

AN ECONOMIC FUTURE IMPERILED

We know what it takes to compete for the jobs and industries of our time. We need to out-innovate, out-educate, and out-build the rest of the world.

—*Barack Obama, 2011*

Americans like to believe that their youth are truly exceptional. A glow of pride spreads across the land whenever young U.S. athletes win more medals than any other nation in the Olympics, as in Vancouver in the winter of 2010 and in London in the summer of 2012. It is true, as the German author of this book likes to remind his colleagues, that at least in the most recent Winter Olympics, Germany won more gold medals than the United States, but however you count these things, the United States was at or near the top of the heap. So it is not pleasant when Americans learn that their education system does not perform at the same world-class level as did those U.S. athletes in Vancouver. For example, among the twenty-five nations who won at least one medal—gold, silver, or bronze—in Vancouver

(and also participated in the PISA international student achievement test), the United States came in eighteenth in advanced math achievement, just edging out the United Kingdom, Italy, Russia, Latvia, Croatia, and Kazakhstan.¹

It is fashionable to attribute these results to sizable numbers of minority students, or to student home environments, or to the quality of schools in urban areas, certain states, or regions. And it is true that African American and Hispanic students perform at a lower level than do white and Asian students, that student performance in urban areas is particularly discouraging, and that some states and regions of the country have students who score at higher levels. But we show in this short book that the problems in American education are not limited to gaps in performance between white and black, Asian and Hispanic, northern states and southern ones, or even between cities and suburbs. Even when we look at the best the United States has to offer, we seldom find performances that lift the United States to the top of the world, especially in mathematics.

Nothing is more important for the long-run future of the United States than the knowledge and skills of the next generation. On this score, the United States is in trouble, because its future, as indicated by the math, science, and reading skill levels achieved by today's students, looks quite depressing compared to what is possible and what has been achieved in other countries. Realizing the country's potential is still within reach, but doing so will take more than small steps and timid actions abetted by general confusion as to whether serious policy changes are worth their political costs.

Many commentators put the problem of schools in the context of generational conflict. The retirees are pitted against the children. They are portrayed as wanting nothing more than greater Social Security and Medicare payments along with lower taxes, implying that educational spending must give way to those priorities. By this argument, as the population ages, the educational needs of children will face an uphill battle for support.

Our view is different. The battle is not young versus old but a conflict between the needs of school-age children and the interests of those adults who have agreed to educate them in our public schools. The school workforce—teachers, principals, superintendents, other administrators, and ancillary personnel—too often favors only those changes to the status quo that enhance their income or lighten their workload. They oppose changes in the organization and structure of the school system that would likely enhance the learning opportunities of those for whom they are educationally responsible. When that happens, the promise of our nation’s prosperity is endangered.

The available evidence about the economic gains possible with improved schooling underscores the common interests of our young and our old. With higher economic growth, something we can expect with improved schools, we could solve the long-run fiscal problems that are adding to the debt load of state and federal governments while threatening the long-term stability of Social Security and Medicare. And we could lessen, if not eliminate, the divisive political conflicts over the size and shape of government that have overwhelmed our policymakers.

The Cacophony of Unmet Goals

Leaders have long known that education is key to the nation’s prosperity and security. Immediately after the Soviet Union launched the Sputnik satellite, the U.S. Congress in 1958 passed the National Defense Education Act to ensure the “security of the Nation” through the “fullest development of the mental resources and technical skills of its young men and women.”²²

National security was no less on the minds of members of a 2012 task force that inquired into the extent to which U.S. schools were competitive with those in other countries. Sponsored by the Council on Foreign Relations, and chaired by former New York City schools chancellor Joel I. Klein and

AN ECONOMIC FUTURE IMPERILED

former U.S. secretary of state Condoleezza Rice, the task force warned, “Poorly educated and semi-skilled Americans cannot expect to effectively compete for jobs against fellow U.S. citizens or global peers, and are left unable to fully participate in and contribute to society.”³ They further summarized the overall problem, “*In short, America’s failure to educate is affecting its national security.*”⁴

