

# NATIONAL COMMISSION ON THE COST OF HIGHER EDUCATION

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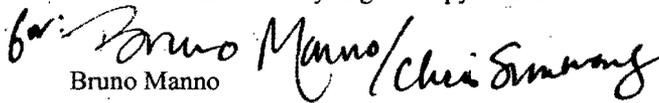
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The White House  
Washington, DC

Mike:

Bruno V. Manno  
Executive Director

I wanted to make sure you got a copy of this.

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# **STRAIGHT TALK ABOUT COLLEGE COSTS AND PRICES**

**Report of**

**The National Commission on the Cost of Higher Education**

**Approved**

**January 21, 1998**

## **Members of the National Commission on the Cost of Higher Education**

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<b>Barry Munitz, Vice Chairman</b>	President and CEO, The J. Paul Getty Trust, Los Angeles, California
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## LETTER OF TRANSMITTAL

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January 1998

The Honorable William Jefferson Clinton  
President of the United States

The Honorable Albert Gore  
President  
United States Senate

The Honorable Newt Gingrich  
Speaker  
United States House of Representatives

Gentlemen:

Public Law 105-18 (Title IV, Cost of Higher Education Review, 1997) established the National Commission on the Cost of Higher Education as an independent advisory body and called for a comprehensive review of college costs and prices.

The legislation created an 11-member Commission — three each to be appointed by the Speaker of the House of Representatives and the Majority Leader of the U.S. Senate; two each to be appointed by the Minority Leader of the House and the Minority Leader of the Senate; and one to be appointed by the Secretary of Education.

Noting that public concern about college affordability was at a 30-year high and that tuition increases at four-year public institutions had outpaced growth in median household income and the cost of consumer goods since 1980, the statute directed the Commission to submit a report to the President and Congress by February 1998. We are pleased to submit this final report.

Our Congressional charter asked that we examine eleven specific factors related to costs. These included:

1. The increase in tuition compared with other commodities and services.
2. Innovative methods of reducing or stabilizing tuition.
3. Trends in college and university administrative costs, including administrative staffing, ratio of administrative staff to instructors, ratio of administrative staff to students, remuneration of administrative staff, and remuneration of college and university presidents and chancellors.
4. Trends in faculty workload and remuneration (including the use of adjunct faculty); faculty-to-student ratios; number of hours spent in the classroom by faculty; and tenure practices, and the impact of such trends on tuition.
5. Trends in the construction and renovation of academic and other collegiate facilities, the modernization of facilities to access and utilize new technologies, and the impact of such trends on tuition.
6. The extent to which increases in institutional financial aid and tuition discounting have effected tuition increases, including the demographics of students receiving such aid, the extent to which such aid is provided to students with limited need in order to attract such students to particular institutions or major fields of study, and the extent to which Federal financial aid, including loan aid, has been used to offset such increases.
7. The extent to which Federal, state and local laws, regulations or other mandates contribute to increasing tuition, and recommendations on reducing those mandates.
8. The establishment of a mechanism for a more timely and widespread distribution of data on tuition trends and other costs of operating colleges and universities.
9. The extent to which student financial aid programs have contributed to changes in tuition.
10. Trends in state fiscal policies that have affected college costs.
11. The adequacy of existing Federal and state financial aid programs in meeting the costs of attending colleges and universities.

Despite our brief tenure, we had little difficulty reaching broad agreement on major themes and directions. We believe that it is time for straight talk about college expenses and that the distinction between cost and price must be recognized and respected. By "cost" we mean the expense an institution of higher education incurs to deliver education to a student; by "price" we mean the portion of those costs students and families are asked to pay. Against that backdrop, the conclusions in this document speak for themselves:

- The United States has a world-class system of higher education, and a college degree has become a key requirement for economic success in today's world.
- This Commission is convinced that American higher education remains an extraordinary value.
- Institutions, families and students, and other patrons share responsibility for maintaining quality and reducing costs.
- Tuition price controls will not work and would be destructive of academic quality in higher education.
- Nevertheless, the Commission is also deeply concerned that most academic institutions have permitted a veil of obscurity to settle over their financial operations and many have yet to take seriously basic strategies for reducing their costs.

- Unless academic institutions attend to these problems now, policymakers at both the state and Federal levels could impose unilateral solutions that are likely to be heavy-handed and regulatory.

To deal with these concerns, this report presents a five-part action agenda. The Commission's recommendations, several dozen in all, emphasize shared responsibility to (1) strengthen institutional cost control; (2) improve market information and public accountability; (3) deregulate higher education; (4) rethink accreditation; and (5) enhance and simplify Federal student aid.

We have been straightforward in our discussions with each other and in our recommendations about what needs to be done. We are unanimous in supporting the broad themes and recommendations in this document.

We want to thank each of you for your confidence that we could complete this challenging assignment. Your support helped us complete the task on schedule.

Finally, we want to acknowledge the work of our staff, under the able leadership of its executive director, Bruno Manno, which unfailingly served us well.

