

AN ANALYSIS OF BARRIERS TO COLLEGE ACCESS AND COMPLETION

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An Analysis of Barriers to College Access and Completion

Prepared for: Bill & Melinda Gates
Foundation

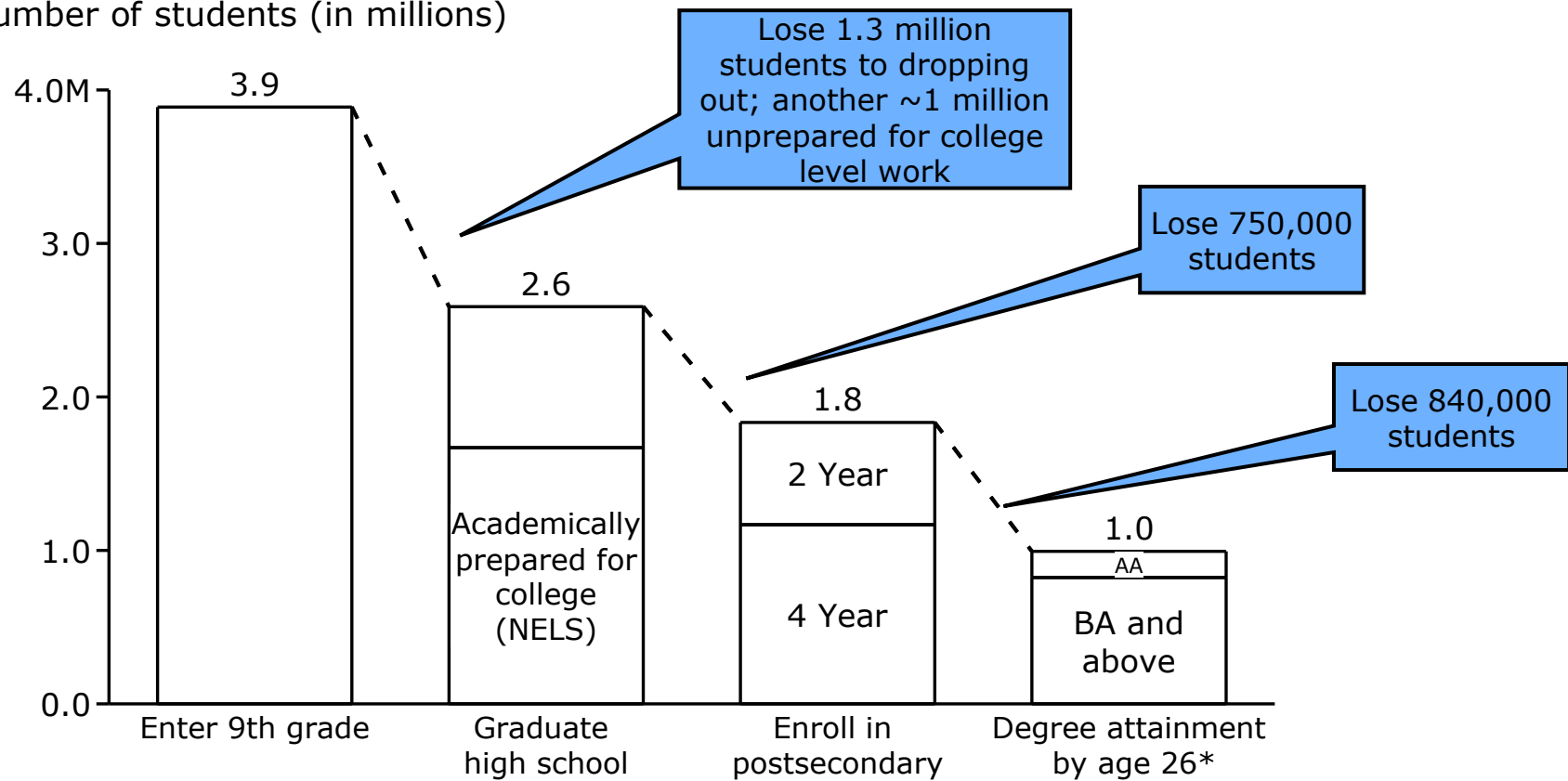
Background/landscape
8 December 2005

Outline

- The pipeline
- Structural constraints to changing outcomes
 - Capacity
 - Affordability
- Baseline outcomes: Increasing access, growing inequality

Greatest leakage in the educational pipeline is at the high school level...

Total number of students (in millions)



...and the most powerful independent predictor of completing a BA is the rigor of high school courses*

Note: Academically prepared for 4-year defined as students who met at least one of the following five criteria: Ranked at or above the 54th percentile in one's class, had a GPA of 2.7 or higher in academic courses, had a combined SAT score of 820 or above (ACT composite of 19 or higher), or scored at the 56th percentile above on the 1992 NELS math and reading composite aptitude test; adjusted for level of rigor of curriculum.

Source: High school graduation rate from JP Green, Public High School Graduation and College Readiness, 2002; College going and BA completion rates from Department of Education, NELS 88/2000, team analysis,

*Finding from multivariate regressions, in Adelman, Toolkit, Department of Education, 1999

This implies that Gates has already invested deeply at the point of greatest leverage for college access and attainment

- We need to ask, what barriers in addition to those already addressed by the secondary school strategy (rigorous course taking and academic preparation) might keep a student from attending and graduating from college
- Before exploring individual student and school based barriers, we should begin by looking at the structural barriers embedded in the current post-secondary system that limit our ability to expand the pipeline
- The two most prominent structural barriers are *capacity* and *affordability*

Capacity and affordability represent important constraints, even on the status quo

1. Capacity: Are there enough undergraduate slots available to meet current and projected demand, even without changing pipeline dynamics?
2. Affordability: Is there enough public and private money subsidizing tuition to ensure that the current number of poor students going to college can afford postsecondary education?



Both issues will likely be addressed via an advocacy strategy

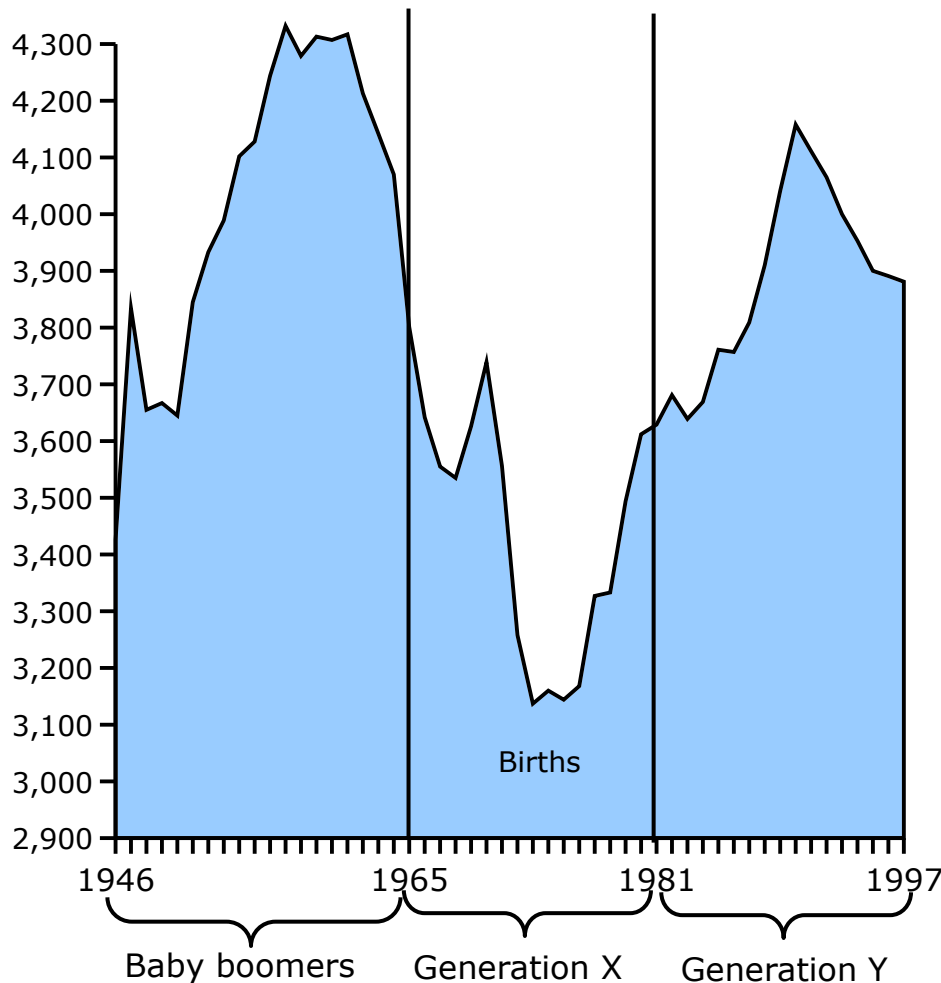
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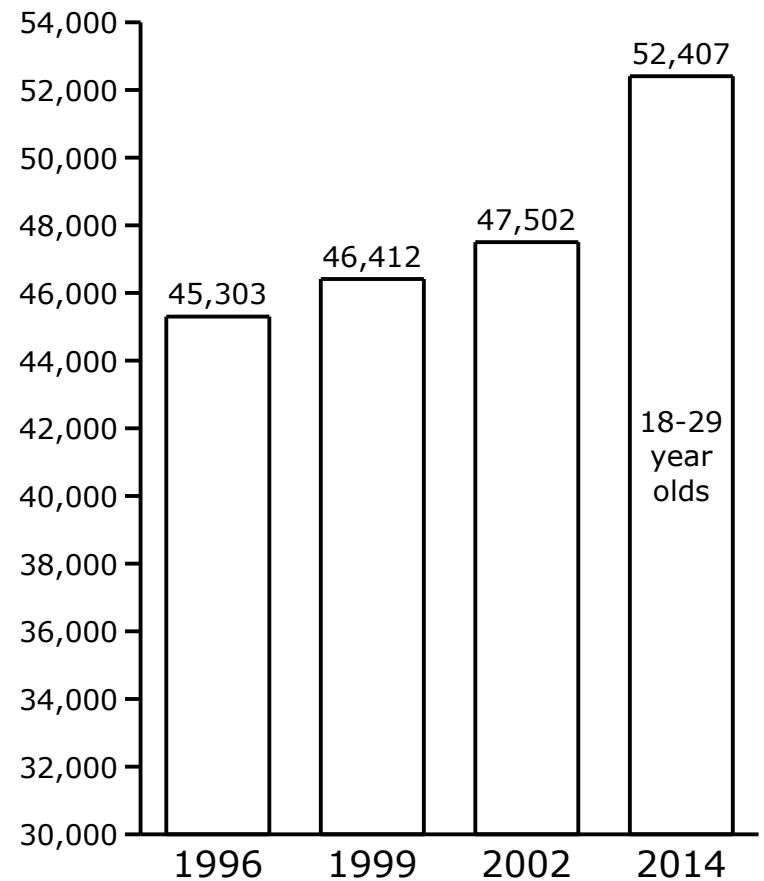
As Generation Y comes into adulthood, the number of college-age students increases