In between those dates, publicly expressed concerns about the quality of U.S. schools steadily intensified. In 1983 a government task force submitted to the Reagan administration a widely heralded report carrying the title *A Nation at Risk*.⁵ In 1989 President George H. W. Bush, together with the governors of forty-nine of the fifty states, set the goal that U.S. education would be at the top of world rankings by the year 2000.⁶ In 1993 President Bill Clinton urged passage of the Goals 2000: Educate America Act, “so that all Americans can reach internationally competitive standards.”⁷ Two years later, the legislation was enacted into law by a wide, bipartisan congressional majority. In 2006 President George W. Bush observed that “the bedrock of America’s competitiveness is a well-educated and skilled work force.”⁸

Despite these proclamations, the position of the American school remains problematic when viewed from an international perspective. Only 7 percent of U.S. students in 2009 performed at the advanced level in mathematics, a percentage lower than that attained by twenty-nine other countries and political jurisdictions.⁹ The problem is not limited to top-performing students. In 2009 just 32 percent of eighth graders in the United States were deemed proficient in mathematics, placing the United States thirty-second when ranked with participating international jurisdictions.

Nor is the public unaware of the situation. When a cross section of the American public was asked how well the United States was doing in math, compared to other industrialized countries,

the average estimate placed the United States at eighteenth, only modestly better than its actual standing.¹⁰ Americans do not find it difficult to agree with the summary words of the Council on Foreign Relations task force report: “Overall, U.S. educational outcomes are unacceptably low.”¹¹

State leaders are no less aware of the challenges facing American education. Many governors—most notably, Bill Clinton of Arkansas and George W. Bush of Texas—lifted their own national profile by adopting reform policies within their states. The strategy has gone on for more than a hundred years. Charles Aycock, governor of North Carolina during the first years of the last century, is remembered as “the ‘Education Governor’ for his support of the public school system. . . . He felt that no lasting social reform could be accomplished without education. He supported increased salaries for teachers, longer school terms, and new school buildings.”¹²

A host of Aycock successors have echoed his calls, hoping that moniker would be applied to them as well. The 1989 meeting of governors made every subsequent governor into an “education” governor. The united effort, which crossed partisan and ideological boundaries, is less surprising than it might seem, as education is one of the most costly of state government responsibilities and one that is of great concern to the general public. A gubernatorial candidate cannot succeed without making firm commitments to school improvement.

Oddly, political leaders are seldom punished for the gap between educational promises and educational outcomes. A common commitment to high achievement has, for the most part, failed to translate into broad, substantive, real-world accomplishments. The reasons for lack of gubernatorial accountability are not altogether clear. Perhaps gubernatorial terms of office are too short for voters to assess whether or not promises have been fulfilled. Perhaps the educational workforce cares mainly about policies of concern to their material

well-being, while the public at large is poorly informed or easily distracted by other issues. What we do know is that school failures seldom generate much more than calls for renewed effort, backed by additional spending, reinforced by still more steadfast commitments to move forward. New goals leapfrog unattained past goals.

The Distraction of the Present

We do not join with those who connect the call for educational reform with current economic difficulties. A dramatically enhanced education system today would do next to nothing for next month's unemployment rate, or next quarter's growth in gross domestic product (GDP), or next year's federal and state budget deficits. Too often, facts from the immediate present are used in campaign and legislative debates to justify—or oppose—adoption of long-range educational reforms. It is quite understandable that the sluggish recovery from the 2008 recession haunts political conversations about nearly every conceivable public issue, even when the connection is remote. For some, a short-term surplus of educated workers is interpreted as evidence that young adults are too well educated, while, for others, high rates of short-term unemployment are attributed to an inadequately trained workforce.

