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**Are We Keeping College Affordable?
Student Aid, Access, and Choice in American
Higher Education**

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ABSTRACT

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In our 1991 Brookings book, *Keeping College Affordable Government and Educational Opportunity*, we examined whether our nation's colleges and universities were affordable for Americans of all economic and social backgrounds, and outlined policies aimed at the efficient allocation of government and private resources towards that aim. In this paper we review, update, and expand our earlier analysis. Of particular interest is how the combination of government funding and institutional financial and scholarship aid combine to explain observed trends in student access and choice.

We begin with an overview of changes over time in the finance of American colleges and universities, focusing on the role of governments, institutions and families in meeting college costs. We then turn to a consideration of the implications of these recent financing trends for the issue of access to college for people of all economic backgrounds. Our focus here is on the bearing of these recent trends in enrollment and pricing on our understanding of the impact of prices and student aid on the demand for college enrollment. We proceed next to examine evidence on the enrollment destinations of students from different income groups and find that students' choices about where to go to school seem to be increasingly constrained by finances. We conclude by speculating about the future and making some observations about public policy.

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In our 1991 book, Keeping College Affordable: Government and Educational Opportunity (McPherson and Schapiro 1991A), we examined whether our nation's colleges and universities were affordable for Americans of all economic and social backgrounds, and outlined policies aimed at the efficient allocation of government and private resources towards that aim. In this paper we review, update, and expand our earlier analysis. Of particular interest is how the combination of government funding and institutional financial and scholarship aid combine to explain observed trends in student access and choice.

We begin in Section I with an overview of changes over time in the finance of American colleges and universities, focusing on the role of governments, institutions and families in meeting college costs. From the early 1960's until the early 1980's, the story is one of growing public commitments to the finance of higher education. From the mid-1980's on, one sees a reversal of this trend toward expanded government support of colleges. As the share of college costs financed by the federal government and even more by state governments has fallen, the share borne by families has inevitably increased.

Yet despite this apparent decline in affordability, the rates at which young people are enrolling in college have actually risen in recent years. We therefore turn in Section II to a consideration of the implications of these recent financing trends for the issue of access to college for people of all economic backgrounds. Our focus here is on the bearing of these recent trends in enrollment and pricing on our understanding of

the impact of prices and student aid on the demand for college enrollment.

That enrollment rates have risen in the face of rising net prices for college suggests that college is, in some sense, remaining affordable. Yet it is important to consider not only whether but where students go to college, and we therefore proceed in Section III to examine evidence on the enrollment destinations of students from different income groups. Our findings here are not so reassuring, in that they indicate that students' choices about where to go to school seem to be increasingly constrained by finances.

Section IV concludes with some speculations about the future and some observations about public policy.

Section I

Prices and Aid

Tables 1 and 2 present a long-run view on college finance, containing data from selected years between 1939 and 1993. Table 1 shows how colleges' principal sources of revenue have changed over the past half century. For public institutions, state and local government spending has been the primary revenue source (accounting for more than half of revenues), with tuition providing a much smaller share (no more than a quarter of revenues). On the other hand, for private institutions, tuition has by far been the principal source of revenue (accounting for

between 43% and 57% of revenues).

This long View allows us to put recent changes in historical perspective. For public institutions, the contribution of state and local government spending has been declining for more than a decade, reaching its lowest post-war level (53%) in the most recent year for which we have data. While there has been a slight increase in the contribution of gifts and endowment earnings (from 3% to 6%), a much more important change has been the increased role of tuition (from 13% to 24%). Tuition at private institutions has also taken its largest role in forty years (going from 45% in 1955-56 to 54% in 1992-93) as the contribution of federal funding has declined to its lowest level since the late 1950's (falling from a peak of 30% in 1965-66 to 19% in 1992-93).

The pattern here is 'clear: tuition has been replacing government spending at both public and private institutions. Indeed, the pattern of revenue shares in the 1990's looks more like that of the late 1940's than of any intervening decade.

Table 2 reports revenue shares for the major categories given in Table 1, averaged over public and private institutions, and also breaks down gross tuition by its sources -- showing the share paid by families directly and the shares paid by various forms of student aid.

The most striking trend is the steady decline through 1980 in the overall share of tuition paid by families, the result of an increase in the enrollment share of public institutions, the

growth of federal grants and contracts, and the rise in financial aid. However, the decline in the share of higher education revenues provided by families came to an abrupt halt in the 1980's, with the family share increasing by 8 percentage points in the 1979-80 to 1992-93 period (reaching the highest level (22%) since 1959-60).

Table 2 also underscores that it is the states rather than the federal government whose role is changing most dramatically. As late as 1979-80, state governments contributed 45% of all of higher education revenues, almost all of it through direct support of state-run institutions. By 1992-93 that share had fallen to 35% and has almost certainly fallen further since. The share of higher education revenues supplied by federal student aid has remained roughly constant since the mid-1970's, but the share provided by federal research support has declined substantially (from 26% to 16%) from its high in the mid-1960's. Since research support is concentrated in a fairly small number of institutions, this decline is of major importance for that subgroup.

We turn now to a detailed look at changes in the sources of financial aid. Table 3 shows the overall magnitudes of federal and other forms of student aid, expressed in constant 1994 dollars, for selected years since 1963. With respect to how federal funding has developed, the period from 1963 to the present can be usefully divided into four subperiods. Before 1975, a fairly modest total of "generally available" aid was

divided between guaranteed loans and the so-called "campus-based" programs, which provide funds for institutions to use for student aid in the form of grants, loans and work. From 1975 to 1980, the federal aid budget grew rapidly (doubling in real dollars between 1975-76 and 1980-81), with substantial expenditures on the newly introduced Pell program, the means-tested grant program put in place under the Nixon administration in 1974. From 1980 to 1992, both the Pell program and guaranteed loans increased at a slower rate (with around a 50% real increase in each). Since that time, growth in guaranteed and direct loans has been enormous (a 57% real increase between 1992-93 and 1994-95) but expenditures on the Pell program have fallen by 13% in real dollars. Thus, while federal aid in 1994-95 totaled \$34.6 billion, up from only \$23.5 billion in 1990-91 (in 1994 dollars), virtually all of the increase was in the form of loans rather than grants.

The real value of state grants has followed a positive trend throughout the entire period but the absolute increase has been dwarfed by the growth in institutional grants. The real value of institutional grants has more than tripled over the past fifteen years, going from \$2.8 billion in 1980-81 (in 1994 dollars) to \$8.9 billion in 1994-95.

These aggregate aid numbers provide only limited insight into how student aid has helped particular groups of students meet the costs of college. One useful bit of insight into this question is provided by Table 4, which examines changes over time

in the targeting of the federal Pell program.

While, in the early years of the program, the bulk of grant recipients were traditional-aged college students supported by their parents (in 1973-74 only 13% of Pell recipients were independent students), by 1985-86 the majority of recipients were independent students. That percentage has been fairly stable at around the 60% level during the 1990's.

Equally striking changes have occurred in the distribution of Pell funds between the non-profit and proprietary sectors. From 1973-74 to 1987-88 there was a remarkable increase (from 7% to 27%) in the share of Pell funds going to students attending proprietary vocational and technical institutions, most of which offer non-degree programs of less than two years.¹ Since that time, however, a tightening of federal aid guidelines has lowered that share all the way to 15%, the lowest level since the early 1980's. Although fully comparable data are not available for federal loans, it is clear that there has been a similar reversal of the trend toward an increasing share of loans going toward proprietary institutions. This is a quite striking turnabout in a situation which had garnered enormous attention in public discussions of higher education finance in the early 1990's.

The tables discussed above provide an overall picture of changes over time in the financing of American higher education. What is missing is an analysis of the different prices faced by

¹ While proprietary institutions enrolled fewer than 7 percent of undergraduate students in 1988, their students received more than a quarter of all Pell grant funds.

students from different income backgrounds, along With the federal, state, and institutional aid available to them.

