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University Tuition, Consumer Choice
and College Affordability: Strategies
for Addressing a Higher Education
Affordability Challenge

by Peter McPherson and David
Shulenburg

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University Tuition, Consumer Choice and College Affordability

Strategies for Addressing a Higher Education Affordability Challenge

A NASULGC Discussion Paper

NASULGC
A Public University Association

Peter McPherson
President
and
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Vice President for Academic Affairs

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Introduction

This purpose of this paper is to promote a discussion, especially within the public research university community, about tuition, the relationship of tuition to cost and program quality, the nature of university funding, and the prospects for controlling both tuition increases and program quality in the future.

We gratefully acknowledge the comments made on earlier drafts of this paper by Sandy Baum, Michael McPherson, Michael Middaugh, Christopher Morpew and Jane Wellman. Many more comments came to us from NASULGC presidents and provosts and from colleagues at other higher education associations. We, of course, are responsible any for errors that remain.

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Executive Summary

With passage of the Higher Education Opportunity Act of 2008, the Higher Education Act (HEA) is now reauthorized. What effect will it have on U.S. higher education? Students receiving Pell grants will find that college is more affordable while those who feared that the government would exert control over learning outcomes have breathed a sigh of relief.

The bill's primary response to the annual increases in tuition is to publicly shame colleges and universities with the highest increases. However, the HEA creates significant additional costs to colleges and universities. As Doug Lederman wrote in *Inside Higher Ed* (August 1, 2008), "the legislation requires colleges to collect and publish a dizzying array of data and information."

Provisions that eliminated large numbers of regulations and reporting requirements were the only way HEA could have reduced pressure on tuition increases without causing long-term distortions harmful to higher education and its students.

The higher education community is aware that continued high rates of tuition increase are not in the best interest of students and is working to keep higher education affordable.

Through NASULGC, the public research universities of this country have begun a serious, long-range dialogue about keeping public higher education affordable. To promote that dialogue, we wrote this analytical paper and revised it based on conversations with our members. While we invite you to read the entire paper, we share its major findings here:

THE MONEY AVAILABLE AND COST OF PROVIDING EDUCATION AT PUBLIC

UNIVERSITIES IS NOT INCREASING. One of the most robust findings in the research literature is that the real cost per student in public higher education is not increasing. This finding was most recently repeated by the Delta Cost Project in its 2008 study, *The Growing Imbalance*. The constant-cost finding necessarily follows from data that demonstrate that public higher education revenues per student (the sum of state appropriations plus net tuition receipts) was \$10,091 in 1996 and increased to only \$10,294 in 2006. Cost per student has remained constant because revenue per student was constant; funds were not available to increase expenditures further. Public university managers have been highly effective at controlling costs; indeed, they were compelled to be, given the resources available. On the other hand, private universities, with increasing real budgets per student, have had significant real cost-per-student increases over the last decade.

PUBLIC UNIVERSITY TUITION IS INCREASING RAPIDLY. Public research university tuition rose at a 6.61 percent compounded annual rate over the last decade; that is 2.7 times faster than consumer prices increased. The only sector of public education where prices increased

at a rate approaching consumer prices was in the community colleges, where tuition went up at a 3.83 percent annual rate, a rate still 1.6 times the rate of consumer prices. While tuition and fees at private universities increased at a slightly slower rate, the absolute dollar increase in the private university tuition over the decade was far greater because of the much higher base from which private university tuition started. At the average public research university, required tuition and fees rose by \$3,063 over the decade; at its private counterpart, they rose by \$13,259.

PUBLIC UNIVERSITY TUITION HAS INCREASED BECAUSE REAL PER STUDENT

APPROPRIATIONS HAVE DECLINED. This finding appears again and again in serious examinations of the causes of public university tuition inflation. Efforts to control tuition in the public sector of higher education are generally misdirected, since they focus on cost (e.g., the new HEA's "shame list" for institutions). Overall cost per student has been constant. Tuition increases have been just sufficient to offset reduced state subsidies, but not to increase public university budgets.

REGARDLESS OF WHAT CAUSES THEM, TUITION INCREASES HAVE NEGATIVE CONSEQUENCES.

No valid instruments exist for measuring the quality of higher education. While data demonstrate significantly higher annual and lifetime earnings for those who earn a bachelor's degree, there is no data that reliably shows that earnings bear a predictable relationship to the institution from which an individual earns the bachelor's degree. Hence, one would expect students to gravitate over time to the lowest-priced providers of higher education.

That is in fact happening. Over the last decade, community college enrollment grew by 24 percent, public four-year university enrollment grew by 19 percent, and private four-year university enrollment grew by 15 percent. Because minority students more frequently are from lower income families, this tendency to attend lower-priced vendors of higher education is more pronounced for them. For example, over the last decade Hispanic enrollment at community colleges increased 173 percent, black enrollment increased 207 percent, and white enrollment 35 percent. At public very high research universities, Hispanic enrollment rose by 51 percent, black enrollment by 22 percent and white enrollment by 14 percent. At private very high research universities, Hispanic enrollment rose 40 percent, black enrollment 22 percent, and white enrollment 11 percent. Further differential increases in tuition across the sectors of higher education will aggravate these tendencies. It is also likely that overall increases in university enrollment would have been greater in every institutional category had tuition increases been lower. Lower rates of tuition increase could play an important role in helping this country regain its historic top ranking among nations in tertiary educational achievement,

PUBLIC UNIVERSITIES ARE DETERMINED TO REMAIN AFFORDABLE. NASULGC's public and land grant university members are proud that public higher education is affordable for most Americans. They are determined that it become affordable for all Americans and that it remain so for future generations. Our members are engaged in a dialogue about actions that

might be taken collectively or individually to expand and preserve their affordability. While some courses of action remain in the hands of others (such as restoring state funding and simplifying federal financial aid), others are in our hands, such as (1) developing managerial and technological methods to reduce educational and support costs, (2) developing innovative and less expensive ways to deliver education, and (3) adding to endowments that target financial aid to those who need it most.

PUBLIC HIGHER EDUCATION REMAINS AFFORDABLE TO MOST BUT PROBABLY NOT ALL

AMERICANS. Tuition and fees at the average research university are only \$719 per month (based on a nine-month academic year); they are \$356 per month at the least expensive research university. This monthly payment for the average public research university is about the same as required to retire a car loan in four years for a new Camry hybrid (\$30,000 at a 7 percent APR). The annual resident tuition and fees at the average research university amounts to 11.07 percent of median family income. The least expensive research university or community college requires about 5 percent of median family income to cover tuition and fees. In return for their tuition and fees payments, the public research university graduate gets increased future income flows with a present value of about \$230,000 upon graduation, more than double the roughly \$110,000 she or he will have just paid for tuition and books and foregone income during college. More than doubling one's investment in four years is an extraordinary opportunity.

PUBLIC HIGHER EDUCATION IS AVAILABLE AT A WIDE RANGE OF PRICES, PROVIDING MANY OPTIONS TO STUDENTS.

In 2006–07, the required resident tuition and fees for an academic year averaged \$4,956 at public doctoral universities and \$6,479 at public research universities (very high research Carnegie Classification). The least expensive doctoral university has tuition and fees of only \$3,274, and the least expensive research university has tuition and fees of \$3,206. The average community college's tuition and fees are \$3,234, in the same range as the least expensive universities.

SPEND \$40,000 FOR A DEGREE OR \$200,000? IT IS OFTEN THE STUDENT'S CHOICE.

Attending a university is perhaps the biggest investment an individual makes in a lifetime. Approaching it carefully and thoughtfully as one would approach any investment can ensure the maximum payoff for the investor, i.e., the student. No matter what courses of action NASULGC member universities take to enhance affordability, it will remain important for students to realize that the cost of higher education for them and hence, its affordability, is fundamentally in their hands. While still in high school, students can shorten the period they will need to be in college by:

- preparing academically by taking a strong pre-college curriculum and by taking courses that will satisfy both high school graduation and college requirements,
- choosing to attend universities whose tuition is low enough to fit their budgets,
- expanding their college budgets by seeking out financial aid and scholarship opportunities and applying for them, and

- shortening the period needed to earn a degree by carefully planning out their studies with an advisor and then diligently pursuing them.

Lifestyle choice while in college also affects cost. We know from research findings that living in college-provided housing increases the probability of earning a degree and it also reduces college costs. Living a more ascetic life while in college pays both academic and financial dividends. If one needs to work while a student, it has been found that having a job on-campus and working 20 hours a week or less increases the probability of earning the degree.

POSSIBLE UNIVERSITY ACTIONS: Many options for public universities to remain affordable are suggested in our paper. Among them are strategies to reduce cost. No doubt individual universities will need to continue to find additional ways to reduce costs that will permit them to reduce tuition increases. We recognize that most public universities have already reduced certain costs. They have done so with great effort and rarely received much public credit for it. Perhaps universities might find ways to deliver education for lower cost and charge lower tuition by deciding to use a modified mixture of personnel, technology and facilities. Of course, they will want to do so consistent with their quality expectations. To take advantage of this option, universities or individual colleges, departments or programs will need to develop ever more sophisticated and fundamental understanding of both their costs and their quality so that they can shed costs unrelated to quality. A possible strategy for universities that wish to dramatically reduce cost might be to unbundle their cost structure. The strategy also may be applicable to university units like departments. We find much evidence that unbundling is happening and recommend attention to it as a possible strategy to reduce costs.

OUR COMMITMENT: This country's future will be fundamentally affected by the extent to which public higher education remains affordable, since over 70 percent of students receive their college education in the public sector. Public universities need substantial assistance from funders and regulators to make progress in maintaining affordability. Students also must become wiser investors in higher education and make the choices that will affect affordability for them. Nonetheless, much can be done within our universities to maintain affordability. Public universities undertake this effort with that understanding and with the determination that, working with funders, regulators and students and their parents, they will succeed in this effort.

Public research universities have risen to meet national needs in the past. With the passage of the Morrill Act in 1862, they transformed themselves to meet the agricultural/industrial needs of the country. In the immediate post-World War II era, they dramatically expanded to serve the returning GIs. In the 1960s, they responded to the challenge of Sputnik. This challenge to cost and affordability is one to which they can likewise find an effective response.

Chapter I

The Looming Affordability Challenge

A. U.S. Higher Education Offers Many Affordable Choices to Students

WHAT DO WE MEAN BY “AFFORDABILITY?” *We begin this discussion by cautioning the reader not to confuse “affordability” with “tuition” or even with “net tuition.” Affordability is specific to the individual student. Any number of student decisions can affect the extent to which higher education is affordable, including enrollment choice, degree completion in four years, on-campus living, modest lifestyle while in school, etc. University decisions about tuition and financial aid awards clearly affect the issue of whether college is affordable for individual students, but tuition alone might be a minor part of the affordability equation. Universities legitimately make decisions to reduce net tuition for some students while maintaining higher tuition for other students, depending on family resources and circumstances. Our discussions that follow deal with elements of affordability; these elements might be of minor consequence to some students and major consequence to others.*

Unlike higher education in much of the rest of the world, students in the United States generally must pay to attend college. It is conceivable that the U.S. “system” of higher education—a system labeled by *The Economist* as the “the best in the world”¹—perhaps partially earns that accolade because students must pay to attend. Paying to attend helps focus both mind and effort and probably improves the value of the experience for everyone involved. Thus we do not approach the subject of paying for higher education apologetically. Students who can afford to pay for at least the portion of their education that represents its private benefit should do so, while the public should cover the portion of the cost approximating the value of its public benefit.

We also want to avoid dwelling in a nostalgic haze in which we perpetuate the myth that higher education was once cheap and now is dear. Such is not the case. Higher education in the United States has always been expensive. Tales of diminutive tuitions from the past were often accompanied by stories of those who had to drop out because they could not afford to attend and of the sacrifices families made so that their children could complete degrees. Our

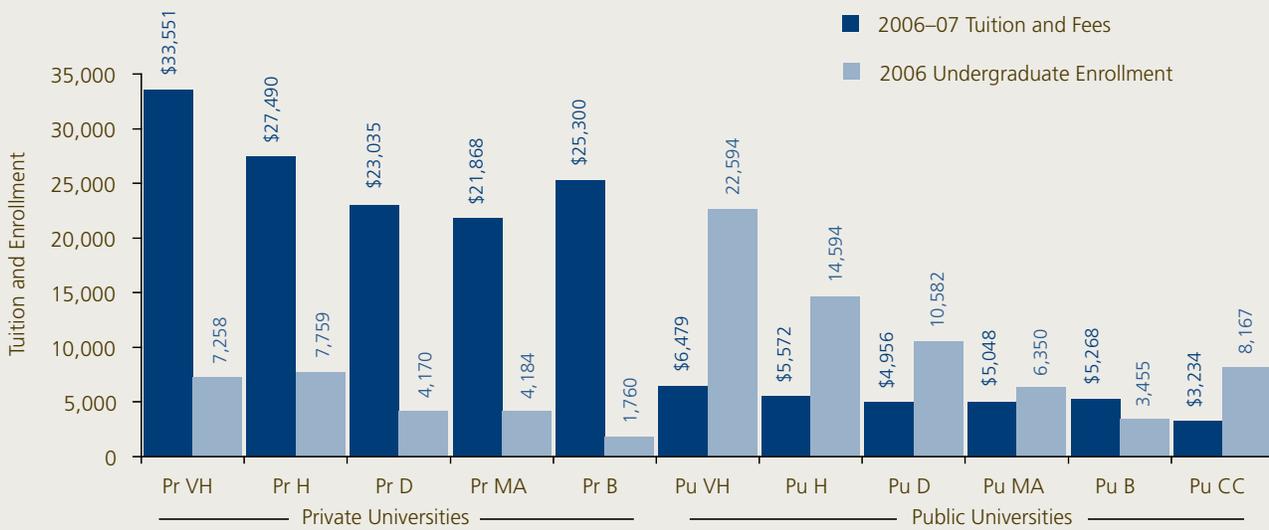
1 “The Brains Business,” *The Economist*, September 10, 2005.

purpose here is to objectively assess factors affecting affordability so that proper balance can be maintained in the future.

THE RELATIONSHIP BETWEEN AFFORDABILITY AND STUDENT CHOICE: Higher education institutions fail to stress to students and parents that tuition is actually a wide range of list prices at which a college education is available. This failure is a major disservice to universities and our various stakeholders.

Figure 1 below illustrates the range of average tuition² and required fees for the academic year at U.S. institutions grouped by Carnegie Classifications.³

FIGURE 1: Average List Tuition and Fees For 2006–07 and Average Undergraduate Enrollments For Carnegie Classification Groups Of Universities



SOURCE: Integrated Postsecondary Education Data System (IPEDS)

The range of tuition and required fees is very large, from a high of \$33,551 per academic year at the average private, not-for-profit⁴ university classified by Carnegie as “very high” in research, dropping to an average of \$6,479 at their public counterparts, and to a low

2 Public college and university tuition rates used are those for in-state students as they apply to the majority of students attending public institutions and are available to every student within their own state. The data used in our illustrations are taken from the Integrated Postsecondary Education Data System (IPEDS).

3 A description of the Carnegie Classifications is found at <http://www.carnegiefoundation.org/classifications/>. Appendix II to this paper provides a description of the samples of universities that make up each of the Carnegie Classifications used in this paper.

4 “Private” when used in this paper as the sole descriptor of a university or group of universities always refers to “private, not-for-profit” universities. It never refers to the “private, for-profit” or proprietary institutions.

of \$3,234 at public community colleges. As Figure 1A shows, the range within categories varies widely as well. These list prices do not reflect the prices most students actually pay for a year of attendance as tuition discounting is common. It ranges from 32.8 percent average reductions at private four-year schools, to 15.7 percent at public four-year schools, to 7.4 percent at public two-year schools. Discounts vary by income levels, demographic characteristics and student academic abilities.⁵ For purposes of discussion, the list price range adequately reflects the varied prices available to students as the range generally reflects the dispersion of prices available to the average student.

Also, for discussion purposes, we find it convenient to group tuition variations by Carnegie Classification. From a student's perspective, the variation within classification may be even more important. Tuition and required fees are zero at the military academies and range up to \$35,634 at the most expensive private university. This is the real range of tuition available to students.⁶

FIGURE 1A: Minimum and Maximum Tuition Within Category



SOURCE: IPEDS

5 Sandy Baum and Lucie Lapovsky, *Tuition Discounting: Not Just a Private College Practice* (College Board, 2006), p. 2.

6 It is preferable to think of the tuition and fees one pays to obtain a degree rather than the amount paid for tuition and fees during an academic year. While this is conceptually preferable, average time to degree data is not available to do so. Even if it were available, it is not clear that the data for an institution would be useful to a specific student as time to degree varies with individual student characteristics as well as with institutional characteristics. If only the institution-specific portion of the variance could be isolated, the data (were it available) would have greater meaning.

It is doubtful policymakers or the general public appreciate the breadth of the available tuition price range. Both appear to hold only the limited notions that private schools cost more than publics and public community colleges are the least expensive options for students. Discussions about the affordability of college, however, seldom recognize that the range between the most and least expensive groupings of colleges is roughly 10 to 1.

Figure 1 includes information on enrollments as well as tuition. Too often, tuitions at the upper end of the range are cited in the media as though they were typical of all higher education. The highest tuitions are charged by the institutions with the smallest share of enrollment. A recent Government Accountability Office (GAO) report found that only 3 percent of U.S. students attend schools with annual tuition and fees more than \$25,000 and that 60 percent of students attend schools with tuition and fees of \$4,750 or less.⁷

Why does this large price range exist? There are many reasons, some of which we will examine in more detail later in this paper. On average, in 2006 states appropriated a subsidy of \$6,325 per student, enabling public institutions to charge students less than private institutions that get no state subsidy or substantially less state subsidy.⁸ Since the private/public tuition differentials tend to be far greater than the public subsidy, there clearly are other additional reasons for private/public price differentials. Institutions with large per-student endowments can subsidize tuition more than those with small per-student endowments, but restrictions placed on endowment funds by donors severely limit the flexibility universities have to use these funds for scholarships or financial aid. Some believe that institutional tuition differentials simply reflect the ability some institutions have to charge higher prices. The interesting question is: *Why do students facing this full range of prices choose to attend relatively expensive institutions when relatively inexpensive alternatives are available?*

Tuition buys a bundle of things and not simply instruction. Part of the range of variation in these bundles is seen in Figure 2, which shows the cost of providing three key components of higher education, grouped by Carnegie Classification: instruction, academic support (libraries, computing, etc.) and student services (counseling, student unions, student athletic facilities, etc.).⁹ The variation of these three components bought when one pays tuition and fees barely reveals some of the enormous complexity of the bundled components. *We caution all readers that the data we use represent averages for groups of universities. They do not represent any single university's cost, revenue expenditure patterns, and enrollment or tuition circumstances.*

7 *Tuition Continues to Rise but Patterns Vary by Institution Type, Enrollment and Education Expenditures* (GAO, November 2007), p. 17.

8 In 2006, the average state appropriation per student was \$6,325 according to SHEEO. <http://www.sheeo.org/finance/shef/2006%20tables/Ed%20Approps%20per%20FTE.xls>

9 Because of differences between the GASB and FASB standards, IPEDS data for private and public universities can take on different meanings. In the case of the financial data we cite in this paper, the differences are relatively unimportant.

FIGURE 2: Cost of Providing Instruction, Academic Support and Student Services, 2006–07

SOURCE: IPEDS

As with tuition, the range of these cost elements is large, enabling one to select a university within a nearly infinite set of combinations of these three components. Universities are also differentiated by less quantifiable variations in perceived instruction quality, attention given to individual students, campus life features, availability of social and living organizations, prestige, etc. Future life success is also perceived to vary by school attended. The point is that variations in the cost of attendance might in fact be—or are simply perceived to be—associated with variations in the content of the bundle of things that constitute the college experience.

Viewed from this perspective, the range of college prices is somewhat like the range of prices for various consumer and investment goods and services. For example, the price of automobiles varies from the upper four digits to the middle six digits. The range of prices for women's dresses, men's suits, hotel rooms, exercise clubs, etc., is similarly great. The same is true of investment goods, such as delivery vehicles, office copiers, corporate offices and machine tools. Little public concern attaches to prices of items at the high end of the range because consumers and investors are free to make choices about prices to pay for those items or services, and those choices connote differences in value that purchasers perceive to be worth the prices they choose to pay.

NACUBO, in its monumental three-year effort to develop a methodology for reporting the cost of undergraduate instruction, articulated this same logic:

Some institutions in this country spend \$5,000 per student for their particular population; other institutions serving different populations and with different missions (and different resources) spend \$40–50,000 per student. The point of

this observation is not that one approach is better or worse or to identify some optimal cost structure that all colleges and universities should seek to realize. Rather, it is that higher education as a whole is wonderfully effective at providing a very wide range of options for students based on their different needs and circumstances. Individual students and their families have an enormous variety of choices.¹⁰

Clearly NACUBO, an organization whose members represent the full range of tuition choices, did not want to complicate its already difficult task of developing a uniform cost estimating method for undergraduate education. Instead, they declared that cost variation is associated with the variety of educational options available from their member institutions.

Arguably, college costs should not be a major public concern because students can buy a year's access to college at institutions across the Carnegie Classifications for prices ranging from \$3,234 to \$33,551.¹¹ The fact that there is so much public concern about tuition levels suggests that the public either does not know about the 1-to-10 range of tuition options available or perceives the more affordable college options to be so inferior as to be judged simply unacceptable.