PRELIMINARY

Annual Number of Live Births, 1946-1997 (in thousands)



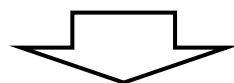
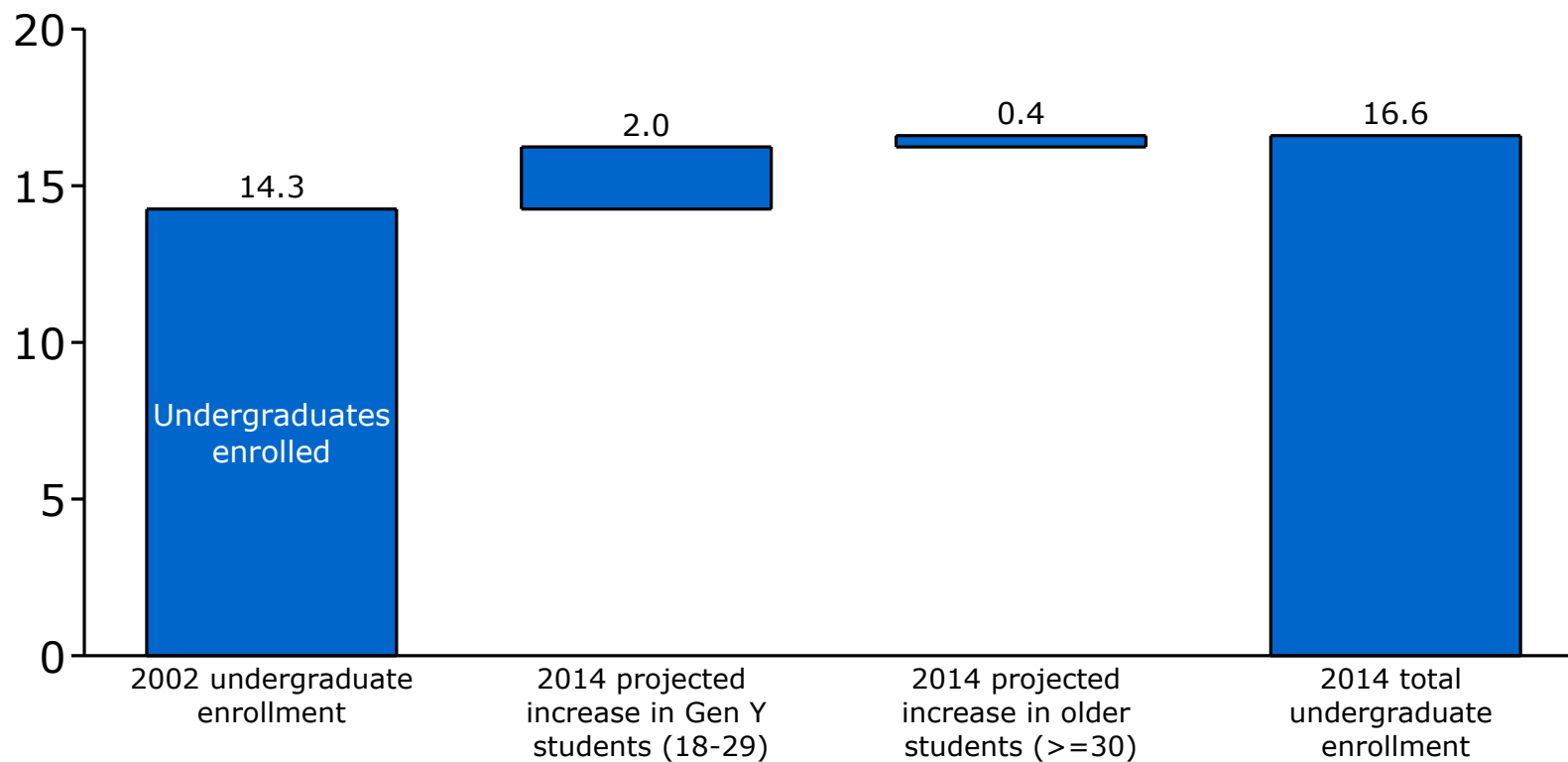
Number of 18-29 year olds (in thousands)



In order to make room for Gen Y need ~ 2 million additional undergraduate slots by 2014...

PRELIMINARY

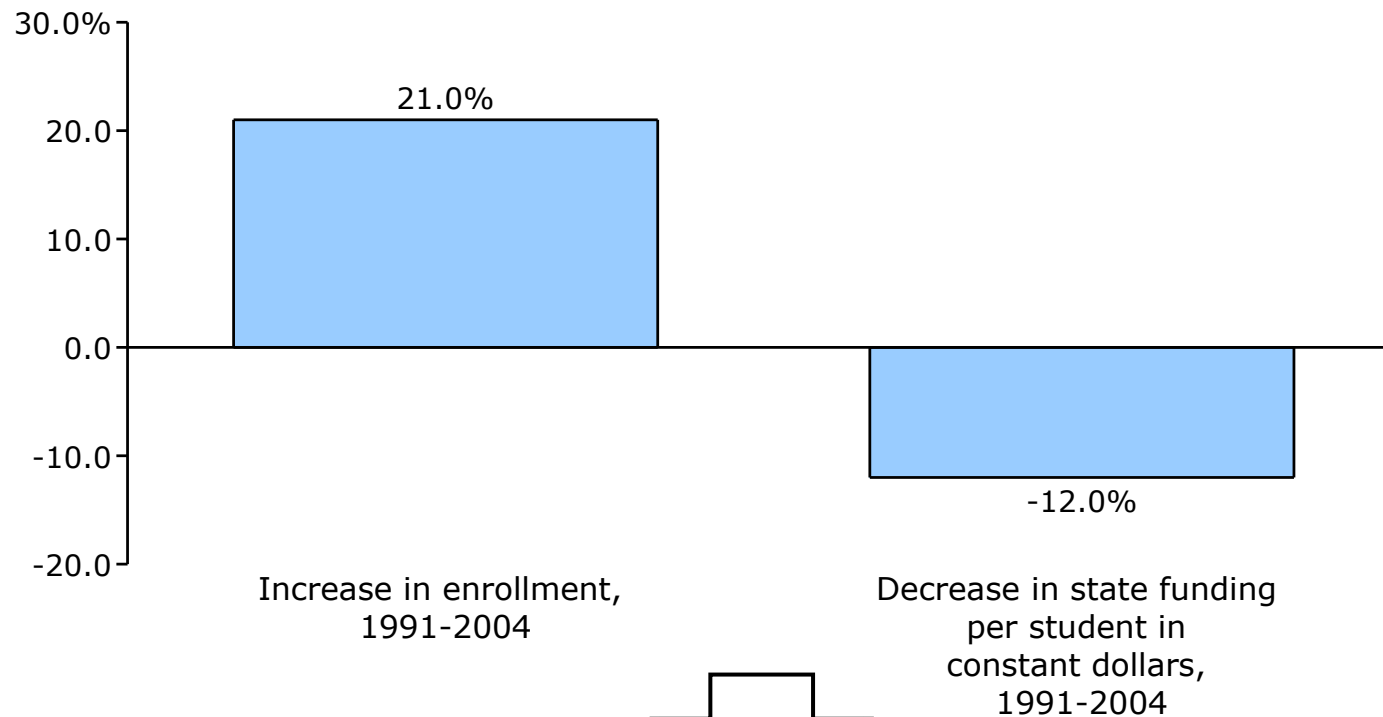
Projected number of undergraduates enrolled (in millions)



...and this is *without* any changes in present trends of high school graduation or college ready rates

...and state investments in new slots have failed to keep up with the increased enrollment thus far.

Percent change, 1991-2004



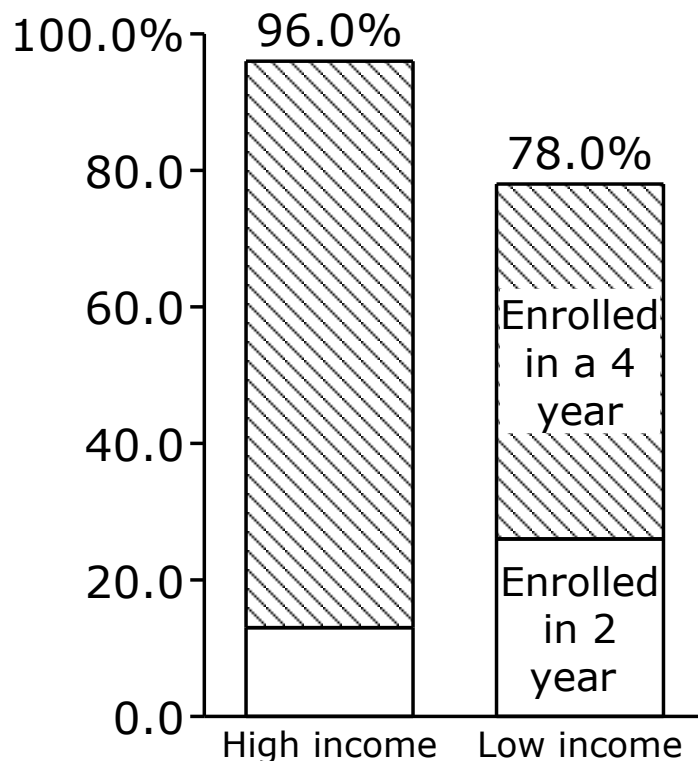
Any attempt to increase rates of enrollment and persistence must address the underlying capacity issue

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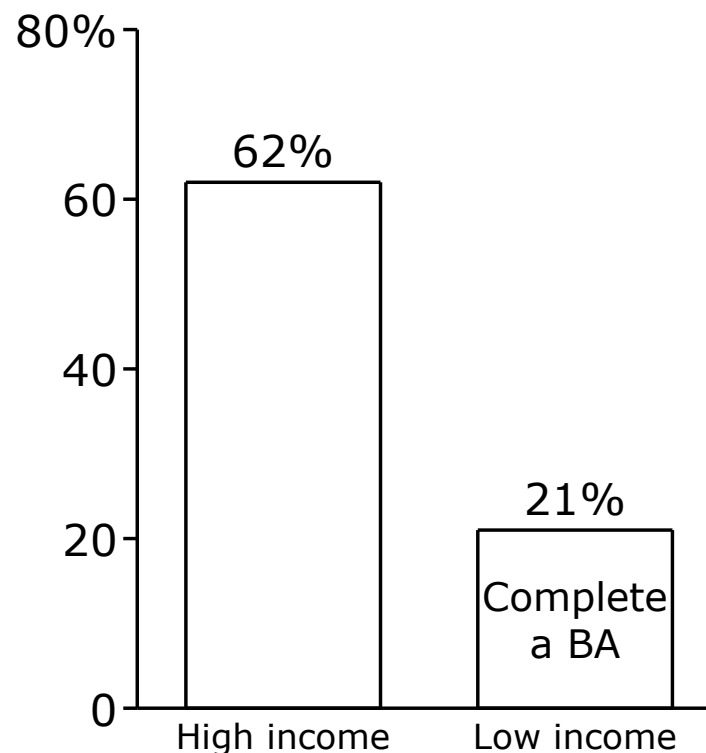
Even among *college-ready high school graduates*, lower income students less likely to attend and complete college

