

School Reform Economics

What Options Are Worth the Price?

Inequality in America: What Role for Human Capital Policies?

By James J. Heckman and Alan B. Krueger, edited and with an introduction by Benjamin M. Friedman

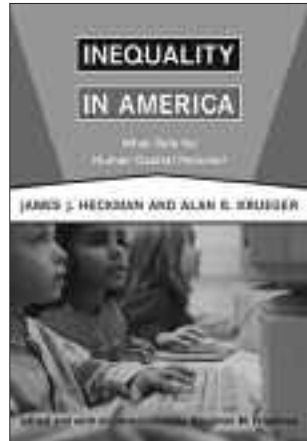
MIT Press, 2003, \$40.00; 370 pages.

As reviewed by Martin R. West

In the first half of the 20th century, a rapidly industrializing American economy intensified the need for a more highly skilled workforce. White-collar workers were in demand, and blue-collar laborers were being asked to follow written instructions, decipher blueprints, and perform basic calculations.

As wages for workers who could perform these tasks grew, so did Americans' appetite for schooling. School districts across the country built a vast number of new high schools and adapted their curricula to employers' needs. By the time the United States entered the Second World War, roughly 50 percent of American teenagers were completing high school, up from less than 20 percent just two decades earlier. This heavy investment in education gave the nation a huge edge over other countries in the amount of "human capital" in its workforce—an edge that helped drive the American economy in the decades that followed.

The time Americans spent in school continued to grow after the war, due in part to policies like the GI Bill that encouraged students to attend college. Indeed, for a time it appeared that Americans might actually be receiving too much education. When the first of the baby boomers entered the job market in the 1970s, many of them holding freshly minted college diplomas, the economic value of a bachelor's degree plummeted,



leading Harvard labor economist Richard Freeman to fret over the plight of the "overeducated American."

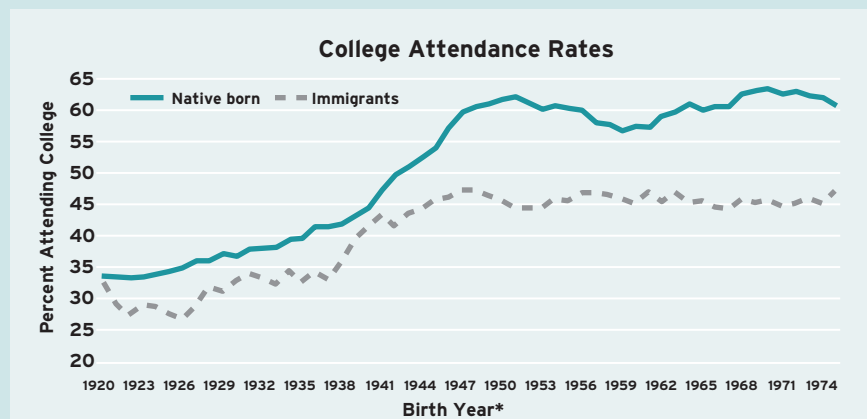
But concern about too much education has long since dissipated. The students who came of age in the 1970s set a benchmark for attainment of education that subsequent generations have

surpassed only recently, and then barely. College participation rates leveled off sharply for individuals born after mid-century, native- and foreign-born alike. While 62 percent of those born in America in 1950 attended at least one year of college, the comparable figure for those born in 1975 (and who came of age in 1995) was just 59 percent (see Figure 1).

Meanwhile, technological advances—in particular the spread of computers—accelerated the economy's need for skills, once again boosting the wage premium received by more-educated workers (see Figure 2). Yet unlike the early decades of the century, when higher wages quickly spurred greater enrollment, the educational response in the late 20th century was slow and uneven. Although the share of the labor force enrolling in college increased modestly in the 1990s, college graduation rates remained essentially flat.

The Bloom Is off the College Rose (Figure 1)

After increasing steadily until the early 1970s, the college-attendance rates of both native-born Americans and immigrants have leveled off.