Of course, in this egalitarian country we desire that access to education be based on potential and not on factors of race, ethnicity or family income. Access based on price will disproportionately direct those from lower income groups into lower-priced schools. We do not hold such egalitarian values with respect to access to half-million dollar homes, and we countenance market forces that largely order individuals into homes that align with their incomes. The Pell Grant program is our imperfect and inadequate federal expression that income alone ought not to determine the school at which one works to earn a bachelor's degree.

IS CHOICE LIMITED BY MOBILITY CONSTRAINTS? Finally, we must confront the questions:

- Do most college students really have choice in the selection of colleges and universities?
- Aren't many students place-bound and therefore unable to attend any college other than the one closest to them?
- Aren't many students inadmissible to many universities because of their poor academic records or test scores?

If the answer to any of these questions is affirmative, then it may not matter that the range of tuition and fees across the nation or across a person's home state fits within even modest

10 *Explaining College Costs: NACUBO's Methodology for Identifying the Costs of Delivering Undergraduate Education* (NACUBO, February 2002), p. 35.

11 The actual range is zero to \$33,551. Some small colleges that are not included in the range covered by the classifications used here have tuitions that are entirely paid for by endowments. Others charge students nothing but require them to work for their tuition, and others, like the military academies charge no tuition but require a service obligation after graduation.

budgets. What matters to such students is only the affordability of colleges and universities that they actually can attend.

But in the Internet age, the student does not have to go to the university; the university can come to the student. According to the Sloan Foundation more than 20 percent of college students (approximately 3.5 million) enroll in at least one on-line course.¹² The 9.7 percent annual growth of online enrollments is more than six times the growth rate in college age students. Furthermore, the growth rate in enrollments is highest in the low admissions selectivity two-year colleges, where more than half of all on-line enrollments now are concentrated.¹³ Just as the smaller private-for-profit sector has the highest rate of enrollment growth in face-to-face education, it also has the highest rates of online enrollment growth.¹⁴ As *The New York Times* reported in July 2008, \$4-per-gallon gasoline prices have made online enrollments grow explosively.¹⁵ The added commuting expense has caused more students to realize that online education is accessible to them.

But is access to the online education phenomenon available only to a privileged subset of students? Much has been made of the “digital divide,” or limitation on access to technology and the Internet based on income. A national survey of teenagers conducted by the Pew Foundation for the National Commission on Writing suggests that the divide has narrowed significantly.¹⁶ For example, while 89 percent of all teens access the Internet from home, 99 percent of those from homes with more than \$75,000 annual income do so, as do 70 percent of those from homes with less than \$30,000 annual income. The divide along racial lines is also narrower than one might expect as 91 percent of white teens, 80 percent of black teens and 85 percent of Hispanic teens access the Internet from home. Schools and public libraries provide access for those who don’t have home access. Thus, although the divide still exists, it appears that a growing majority of teens in all groups now access the Internet from home.

We do not claim that online instruction is the solution for every mobility-constrained student. Some students prefer not to use digital access and will not. But, as the data above demonstrate, their numbers are dwindling and will fall further as this generation of teenagers, who are digital natives, become young adults. We also note that private-for-profit higher education is not restricted to online delivery. A drive around any major urban area shows that for-profit educators have been busy creating attendance centers close to the population. They make more choice available, even to those who desire only face-to-face education. Choice in higher education is available to the overwhelming majority of Americans. Some undoubtedly have little real choice, but it appears that technology and new entrants are rapidly expanding choice to more prospective students.

12 Elaine Allen and Jeff Seaman, *Online Nation, Five Years of Growth in Online Learning I*. (Babson Research Group and the Sloan Consortium, October, 2007).

13 Ibid., pp. 1, 2.

14 Ibid., p. 7.

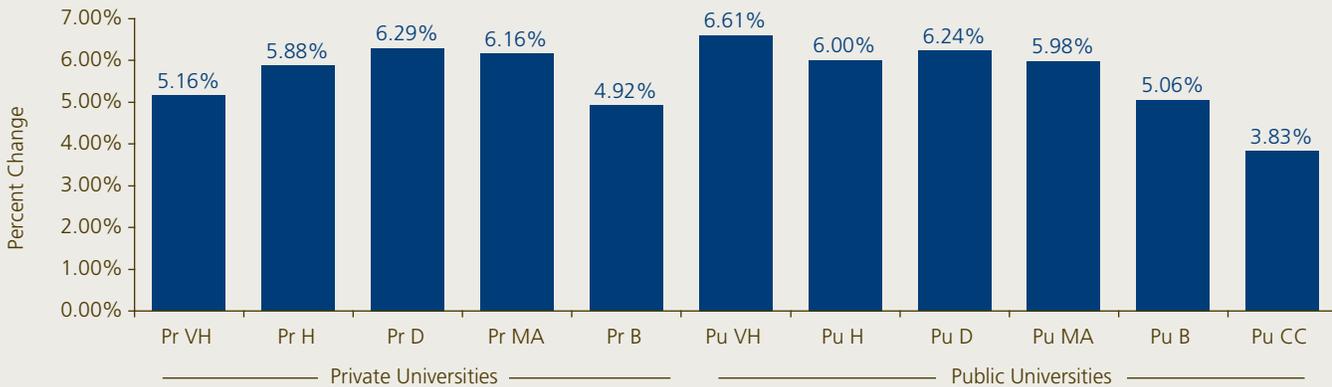
15 Sam Dillon, “High Cost of Driving Ignites Online Classes Boom,” *The New York Times*, July 11, 2008. <http://www.nytimes.com/2008/07/11/education/11colleges.html>

16 *Writing, Technology and Teens*, National Commission on Writing and the Pew Internet Project, 2008. http://www.writingcommission.org/prod_downloads/prof/community/PIP_Writing_Report_FINAL.pdf

B. Projections of Tuition and Affordability Changes

The public is often concerned about the rate at which the average price of goods increases rather than to the range of prices available. This concern is more intense when the good in question is perceived to be a necessity and/or when the good's average price increases more than average incomes and it becomes less affordable. Tuition has been increasing at a substantial rate during the last decade, as shown in Figure 3. While there is considerable variation in rates of increase across university groups, the rates of increase for each of them exceeds the 2.44 percent rate at which the consumer price index increased during the same period.

FIGURE 3: Compounded Annual Growth Rate of Tuition, 1996–2006



SOURCE: IPEDS

Further, one must not equate percentage increases in tuition with changes in affordability. As Figure 1 illustrates tuitions are much higher at private universities than at public universities so the slightly higher percentage increases in tuition at public schools translate to far smaller dollar increases. As Table 1 illustrates, the 5.1 percent compounded annual increase at private very high research universities meant a dollar increase of \$13,259 while the larger 6.6 percent increase at public very high research universities represented a far smaller dollar increase of \$3,063.

TABLE 1: Dollar Increases in Tuition by Carnegie Type and Governance, 1996–2006

PrVh	Pr H	Pr D	PrMA	Pr B	PuVH	PuH	PuD	PuMA	PuB	PuCC
\$13,259	\$11,967	\$10,524	\$9,843	\$ 9,653	\$3,063	\$2,460	\$2,250	\$2,224	\$2,053	\$1013

SOURCE: IPEDS

For consistency, throughout this paper we use the tuition and family income values of the decade from 1996 to 2006 to project possible future values. This is an arbitrary basis for projection, but the same could be said of any other projection basis. We note that during the period from 1976 to 1996, tuitions increased at slightly faster rates at private universities and at public, two-year community colleges than at public universities.¹⁷

TABLE 2: Tuition Increases, 1976–1996

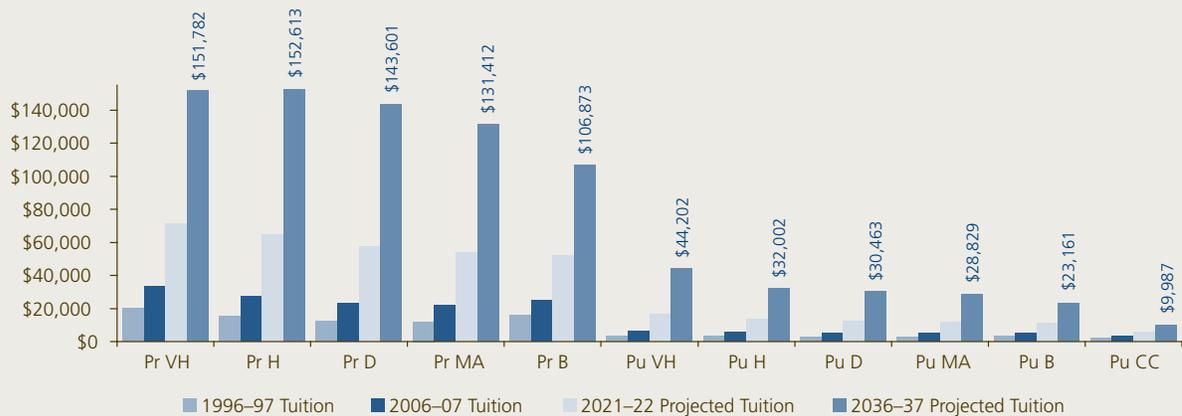
	1976	1996	Change
Public Universities	\$642	\$3,151	390%
Private Universities	\$2,281	\$15,581	441%
Public Two-Year Colleges	\$245	\$1,245	408%

SOURCE: *Straight Talk About College Costs and Prices*, Report of the National Commission on the Cost of Higher Education

If one uses the past decade's rates of increase in tuition (Figure 3) for each of the Carnegie groups to project tuition 15 and 30 years into the future, some startlingly large numbers result (Figure 4A). Using these historic rates for projection, by 2036 tuition and fees at private very high research universities rise to \$151,782 (in non-inflation-adjusted dollars), their public counterparts to \$44,202 and public community colleges to \$9,787.

17 *Straight Talk About College Costs and Prices* (Report of the National Commission on the Cost of Higher Education, January 21, 1998), p. 5.

FIGURE 4A: Tuition and Fees Projected into the Future at 1996–2006 Growth Rates (not inflation-injusted)



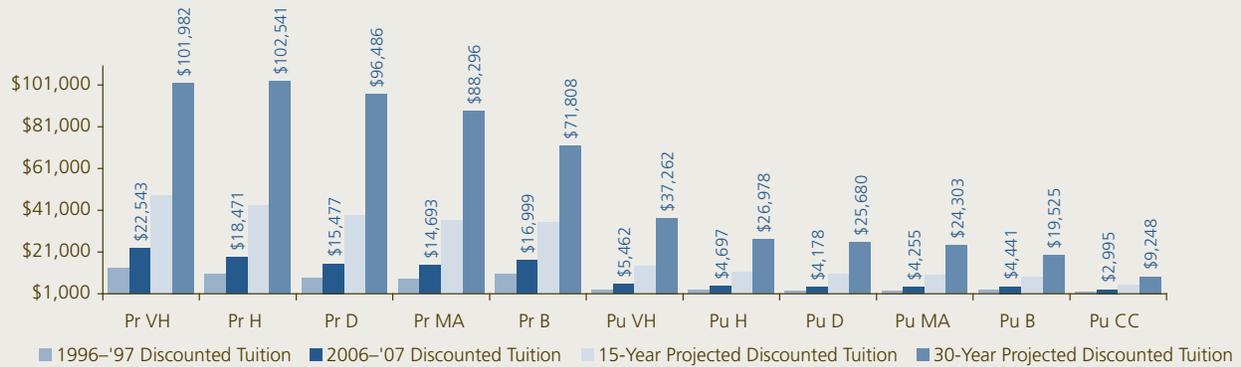
SOURCE: Projection from IPEDS

Even when historic student tuition discount rates are applied to these projected list prices (Figure 4B), the resulting figures remain substantial.¹⁸ If discounting continues at the rates that prevailed in 2006, the average net tuition at the end of 30 years would be \$101,982 at private very high research universities, \$37,262 at public very high research universities and \$9,248 at public two-year institutions. In these projections, we use the discount rates that prevailed in 2006. This implicitly assumes that the rates will remain unchanged in the future.

Average discounted tuition figures like these might be relevant for the public policy purpose of understanding the real rate of inflation in college tuition or for universities to use in projecting their actual tuition collections. But they are generally irrelevant to individual students. Many students experience actual discount rates that are bunched nearer the ends of the range, i.e., near 0 percent and near 100 percent. We do not have good data on the actual dispersion of discounts. In order to fill this information gap, the reauthorized Higher Education Act requires universities to report net tuition disaggregated by income category. “Average” discounts are statistical illusions with little practical meaning to individual students. What is important to a specific student is the net tuition she or he is expected to pay.

18 From 1987 until the late 1990s, discount rates rose steadily at all categories of institutions, with the exception of community colleges at which they remained relatively unchanged (see *The Growing Imbalance*, pp. 30–31). From the late 1980s through 2006, discount rates were flat in all institutional categories. Recent announcements, particularly by large private universities, of income-specific plans that will enable students to graduate with no debt, might suggest that discount rates will increase in the future. Perhaps these plans will result in repackaging of existing discounts with no change in the average discount rate. With no other clear basis for predicting future discount rates, we chose to project 2006 discount rates into the future.

FIGURE 4B: Tuition and Fess Projected by 1996–2006 Growth Rates with Students Discounts at 2006 Rates



SOURCE: Projection from IPEDS

Are these numbers of such a magnitude that they should trigger alarm? There are multiple ways of assessing this question. One is to reduce the projections in Figure 4A to eliminate the impact of consumer price increases. That, of course, is difficult as we do not know the amount of increase that will occur in consumer prices during the 15- and 30-year projection period. Assuming that consumer prices over the two intervals will increase at a 2.44 percent annually compounded rate as they did during the 1996–2006 interval (the same base period we used in estimating how much tuition will increase), we derive the results for the 30-year projections for three key Carnegie Classifications in Table 1. These multiples we calculate depend upon the ratio of tuition increase to CPI increase remaining unchanged for the next 30 years.

TABLE 3: Projected Tuition, 2036

	Projected Tuition in 2036 (After Tuition Discounts to Students)	Projected Tuition in 2036 Expressed in 2006 Dollars (After Tuition Discounts to Students)	Actual Tuition in 2006 (After Tuition Discounts to Students)	Multiple of Projected Tuition in 2036 Expressed in 2006 Dollars to Actual Tuition in 2006
Private Very High Research	\$151,782 (\$101,997)	\$73,643 (\$49,488)	\$33,551 (22,546)	2.19
Public Very High Research	\$ 44,202 (\$37,262)	\$21,446 (\$18,079)	\$ 6,479 (\$5,461)	3.31
Public Community College	\$ 9,787 (\$9,248)	\$ 4,748 (\$4,487)	\$ 3,234 (\$2,995)	1.47

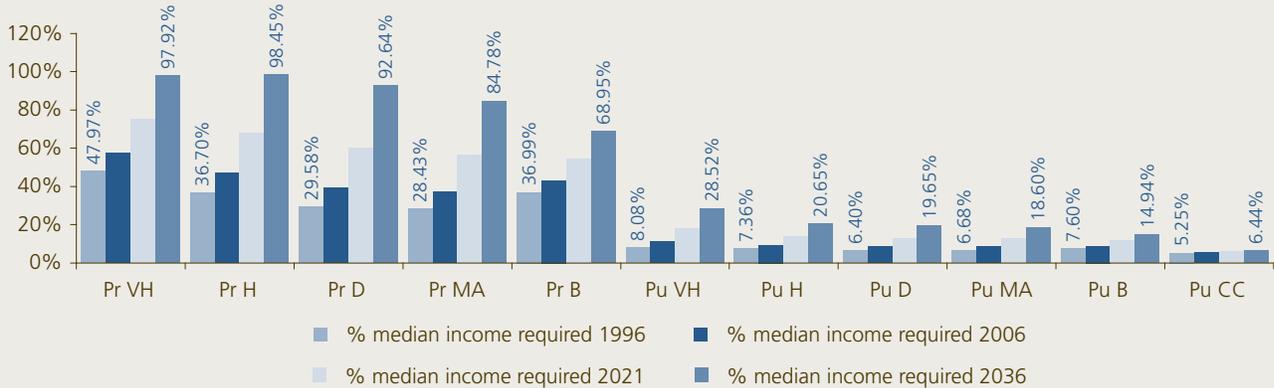
SOURCE: Projection from IPEDS

Another standard of affordability often used is the proportion of median family income required to pay for a year of college. **Family income is an improper criterion to apply as education is fundamentally an investment good and should be evaluated based on the return it provides.** However, we use this family income criterion in the following analysis because public policies are generally based on it. Any time family income cutoffs are part of financial aid, tax deduction or loan eligibility criteria, the underlying policy is using family income as an affordability criterion. Almost all federal education programs include some level of family income as an eligibility criterion.

Median family income increased at a 3.3 percent annual compound rate from 1996 to 2006. Figure 5 is calculated by dividing the tuition projections given above by projected median family income. Figure 5B repeats the same calculation but uses discounted tuition, i.e., tuition, net of the average discounts received by students, rather than list price tuition.

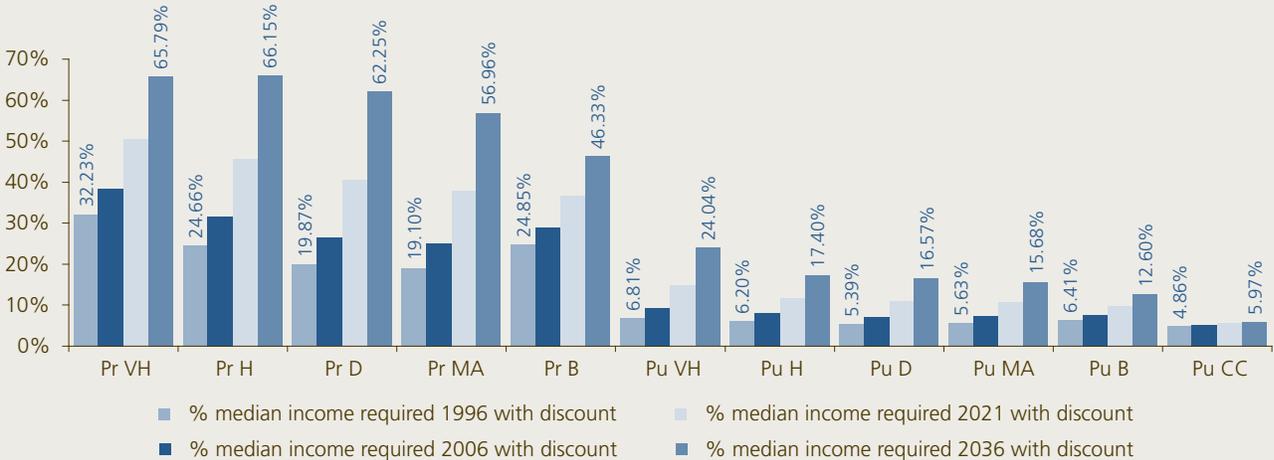
FIGURE 5: Percentage of Median Family Income Required to Pay Tuition and Fees If 1996–2000 Rates of Increase Continue

(Projections at 1996–2006 growth rates)



SOURCE: IPEDS and Historical Income Tables, U.S. Bureau of the Census

FIGURE 5B: Percentage of Median Family Income Required to Pay for Tuition and Fees If 1996–2006 Rates of Increase Continue with Tuition Discounting at 2006 Rates



SOURCE: IPEDS and Historical Income Tables, U.S. Bureau of the Census

These projections (summarized in Table 4) produce results that are of concern.¹⁹ The modest proportion of median family income required to pay for college in 2006 is dramatically greater for every college group except community colleges in 2036. In 2006–07, a hefty 57.3 percent of median family income (38.5 percent with tuition discounting) is required to pay a year’s tuition and fees at private very high research institutions, and that increases to 97.9 percent of median income in 2036 (65.8 percent with tuition discounting). At public very high research institutions, the increase is from 11.07 percent (9.33 percent with tuition discounting) in 2006–07 to 28.5 percent (24.04 percent with tuition discounting) in 2036–37. The situation is different at public community colleges, where the required percentage edges up only slightly from 5.53 percent (5.1 percent with tuition discounting) in 2006–07 to 6.44 percent (5.97 percent with tuition discounting) in 2036–07.

TABLE 4: Proportion of Family Income Required to Pay Tuition

Year	Private Very High Research Institutions	Public Very High Research Institutions	Public Community Colleges
2006	57.3%	11.07%	5.53%
2006 (with Tuition Discounting)	38.5%	9.33%	5.1%
2036	97.9%	28.5%	6.4%
2036 (with Tuition Discounting)	65.8%	24.0%	6.0%

SOURCE: Projection from IPEDS and Historical Income Tables, U.S. Bureau of the Census

While there is no agreed-upon ideal level for the maximum proportion of family income that would be needed to pay tuition, the public is clearly concerned about affordability at the current levels. The public will certainly react to a 70 percent increase in the proportion for private universities and a near trebling of the proportion for public universities—and that will lead to unpleasant consequences for the university. Only public community colleges retain roughly the same degree of affordability between the present and 2036.