Percent of college qualified high school graduates enrolling in postsecondary education



College access

Percent of college qualified high school graduates with a BA by age 26



BA attainment

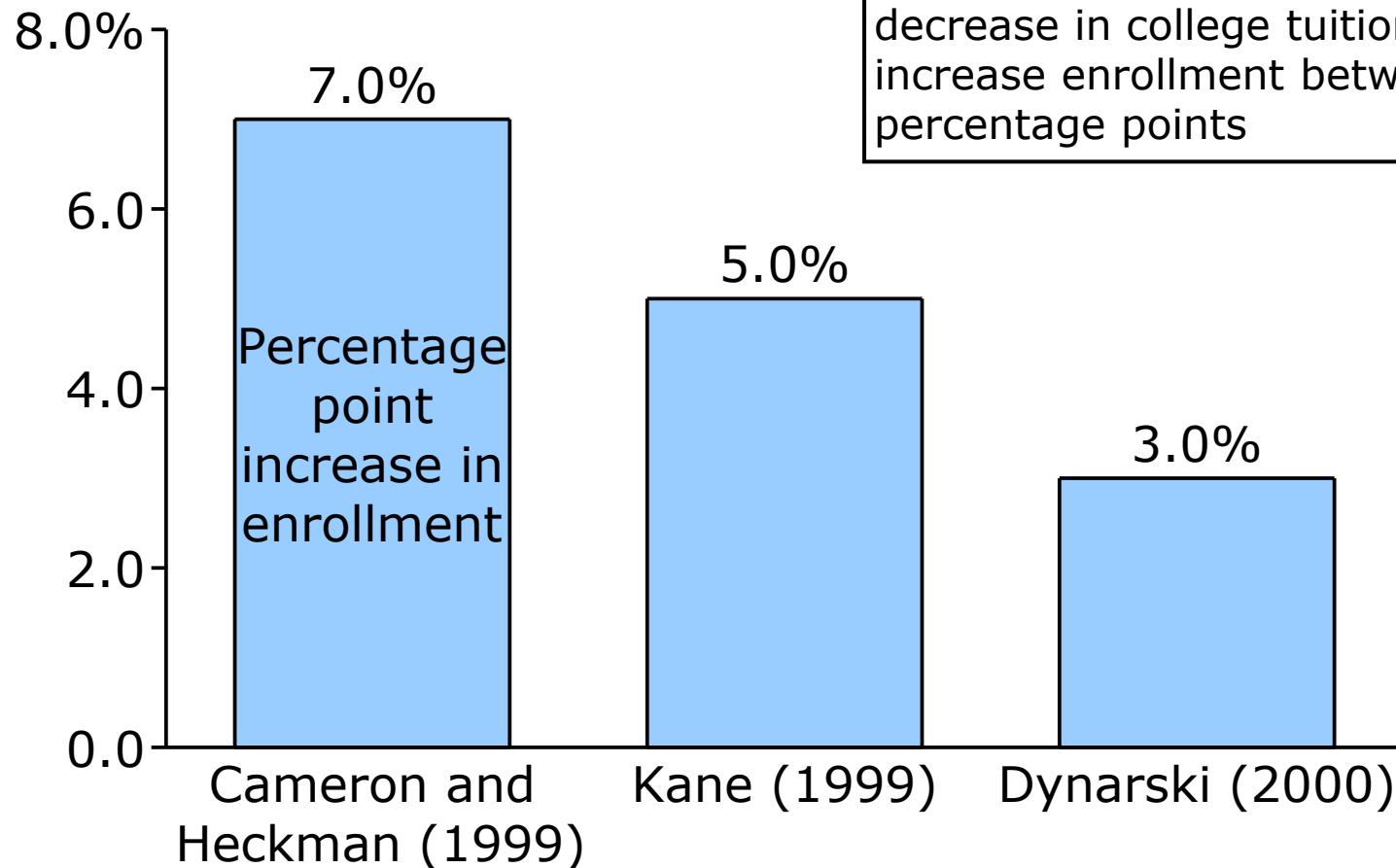
Note: 4-year college qualified defined as students who met at least one of the following five criteria: Ranked at or above the 54th percentile in one's class, had a GPA of 2.7 or higher in academic courses, had a combined SAT score of 820 or above (ACT composite of 19 or higher), or scored at the 56th percentile or above on the 1992 NELS math and reading composite aptitude test; adjusted for level of rigor of curriculum.

Low-income = families with income below \$25,000; High-income = families with income over \$75,000

Source: NELS 88/2000, Empty Promises: The Myth of College Access in America, A Report of the Advisory Committee on Student Financial Assistance, 2002

Affordability matters - evidence suggests that when the direct cost of college decreases, enrollment increases

Percentage point increase in undergraduate enrollment brought about by a \$1000 drop in the cost of college



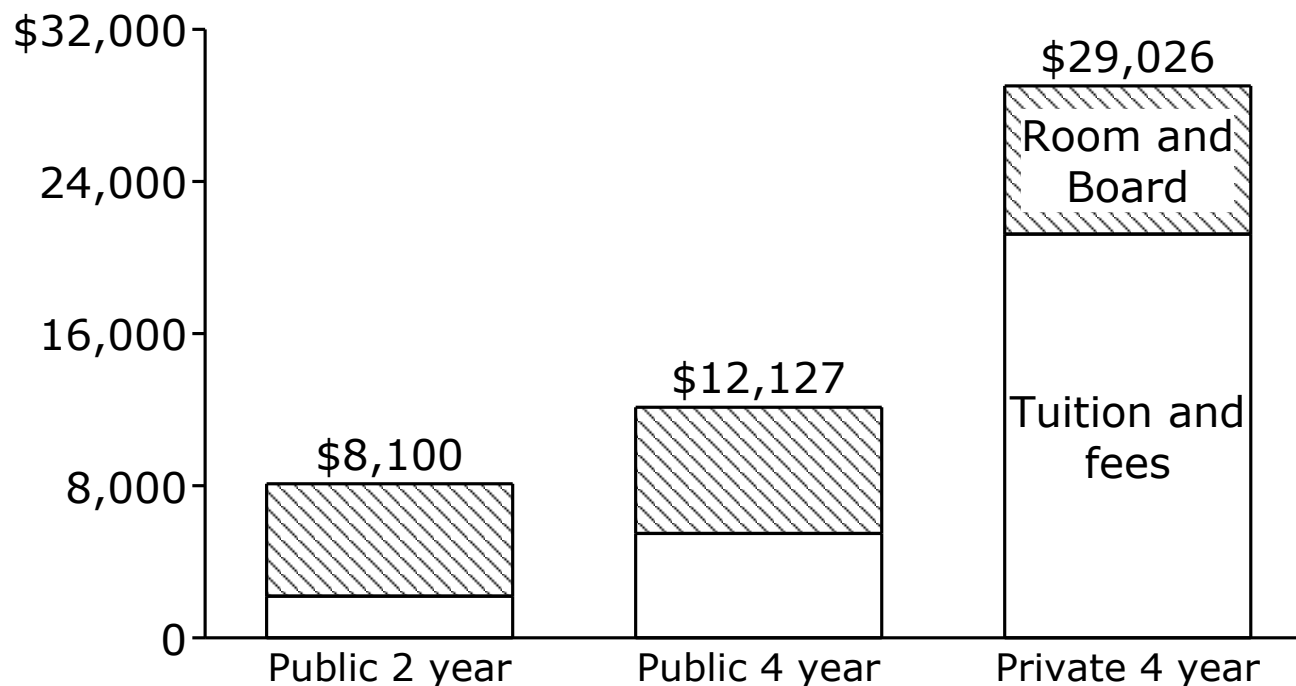
Economists estimate that a \$1000 decrease in college tuition will increase enrollment between 3 and 7 percentage points

Affordability is determined by the interaction of three basic components of the financing system

- Student tuition = sticker price of college, \$ goes from student to the institution
- State subsidy / appropriations = covers the operating costs and subsidizes tuition, \$ goes from state to institutions
- Federal and state financial aid = grants, tax breaks, and loans, \$ goes directly to student then transferred, in part, to institution

Tuition equals the sticker price of college – but the actual price must factor in both living expenses and financial aid

Total student expenses, 2005-2006



College Type	Net price after average financial aid package*
Public 2 year	\$6,600
Public 4 year	\$8,800
Private 4 year	\$19,400

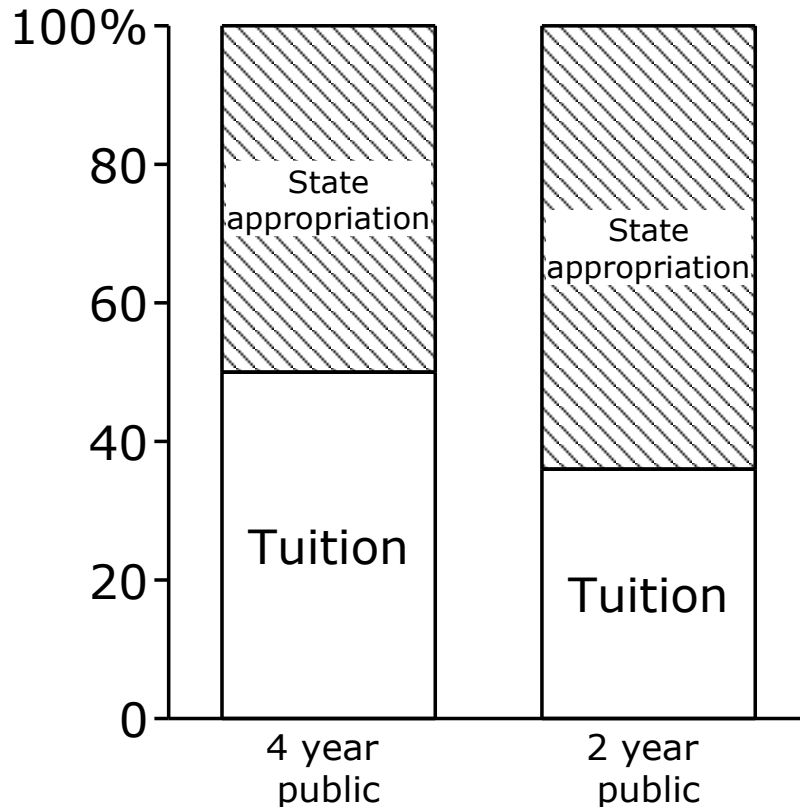
*Net "price" of college = (tuition and fees + room and board) - grants

Source: Trends in College Pricing, 2004.