* Add 20-25 years to estimate the likely years of college attendance.

SOURCE: Adapted from Heckman and Krueger, (2003), Figure 2.2a. Data are from the 2000 Current Population Survey

In contrast, education levels elsewhere in the developed world continue to rise, with college graduation rates increasing roughly 5 percentage points among the other countries of the Organization for Economic Cooperation and Development (OECD) over the past 20 years alone. As a result, America's longstanding international advantage in the share of its adult population with college degrees, while still sizable, shows signs of eroding (see Figure 3).

Recent high school graduation statistics are even more alarming. The percentage of American students completing high school has actually fallen since 1970—a trend masked in official statistics by the growing number of students receiving alternative credentials like the General Educational Development, or GED, certificate. This decline, along with the arrival of a sizable immigrant population that has relatively little education, has bequeathed the United States a pool of low-skilled adults exceptional in the developed world.

In short, America's supply of educated workers is simply not keeping up with demand.

A Hard Row to Read

Why not? And what, if anything, should the government do about it? These were the questions put to Alan Krueger and James Heckman at a 2002 symposium at Harvard University. Heckman, the recipient of the 2000 Nobel Prize for Economics, and Krueger, formerly the chief economist at the Department of Labor and now a professor of economics at Princeton University, have long been among the most prominent observers of the policies that affect the skills of the American workforce. Their answers, along with the discussion they provoked among such authorities as Harvard president Lawrence Summers and Stanford economist Eric Hanushek, have now been compiled in this important volume from MIT Press.

Before running out to purchase a copy of *Inequality in America*, however, readers are warned that the authors have made disappointingly little effort to present their ideas and evidence in a way that is intelligible to noneconomists. Moreover, the book's format—lengthy essays by Krueger and Heckman (who teamed up with fellow economist Pedro Carneiro, now of University College London, for his contribution), followed by commentaries from five scholars, each with a favorite bone (or nit) to pick, then by extended responses and final

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rejoinders from the lead authors—makes it hard to find the forest for the trees.

That said, readers willing to invest the effort to make sense of it on their own can expect a healthy return. Krueger offers an energetic, if ultimately unconvincing, call to expand existing education and training programs for people of all ages, focusing especially on the most disadvantaged. In contrast, Heckman and Carneiro advocate reallocating resources toward the youngest students (especially preschoolers), expanding mentoring

programs for disadvantaged adolescents, and raising the quality of the nation's public schools, not by augmenting their resources, but by enhancing parental choice. Together these prescriptions for enhancing America's stock of human capital clarify the range of policy options.

More of the Same: Money

For Krueger, the flaws in America's human capital policies stem less from the design of existing programs than from the level of resources devoted to them. Krueger would increase spending first and foremost on compensatory programs for the disadvantaged. These investments will be especially effective, he contends, because low-income groups often lack either the resources or the desire to invest adequately in their own education. By the same token, Krueger rejects the notion that policymakers should focus new investments in education on a particular age group, such as the very young: "Old dogs can learn new tricks," he says, and the benefits of programs for teenagers and adults are apparent more quickly than those for young children. He would therefore expand education and training programs for people of all ages, from preschool to underemployed adults.

For school-age children, Krueger would begin by reducing class size and increasing teachers' salaries, especially in schools serving low-income communities. He would also increase the quantity of schooling by lengthening the school year (or offering disadvantaged students vouchers for summer school) and extending the age for compulsory schooling to 18. Finally, for those not yet or no longer in the public school system, Krueger would increase funding for programs sponsored by Head Start (programs for disadvantaged preschoolers) and the Job Corps (programs for high school dropouts) until all those eligible can participate—and expand adult training under the Workforce Investment Act.

Implementing even a fraction of these recommendations would require massive new resources. Unfortunately for policymakers with fixed budgets, Krueger makes no effort to prioritize among them. He settles instead on a “policy of giving ample resources to local governments in low-income areas to invest in the initiatives they think best meet their needs—and holding the local governments accountable for the results.”