Concern about affordability is heightened because the public has increasingly become convinced that attending college is a necessity. A poll regularly conducted for The Public Agenda found that in 2000, only 31 percent of the public believed that college was a necessity, but that figure had risen to 50 percent by 2007. When asked whether there is another way to succeed in life (other than with a college education), 67 percent of the public agreed that there was in 2000, but only 49 percent agreed in 2007.²⁰ In only seven years the public’s modal

19 We do not claim the projections to be accurate predictions of the future, only reflections of what would happen were the patterns of the last decade to be repeated over the next 15 and 30 years. These startling results will not materialize if median family income grows at a more rapid rate and/or tuition grows at lower rates.

20 John Immerwahr and Jean Johnson, *Squeeze Play: How Parents and the Public Look at Higher Education Today*, The Public Agenda, 2007.

view of higher education shifted from seeing it as optional preparation that produced positive results for those who got it to seeing it as *necessary* for success in life.

Students fear that they cannot afford higher education at current tuition levels. The 2007 compilation of campus surveys by the Higher Education Research Institute at UCLA summarizes the concerns that those first attending college in the fall of the 2007–08 academic year had about affordability (see Table 5). Slightly more than 60 percent of students had some degree of concern about their ability to finance their college career.²¹ As the ratio of tuition to family income grows, it seems reasonable to conclude student concerns about affordability will also grow.

TABLE 5: Student Anxiety About Paying for College

	All	Men	Women
None (I am confident that I will have sufficient funds)	38.9%	45.2%	33.6%
Some (I probably will have enough funds)	51.6%	47.5%	55.1%
Major (Not sure I will have enough funds to complete college)	9.5%	7.3%	11.3%

SOURCE: *The American Freshman: National Norms for Fall 2007*

In this section, we purposely focused only on the ratio of tuition and required fees to family income, as tuition and fees are cost items determined by universities. The cost of college involves more than these items (see Table 6). IPEDS collects the estimated total cost of attendance from universities, and those figures are reported below for three public Carnegie types of institutions for students in three different living categories. In each case, total cost is some multiple of tuition. These data demonstrate starkly how a student’s choice of in-state or out-of-state college, type of college and type of living arrangements affect affordability.

21 John Prior, Sylvia Hurtado and William Korn, Jessica Sharkness, *The American Freshman: National Norms for Fall 2007*, (Cooperative Institutional Research Program, University of California at Los Angeles, 2008), p. 39.

TABLE 6: Total Cost of Attending College

Total Price of ...	Public Very High Research University	Public Doctoral University	Public 2-Year College
In-State Living On Campus	\$18,212	\$15,361	\$10,071
In-State Living Off Campus, But Not With Family	\$18,629	\$17,351	\$13,751
In-State Living With Family	\$10,710	\$10,092	\$ 6,683
In-State Required Tuition and Fees	\$ 6,479	\$ 4,956	\$ 3,234

SOURCE: IPEDS

C. Enrollment Consequences of Rising Tuition

In November 2007, the GAO released a report²² on post-baccalaureate tuition and enrollment, from which the following table is copied.

TABLE 7: Enrollment Distribution by Institution Type

	1995–1996	2006–2007	2006–2007 Enrollment share (percent)	Increase	
				Number	Percent
Public schools	9,779,145	11,674,338	83	1,895,193	19
Private schools	2,025,529	2,337,509	17	311,980	15
4-year, research/ doctoral schools	2,722,192	3,298,474	24	576,282	21
Other 4-year schools	3,512,962	3,913,643	28	400,681	11
2-year schools ^a	5,307,447	6,566,142	47	1,258,695	24
Specialty schools ^b	262,073	233,588	2	-28,485	-11

SOURCE: GAO Analysis of Education Data

- a These primarily two-year schools are institutions that offer associate of arts certificate or degree programs and, with few exceptions, offer no baccalaureate degrees. These include community, junior, and technical colleges
- b These institutions offer degrees ranging from the bachelor's to the doctorate, and typically award a majority of degrees in a single field. Institution types include, but are not limited to, medical and business schools; schools of art, music, and design; and law schools.

Increases in enrollment rates are greatest in the lowest priced institutions—the public community colleges—and in public higher education, in general. Two-year schools enrolled 44.9 percent of all those involved in undergraduate study in 1995–96, 47 percent in 2006–07 and, if the relative enrollment growth rates of the last decade prevail, they will enroll 52.4 percent of college students in 2036. These are not monumental shifts but they represent consequential changes in the character of U.S. higher education.

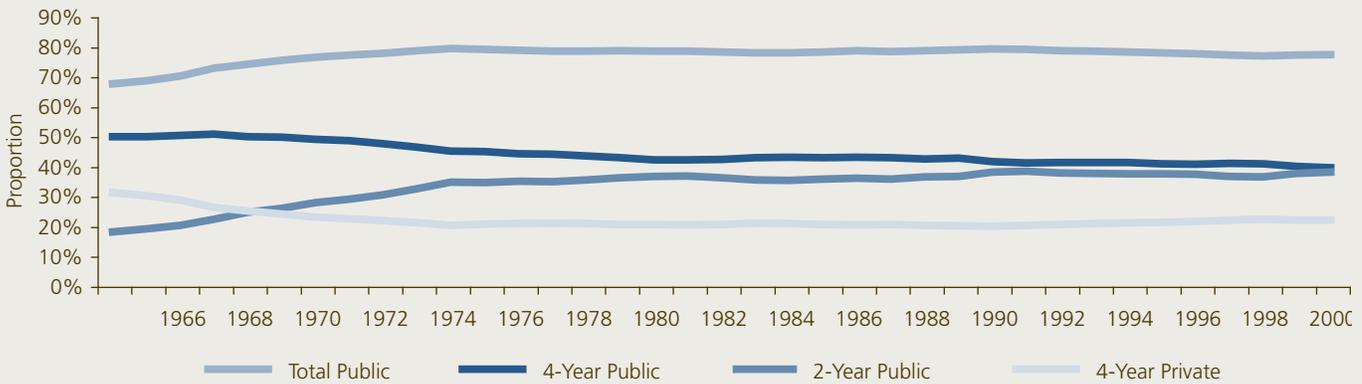
As Figure 6 below illustrates, these shifts in enrollment have been under way for much longer than the 10-year interval reported on by GAO. The proportion of total higher education enrollment in the public sector has steadily increased, but all of that growth has been at two-year colleges. The proportion of higher education enrollment at four-year public and private

²² *Tuition Continues to Rise but Patterns Vary by Institution Type, Enrollment and Education Expenditures* (GAO, November 2007), Table 3.

universities has declined since 1965, with the sharpest declines occurring before 1975. Both public and private four-year universities lost about 10 percent in market share during the period, with public market share declining from 49 to 39 percent and private, from 31 to 21 percent. Public two-year colleges increased their share of the postsecondary degree-seeking market by a full 20 percent, increasing from 17.6 to 37.6 percent.

Remember that these market share changes occurred while the entire market grew substantially, from 5.9 million in 1965 to 15.9 million in 2001. Every sector grew substantially: public four-year universities by 113 percent, private four-year institutions by 82 percent, and two-year public schools by a whopping 366 percent.²³ Loss of market share is less painful in a rapidly growing market, but the danger is that those losing market share while enrollment is growing may not realize that the shift in students' relative preference away from them can be very destructive to their interests in a shrinking market.

FIGURE 6: Changing Market Share by Sector, 1965–2001



SOURCE: Western Interstate Commission for Higher Education (WICHE)

In a sense, we may be moving into a declining market for higher education. The Western Interstate Commission for Higher Education (WICHE) projects that the total number of high school graduates in 2022 will be roughly 1 percent larger than in 2009, but the overall figure masks some dramatic changes in high school graduates across demographic groups. Given the high college-attending proclivity of whites, who decline in numbers by 14.6 percent, and the low college-attending proclivity of Hispanics, who increase in numbers by 62.5 percent, data suggest that postsecondary enrollment will decline dramatically if historic university attendance patterns remain unchanged. Of course, universities will work vigorously to

23 *Digest of Education Statistics* (U.S. Department of Education, 2003), Table 203.

increase the enrollment patterns of Hispanics as well as whites and blacks but, if they do not succeed, the next 13 years will see a declining market for higher education. Those sectors of higher education whose market share is reduced may well see absolute declines in enrollments.

TABLE 8: Projection of High School Graduates²⁴

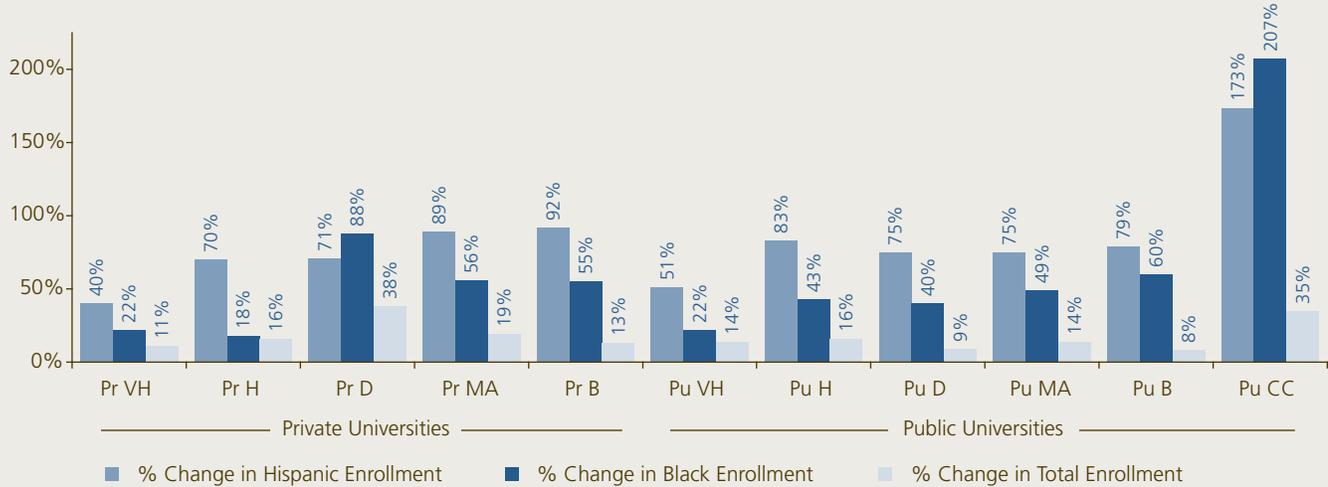
	White, non-Hispanic	Hispanic	Black, non-Hispanic
2008–09	1,859,514	480,187	434,234
2021–22	1,588,455	780,268	393,363
Percent Change	-14.6%	62.5%	-9.4%

SOURCE: *Knocking at the College Door*, Western Interstate Commission for Higher Education (WICHE)

As the WICHE data make clear, the demographic composition of the incoming student body is a variable that must be taken into account in projecting future enrollment. For the Carnegie Classification sets of schools, there are complex relationships between the levels of tuition, the compounded annual rate of change in tuition and change in enrollment. The common thread is that each of the Carnegie Classifications had increases in both overall enrollment and enrollment in both minority categories (see Figure 7). Each of the institutional grouping categories reported larger enrollment increases for minorities than for all students, providing hope that historic differences in attendance patterns across race and ethnic groups will not be perpetuated indefinitely.

24 *Knocking at the College Door* (Western Interstate Commission for Higher Education, 2008), p. 59.

FIGURE 7: Changes in Enrollment Among Black, Hispanic and All Students, 1996–2006



SOURCE: Western Interstate Commission for Higher Education (WICHE)

However, as the correlation matrix below shows, there is essentially no relationship ($r = .015$) between tuition levels and enrollment changes for all students (see Table 9). There is a moderate, negative relationship between tuition levels and both black and Hispanic enrollment ($r = -.38$ and $-.35$).

The most pronounced negative relationship is between the change in both black and Hispanic enrollment and the compounded rate of change in tuition. These correlation coefficients of -0.7 and -0.74 suggest an apparent extreme and adverse sensitivity of members of these groups to tuition increases. While correlation does not demonstrate causation, roughly half the variation in minority enrollment is associated with the rate of change in tuition, while only 4 percent of the total student enrollment change is associated with tuition change.

But these correlation figures warrant some skepticism because they represent correlations among the means of the 11 Carnegie Classifications and are not correlations at the institutional level, with more than 3,000 institutions across the country. They also do not control for differential population growth of the various demographic groups. Despite the data weaknesses we report, the correlations are here because they fit the pattern that we generally observe. Low-income students tend to cluster in community colleges and relatively open admissions universities; high-income students tend to cluster in selective admissions universities. Because race and ethnicity are strong correlates with income in the United States, black and Hispanic students are present in greater proportions where low-income students are found.

TABLE 9: Change In Enrollment By Ethnicity

	Undergraduate Tuition 06–07	% Change Hispanic	% Change Black	% Change Total	Compound Rate of Change in Tuition
Undergraduate Tuition 2006–07	1				
% Change in Hispanic Enrollment	-0.38946	1			
% Change in Black Enrollment	-0.37976	0.939987	1		
% Change in Total Enrollment	0.035425	0.547649	0.64644	1	
Compound Rate of Change in Tuition 1996–2006	0.01465	-0.69549	-0.73972	-0.20139	1

SOURCE: Correlation of IPEDS data

If these relationships hold, and if patterns of tuition increases that have prevailed over the last decade continue into the future, increased concentrations of minority students will end up in those Carnegie Classifications of postsecondary institutions that increase tuition least, primarily the community colleges. Because the statistical evidence we report here is weak, we encourage further research into the income/race/institution/tuition-level/tuition-rate increase phenomena.

D. Bruce Johnstone, in musing about these relationships, suggests “... we can expect there to be a measurable ‘enrollment response’ to a tuition increase among low-income, academically unsuccessful and/or ambivalent youth, and among part-time students. The actual nature of these enrollment responses, however, can vary: From not applying at all or dropping out for a semester to work, to ‘dropping down’ to a lower-cost college near home, or to dropping out altogether never to return.” The response measured here is only the choice to enroll in a lower-priced venue; the other possibilities he speculates about have social consequences as well.²⁵

The May 2008 national survey of students and parents vividly demonstrates the relationship between race/ethnicity and family income and college choice. When students were asked whether they eliminated specific colleges based on their net cost, 43 percent of students from families with incomes below \$35,000 responded affirmatively, but only 16 percent of those with incomes above \$150,000 did so. The proportion responding affirmatively fell at each increase in income level. Twenty-nine percent of white students eliminated colleges based on net cost to them; 46 percent of black students and 49 percent of Hispanic students did likewise.²⁶ Only 11 percent of whites considered postponing college as a way of accumulating

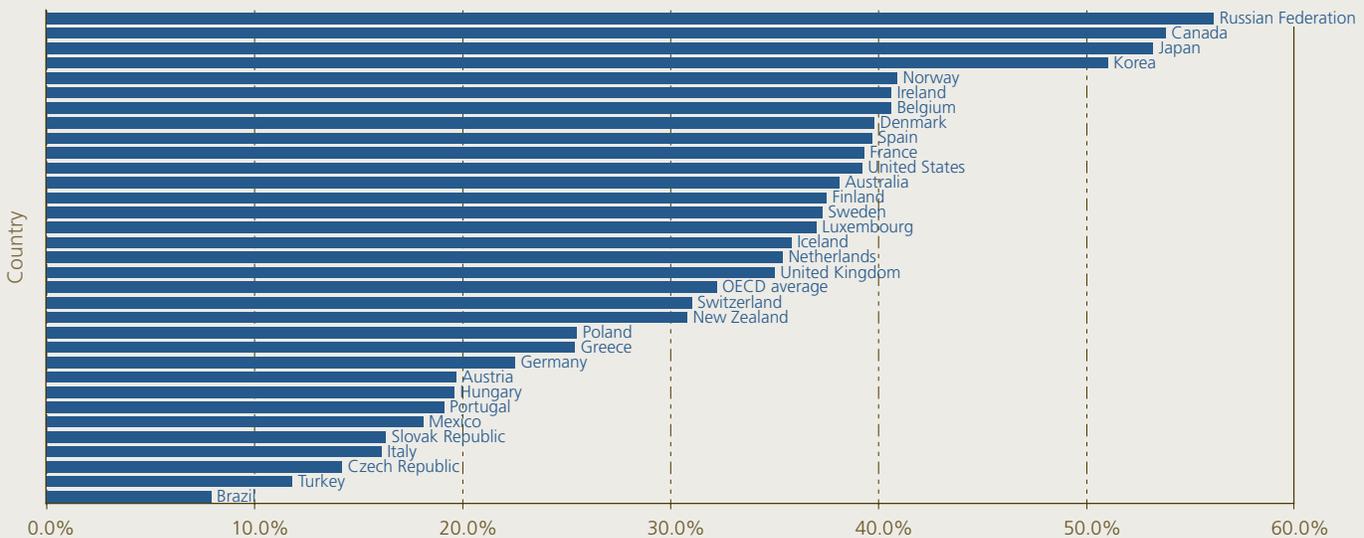
25 D. Bruce Johnstone, “Those ‘Out of Control’ Costs” in Philip G. Altbach, D. Bruce Johnstone, and Patricia J. Gumperts, eds. *In Defense of the American Public University* (Baltimore: The Johns Hopkins University Press, 2001) and also in National Center for Education Statistics, *Study of College Costs and Prices 1988–89 to 1997–98, Volume 2 Commissioned Papers*, NCES 2002-158. (Washington D.C.: U.S. Department of Education, 2001). The Web version cited is at <http://www.gse.buffalo.edu/FAS/Johnston/Altbachchapterfinaltables2700.htm>

26 *How America Pays for College: Sallie Mae’s National Study of College Students and Parents Conducted by Gallup* (Sallie Mae and Gallup, 2008), pp. 26, 27.

funds to afford college but 28 percent of black students and 26 percent of Hispanic students did so. Similarly, 35 percent of Hispanics and 38 percent of black students considered going to college part-time for cost reasons but only 21 percent of whites did so.²⁷ Finding after finding in this path breaking survey reinforces the impact that income, race and ethnicity have on college choice.

Of course any enrollment decrease is opposite the direction in which we should be moving. The often-repeated and sometimes challenged OECD statistics show that the United States has fallen to eleventh in tertiary educational attainment of the 25–34 population (see Figure 8).²⁸ Continued high rates of net tuition increases may cause the United States to move farther down into the pack of competing nations. Given that Hispanic students will drive the bulk of U.S. enrollment growth in the next 15 years,²⁹ and given the sensitivity to tuition increases found here, the prospects for decline in attainment are particularly real and worrisome.

FIGURE 8: OECD Tertiary Attainment, Ages 25–34



SOURCE: OECD Fact book 2008

27 Ibid., p. 29.

28 OECD Factbook 2008: Economic, Environmental and Social Statistics, (OECD 2007).

29 Knocking at the Door: Projections of High School Graduates by State and Race/Ethnicity, 1992–2022 (Western Interstate Commission for Higher Education, March 2008), Chapter 3.

D. Is Tuition Increasing Because Public University Costs Are Out of Control?

ON THE LEVEL OF COSTS: There is much literature on the question of college cost increases. A general conclusion is that there are pressures to increase costs that do not necessarily go to improving quality. Universities sometimes yield to such pressures, in part because they wish to demonstrate that their institutions are high quality, and they use targeted acquisitions to signal their quality. Such acquisitions may include big new equipment, flashy programs, high-profile faculty, etc., whether these acquisitions demonstrably further their mission or not. The *U.S. News and World Report* annual rankings have exacerbated the problem by placing heavy weight on reputation and inputs while only nominal weight is provided for measures of “outcomes” such as actual versus expected graduation rates.

At the end of his very thorough study, *Tuition Rising: Why College Costs So Much*, Ron Ehrenberg, one of the premier higher education economists, concludes

Simply put, cost increases at selective private colleges and universities are driven by the desires of these institutions to be the very best that they can be. Competitive pressures have caused their focus on pushing back the frontiers of knowledge and providing high-quality education to widen to include providing the very best student living, dining and athletic facilities ... Their (costs) have further been increased by the behavior of local governments, the institutions’ systems of shared governance, the way the selective universities organized to allocate resources and raise funds, the ways they select and reward the academic leaders of their colleges, and the growth of the publications that numerically rank institutions.³⁰

Later, Ehrenberg concludes that the price and cost behavior of selective institutions is emulated by less selective institutions, both public and private, as they compete for students and faculty with the most selective private institutions.³¹

Universities also spend to compete for students, e.g., workout facilities, modern or luxurious residence halls, etc. Such expenditures can either be characterized as unnecessary cost increases because they are unrelated to the educational process, or as expenditures designed to create new or “better” product bundles that make the university more appealing to certain students. However, our point here is neither to accept nor reject the conclusions reached on

30 Ron Ehrenberg, *Tuition Rising: Why College Costs So Much* (Cambridge: Harvard University Press 2002), p. 265.

31 *Ibid.*, p. 266.

this subject by Ehrenberg and others. In fact, there would be little support in the literature for rejecting Ehrenberg's list of cost drivers. The point is to face the reality that the cost of providing a higher education varies enormously among institutions in the United States. We must recognize that, to the extent that cost increases drive tuition increases, universities are reasonably certain to face some undesirable consequences if tuition levels continue to rise at rates greater than the increase in family income and if existing tuition differentials among Carnegie Classifications widen.