Such rants completely miss the fundamental problem that needs to be addressed. Linking the schools of today to current unemployment levels or quarterly rates of economic growth invites erroneous comparisons and conclusions. It may be true that our economy performed at lower levels in the first decade of the twenty-first century because student achievement reached a plateau during the 1970s, but that long-run impact must be kept distinct from the impact of the recent financial crisis and economic recession. Certainly the quality of schools now is of no significance to our economy today. High school students in 2013,

no matter how skilled or unskilled they might be, have nothing to do with the contemporary state of the economy. Even the skills of those schooled five to ten years ago have only marginal effects on today's economy, as they constitute but a small segment of the workforce. The recent slow-growth experience in the United States is a warning about the costs to society of economic stagnation, and it may be due in part to educational stagnation over the past half century, but fixing U.S. schools will not immediately alter the course of the current business cycle.

Consider, for example, discussions of the short-term employment prospects of highly skilled workers in the midst of the 2008 recession. Isn't it the case, the argument went, that scientists, engineers, and other highly qualified technicians are unemployed or forced to accept jobs that made inadequate use of their skills? If those with skills are unemployed, why do we need to worry about educating more of the same? That perspective takes a very static view of the U.S. economy and ignores the dynamic nature of economies in general. When a society becomes more productive, jobs open up most quickly for those who are the most skilled, and their work then creates still more jobs. That kind of dynamic interaction between skills and economic growth has long been the hallmark of U.S. success. Conversely, if a society does not supply the skills and if the pace of technological change slows, the potential demand for those skills will never become apparent.

The Long-Run Imperative

The immediate future is locked in, not capable of being altered by anything that happens in the nation's schools. The focus here is on the well-being of the citizens of the United States when our children and grandchildren are active adult members of our society. We are not writing about next year nor even the next decade. Barring some catastrophe, the United States will

over the short run continue to be the world's dominant economy, and the people of the United States will continue to enjoy the fruits of that reality. The immediate future could be a little bit better or a little bit worse, depending on the actions taken now, but short of some external shock, the range of possible near-term futures is quite small.

The range of possible futures widens steadily as one peers further into the future, as that is not locked in by past decisions in the same way that the next few years are. And the long-term path depends on decisions that are now being made, either explicitly or implicitly. Unfortunately, the consequences of those decisions will not be fully known until they, too, cannot be altered.

The long-run future of the U.S. economy depends crucially on the capacities and skills of those being educated today. Those skills will have their impact when today's youth become the core of our labor force and our society. Unfortunately, we know that the United States today is not doing as well as other countries either in lifting all students up to math and reading proficiency or in bringing a significant share up to an advanced level of accomplishment. When only 7 percent of students perform at the advanced level in math and only 32 percent are deemed proficient, and when at the same time an educated workforce is key to international standing and economic growth, a long-term challenge stares a nation in the face.

Comparisons with other countries tell us what can and must be done. The United States is in the middle of the pack among developed nations in terms of the skills that demonstrably drive national economic growth. The performance of its students on international math and science exams provides a valuable metric for assessing its standing, and the U.S. record in this regard is mediocre at best. The failure to develop adequate skills, what economists call human capital, has truly profound implications for U.S. productivity growth in the next half century. And of

course, the skills being developed in other countries will have their own implications for growth in productivity throughout the industrialized and developing parts of the international economy.

In simplest terms, nations that have a highly skilled labor force grow faster. This key fact has become the conventional wisdom throughout the world and is proclaimed repeatedly by political leaders. Yet in practice, this bare fact has yet to be fully appreciated, if actions, rather than words, are the measure of the seriousness with which it is truly understood. Those responsible for education policy have yet to show that they know and care that a high level of human capital induces long-run growth in productivity, which leads to greater GDP and, in turn, to improved living standards.

We are not arguing that the United States should attempt to retard the educational progress of other nations in order to promote its own citizenry. On the contrary, growth in human capital around the world will redound to the benefit of all, as countries exchange the products of their better-educated workforces. We do not live in a zero-sum world, where growth in other countries comes at the expense of the United States. The gains of other nations will not subtract from gains achieved in the United States, nor will faster growth by the United States diminish the prospects for other nations. A world with higher levels of human capital will, in the absence of war, be of great benefit to all nations. The relative growth of the different nations will, however, affect the future prestige and influence of each. It will have implications for the kinds of jobs and economy that we have and whether we exhibit technological leadership or take a more supporting role. The United States cannot afford to ignore investments in human capital in the hope that it can benefit from the accomplishments of others. If the United States takes that strategy, it will endanger the prosperity of the next generations.