Krueger says nothing about how such accountability might work. And why would he? If existing programs are doing the best they can with what they have, surely they can safely be trusted to put new resources to good use.

Elusive Evidence

But does Krueger demonstrate that current investments in education and training on this scale could be worthwhile? He contends that the return on investments in education in low-income individuals compares favorably with the return on investments in the stock market. On its face, this fact would seem to justify increased spending on a wide range of costly interventions.

Elsewhere in the book, however, former treasury secretary Summers reminds readers that any returns of the Krueger program would need to be balanced against the cost of forgoing other policies, within education and beyond, and against the drag on the economy due to increased taxation. Krueger, even though allowed to respond to Summers’s critique, makes no effort to account for these costs.

And a close look at the evidence Krueger uses to calculate the expected return on investments in education reveals that it is, at best, highly selective. Krueger mounts his case like a seasoned lawyer, presenting the evidence most likely to sway the audience to his position, all the while downplaying doubts as to its validity and ignoring evidence to the contrary.

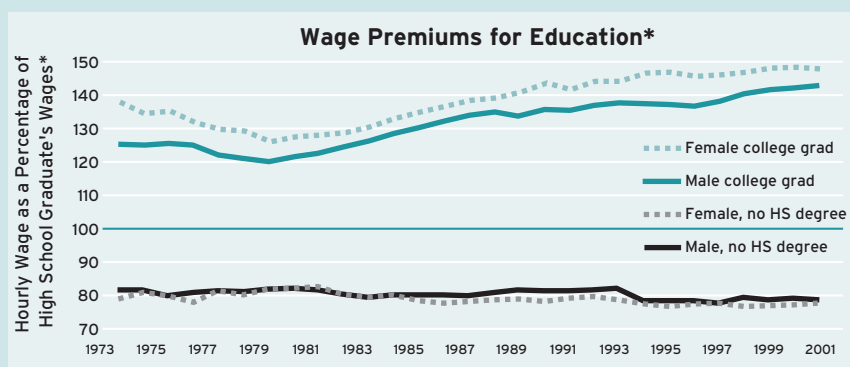
To justify his call for class-size reductions, for example, Krueger relies heavily

on evidence from Tennessee’s Project STAR, a large-scale class-size experiment conducted in the 1980s. But it remains unclear whether improvements of the kind identified in Project STAR would justify the costs of reducing class sizes—particularly if it were attempted on a large scale. Although Krueger’s own cost-benefit analysis paints a modestly

optimistic picture, it ignores the fundamental tradeoff between quality and quantity that school districts face when hiring teachers. Likewise, Krueger’s interpretation of the much larger body of nonexperimental evidence on class-size reduction (he considers these studies supportive of class-size reduction) is at best open to debate.

Dollars in the Diploma (Figure 2)

As technological advances increased demand for high-skill workers over the past three decades, the value of a college education, in terms of wages above the earnings of an average high school grad (the 100 percent line below), has risen. (Not having a high school diploma depresses wages by roughly 20 percent.)

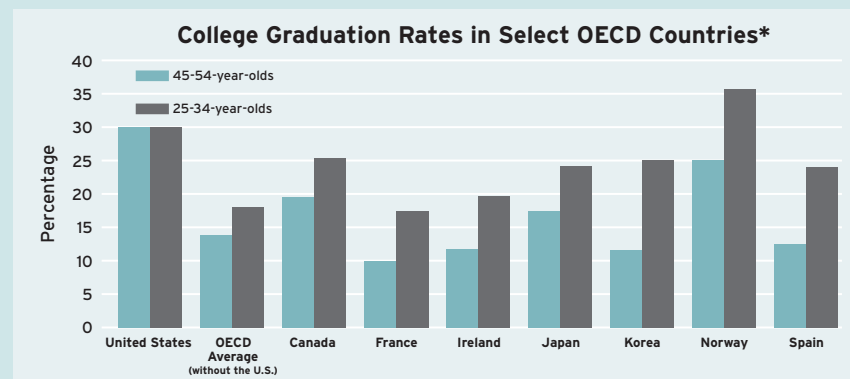


* Differential after controlling for age, race, marital status, region, and ethnicity.

