

RETHINKING THE WAY AMERICANS PAY FOR COLLEGE

More bang for a buck

By Thomas J. Kane

The stakes have never been higher in the decision about who goes to college and who doesn't. In 1980, the typical young male college graduate starting a career earned just 20 percent more than his counterpart who went to work right out of high school. By 1995, that difference had widened to 52 percent – more than doubling the earnings premium for college graduates. Even a few years of college makes for big differences in paychecks.

As an increasing proportion of high school graduates are responding to the ever more obvious incentives to go to college, the system for financing higher education is showing signs of strain. Even after accounting for inflation, tuition within each category of college – public or private, two-year or four-year – rose by more than 110 percent between the 1980 and 1998.

Politicians have been far ahead of policy wonks in recognizing parents' growing anxiety about how they are going to pay these tuition bills. Polling data persuaded President Clinton to make the Hope Scholarship college tax credit a centerpiece of his 1996 campaign. Not to be outdone, Congressional

The ultimate goal: increasing the social mobility of America's young and poor.



Republicans overcame their anti-regulatory fervor long enough to appoint a Federal commission to contemplate steps for curbing tuition inflation.

However, the debate has been longer on rhetoric than on ideas for making college affordable for all. The two fundamental components of the nation's financial aid systems – massive state subsidies for public institutions and Federal subsidies distributed according to

student need – have remained largely unchanged since the mid-1970's. Indeed, last year's politically charged debate over the Higher Education Act yielded nothing more dramatic than some tinkering with the interest rates charged on Federal loans to students.

WHY RETHINK FINANCIAL AID?

Any sort of education, elementary to graduate school, is “labor intensive,” making it both

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costly to produce and resistant to the sorts of productivity gains that have revolutionized many industries in recent decades. Yet concern about the cost of education intrudes on the public consciousness only occasionally since the nine out of ten parents who send their children to public grade schools do not write a check for education until their kids are ready to attend college.

Many parents, no doubt, would be sur-

ing salaries averaging \$37,846, plus another 27 percent in benefits, instructional costs alone run to \$2,788 per student a year. Add \$549 per student for building operation and maintenance, \$221 for transportation, \$225 for food services, \$252 for health services, \$446 for administration, \$212 for instructional support (libraries, computer labs, etc.) – and you begin to see why education is a big nut to crack for both state and local budgeters alike.

TABLE 1: DIFFERENCES IN POST-SECONDARY TRAINING FOR THE HIGH SCHOOL CLASS OF 1992 BY PARENTAL INCOME QUARTILE

PARENTAL INCOME QUARTILE	OTHER VARIABLES HELD CONSTANT			
	NONE	MATH & READING TEST SCORES, HIGH SCHOOL GRADES	... AND 8TH GRADE SCHOOL	... AND PAREN EDUCATION
PERCENTAGE POINT DIFFERENCE IN PROPORTION OF YOUTH ENTERING ANY POST-SECONDARY TRAINING WITHIN 20 MONTHS OF HIGH SCHOOL GRADUATION, COMPARED TO YOUTH FROM THE BOTTOM QUARTILE				
Top	28	18	14	10
Second	22	15	14	11
Third	11	7	6	5
PERCENTAGE POINT DIFFERENCE IN PROPORTION OF YOUTH ENTERING A FOUR-YEAR COLLEGE WITHIN 20 MONTHS OF LEAVING HIGH SCHOOL, COMPARED TO YOUTH FROM THE BOTTOM QUARTILE				
Top	36	18	12	6
Second	20	8	7	3
Third	9	2	1	1

prised to learn that the average annual expenditure per student in public elementary and secondary schools in 1995 was \$6,213. This may seem an impossibly large number until one looks closely at where the money goes. In 1995, there were 17.1 students in attendance per full-time-equivalent teacher. With teach-

The surprise hardly ends there. In the 1998-99 academic year, annual tuition averaged \$1,600 at two-year public colleges and \$3,200 at four-year public colleges. This is far less than the average expenditure per student, which runs roughly \$6,000 at the two-year publics and \$11,000 at the four-year variety.

Thus higher education finance, I would argue, is as poorly understood today by most Americans as the health-care finance system was in the late 1980's – and ignorance is not bliss. There are at least four reasons why a muddle-through strategy is not viable.