ON THE RATE OF INCREASE IN COSTS: Clearly, university tuition and fees, which to students and parents are the “price” of the university, have increased dramatically during recent years. (Figure 3 demonstrates this graphically.) From 1996–2006, the five private university categories we examine in Figure 3 have had average compounded annual tuition increases of 5.68 percent, while their public university counterparts have had increases that averaged 5.98 percent. These rates are more than double the compounded annual CPI increase for the period of 2.44 percent. (This is in sharp contrast to the pattern that prevailed from 1980 to 1990 when public university tuition increased at a 4.3 percent rate and private university tuition went up at a substantially greater 5.6 percent rate.³²)

Price changes are what consumers experience while *cost changes* are directly experienced by producers.³³ The mass media often confuse the two, especially when they report on tuition increases. They are frequently abetted and reinforced in this confusion by elected officials. Consider the 2003 statement of a prominent legislator, reported by *The New York Times* in an article on public university tuition increases: “Colleges and universities have not shown a willingness to contain costs,” he said, and then he committed to introducing legislation to withdraw federal money from big tuition raisers.³⁴ The legislator assumed that it must have been cost increases that led to the tuition increases. Similar confusion is evident among members of the current Congress as the Higher Education Reauthorization Act of 2008 includes mechanisms to compel or cajole study of and control of costs by universities whose tuition increases exceed certain thresholds.

This confusion may have its roots in the classical economics model of price and cost behavior in a competitive market. Long term, in a purely competitive market, cost increases and price increases tend to be precisely the same amount, and at equilibrium, the market clearing price and the firm's per unit costs are also the same. But the market for earning the baccalaureate degree is not the competitive market envisioned by Smith and Ricardo. The student shares the price of a college education with donors, governments and others. Information flows are far from perfect. Prices are often set by government action and not by the market. Accordingly, price (i.e., tuition) and cost increases of a college education have diverged significantly over time.

32 *The Cost of Higher Education, Findings from the Condition of Education, 1995* (NCES, U.S. Department of Education, 1995), pp. 2, 3.

33 For an earlier discussion of “cost” and “price” see *Straight Talk About College Costs and Prices*, (Report of the National Commission on the Cost of Higher Education, January 1, 1998), pp. 8–10.

34 Karen Arenson, “Public College Tuition Increases Prompt Concern, Anguish and Legislation,” *The New York Times*, August 30, 2003.

What is the pattern of higher education cost increases? Jane Wellman of the Delta Cost Project and author of *Costs, Prices and Affordability: the Future of Higher Education*³⁵ and numerous other works on higher education economics and finance, has recently conducted a thorough examination of higher education finances. She permitted us to include below (Table 10) her higher education expenditure increase history summary (by Carnegie Classification and governance type, based on IPEDS data):

TABLE 10: Prices, Revenues, and Spending Per FTE Student, 1998–99 to 2004–05

Sector Type	In-State Undergrad "Sticker" Price	Net Tuition Revenue per FTE	Direct Instructional Spending/FTE	Full Educational Spending/FTE	Total E&G Spending/FTE
Public Research	+45.6% (\$1609)	+34.6%	+3.2%	+0.2%	+7.9%
Public Master's	+42.3% (\$1277)	+36.6%	+2.7%	+3.4%	-3.0%
Public Associate's	+28.5% (\$491)	+34.1%	-1.3%	+0.3%	-3.4%
Private Research	+24.0% (\$5169)	+16.7%	+6.9%	+4.5%	+17.8%
Private Master's	+23.5% (\$3366)	+19.0%	+9.6%	+10.9%	+5.6%
Private Bachelor's	+22.6% (\$3208)	+16.5%	+5.9%	+6.1%	+4.6%

SOURCE: Delta Cost Project, 2008; Median #/FTE, from 19-year Matched Set.

The column entitled, "Full Educational Spending/FTE" is perhaps the most appropriate measure of the increase in expenditure required to provide educational services to the student, including instruction. Over the seven years for which consistent data are available, public universities increased per FTE student expenditures in CPI-adjusted real terms by only small proportions, ranging from 0.2 percent at research universities to 3.4 percent at master's universities. Private universities exhibit a different pattern, a pattern of greater increases, with their research universities increasing real expenditure by 4.5 percent and master's universities increasing real expenditure by 10.9 percent. The direct instructional expenditure

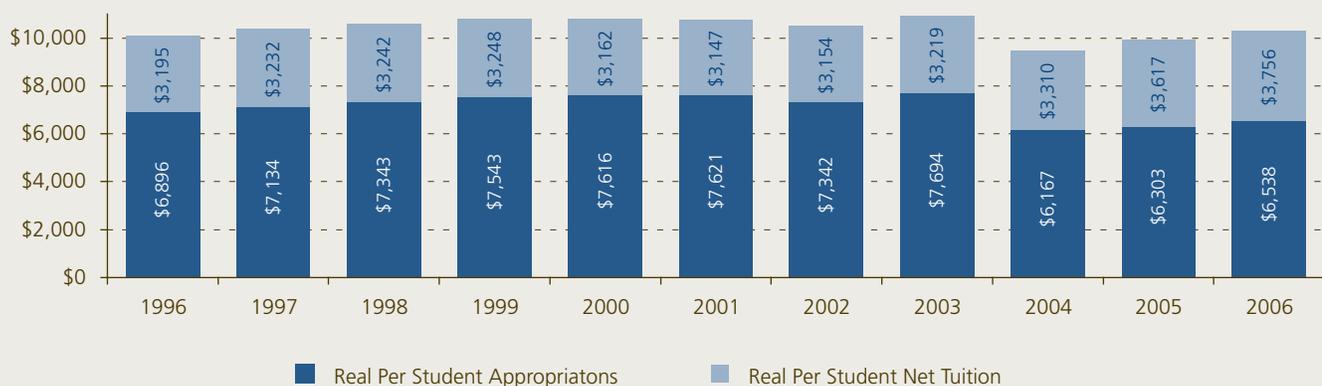
35 Issue paper #13 for The Commission on the Future of Higher Education, 2006.

and Educational and General (E&G) expenditure columns reveals this same pattern; substantially greater increases in expenditure occurred at private than at public universities.³⁶

What accounts for the remarkably lower rate of increase in educational expenditures at public universities than at private universities? It would not appear to be lack of tuition revenue, as the table shows that net tuition revenue increased at a far faster pace at public universities than at private universities. However, this is deceptive. Because the base on which the increase is applied is much lower at public universities, the larger percentage increase in tuition revenue brings in far fewer dollars for public universities than for private ones. Indeed, while public universities' real net tuition revenue rose at about double the rate at which it grew in private universities, the actual per-student increase in tuition at public research universities was \$1,609. This amounted to only 31 percent of the actual dollar increase—\$5169—produced by the smaller percentage tuition rise at private research universities. (See Table 1 for data on absolute increases in tuition by Carnegie category.)

Most significant for public universities, however, was a drop in real terms in direct state appropriations per FTE (full-time equivalent) student, a revenue source largely unavailable to private universities or available to them in considerably smaller amounts.

FIGURE 9: Real Per-Student Revenues of U.S. Public Universities



SOURCE: State Higher Education Executives Organization (SHEEO)

³⁶ A word of explanation is in order. E&G expenditures include more than educational expenditure and therefore behaved differently in this period than did the narrower measures of instructional expenditure and full educational spending. Private research universities increased total E & G expenditures per FTE by 17.8 percent beyond inflation during this period while their public counterparts had an increase of 7.9 percent. This is the one item in the table for public universities that appears as an anomaly. Although this is less than half the rate of increase for their private counterparts, it is still substantial. What accounts for this? Much of the increase occurred during a period of rapid increase in federal research expenditure, notably the period of “doubling” of the NIH research budget and is probably largely due to it. E&G expenditure is inflated by this and other factors whose origins are not rooted in increased cost for instruction or purchase of goods and services required in generating student instruction.

For many years the State Higher Education Executives Organization (SHEEO) has collected data on public higher education finances (see Figure 9). Since 1986, that data have shown cyclical variability in the real value of state appropriations per student and have trended downward over time. The years we focus on here, 1996–2006, are no exception. In 1996, real state appropriations per student were \$6,896, dropping to \$6,538 in 2006. While during this period net tuition increased as a proportion of real per student revenues, the increase barely made up for the drop in state revenues. In 1996, the sum of net tuition and state revenues per student was \$10,091 and in 2006 it was \$10,294, a scant \$203 per student increase. Over the longer period, 1986 to 2007, the increase in total real public higher education per FTE revenue was only \$1,019. That increase amounts to a 0.48 percent increase in real revenue per FTE student per year,³⁷ hardly the magnitude that legitimately could be characterized as demonstrating an unwillingness of public higher education to control expenditure.

These data are corrected for price change by what we think to be the best measure of inflation for universities, the Higher Education Cost Adjustment. If one uses the less appropriate Consumer Price Index as a cost measure, the annual real increase is still just 0.84 percent per year.³⁸ (Please see Appendix 3 for a discussion of the appropriateness of the CPI, HEPI and HECA as higher education cost measures.) To repeat, the substantial increase in tuition revenue over the last decade, and in fact over the last two decades, was only slightly more than the real revenue lost as real state appropriations were cut; total per-student real revenue and necessarily, total per-student real expenditure, barely increased.

Note that this conclusion is not novel. Analysis like this typically produces the conclusion that in recent years, public university tuition increases merely replace portions of the loss from state appropriations. Bruce Johnston reaches this conclusion,³⁹ as does Jane Wellman.⁴⁰ And, while not focused on revenue per student, the National Commission on the Cost of Higher Education found that “in public four-year colleges and universities the percentage of total student cost covered by the general subsidy declined from 79 percent to 68 percent” during the period from 1987 to 1996. The Commission also noted periods when actual appropriations declined in a substantial number of states.⁴¹

Perhaps legislators are fixated on the absolute increases they have provided to higher education over time and do not clearly understand what has happened to budgets on a per

37 The SHEEO data series for 1986 shows that real public higher education budgets were little different then than in 1996 or in 2006. Total real per-FTE revenue in 1986 was \$9,663 with \$2,220 from tuition and \$7,423 from state appropriations. Thus real per-FTE revenue increased only \$428 between 1986 and 1996. Note that SHEEO data include both four- and two-year schools, and the shift toward two-year schools masks a slightly greater increase.

38 Note that SHEEO and Wellman use two different methods of deflating figures to account for inflation. Wellman used the Consumer Price Index while SHEEO utilizes its own cost index, the Higher Education Cost Adjustment (HECA) for deflation. The SHEEO index is a combination of the BLS’s Employment Cost Index (75 percent weight) and the Implicit Price Deflator (25 percent weight). SHEEO uses this combination because university expenses are about 75 percent for personnel and 25 percent to purchase a mixture of items that approximates the mixture in the gross domestic product. Between 1997 and 2007 the CPI increased at a compounded annual rate of 2.58 percent while the HECA increased at a rate of 3.38 percent. See Appendix III for a discussion of three measures of university cost increase.

39 “Those ‘Out of Control’ Costs,” p. 10.

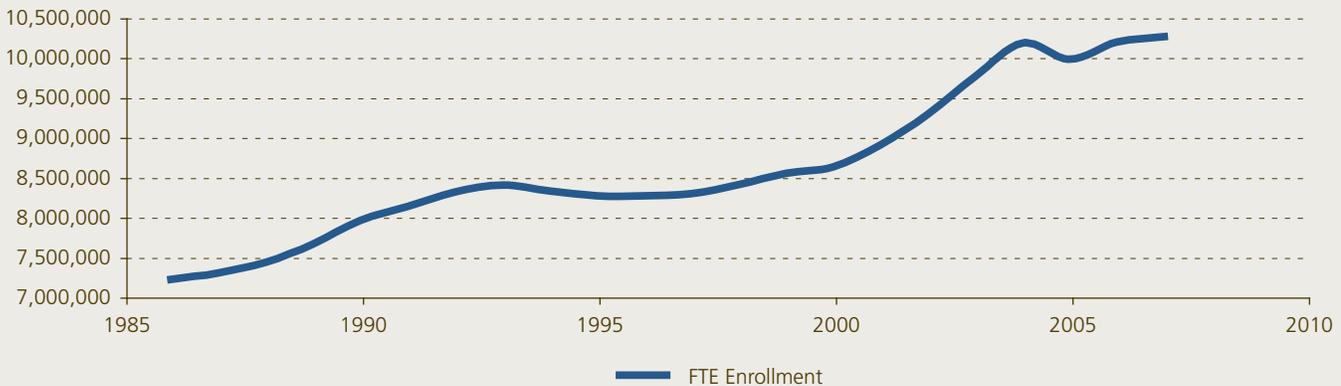
40 *The Growing Imbalance*, pp. 19, 20.

41 National Commission on the Cost of Higher Education, p. 11.

student basis. Figure 10 below, derived from SHEEO data, reveals that enrollment increased rapidly during the 1986–2007 period. The growth from 7.1 million FTE to 10.2 million, a 43-percent increase, was not met by an equivalent percentage increase in real funding. Thus, real per-FTE student funding declined. The rationalization that a few more students can be added to an existing class without additional cost may be true when a small number of students are added, but it breaks down completely when the increase is of this magnitude.

Finally, it is clear that public universities have grown dependent on tuition. Figure 9 shows that net tuition receipts per students in real terms have increased 17.7 percent over the decade. No matter how desirable it is for tuition to be reduced, the economics of universities depend upon it. It is simply unrealistic to think that tuition and fee charges could be reduced significantly unless those funds were replaced from other sources.

FIGURE 10: FTE Enrollment in Public Higher Education, 1986–2007



SOURCE: State Higher Education Executives Organization (SHEEO)

Thus public universities have increased total expenditure per student by only a very small percentage; they have had little choice in the matter because they have been constrained by total revenue availability. In other words, increasing expenditure was not an option open to them. Total operating expenditures at public universities may not exceed revenue because they generally must operate with balanced operating budgets. Ironically, private universities, never having had the advantage of growing to rely on significant revenue from state appropriations, were saved the disadvantage of experiencing this real revenue decline. Put another way, private universities were able to put their tuition increases into educational expenditures while public universities had to use nearly all of their substantial tuition increases to offset real decreases in state appropriation. Thus while both private and public universities experienced cost increases, only private universities had sufficient resources to

expand expenditures significantly beyond the rate of CPI growth. This situation is reflected in the recent GAO finding that between the 2001 and 2005 academic years “...increases in average tuition were matched or exceeded by increases in average institutional spending on education at private institutions but not at public institutions.”⁴² Public universities had to replace lost real state revenue with tuition and were unable to increase educational expenditure, while private universities could dedicate substantial portions of their tuition increases to increase instructional expenditure.

This discussion of public university budgets has not included private funds as a significant source of revenue. This is not an oversight. On average, in recent years, private contributions to public universities have amounted to only a miniscule proportion of per-student expenditure. *The Growing Imbalance* concludes that “private funds have not materially contributed to the bottom line in public institutions” and provides data demonstrating that public master’s institutions have not enjoyed private contributions that averaged as much as \$300 per student during any year in the 1987–2005 period and public research universities averaged just over \$700 per student in recent years.⁴³ While these small amounts make a difference when used in well-targeted ways, their overall impact on public institutions is small. Since per-student sums from these figures remain at about the same level as they were two decades ago, they have not provided a source for growing budgets for educational programs.

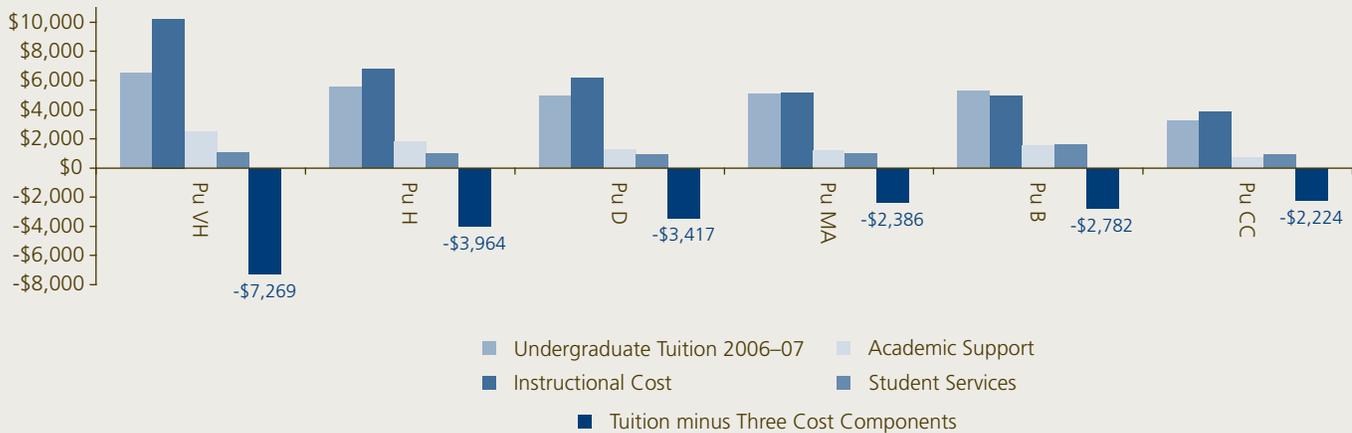
Finally, public universities subsidize students; tuition and fees do not cover even the variable cost of educating them. In Figure 11, the variable cost of instructing students (i.e., the sum of instructional cost, academic support and student services) is subtracted from tuition to yield the net operating subsidy to students. These figures have to be seen for what they are, that is, they are averages across all levels of students, since undergraduate instructional, academic and student support services are not accurately assignable to each student level. In every public Carnegie Classification, students are subsidized. We make this point to ensure that the reader understands that the immense cost pressures public universities have faced have not changed the basic fact that students in the public sector do not pay even the variable cost of their education. *The Growing Imbalance* examines the relationship between revenues for student tuitions for the Carnegie university-level categories, and it reports that average revenue from tuition is less than instructional costs for all categories of institutions, public and private. The report also finds that undiscounted tuition exceeds average instructional costs for only one category of university, the private master’s university.⁴⁴ Thus, subsidy to students remains the rule at both public and most private universities.

42 *Tuition Continues to Rise, but Patterns Vary by Institution Type, Enrollment, and Educational Expenditures*, Report to the Chairman, Committee on Education and Labor, House of Representatives (Washington, D.C.: Government Accountability Office, 2007), p. 4.

43 *The Growing Imbalance* (Delta Cost Project, 2008), p. 21.

44 *Ibid.*, pp. 32, 33.

FIGURE 11: Public University Subsidy to Students



SOURCE: IPEDS

Perceptions that public universities have had runaway expenditures during the last 20 years are simply incorrect. Over the seven-year period for which we have consistent data, the real amounts spent by public universities per FTE student have increased modestly. ***Public universities have had to make hard choices and have had to economize. They have not permitted overall levels of costs to rise in an uncontrolled, excessive fashion. They have, with the consent of their governing boards and legislatures, increased tuition in the attempt to offset reductions in real state appropriation, not because cost increases forced them to do so.***

Universities operate at a given tuition and cost level based upon the subsidy available to them and their desire to provide a specific type of education. A Carnegie-classified very high research university could choose to operate similarly to a Carnegie-classified master’s institution and thereby reduce its cost of operation. Thus for public institutions at least, it is the choice of the type of university they choose to be, i.e., the segment of the higher education market in which they wish their university to operate, that affects their cost of providing education. It is not an out-of-control cost environment that determines university costs.

Tuition level, then, is also a matter of choice. Clearly, in the long run the total revenue a university takes in must cover its costs. Cost is determined by the choice of the type of university it wishes to be or, most probably, by a series of choices made over decades by the institution and its governing board. Hence, the amount needed to balance the university budget after that cost choice is made essentially dictates the public institution’s average tuition level. Thus a given university ultimately has control over the type of institution it will be and over the tuition level it will charge. This choice, of course, *may* have consequences for the education quality the university offers.

E. How Does Externally Funded Research Affect Costs?

This brief section focuses on only one facet of this complex question: Does student tuition subsidize research? The answer to this question is fairly straightforward—Figure 11 clearly demonstrates that student tuition at public universities and colleges does not cover even the variable cost of student education. At public research universities, the amount that educational cost exceeds net tuition receipts is greater than in the other Carnegie categories. It amounts to \$7,269 at very high research universities and \$3,964 at high research universities. Thus, student tuition cannot subsidize university research or any other non-instructional activity as tuition is insufficient to cover even the variable cost of education. While money is fungible and dollars that arrive at the university in tuition payments might occasionally be spent on research items, far more money is required to cover educational costs than tuition in total produces. For any tuition dollar that may be spent on research, an amount many times that dollar must be taken from nontuition sources to cover the educational costs deficit.

In March 2008, the Council on Governmental Relations (COGR) released an excellent summary document titled “Finances of Research Universities.” Relying heavily on National Science Foundation (NSF) analyses, the document—and Table 11—shed light on why some have mistakenly argued that tuition subsidizes research.

TABLE 11: R&D Expenditures of U.S. Universities as a Percentage of Total R&D Expenditures

Fiscal Year	All R&D Expenditure	Federal Govt.	State and Local Govt.	Industry	Institutional Funds	All Other Sources
1956	100%	57.3%	14.2%	7.8%	11.6%	9.1%
1966	100%	73.5%	9.1%	2.4%	8.6%	6.3%
1976	100%	67.4%	9.8%	3.3%	12.0%	7.6%
1986	100%	61.4%	8.4%	6.4%	17.1%	6.7%
1996	100%	60.1%	7.9%	7.0%	18.1%	7.0%
2006	100%	62.9%	6.3%	5.1%	19.0%	6.7%

SOURCE: *Finances of Research Universities*, Council on Governmental Relations

The “Institutional funds” column in Table 11 shows the contribution universities make from their own funds to research expenditures. Universities have increased their proportional contribution to research more rapidly than any of the other funding contributors. However, the table shows that universities are increasing their subsidy to research, not that tuition is being used to finance research.