At public colleges, tuition covers only a portion of the true cost of the education – the rest is subsidized through state money

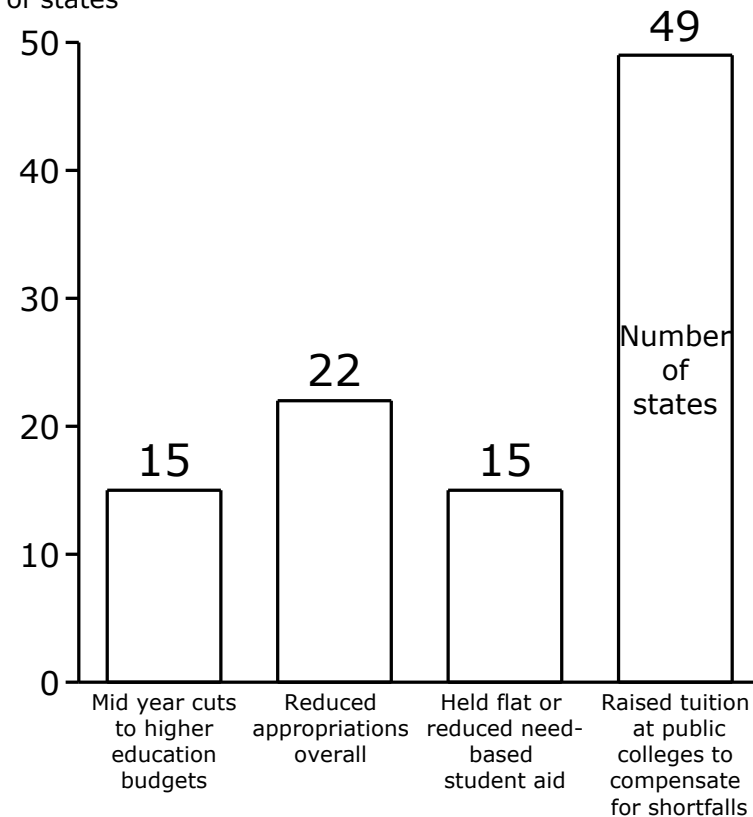
Washington state example of state subsidization

Percent of actual cost of providing postsecondary instruction



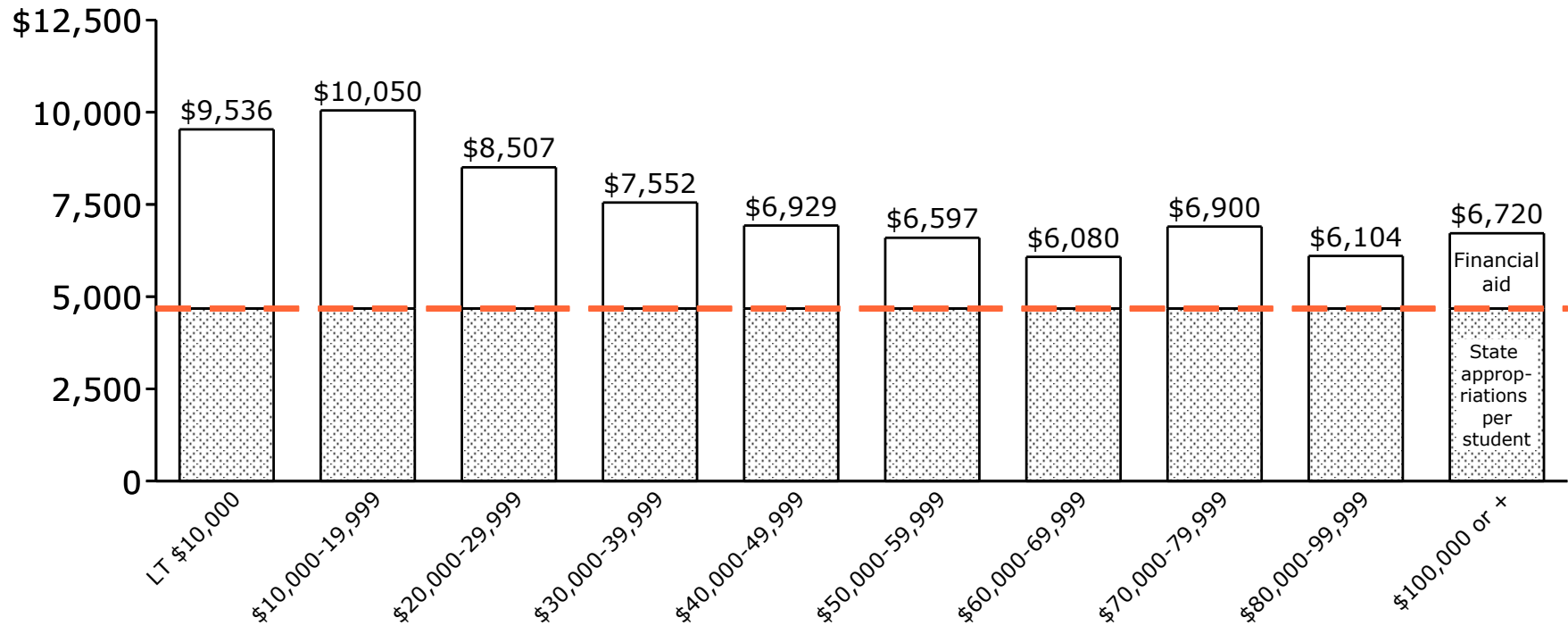
State support for higher education dwindles leading to increases in tuition

Number of states



The subsidy provided via state appropriations is spread evenly among students regardless of parental income level

Dollars per Public 4-year financially-aided full-time, full-year same institution dependent undergraduate



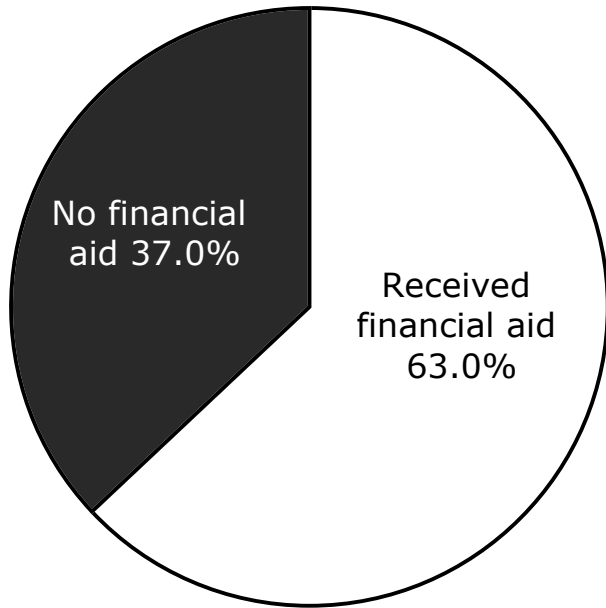
This produces a financing system that does not dramatically discriminate by income level

Note: Does not include loans and family contributions

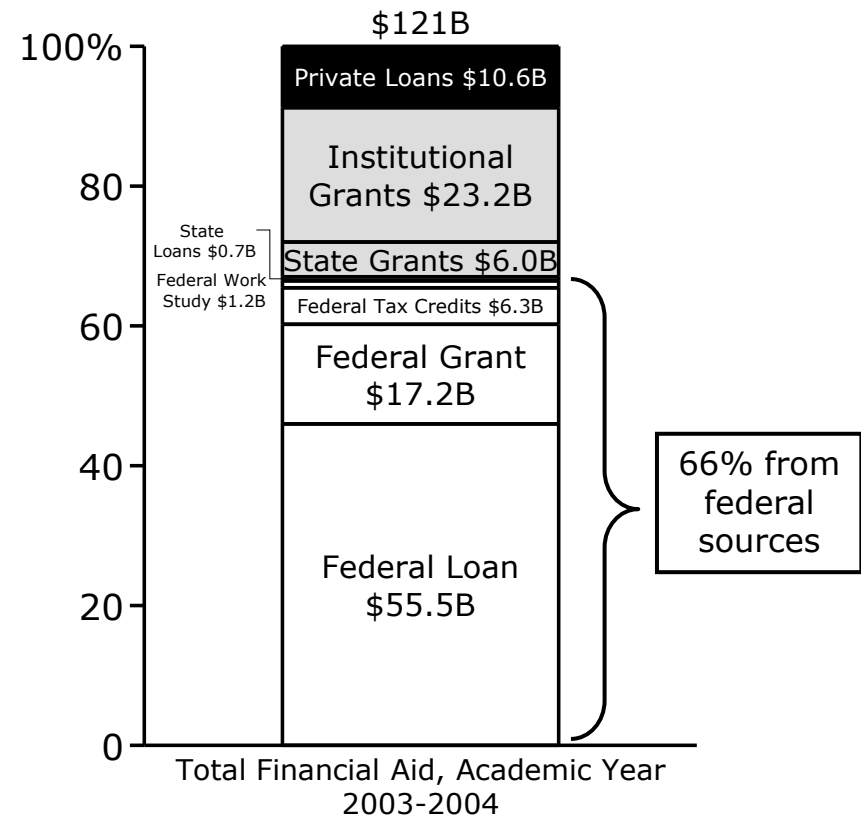
Source: State Higher Education Executive Officers (SHEEO): <http://www.sheeo.org>. *Financing Public Higher Education Rankings*, Kent Halstead; Postsecondary.org

Nearly two out of three students receive financial aid – the bulk of which comes from federal sources