Fortunately, NPSAS surveys covering the 1986-87 and 1992-93 academic years provide detailed student-level data on higher education financing. Figures 1, 2, and 3 present a graphical representation of data contained in Table 5. Figure 1 shows the distribution of gross tuition costs (in 1992-93 dollars) for full-time, dependent students attending private non-profit colleges and universities during each of the survey years. Students are divided into low, middle, and high income groups based on the following income breakdowns (in thousands of dollars):

Income Group	1986-87	1992-93
Low	<23.5	<30
Middle	23.5-54.9	30-70
High	>54.9	>70

These income brackets are equivalent in 1992-93 dollars, reflecting the 27.6% increase in prices between the two academic years.

There was a considerable real increase in gross tuition charges (sticker prices) facing students from all income backgrounds, with the largest absolute increase for high income students. However, increases in the net tuition price actually

paid by students were somewhat smaller than increases in sticker prices: \$4,232 vs. \$4,756 for high income students, \$3,656 vs. \$4,307 for middle income students, and \$2,247 vs. \$3,263 for low income students.

Federal grants remained approximately constant in real value for low income students attending private institutions, which in light of the considerable real increase in gross tuition, means that the percentage of tuition covered by federal financial aid for low income students has decreased considerably over time -- from 22% in 1986-87 to only 16% in 1992-93. The real value of federal grants for more affluent students fell over the period, although federal grants account for a very small percentage of gross tuition for these students.

The subsidy value of federal loans (computed at 50% of the total loan amount (see McPherson and Schapiro 1991-A)) changed little over time, implying once again that federal financial aid accounts for a declining share of gross tuition. State grants not only contribute a decreasing share of gross tuition, they have declined significantly, especially for low income students (for whom the real value of state grants fell by \$372).

Institutional grants, on the other hand, have increased rapidly for students from all income groups, particularly for low and middle income students (with real increases of around \$1,165 compared with an increase of \$669 for high income students). The percentage contribution of institutional grants to gross tuition has increased for students from all income groups -- from 25% to

29% for low income students, from 23% to 25% for middle income students, and from 8% to 10% for high income students.

Figure 2 provides analogous information for students attending public colleges and universities. As for privates, sticker prices increased in real terms for all groups. Again, increases in the net tuition price actually paid by students were somewhat smaller than increases in sticker prices for each income group -- \$1,391 Vs. \$1,505 for high income students, \$1,083 vs. \$1,104 for middle income students, and \$799 vs. \$1,086 for low income students. Note that for the average low income student attending a public institution, the contribution of federal, state, and institutional aid exceeded the gross tuition price in 1986-87, implying a negative net tuition payment. This reflects the difference between gross tuition and gross total costs of attendance, with the latter including room, board, and other charges. Thus, the excess of financial aid over gross tuition is applied against other costs of attendance.

Federal grants for low income students attending public colleges and universities increased slightly in real terms, but not enough to maintain the percentage contribution of these grants to gross tuition -- the percentage of tuition covered by federal financial aid for low income students decreased from 68% in 1986-87 to 42% in 1992-93. The subsidy value of federal loans, while increasing for low income students by \$119 in real dollars, also failed to grow enough to maintain its share of gross tuition (which fell from 26% to 19%). The contribution of

state grants also declined. Institutional grants, on the other hand, increased for students from all income groups, although the percentage contribution of institutional grants to gross tuition is relatively small in public higher education (the largest contribution is for low income students where it has been holding steady at around 11%).

Finally, Figure 3 presents information for students attending private for-profit (proprietary) schools. Again, sticker prices increased in real terms for all groups, although in this case increases in the net tuition price actually paid by students were larger than increases in sticker prices for each income group -- \$2,222 vs. \$1,969 for high income students, \$2,561 vs. \$1,880 for middle income students, and \$3,031 vs. \$2,464 for low income students. This reflects the decline in the real value of financial aid from all sources, most notably the fall in the real value of federal grants for low income students and the real decline in the subsidy value of federal loans for more affluent students. Whereas the sum of federal grants and loans in 1986-87 accounted for 66%, 28%, and 7% of gross tuition for low income, middle income, and high income students attending proprietary schools, those contributions fell to 35%, 13%, and 3% in 1992-93.

The NPSAS data unfortunately take us only through 1992-93. There is evidence of further important change in student financing patterns since then, apparently largely the result of changes in the federal student aid programs introduced in the

1992 reauthorization of the Higher Education Act.

The most striking such change is the spectacular run-up in federal loan volume since 1992-93. As we noted in Table 3, federal lending has grown in real dollars by almost \$9 billion in the two years between 1992-93 and 1994-95. Probably the most important explanation for this growth is a set of changes in needs analysis methodology introduced *in the* 1992 reauthorization. Students receive interest subsidies on their loans only to the extent that they can be shown to have financial need. Congress, which some years ago decided to write the needs analysis rules themselves, rather than leaving them to student aid experts, made those rules significantly more lenient for middle and upper-middle income students in the 1992 legislation. Most strikingly, a family's home equity was no longer counted as an asset. These changes imply that many families at public institutions who would not have qualified as needy under the old rules can now get subsidized loans. Other factors contributing to the loan run-up probably include the rising costs at public institutions, which also qualify more students for loans, and the introduction of federal direct loans, which have simplified the process of obtaining a loan considerably.

This recent pattern of declining real funding for federal grants coupled with rapid expansion in subsidized loans seems not to reflect a deliberate policy shift, but rather the working out of budgetary pressures. Since grant funds are a form of discretionary spending, their real decline reflects the impact of

the general squeeze on the federal budget. Guaranteed loans, by contrast, are an entitlement and so are not affected in the same way in the short run by budget battles.

But intended or not, this shift has significant implications for the targeting of federal aid subsidies. Since Pell grant funds are very effectively targeted on low-income students, as the charts from NPSAS reviewed above show, while federal loan subsidies are distributed much more broadly to middle-income as well as lower-income students, the shift of funding toward loans clearly moves support away from low-income students and toward the middle class.

Section II

Access

Our review of pricing and aid makes clear that recent years have seen a substantial run-up in the costs to students of attending college, even after allowing for the effects of financial aid. These cost increases are widespread across types of institutions and family income levels of students. It is natural to expect that these substantial increases in college costs should produce a decline in rates of college attendance, yet, as we will show in a moment, enrollment rates of high school graduates are actually at an all-time high. The question before us is whether and how we can reconcile these trends with the econometric evidence that higher prices or lower aid levels tend

to discourage college attendance.

First, the facts. Table 6 traces changes over time in college enrollment rates for high school graduates from different races. Data are available for White students from 1960, while data for Blacks and Hispanics date only from 1976. Due to the high variability reflecting small sample sizes for Blacks and Hispanics, three year moving averages are also calculated for those groups.

Beginning with Whites, there was little trend between 1960 and 1980, with enrollment rates hovering at around the 50% level.² After that time, however, enrollment rates climbed to the 60% level in the late 1980's continuing to rise to around 64% in the past few years. The moving average for Blacks was around 45% in the late 1970's, fell to around 40% during the first half of the 1980's, then regained that loss before ending the period with enrollment rates around the 50% level. Rates for Hispanics were generally slightly below 50% from 1977 to 1984, fell during the mid-1980's, before averaging around 55% over the subsequent period.

Thus enrollment rates for all three racial groups have risen in the 1990's. Enrollment rates are near record levels for all three racial groups, with a notable gain beginning around 1988

² Note that the denominator in Table 6 is the number of people aged 16 to 24 who graduated from high school within the preceding 12 months, while the numerator is the subset of that group enrolled in college. The rates in Table 6 are substantially higher than the enrollment of all high school graduates aged 16 to 24.

and continuing to the present. Yet we should also note that the gap between the enrollment rate of Whites and those of Blacks and Hispanics is larger now than it was in the late 1970's. At that time, White enrollment rates were about 5 percentage points higher than those for Blacks and about 3 percentage points higher than those for Hispanics. In the 1980's that gap widened, and in the early nineties it was around 12 percentage points for Blacks and 7 or so for Hispanics.