If one begins from the proposition that universities have *only* the mission of educating students, it logically follows that all university funds should be used for educational or institutional infrastructure purposes. In such a simple world, any institutional funds spent on research would be at the expense of funds that should have been spent on instruction or used to reduce tuition charges to students.

But universities have complex missions. Many NASULGC members explicitly include research in their mission statements, and many of those mission statements also characterize research as being a fundamental contributor to the quality of both their graduate and undergraduate education programs. Their states both take pride in having one or more research universities in the state and rely on it (them) to serve as an engine of technology transfer and to attract and promote the growth of high-technology industry in the state. Universities with such mission statements are furthering their missions, not distracting from them, when they spend institutional funds on research.

The data in Table 11 cause public concern as they demonstrate that an increasing proportion of institutional funds are being used to pay for research. The COGR paper argues that institutional funds represent a subsidy to research, an increasing subsidy, especially to federal funders of research. The paper concludes that the factors that contribute to the increasing university subsidy are:

- 1) Agency and/or statutory regulations that restrict the proportion of direct and/or indirect costs of research that federal agencies will pay;
- 2) Cost sharing taken on by institutions either because of direct agency requirements or by the university to make itself seem more competitive for a research award;
- 3) Research compliance costs that force overhead costs to exceed the 26 percent mandated cap on administration expenses and thus are not completely reimbursed for many universities; and
- 4) Miscellaneous restrictions in the OMB A-21 Circular methodology affecting matters such as library expenditures that limit otherwise legitimate reimbursement of research expenditures.⁴⁵

⁴⁵ *Finances of Research Universities* (Council on Governmental Relations, March 2008), pp. 13, 14.

Research universities arguably could subsidize instruction more than they now do if the federal government would provide compensation for the full direct and indirect costs of engaging in research. Thus, while student tuition is insufficient to cover research costs, the failure of the federal government to cover the full cost of sponsored research might place upward pressure on tuition by increasingly forcing universities to absorb those unreimbursed costs. Legislators genuinely concerned about tuition affordability ought to consider the role that restrictions on research cost reimbursement play in reducing the ability of universities to subsidize instruction.

Chapter II

For Discussion: A Framework of Strategies for Keeping College Affordable

A. Alternative Actions and Strategies to Defuse the Affordability Challenge

It surely will not be healthy for higher education in the long run if external parties conclude that the leadership of our institutions will not respond to reasonable concerns. Is it only accidental that lawmakers are considering taxing endowments, altering tax benefits for charitable giving, imposing price caps, or denying student aid to certain campuses—all blunt clubs that may be more indicative of frustration than careful thought?⁴⁶ — David Breneman

Our purpose in this paper is both (1) to create a factual understanding of tuition, enrollment patterns, university funding, affordability and costs, and (2) to promote discussion within the public university community about possible courses of action. This section of the paper focuses on identifying courses of action we hope the community will evaluate, modify, add to or subtract from as it determines appropriate. We are convinced that collective and individual actions must be taken to defuse what appears to be a developing affordability challenge. Unless tuition or family income trends change, we will see undesirable enrollment shifts or relative enrollment declines. Given the importance of higher education to our society, we do not believe that our political system will permit the affordability issue to become a full blown crisis. Indeed, the activity spawned by the 2007–08 reauthorization of the Higher Education Act indicates that the political mechanism is already beginning to act.

46 David Breneman, “Elite Colleges Must Stop Spurning Critiques of Higher Education,” *The Chronicle of Higher Education*, February 15, 2008, Volume 54, Issue 23, p. A40.

The reauthorized HEA includes provisions designed to track tuition increases and restrain them. These are attempts to steer tuition downward by compelling reporting, creating lists of shame on which universities with exceptionally high tuition increases will be listed, and forcing formation of local commissions to study and detail efforts to control costs by universities whose names appear on those lists. We believe these provisions to be both costly to implement and likely to be ineffective. We join the 1998 National Commission on the Cost of Higher Education in opposing real efforts at price controls, and we agree with their prognosis that “tuition price controls will not work and would be destructive of academic quality in higher education.”⁴⁷ Our conviction is strengthened by the professional experience of one of us in serving in the bureaucracy of President Nixon’s ill-fated wage and price control experiment and also by subsequent academic research findings on the dysfunctions of price controls in peace-time environments.

We believe that the present stimulus for harmful political action will only increase if real progress is not made to avert the looming affordability challenge. We can wait for probable government actions and controls or we can begin deliberate efforts that could lead to productive responses that will defuse the affordability challenge. The latter course seems wiser.

Below we discuss in varying detail 13 possible initiatives for solving the affordability challenge. Some of the actions and strategies can be employed at the individual university level and others require collective action. Almost certainly, some combination of actions and strategies will be needed to address the many facets of the problem within this exceedingly complex public university system. These initiatives do not constitute the complete catalogue of possibilities nor are they listed in any order of priority or perceived effectiveness. We expect the fertile minds in our public universities to produce other scenarios and possibilities superior to these. Our task is to promote an active conversation that will identify productive courses of action, sharpen and improve them through discussion, and hopefully set in process efforts to implement them.

In evaluating the options we describe below and others that the NASULGC community might create, we believe it important first to advance solutions the community can implement within the means currently available. It is far too easy to call upon others for resources to help solve the affordability problem and far too hard to get those resources allocated to public universities. If public universities are seen to be making every feasible effort to resolve the problem on their own, the chances of obtaining external assistance to complete the job will be greater. Thus, a first question becomes: With the resources available to public universities, what actions can be taken that will increase the quantity and quality of the higher education made available to students? Other questions are:

- Can public universities help students and families better understand the value of higher education as a good investment?

47 *Straight Talk About College Costs and Prices*, (Report of the National Commission on the Cost of Higher Education, January 1, 1998), p. 4.

- Can public universities find ways to help students and families more easily budget for public higher education purchases?
- Can public universities divert funds used for noneducational purposes to subsidize students even more?

After answering questions like these, it is then most appropriate to turn to the question: Can public universities obtain greater subsidies from government and other external sources and use those funds to make public higher education more affordable?

B. Reducing the Level of Cost to Facilitate Tuition Reduction

THE INITIATIVE: Have individual universities understand both costs and program quality well enough so they can reduce costs without reducing academic quality—thus enabling them to reduce tuition generally (or selectively).

Public university presidents and provosts reading this will probably gasp at the notion that cost cutting or control is even a potential answer. After all, presidents and provosts have spent much of their time during the last decade cutting costs. In such efforts, departments and divisions have been eliminated or reduced in size, positions have been left unfilled, functions have been outsourced, thermostats have been turned down, costs have been shifted from the institution to others who would bear it, old inefficient systems have been replaced with new efficient ones, etc. The April 2008 report by the American Association of State Colleges and Universities (AASCU), *Cost Containment: A Survey of Current Practices of America's State Colleges and Universities*, details the dozens of tactics their member institutions have employed to contain cost increases in recent years.⁴⁸ As Bruce Johnstone says, “[F]aculty and administrators of very many colleges and universities feel as though they have been living amid almost perpetual financial challenges, constantly cutting, reallocating, downsizing and chasing new revenues.”⁴⁹

For public universities whose per-student educational budgets in real terms remain uncomfortably near their levels of 20 to 30 years ago, it has only been through such budget cutting and reallocation that personal computers, which were not even imagined as a budget element in 1980, could be purchased and become ubiquitous in the university today; that faculty salaries could be raised selectively to meet the competition; that investment resources

48 *Cost Containment: A Survey of Current Practices at America's State Colleges and Universities* (Washington, D.C.: American Association of State Colleges and Universities, 2008).

49 Johnstone, p. 2.

could be found to fund innovations in curriculum; and so on. Those who have spent decades cutting costs have to ask: Is yet more cost-cutting or control possible?

But let us consider again the charts that appear at the beginning of this paper. The first one demonstrates the dramatic tenfold range of prices available to the student seeking to attend a college or university for a year's education. The second figure illustrates that the per-student cost of instruction, instructional support and student services varies every bit as much as does tuition. Thus we discuss cost control and cutting not from a theoretical standpoint but from an empirical one—the cost of producing an undergraduate education is demonstrably lower in some types of institutions than in others. Clearly it is possible for members of some Carnegie Classifications to offer higher education at considerably lower costs/prices than others. Generally, it is possible for any university to reduce tuition if it chooses to adopt the staffing, building, equipment and support practices prevalent in a Carnegie Classification with a cost structure less expensive than its own.

How is this variation in price and cost possible in our “system” of higher education? How do public community colleges supply instruction for one-eighth of the cost of private very high research universities? How have public very high research universities provided instruction for one-third the cost of their private counterparts? How is it possible that the student services provided by public community colleges cost one-fifth as much as those provided by the private very high research universities, while those services provided by public very high research universities cost one-fourth of what their private counterparts pay?

A basic cost management principle in managerial accounting is that product quality must be understood if one has any hope of controlling either product cost or product quality. This simple statement implies that one must be able to measure and understand product quality because the concept of cost control assumes that one is producing the same “product” over time.⁵⁰ That is to say that ***one has not controlled cost if the quality of the unit produced deteriorates while the cost of producing the product declines or remains unchanged.***

Members of the academy are often reluctant to apply management terms to universities, but it is important for our analysis to apply those terms to the university environment in order to understand why university tuition and the cost components of the educational process vary so much across institutional type. In the parlance of the university, the “product” varies, by level of student, type of degree, variety of clinical service, nature of the research conducted, etc. Quality is a concept we all understand but seldom measure. Indeed, public universities have made considerable progress in measuring costs for some of our products through efforts like the Delaware study⁵¹ but have made little progress on measuring output quality.

50 For a thorough discussion of these concepts from managerial accounting, see one of the leading textbooks in the field: Don R. Hansen and Maryanne M. Mowen, *Cost Management Accounting and Control*, fifth edition, (Cincinnati, OH: Thompson/South-Western, 2005), especially pp. 4, 5 and 45–49.

51 “Participation in the Delaware Study affords ... concise analysis of data on teaching loads by faculty category, direct cost of instruction, and externally funded research and service productivity. The Delaware Study enables [comparison] of ... institutional data with national benchmarks arrayed by Carnegie institution type and by highest degree offered and undergraduate/graduate program mix within a discipline. *Moreover, one may select custom groups of peer institutions against whom to benchmark data.*” <http://www.udel.edu/IR/cost/brochure.html>

Even the progress public universities have made in measuring costs is somewhat questionable because most of our products are “joint products,” i.e., public universities use the same inputs (faculty, staff, administrative systems, libraries, equipment, etc.) to produce multiple outputs.⁵² Because most shared overhead costs can be attributed to each product only in an arbitrary manner⁵³ one can place only limited confidence in the cost calculation algorithms that have been laboriously developed. This is especially the case when it comes to questions such as *How much will it cost to increase the number of undergraduates in Physics by one (10? 100? 1,000?) and maintain current quality?*

The continuum of universities within the private and public governance groupings moves from *very high research*, to *high research*, to *doctoral*, to *master’s*, to *bachelor’s*, to *two-year*. Costs and tuition generally fall across that continuum within both the private and public sectors. Why is this so?

The continuum on which we have placed the Carnegie Classification represents universities grouped from those providing very complex bundles of “products” to those providing very simple bundles of products. Very high research universities, both public and private, are extraordinarily complex.

- They provide education at levels that range from the doctoral to the bachelor’s degree as well as executive education and certificates.
- They conduct research, often in locations worldwide using facilities and equipment that represent immense investment and complexity.
- They engage in the storage, generation and dissemination of knowledge; house libraries, museums, presses, etc.
- They have within them complex clinical facilities that provide direct patient services in conjunction with their research.

As one moves across the Carnegie Classification continuum (within the public and private groupings) from left to right, complexity decreases. Doctoral institutions, for example, often offer only a few Ph.D. programs and generally don’t house medical facilities. At the far end of the continuum, the two-year schools primarily provide freshman and sophomore instruction.

In the language of management literature, community colleges represent extreme “unbundling” and very high research institutions represent “bundling” of an immense number of complex activities. Costs can be fairly easily understood in community colleges and attributed to one of the primary products that they “sell,” i.e., freshman and sophomore education. Similarly, focusing on quality involves very few compromises in the two-year school. One can define quality by dimensions like retention into the sophomore year, performance on standard tests, satisfaction with instruction, etc., and then proceed to measure and seek to “control” it.

52 For a similar discussion see Johnstone, p. 18.

53 Ibid., p. 296.

In 2003, the National Center for Education Statistics released a study of higher education expenditures using the Delaware Study data. It concluded that three factors were associated with direct expenses per student when one disaggregated to the academic unit level. Those three factors are the ratio of faculty to students, unit complexity and the presence of graduate education. Their description of the complexity/cost relationship is “The scope of service offered by a department or program, i.e., the extent to which it moves beyond instruction into areas of research and public service, is tied to increases in direct instructional expenses for that unit.”⁵⁴ This finding is obviously another way of saying that as academic organizations bundle, or add to complexity, their per unit cost increases.

In contrast to the community college, in research universities the same faculty that performs research also provides clinical services, generates knowledge and teaches students at all levels. Attributing cost to a single activity such as undergraduate education is very difficult. Really controlling cost in that complex environment is nearly impossible. At the very high research university, faculty hired especially because of their gifts in contributing to one specific activity, e.g., clinical services or research, might be (and generally are) involved in producing multiple “products” for the institution. Focusing on the “quality” of freshman/sophomore instruction supplied by such faculty may be viewed as antithetical to producing quality in research (although it is commonly argued that the two are complementary). Evaluating a “star” as underperforming in instruction when his or her extraordinary gift is in research may be seen as bad for the university when viewed as a whole. Unfortunately, part of the star researcher’s time and cost is attributed to teaching while there is no effective way to ensure that his or her contribution to teaching is a quality contribution. Neither cost nor quality in undergraduate education or in graduate education can be carefully monitored and managed in such a bundled environment. Nor does the university have a convincing counter to the demand by a faculty member or researcher that the university must buy the latest gizmo that the competing university has acquired, since it has no way of measuring the gain in quality to one or more of its joint products that might be generated by the new expenditure.

Such complexity is hardly unique to universities. A popular new management book, *The Complexity Affordability Challenge* by John L. Mariott (Platinum Books, 2008) describes a number of manufacturing and service industries afflicted by what he calls “runaway complexity.” There is a certain progression that is initiated when businesses recognize that they are afflicted with complexity: They work to simplify themselves. Remember the “conglomerate” business craze of the late 60s and 70s? Firms grew by acquiring unrelated firms and running them as part of an umbrella business. But as Michael Rozeff says, “The internal accounting and budgeting systems couldn’t get a good handle on allocating costs across all the companies, and the central managers actually could not accurately tell the profits of the various divisions and subsidiaries.” These information/control difficulties,

54 *A Study of Higher Education Instructional Expenditure: The Delaware Study of Instructional Costs and Productivity* (Washington, D.C.: NCES, U.S. Department of Education 2003), p. 27.

he explains, caused the conglomerates to become uncompetitive, so they began to spin off subsidiaries unrelated to the core of their business while some simply declared bankruptcy.⁵⁵

Rozeff affirms the conclusion that business analysts generally have reached about the complexity of the conglomerate: “Conglomeration is a minefield of problems. The fact that conglomerate stocks that slimmed down and restructured went up so much in price suggested that a good deal of conglomeration had been destructive of value.”⁵⁶ The same storyline and conclusion can be found in the work of many scholars.⁵⁷ Of late, some conglomerates appear to be thriving but on inspection, they appear not to be as complex as those in the past; these conglomerates tend to operate within a single industry, e.g., media conglomerates that include television and other outlets.

The analogy we draw is between complex research universities and conglomerate businesses. While we see few universities divesting and spinning off doctoral programs, master’s programs and undergraduate programs, we note some of their actions that are consistent with intent to reduce complexity. For example, many campuses have spun out urban campuses that specialize in just one two products—most often bachelor’s and master’s degrees. Other colleges create or spin off two-year campuses. Of great current interest is the high level of activity in creating separate, simple and single-mission campuses abroad that are often administratively separated or otherwise well buffered from the complexity of their home institution.

Many conglomerates had a market motivation for their divestment activities called “competition.” Often they found a product was being sold at a lower price by non-conglomerate competitors, and investigation revealed that their competitor could do so because they had lower costs. We believe that the same factor, competition, is beginning to affect universities and provide the motivation to spin off or create new single-mission or simple-mission campuses in order to compete better with those less complex but more nimble competitors.

The substitution of non-tenure-track instructors for tenure-track professors is evidence of the more complex imitating the less complex. According to the American Association of University Professors (AAUP) 36.5 percent of U.S. higher education faculty were full-time tenured in 1975 but only 24.1 percent were in 2003.⁵⁸ Non-tenure-track faculty tends to have only one duty, teaching, so measuring their costs and, debatably, the quality of their instruction, is less complex. Clearly, it costs less to use such faculty in instruction than to use more expensive full-time, tenure-track faculty who split their time across multiple tasks.

55 Michael Rozeff, *Remembering the Conglomerates*, 2006 in LewRockwell.com. <http://www.lewrockwell.com/rozeff/rozeff-arch.html>

56 Ibid.

57 See especially, Robert Sobel, *Rise and Fall of the Conglomerate King* (Beard Books, 1999).

58 AAUP *Contingent Faculty Index 2006*, (Washington, DC: AAUP, 2006), p. 5.

The design of the higher education system in California is an example of intentional unbundling. A clear mission for the community colleges was envisioned with intentional routes created for students to transfer to the California State and University of California systems. The notion was that the first two years of instruction might be delivered in a low-cost but high-quality fashion in institutions with very simple missions.

Medical schools and individual departments within medical schools have been placed on their own “bottoms” as they faced competition from both for-profit and not-for-profit, non-university-related hospitals. Large service operations such as bookstores and cafeterias have been outsourced and hospitals have sometimes been sold. These are all examples of efforts to reduce complexity.

In June 2008, the Florida legislature created a new system of higher education, The Florida College System, comprised of 28 public community colleges. The new System’s founding report focused on using the schools to offer bachelor’s degrees to alleviate the state’s capacity problem.⁵⁹ This action at least partially represents an understanding that institutions at the less complex end of the scale could offer degrees with fewer resources than those higher in the Carnegie scale. In a sense, the Florida move represents a decision to at least partly unbundle higher education in Florida.

The possibility of unbundling is perhaps easier to envision when one disaggregates to the school or departmental level. Universities often compare schools and departments to like units in other universities. Indeed, enabling such comparisons is the whole point of the Delaware cost-study effort. It is not unusual for universities to decide that a relatively undistinguished unit is unlikely to gain distinction and to decide to budget it like undistinguished units elsewhere are budgeted. Units that have a realistic hope rising to distinction are often budgeted like units that have achieved distinction elsewhere, in order to enhance their chances of improvement. In other words, undistinguished units with little hope of improvement are likely to be budgeted in an unbundled manner with the intent that they should perform the single activity of instruction very well. At the same time, units judged to have promise of greatness are likely to be budgeted as complex units and are expected to excel in teaching, research and service. Universities make choices at the unit level that are consistent with unbundling, but such choices would be very difficult politically to make at the all-university level.

Some complex institutions choose to remain complex, but they almost certainly have to adopt sophisticated cost tracking and allocation systems if they are to remain competitive. Banks, for example, often track activity and cost by customer and by service provided to each customer in order to determine what services to continue offering customers and how to do so in a manner that keeps high profitability customers loyal to them.⁶⁰ A necessary step for those that remain bundled is to implement sophisticated cost and quality monitoring systems.

59 Jack Stripling, “Whose Job Is It?” *Inside Higher Education*, June 16, 2008.

60 *Cost Management and Accounting*, p. 845.

We do not propose to tell our colleagues at very high research universities (the type of institution in which we both have considerable experience) that they should unbundle and use separate personnel, equipment or facilities for each of the various products they produce. We merely point out that costs of producing an undergraduate education are lower in less complex settings and that reduced complexity is at least part the reason for the cost difference. We do suggest that the unbundled research university would have a better chance of understanding the quality and costs of each of the “products” produced. Further, we argue that a principal reason why community colleges provide services in the first two years of university instruction with the use of fewer resources than other types of institutions of higher education is that undergraduate instruction is bundled with fewer things in the community college environment than in other higher education environments.

In brief, our observation is that organizations that achieve real results in cost/quality control find some organizational, physical, accounting or other method of separating products to control the costs and to measure and drive quality improvement. Organizations that are not successful in these efforts are usually targeted by competitors and ultimately lose market share. The numerical trends shown above reveal that the more complex Carnegie Classifications are losing student market share to the least complex category, the two-year schools. Whether the more complex are being “targeted” by the less complex or whether the changes in enrollments are simply one of the consequences that complexity carries with it, the result is the same.

In the private sector, less efficient organizations are often taken over and broken up. Conglomerates generally do not last long. This is a cautionary tale that we in higher education must examine for its potential relevance. Being “broken-up” or “taken-over” are not actions that would serve the ends of truly integrated universities in which the activities of undergraduate and graduate instruction, research and clinical services must unquestionably be interdependent.