Percent of undergraduates receiving financial aid, 2003-2004



Breakdown of total financial aid, 2003-2004

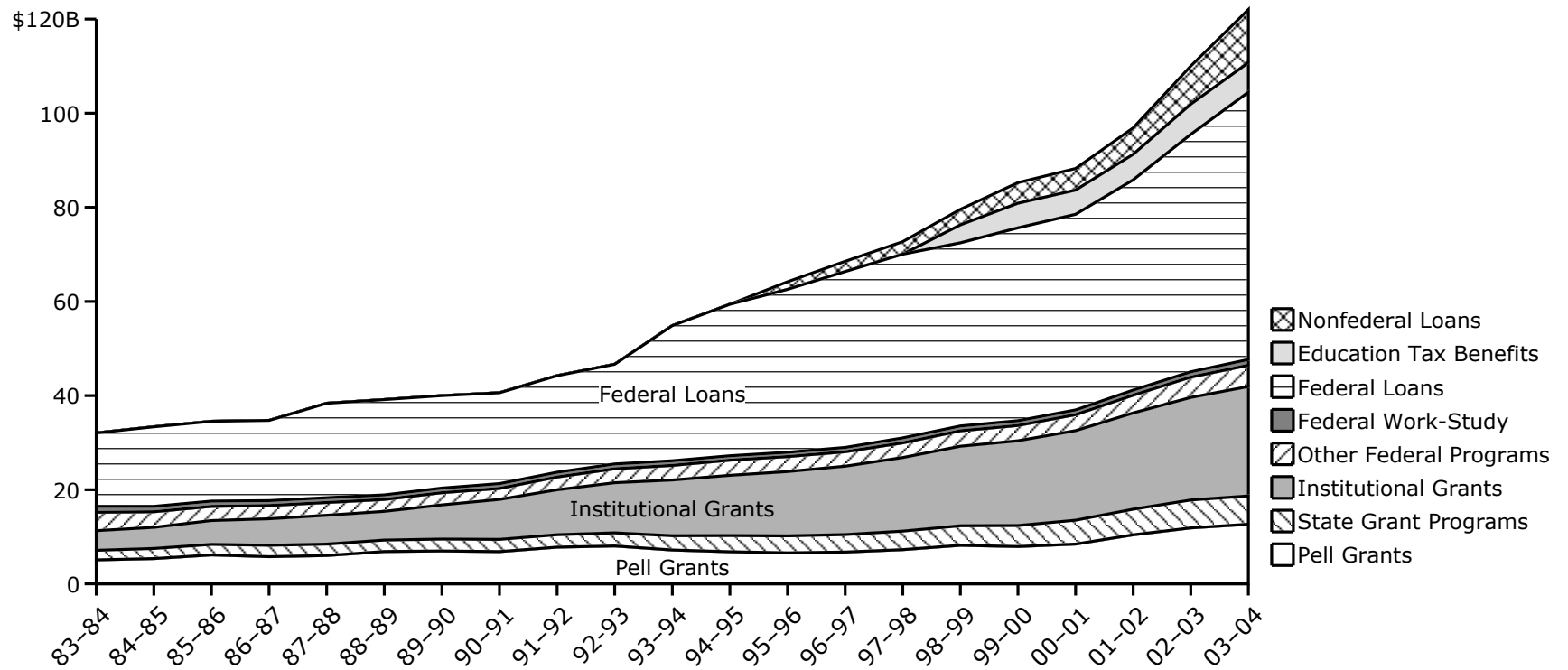


Note: Financial aid includes grants, loans, and work-study.

Source: Berkner, L., He, S., Lew, S., Cominole, M., and Siegel, P. (2005). *2003-04 National Postsecondary Student Aid Study (NPSAS:04) Student Financial Aid Estimates for 2003-04* (NCES 2005-158). U.S. Department of Education, National Center for Education Statistics. Washington, DC; College Board, Trends in Student Aid, 2004.

Total financial aid has increased over time, driven by loans, institutional grants, and tax benefits...

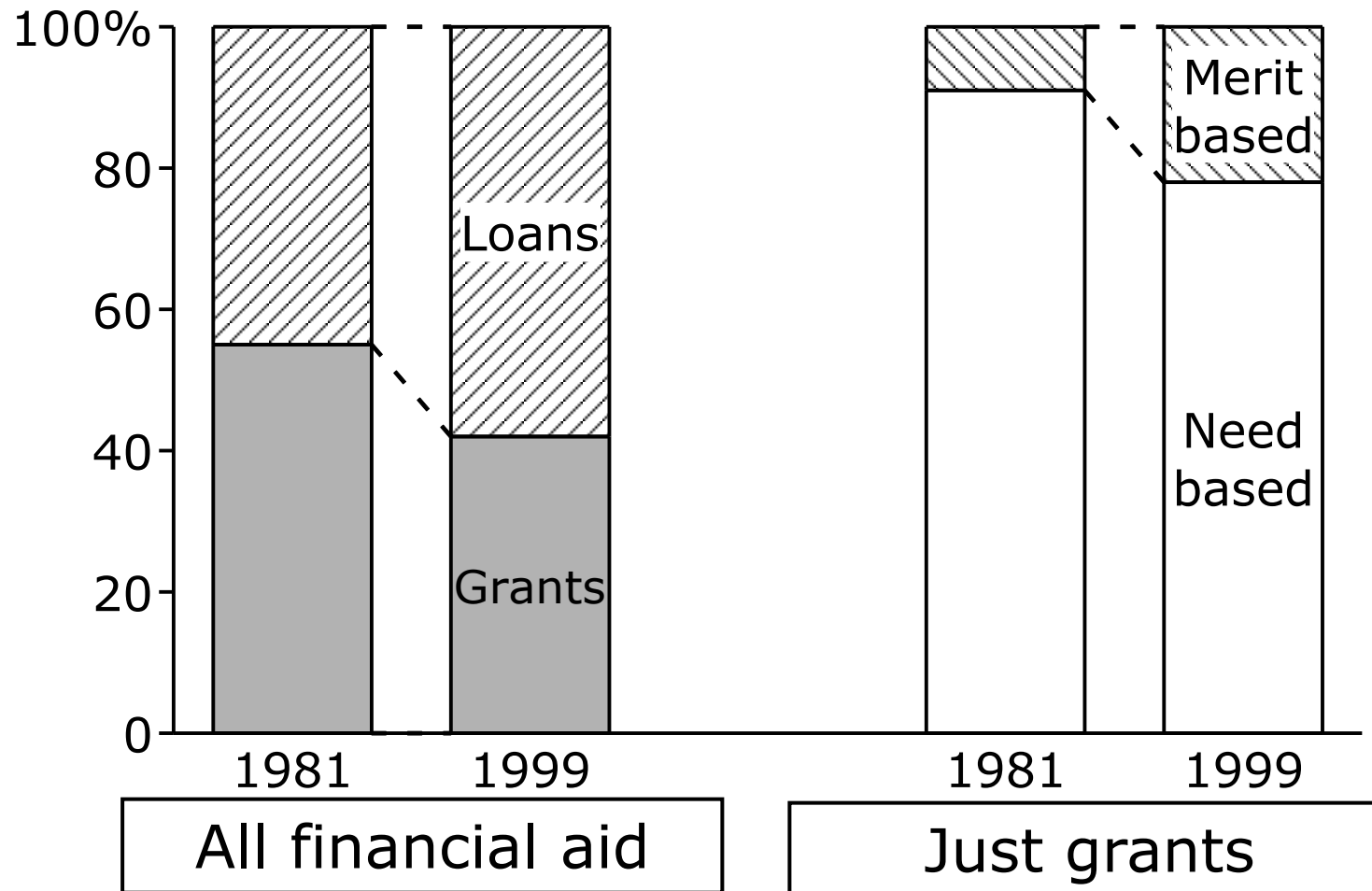
Aid used to finance postsecondary education expense in 2003 constant dollars



and these changes favor middle and high income families

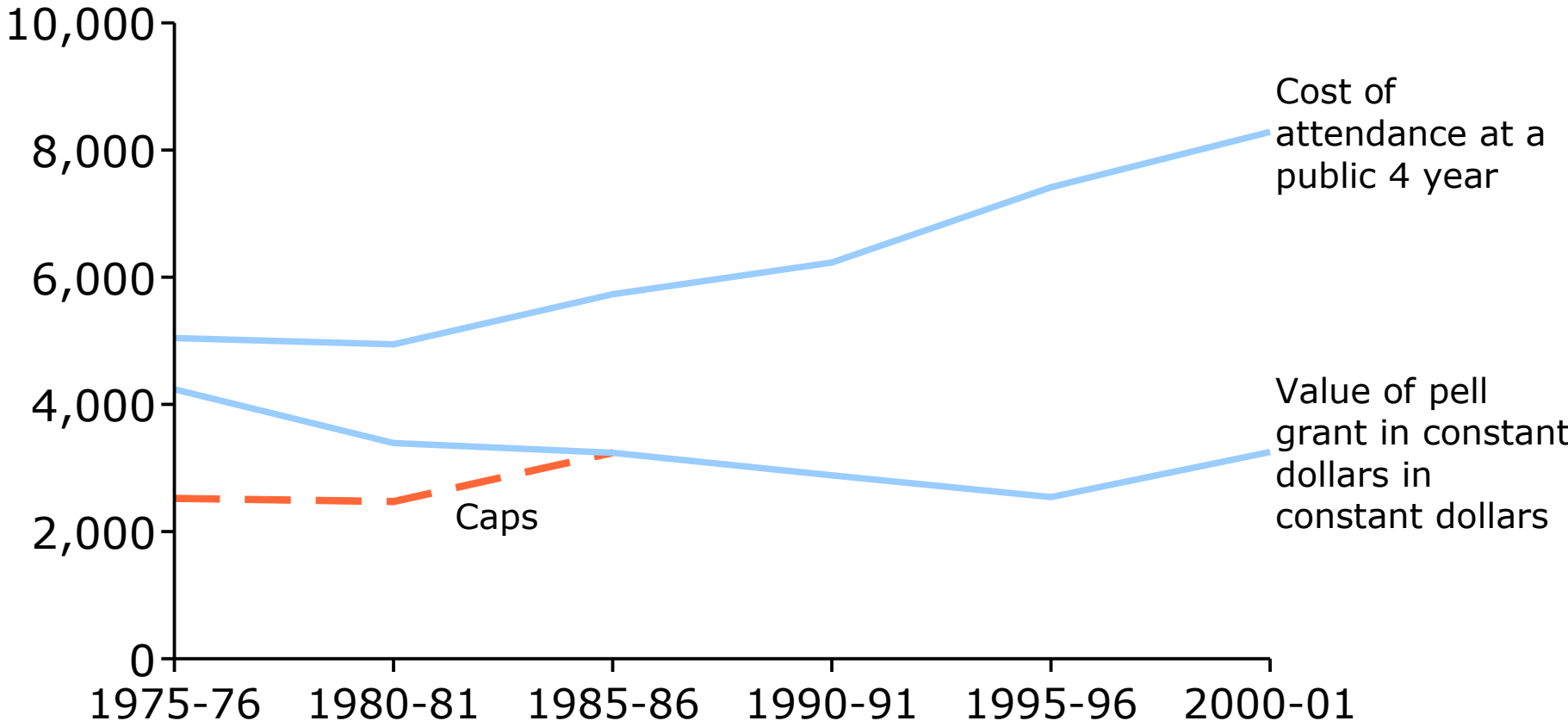
Loans have come to represent over half the total investment in financial aid and grants are increasingly merit based

Total federal and state financial aid



Furthermore, the value of the main need-based federal grant, the Pell Grant, has not kept pace with tuition