SOURCE: Lawrence Mishel, Jared Bernstein, and Heather Boushey, *The State of Working America* (Cornell, 2003)

Losing Our Edge (Figure 3)

In other developed countries, more people aged 25–34 than those aged 45–54 are college graduates; in the United States these percentages are almost equal. This means that those other countries have experienced growth in college graduation rates, while American rates have remained flat.



* Organization for Economic Cooperation and Development

SOURCE: OECD *Education at a Glance 2003*

The empirical support for Krueger's other proposals is equally tenuous. While teachers' salaries have declined relative to other occupations requiring a college degree since midcentury, there is no evidence to suggest that across-the-board raises would improve student outcomes enough to justify the expense, particularly if they were not accompanied by changes that would link teachers' pay to their performance in the classroom. Moreover, the apparent success of the famous Perry Preschool Program and several other intensive early-childhood interventions is insufficient to justify an expansion of the less-intensive federal Head Start program.

While the evidence Krueger reviews does not prove his program will be effective, neither does it prove the opposite. This is hardly surprising. As Heckman and Carneiro argue elsewhere in the book, "A purely empirical approach to assessing policy proposals is never effective, because the data almost never dovetail with the proposed policies." They go on to point out, however, that it is essential that analysts draw on "all available data and theory."

Fortunately, elsewhere in the volume, Eric Hanushek provides key evidence that Krueger ignores: the United States has been reducing class size and otherwise increasing the resources invested in the public school system for more than four decades. The results of this large-scale "experiment" are far from ambiguous: while school resources, adjusted for inflation, have more than tripled since 1960, student achievement has hardly budged. Meanwhile, as noted above, high-school dropout rates have increased, and college graduation rates have been essentially flat.

This dismal record indicates the need to reassess the nation's basic approach to improving education. Krueger's failure even to acknowledge the need for such a reassessment, much less contribute to it, is disappointing.

A Fresh Approach

It is encouraging to find that Heckman and Carneiro begin their analysis with a discussion of the process by which individuals acquire skills. Their point of departure is the observation that skills acquired by a given time affect not only performance levels at that moment, but also the learning tools available going forward. For example, 1st graders who learned to read while in kindergarten not only excel on reading tests, but also are able to use books to learn new material more quickly. Likewise, students with a demanding 3rd-grade teacher may learn more as 4th graders because

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of work habits and study skills developed during the previous year.

The notion that human capital accumulation is a dynamic process has one crucial implication: delay is costly. All else being equal, education interventions for young students should be more cost-effective than interventions later on. It is no surprise, then, that most public job-training efforts have had disappointing results. As Heckman and Carneiro put it, such programs must "work with what families and schools supply and cannot remedy twenty years of neglect." They would have the government exit the field of job training

almost completely and rely on employers to make whatever investments in adult workers will be profitable.

In contrast, programs for very young students should be especially cost-effective. Here Heckman and Carneiro call attention to the evidence demonstrating that intensive intervention programs for disadvantaged preschoolers can be quite successful. They are quick to acknowledge the limitations of this research, in particular, the small number of programs that have been rigorously evaluated. Nonetheless, they are prepared to recommend that aggressive (and expensive) preschool interventions be central to any effort to enhance the skills of the American workforce.

Heckman and Carneiro also advocate the expansion of mentoring programs for disadvantaged teenagers, such as Big Brothers Big Sisters. But they maintain that these interventions should focus on noncognitive outcomes, such as social skills, work habits, and motivation, which are more malleable at that age than cognitive skills. In fact, they argue that the cognitive abilities of eight-year-olds are basically fixed, in the sense that their IQs correlate very closely with their IQs later in life. This is not to say that older students cannot improve their academic achievement, or that such improvements will not reflect the acquisition of valuable skills. Indeed, the long-term importance of skills that do not necessarily show up on standardized tests is an important secondary theme of Heckman and Carneiro's essay.