Of course, one “competitor” to our complex approach to education is the for-profit, degree-granting university. The numbers of degree-seeking students they serve is still relatively small, but their rate of growth is high (see Table 12). Their explosive growth reflects that of competitors who introduce “disruptive technologies” into previously stable markets, ultimately compelling existing entrants to respond to them.⁶¹ They generally offer relatively few degrees and do not conduct research, service or clinical operations. They focus on delivering instruction and are noncomplex organizations. It remains to be seen whether the for-profits will grow to be a large enough force to disrupt the public research universities’ methods of delivering undergraduate education.

61 See Clayton M. Christensen, *The Innovator’s Dilemma* (Boston, MA: Harvard Business School Press, 1997).

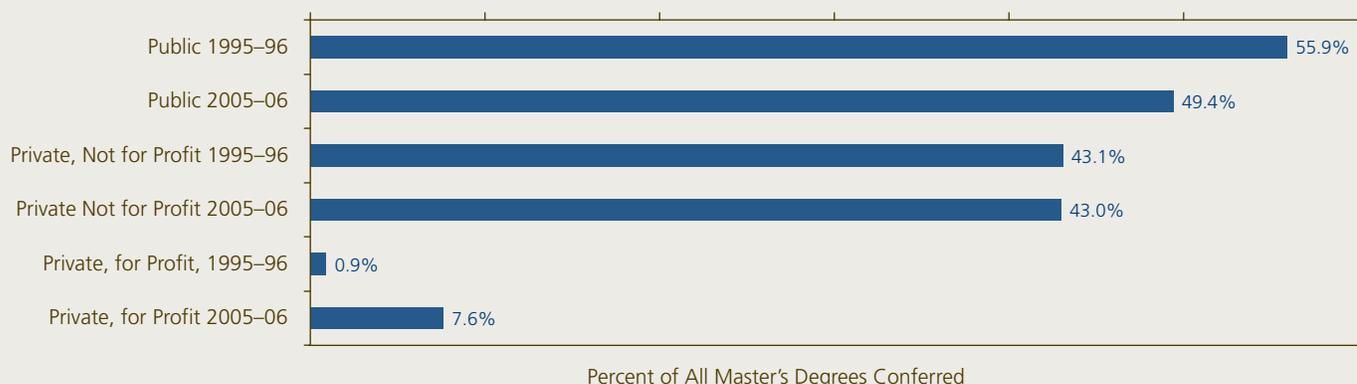
TABLE 12: Head Count Enrollment in U.S. Degree Granting Postsecondary Institutions⁶²

	Public	Private, not-for-profit	Private, for-profit
1996	11,120,449	3,247,021	240,362
2005	13,021,834	4,465,641	1,010,949
% Change	17.1%	17.4%	320%

SOURCE: *Digest of Education Statistics*, National Center for Education Statistics

As Figure 12 demonstrates, for-profit institutions are targeting specific segments of the higher education market. Essentially all of the enormous proportional growth in master’s degrees conferred by private for-profit institutions came at the expense of the public sector. Master’s degrees offer one of most lucrative niches for public universities; this is apparently a lesson not lost on the private for-profit schools.

FIGURE 12: Master’s Degrees Conferred



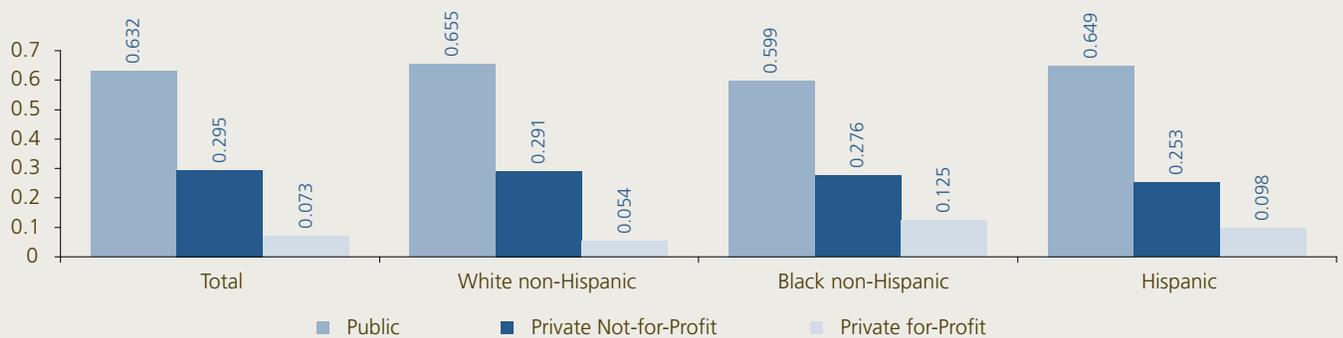
SOURCE: IPEDS

In addition to moving differentially into lucrative niche areas, the private for-profit institutions are also differentially attracting minority students and awarding degrees to them. For-profit institutions award 5.4 percent of all degrees that are awarded to white students, 13 percent of degrees awarded to black students and 9.8 percent of degrees awarded to Hispanic students. For-profit institutions award degrees at more than double the rate to minority students than to white students.

62 *Digest of Education Statistics* (Washington, DC: NCES, U.S. Department of Education, 2006), Table 175.

It may well be that the overall growth of for-profits, their movement into lucrative niche areas and their special attractiveness to minority students are functions of factors other than tuition differentials. Further research is needed into these phenomena. What is fairly certain is that more rapid tuition growth at public universities than at for-profit universities would increase the relative attractiveness of the for-profit institutions even more. Their relative success is a cautionary note that should be heeded by public universities.

FIGURE 13: Distribution of All Post Secondary Degrees Awarded by Race/Ethnicity Groups and Institutional Control



SOURCE: IPEDS

C. Tuition as an Investment, Not a Consumer's Purchase

THE INITIATIVE: To ensure that the public perceives that higher education is an investment in the future and not a current consumption good, and to ensure that government programs and practices treat it as such.

The public has come to view higher education as it views consumer goods. Such goods are generally purchased using savings or current income. In a February 27, 2008 speech to the Consumer Banker's Association, Doug Bennett, President of Earlham College, put it this way:

We're confused about whether postsecondary education should be considered as a current expenditure (like a consumer good) or like an investment. Is it something we enjoy for only a short while? Or is it something we draw on for

our whole lifetime? I believe it is clearly an investment, but as a nation we are drifting more and more towards considering it a current expenditure.

The decision to purchase a consumer good is reached by comparing available funds, including accumulated resources, with the price of the good and with the attributes of the remainder of one's consumption needs/desires. If one does not have the money, the purchase is not made or if some other good or service would provide more satisfaction and the money is available to buy it, that good will be bought instead.

Consumption decision making stands in sharp contrast to investment decision making. For example, a business person who contemplates buying a press looks to the future, considers how much additional revenue the press will produce for the firm and determines whether that additional revenue will cover the machine's initial costs, its financing cost and its operation's cost. If that additional revenue does cover these costs and no better investments are to be had, the investment is made.

These are very different perspectives. Using the ratio of tuition and required fees to median family income as an affordability criterion for higher education is to use a consumer goods affordability criterion, not an investment criterion. The appropriate investment criterion to use would be to compare the net present value of the additional income expected from higher education to the cost of obtaining the higher education. Appendix I of this paper does the investment calculation for bachelor's degrees at public universities. It shows that public higher education is a good worth investing in.

What are some of the implications of viewing higher education as a consumer good rather than as an investment?

- *First*, the standard for judging affordability is one's family income and past savings accumulations rather than the increase in income that might flow from the investment. Using this standard, poor children get less education than wealthy children. Higher education goes to those with the greatest wealth, not to those with the most intellectual ability. Under the investment lens, higher education would go to those most likely to earn a return from it.
- *Second*, when it is viewed as a consumer good, the recipients of education's benefit are both the family and the individual, as the family is at least implicitly paying for it. (Why else would the ratio of tuition to family income matter?) Thus if a family has little "taste" for higher education, they are less likely to acquire it for family members. Since most tastes are acquired, families with less "taste" for higher education are almost certainly those who have not benefited from it. Thus the children born to families who have not gone to college are themselves less likely to go to college. On the other hand, family taste for higher education is largely supplanted by the student's ability when education is viewed as investment.
- *Third*, the incentive for government to pay for part or all of a consumer good is essentially zero as consumer goods are almost always considered to be private goods. If education

is viewed as an investment, all who benefit have an incentive to invest in it. To the degree that the government (or the society it represents) benefits, it has an incentive to participate in the investment.

Thus a society that tends to view higher education as a consumer good rather than an investment good will tend to perpetuate elites who have themselves had a higher education and will endeavor to afford one for their children. The children of the poor will tend to remain poor as they will get much less higher education. More bright, capable minds will fail to receive the benefit of a higher education in a consumption goods-oriented society than in the investment-directed society. The government will sit on the higher education sidelines in the consumption society, but will have an incentive to be a player and invest in higher education in an investment society. A strong case indeed can be made for the healthier society being the one that views higher education as an investment rather than as consumption good.

One major difference between investments in tangible goods like machinery and real estate and investment in higher education is that the former can collateralize itself while the latter cannot. Thus one's higher education, while it enhances earning power, makes poor collateral as one cannot be compelled to use that asset to produce earnings and it cannot otherwise be confiscated by the lender. The lender of funds for the acquisition of human capital has little to take back if the debtor refuses to pay and has no other assets to cover the debt. Thus, in the absence of government guarantees of human capital loans, only those who have nonhuman capital wealth with which to collateralize human capital loans would receive such loans. That is, only the "haves" would be able to borrow to invest in higher education. Fortunately we have recognized this difference between human and physical capital loans, and our federal government has made provision to guarantee some lenders against loss in the case of the former.

The formerly burgeoning market for parent loans and non-guaranteed loans has been dealt a severe blow by the stresses in the economy's credit markets, and this blow was worsened by reduction in the federal subsidies for student loans. Passage of the Ensuring Continued Access to Student Loans Act of 2008 was prompted by this challenge. Its creation of governmental resale possibilities for loans is a strong reminder that properly measured governmental subsidy is necessary if lenders are to participate in this relatively collateral-unsecured market.⁶³

The initiative here would be to educate the public to think about the value of higher education the way as it thinks about investment goods rather than about consumer goods. The Gallop/Sallie Mae survey suggests most consumers are already in this mode, as 84 percent of students and 86 percent of their parents surveyed characterized higher education as an "investment in my future."⁶⁴ Success would come if we could switch the criterion of

63 Paul Basken, "As Bush Prepares to Sign Bailout Bill, No Agreement on Whether 'Challenge' Has Ended," *The Chronicle of Higher Education*, May 5, 2008.

64 *How America Pays for College*, (Sallie Mae and Gallup, August 2008), p. 44.

affordability away from the ratio of family income to tuition to the ratio of lifetime earnings increase to tuition. If the switch in perspective is to dramatically increase the proportion of our population earning degrees, government will have to remain heavily involved as a guarantor of human capital loans as this change is made.

D. Transforming the Way Higher Education Is Delivered

THE INITIATIVE: Pursue research into methods of improving the effectiveness of course delivery at reduced per-student costs, thus enabling tuition reduction, and implement programs that prove effective.

“No Significant Difference” is a statistical term that has been borrowed as a book title to summarize 355 research reports, summaries and papers that document *no significant differences* in student outcomes between alternative modes of education delivery.⁶⁵ The research reported in these studies largely contrasts online education delivery with face-to-face delivery and, using a number of outcomes measures, reaches the conclusion that one mode of educational delivery method is as effective as another. While there are contrary findings, the weight of evidence compels academic administrators and faculty to carefully investigate alternative delivery modes that might result in cost savings.

There are indeed systemic methods for reducing the cost of delivering an undergraduate education that have arguably demonstrated that they preserve quality. For example, The National Center for Academic Transformation, a Pew-funded effort under the direction of Carol Twigg, has found a 37 percent average cost reduction in undergraduate courses using the methodology that they have piloted. They estimate that applying these carefully piloted methods to the top 25 courses in enrollment in these U.S. higher education institutions would generate savings of \$9.7 billion, \$1.4 billion of which would occur at public baccalaureate-granting universities. Their research tends to show improved student test scores and larger percentages of students completing redesigned courses.⁶⁶

Universities have not adopted the Center’s principles for course redesign on a scale sufficient to affect the overall level of higher education costs. However, several statewide groups including the University of Hawaii System, the University of Maryland System and the Ohio Learning Network have pilot projects under way that could lead to wider adoption.

65 Thomas L. Russell, *The No Significant Difference Phenomenon*, (Montgomery, AL: International Distance Education Certification Center, fifth edition, 2001) and also available on website at <http://www.nosignificantdifference.org/>

66 For a full description of this effort see the Center’s website at http://www.highereducation.org/reports/pa_core/possibilities.shtml

Online coursework is no longer a novelty. It has become an alternative delivery mode for everything from course modules, to complete courses, to undergraduate and even graduate degrees. Cost varies, with some applications being more expensive and others less expensive than face-to-face instruction. A major motivation for online delivery is that some students are best served by having the instruction come to them. Often the online delivery of coursework is priced higher to the student than face-to-face instruction, with the student opting to pay for the convenience. The scale of experimentation under way will permit a thorough examination of price and quality of online delivery. NASULGC's initiative to explore "online learning as a strategic asset" has increased understanding of how it can be used strategically.⁶⁷

There is much interest and experimentation in radical alternatives like the use of e-games as an effective means of learning. A simple Google Scholar search of the term "games and learning" produces 506,000 articles. Many of the entries present sophisticated attempts to understand how learning develops through game playing. Many such efforts are under way on NASULGC campuses. Perhaps these efforts will lead to discoveries that will permit radical instructional cost reductions.

Because the responsibility for course design devolves to individual faculty members in most U.S. higher education institutions, it is difficult to foster widespread adoption of cost-reducing or learning-enhancing practices. Major course redesign efforts generally originate with individual faculty members or their departments. Foundation funding is not difficult to find to support promising efforts. However, using course redesign as a major way of reducing costs has been limited because decision making is decentralized and faculty members are skeptical that there is a better way of teaching than the traditional lecture method to which they have become accustomed. Nevertheless, the potential for course redesign, online instruction or games to reduce costs is real, and university presidents and provosts should give greater priority both to investigating that potential and to providing incentives for course design where the payoffs appear significant.

67 For a description of the effort and its findings to date see <http://www.nasulgc.org/NetCommunity/Page.aspx?pid=282&srcid=183>

E. Justifying Tuition Levels by Demonstrating How Value for the Student Varies with Tuition Levels

THE INITIATIVE: Individual universities should objectively measure the benefits they provide to students. This will enable students to understand the relationship between the variation in tuition levels across universities and the benefits provided to the student by obtaining a degree from a specific university.

Within our community, one often hears the argument that the undergraduate studying in a research university receives a superior education to the undergraduate studying in a university in which the faculty is not engaged in research. The rationale generally provided is that the student in the former benefits because her education is informed by faculty who are current in the literature, who know the latest research findings, and who themselves are contributing to that research and writing the textbooks rather than teaching from texts written by others. Those favoring the non-research university education experience contend that the opposite is true: The research university undergraduate is neglected by faculty because they spend their time in the lab rather than the classroom or are taught by graduate students who themselves are occupied by pursuit of their own degrees rather than applying themselves to create the optimal learning environment for their students. Whether the higher tuition at the research university is “worth it” largely hangs on which of the arguments, if either, is correct.

One often hears the contention that attending a prestigious private university is worth the large price differential between it and a public university. During the last two years, applications to prestigious private universities have skyrocketed far beyond the rate of growth of high school graduates or of applications to public universities, apparently reflecting the applicants’ belief that obtaining a degree from such a school confers benefits that more than justify the higher cost and that will last a lifetime.^{68, 69} A recent Gallup Poll found that 40.9 percent of respondents believed quality was higher at private universities, 36.5 percent believed that public and private universities were equal in quality, while only 3.7 percent believed quality was higher at public universities.⁷⁰

The Cooperative Institutional Research Program has tracked the attitudes of incoming college freshmen for 35 years and observed very large increases in the proportion of students

68 For a glimpse at the continuation of this activity in 2008 see Karen W. Arenson, “Applications to Colleges are Breaking Records,” *The New York Times*, January 17, 2008.

69 See also “Elite Colleges Reporting Record Lows in Admission,” *The New York Times*, April 1, 2008.

70 “Americans Split on Government Control of Tuition,” *The Chronicle of Higher Education*, April 4, 2008 (online).

who say they selected a specific college because of quality or outcome factors associated with a specific college. About their recent results the program researchers conclude, “These data indicate that incoming college students might be reacting to the national debates on measuring the quality of college education and accountability by weighting related factors more heavily in their admissions decisions.”⁷¹ The 2007 compilation of their campus surveys further supports the notion that today’s students are aware that they are buying a bundle when they choose to attend a specific college. Table 13 lists the top seven reasons given for selecting a given university, all of which relate to different attributes of the bundle that appealed to the students.⁷² Note that price is an argument of significance for some students but, more frequently, other parts of the bundle persuade the potential student.

TABLE 13: Top Reasons Noted as Very Important in Selecting College Attended

	All	Men	Women
College has a very good academic reputation	63.0%	57.2%	67.6%
Graduates get good jobs	51.9%	47.3%	55.6%
A visit to the campus	40.4%	34.4%	45.2%
Was offered financial assistance	39.4%	34.8%	43.1%
Wanted to go to a school about the size of this college	38.9%	31.4%	45.0%
College has a good reputation for its social activities	37.1%	35.2%	38.6%
The cost of attending	36.8%	32.7%	40.1%

SOURCE: *The American Freshman: National Norms for Fall 2007*

Such reasoning is similar to the reasoning that keeps society from being concerned because a model of a luxury automobile costs \$500,000. Society generally expresses no concern because the purchase of the luxury automobile is a voluntary action by a rational consumer who weighs the benefits against the substantial cost and elects to make the half-million dollar car purchase. Such behavior does not provoke congressional hearings or threats of automotive price controls. The consumer might have bought a \$13,000 car but chose the more expensive one, and the choice itself makes fully legitimate the market for cars and transactions within the market for cars.

The analogy with the car market does not seem to apply when it comes to higher education. Congress is concerned about price and rates of price increase. Parents who can’t get their children into “better” schools are concerned and demand to know why. Higher education consumers apparently are not believed to be making higher education choices based on the

71 Morley, Hurtado, Sharkness, Korn, *The American Freshman: National Norms for Fall 2007*, p. 12.

72 Ibid., p. 30.

full-information, rational choice model taught in Economics 101. Nor do they trust that individuals can make rational investment choices about their futures.

It turns out that universities don't have an objective basis for making claims of superiority for their schools like those described in the lead paragraphs of this section.⁷³ No university can legitimately claim that their students learn more than do students graduating from competing universities. For the most part, testing data or evidence that might support such claims differs so much from university to university in the tests employed, the sampling patterns and administration patterns used that the resulting data simply are not comparable. While graduates of some schools have Graduate Record Exam (GRE) scores that are higher on average than of those of graduates of other schools, the variations in such scores tend to closely reflect the variation in the incoming test scores of the schools' undergraduates. This raises the possibility that the higher GRE scores may be the result, not of educational programs of the undergraduate schools, but of the selectivity of their admissions. The same problem affects occupational licensure and other such pass rates and test scores. Simply put, comparative data on learning gains across U.S. universities does not now exist.

Universities cannot rigorously support claims that their bachelor's degree graduates earn more than do graduates of other universities. Many carefully controlled academic studies have been made of the impact of college quality on lifetime earnings, but they generally find (as does the study authored by Zhang that is described in Table 14) that when entering test scores, family income, etc., are controlled for, college quality (however defined) makes little difference.⁷⁴ Some research literature finds that private, prestigious universities confer earnings benefits on graduates, but co-variation of student characteristics with institution type, indebtedness levels of students and restriction of the results to full-time employed graduates make the findings less than definitive.⁷⁵ The common finding is that future earnings variation within a university's graduates is far greater than variation in earnings across universities.⁷⁶ That is to say, the data tend to show that a given student does not change his or her lifetime earnings prospects when he or she earns a bachelor's degree from a high-quality private college rather than a high-quality public college.

73 Note that we do not question whether graduating from college makes a difference in earnings, health, civic participation, etc. Our argument focuses instead on whether adequate evidence exists to support contentions that graduating from one university with a bachelor's degree confers more benefits to the individual than graduating from another university. A thorough summary of the benefits associated with higher education is found in Sandy Baum and Jennifer Ma, *Education Pays: The Benefits of Higher Education for Individuals and Society* (College Board, 2007).

74 Lang Zhang, "Do Measures of College Quality Matter? The Effect of College Quality on Graduate Earnings," *Review of Higher Education*, Volume 28, Number 4, Summer 2005, pp. 571–596.

75 For such a study see S.L. Thomas, "Longer Term Economic Effects of College Selectivity and Control," *Research in Higher Education*, (44) 3: 263–299.

76 *Ibid.*, p. 293.

TABLE 14: Benefits: Public vs. Private College

Earnings impacts by university quality/governance	
Middle-quality, public	9.2%
Middle-quality, private	10.6%
High-quality, public	18.0%
High-quality; private	17.5%

In 1997 dollars, high-quality private earnings minus low-quality public earnings=\$5,890/year

In 1997 dollars, high-quality private tuition minus low-quality public tuition = \$10,000/year

SOURCE: "Do Measures of College Quality Matter?," *Review of Higher Education*, Volume 28, Number 4, Summer 2005, pp. 571–596.