Could We Be Canada?

To show exactly how much depends on the quality of human capital in a country, we begin with a picture of the relative performance of U.S. students on an international mathematics examination known as the Program for International Student Assessment (PISA), which is administered by the Organization for Economic Cooperation and Development (OECD) and given in sixty-eight of the world's school systems.¹³ PISA tests are only beginning to figure in education debates within the United States, but elsewhere in the world they have become a key measuring stick for tracking progress toward guaranteeing a vibrant economic future. The United States needs to take these tests no less seriously.

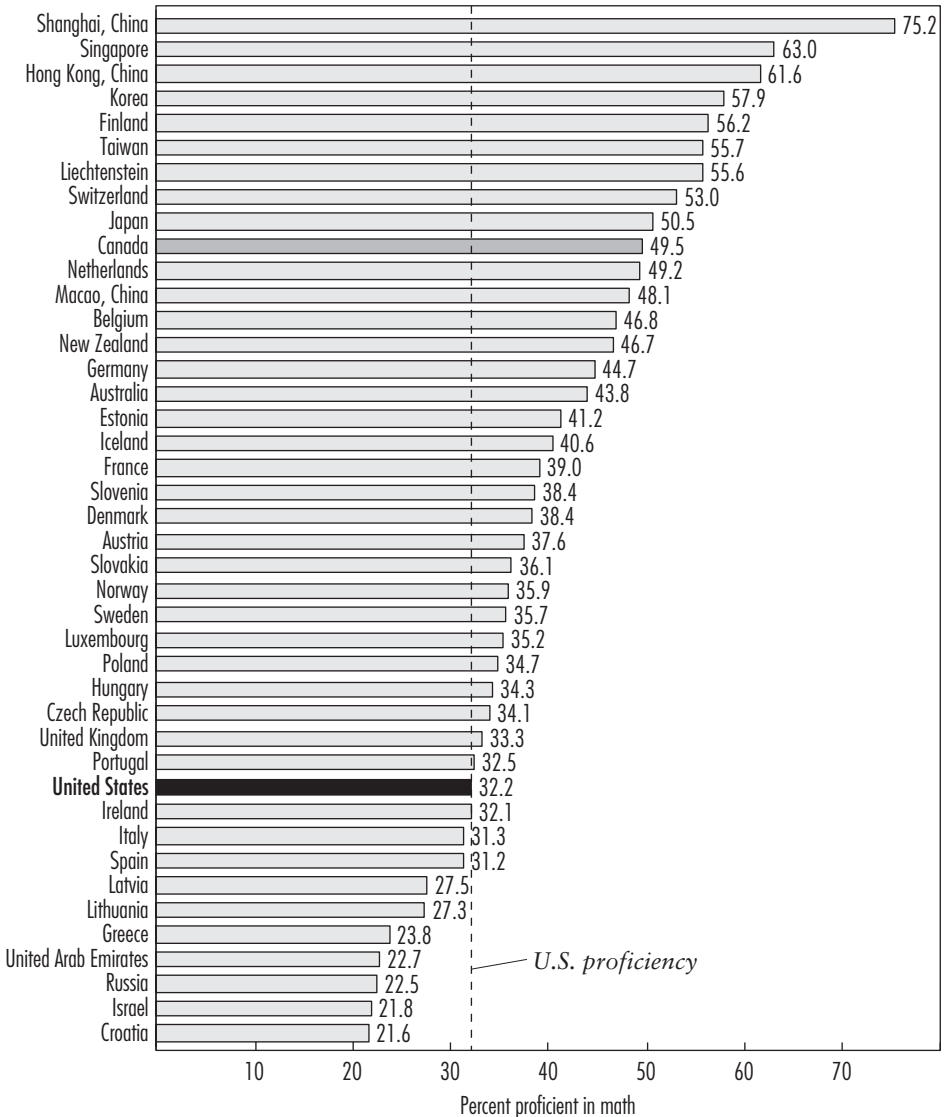
Figure 1-1 displays the percentage of fifteen-year-old students who were proficient in mathematics in 2009 in most of the leading countries of the industrialized world and in a sizable number of developing countries. As the figure shows, and as we elaborate in chapter 3, the United States trails most industrialized nations and barely beats out Greece, Spain, and Italy. Although the U.S. economy has many strengths not shared by the countries on the southern tier of the European Union, the fact remains that the United States is not building its human capital for the long run at a rate that is any better than those in some of the more problematic economies of Europe.

