal government now appears to be the fiscal flywheel protecting the nation's schools during economic downturns. This change has occurred with hardly any national debate.

Ironically, the federal government as a major funding partner may portend the end of automatic spending increases for schools. As school funding become more centralized, both at the state and federal level, it is forced to compete more intensely with other public sector services and is subjected to a far less favorable political backdrop. Whereas local school districts are often free to job future salary increases, pension liabilities, and retiree health care costs onto state authorities, the greater the federal and state funding roles, the larger these previously extraneous conditions become as funding obstacles.

Such fiscal dynamics, coupled with the long-standing static nature of student achievement, do not bode well for future school revenues. A new era of fiscal stringency is emerging and it may come quickly.

Part I: A Comforting Glance Backwards Through Education's Fiscal History

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For the past hundred years, with short exceptions during the Great Depression and World War II, America's public schools—after controlling for inflation—invariably have had more money and fewer pupils per employee in year two than in year one.

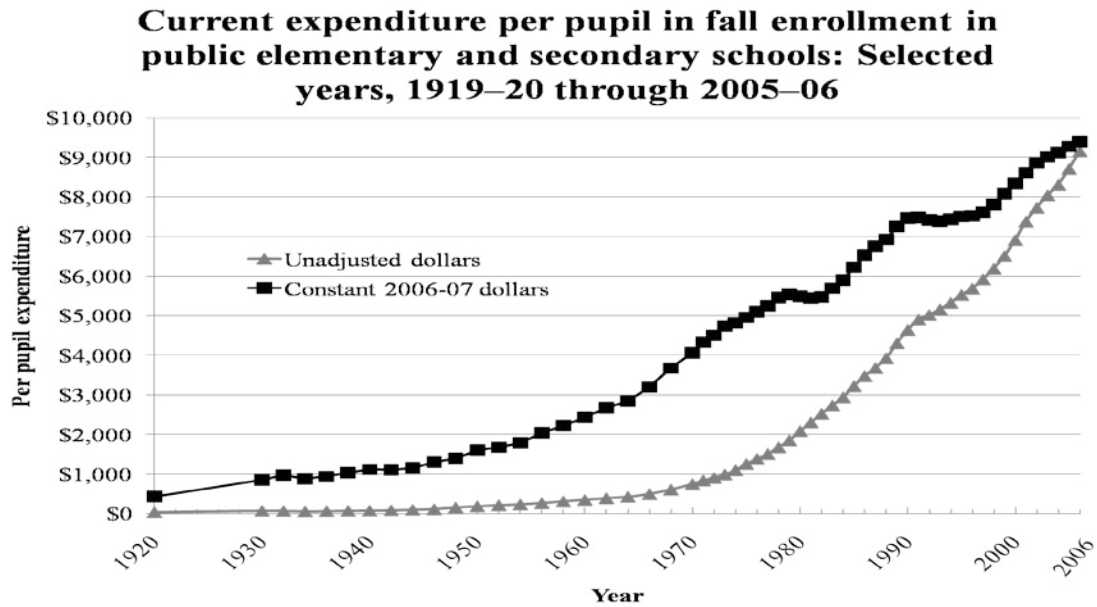
Episodically, school districts do become insolvent. States, on occasion, do have to step in and take over a district. California had a string of such costly and highly visible instances in the last part of the 20th century and in the first decade of the 21st century. The state had to elbow locally elected school boards aside and install all-powerful administrative overseers in large districts such as Oakland and Richmond.

Detroit Michigan is the poster child for similar activity in the Midwest. However, school district insolvencies are rare and most often are due to unusual individual instances of administrative or school board mismanagement and malfeasance, rather than from diminished revenues and systematic budget cuts.

The larger picture is far different. As seen nationally in Figure 1 and by classification of school district, (rural, suburban and urban) in Figure 2, America's public schools districts have long been on an upward per-pupil revenue trajectory. Moreover, teacher salaries, while not growing as rapidly have, with the exception of the enrollment decline and recessionary period of the late 1970's and early 1980's, also continually increased and have been essentially flat since 1985.

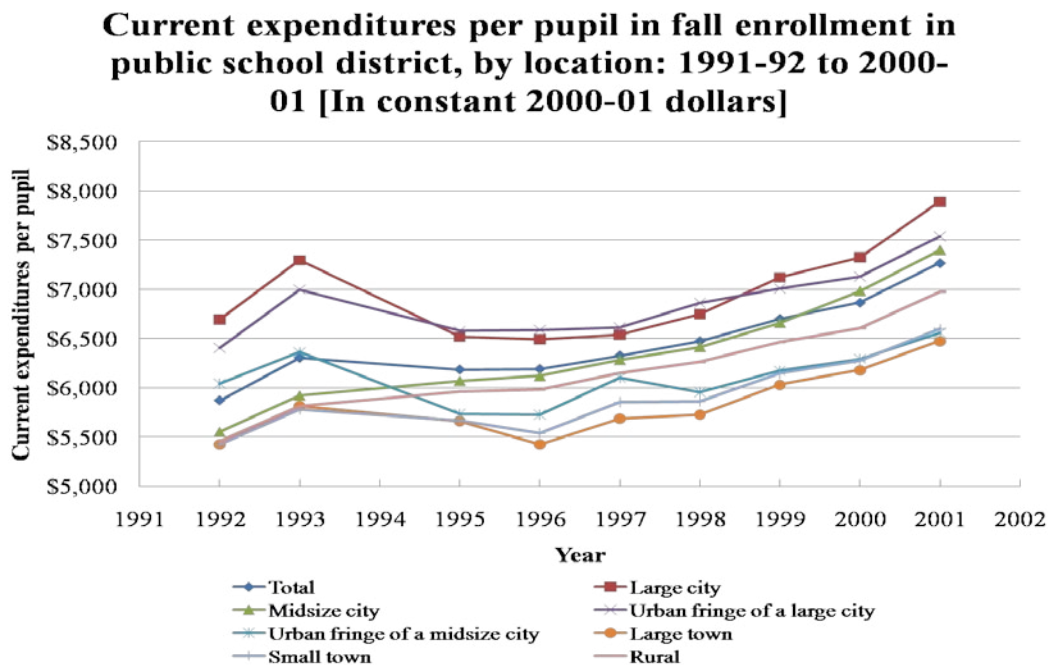
Finally, as displayed in Figures 3, 4, and 5 the number of employees, teachers, administrators and others has also continually increased, except during the above noted early 1980's enrollment decline and recessionary period, for four decades.

Figure 1: Historic Per-pupil Expenditure



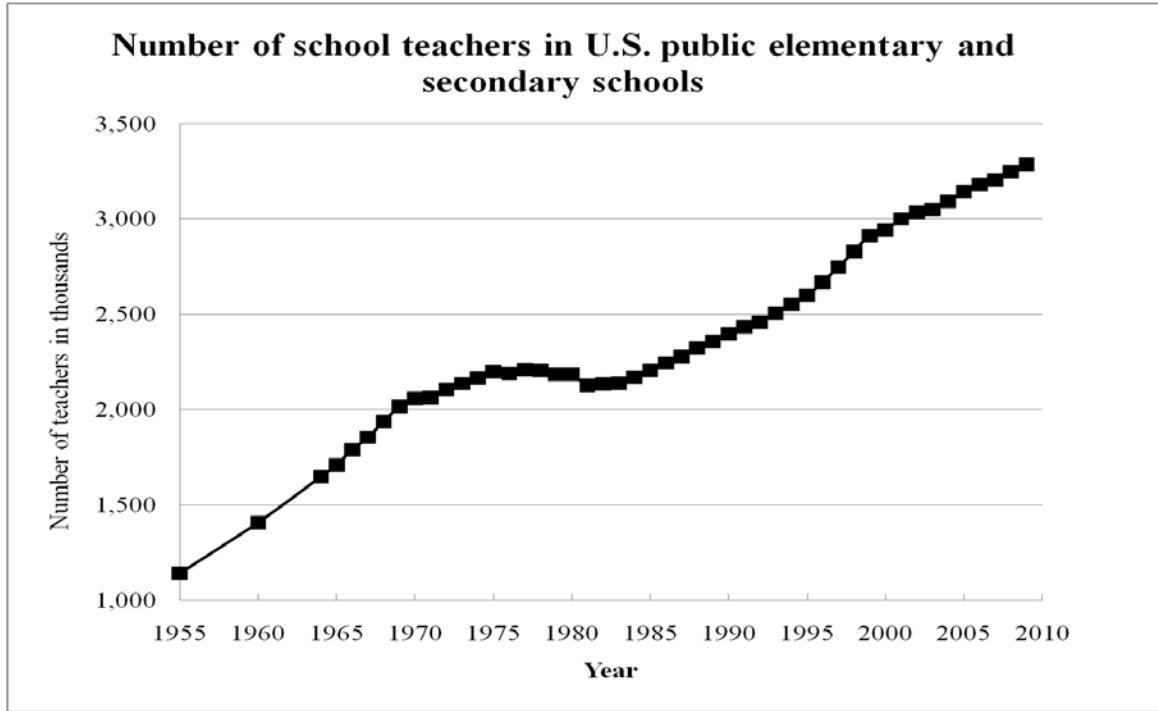
SOURCE: National Center for Education Statistics, 2008 Digest of Education Statistics.