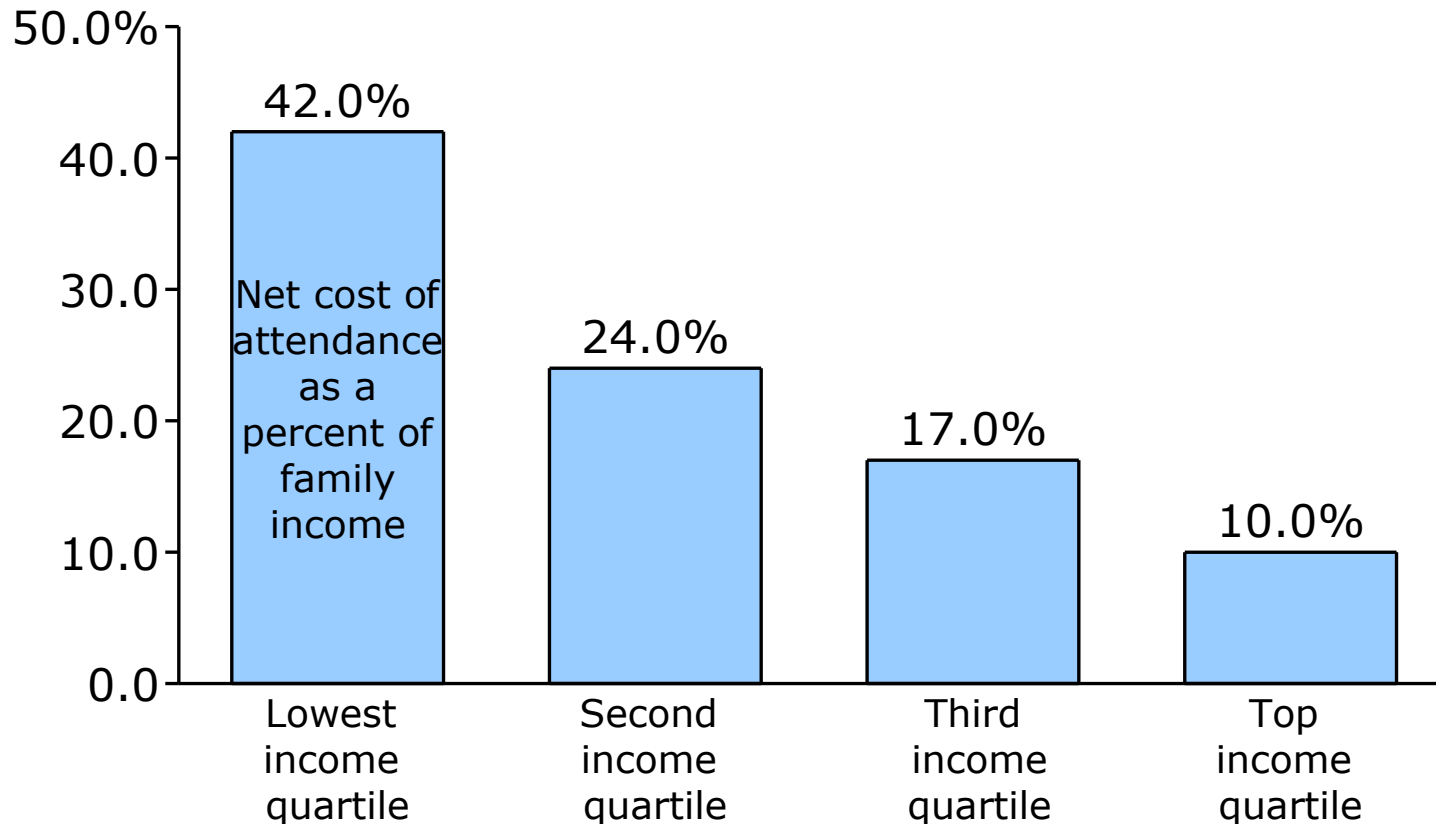
Constant Dollars, Y2000



Source: College Board, "Losing Ground: A National Status Report on the Affordability of American Higher Education," National Center for Public Policy and Higher Education, 2003 data update

The results are unsurprising: The poorest families must raise an amount equal to 40% of their income to finance college

Percent of family income needed to cover net costs of attending a public 4 year college



*Net "price" of college = (tuition and fees + room and board) - grants

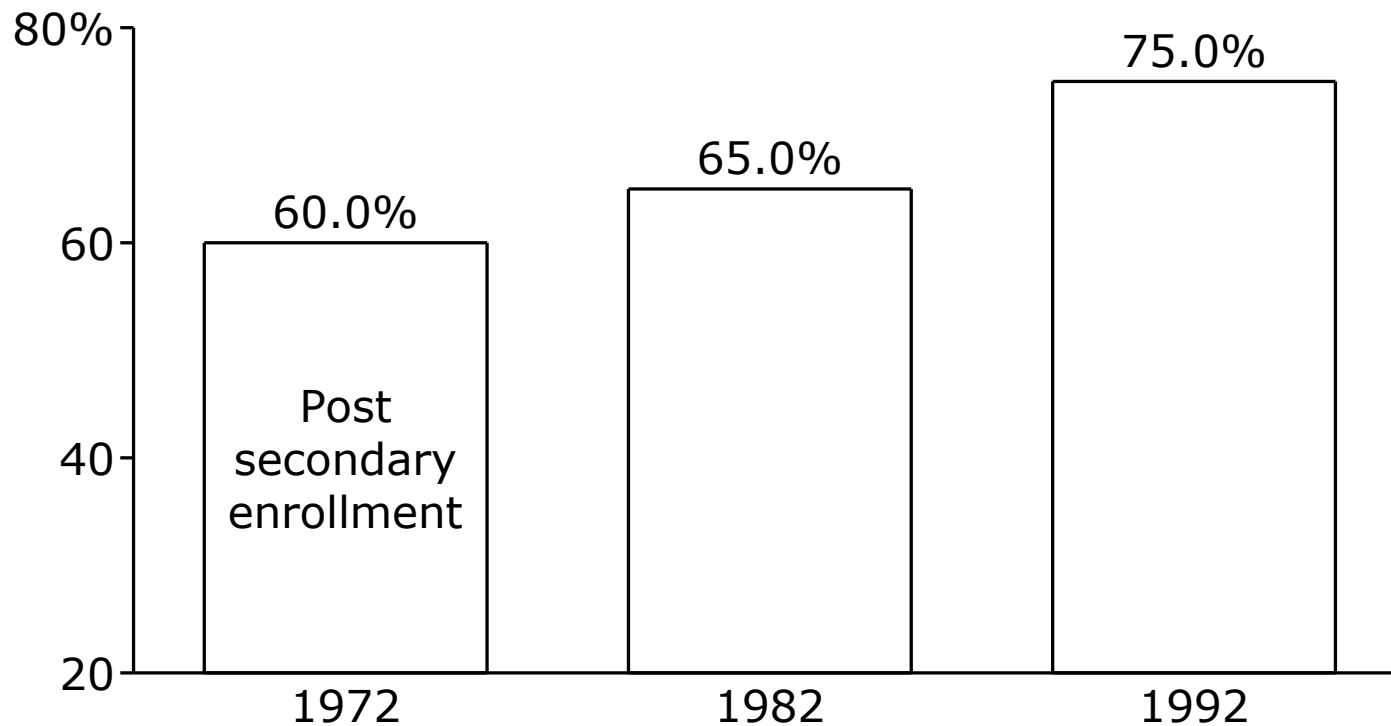
Source: Trends in College Pricing, 2004.

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Between 1972 and 1982 postsecondary enrollment rates have increased...

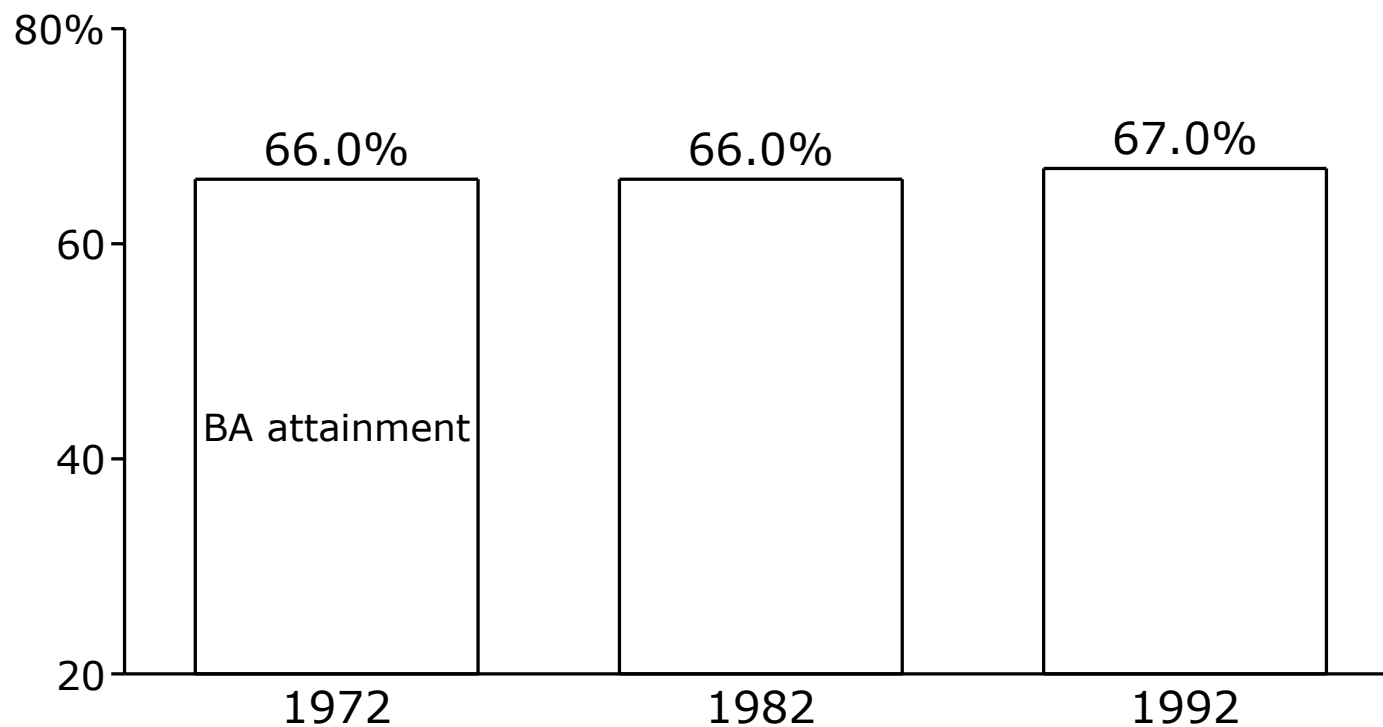
Percent of high school graduates enrolling in post secondary within 20 months of graduation



SOURCE: Adelman, C. (1999). *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment* (PLLI1999-8021). U.S. Department of Education. Washington, DC: Office of Educational Research and Improvement; Adelman, C., Daniel, B., and Berkovits, I. (2003). *Postsecondary Attainment, Attendance, Curriculum, and Performance: Selected Results from the NELS:88/2000 Postsecondary Education Transcript Study (PETS)*, 2000 (NCES 2003-394). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office; and Adelman, C. (2004). *Principal Indicators of Student Academic Histories in Postsecondary Education, 1972-2000*. Washington, DC: U.S. Department of Education.