Other comparisons—to Singapore, Finland, Hong Kong, and Korea—show the United States education system at an even greater disadvantage. Many argue that special circumstances in all these countries make comparisons with the United States inappropriate and misleading. We do not agree. Much can be learned from looking at countries across the globe.

But even if the results from the above-mentioned nations are dismissed, it is difficult to argue that Canada is completely different from the United States. After all, the two countries share a common language, a common heritage, and a common border

AN ECONOMIC FUTURE IMPERILED

Figure 1-1. The United States in International Perspective: Proficient Students in Math, Class of 2011



Source: Authors' calculations.

Note: The percent proficient, calculated for countries that participated in PISA 2009, is displayed for all countries with greater than 20 percent of their students proficient in math. Countries with a smaller percentage of proficient students are, in declining order, as follows: Turkey, Serbia, Bulgaria, Uruguay, Trinidad and Tobago, Romania, Chile, Thailand, Mexico, Qatar, Kazakhstan, Argentina, Azerbaijan, Montenegro, Brazil, Albania, Jordan, Peru, Colombia, Panama, Tunisia, Indonesia, and Kyrgystan. See appendix A for methodology.

that is several thousand miles long. Canadian students go to schools just a short distance away from their U.S. counterparts. Yet on average, the students just north of the U.S. border are dramatically outpacing their U.S. peers.

The difference between U.S. and Canadian educational performance today provides a dramatic illustration of how the economic future of the United States relates to educational achievement and, ultimately, to the human capital of the country. Consider the possibility that the United States reaches the Canadian level of performance by the year 2025. Assuming that historical patterns of economic growth are an accurate guide to the future, the average annual income of every worker in the United States over the next eighty years would be 20 percent higher, all other things being equal. Discounted to the present, the gains from a faster-growing economy over the lifetime of somebody born today would amount to five times our current GDP.

As described in chapter 5, the additions to GDP from improving to the level of Canadian students would, by historical patterns, be enough to resolve the projected U.S. debt crisis.

The Vested Interests

With gains of such magnitude potentially accruing from school improvement, why are we stuck in the land of unfulfilled educational goals and flat student test performance? The simplest answer is that improving the schools is tough. Not only are the best ways to improve the system uncertain, but a sizable contingent of people would like to keep the schools largely as they exist today.

Many institutions and organizations have a stake in the status quo—teacher organizations, school districts, school administrators, schools of education—and they tend to fight against educational reforms that might alter current practices, including school accountability, school choice, and teacher policy reform.

Those who work for the schools seem more concerned about their own benefits and privileges than about the customers they are expected to serve—the children of today, on whom the prosperity of the future depends. Children themselves have little power, of course. And even their ostensible champions, today's parents, find themselves torn between acceptance of the current institutions, which hold considerable power over their children, and the promise of something better. Parent groups are notoriously weak when the countervailing centers of power are organized components of the education industry.

Is Spending More Good Enough?