Figure 2: Historic Per-pupil Spending by School District Type



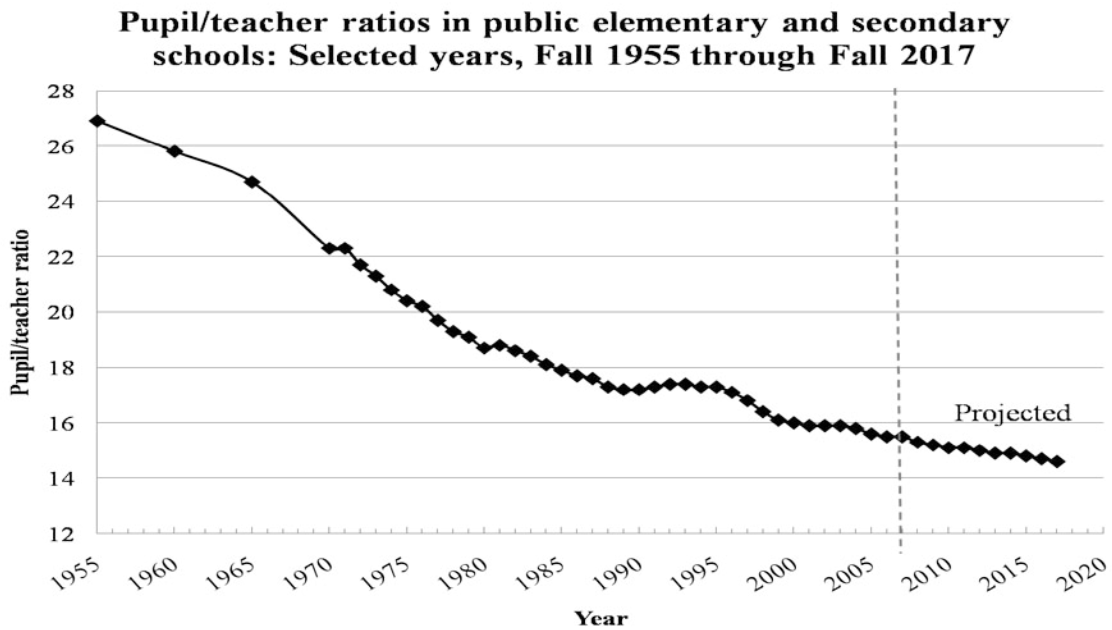
SOURCE: National Center for Education Statistics, 2004 The Condition of Education.

Figure 3: Historic numbers of school teachers in elementary and secondary schools.



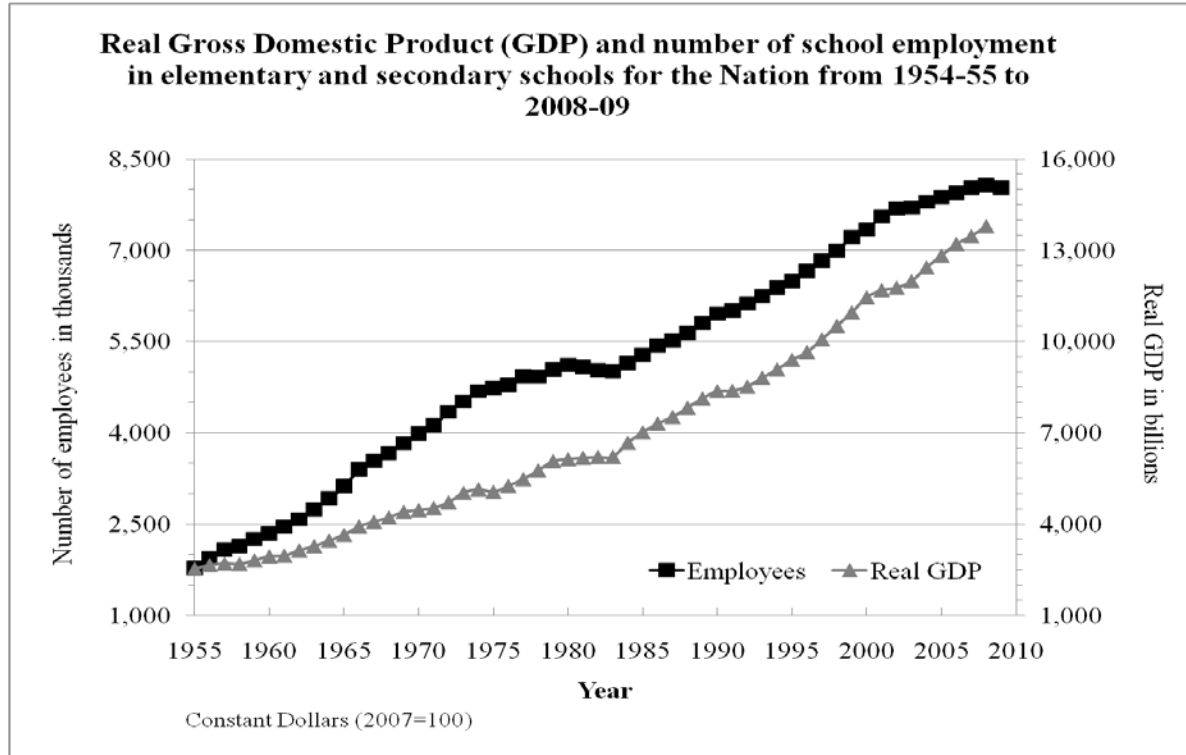
SOURCE: National Center for Education Statistics, 2008 Digest of Education Statistics.

Figure 4: Historic change in pupil teacher ratios



SOURCE: National Center for Education Statistics, 2008 Digest of Education Statistics.

Figure 5: Displays number of Elementary and Secondary Employees relative to growth in GDP over time



SOURCES: GDP data retrieved from National Economic Accounts, Bureau of Economic Analysis, April 9th, 2009; School employment data extracted on December 8th, 2009 from Bureau of Labor Statistics.