...while bachelor's degree completion rates remain flat

Bachelors degree attainment amongst students who attended a 4 year college and completed at least 10 credit

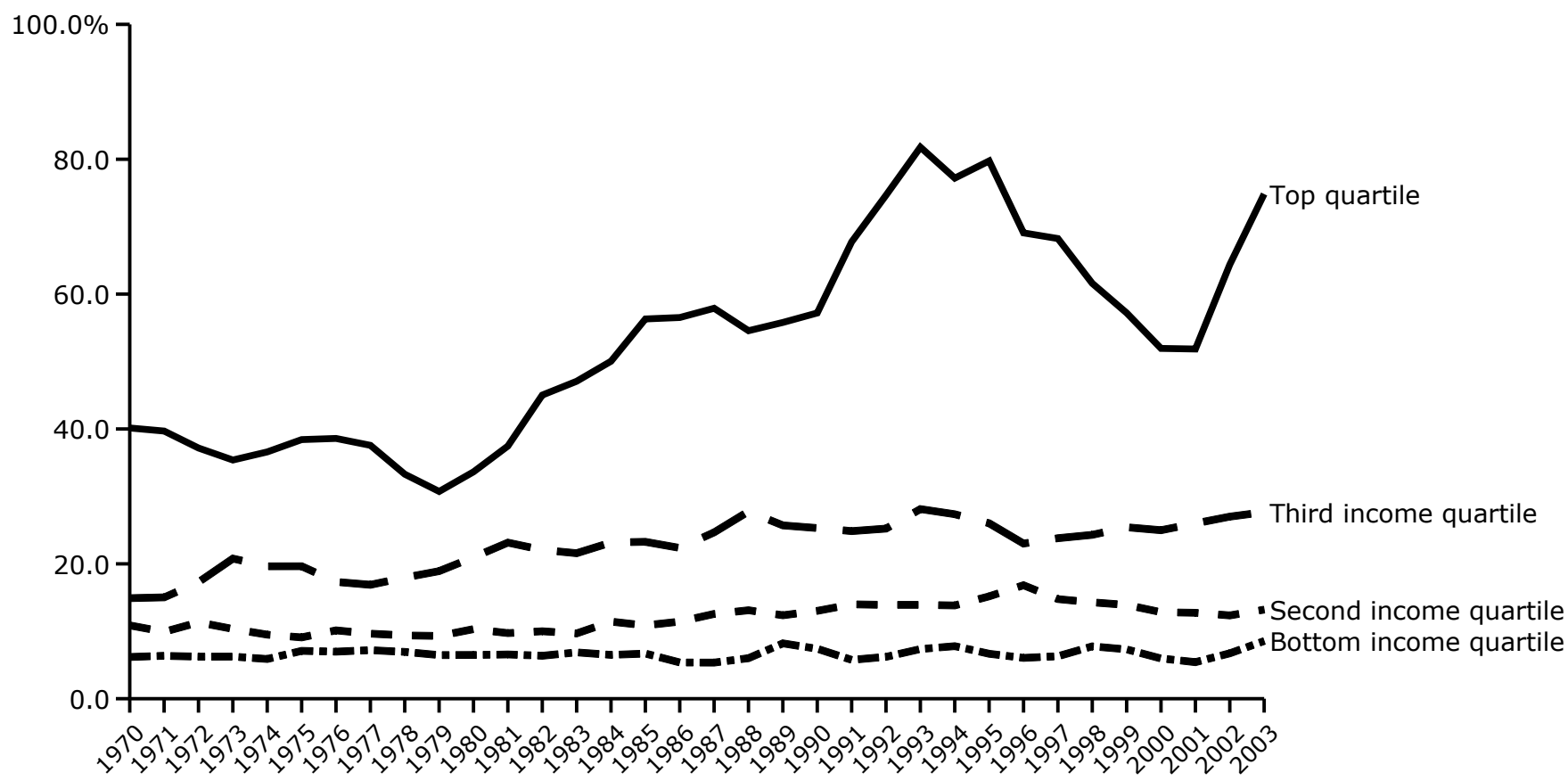


Note: Bachelor's degree attainment as of age 30 for 1972 and 1982 high school graduates and age 26 for 1992 high school graduates. Rates based on those who had attended a 4-year institution and completed at least 10 credits

SOURCE: Adelman, C. (1999). *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment* (PLLI1999-8021). U.S. Department of Education. Washington, DC: Office of Educational Research and Improvement; Adelman, C., Daniel, B., and Berkovits, I. (2003). *Postsecondary Attainment, Attendance, Curriculum, and Performance: Selected Results from the NELS:88/2000 Postsecondary Education Transcript Study (PETS)*, 2000 (NCES 2003-394). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office; and Adelman, C. (2004). *Principal Indicators of Student Academic Histories in Postsecondary Education, 1972-2000*. Washington, DC: U.S. Department of Education.

However the *distribution* of completed BA's by income quartile has changed radically

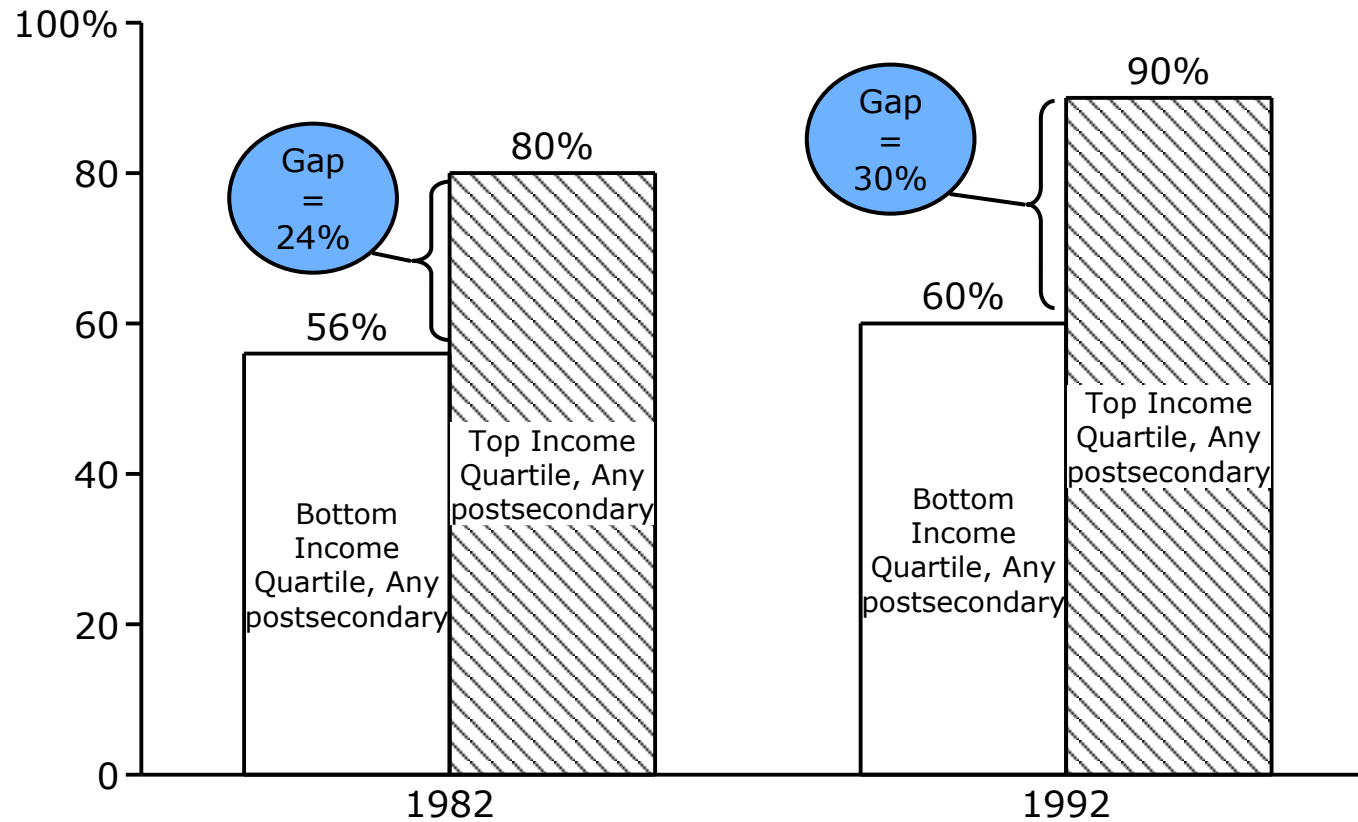
Probability of a BA by age 24, 1970-2003



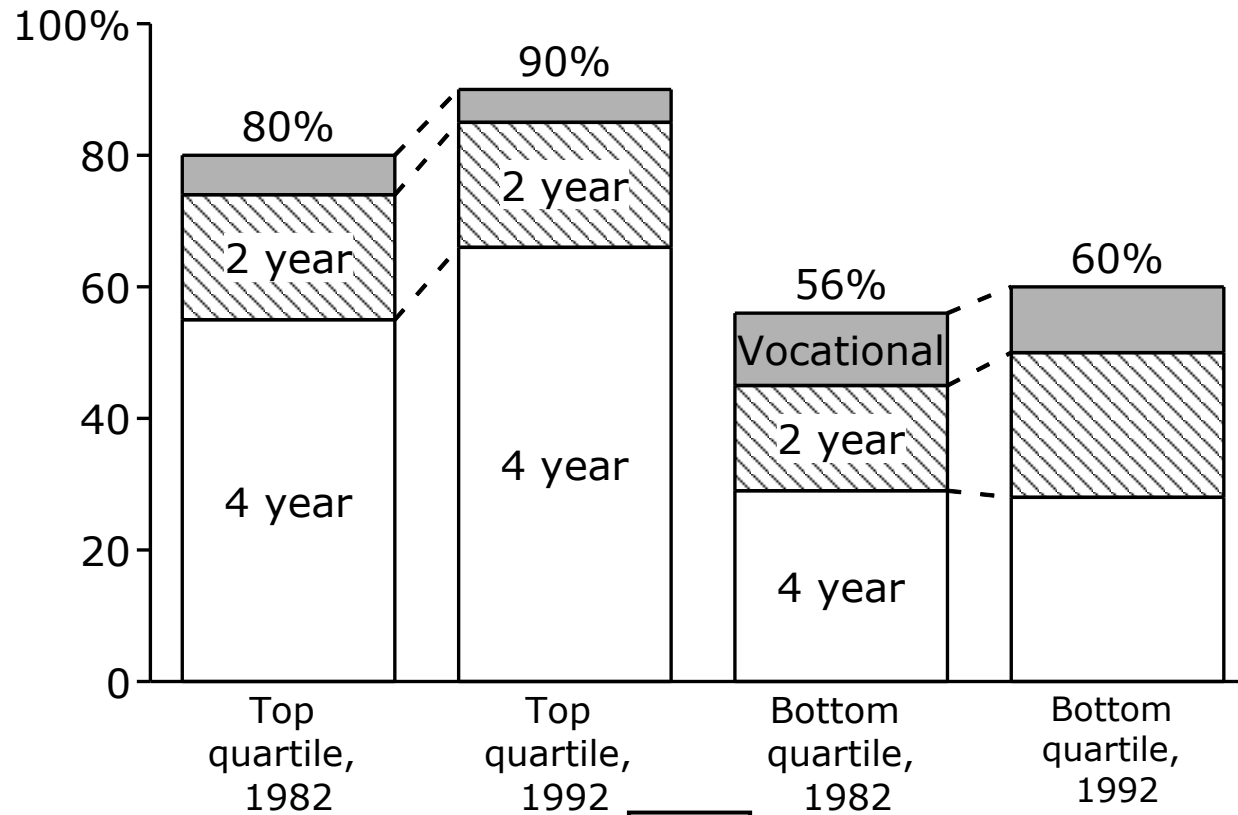
Source: Tom Mortenson, Postsecondary Opportunity, 2005