Which factors have contributed to the observed trends? Have changes in tuition and financial aid had an impact? Have government policies played a positive role?

The question of how pricing and aid influences student enrollment decisions has received much attention from economists and policy analysts over the last decade. One school of thought, led by Lee Hansen, has focused on the difficulty of discerning much impact of changes over time in prices and in federal student aid policy on national enrollment trends. Certainly the coincidence of higher prices and higher enrollment rates in recent years that we have just noted could be used to buttress these arguments. Another school of thought has focused on econometric studies, relying mostly on cross-section data, that show significant negative effects of price on enrollment and significant positive effects of aid on enrollment.

Our own work (McPherson, Schapiro and Winston 1993, chapter 8; McPherson and Schapiro 1991A, chapter 3; McPherson and Schapiro 1991B) presented new empirical results in an attempt to

reconcile differences in the literature. We presented a properly controlled econometric analysis of time-series data which showed significant effects of aid on enrollment for students from lower income families (defined as income below \$20,000 in 1990 dollars).

This finding is very important -- it provides an economic foundation for the considerable investments in financial aid made by federal and state governments as well as by institutions. Specifically, our results indicate that increases in net cost over time lead to decreases in enrollment rates for lower income students. The magnitude of the coefficient on net cost implies that for lower income students a \$150 net cost increase, expressed in 1993-94 dollars, results in a 1.6 percent decline in enrollment for that income group. A consensus in the econometric literature is that a \$150 increase in net cost reduces enrollment rates by 1.8 percent. Our result is thus broadly consistent with typical cross-section findings, and thus helps to ease the worry that the historical evidence of the time series studies is at odds with the best econometric work.

While our findings corroborate the presence of a significant price or aid effect for low income students, we found no evidence that increases in net cost inhibited enrollment for more affluent students. Thus, policies that call for cross-subsidization of students -- richer students paying a substantial share of educational and general costs with these revenues supporting discounts for lower income students -- makes sense from the

viewpoint of economic efficiency.

A recent study by Tom Kane (Kane 1995) supports our findings. Kane examined the effect of public college tuition on college entry, with the bulk of the evidence pointing to large enrollment impacts, especially for low income students and for those attending two-year colleges. Specifically, states with high public tuitions have lower college entry rates, the gap in enrollment between high and low income youth is wider in high tuition states, and within state tuition hikes lead to lower enrollment rates and wider gaps between high and low income youth.

Is it possible, then, to reconcile these econometric results with the recent growth of enrollment rates in the face of rising net costs? We think so, for several reasons.

First, of course, prices are not by any means the sole determinant of enrollment rates. There is strong evidence that the economic returns to investments in college have grown substantially in recent years, and this is an obvious explanation for the growth in college attendance. According to Census data (Bureau of the Census 1994), a worker with a Bachelor's degree earned 1.54 times as much in 1975 as a worker with a high school degree; in 1992 that ratio had risen to 1.74. Unfortunately, this growing labor-market advantage for the college-educated came about mostly because of declines in the real incomes of recent high school graduates, rather than because of large real gains for college-attendees (see Katz and Murphy 1992). As Kane (1995)

argues, this change in returns can go a long way toward explaining the increase in enrollment rates.

Moreover, the increase in enrollment rates has not been uniform across income groups. Kane (1995) notes that the gap in enrollment rates between students from the lowest income quartile and those from the other three quartiles grew by 12 percentage points between 1980 and 1993 (p. 6). We noted above that the gap between the enrollment rate of Whites and those of Blacks and Hispanics have likewise grown over that period, a fact that is consistent with the lower average socioeconomic status of Blacks and Hispanics. These results support the evidence in our econometric work that price sensitivity to enrollment is concentrated among low income students, with little or no price response observed among higher income students.

We can make this point more explicit by referring back to Table 5 and Figure 2. If we concentrate on public higher education, the sector which dominates the total enrollment numbers, it appears that net tuition increases of \$1,000 to \$1,500 for middle and upper income students have not been enough to deter enrollment in the face of high economic returns to college. Economists have long criticized the large subsidies to middle and upper income families implicit in the states' tendency to subsidize college attendance through low public tuition. This evidence is consistent with the judgment that, at the margin, shifting some of the financing burden from state governments to middle and upper income families does not discourage enrollment.

On the other hand, the growing gap between enrollment rates for lower and higher income students noted above suggests that increases in the net cost facing low income students do discourage college attendance. Kane's (1995) evidence that the gap between low income and high income enrollment rates by state is positively related to rates of growth in public tuition strongly suggests that the increases in net cost for low income students shown in Table 5 are having an impact on their access.

These facts make the trend of the last few years to reduce real funding of Pell and increase funding for loans all the more unsettling. As we noted earlier, expanded loan funds since 1992-93 have probably gone largely to middle and upper-middle income students at public colleges and universities. While they no doubt welcome such support, there is little evidence that it is essential to enabling them to attend college. Yet federal grant dollars are very effectively targeted on low income students, and there is evidence that changes in support for low income students do influence their college going. So the recent redistribution of federal dollars appears to be going the wrong way both from the standpoint of social equity and the standpoint of efficiency in promoting college enrollment.

One final point is worth noting. For-profit colleges have endured the largest impact on the net prices facing low income students, as their tuitions have gone up and both grant and loan support have declined. It seems very likely that this dramatic change in their financial situation has had an important impact

both on attendance levels and the financial well-being of many of these establishments. Unfortunately, there is no reliable database to draw on in order to study the fate of this intriguing sector.

Section III

Choice

When we consider the topic of educational opportunity, we take into account both the issue of the accessibility of higher education to lower income students and the overall distribution of students across institutional types. Despite the concerns we have noted about the impact on access of the recent rise in college costs facing low income students, the high overall rates of college attendance in recent years point to considerable success in making some form of postsecondary education financially accessible to a very wide range of Americans. Although continuation of recent trends could easily threaten the nation's achievements in providing "access" to college, it is important to stress the considerable success of the U.S. system in making it possible for so many Americans to continue their education beyond high school.

Yet the existing financing system may be much less successful in providing a suitable postsecondary experience for many disadvantaged students. The range of alternatives available to students appears to be quite sharply constrained by their

incomes under existing arrangements. In most states community colleges are the cheapest and most accessible alternative for low income students, a fact which is reflected in their disproportionate representation in these institutions. Although the issue of "choice" is often expressed in terms of public versus private alternatives, opportunity to attend a flagship public university or indeed any four year public institution is importantly constrained by income in many states.

It is interesting to note that much of the popular discussion regarding where students go involves middle income students, not lower income students. It is often suspected that students from middle income backgrounds have been most affected by the considerable real increases in tuition at private colleges and universities. Students from lower income backgrounds qualify for need-based financial aid, lessening the chance that these students experience an affordability problem. Students from upper income backgrounds receive a different but analogous form of financial aid -- parental contributions that do not require major proportions of available annual incomes. But, the story goes, when tuitions rise faster than other economic indicators, students from middle-income backgrounds are forced to switch to less costly educational alternatives.³

In this section we examine changes over time in the higher

³ For years, the view that middle-income students -- too rich for financial aid but too poor to afford private school tuitions -- are increasingly showing up at public institutions has been stated as truth in the national media. See, for example, Kuttner 1989.

education destination for students of different economic backgrounds. This allows us to consider not only the "middle-income melt" topic, but also to examine the broader question of who goes where and how that compares with more than a decade ago.

Our analysis relies on data from an annual survey of first-time, full-time college freshmen, The American Freshman Survey. These data are self-reported by students, thereby undoubtedly introducing measurement error. Nevertheless, we use these data for several reasons. First, they are the only consistently reported annual data on the college choices of students from different income backgrounds. Second, there is no reason to expect the biases in student reporting of income to vary systematically over time. Hence, while the data may be inaccurate in a particular year, their variation over time should be more reliable. Therefore, while we discuss the distribution of students by income at a given time, we concentrate more on changes over time in that distribution.