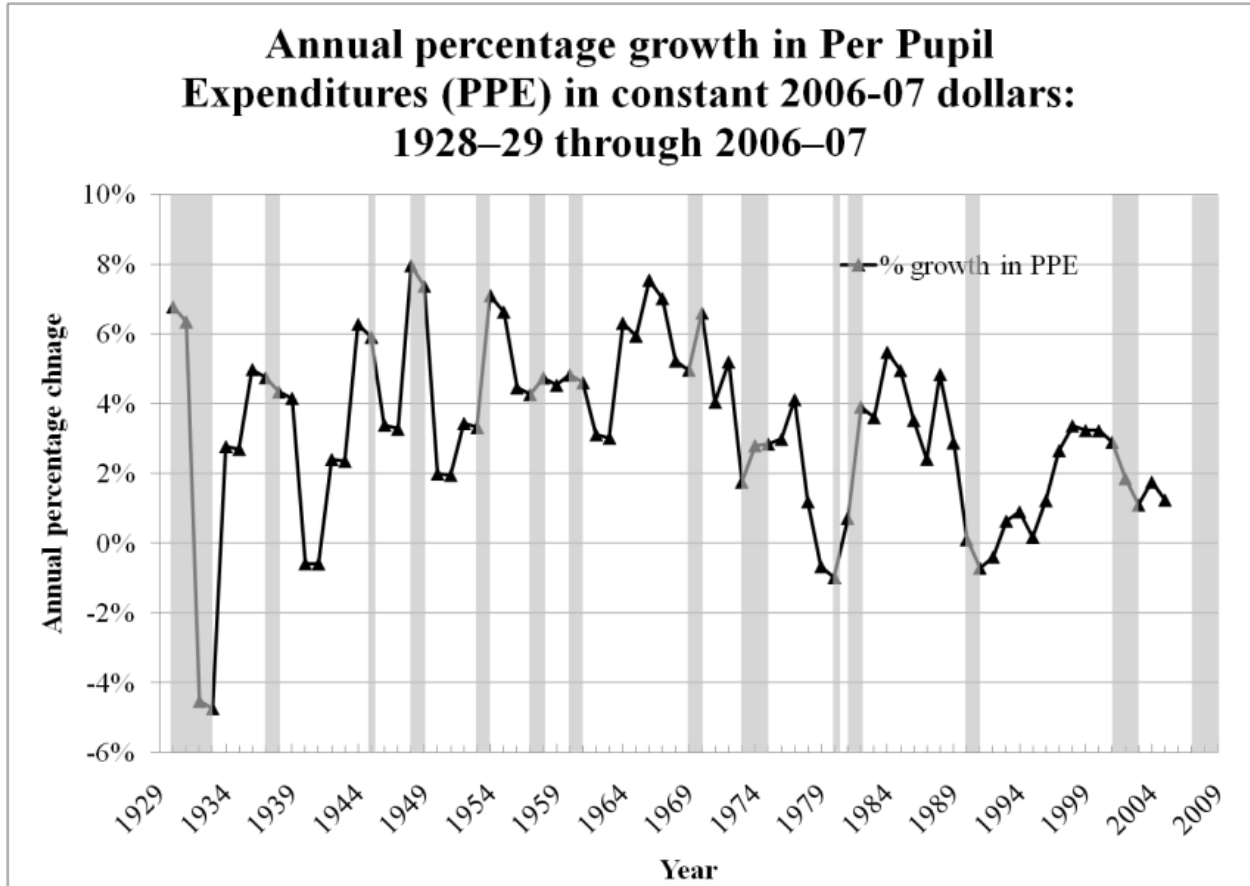
Why and How Is Education So Privileged?

Public schools have done well when the economy grows and, particularly when compared to other economic sectors, are remarkably insulated from economic downturns.

Figure 6 displays a 75-year historic pattern for per-pupil revenue change (percent year-over-year growth or decline) relative to Gross Domestic Product change (GDP in constant dollars). Here one can see that since 1929, there has been only two times in modern history, once during the “Great Depression” and once in the midst of World War II, that per-pupil spending declined.

Conversely, there have been eleven periods during which GDP declined, but mean total real per-pupil revenues increased.

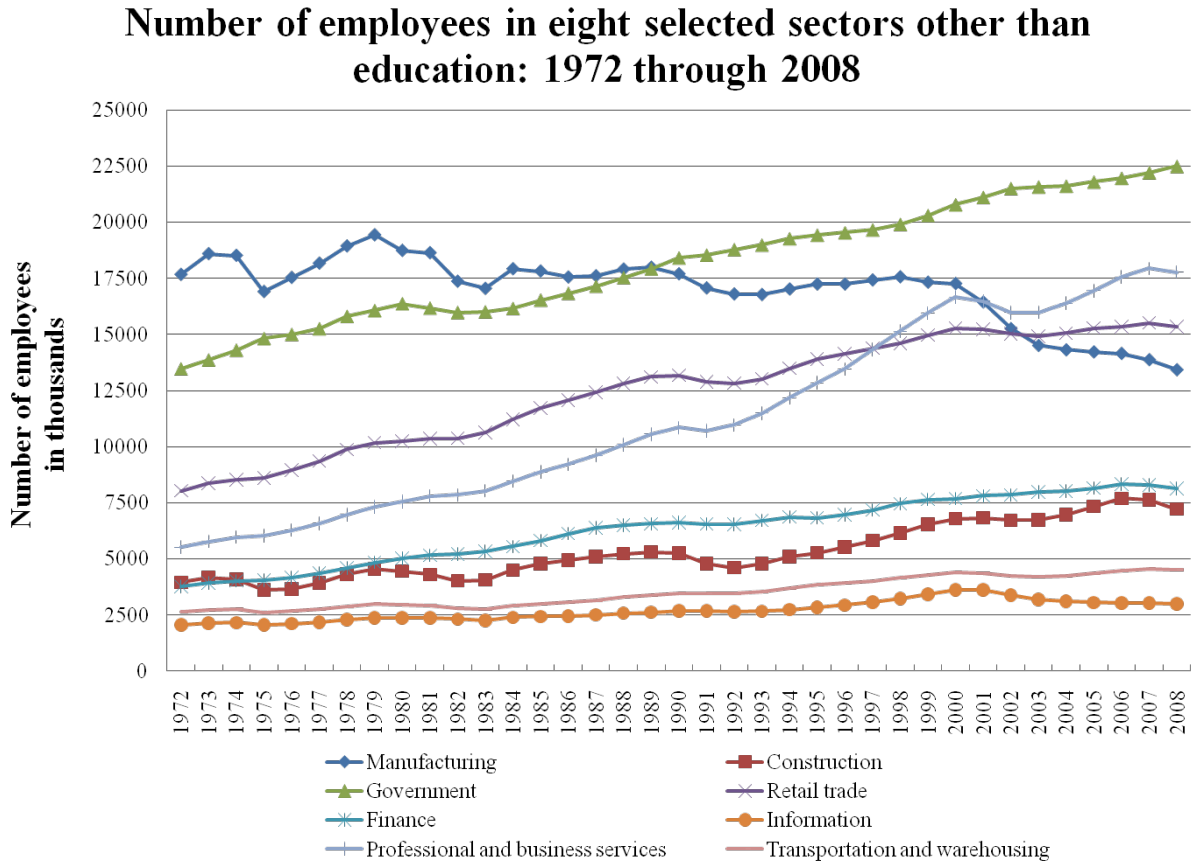
Figure 6: GDP and Mean National Per-pupil Expenditure Change Compared



SOURCE: GDP data retrieved from National Economic Accounts, Bureau of Economic Analysis, April 9th, 2009; US Business Cycle Expansions and Contractions, National Bureau of Economic Research. Retrieved on Nov. 9, 2009; National Center for Education Statistics, 2008 Digest of Education Statistics.

Figure 7 displays historic (1972–2008) employment information in nine selected sectors other than education—construction, finance, government, information, manufacturing, professional and business services, retail trade, transportation, and warehousing.