1) Financial aid has never succeeded in insuring equal access to college. Table 1 reports differences in the proportion of youth receiving post-secondary training in 1992. The first column shows the simple percentage difference in post-secondary training attendance rates by family income, without controlling for other factors that influence the decision. Youth from the top quartile of the income distribution were 28 percentage points more likely to have received some form

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of training and 36 percentage points more likely to have attended a four-year college than those from the bottom income quartile. (The proportion of the lowest quartile receiving any post-secondary training was 63 percent and the proportion of the lowest quartile entering four-year college was 32 percent.)

The second column shows that large differences in attendance rates remained, even after adjusting for objective performance standards – test scores and high-school class ranks. There was an 18-percentage-point difference between the top and bottom income quartiles in both the number of young adults receiving any training and in the proportion entering a four-year college. The third column adjusts for systematic differences in school quality, comparing youth with similar test scores and high school class rank who had also attended the same schools in eighth grade. Youth from the top quarter of the income distribution were 14 percentage points more likely to get any post-secondary training and 12 percentage points more likely to attend a four-year college.

The last column refines the estimate still further, comparing youth with similar parental education, as well as similar test scores and high school class ranks. Note the 10-percentage-point gap in rates of training between the top and bottom quarters of the distribution.

It is not always clear how to interpret these last figures. On one hand, part of the difference in college attendance by family income may reflect differences in parental attitudes

toward education, rather than financial barriers. On the other, parental education probably measures more than just parental encouragement for higher education since it is also likely to reflect differences in family wealth, which is a financial barrier and does not show up in family income figures.

As a result, controlling for differences in parental education may overstate the importance of differences in parental tastes for education and understate the differences attrib-

TABLE 2: PERCENTAGE OF STUDENTS FROM FAMILIES IN EACH INCOME QUARTILE WHO ENROLL IN POST-SECONDARY SCHOOLS WITHIN 20 MONTHS OF HIGH SCHOOL GRADUATION

PARENTAL INCOME QUARTILE	ANY POST-SECONDARY SCHOOLING				
	NONE	TOTAL	VOCATIONAL, TECHNICAL	2-YEAR COLLEGE	4-YEAR COLLEGE
HIGH SCHOOL CLASSES OF 1980/82					
Top	20	80	6	19	55
Second	29	71	10	22	39
Third	37	63	11	19	33
Bottom	43	57	12	16	29
HIGH SCHOOL CLASS OF 1992					
Top	10	90	5	19	66
Second	21	79	6	25	48
Third	30	70	7	25	38
Bottom	40	60	10	22	28

utable to parental ability to pay. Nevertheless, the bottom line is clear enough: *Much of the difference in college attendance by parental income remains, even after controlling for nonfinancial explanations for going to work directly out of high school.*

What's even worse is that these gaps seem to be widening. Table 2 shows the percentage of youth from each income quartile entering post-secondary schools in the 20 months after graduating from high school in 1980-82 and in 1992. (Students attending more than one type of school are counted in the highest

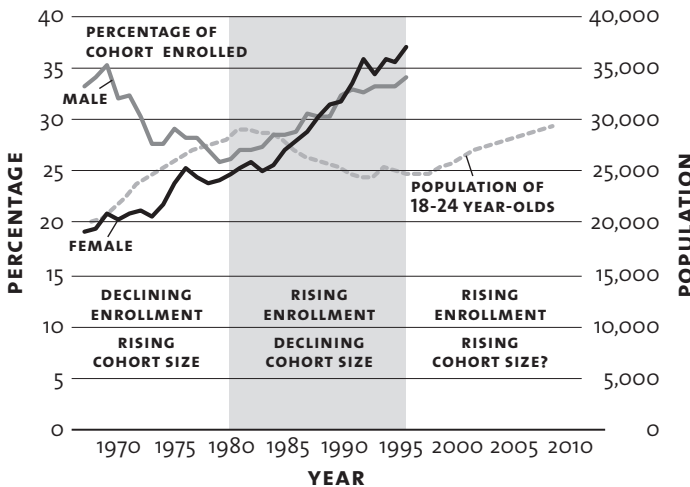
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level attended.) The results suggest that while the proportion of high-income youth getting some sort of training rose by 10 percentage points over the decade of the 1980's, the proportion of low-income youth attending college grew by only three percentage points. The comparable gap in four-year college entry grew even more, with the highest income youth raising their entry rates by 11 percentage points while the entry rates of

to 26 percent. (Women's enrollment rates did rise slightly – but not as much as male enrollment fell.) Since 1980, this pattern has been turned on its head: Enrollment rates for both men and women have risen by more than one-third, while the number of Americans of college age has been falling.