Perhaps the most compelling evidence on this point comes from Heckman's own research on the GED program (first published in the *American Economic Review* in 2001). It is well established that GED recipients do better in the job market than high school dropouts without a GED—a fact that has led some to conclude that the program is a success. But as Heckman has shown, GED recipients also tend to have stronger cognitive abilities than other dropouts; after all, they

passed a test to earn their credential. Controlling for this difference, GED recipients earn considerably less than other dropouts. The same characteristics that lead students with considerable academic potential to leave high school before graduation apparently make them less-productive workers later in life.

The apparent implication is that the GED has become a mixed signal for employers: it identifies the smart but undisciplined individuals within the larger pool of dropouts. The relatively low wages GED recipients receive, controlling for their cognitive ability, show that discipline matters.

The Need for More Competition

Although Heckman and Carneiro devote markedly less space to the public school system than to the failure of job training programs, the potential effectiveness of early-childhood education, and the importance of noncognitive skills, they do document a “growing consensus” that schools’ material resources are only weakly related to their students’ earnings later in life. Simply increasing those resources is therefore unlikely to stimulate more disadvantaged students to attend college. In fact, they note, this pattern implies that the United States could be spending too much on students—at least given the incentives schools currently face.

Heckman and Carneiro would aim to change those incentives. Specifically, they call for families to be given more choice over the schools their children attend. The resulting competition among schools to attract students should force schools to reduce costs and increase quality. As Heckman and Carneiro point out, the evidence on the benefits of competition within education is limited—a necessary consequence of the lack of serious experimentation with meaningful choice-based reforms. Nonetheless, they make a persuasive case that “policies that promote such competition are much

more likely to raise schooling performance than policies that increase schooling quality and do not change the organization of schools.” (Though this is an example of the sometimes wooden prose that can make this book a workout, what they mean is that it’s better to give schools more competition than more money.)

More puzzling is Heckman and Carneiro’s failure to discuss the most prominent current strategy for encouraging schools to put their resources to good use: test-based accountability. By the early 1990s, several states were experimenting with policies that

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reward or sanction schools based on their students’ performance on tests that are aligned with statewide standards. In 2001, the No Child Left Behind Act mandated that all states adopt such policies as a condition for receiving federal aid. With each student in grades 3 through 8 now being tested annually in at least two subjects, and schools’ progress assessed largely on the basis of the results, there is no corner of the American public school system left untouched.

Heckman and Carneiro’s inattention to the accountability movement is consistent with the low regard in which

they hold evidence from standardized tests and with their emphasis on the importance of noncognitive skills. Throughout the volume, they are critical of analysts who evaluate education interventions solely on the basis of “arbitrarily scaled test scores” and of “proposed systems for evaluating school performance” (read: No Child Left Behind) that take this same approach. Their enthusiasm for school choice suggests that they are more confident of parents’ ability to sense whether a school or teacher is effective and to act on that knowledge.

In my view, however, they are too quick in their otherwise thorough survey to dismiss the accountability movement’s potential to improve the productivity of America’s schools—even with respect to the outcomes they consider most important. While standardized tests are necessarily limited in scope, well-designed assessments can and do measure skills that are essential components of what we expect schools to impart. Moreover, the very process of preparing to take them can be expected to cultivate in students many of the same noncognitive skills Heckman has shown to be so important later in life, all the more if states go beyond the requirements of No Child Left Behind and create incentives for individual students to do well. Given that we do not yet know how to measure students’ discipline, motivation, and social skills directly, setting high expectations for skills we are able to measure and holding students accountable for meeting them may well be the best ways to improve all of the above.

Martin R. West is a research fellow at the Program on Education Policy and Governance at Harvard University and the research editor of Education Next.

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