Our first step is to disaggregate income distribution data into reasonable groupings that can be traced over time. The most recent available survey data are from the Fall of 1994, during which time students were asked to report parents' income for 1993. We have created six basic income brackets from those data (lower, lower-middle, middle, upper-middle, upper, and richest) and computed their constant dollar equivalents in a previous survey year, 1980. The 1994 income bands almost perfectly

approximate constant-dollar equivalents for those used in 1980.⁴

The income groupings from the questionnaires follow (in thousands of dollars):⁵

Income Group	1980	1994
Lower	<10	<20
Lower-middle	10-15	20-30
Middle	15-30	30-60
Upper-middle	30-50	60-100
Upper	50-100	100-200
Richest	>100	>200

Table 7 presents data on the distribution of students from different income backgrounds across institutional types.⁶ The institutional types are private universities, private four-year colleges, private two-year colleges, public universities, public four-year colleges, and public two-year colleges. Figures for all private institutions and all public institutions are also

4 The selection of the year 1980 was made with the aim of having the income brackets correspond as closely as possible with the inflation adjusted boundaries.

5 The precise inflation adjusted categories in 1980 would break down as follows (in thousands of dollars): <10.0, 10.0-15.1, 15.1-30.2, 30.2-50.2, 50.2-100.5, and >100.5. This reflects-inflation between 1979 (the 1980 survey asked students to report parent's income in 1979) and 1993 of 99.0%.

6 McPherson and Schapiro 1995 also presents data on the distribution of students across income groups at each institutional type.

provided.

In 1994, 25.5% of students attended private institutions. That figure represents a very small drop from 26.0% in 1980. Thus, our data do not indicate a significant long-term downward trend in the percentage of full-time students attending private colleges and universities. With total first-time, full-time freshman enrollment in 1994 of around 1.5 million, a decline of one half of one percentage point between 1980 and 1994 represents only about 7,500 fewer freshmen enrolled in private institutions relative to what would have occurred had the private share remained at the 1980 level.⁷ Looking within the private sector, the share of all students attending private universities has held rather steady over time, starting at 5.2% and ending in 1994 at 5.7%. The share at private four-year colleges also rose slightly, from 16.8% to 17.1% while the share attending two-year colleges fell from 4.0% to 2.7%.

The small gain in share in the public sector was not evenly distributed across institutional types. The percentage of students attending public universities began the period at 18.1% and rose to 19.1%. The share of students-attending public four-year colleges rose more dramatically, from 20.2% to 24.1%. That increase represents about 59,000 more freshmen than would have been enrolled in that sector had the enrollment distribution

⁷ The actual number of first-time, full-time freshmen enrolled at private schools in 1994 was about 395,000.

remained as it was in 1980.⁸ On the other hand, the share at public two-year colleges fell from 35.8% in 1980 to 31.3% in 1994. This decline means that about 68,000 fewer full-time freshmen were attending community colleges in 1994 than would have been the case had the enrollment distribution been stable over time.⁹

Turning now to the income breakdowns, it is clear that the percentage of students attending private schools in 1994 varies considerably with income. Only 18.5% of lower income students attended private colleges and universities, a figure that rises to 23.0% for middle income students, and to 53.5% for the richest students. Only 2.6% of all lower income students enrolled in higher education are at private universities, with 12.8% at private four-year colleges. On the other hand, 22.4% of the richest students enrolled in higher education are at private universities and 27.3% are at private four-year colleges. Middle income students had intermediate enrollment percentages of 3.9% and 16.6%. Thus, the probability of a student attending a four-year private college or university depends critically on his or her parent's income.

The chances that a student will attend a public university

⁸ Actual first-time, full-time freshman enrollment at public four-year colleges in 1994 was about 371,000.

⁹ Actual first-time, full-time freshman enrollment at public two-year colleges in 1994 was about 483,000. Since 1980, community colleges have drawn a larger share of their enrollment from part-time and adult students, which helps account for the decline in numbers of first-time, full-time freshmen.

are generally positively related to parent's income (with the exception being the change from the upper income to the richest income group). The relationship between income and attendance at a public four-year college is more mixed -- rising slightly from lower income to upper-middle income and falling for the two more affluent groups.

Perhaps the most striking finding is that 41.0% of upper income and 47.0% of the richest students attend a university (private or public), compared with only 13.5% of lower income students. Where do lower income students disproportionately enroll? 47.3% of lower income students are at public two-year colleges, almost three and a half times the percentage of upper income students (13.9%) and five and a half times the percentage of the richest students (8.6%).

How have these proportions changed over time? Comparing 1994 to 1980, the percentage of upper income students who attend either private or public universities rose from 39.4% to 41.0% while the percentage of the richest students who attend a university rose from 39.4% to 47.0%. These increases were shared by universities in both the public and the private sectors -- contrary to popular belief, the proportion of upper income students and of the richest students that attend private universities actually increased over the period.¹⁰ Instead, it

¹⁰ The increased attractiveness of public universities to affluent students is also noteworthy. Their share of upper income students rose from 26.6% to 27.8% and their share of the richest students rose from 19.6% to 24.6%.

was private four-year colleges that have suffered the loss of affluent students in recent years -- the proportion of upper income students who enrolled at these schools fell from 25.2% to 22.2% while the proportion of the richest students fell from 31.7% to 27.3%.

That fact undoubtedly accounts for the intense financial pressure that private four-year colleges have appeared to be under over the past decade, as no-need students have become increasingly rare.¹¹ Interestingly, affluent students have found public four-year colleges increasingly attractive, with the proportion attending these schools rising from 15.6% to 20.1% for upper income students and from 11.9% to 13.3% for the richest students. Middle income students have similarly increased their share going to public four-year colleges, from 20.4% to 25.2%, with a smaller increase in their share attending public universities (from 17.4% to 18.1%). The share of middle income students attending private universities was stable (3.9%) while the share attending private four-year colleges increased slightly from 15.8% to 16.6%. The share of lower income students attending different institutional types generally changed little over time, except for the decline from 5.6% to 3.1% in the share attending two-year private colleges and the increase in the share attending community colleges from 45.9% to 47.3%.

Of all the institutional types, the most striking changes

¹¹ The revenue situation faced by private four-year colleges (as well as other institutional types) is discussed in detail in McPherson and Schapiro 1994A.

over time were at two-year public colleges. There were considerable changes between 1980 and 1994 in the attractiveness of public two-year colleges to students from different income backgrounds. While the percentage of lower income students attending community colleges increased over time, the share of students in the other income groups fell dramatically (especially noteworthy are the declines from 38.9% to 33.7% for middle income students; from 27.6% to 22.1% for upper-middle income students; and from 14.5% to 8.6% for the richest students). Thus, the flight of students from more affluent backgrounds away from public two-year colleges from 1980 to 1994 was in marked contrast to the experience of students from lower income backgrounds.

These findings raise doubts about some common impressions concerning "middle income melt". There is no evidence in our data of a redistribution of middle income students from either private universities or private four-year colleges. In 1980, 19.7% of middle income students and 24.5% of upper-middle income student were enrolled at private four-year colleges and universities; in 1994, 20.5% of middle income students and 25.0% of upper-middle income students were in those institutions.

The most striking movement among middle income students has in fact been within the public sector, with a sharp decline in the share of middle income students at public two-year institutions, offset by growth in the share of middle income students at public four-year institutions. Indeed, one of our most interesting findings is the increase in the representation

of low income students at public two-year colleges as opposed to the declining representation of middle and upper income students there. It is of course important to remember that the relatively young, first-time, full-time freshmen represented in our survey are not the predominant clientele at community colleges.

Nonetheless, these data do seem worrisome. They suggest that the combined effects of tuition increases and limitations on federal student aid may be impairing the relative ability of lower income students (relative to their more affluent counterparts) to gain access to institutions other than community colleges.