On balance, these offsetting trends actually saved money for the taxpayers because the number of college-age Americans rose only half as much in percentage terms as enrollment rates (from 7.4 million in 1980 to 8.7 million in 1996). However, taxpayers' luck is about to run out. Between 1995 and 2015, the number of 15- to 24-year-old youth is expected to rise by 22 percent. This change will be even more dramatic in certain high-profile states – notably California – where the college-age “cohort” is expected to rise by more than 50 percent over the next 20 years. *Thus, even if college enrollment rates were to stop rising, policy makers must anticipate that nearly a quarter more students will arrive on campus.* If the states continue to rely on the untar-

FIGURE 1: OFFSETTING TRENDS IN COLLEGE ENROLLMENT RATES AND THE SIZE OF THE COLLEGE AGE COHORT
PERCENTAGE OF 18-24 YEAR OLDS ENROLLED



low-income youth barely changed.

2) Demographic forces will cause college enrollments to swell over the next 20 years, stretching public subsidies very thin. The first figure shows that changes in enrollment rates since 1970 have been partly offset by changes in the size of the college-age population. During the 1970's, when the big baby boom generation was moving through college, the proportion of men aged 18-24 enrolled in college actually declined from 35

geted, across-the-board subsidies used in the past, they will be hard-pressed to sustain today's low-tuition levels without fierce tax hikes.

3) Although the average payoff to a college degree seems to have increased, the variation in the financial returns to college has widened. Rather than focus only on the difference in the average earnings of those with and without a college degree, children and parents ought to be considering the full

range of possible outcomes from staying in school or going directly into the labor force.

Table 3 reports the median earnings of men with differing educational attainment as well as earnings in the 90th and 10th percentiles of the wage distribution. While the median earnings of college graduates grew more rapidly than the earnings of high school graduates, the top 10 percent of college graduate wage-earners also grew more rapidly than the wages of college graduates who are least well paid.

These days, it matters a lot whether you end up a lawyer or a social worker. However, it also matters a lot whether you end up as a successful lawyer or an unsuccessful one. The Federal government may have a legitimate role to play in absorbing part of this rising risk to private investments in college. (More on this later.)

4) Because of heightened competition for the most able students, colleges are less able to underwrite need-based financial aid. In 1997, individual institutions disbursed \$10.5 billion of their own funds as financial aid, an amount roughly equal to the combined budgets of the Federal- and state-funded “means-tested” grant programs. While it is difficult to pinpoint what proportion of this aid was targeted to low-income students, the evidence suggests that means-tested aid represents a shrinking slice of the pie.

Three trends have limited schools’ ability to target aid according to need. Start with declining regional loyalties of applicants, which has led non-needy students to shop around within a wider range of schools. Next, consider the increasing emphasis on student-body selectivity in the published national

rankings of colleges, which has increased both the implicit “cost” of admitting a mediocre student with low-income and the value of attracting the superstars. Third, the implicit tax rate on scholarships needed to tailor aid to need has risen.

This last point requires some explanation. Suppose a college wished to provide free tuition to students from families with incomes under \$30,000 and to charge full price to families with incomes more than \$90,000. In 1980, when the average annual tuition of a private four-year college was

TABLE 3: DIFFERENCES IN HOURLY WAGES FOR MALES BY EDUCATIONAL ATTAINMENT (1997 DOLLARS)

	1979	1989	1997
HIGH SCHOOL GRADUATES			
Top tenth of earners	\$22.96	\$21.30	\$20.13
Median	\$13.91	\$11.92	\$10.97
Bottom tenth of earners	\$7.20	\$6.11	\$5.94
Ratio of top tenth to bottom tenth	3.19	3.49	3.39
COLLEGE GRADUATES			
Top tenth of earners	\$32.86	\$33.18	\$34.62
Median	\$17.88	\$18.28	\$17.73
Bottom tenth of earners	\$9.49	\$8.82	\$8.35
Ratio of top tenth to bottom tenth	3.46	3.76	4.15

\$6,800, this could be done by “taxing” family income above \$30,000 at an implicit rate of 11 percent – that is, taking away \$11 in aid for every extra \$100 in family income – in calculating scholarships.