Figure 7

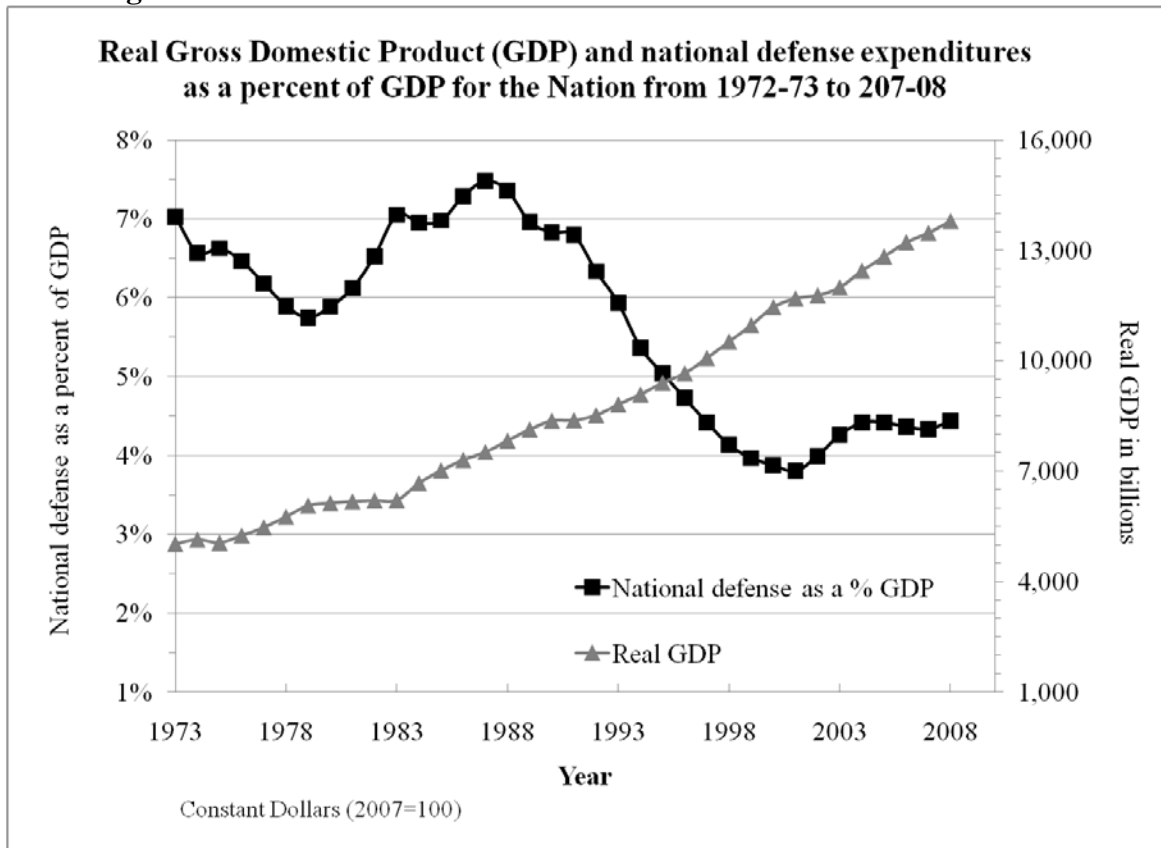


SOURCE: Data extracted on April 10th, 2009 from Bureau of Labor Statistics.

Here one can see that employment levels are linked to economic conditions and, except for government (that includes educators), the historic employment trend in other sectors is a modest upward line. Contrast this picture with the perpetually steeper slopes in previously cited Figures 3 and 5 regarding education employment,

Figure 8 displays almost four decades of defense appropriations relative to real GDP. Here one can see that from 1990 until 9/11/2001, Pentagon appropriations occupied a falling share of real GDP and, even though recovering since the inception of the “War on Terror,” have not begun to reclaim their historic share.

Figure 8



SOURCE: GDP data Retrieved from National Economic Accounts, Bureau of Economic Analysis, January 24th, 2009.

An interlocking and reciprocally reinforcing set of conditions, historically, has protected education from the direct effects of macroeconomic ups and downs. These conditions include (1) education's privileged legal status within most state constitutions, (2) schooling's almost unique decentralized operation and diffuse revenue generation structure, (3) local political dynamics and institutions that generally foster a favorable fiscal environment for public schools, (4) a multi-tiered responsibility for funding schools with complicated intergovernmental funding incentives and (5) reliance upon inelastic tax sources, property, at the local level. Almost no other economic endeavor enjoys such a spectrum of insulating conditions. However, as described in the second part of this paper, many of these conditions appear to be eroding and will, likely, be less able to buffer public school revenues in the future.

Constitutional Privilege

The United States Constitution is silent regarding education and schooling. This omission¹, taken in tandem with Tenth Amendment prescriptions, reserving unspecified powers to states, the people, and state-level constitutional provisions, renders education principally a state function. Moreover, state constitutions actively assume responsibility for provision of schooling,

State constitutional provisions are generally of three kinds. They assign the legislature a responsibility for provision of an education system that is (1) “Thorough and Efficient,” (2) “General and Uniform” or (3) a product of the legislature’s “Paramount Duty.”

The precise language of the state constitution is not as important as is the explicit specification or acceptance of the state’s responsibility for providing education. Criminal justice, transportation, welfare, public health, higher education, recreation and even public safety are not privileged in the same degree as education. A state can decide to create or abolish numerous activities, for example, prisons, highways, parks, welfare payments, or colleges. It cannot decide to abandon its K-12 education system. Indeed, sometimes a state, almost regardless of the economy, is hamstrung when it comes to school spending. Several states have constitutional provisions that prevent less being spent on education in any one year than in a prior year. In addition to constitutional and statutory protections for state education systems, courts have frequently made clear that education comes first when it comes to appropriating funds².

Decentralized Operation

No modern nation has an education system that is more decentralized or multi-tiered than the United States’. The consequence is that American school systems are buffered structurally and

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politically against resource competition more than most any other state or local government service.

Conceived in the colonial period and evolving well into the 21st Century, the United States has relied upon fifty distinct state education systems that, in turn, delegate selected dimensions of operational authority to more than 13,000 local school districts. The majority (80 percent) of these local districts have property taxing authority. Those that do not have such taxing power rely upon county or municipal government to generate their required local revenue share.

Local school districts are overseen by boards of education. Most of these (eighty percent) are comprised of elected members. The remaining are appointed by mayors, city councils or other elected authorities (such as the Court of Common Pleas in Philadelphia). However, regardless of membership selection procedures, these boards place education in a privileged special government position. Most publicly provided services must depend for revenue upon more general governments, and are subject to the resultant more intense intersegmental competition for resources that such arrangements imply.

Political Protection

Political transaction costs privilege parents and public school system employees over citizens, particularly citizens who do not have children enrolled in public school. School policy and operational matters can be complicated. It takes a great deal of personal time to become informed regarding details of issues such as racial desegregation, charter schools, curriculum content, testing, graduation standards, geographic placement of a new school and the configuration of

attendance boundaries. These are illustrative of issues with which local school boards routinely deal and that directly affect parents and educators more than they do other citizens.

Hence, school district politics, including those surrounding funding issues and taxation, tend to be dominated by self-interested coalitions of parents and school district employees. For these constituents, the costs of becoming informed and actively participating in school district decision-making are low relative to the benefits to be gained. Hence, it is this employee-parent coalition that tends to dominate local school district school board elections and ballot measures regarding school funding. Their self-interest and favorable predisposition provides schools with added political protection against budget cuts when the overall economy turns down.

Opponents of added school spending or higher taxes for schools can be mobilized and, on occasion, dominate an election. This was dramatized in the June 6, 1978, enactment of California's famous tax limitation provision, Proposition Thirteen.³ Usually, however, incremental costs of proposed school budgets involve only a fractional addition to local property tax rates. Property owners may find themselves projected to pay but a hundred or so additional dollars in the forthcoming year. Hence most taxpayers, who are not immediate benefactors of schooling or school employment, are unwilling to assume the high transaction costs involved in actively opposing added or sustained school spending at such a low level.

High transaction costs partially explain general citizen apathy toward school spending. There are several more active political elements, however, that favor school funding. Educator employees, those with the most direct interests in sustaining or elevating school spending, are frequently well organized politically. Employee groups can offer sympathetic candidates more electoral campaign resources than most any other school related constituency. Union members are themselves probably the voters most predisposed actually to turn out at an election and vote.

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These dynamics provide schools and school spending with local level advocates that are long lasting, sophisticated politically and well-resourced for electoral campaign purposes.

There is an additional political dynamic contributing to the preservation of local school funding levels. A frequent metric, however misguided, for measuring school quality is the amount of money a district annually spends per pupil. Many posh suburbs actively compete on this dimension, proudly proclaiming their per-pupil spending status ranking relative to competitor districts. Citizens, parents and others who have purchased homes in such districts perceive the value of their property linked to high per-pupil spending levels and accordingly acquiesce to advocate implorations for more money.