Those with vested interests in the structural status quo insist that they, too, support school improvement. But the changes they propose are simple expansions of the current system: higher expenditure, smaller classes that reduce teacher workload, and added support and administrative personnel. The problem with such an agenda is that it has already proven to be an expensive failure. Current education expenditures per pupil in dollars adjusted for inflation are some two and a half times what they were in 1970.¹⁴ An educational moon shot, as it were, has taken place. If money were the answer, the solution would be in place, and the country would already be enjoying the fruits of the reforms. But money alone, it is now clear, does not translate into higher student achievement.

Nor has another favorite proposal of those with a stake in the system as it exists—class-size reduction—proven effective. It is hard for policymakers to argue against class-size reduction because teachers, parents, students, and everyone else like the idea. For teachers, it reduces the daily effort to manage classrooms and assess student performance. For parents and students, it provides for more personalized attention. Unfortunately, it costs a lot of money. A one-third reduction in class size drives up the

cost of instruction by 50 percent. At a time when fiscal pressures affect all levels of government, such increments in expenditure are simply not feasible. Even more to the point, class-size reduction in the past has not brought higher achievement. Despite a one-third drop in the pupil-teacher ratio since 1970, the performance of our seventeen-year-olds remains stagnant.¹⁵

A central feature of these and similar policies of the past two decades is that they do not change the basic structure and incentives of schools. They amount to an enriched status quo. We should now realize that the stakes in educational policy are enormous. Both individual livelihood and national well-being hinge on improving the outcomes of our schools. Among the many reforms that need to be introduced to make schools more effective are policies that could enhance the overall quality of the teaching force. On this topic the research is unequivocal. Highly effective teachers have an enormous impact on students, as do highly ineffective teachers, though in the opposite direction.

Those who favor the status quo would attempt to enhance the quality of the teaching force by increasing pay, or giving teachers more in-service preparation, or requiring them to earn more credentials (a master's degree, for example), or reducing the number of students in the classroom. All these steps are easily taken because they call for no change in the structure of the school system; they can all be implemented without imposing burdens on existing stakeholders, and if anything, they expand the corps of self-interested employees. The only group to suffer is the taxpayer.

But these policies, which have been proposed and implemented again and again over the past half century, have not changed a stagnant system. Instead, it has become increasingly unable to keep up with the rest of the world. Taxpayers and policymakers have consistently been willing to provide added support to schools in hopes of reaping higher achievement, and a half century of failure has only led to further calls for added resources.

Our view is that much more fundamental changes need to be made. The usual response to such suggestions is, well, it is just too hard to do these things. And it is hard, because the currently empowered adults are well organized and aggressive in opposing significant changes. But they do so at the peril of the nation.

Plan of the Book

Our objectives are not to explain the deep causes of past failures nor to detail the specific reforms that need to be undertaken. All three authors have expressed clear views in other publications on particular initiatives that might be taken. Our purpose here is to add urgency to calls for structural reform by documenting how dramatically the United States school system has failed its students and its citizens. To move forward to a different and better future, we must first understand the magnitude of the situation facing the country today.

The next chapter identifies the contribution made by the acquisition of cognitive skills in elementary and secondary school to the income of individuals and the economic prosperity of nations. Chapter 3 documents the relatively small proportion of students who are proficient in reading and, especially, math. Chapter 4 shows that the percentage of U.S. students performing at the advanced level, when viewed from a global standpoint, is shockingly low. In chapter 5, we show the potential long-term economic impact if student achievement could be lifted to levels attained by higher-performing countries.

In chapter 6, we look at the rate of achievement growth in the recent past both within the United States and around the world. The results are both worrisome and promising. Worrisome, in that achievement growth within the United States as a whole is, at best, moderate. Promising in that certain states within the United States and certain countries in various parts of the world

are making striking gains, indicating that the potential for greater achievement growth is there.

In the concluding chapter, we reply to various objections to the arguments we have advanced and reflect on why, with the promise of enormous gains from improving achievement, we continue to pursue policies that offer little hope for improvement. If the latter can be overcome, the future prosperity of the United States would no longer be endangered. We conclude with a final assessment of what can be learned from taking a global view of the American school.