However, educational costs per student have been rising, and so, too has, the tax rate implicit in need-based scholarship formulas. In 1998, average annual tuition at a private four-year college was \$14,500. A college that hoped to provide free tuition to the lowest income youth would have to impose an implicit tax rate of 24 percent over the same

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\$30,000 to \$90,000 range. While parents may not be swayed by a tax rate of 11 percent in choosing a school, they are likely to shop harder for an education bargain when the implicit levy doubles.

SOME POSSIBLE REFORMS

Many of the existing subsidies to higher education amount to windfalls, simply subsidizing students to do what they would have done otherwise. Yet, a dollar spent with no effect on behavior still leaves the nation with a dollar less to respond to the needs of low-

encouraging low-income youth to try higher education.

Concentrating grants in the first two years would have a larger effect on youth who need a larger incentive to take the college plunge. But, of course, in easing the pain of entering college, one would also raise the financial hurdle for those passing from their second year to third year.

I think the trade-off is worth it. For a substantial fraction of youth, college amounts to an experiment. Front-loading the Pell grants would allow more youth to try college – to discover whether they are college material.

While it is quite plausible that a dollar in grant aid to low-income youth is more effective in promoting access than an additional dollar in loans, a dollar in grants costs six times as much in the long run.

income youth wishing to go to college. My proposals, described in some detail below, are aimed at increasing the bang from a government buck, retargeting existing subsidies to encourage students to experiment with college and to pool the risk in choosing to enter college.

Proposal 1: “Frontload” the Pell Grant Program for Needy Students. Even after accounting for recent increases, the inflation-adjusted value of the Federal Pell Grant offered to students from the poorest families has fallen by 20 percent since 1980. It may not be realistic to expect Congress to fork over more cash for the grant program. By limiting eligibility to Pell grants to the first two years of college, however, the same amount of money now spent could be focused on

For those who find they want to finish college, there are substantial loan programs to cover the costs.

Proposal 2: Convert the Hope Scholarship Tax Credit and Lifelong Learning Credit into an “Income Contingent” Loan-Forgiveness Tax Credit. The Taxpayer Relief Act of 1997 included a number of new “tax expenditures” for higher education that are projected to cost about \$8 billion per year over the first five years. Those tax breaks have been widely criticized by economists for being poorly targeted, for inviting fraud and for being cumbersome to administer.

Such lemons, however, might be converted to lemonade if the money were re-deployed

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Higher Education Finance: Who's Minding the Store?

Most of the money to cover college costs comes from five sources.

State and local governments kick in about \$47 billion in operating subsidies annually to public institutions to keep tuition low. This figure is seven times larger than the sums spent on the largest Federal grant program for low-income students and almost twice as large as total borrowing under the Federal loan programs. But because these subsidies are largely invisible, they obscure the true cost of a college education and relieve administrators of the need to justify costs to parents. Students need not apply for their share, and the subsidy is not means-tested.

Means-tested government grant and loan programs represent the second major source of financing. Since need assessments are based on parent's income and assets (as opposed to student's future earnings), the ability to pay is assessed on a backward-looking basis. Although all states have means-tested financial aid programs, the Federal government still provides the lion's share of such aid, primarily through the Pell Grant program, the Federal work-study program and various Federal loan programs. Spending on Federal grant and work-study programs totaled \$6.6 billion in 1995-96. Moreover, the Federal government guaranteed \$27 billion in new loans for college in that year, including \$2 billion in loans to parents of college students. Spending on state financial aid programs totaled only \$3 billion.

Third, colleges distribute aid from their own sources. They offer price discounts (a.k.a. scholarships) based upon academic and athletic talent, and financial need. These discounts amounted to \$10 billion in the 1995-96. Nearly half of all full-time students at private four-year colleges receive some institutional grant aid. But only 11 percent of full-time students at public colleges received grants from institutional funds in 1992-93.

Colleges enjoy some discretion in distributing Federal grant, work-study and specially subsidized loans. In 1995, they handed out \$2.1 billion through such campus-based programs – notably, Supplemental Educational Opportunity Grants, Perkins Loans and Federal Work-Study programs.

Fourth, universities draw on endowment income, but the sums are generally small. In 1993-94, endowment income accounted for just 5 percent of current-fund revenues at private colleges and less than 1 percent at public institutions. Relatively few colleges earned an amount worth considering. The top 10 controlled more than a quarter of total endowment wealth in higher education in 1995.

Fifth, the Tax Relief Act of 1997 created a number of new Federal tax expenditures for higher education. The package of tax credits and tax deductions is expected to cost \$41 billion over the first five years, making it roughly the same size as the Pell grant program for low-income youth.