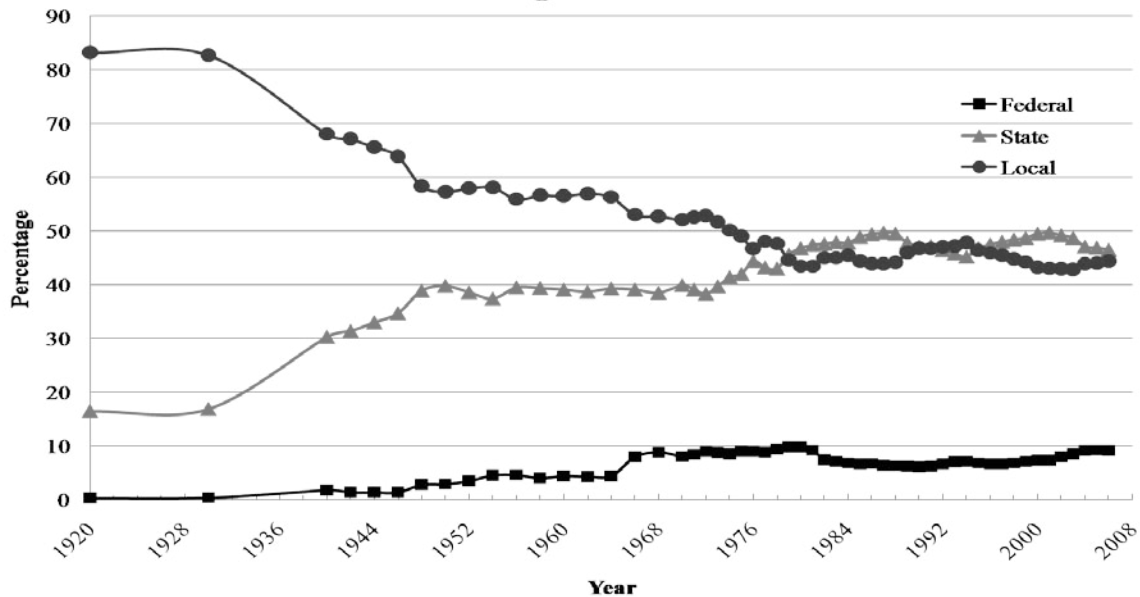
Finally, a reader should understand that in most states, education employee unions have the right to bargain with school boards and to embed collectively derived agreements regarding salaries and working conditions into legally enforceable multi-year contracts. These extended year contracts, often bridging or outlasting economic recessions, act as an inertial flywheel to smooth revenue reduction threats.

Multiple Revenue Sources

The distribution of revenue raising responsibility over three levels of government, federal, state and local, contributes to education revenue stability. Schools are highly resource dependent, but they are not dependent on a single source. Figure 9 displays the three tier longitudinal mix of government-contributed education revenues from 1920 through to 2006.

Figure 9

Percentage distribution of revenues for Public elementary and secondary schools, by source of funds: Selected years, 1919-20 through 2005-06



SOURCE: National Center for Education Statistics, 2008 Digest of Education Statistics.

There are three trends of note in this figure. First, one can see that the initial pattern was dominant local school district support, with states and the federal government being only minor partners.

By convention, local district and municipal, revenue support has been generated through property taxation. Historically this arrangement has assisted in insulating schools from economic ups and downs. Property taxes are relatively inelastic when the economy swings up. It takes assessors two to three years to capture escalating property values and, thus, to give school districts the full measure of benefit from economic growth and housing inflation. However, consistent with the sustained revenue thesis in this article, this same inelasticity protects schools during economic downturns when property owners continue to pay taxes, even if their income is reduced and where assessors do not reduce property values in a timely manner.

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The second trend begins in the Post World War II era with state funding supplanting and matching or slightly exceeding local district revenues. This pattern appears to have resulted, at least partially, from the “equal protection” legal litigation movement launched in the 1970’s in which state courts emphasized that once-rampant intra-state spending inequalities were the states’ responsibility to rectify. Remedies to this problem could have taken various paths that would have left local funding as the principal revenue source for schools. However, state legislatures chose another course of action, providing funding centrally from state coffers and reducing the relative contribution of local school districts.

This is a two-sided sword. State revenues dampen inter district per-pupil wealth inequalities. However, state revenues, generally from sales and income taxes, are also more closely linked to economic fluctuation and more volatile than property tax receipts. Also, added state funding places education in a more competitive resource arena. Local school boards concern themselves, and focus their taxing authority, only on education issues. State legislatures, even acknowledging education’s privileged constitutional position, have to consider a far wider range of services in deciding who gets what?

The third trend of note pertains to the federal contribution. Even prior to ratification of the U.S. Constitution, Congress contributed to education policy. This began with 1780’s Land Survey Ordinances specifying resources in newly opening territories for the support of local schools, continued with enactment of vocational education programs, passage of so-called “Impact Aid” to compensate local school districts for lost revenue and enrollment consequences stemming from federal land ownership and program activity, and a 1958 response (the National Defense Education Act-NDEA) to the surprise Soviet Union launching of the world’s first orbiting satellite, “Sputnik..”

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In 1965, The federal government launched its most significant education endeavor with the Johnson Administration initiated Elementary and Secondary Education Act (ESEA). Appropriations from this legislation pumped federal spending all the way to the then unheard level of 8 percent of total school revenues. The currently controversial “No Child Left Behind Act” (NCLB) is a 2001 addendum to the ESEA. This statute did not dramatically increase federal funding for education, at least as a percent of total local, state and federal revenue. It did, however, usher in a completely new era of accountability in education, and an attendant quantum of educator resistance.

However, even if of long standing and escalating influence, the federal contribution has seldom been of much revenue consequence. Prior to 2009, the highest historic federal contribution rate has been 10 percent. As will be explained later, the Obama Administration’s economic stimulus plan (\$44 billion for states and schools now flowing under the American Recovery and Reinvestment Act (ARRA) of 2009) dramatically alters this trajectory, and contributes to a more evenly balanced revenue portfolio for schools. The federal government is less and less a junior partner, and more and more an equal partner, in the tripartite American method of funding schools

Indeed, the 2009 ARRA stimulus package may portend of an entirely new source of fiscal stability for America’s schools. If the economy turns down, the federal government may be the major fiscal backstop for schools.

Why the Ever-Present Sense of Fiscal Doom for Schools?

If school revenues enjoy such remarkable stability, why the persistent appearance of fiscal calamity? There are at two related answers to this question: (1) media dynamics and (2) protectionist personnel provisions.

School district budget cycles are imperfectly synchronized with legislative appropriations processes. It is true that the Fiscal Year for state and local governments routinely begins on July 1. However, it is increasingly rare that legislative bodies enact spending bills much in advance of this date. School districts are legally obligated to have balanced budgets. They cannot balance anticipated expenditures through deficit financing. As local school boards begin their winter and spring budget planning, in the face of what they and their administrative officers perceive as state and federal fiscal uncertainty, they publicly discuss, as state sunshine statutes mandate, their contingencies for budget cutting.

In that 80 percent of school district budgets are absorbed in personnel costs, then, quite naturally, when pressed fiscally, local school boards give consideration to personnel cutbacks and salary freezes. State statutes and collectively bargained employee contracts make it necessary to inform school employees, usually in April or May, if there are to be layoffs. School districts sensing financial vulnerability and needing to comply with personnel notification deadlines, issue layoff notices and hold mandatory public hearings, even if the probability of actual personnel layoffs is slender. Such threatening publicity triggers a media frenzy, alarms employee and parent advocates, and exacerbates a prevailing public perception that, yet again, schools are headed for fiscally stringent times.

The reality of resource reductions is remote. However, it is a rare reporter, a teacher who receives a layoff notice (however unlikely to be acted upon), or a parent who was expecting to

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have the highly regarded but layoff vulnerable Ms Jones for her third grade child in the fall that sees the matter in historic perspective or with objectivity.

A Disconcerting Look Into the Future

Education's short run fiscal prospect is likely quite different from the longer run outlook. The short run, through 2011, will probably not be terribly different from that which school districts are now experiencing. If anything, money matters may improve somewhat as state and local government fiscal conditions improve.

However, the longer term, beginning in or near 2012, may be characterized by vastly different and more perilous conditions. This fiscal reversal will have little to do with the outcome of the Presidential election scheduled to take place in November of 2012. Indeed the structural conditions to be described below will likely impose a negative impact on school revenues regardless of electoral outcomes.

Public frustration with four decades of stagnant school achievement, the apparent unproductive increasing labor intensity, the slow pace of infusing instructional technology into classrooms, overall declining education productivity, frightening financial liabilities associated with current and future retiree educator pensions and health care obligations, added political competition from other publicly funded services, increasing centralization of revenue generation, the diminishing number of households with school-age children and the overarching pressures of soaring national debt portend of a downwardly spiraling funding dynamic that may be more powerful than any partisan electoral forces. Future Presidents, Governors, Mayors, school board members and superintendents will likely face a perfect storm of fiscal obligations, revenue restrictions and resource competition unseen for a hundred years.

The Near Term: Continued Revenue Stability

In the years, 2009-2011, aforementioned revenue stabilizing factors likely will protect schools and per-pupil revenues. This prediction is made particularly probable by the unprecedented congressionally authorized ARRA stimulus recovery package for education. The dramatic escalation of the federal government's revenue contribution, to close to 15 percent of education's national spending total, almost assures that, when finally compiled, 2008-2009 per-pupil national mean revenues will not have declined, and if they did, it will not be by much.