A particularly illuminating discovery concerns changes in the representation of students in the upper income and richest income brackets at private four-year colleges. Although leaders at these schools have been vocal in talking about middle income melt, it appears that what they have experienced is in fact upper income melt. It seems likely that this loss of full-pay students is a significant part of the explanation for the growing interest of these schools in reviewing their student aid policies and entering into merit aid competition.¹²

These results raise the interesting question of why there hasn't been middle income melt in the sense of movement of middle income students from more to less expensive institutions. These data do not speak directly to the causes of the patterns we observe. But we would suggest two factors that may be at work.

¹² An examination of how different types of institutions have used merit aid in response to enrollment pressures is presented in McPherson and Schapiro 1994B.

First, many middle income students get substantial tuition discounts at private institutions. Increases in discounting may have buffered the effects of a growing tuition gap. Indeed, as Table 5 and Figure 1 indicate, more than a quarter of the tuition increase facing middle income students at private colleges and universities between 1986-87 and 1992-93 was absorbed through increased student aid. Second, many public colleges and universities have experienced serious budgetary problems, raising doubts about future quality, imposing obstacles to students getting the classes they need to graduate on time, and so on. These factors may have tended to push students, including middle income students, toward private institutions, working to offset middle income melt.

But what about the finding that high income students have been leaving private four-year colleges for private and public universities? Again, we can conjecture about possible explanations. Perhaps the phenomenon of "brand-name" identification that became such an important part of American consumerism in the 1980's also took hold in higher education, with students leaving small, usually regional private colleges for larger and better known universities. This explanation may also help account for the decreased attractiveness of community colleges among middle and upper income students.

Stepping back from the details, we find that two broad trends of special importance are revealed in these data. First is the loss of upper income students at private four-year

colleges. This fact goes a long way toward helping us understand the plight of these institutions and their increasingly aggressive marketing and price-discounting policies. Second is the increasing concentration of lower income students in community colleges. It makes a great deal of sense that, as prices rise in public higher education and alternative aid sources fail to keep pace, students of limited means will increasingly find the local community college to be the only viable alternative for postsecondary education. (Table 5 and Figure 2 indicate that from 1986-87 to 1992-93 the real tuition charge facing low income students at public institutions rose by roughly \$1,100. About \$300 of that was offset by real aid increases, with the result that net tuition charges rose by \$800.) Community colleges may offer excellent opportunities to many young people, but there is no reason why they should be disproportionately attractive to low income students. The increasing stratification of public higher education by income suggested in these data is a cause for concern.

Section IV

Conclusion

The current situation in American higher education has been shaped by two overarching trends. The first is the rising economic value of education, reflected in the widening earnings gap between those with less and those with more education, and

resulting in college enrollment rates at or near historic highs. The second is the increasing fiscal squeeze felt by American governments at both the federal and state levels, which has led to governments contributing a declining share of higher education revenues. In one sense, and at least momentarily, this might be seen as the best of both worlds: government's share of higher education costs is lower than it has been since the 1950's, and enrollments are higher than ever.

Yet beneath the surface are signs of a less encouraging reality. Higher net prices for college education have produced a widening gap in enrollments of more and less affluent students. Low income students are increasingly rare at four-year colleges and universities in both public and private sectors, and are heavily concentrated in the community colleges. Meanwhile, four-year private colleges are increasingly starved for high-income, full-pay students and are engaged in price-discounting competitions that threaten to be financially destabilizing.

What is the future likely to hold? It seems likely that the economic returns to education will remain high, as technological developments and an expanding service economy will continue to put a premium on more educated workers. It seems likely as well that the fiscal crisis of American governments will continue. There are no signs of a reversal in Americans' reluctance to pay taxes, nor of a real willingness by Americans to yield their expectations of high levels of government support for medical care, law enforcement, imprisonment and so on. Caught in that

squeeze, it will be hard for lawmakers at either the state or federal levels to accord a high priority to spending on higher education.

Against this backdrop, we must consider the echo of the baby boom, which will produce an increase of about one-third in the size of the traditional college-age population over the next decade. With growing demand for places and limited fiscal resources, it seems likely that state institutions will respond by raising tuitions and by increasingly restricting admission to the more prestigious public campuses to students with better academic preparation and therefore, on average, more affluent backgrounds. This trend seems likely to exacerbate the stratification of public higher education by income that we discussed in Section III.

Increasingly restricted state funding is beginning to have another interesting consequence for public colleges and universities. As states come to provide a smaller share of the dollars needed to finance public colleges, their leaders are more and more reluctant to cede control over their activities to state governments. The idea of state universities bargaining for more autonomy from state control in exchange for guaranteed but limited financial support from the state is gaining currency. Presidents calculate that greater freedom to set tuition, revise curriculum, and recruit aggressively may more than make up for a limitation on state funding. The resulting trend toward a sort of "semi-privatizing" of public colleges may, if it materializes,

result in improved quality at some public institutions. It may also, however, reduce the accessibility of these institutions for less affluent students.

All these trends point to the urgency of using increasingly scarce public dollars for higher education well. As we have argued here, recent experience confirms the prediction based on theory and econometric evidence that raising prices for middle and upper income students in public higher education will not discourage enrollment. For the same reason, using federal dollars to subsidize the lending costs of middle and upper-middle income students is probably not effective in promoting college enrollment.¹³ It seems attractive to husband government resources that are now being devoted to subsidies for relatively affluent students and to target them instead on student aid grants for qualified low income students. The goal should be to provide grants that are adequate to allow qualified low income students to attend the flagship public university in their home state.

What does the future hold for private colleges and universities? Certainly the expected growth in demand for

¹³ It is important to distinguish the goal of providing access to capital markets for students, by insuring or guaranteeing loans or by direct federal lending, from the goal of subsidizing interest costs, as by the current practice of having the federal government pay the interest (or forgo collection of interest in the case of direct lending) while the student is in school. It is desirable for the government to provide all students with access to capital; we argue here that there is no reason to offer middle or upper income students interest subsidies beyond those implicit in guaranteeing the loan.

college enrollment will ease some of the competitive pressures private colleges have been experiencing. Higher prices and tougher admissions standards at public institutions will similarly bolster demand for enrollment at private institutions. Yet not all the trends are positive for the financial health of private institutions. First, the trend toward increasing price competition through student aid discounts and merit aid may prove difficult to reverse even after the decline in demand that touched off the "price war" reverses. The system of need-based financial aid, never as pure as it was sometimes reputed to be, is in pretty bad shape now at many institutions, and will be very hard to restore. Second, while demand for private higher education will be bolstered by higher public tuitions, the trend at public colleges toward greater independence from state control may be threatening to some private institutions. A relatively sleepy public university with a large state subsidy and a low tuition may be a less worrisome rival than a higher-priced but more market-oriented publicly-assisted institution. Finally, research universities in both the public and private sector face very serious threats to their mission and financial health as Congress contemplates substantial cutbacks in federal research funding.

Are we keeping college affordable? Our review of the evidence relevant to this question puts us in mind of the story of a man who fell from a fortieth story window. As he fell past the twentieth floor, a colleague leaned out the window and

shouted, "are you ok?" The man hollered back, "SO far, so good."

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Table 1: *Shares of Educational and General Revenue, Public and Private Institutions, Selected Academic Years, 1939-1993*

Percent

Year	Gross tuition	Government		Gifts and endowment earnings	Other
		Federal	State and Local		
<i>Public Institutions</i>					
1939-40	0.20	0.13	0.61	0.04	0.01
1949-50	0.25	0.13	0.56	0.03	0.03
1955-56	0.13	0.17	0.62	0.04	0.04
1959-60	0.13	0.21	0.59	0.04	0.03
1965-66	0.14	0.23	0.54	0.03	0.05
1969-70	0.15	0.19	0.57	0.03	0.05
1975-76	0.16	0.18	0.61	0.03	0.02
1979-80	0.15	0.15	0.62	0.04	0.03
1985-86	0.18	0.13	0.61	0.05	0.03
1989-90	0.20	0.13	0.58	0.05	0.04
1991-92	0.22	0.14	0.55	0.06	0.03
1992-93	0.24	0.14	0.53	0.06	0.04
<i>Private Institutions</i>					
1939-40	0.55	0.01	0.03	0.38	0.03
1949-50	0.57	0.12	0.04	0.23	0.05
1955-56	0.45	0.18	0.02	0.28	0.06
1959-60	0.43	0.25	0.02	0.25	0.05
1965-66	0.43	0.30	0.02	0.18	0.06
1969-70	0.44	0.26	0.03	0.19	0.08
1975-76	0.48	0.25	0.04	0.19	0.04
1979-80	0.47	0.25	0.04	0.19	0.05
1985-86	0.50	0.22	0.03	0.19	0.06
1989-90	0.51	0.21	0.04	0.18	0.06
1991-92	0.53	0.20	0.04	0.17	0.06
1992-93	0.54	0.19	0.04	0.17	0.06

Notes: 1992-93 data are preliminary. Figures in table do not include revenue from auxiliary enterprises or from sales and services. Government figures do not include student aid (which is included under gross tuition).