The Wall Street Journal characterized a new Moody's report as indicating "... that high-tuition institutions may be particularly affected by prevailing economic conditions as students who are dealing with their own financial struggles opt for less expensive schools."⁷⁷ This readily makes the point. In the absence of evidence that quality follows price and particularly when the economy makes the value of resources evident, student choice may be affected largely by price.

Note that no unbiased national database exists that tracks university graduates throughout their careers—and from which a university might gather data to support claims of superior earning or career success for its graduates. Databases that do exist suffer from potential bias as they are made up of responses from graduates who voluntarily self-report that data. The Spellings Commission call for developing a National Unit Record System⁷⁸ was directed at creating an unbiased database that could be used for documenting such claims, but such development appears unlikely as the 2008 Higher Education Reauthorization Act prohibits the creation of data systems that track students over time, including a student unit record system. Efforts to link state databases that use objective employer-reported earnings into a single national database are under consideration.⁷⁹ If those efforts succeed, an objective, nationwide database on earnings will exist. Unfortunately, many graduates would still be excluded from such a database, e.g., the self-employed and those working abroad.

This is not to deny that there are differences that can be documented among the Carnegie Classifications of universities. Graduation rates do differ among them as do the precursor of graduation rates, freshman-to-sophomore retention rates. Retention rates have roughly the

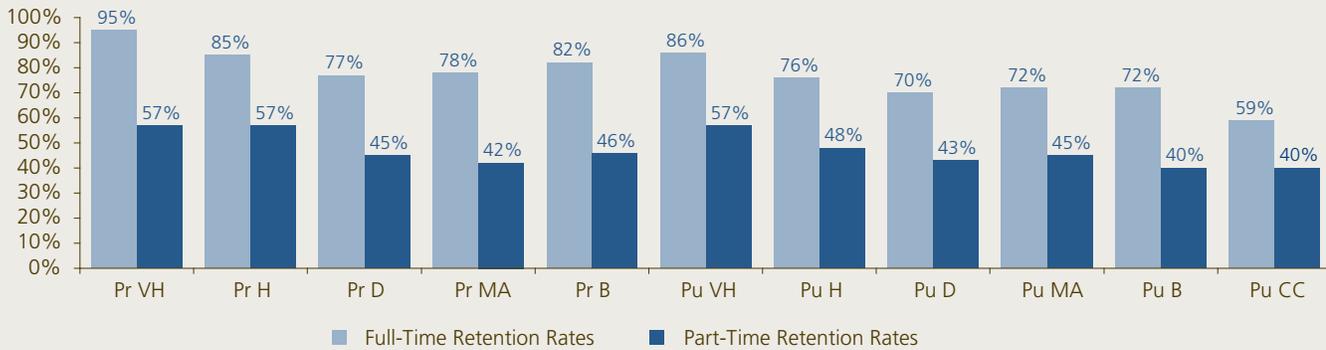
77 "In Slumping Economy Colleges Forced to Keep Enrollment Numbers Up," *The Wall Street Journal* digital network (MARKET WIRE via COMTEX) Aug 7, 2008 <http://www.marketwatch.com/news/story/slumping-economy-colleges-forced-keep/story.aspx?guid=%7BEF7B2827-4BFC-4169-90D2-0190368AB63A%7D&dist=hppr>

78 Recommendation 3, *A Test of Leadership: Charting the Future of U.S. Higher Education*, Commission on the Future of Higher Education, (Washington, D.C.: U.S. Department of Education, 2006).

79 For a description of these efforts see Peter Ewell and Marianne Boeke, *Critical Connections: Linking States' Unit Record Systems to Track Student Progress* (Indianapolis: Lumina Foundation, January 2007).

same meaning across each of the Carnegie Classifications, and we illustrate differences in Figure 14. Much of the variation can be explained by the differences in admissions selectivity across the Carnegie Classifications, as retention and graduation rates are close correlates of entering admissions tests. Community colleges generally have lower retention and graduation rates than do other categories of institutions, even when one controls for selectivity. Recent research suggests that simple interventions such as block scheduling that create community on two-year nonresidential campuses might dramatically improve these rates, even for students who require remedial instruction.⁸⁰ If ability-adjusted graduation and retention rates cannot in time be brought to the same level across institutional types, the educational outcomes of some institutional types could legitimately be judged superior to others, based on sustained differences in retention rates.

FIGURE 14: Retention Rates for Full- and Part-Time Students for Various Carnegie Group Institutions, 2005–06



SOURCE: IPEDS

In a recent path-breaking working paper from the National Bureau of Economic Research, the authors find that earning a college degree produces equal wages for white and minority graduates (when ability is controlled for using the Armed Forces Qualification Test). Unfortunately, it also finds that minority high school graduates of equal abilities earn 6 to 10 percent less than whites.⁸¹ They do not find differential earnings impact among colleges or high schools, but their research hints at the possibility of potential benefits of education that solid research by individual universities might be able to discover and attribute to their educational programs.

80 Scott Jaschik, "Promising Path on Remediation," *Inside Higher Education*, March 11, 2008.

81 Peter Arcidiacono, Patrick Bayer and Aurel Hizmo, *Beyond Signaling and Human Capital: Education and the Revelation of Ability*, NBER Working Paper 13951, April 2008.

We do not suggest that the higher priced universities do not provide benefits commensurate with the price. Johnstone's statement of the position most universities would take is, "Measured by the learning acquired, the developmental advancements in character and leadership abilities, and by other values evidently given to the student . . . the 'high priced' colleges and universities would readily admit to being more costly, but not necessarily to being any less efficient or productive."⁸² We do wish to state clearly that **when higher priced (or for that matter, lower priced) universities are asked to demonstrate that benefits are commensurate with price, they do not have the data required to do so.**

Universities that believe the education they provide to be worth a price premium could help both themselves and the credibility of higher education in general if they began to develop credible data to document their claims. It is one thing to oppose *US News and World Report* for producing a college ranking system that bases 75 percent of its weight⁸³ on inputs and quite another to begin to develop measures of output that one day might support the claims of benefit associated with them, implement those measures and report the results to the public.

Jane Wellman, in her paper for the Commission on the Future of Higher Education, arrives at this same point. She says: **"The major public policy problems surrounding higher education are at the intersection of quality and finance; focusing on money without a parallel attention to purpose and outcomes perpetuates data chases to no particular effect."** Wellman continues with the observation that adequate tools to measure quality are not now employed and that institutional accreditation reviews generally do not attempt to measure quality in useful ways that would inform policymakers or institutional leaders.⁸⁴

NASULGC and AACSB member institutions, having launched the Voluntary System of Accountability (VSA) in December 2007, have under way an effort to systematically measure a limited set of educational outcomes. VSA begins with a four-year trial period of measuring gains in learning outcomes. During this trial period participating schools will administer three different learning outcomes measures in a value-added format. If the participating schools determine that administering some or all of the chosen instruments generates credible and meaningful measurement of core learning, objective data will finally be available to support claims of differential effectiveness of learning environments. VSA is far from a complete set of outcome measures, but it is a beginning.

Locally developed measures of learning outcomes, while they do not facilitate inter-university comparison, may permit a university to observe changes in the quality of its educational outcomes over time. Such measures can permit universities to determine whether cost control measures affect the quality of educational outcomes.

82 Johnstone, p. 4.

83 Kevin Carey, *College Rankings Reformed: The Case for a New Order in Higher Education* (Washington, D.C.: Education Sector, September, 2006), p. 3.

84 Jane Wellman, "Costs, Prices and Affordability," Thirteenth in the series of Issue Papers created for the Secretary of Education's Commission on the Future of Higher Education, (U.S. Department of Education, 2006).

A very different sort of evaluative material is present in the Massachusetts Institute of Technology's (MIT) Open Courseware Initiative, which freely reveals evidence of their course quality those who wish to examine it.⁸⁵ Many other university efforts at full transparency are under way. But at present, there is little comparable evidence available to support claims of superior outcomes for graduates of any bachelor's program.

In short, if the question were answered concerning whether higher priced universities produce benefits comparable to their cost, the academy would be placed beyond criticism with respect to the price/value dimensions. Higher prices could be defended by higher benefits.

F. Governmental Subsidy Restored to Earlier, More Appropriate Levels

THE INITIATIVE: Persuade state governments to return to funding roughly the same proportion of university budgets that they funded two decades ago in order to enable universities to reduce tuition levels. Nationwide, this would mean that states, on average, would return to supplying 77 percent of university educational budgets (defined as net tuition plus state appropriations), an increase from the current 63 percent level.

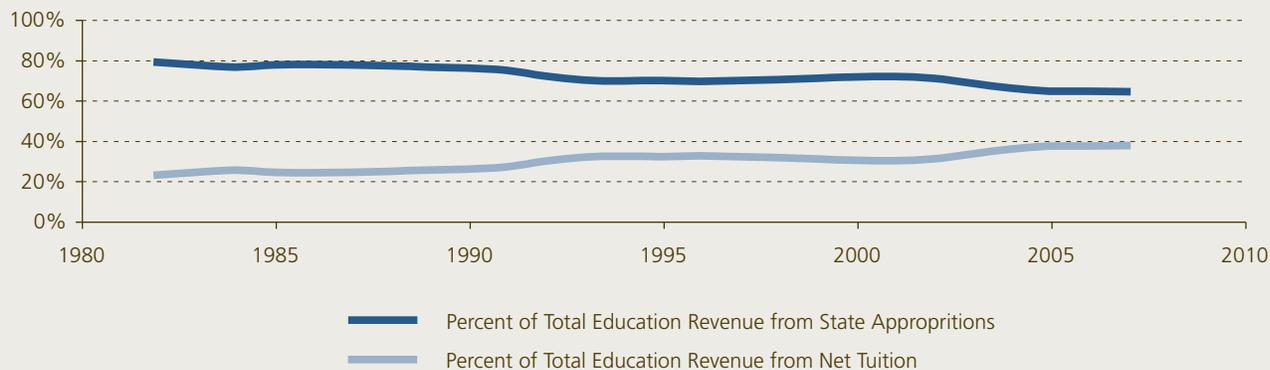
In 1985, NASULGC assembled an ad hoc Committee on the Future of State Universities that persuaded a group of scholars to put their best thinking about the future into a book titled simply, *The Future of State Universities*.⁸⁶ Duward Long's chapter, "Financing in the Year 2000," had as its first assumption, "... both society and individuals benefit from higher education and that the benefit, while unquantified and unquantifiable, is sufficient to justify investment of public funds by a variety of subsidies for the higher education industry, public and private." While he based his chapter on this assumption, he observed that the balance was shifting, and the magnitude of private benefits from education was beginning to erode the willingness of governments to support higher education.⁸⁷ Figure 15 details the decline over time in the proportion of public university revenue arising from state appropriation, from 77 percent in 1986 to 63 percent in 2007, and the concomitant increase in the proportion arising from net tuition receipts. Can these trends be reversed?

85 Massachusetts Institute of Technology Open Courseware Initiative, <http://ocw.mit.edu/OcwWeb/web/home/home/index.htm>

86 Leslie Koepplin and David Wilson, Editors, *The Future of State Universities* (Piscataway, NJ: Rutgers University Press, 1985).

87 *Ibid.*, pp. 210, 211.

FIGURE 15: Proportion of Public Higher Education Revenue from State Appropriation and Net Tuition Revenue



SOURCE: State Higher Education Executives Organization (SHEEO)

The private benefit of higher education exists and is growing. Sandy Baum and Jennifer Ma's book, *Education Pays: The Benefits of Higher Education for Individuals and Society*, demonstrates not only the existence of the earnings premium associated with various levels of higher education but the dramatic growth of those earning premiums over the last decades. (Appendix I particularizes those benefits to the costs and returns from attending a public research university.) Those with degrees are more likely to have pensions and health insurance and are more likely to be employed. New research has found that, in recent years, even the ultimate private benefit, increased lifespan, has come only to those who obtain college degrees.⁸⁸

But the impact of a college degree has significant neighborhood effects that Baum and Ma also identify. Important among them are Enrico Moretti's research findings that increases in the proportion of college degree holders in a population leads to significant wage increases for those who do not hold college degrees.⁸⁹ In Thomas Friedman's *The World Is Flat*, which explores why we cannot insulate ourselves from international competition, Moretti's findings illustrate why public subsidies to increase the proportion of the population with college degrees is good for all of society and therefore worthy of government support. Baum and Ma continue with a data-rich catalogue of public benefit: reduced poverty, reduced public assistance expenditure, improved health (including a reduced propensity to smoke), greater cognitive skill development of children living with educated parents, and increased willingness to volunteer, to give blood, to vote and even to understand the opinions of others.

The private benefits of higher education are not distributed evenly; some benefit more from obtaining it than others. Across gender and race/ethnic groups, however, the benefits from

88 Ellen Meara, Seth Richards, and David Cutler, "The Gap Gets Bigger: Changes in Mortality and Life Expectancy, by Education, 1981–2000," *Health Affairs*, March/April, 2008 27:2.

89 Baum and Ma, p. 17.

obtaining higher education are positive and large.⁹⁰ Higher education remains the most certain path to social and economic mobility. Yet those from low-income families participate proportionately less in higher education than those from high-income families. A major public-good agenda must be to bring participation rates of these individuals up to those of the total population. The federal Pell grant is our major national investment intended to enable students from the former set of families to overcome the cost barrier so that they can get on that upward path. Unfortunately, it is not of sufficient financial magnitude to permit low-income students the choice of the full range of higher educational options.

Economic returns to those who obtain degrees in fields like education and social sciences are generally lower than in fields like business, engineering, science and math.⁹¹ The country does not now have and is unlikely in the future to have sufficient numbers of students educated in areas of national need—in low-paying fields like public school education and social welfare—unless (1) it provides considerable subsidy to students who specialize in those areas or (2) it acts to push wages for those in these professions upward. The private goods incentive to obtain degrees in these disciplinary areas is weak.

But higher education is not the only competitor for scarce public funding. The federal budget already has a substantial structural deficit and the business cycle is negatively impacting revenue. The states' reliance on sales taxes as a revenue source makes them feel the economic downturn first. Alternative energy research and development has become a necessity and basic infrastructure building and repair is needed. The states also face structural deficits originating in their share of the obligations created by federal entitlement programs, especially those related to healthcare. The courts' decisions requiring states to ensure relatively equal funding of public schools across districts has led to a redirection of state funding to the public schools in many states. It will take substantial persuasion to increase real funding to universities in this environment. Simply balancing budgets is a fierce competitor for both state and federal funding for higher education, at least in the short run.

Every public university president is engaged in the effort to persuade states and the federal government to fund a larger proportion of university budgets. Unfortunately, the pursuit of adequate state subsidy generally has not been successful. As the SHEEO data indicate, the real resources per FTE student appropriated by the states just returned to their 1986 levels⁹² in 2007; the weakening economy threatens to put public universities back on the historic cyclical path that will take real per FTE funding below 1986 levels again. Federal appropriations that might hold down tuition increases are increasingly targeted to students and not to institutions; hence the funds are not available to subsidize institutional operations in ways that help to hold down tuition. Efforts to secure more resources from all levels of government must and will continue as undergraduate education retains much of a public-goods character; it is clearly appropriate that government subsidize it.

90 Ibid., p. 12.

91 S. L. Thomas, p. 280.

92 State Higher Education Finance Tables, State Higher Education Executive Officers Organization [http://www.sheeo.org/finance/shef/2006%20tables/Wave%20Charts%201980-2006%20\(US%20&%20Data\).xls](http://www.sheeo.org/finance/shef/2006%20tables/Wave%20Charts%201980-2006%20(US%20&%20Data).xls)

So much emphasis has been given to the private-goods nature of higher education in recent years that legislators at all levels apparently believed that they could reduce their investment in it. In a nation that is now falling behind nations it used to lead in competitiveness, legislators ignore at our national peril the public-goods nature of higher education—the investment most likely to return this nation to its former competitive position. States that do not promote and fund vital public universities are similarly uncompetitive in retaining and attracting vital firms that contribute to the states’ economies. We must continue the effort to obtain adequate funding. For the sake of the country and each of our states, we must succeed in that effort.

G. Amassing Endowments to Offset Tuition Increases

THE INITIATIVE: Add to endowments and to focus endowment expenditures to cover gaps left after aid from public and other private sources have been exhausted such that low-income students can attend our universities without amassing significant debt.

Some large private institutions have succeeded in obtaining sufficient funds from individuals and foundations so that they may now provide institutional support that meaningfully reduces the pressure to increase tuition and/or provides targeted support that directly reduces net tuition for large proportions of their students. Recent announcement by Harvard, Yale and others of increased tuition subsidy based on the student’s family income represent prominent examples of such success. Can this sort of success be replicated at public universities?

First, it is important to recognize that the numeric impact on higher education of these private university programs is very small. Sandy Baum observes, “The number of students going to these schools is tiny. It’s not going to make a dent in educational opportunity.” And experts⁹³ on higher education finance doubt that “no-debt” programs such as Harvard’s will spread very far. *The New York Times* reports further, “Mark Kantrowitz, a Pittsburgh-based financial-aid expert who publishes FinAid.org, expects no-loan programs to spread to no more than 5 percent of four-year colleges, or about 125 schools.” In a *Wall Street Journal* article, Michael McPherson, an economist and former president of Macalester College in St. Paul, Minn., said, “It’s not going to change the landscape for everyone.” He speculates that only schools with the biggest endowments—perhaps over \$5 billion—will match Harvard and Yale.⁹⁴ The very well-endowed (on a per-student basis) colleges and universities like Berea and

93 David Leonhardt, “The (Yes) Low Cost of Higher Ed,” *The New York Times*, April 20, 2008.

94 Anne Marie Chaker, “The New Math of College Financing,” *The Wall Street Journal*, April 21, 2008.

Cooper-Union that use endowments to eliminate all tuition are newsworthy because they are exceedingly rare.

In brief, at least in the near future, the prospects are exceedingly low for success at large-scale fundraising that might make a meaningful impact on tuition levels or rates of tuition increase at public universities. A little simple math illustrates why. An institution with a \$6,000 annual tuition would require an endowment of \$120,000 per student yielding 5 percent per year to earn a sufficient amount to equal the tuition of a single student. According to NACUBO/TIAA, in 2005 the average public institution had a per-student endowment of only \$15,823.⁹⁵ Thus, that average endowment would have to grow by 7.5 times to yield enough to cover tuition costs. Of course, 5 percent of the corpus will yield funds that can be used to cover tuition **only** if **all** the endowment funds were unrestricted. The recent NACUBO study found that about 80 percent of large university endowments were restricted. Using this figure, the average public university would have the earnings from only \$3,164—only \$158 per year—that could discretionarily be applied to cover student tuition (again, assuming a 5 percent yield).

Restrictions are placed on endowment funds by donors, not by universities. While universities seek donations without donor restrictions, most donors give because they wish for the recipient university to use their funds to improve some specific facet of the university. Buildings are built with such funds, scientific equipment purchased, distinguished professorships funded, library collections enhanced, athletic programs improved and students support enhanced by these donations. All of these causes and many others require donor funds if they are to be furthered and, if a university determines the donor's restrictions nevertheless further a project that fits the objectives of the institution, it will accept the gift and honor the restrictions the donor places on the gift. It is probable that future donors will wish to direct the purpose for which their donations are expended. Thus, while universities will continue to seek funds to support students and for other high priority mission-directed purposes, the proportion of endowment funds available for student support is unlikely to change very much.

While it is not a realistic short-term (or even long-term) expectation that funding will come from external sources to pay all public university student tuition, a significant group of public universities has found funding from external sources to enable the academically properly prepared low-income students to afford college. The Project on Student Debt⁹⁶ lists 26 public universities (as of February 8, 2008) that have developed programs “that limit or eliminate student loans from financial aid packages, and reduce costs for students and families.” The listed public universities are Appalachian State, Arizona State, Cornell (public and private), Georgia Institute of Technology, Indiana (Bloomington), Michigan State, North Carolina State, California (all 10 system campuses), the universities of Florida, Illinois (Urbana-Champaign), Louisville, Maryland (College Park), Michigan (Ann Arbor), North Carolina (Chapel Hill), Tennessee, and Virginia and the College of William and Mary. In addition, NASULGC member university MIT, a private land-grant university, is also listed. This very

95 Highlights of NACUBO's 2004 Endowment Survey <http://www.tiaa-crefinstitute.org/research/trends/docs/tr040105.pdf>

96 http://projectonstudentdebt.org/pc_institution.php

significant showing by these universities illustrates the commitment shared by universities in the land-grant tradition to providing access to those who would otherwise be barred by family income from attending.

Given the relative paucity of endowment funding in the average public university and the limited availability of that funding to directly support students, it appears that a strategy could be to target the scarce endowment dollars available to ensure that prepared low-income students can attend. To use these scarce funds broadly to reduce tuition significantly or to dampen rates of increase in tuition is simply not feasible. Generalizations, such as this one, always risk over-simplifying complex matters. Tuition levels are reduced when

- endowments fund distinguished faculty stipends and reduce the need for tuition funds for salaries;
- new buildings are built with endowment funds instead of tuition; and
- endowment funds cover any cost that otherwise might have been funded by tuition or state appropriations.

That is, funds within a university are largely fungible. Thus, earnings from much of the 80 percent of endowment funds that are restricted and the 20 percent that are not, effectively serve to reduce tuition for all students because they are spent in ways that reduce the need for institutional support to come from tuition or state funding or else are directly for scholarship/financial aid funding.