There is no effort here to dispute the reality of the current recession. State and local tax receipts, heavily dependent upon consumption and income, were down 4.6 percent for 2009 over the prior year. Retail sales are down. Housing foreclosures and personal bankruptcies continue to climb. Purchasing managers anticipate continued cutbacks in orders. Consumer confidence is still close to a three-decade low.

However, on a more positive front, aside from President Obama's efforts to jawbone the economy upward, the federal government's monetary and fiscal recovery plans have been enacted into policy with remarkable speed. Congressional willingness to subsidize the economy has never been higher. The international community has coordinated and elevated stimulus spending as never before. In mid 2009, the U.S., European and Asian stock markets seem to have bottomed out and turned up. Job losses, while continuing, are slowing. Durable goods inventories are becoming slender. Nationwide unemployment has stabilized near 10 percent and gives no indication of coming close to catastrophic Great Depression rates.

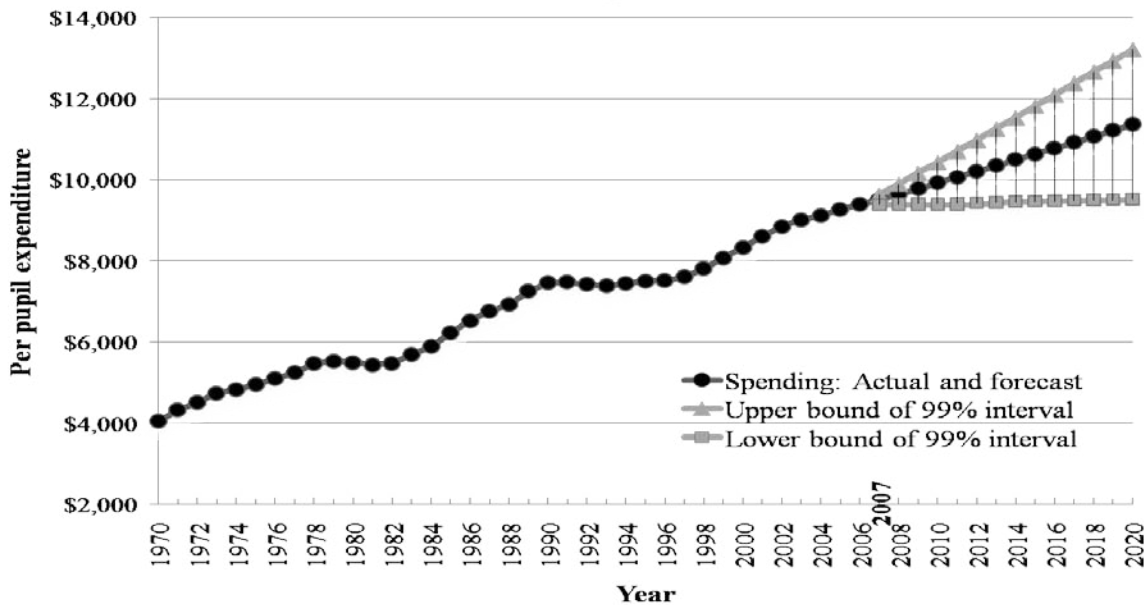
Balancing these factors leads to the projections in Figure 10a and Figure 10b. This display provides bounded estimates of near future national total operating revenues, by per pupil

and in the aggregate. The major assumption here is that the federal government K-12 contribution will approximate \$90 billion. The \$37 billion in the stimulus package intended to replace reduced state and local education revenue will be sustained at least another fiscal year and continue to cushion what would otherwise likely have been the first per-pupil spending reduction in sixty years.

The probability that the recession will end quickly and result in a dramatic upward increase in GDP and school spending seems remote. The lower bound of the projection, sustained school spending would seem to be the likely outcome.

Figure 10a

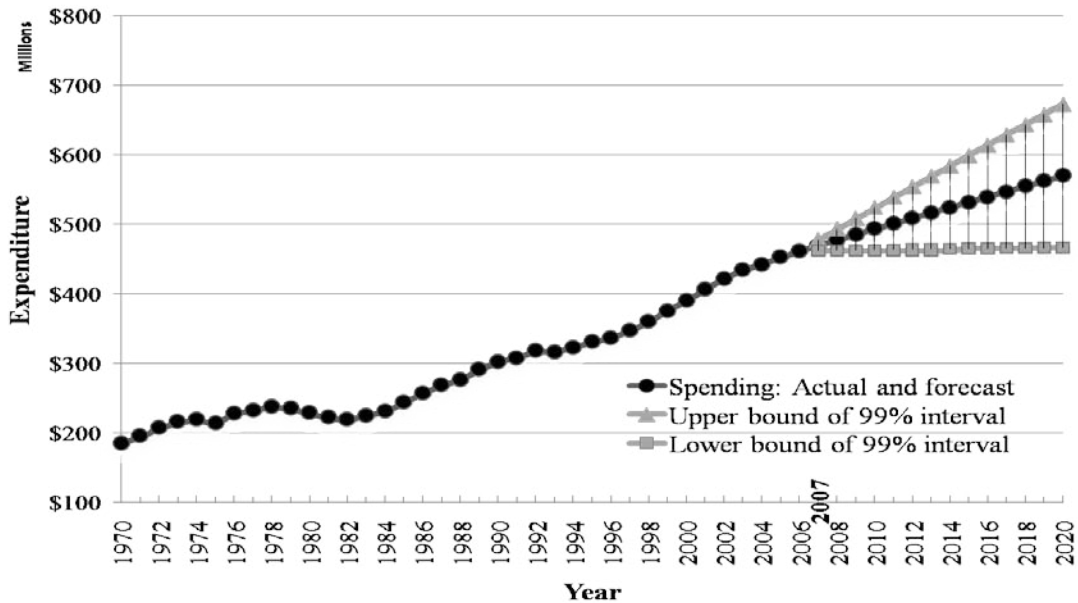
Current expenditures per pupil in public elementary and secondary schools: Actual and forecast, 1970 through 2020



SOURCE: National Center for Education Statistics, 2008 Digest of Education Statistics.

Figure 10b

Curent expenditures in public elementary and secondary schools: Actual and forecast, 1970 through 2020



SOURCE: National Center for Education Statistics, 2008 Digest of Education Statistics.

Education’s Longer Run Fiscal Future is Far Less Optimistic

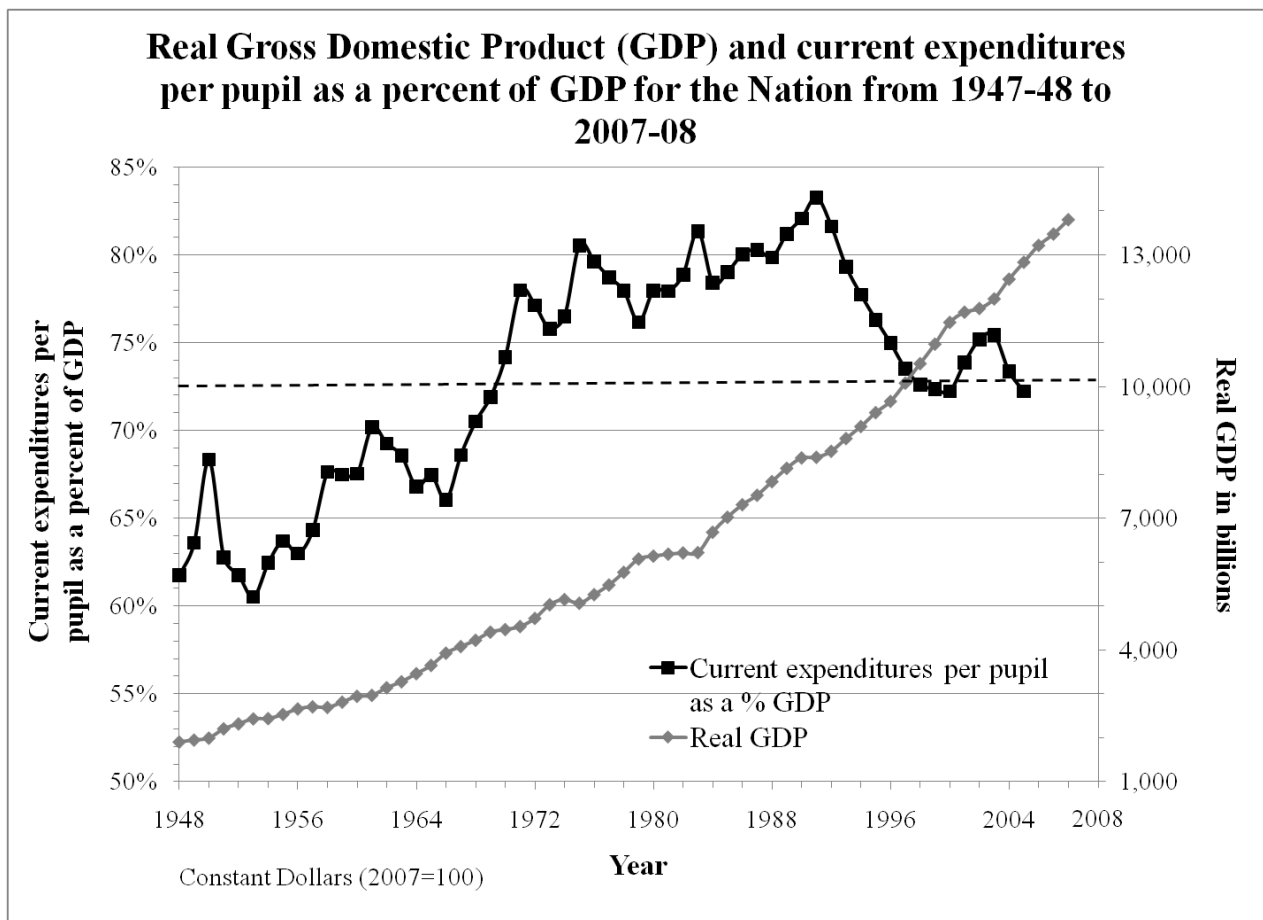
Like a tsunami amassing momentum far out at sea and not yet visible from land, a set of ominous economic conditions has been building that portends a far less fortunate fiscal future for America’s public schools. The effects of the tsunami are already starting to be felt, even if the full tidal impact has yet to emerge.