Source: See McPherson and Schapiro 1991A, p. 21, plus, for data after 1986, Tables 319 (p. 331) and 320 (P. 332) of the Digest of Education Statistics 1995, National Center for Education Statistics (October 1995).

Table 2: Shares of Higher Education Revenue, by Source, Selected Academic Years, 1939-1993

Year	<u>Tuition Paid By:</u>					<u>Nontuition Revenue:</u>		
	Gross Tuition	Families	Institutions	<u>Government:</u>		Federal	State & Local	Gifts & Endowment Earnings
				Federal	State			
1939-40	0.37	0.35	0.02	0.00	0.00	0.07	0.33	0.21
1949-50	0.40	0.37	0.03	0.00	0.00	0.12	0.32	0.12
1959-60	0.26	0.22	0.03	0.00	0.01	0.23	0.34	0.13
1965-66	0.26	0.21	0.04	0.00	0.01	0.26	0.33	0.09
1969-70	0.25	0.20	0.04	0.00	0.01	0.22	0.38	0.08
1975-76	0.26	0.16	0.04	0.04	0.02	0.20	0.43	0.08
1979-80	0.26	0.14	0.04	0.06	0.02	0.19	0.43	0.09
1985-86	0.29	0.17	0.05	0.05	0.02	0.16	0.41	0.10
1989-90	0.31	0.19	0.05	0.05	0.02	0.16	0.37	0.10
1991-92	0.34	0.22	0.05	0.05	0.02	0.16	0.35	0.10
1992-93	0.35	0.22	0.06	0.05	0.02	0.16	0.33	0.10

Notes: 1992-93 data are preliminary. Both veteran's educational benefits and social security benefits paid to qualified college students are excluded from federal tuition payments.

Source: See McPherson and Schapiro 1991A, p. 23, plus, for data after 1986, Table 318 (p. 330) of the Diigest of Education Statistics 1995, National Center for Education Statistics (October 1995) and Table 1 (p. 4) of Trends in Student Aid: 1985 to 1995, The College Board (September 1995).

Table 3: Aid Awarded to Students, by Source of Aid, Selected Academic Years, 1963-1995,
In Millions of 1994 Dollars

	63-64	70-71	75-76	80-81	85-86	90-91	92-93	93-94	94-95
Federal programs									
Generally available aid									
Pell grants	0	0	2505	4088	4866	5436	6427	5731	5570
Supplemental educational opportunity grants	0	499	538	630	559	501	576	572	546
State student incentive grants	0	0	53	124	103	65	74	73	72
Work-study	0	849	789	1131	895	806	812	782	749
Perkins loans	547	898	1231	1188	959	964	928	932	958
Guaranteed and direct loans	0	3791	3389	10623	12056	14034	15523	21480	24325
Subtotal	547	6038	8505	17784	19439	21806	24340	29571	32221
Specially directed aid									
Social Security	0	1864	2924	3225	0	0	0	0	0
Veterans	322	4187	11182	2936	1178	752	1079	1209	1390
Military	201	241	259	344	467	408	409	411	415
Other grants	42	59	169	209	92	130	169	170	184
Other loans	0	157	120	106	508	382	428	462	400
Subtotal	565	6508	14654	6820	2245	1672	2085	2252	2388
Total federal aid	1112	12546	23159	24604	21684	23479	26425	31823	34610
State grant programs	269	882	1311	1372	1788	2059	2212	2408	2628
Institutional & other grants	1297	3125	3126	2782	4040	6379	7788	8349	8929
Total Federal, State, and Institutional aid	2679	16553	27596	28758	27511	31917	36425	42580	46167

Note : 1993-94 and 1994-95 data are preliminary.

Source: See McPherson and Schapiro 1991A, p. 26, plus, for data after 1986, Tables 2 (p. 5) and B (p. 13) of Trends in Student Aid: 1985 to 1995, The College Board (September 1995).

Table 4: Distribution of P&I Grant Funds to Independent students and Proprietary Schools, Selected Academic Years, 1973-1994

Year	Pell recipients who are independent students	Pell revenue going to students at proprietary institutions
1973-74	13.3%	7.0%
1975-76	29.8%	9.0%
1977-78	38.5%	8.9%
1979-80	33.8%	10.5%
1981-82	41.9%	13.5%
1983-84	47.5%	18.8%
1985-86	50.4%	22.2%
1987-88	57.5%	26.6%
1989-90	59.0%	23.1%
1991-92	61.5%	20.7%
1992-93	62.1%	18.5%
1993-94	59.2%	15.3%

Note: 1993-94 data are preliminary.

Source: See McPherson and Schapiro 1991A, p. 28, plus, for data after 1988, Tables 5 (p. 9) and 7 (p. 11) of Trends in Student Aid: 1985-1995 The College Board (September 1995).

**Table 5: Financing Undergraduate Tuition, 1986-87 and 1992-93,
In 1992-5 Dollars**

Private Non-Profit Institutions

			Net Tuition	Fed. Grant	Fed. Loan Sub.	State Grant	Inst. Grant	Gross Tuition
Low Income	1986		1372	1585	958	1354	1780	7049
	1992		3619	1628	1141	982	2942	10312
Middle Income	1986		4048	355	840	582	1754	7579
	1992		7704	184	750	328	2919	11886
High Income	1986		7390	117	317	92	719	8635
	1992		11622	23	304	55	1388	13391

Public Institutions

			Net Tuition	Fed. Grant	Fed. Loan Sub.	State Grant	Inst. Grant	Gross Tuition
Low Income	1986		-439	980	370	355	168	1434
	1992		360	1051	489	352	267	2520
Middle Income	1986		1030	97	278	102	154	1661
	1992		2113	84	220	85	263	2765
High Income	1986		1721	37	73	18	83	1932
	1992		3112	11	84	38	193	3437

Private For-Profit Institutions (Proprietary Schools)

			Net Tuition	Fed. Grant	Fed. Loan Sub.	State Grant	Inst. Grant	Gross Tuition
Low Income	1986		1124	1546	1233	266	70	4238
	1992		4155	1254	1102	122	69	6702
Middle Income	1986		3281	180	1245	207	105	5018
	1992		5842	94	784	69	110	6898
High Income	1986		4630	33	349	27	62	5102
	1992		6852	7	188	0	25	7071

Note: Numbers are averages across all full-time, dependent students attending a particular institutional type.

Source: Calculated from 1986-87 and 1992-93 NPSAS data bases.