We must note that success in providing financial support for low-income students cannot be viewed as a victory if it comes at the expense of expanding the numbers and proportions of low-income students who attend. The *Chronicle of Higher Education* recently reported that between the 2004–05 academic year and 2006–07, the proportion of students receiving Pell Grants in the country’s 75 wealthiest private colleges (\$500M or more endowment) fell from 13.1 percent of undergraduates to 7 percent, and at the best-endowed public universities, it fell from 19.6 percent to 18 percent.⁹⁷ This was not welcome news. The goal must be both to increase affordability for low-income students *and* to increase participation. Indeed, if this country does not dramatically increase the proportion of the population earning (four-year) college degrees, our international competitive position is in jeopardy.

97 Karin Fischer, “Top Colleges Admit Fewer Low-Income Students,” *The Chronicle of Higher Education*, May 2, 2008, p. 1.

H. A Multiple Party Compact to Keep Public Higher Education Affordable

THE INITIATIVE: Develop a compact among public universities, their governing boards and their state governments that would define “affordable” tuition and develop roles for universities, governing boards and states that would permit tuition to be priced at “affordable” levels.

The previous suggestions focus on using a single tool to defuse the affordability challenge. This suggestion is a proposal involving governing boards, legislatures and university administrators and multiple strategies. Perhaps it is less feasible than the strategies involving single parties acting alone. On the other hand, reasoned analysis and agreement by the parties has the potential of producing a better solution for all parties. Elements of such a proposal might include the following:

- i. States and their university governing boards will strive to agree, as a matter of public policy, on the desired or maximum proportion of median family income that tuition and required fees *should* constitute for a resident⁹⁸ undergraduate student. This proportion will probably vary by state and may vary within states by type of educational institution and within institutions based on student level, degrees or programs of study.
- ii. Universities and/or their governing boards will agree to annually set undergraduate tuition and required fees at a level (or at levels) that will implement item i’s agreement on the tuition/median family income ratio. A period of adjustment may be needed if the initial ratio is either far above or far below the ratio agreed upon in item i.
- iii. Universities and their governing bodies pledge to keep the annual increase in their full educational expenditure per FTE student at or less than the rate of increase in the Higher Education Cost Adjustment (HECA).⁹⁹ Again, a period of time may be needed before this limitation goes into effect if the initial tuition level was significantly below that needed to bring tuition up to the desired ratio agreed upon in item i.
- iv. If conditions in items ii and iii are met, state executives agree to request and legislatures agree to appropriate university operating grants (either including tuition receipts or

98 Nonresident tuition is specifically excluded from these considerations as various states have differing legitimate rationales for establishing its level that may be independent of considerations of affordability. For example, some states use nonresident tuition as a means of attracting students likely to become future residents of their states. Others use it to generate funds beyond the full cost of education that will be used to offset educational costs that would otherwise have been borne by resident students or state tax payers.

99 See Appendix III for the rationale for using HECA rather than HEPI or the CPI as a measure of cost increase.

in addition to tuition receipts retained by the university, depending on state practice) sufficient in amount to fully fund FTE student expenditure at an agreed-upon level and to increase that funding each year to reflect changes in full educational expenditure per FTE.

- v. Need-Based Aid: Executive and legislative entities, governing boards and university parties will strive to reach agreement on the threshold family income below which a student's college costs should be entirely covered by some combination of Pell, state and university financial aid and earnings from work-study or other campus jobs. The parties will then agree upon division of fiscal responsibility for providing the funding required. They will then appropriate/allocate funding as agreed upon to meet this objective in a manner that does not require reallocation of funding from these purposes in order to maintain the agreed-upon ratio of undergraduate resident tuition to median family income.
- vi. Graduate education, research and outreach funding: Funding for these critical components of university budgets will be supplied in a manner that does not require reallocation of funding from amounts budgeted/allocated for them in order to maintain the agreed-upon ratio of undergraduate resident tuition to median family income.

As the slowing economy is affecting state revenues public university budgets are taking considerable hits. Many of the universities targeted will undoubtedly feel that elements of a compact like the above were in place and that the compact is being unilaterally broken. The cyclical pattern of state funding exhibited in the SHEEO data reflects the discretionary category to which states assign university funding. Compacts like this have been tried frequently and, frequently, they have failed. Generally, such agreements have failed because the governmental partner could not or would not deliver on its portion of the agreement. Before compacts like the above can be embraced, binding assurances would need to be forthcoming from states that the funding patterns of the past will not be prologue to the future.

I. Deregulation

THE INITIATIVE: Reduce state and federal regulations on public universities so that they would be free to make decisions and take courses of action that are more efficient.

Universities operate under many mandates from various levels of government. As the proportions of budgets coming from state governments have declined over time, there is the increasing conviction that regulation ought to be reduced as well. Most studies of higher education efficiency note the lack of flexibility universities have due to regulatory requirements. The newly reauthorized Higher Education Act was preceded by debate filled with rhetoric about cost, but the bill was filled with additional regulations that each add

to university operating costs. Colorado and Virginia have with different degrees of success devised plans to reduce regulation.

As reported in *The Chronicle of Higher Education*,¹⁰⁰ Moody's Investor Services released a report on public higher education finance on May 6, 2008 that spells out the logic behind a deregulation initiative. Moody's begins by repeating this paper's finding that for more than two decades, the real support of the states for public higher education has been reduced and that support has been replaced by tuition receipts. From Moody's perspective this change has resulted in a more reliable source of financing for public universities; however, public universities remain constrained by state regulations and are unable to operate as efficiently as they could if the state regulations had been reduced along with the state funding. Thus Moody's calls for increasing the management expertise on public university Boards, accompanied by reduction in state regulation so that universities can realize the economies that their increasingly privatized status should permit.

J. Other Possibilities

The categories above are not meant to be exhaustive. We will list a few more possibilities here, but the important work of adding, sifting and winnowing is best left to NASULGC members.

- i. **REDUCE THE AVERAGE TIME PERIOD TO THE DEGREE.** "Out-in-four" is a popular slogan and following its advice a sure way to reduce the expense of an undergraduate degree for the student who might otherwise have taken five years or more to complete the degree. Techniques to accomplish this vary from better advising and scheduling to financial disincentives for students who take longer than four years. "Out-in-three" becomes possible with summer schools and college credit earned while still in high school.
- ii. **USE THE SENIOR YEAR OF HIGH SCHOOL MORE WISELY.** There is much agreement that the senior year of high school is often wasted. Early entry programs, intensive use of Advancement Placement or International Baccalaureate possibilities, dual credit for community college courses, etc., can make the senior year a more productive one.
- iii. **BURDEN SHIFTING.** Programs that shift the financial burden of paying for college obviously make college more affordable. Reserve Officer Training Corps programs on our campuses have shifted the burden of payment to the military in return for obligating the graduate to serve in the military. Similar programs that lead targeted students into science, technology, engineering, and mathematics (STEM) teaching fields or other careers of national interest might be expanded to assist meaningful numbers of students. In an effort to shift burden, the new Higher Education Act adds to the categories of lower

100 Eric Kelderman, "Governing Boards Need More Expertise and Flexibility, Moody's Report Says," *The Chronicle of Higher Education*, May 7, 2008.

paying but high public need occupations for which student loans can be at least partly forgiven: early-childhood educators; nurses; foreign-language specialists; librarians; child-welfare workers; speech-language pathologists and audiologists; school counselors; certain public-sector employees; nutrition professionals; medical specialists; mental-health professionals; dentists; physical and occupational therapists; some employees in science, technology, engineering or mathematics; superintendents, principals and other school administrators; and “highly qualified” teachers serving low-income or underrepresented students, or those with limited English proficiency.¹⁰¹

- iv. RESTRUCTURING THE UNDERGRADUATE DEGREE.** U.S. universities typically require the equivalent of four years of study before a degree is awarded. Could degrees be restructured so that the same knowledge could be gained in three or even two years? As Lee Shulman put it in his benedictory remarks to higher education. “At what point did God speak to Moses and say a college education is four years? Go to Europe and it is three years. Did God speak to them on a different day?”¹⁰² Can equivalency testing be perfected such that degrees awarded for passing such tests would be accorded the same credence by employers as degrees earned through the traditional seat-time method?
- v. FINANCIAL AID REFORM.** Federal financial aid programs have proven a confusing morass that is treacherous for students and their parents to traverse. Perhaps a complete rethinking and redesign of federal financial aid could lower student costs and encourage more students to acquire a university education. We do not go into this initiative deeply here because a proposal for reform by Education Secretary Margaret Spellings was put on the table at her Higher Education Summit in Chicago on July 18, 2008,¹⁰³ a major study of financial aid reform sponsored by the Spencer Foundation is nearing completion and the National Association of Student Financial Aid Administrators is developing plans for a national dialogue on financial aid reform. We believe that the potential is great for a simplified financial aid system that would make higher education more affordable for low-income students and would increase their attendance.

101 Cathy Field, “Buried in Vast Higher-Education Bill Is Another Expansion of Loan Forgiveness,” *The Chronicle of Higher Education*, August 11, 2008. http://chronicle.com/news/index.php?id=4973&utm_source=pm&utm_medium=en

102 Jeffrey J. Selingo, “Trust Ideas, Not Policy, to Improve Teaching, Says Departing Leader,” *The Chronicle of Higher Education*, August 1, 2008.

103 <http://www.ed.gov/news/pressreleases/2008/07/07182008.html>

Chapter III

Summary and Conclusions

Students in the United States have choices and can obtain college degrees for tuition and fees ranging from quite modest to amounts that seem outrageous, as they challenge the abilities of most families to afford them. Increases in tuition beyond the growth rates of family income have made college less affordable. There are indications that students are beginning to gravitate toward the lowest priced schools and those that have the lowest rates of price increase. This tendency is most pronounced for minority students.

Public universities have reason to be concerned about these trends and the implicit invitation proffered by these trends for elected officials to become involved in matters of pricing and quality. Some of the means described here to deal with the affordability challenge are (1) securing external funding to reduce or moderate cost and tuition increases, (2) cutting costs, as demonstrated by those that provide higher education for far less than others and (3) finding ways to demonstrate that higher prices are directly associated with higher value.

Our call is for a serious dialogue among and within universities about tuition levels and about alternative ways of restraining them in the future. Scholarly research is needed into quantifying the benefits that higher expenditure produces for students and into better ways of measuring benefits produced by various types of colleges or alternative approaches to providing higher education. Honest and forthright experimentation by colleges in gathering outcomes data and open reporting of valid and useful data is clearly required.

We have passed the time when we can claim that the benefits of a college education are so obvious that the price of education is immaterial. It is indeed material in markets in which consumers are free to choose. Our failures (1) to recognize the reality of price variation and choice based upon price variation, (2) to take courses of action to dampen or reverse tuition increases and (3) to objectively demonstrate the value of various approaches to providing education are harming the reputation of public higher education. At stake is the ability to keep the preservation and improvement of college education in the academy's hands. Failure to act on controlling costs to students and/or demonstrating societal benefits invites attempts to control college education through the political process.

Nevertheless, something is going to happen in the years ahead. As public educators, we clearly share interest in avoiding the affordability challenge. We do not want the primary instrument of social and economic mobility in this country—higher education at public universities—to become limited by finances to the select few. We do not want our universities solely to

become purveyors of a private good, affordable by only those with resources who wish to study in areas with high monetary returns. It is not acceptable to reduce public universities to a mere public wrap-around remnant, a historic artifact from a time when the “public” in public higher education recognized the public-goods nature of the education we provide. Moreover the body politic is unlikely to let this happen. If public higher education does not act as a community to control/reduce tuition and find ways to demonstrate quality, our fate at the hands of the body politic may mean imposition of government-imposed price controls and other forms of regulation that will almost certainly do great harm to major public universities.

Public research universities have risen to meet national needs in the past. With the passage of the Morrill Act in 1862, they transformed themselves to meet the agricultural/industrial needs of the country. In the immediate post-World War II era, they dramatically expanded to serve the returning GIs. In the 1960s they responded to the challenge of Sputnik. This challenge to cost and affordability is one to which we can likewise find a way to respond.

At the same time, public higher education has an excellent argument why the government should invest more money in it: Higher education has essentially become as much a requirement as a high school diploma has historically been. At this point, no one would suggest that high school should not be available to all regardless of financial situation. In fact, that argument was won more than 75 years ago. Certainly a college education is as important today as a high school diploma was 75 years ago and, on that basis, one could make a sound case that full public support of college for everyone ought to be on the Congressional agenda. Since higher education’s value as a public good is not contained within the borders of the states, any dramatic expansion of funding to make universal higher education possible will have to come from the political entity that encompasses all the states, not just from the individual states. Just as the federal government has accepted the basic responsibility for ensuring that qualified low-income students have access to higher education through the Pell Grant program, the time is ripe for expansion of this opportunity to all qualified students.

However, we are more likely to be able to make the claim for more public resources when we can demonstrate real progress on tuition containment and can measure the quality differences that universities at different prices represent. Until we have done this, Congress would be rightfully leery of taking on an obligation to finance indefinitely a higher education sector whose prices to students have increased more rapidly than prices of any other major item during the last 20 years.

Thus, it is imperative that we take the price/quality discussion seriously if we are to (1) make college more affordable, (2) avoid undesirable regulation and (3) enable public higher education to take advantage of circumstances that ought to encourage serious discussion of public financing of higher education for all qualified students. Indeed we believe that it is the most urgent matter facing public higher education at this time. Thus we present this initial discussion paper as our call for an intensive NASULGC family discussion about these matters.

Further Research and Development Needs

Much additional development and research is needed in order to create both an adequate knowledge base and a set of tools that will help public universities avoid a deepening affordability challenge. This listing below is not exhaustive.

- A. Evaluate existing educational outcome measurement techniques and develop improved ones.
- B. Develop improved university cost monitoring and control systems.
- C. Improve understanding of the differential impacts of tuition levels and tuition increases on university choice and retention decisions of various demographic groups of students.
- D. Conduct empirical study of the relationship between “bundling” and cost within universities and within university departments.
- E. Develop additional state systems that track employment and earnings of graduates and also develop means to combine those systems to permit reliable multistate tracking.
- F. Conduct (or sponsor) independent evaluation of the impacts on quality of various techniques that appear to improve course quality while reducing per-student cost of instruction.
- G. Research the causes of the differential attractiveness to minority students of for-profit universities.

Appendix I

The Monetary Returns to Earning the College Degree

In 2005 the median earnings of the full-time, year-round worker age 25 and older who held only a high school degree were \$37,100, while a bachelor's degree holder earned \$50,900. The after-tax earnings of the median high school graduate were \$24,900; for the bachelor's degree holder, the figure was \$39,000.¹⁰⁴ Thus the annual net earnings advantage held by the bachelor's degree holder was \$14,100 per year. Between ages 25 and 60, the bachelor's degree holder will have net earnings roughly \$493,500 greater than that of the high school graduate. The present value of this annual flow of added net earnings to the 25-year-old is \$230,983 using a 5 percent discount rate.

One can directly compare the cost of education to the present value figure to determine whether acquiring education is financially worthwhile. Four years at the most expensive set of public institutions, the very high research institutions, would cost the student \$25,916 for tuition and fees. To this add the cost of textbooks for four years at \$1,000 per year.¹⁰⁵ No other living costs are included as we assume that the high school graduates who chose not to go to college have housing, food, transportation costs, etc. roughly equivalent to those encountered by the college student. Our calculations also assume that the student neither works while in college nor receives financial assistance of any sort to go to school. The latter assumptions are extreme as many students work and college discounting, federal financial aid and parental assistance are financial realities for most students. These assumptions mean that during the college experience, the student forgoes the \$19,882 per year that the average high school graduate earns between the ages of 19 and 24¹⁰⁶ and receives no subsidies to go to college. Table 15 summarizes the results of our calculation.

104 Baum and Ma, p. 9.

105 The Campaign to Make College Textbooks Affordable, quoting from a report by the State Public Interest Research Groups, *Rip-off 101: Second Edition, How the Publishing Industry's Practices Needlessly Drive Up Textbook Costs*, estimates that college students spent \$900 per buying textbooks in 2004 see <http://www.maketextbooksaffordable.org/newsroom.asp?id2=15618>. There are no authoritative figures for the net cost available so we adopt the estimate of \$1,000 per year.

106 Baum and Ma, p. 45.

TABLE 15: Cost of the College Experience

Tuition and Fees at Public Very High Research University (4 years)	Cost of Books (4 years)	Foregone Income (4 years)	Total of Explicit Costs and Foregone Income
\$25,916	\$4,000	\$79,528	\$109,444

SOURCE: IPEDS and other calculations

Subtract the cost of attending college (\$109,444) from the present value of future income flows (\$230,983) and one arrives at the net present value of the difference between a college education and that of a high school degree, \$121,539. Thus, earning the bachelor's degree pays handsomely. These figures can be varied for the student who takes more than four years to earn a degree or attends a college with greater or smaller tuition and fees than the one chosen.

The estimates of benefits of attaining a college degree are significantly understated. The premium for earning the bachelor's degree has been growing over time but our calculations hold it static. College graduates also experience lower rates of unemployment, are healthier and are more likely to receive employer-paid benefits. In addition, only those who earn college degrees are able to earn master's, doctoral and professional degrees, the returns to which are significantly greater than those of the bachelor's degree.¹⁰⁷

107 Ibid. *Education Pays: The Benefits of Higher Education for Individuals and Society*, (New York, NY: College Board, October 2007), for a thorough review of the monetary and non-monetary benefits of the degree.

Appendix II

The Carnegie Classification of Institutions of Higher Education Sample Description

Abbreviation	Carnegie Classification	Category Description and Number
PR VH	Private Very High Research	All in category N = 33
PR H	Private High Research	All in category N = 27
Pr D	Private Doctoral	All in category N = 47
Pr MA	Private Masters	All of 5,000–10,000 enrollment N = 51
Pr B	Private Bachelors	All Liberal Arts and Sciences of 1,000 to 5,000 enrollment N = 81
Pu VH	Public Very High Research	All in category N = 63
Pu H	Public High Research	All in category N = 76
Pu D	Public Masters	All in category N = 27
Pu MA	Public Masters	All of 5,000–10,000 enrollment N = 73
Pu B	Public Bachelors	All Liberal Arts and Sciences of 1,000 to 5,000 enrollment N = 37
Pu CC	Public Community College	All Public Suburban location and Liberal Arts and Sciences N = 101

SOURCE: The Carnegie Foundation for the Advancement of Teaching

Appendix III

Rational for Preference for the Higher Education Cost Adjustment (HECA)

Why choose HECA as the benchmark for cost increases? One uses a price index to measure the amount of funds it takes to buy a fixed set of goods/services over time. Three candidate indices are available for measuring cost changes in what a university must buy: the Consumer Price Index (CPI), the Higher Education Price Index (HEPI) and the Higher Education Cost Adjustment (HECA).

The CPI, developed and maintained by the U.S. Bureau of Labor Statistics, measures the market basket of things bought by families who live in different circumstances, e.g., all urban families, urban wage earners and clerical workers. The index is not tailored for the purchasing patterns of colleges and universities.

HEPI, originally developed by the U.S. Department of Education but now maintained by the Common Fund, is an index made up of the variety of things bought by colleges and universities. It is criticized as being “self-referential” because the salary portion of it uses as its principle component the wage index compiled by the American Association of University Professors (AAUP). Thus, to an unfortunately large degree, the index increases because colleges and universities pay more for labor, whereas the normal approach is that, because things external to the subject of the index cost more, the institution pays more.

HECA was created and is maintained by the State Higher Education Executives Organization and is designed to reflect the set of things universities buy and to avoid the self-referential problem of HEPI. Seventy-five percent of its weight is given to the U.S. Bureau of Labor Statistics Employment Cost Index (ECI) and 25 percent of its weight is made up of the Implicit Price Deflator (IPD). The proportionate weights reflect the good/labor division of the average university’s expenditures. The IPD’s weights are those of the domestic national product of the United States, with the implicit assumption that universities, in general, buy a set of goods that reflect those purchased in the economy at large. Likewise, the ECI reflects the changes in wages and fringe benefits in the economy at large, with the implicit assumptions that universities buy the same distribution of labor as does the economy. Both implicit assumptions are for purposes of approximation and both have the effect of avoiding the self-referential problem of HEPI since universities are small relative to the economy, and their purchasing behavior can have only the smallest effect on the rate of change of the index.

TABLE 16: Compounded Annual Rates of Increase in Select Price Indexes, 1984–2004

HECA	3.56%
HEPI	4.04%
CPI	3.06%

SOURCE: State Higher Education Executives Organization (SHBEO)

Rationale for Choice: We choose to use the HECA because its weighting, like that of the HEPI, approximates university expenditure patterns, but unlike HEPI, it avoids the self-referential problem. The CPI is less acceptable inasmuch as 100 percent of its weighting is on goods and services purchases and none of it is on the purchase of labor. Since university weighting is roughly 25/75 percent on these two component items, respectively, an index that reflects only a minority of purchases is not representative. None of the three indices is ideal. While HEPI is most appropriate because its market basket theoretical is identical to that of the average university, the causal relationship between university purchases and the value of the HEPI makes it unusable as a benchmark of costs. The CPI is perhaps most readily accepted by members of the public as they are used to hearing the term and generally assume it to be an unbiased measure. We judge HECA to be the most appropriate of the three from a public policy perspective and a weighting perspective, and so we choose to use it in these analyses.

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