Early Warnings

Beginning in the last decade of the 20th Century, even as mean national per-pupil revenues continued to trend upward, as of the 1990’s public education ceased to capture its historic share of the fiscal dividend resulting from GDP growth.

Figure 11 displays a sixty-year perspective (1947 to 2007) of national mean per-pupil expenditures as a percent of GDP. (In that mean per-pupil spending is a small dollar figure relative to the huge number for GDP; the quotient is a very small percent. Thus, it is the trend line that matters, not the actual percent) Here can be seen that up until the 1980's, education spending was capturing an ever larger per-pupil share of GDP growth. In the 1980's, this trend reached a plateau. In the 1990's, it actually reversed with inflation adjusted national mean per-pupil spending occupying a lower and lower percent of GDP.

Figure 11



SOURCE: GDP data Retrieved from National Economic Accounts, Bureau of Economic Analysis, January 24th, 2009; National Center for Education Statistics, 2008 Digest of Education Statistics.

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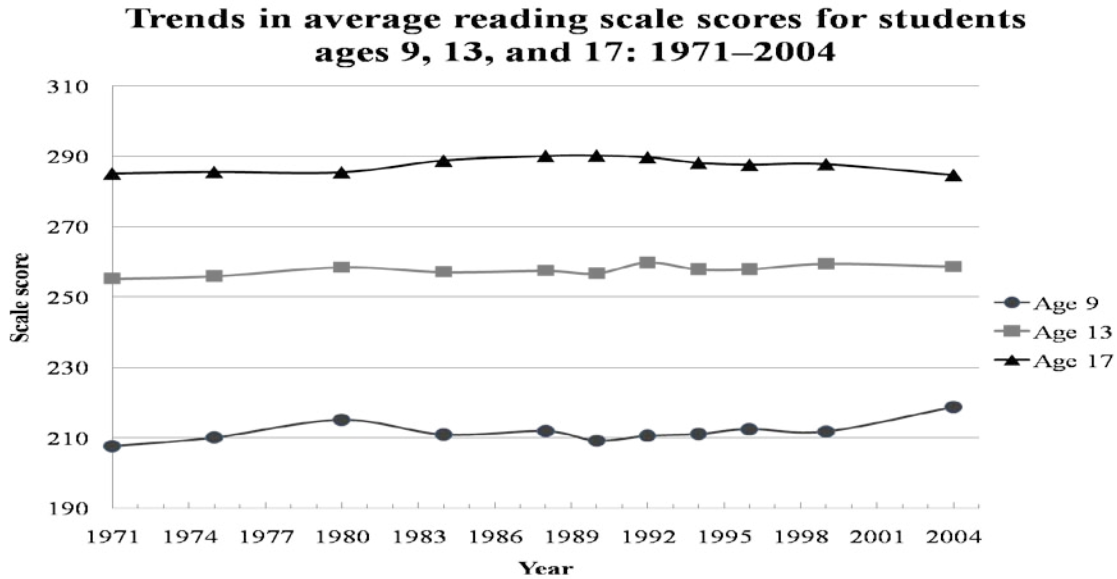
Public Intolerance Regarding Stagnant Student Achievement

Reduction in GDP share may be an early warning sign. However, more ominous signals are flowing from other sources. The United States expects much of its schools. Preparation for career, college, citizenship, personal health and hygiene, racial and gender equity, leisure and aesthetic appreciation, social mobility, scientific sophistication, safe driving and sex, alcohol, drug, reproductive and environmental awareness are all part of the booming buzzing and sometimes antithetical public discourse that results in assigning purposes to the nation's schools. America solution to a public policy issue is to add a course to the public school curriculum. The consequent spectrum of purposes impedes easy appraisal of the system's outcomes.

However, regardless of the range and complexity of purposes, there are two fundamental dimensions on which schools must maximize performance in order to make progress toward the hierarchy of other desired education outcomes. These fundamental activities are (1) children learning to read and (2) students staying in school. When viewed longitudinally, America's schools have not done well on these dimensions.

Despite sustained upward revenue growth, NAEP reading scores have been level for four decades.

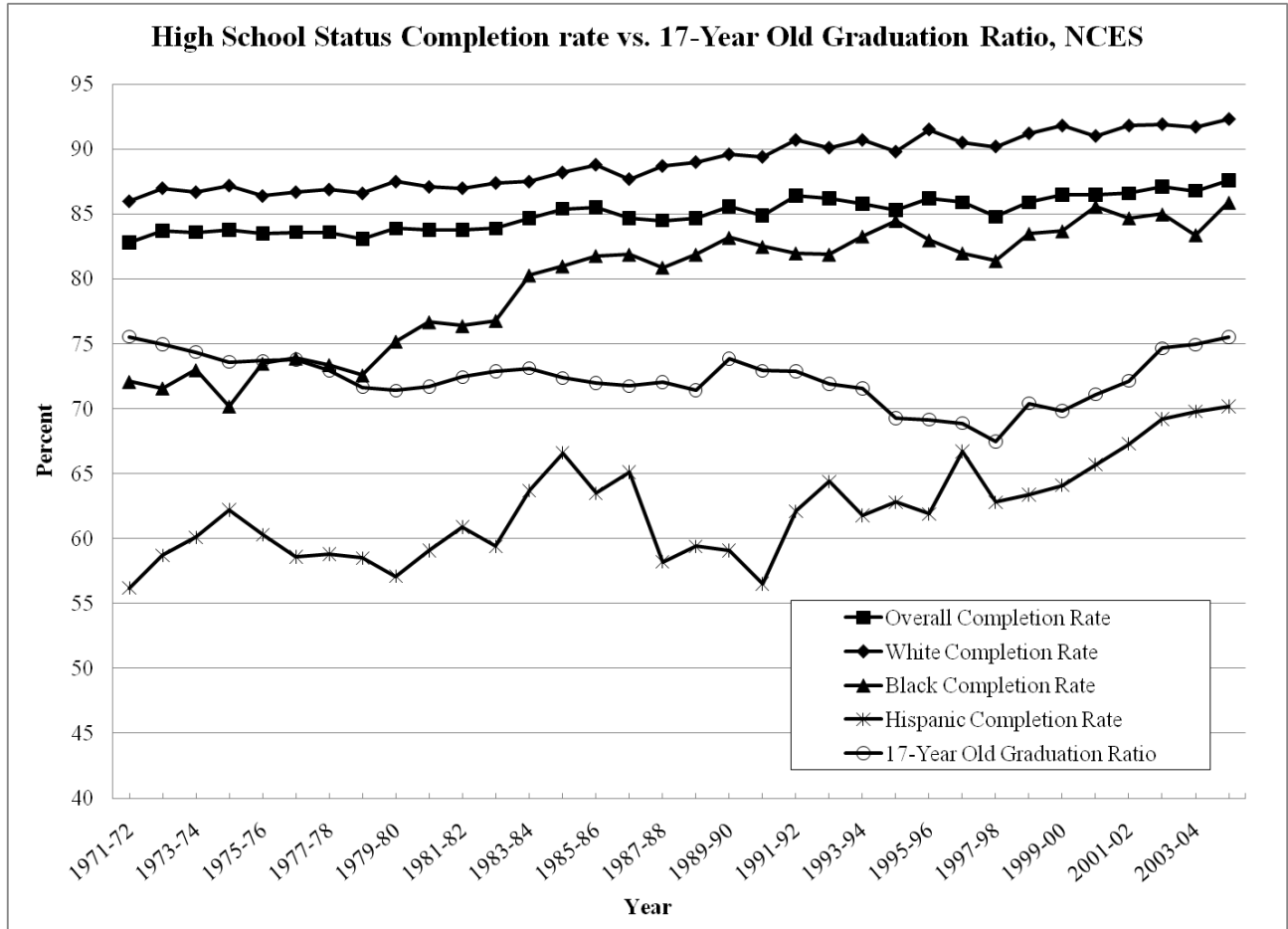
Figure 12: NAEP reading scores over time