Table 6: College Enrollment Rates of High School Graduates

	Whites	Blacks	3-yr. ave.	Hispanics	3-yr. ave.
1960	45.8	--	--	--	--
1961	49.5	--	--	--	--
1962	50.6	--	-o	--	--
1963	45.6	--	-o	--	--
1964	49.2	--	-o	--	--
1965	51.7	--	-o	--	--
1966	51.7	--	--	--	--
1967	53.0	--	--	--	--
1968	56.6	--	--	--	--
1969	55.2	--	--	--	--
1970	52.0	--	--	--	--
1971	54.0	-o	--	--	--
1972	49.4	-o	--	--	--
1973	48.1	-o	--	--	--
1974	47.1	-o	--	--	--
1975	51.2	-o	--	-o	-o
1976	48.9	41.9	-o	52.6	
1977	50.7	49.6	45.7	51.3	48.9
1978	50.1	45.7	46.9	42.9	46.3
1979	49.6	45.4	44.3	44.8	46.8
1980	49.9	41.8	43.4	52.7	49.9
1981	54.6	42.9	40.4	52.1	49.3
1982	52.0	36.5	39.3	43.1	49.8
1983	55.0	38.5	38.4	54.3	47.3
1984	57.9	40.2	40.3	44.3	49.9
1985	59.4	42.3	39.7	51.1	46.6
1986	56.0	36.5	43.6	44.4	43.0
1987	56.6	51.9	44.5	33.5	45.0
1988	60.7	45.0	49.9	57.0	48.6
1989	60.4	52.8	48.0	55.4	53.2
1990	61.5	46.3	48.2	47.3	53.3
1991	64.6	45.6	46.6	57.1	53.1
1992	63.4	47.9	49.7	54.8	58.1
1993	62.8	55.6	51.5	62.5	55.4
1994	63.6	50.9	--	48.9	--

Note: enrollment rates reflect enrollment in college as of October of each year for individuals age 16 to 24 who graduated from high school (including GED recipients) during the preceding 12 months.

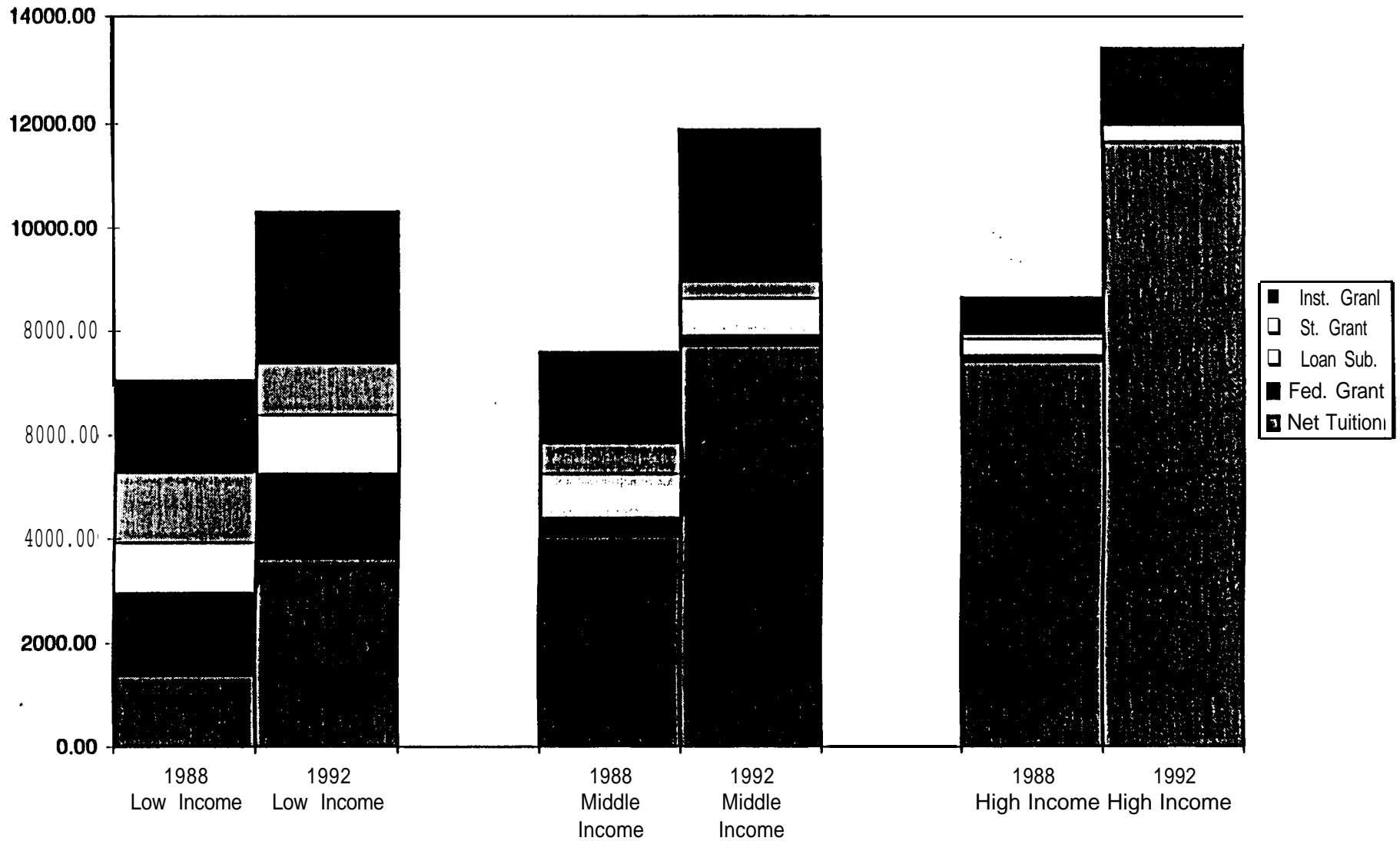
Source: based on information presented in Table 177 (p. 187) of the Digest of Education Statistics 1995, National Center for Education Statistics (October 1995).

Table 7: Distribution of Freshman Enrollment By Income Background Across Institutional Types

	Lower	Lower Middle	Middle	Upper Middle	Upper	Richest	All Groups
1994	<\$20	\$20-\$30	\$30-\$60	\$60-\$100	\$100-\$200	>\$200	
Private							
University	2.6%	3.3%	3.9%	6.6%	13.2%	22.4%	5.7%
1-Year Colleges	12.8%	15.3%	16.6%	18.4%	22.2%	27.3%	17.1%
4-Year Colleges	3.1%	2.9%	2.5%	2.2%	2.8%	3.8%	2.7%
All Private	18.5%	21.5%	23.0%	27.2%	38.2%	53.5%	25.5%
Public							
University	10.9%	14.5%	18.1%	24.9%	27.8%	24.6%	19.1%
4-Year Colleges	23.2%	24.6%	25.2%	25.9%	20.1%	13.3%	24.1%
2-Year Colleges	47.3%	39.4%	33.7%	22.1%	13.9%	8.6%	31.3%
All Public	81.4%	78.5%	77.0%	72.9%	61.8%	46.5%	74.5%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
1980	<\$10	\$10-\$15	\$15-\$30	\$30-\$50	\$50-\$100	>\$100	All Groups
Private							
University	2.2%	2.9%	3.9%	6.8%	12.8%	19.8%	5.2%
4-Year Colleges	13.4%	15.1%	15.8%	17.7%	25.2%	31.7%	16.8%
2-Year Colleges	5.6%	5.1%	3.7%	3.3%	2.6%	2.5%	4.0%
All Private	21.2%	23.1%	23.4%	27.8%	40.6%	54.0%	26.0%
Public							
University	10.1%	13.2%	17.4%	24.6%	26.6%	19.6%	18.1%
4-Year Colleges	22.8%	21.3%	20.4%	20.1%	15.6%	11.9%	20.2%
2-Year Colleges	45.9%	42.4%	38.9%	27.6%	17.3%	14.5%	35.8%
All Public	78.8%	76.9%	76.7%	72.3%	59.5%	46.0%	74.1%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: ' calculated from results from The American Freshman Survey.