We would be implicitly taxing a much longer stream of income – the borrower’s lifetime income – in deciding who receives the subsidy.

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to programs for sharing risk in the repayment of student loans. The idea is simple: Taxpayers reporting student loan payments exceeding a modest fraction of their adjusted gross income would be forgiven a portion of their tax liability. Borrowers with low earnings would have the choice of taking the refund directly, or having the checks sent to their creditors.

In practice, this would take little new paperwork: Eligible taxpayers would have been identified when they first borrowed the money. By contrast, the Hope Scholarship and Lifelong Learning tax credits are bureaucratic messes. They require participating colleges to confirm that a student is either in his or her first or second year of college, to

confirm half-time enrollment status in a degree-granting program and to collect parents’ social security numbers to help the Internal Revenue Service determine eligibility. The National Association of College and University Business Officers estimate that all this will cost colleges and universities \$137 million in 1999.

A tax credit approach to risk sharing could make use of existing administrative records maintained by the Department of Education and private lenders. As important, since the credit would not affect the loan-collection costs of private lenders, the student-loan industry would not have incentives to oppose the new approach. Indeed, private banks might become strong

supporters if taxpayers were given the option to channel their tax credits directly to student-loan creditors.

Such “forward-looking” means testing would have a number of advantages over expanding the “backward-looking” means testing implicit in current student aid programs. First, it would reduce the need to use the currently very high implicit tax rates in scholarship formulas based on parents’ incomes for the few years their children are in college. Instead, we would be implicitly taxing a much longer stream of income – the borrower’s lifetime income – in deciding who receives the subsidy.

Second, student borrowers – and, indirectly, their parents – would be cushioned against the risk that their careers did not take off. Note, by the way, that it would give parents more justification in asking their children to bear a portion of the cost of college because it would reduce the loan burden on kids who

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later chose poorly paying jobs or were simply unlucky.

Last but not least, states could piggyback on the Federal system, forgiving some of the taxes owed by former students who were poor earners. By the same token, it would serve as an incentive for graduates to stay in the states that educated them.

Proposal 3: Find out which forms of aid really work. While policy options abound, there is currently little empirical basis for choosing among methods for closing the gap in college attendance. For instance, liberals have long focussed on efforts to raise the maximum size of Pell Grants. However, while it is quite plausible that a dollar in grant aid to low-income youth is more effective in promoting college attendance than an additional dollar in loans, a dollar in grants costs six times as much in the long run. Without hard evidence about how grants and loans change behavior, there is little solid reason for preferring one to the other.

Given the amount of tax money at stake, it is time to collect the information that would allow such comparisons. An experiment comparing, say, the impact of better counseling and larger maximum grants or the incentives in different loan packages, could go a long way toward adding some substance to an emotional debate.

There are plenty of precedents. Over the past two decades, both the government and private foundations have sponsored numerous experimental evaluations of the employment and training programs for welfare recipients. More recently, the Department of Labor sponsored an experimental evaluation of the Job Training Partnership Act (J.T.P.A.) program.

However, the dollars at stake in these areas are small compared with the public subsidies for higher education. Federal spending on

employment and training programs for welfare recipients totaled \$1 billion per year following the Family Support Act of 1988; appropriations under the J.T.P.A. were under \$2 billion in the early 1990's at the time of the J.T.P.A. evaluation. By contrast, the Pell Grants alone cost \$7 billion per year. States spend another \$45 billion in direct subsidies to public institutions, and more than \$25 billion of Federally guaranteed education loans are originated each year. Given the magnitude of the public investment at stake, an evaluation is plainly overdue.

CONCLUSION

As the financial rewards for educational attainment have grown, it is no coincidence that calls to reform the education system have become ever louder. In response, reformers have offered a laundry list of suggestions for improving the quality of elementary and secondary education for the disadvantaged – ideas ranging from school choice to national standards to greater accountability at the school level.

Many of these proposals, particularly ones that improve accountability and allow more decision-making at the school level, may well have merit. However, ever since the publication of the Coleman Report in 1966 researchers and policy makers have argued over whether marginal increases in school spending have yielded improvements in student performance. It is now apparent that many have not.

My goal here is to urge that we explore the opportunities for helping youth by extending their training after high school rather than focusing solely on the quality of elementary and secondary school. These proposals need not add to the public budgets for higher education. Their goal is to get our money's worth from what is already spent. **M**