SOURCE: National Center for Education Statistics, 2004 National Assessment of Educational Progress.

Graduation rates, as recently calculated by Nobel Laureate economist James Heckman, display the same regrettable pattern. For a half century, nearly a third of the nation’s high school students have failed to graduate. Many of these subsequently obtain high school equivalent training, such as the GED. However, schools themselves have somehow failed each year in retaining more than a million adolescents.

Figure 13: Heckman calculated high school graduation rates.⁴



SOURCES: Reproduced from NCES publication "Dropout Rates in the United States: 2005" (Laird et al, June 2007); National Center for Education Statistics, 2004 Digest of Education.

What explains this stagnant condition? The reasons are varied and complicated and cannot be treated with justice here. Suffice it to proclaim that the inability of the public education system to elevate student achievement will assuredly trigger ever increasing political pressures for reforms.

Matters are Changing

There are reasons to be guardedly optimistic that public schools are adapting to the new global reality and grappling with the new achievement challenge. Increasing numbers of state are

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independently adjusting their learning objectives and achievement goals upward. There is an expansion and political acceptance of Charter Schools. Approximately twenty percent of the nation's classroom teachers are now paid by means measuring performance, in addition to or in place of the conventional single salary schedule. Technology, while still not offering a silver bullet, appears to be creeping into the interstices and margins of schooling through means such as distance learning and private sector marketed new curricula.

The question is whether or not these or a combination of these changes will be adopted with sufficient speed and intensity to preserve the resource privilege that public education has long held.

The Growing Issue of Shrinking Productivity

The aforementioned stagnant achievement has occurred despite the investment of billions of dollars for added education personnel. Figure 5 (see page 7) compares education personnel growth to enrollment trends. There is nothing new here, but one can readily see that increases in educator employment outstrip growth in numbers of enrolled students. At some point, decision makers have to question whether or not this strategy should be sustained.

Other economic sectors have had great success, have gained significant productivity, by substituting capital for labor. Communication, agriculture, finance, manufacturing have all become much less labor intensive and much more dependent upon technology to provide services. To date, education has been remarkably impervious to such changes.

Unfunded Financial Obligations

Public sector employees generally and education employees in particular are typically provided with generous fringe benefits, retirement plans and health care. Health care is expensive for those who are currently employed. It is also expensive for those who have retired. Pensions in education are said to be heavily back loaded. That is they do not provide much benefit for those who have been employed for a short time. However, for those teachers and administrators willing to be patient and remain for a lengthy time in a school system or state pension plan, the benefits are generous when compared to private sector employees in comparable positions.

The problem is that school districts and states have not been setting aside sufficient funding fully to cover these employee and retiree pension and health obligations. There is a big bill coming due. Robert Novy-Marx and Joshua Rauh estimate unfunded pension systems liability to be approximately \$3 trillion, possibly as high as \$5 trillion⁵. Clark estimates unfunded teacher retiree health costs liability to be in the range of \$0.5 to \$1 trillion. All other public employee retiree health cost liability are probably the same amount or higher.⁶

Resource Competition

Paying interests on and striving to reduce the \$13 trillion national debt, ensuring Social Security is fiscally stable, funding health care needs of an aging, obese and diabetic population, addressing the nation's aging physical transportation and waste infrastructure, converting the economy to an ecologically sound basis, buoying banks and other fragile financial institutions, bailing out fundamental industries such as automobile manufacturing and sustaining the war on terror are increasingly intense competitors for public dollars. What the total bill is for the foregoing list is difficult to say. However, it is not difficult to see that the aggregate consequence

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of the foregoing assuredly will have a dampening effect on allocations to current operations such as the support of schools.

*Intensified Politics*⁷

For much of the 20th century, education had a protected revenue base. Most school dollars were generated from local property taxes. Here education held a special position. However, as plaintiffs have successfully pursued equalization suits, a larger and larger share of school spending has shifted to state sources. Local governments depend upon property taxes. These are resilient in times of economic duress. States depend upon income and sales taxes, revenue source much more tightly linked to economic ups and downs. As education shifts from local to state and federal funding, it forfeits its privileged revenue base, finds itself in competition with added sectors for scarce resources, and is more vulnerable to the winds of the larger economy.

Increasingly Unfavorable Demographics

There is an additional demographic threat to public school's politically protected resource privilege. Many of the contemporary resource resiliency arrangements were politically promulgated in the 1960 and 1970, at the height of the Post World War II "Baby Boom." In 1963, the highest point in history, 57 percent of the nation's households had children under age 18 at home. By 2008, this figure had fallen to 46 percent and was still dropping. Moreover, the number of children at home had itself dwindled to an average of 1.8 per female. Finally, only 36 percent of households enrolled or were intending to enroll their children in public schools.

The political base for public education is shrinking. The competition for resources from other sectors, for example, the now aging Baby Boomers, will assuredly imperil schools' historic resource privilege.

Conclusion

Public schools have enjoyed a century-long period of relative full funding. Year over year per pupil spending, even when controlled for inflation, has climbed ever higher, as have teacher salaries, fringe benefits and the total number of school employees. An emerging coincidence of unfavorable fiscal and political conditions suggests that this era of plenty is about to reverse itself. A new era of intense public policy concern for education efficiency and productivity is about to begin.

¹ The absence of education or schooling from the Constitution appears not to have been a frivolous omission or unconscious lapse of Constitutional Convention consideration. At the time of the Constitution's framing, most of the soon-to-be states' constitution's already had provisions by which the state would assume responsibility for education.

² See *Campbell County v Wyoming*, *Serrano v Priest*, *Seattle v Washington*, or *Small Schools v McWherter*.

³ A seldom recognized irony is that in the school year immediately following enactment of proposition 13, an overwhelmingly popular initiative that withdrew \$5 billion in tax revenues out of the state's public economy, public schools in California received more per pupil than in the prior year. California had a seldom revealed (Governor Jerry Brown protected) \$7 billion state surplus upon which the legislature could draw to compensate for local property tax revenue losses.

⁴ Heckman, J. J. and LaFontaine, A. P., (2007). *The American High School Graduation Rate: Trends and Levels*. NBER Working Papers 13670, National Bureau of Economic Research, Inc.

⁵ Novy-Marx, Robert, Rauh, Joshua "The Liabilities and Risks of State Sponsored Pension Plans," *Journal of Economic Perspectives*, Volume 23, Number 4, Fall 2009, page 191-210.

⁶ Clark, Robert, "Retiree Health Plans for Public School Teachers After GASB 43 and 45," Paper Commissioned by the National Center on Performance Incentives for a February 9/10 Conference on Educator Pension Systems held in at Vanderbilt University in Nashville, TN.

⁷ There is an interesting sidebar here. When there are many local school districts in a state and they contribute a large share of school revenues, state per-pupil mean spending is higher.