Increasing levels of inequality in college going rates between rich and poor

Proportion of students who enroll in 4 year college within 20 months of graduation



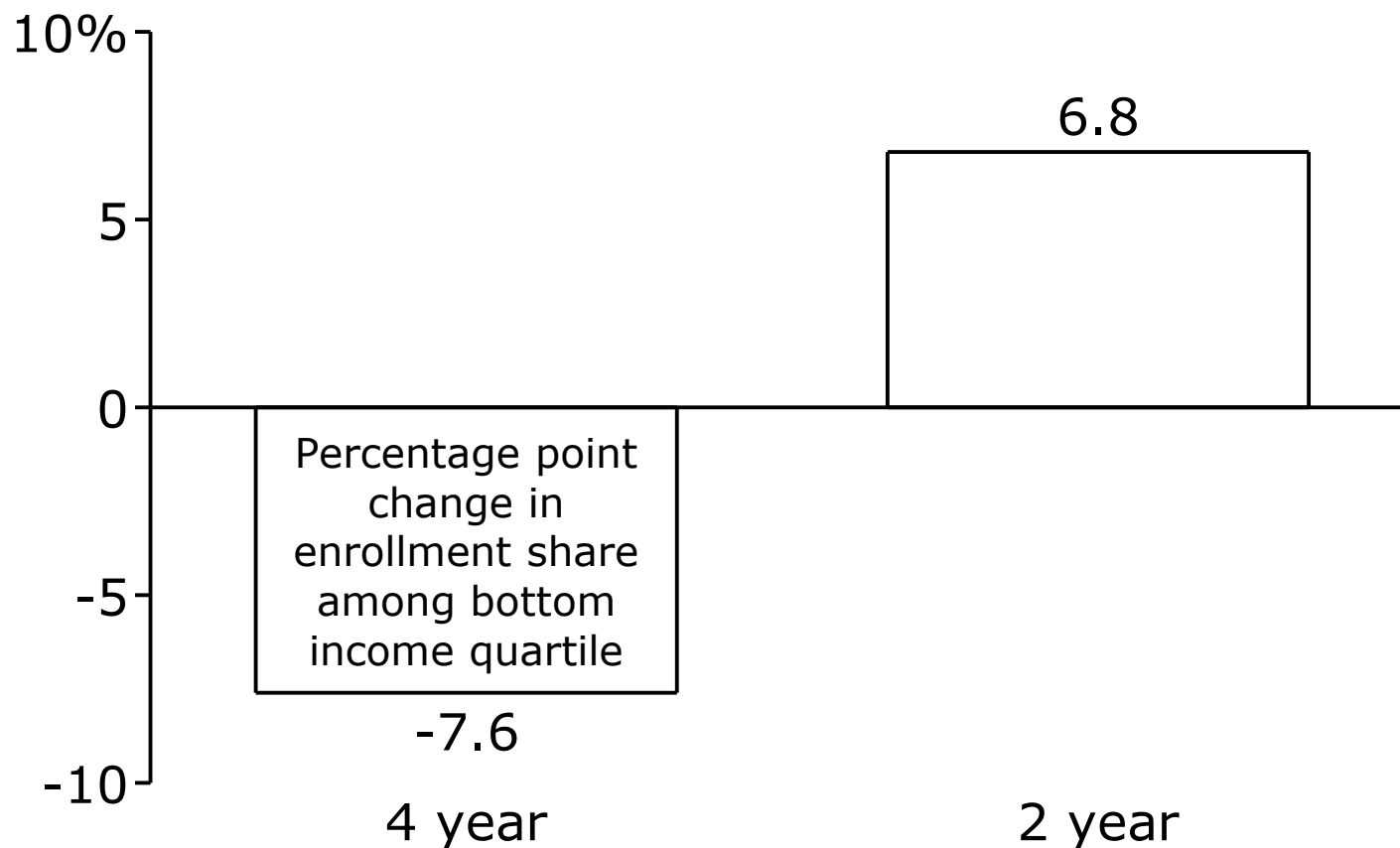
Inequality driven by increase in 4-year college going among the top quartile



Increase in overall postsecondary rate among the bottom quartile driven completely by community college enrollment

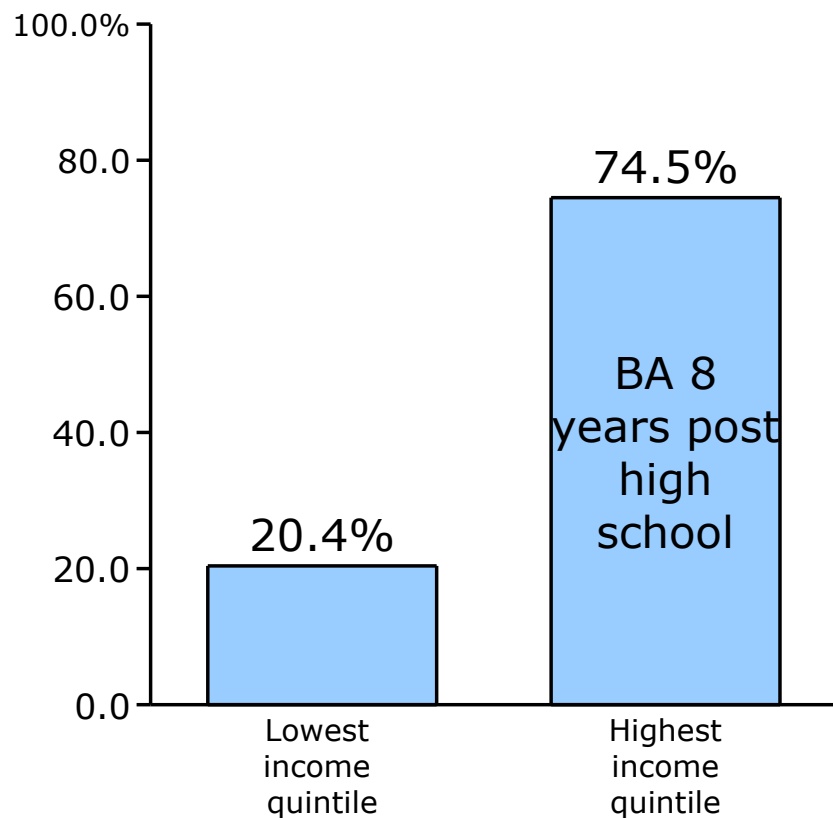
Over the past fourteen years, low income students have become even more concentrated in 2 year colleges

Percentage point change in enrollment share among bottom income quartile, 1990-2004



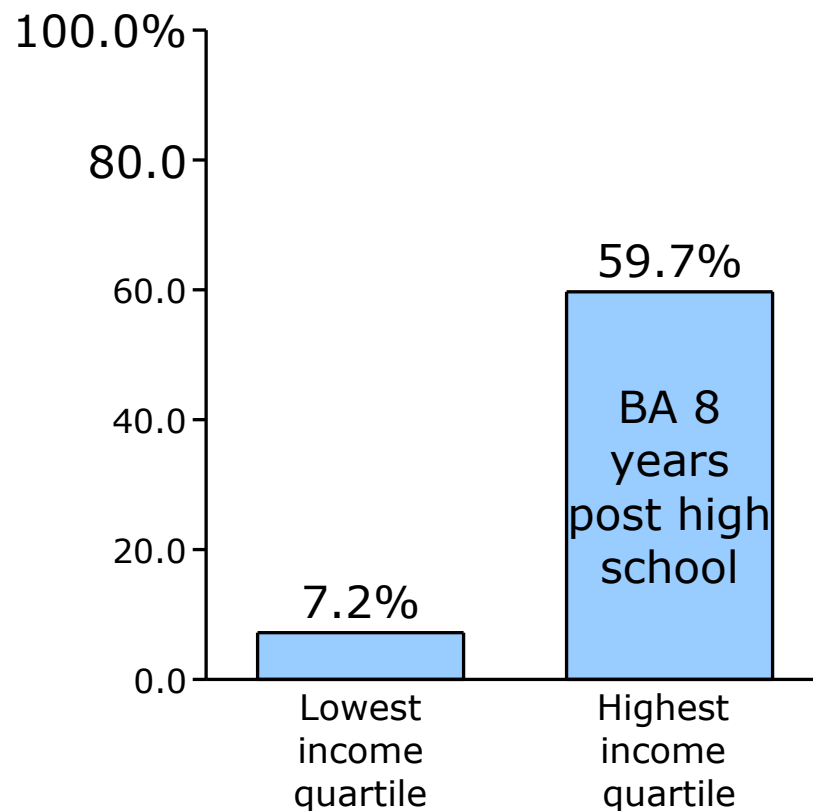
Coupled with low rates of persistence and attainment once enrolled, these trends produce stark class-based educational inequalities

Percent of postsecondary students with >10 units who received a BA or higher by age 26, 2000



Attainment among college goers

Percent of 8th graders who receive a BA or higher by age 26, 2000



Chance for BA by 26

Back Up

Federal Higher Education Financial Aid

Program	Description	Total Allocation
§305 of the Higher Education Act: Leveraging Educational Assistance Partnership (LEAP)	<ul style="list-style-type: none"> Provides a federal match to states as an incentive to create need-based grant and work study assistance to low income students. 	<ul style="list-style-type: none"> \$66.5 million in 2003
Pell Grants	<ul style="list-style-type: none"> Grants to low income students. Maximum grant is \$4050. 	<ul style="list-style-type: none"> \$11.365 billion in 2003
Stafford Subsidized Loan Program	<ul style="list-style-type: none"> Guaranteed loans provided to financially needy families; loans do not accrue interest while student is in school. 	
Stafford Unsubsidized Loan Program	<ul style="list-style-type: none"> Guaranteed loans provided to middle income families; loans accrue interest while student is in school. 	

Federal Higher Education Financial Aid

Program	Description	Amount
Gear-Up	<ul style="list-style-type: none">• Supports state grants and grants to partnerships for early intervention services and scholarships for students beginning in middle school	<ul style="list-style-type: none">• \$293 million in 2003
Trio Programs	<ul style="list-style-type: none">• Six programs that support the progress of first-generation, at risk students towards college and completion of their degrees. Talent search, Upward Bound, Student Support Services, Educational Opportunity Centers and McNair Achievement	<ul style="list-style-type: none">• \$827 million in 2003