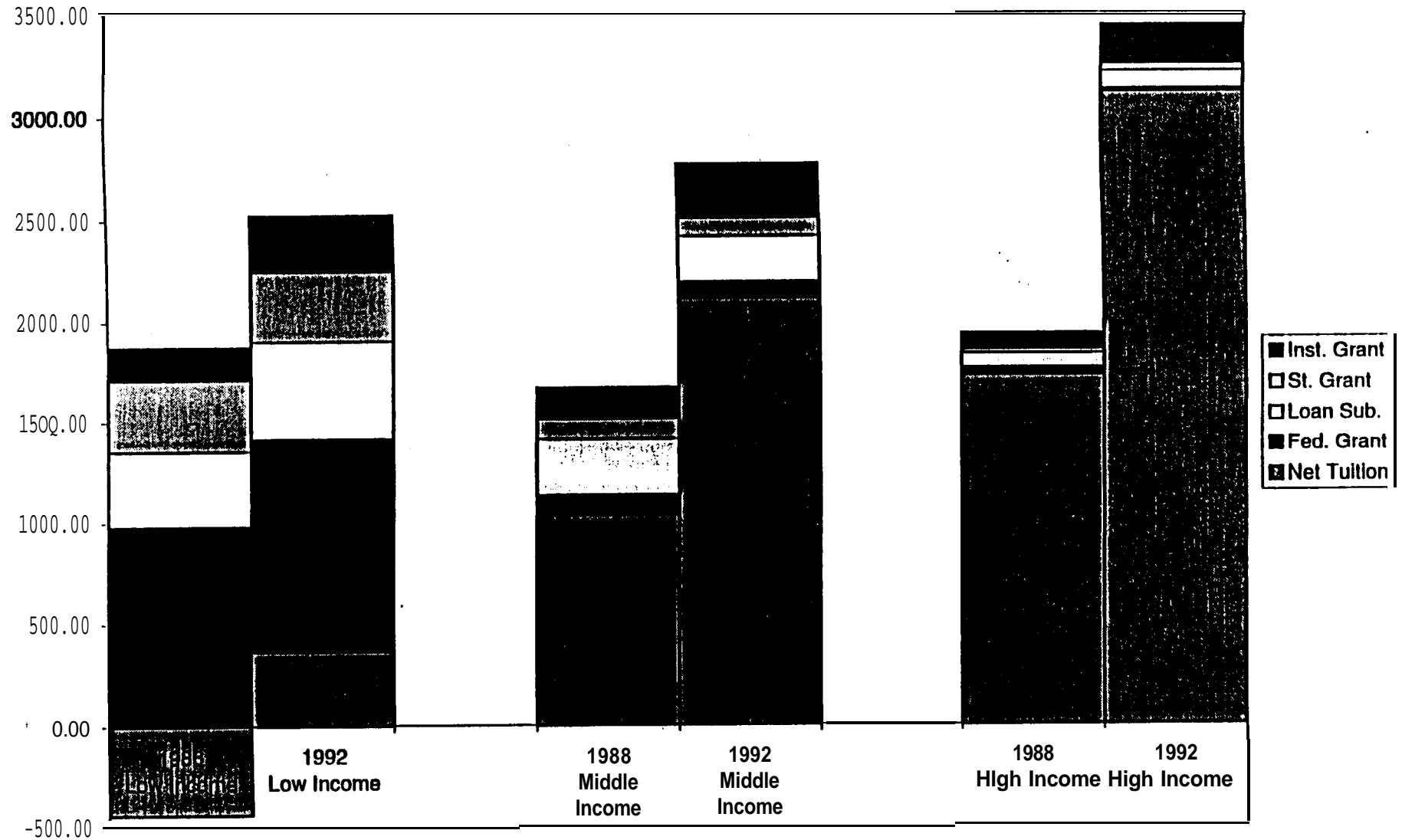
Figure 1: Financing Undergraduate Tuition, 1986-87, 1992-93
Private Non-Profit Institutions



Note: Numbers are averages (in 1992-93 dollars) across all full-time, dependent students.

Source: Calculated from 1986-87 and 1992-93 NPSAS data bases.

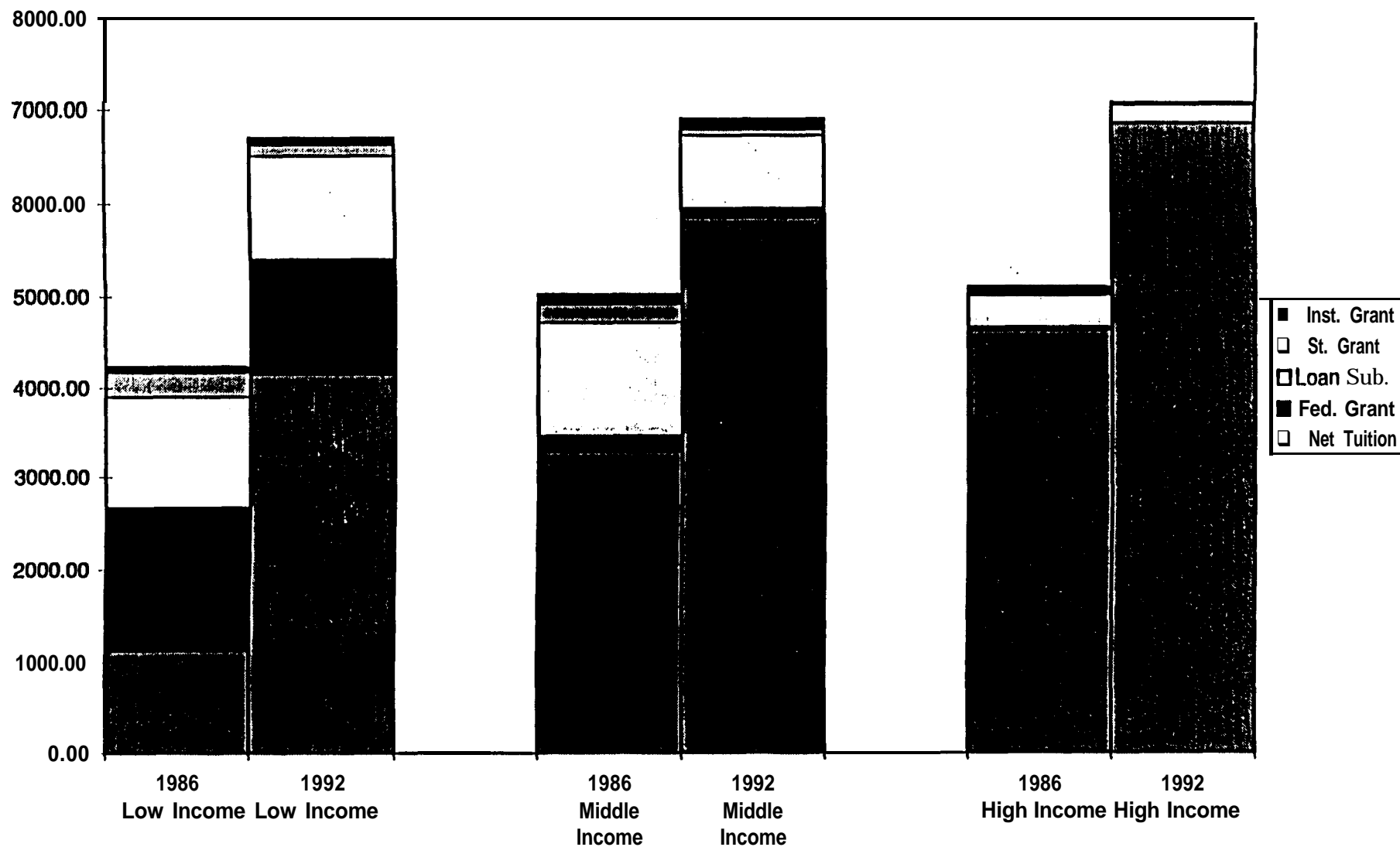
Figure 2: Financing Undergraduate Tuition, 1986-87,1992-93
Public Institutions



Note: Numbers are averages (in 1992-93 dollars) across all full-time, dependent students.

Source: Calculated from 1986-87 and 1992-93 NPSAS data bases.

Figure 3: Financing Undergraduate Tuition, 1986-87,1992-93
Private For-Profit Institutions



Note: Numbers are averages (in 1992-93 dollars) across all full-time, dependent students.

Source: Calculated from 1986-87 and 1992-93 NPSAS data bases.