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**William E. Troutt, Chairman**

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**Barry Munitz, Vice Chairman**

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**Martin Anderson**

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**William D. Hansen**

## STRAIGHT TALK ABOUT COLLEGE COSTS AND PRICES

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The phenomenon of rising college tuition evokes a public reaction that is sometimes compared to the "sticker shock" of buying a new car. Although this reference to automobile prices may irritate some within the higher education community, it serves to remind all of us that higher education is a product, a service and a life-long investment bought and paid for, like others.

Rising college tuitions are real. In the 20 years between 1976 and 1996, the average tuition at public universities increased from \$642 to \$3,151 and the average tuition at private universities increased from \$2,881 to \$15,581.\* Tuitions at public two-year colleges, the least expensive of all types of institutions, increased from an average of \$245 to \$1,245 during this period.<sup>1</sup>

Public anxiety about college prices has risen along with increases in tuition. It is now on the order of anxiety about how to pay for health care or housing, or cover the expenses of taking care of an elderly relative.<sup>2</sup> Financing a college education is a serious and troublesome matter to the American people.

Each member of this Commission understands this anxiety. We treat it seriously. We do not take lightly the public concern generated by increases in tuition. Worry about college prices, the difficulty of planning for them, and the amount of debt they entail dominated a discussion group of parents convened by the Commission in Nashville in November 1997. Members of the Commission are equally convinced that if this public concern continues, and if colleges and universities do not take steps to reduce their costs, policymakers at the Federal and state levels will intervene and take up the task for them.

What concerns this Commission is the possibility that continued inattention to issues of cost and price threatens to create a gulf of ill will between institutions of higher education and the public they serve. We believe that such a development would be dangerous for higher education and the larger society.

In the end, academic institutions must be affordable and more accountable. The Commission is worried that many academic institutions have not seriously confronted the basic issues involved with reducing their costs — and that most of them have also permitted a veil of obscurity to settle over their basic financial operations.

This report addresses these issues. It provides straight talk about college costs and about college prices. While this Commission's ultimate goal is ensuring the affordability of higher

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\*Unless otherwise stated, financial data in this report are not adjusted for inflation.

education, achieving that goal requires an understanding of what it costs colleges and universities to educate students, the prices academic institutions charge students to attend, and the relationship between the two. Moreover, the role of financial aid is considered since many students do not pay the full price they are charged for their education. This report, therefore, is divided into three main sections: the first provides a review of significant facts about higher education and the current situation with regard to higher education costs and prices. The second outlines our review and assessment of the major reasons advanced for increases in college costs and prices. The third presents our convictions about the college cost and price crisis and our recommendations to keep higher education affordable.

## **Facts about Higher Education, Its Cost, and Its Price**

The diversity of American higher education is unequalled in the world and is, without question, one of this nation's great strengths. Approximately 3,700 not-for-profit colleges and universities which vary in terms of size, geography, sector, selectivity, and mission comprise the academic spectrum: flagship state universities expanding the boundaries of human knowledge; four-year public institutions providing access at very low prices; private universities, many of them among the most prestigious in the world; liberal arts colleges proud of their tradition of encouraging intellectual development in small, intimate settings; and two-year community colleges offering everything from high school and transfer programs to retirement planning and technical training.

Although there are more private colleges and universities than public ones, more than three quarters (78 percent) of all students — and 81 percent of all undergraduates — are enrolled in public two- and four-year institutions. In recent years, the number of part-time students has increased substantially. Indeed, the student profile has changed radically in recent decades profoundly affecting the way colleges look at and do their jobs. In addition to the traditional 18-to-22 year-old full-time students, higher education enrollments now include large numbers of older, married individuals, many of them parents, with limited means, demanding personal schedules, and a tendency to move in and out of the student population on a part-time basis. Current students are the most racially and ethnically diverse group ever served by any nation's system of higher education. A high percentage of these students, including many undergraduates, are financially independent of their parents. In fact, the percentage of undergraduates enrolled part-time increased from 28 percent of all enrollments (two- and four-year) in 1980 to 42 percent in 1994, with the greatest concentration of part-time students in two-year institutions. (See Table 1.)

**Table 1: Number of Institutions and Enrollment by Status and Age, by Type of Institution**

	Public		Private		Total
	Four-year	Two-year	Four-year	Two-year	
Number of Institutions <sup>1</sup>	608	1,047	1,636	415	3,706
Total Enrollments (thousands) <sup>2</sup>	5,825	5,308	2,824	221	14,279
Full-time (thousands)	4,065	1,885	2,041	146	8,138
Part-time (thousands)	1,760	3,423	1,760	75	6,141
Percent Undergraduate Enrollment	80%	100%	72%	100%	86%

Source: Digest of Education Statistics, 1996. Tables 237, 192, 194, and 174.

<sup>1</sup> 1995-96 Academic year

<sup>2</sup> Fall 1994

The diversity within American higher education is also reflected in the prices institutions charge students to attend. The average undergraduate tuition ranged from \$1,245 in public two-year colleges in the Fall of 1996 to \$15,581 in private universities. Tuition, however, generally does not cover the full cost of the students' education. This means that *all* students — both those in public and private institutions — receive a subsidy.

Posted tuition does not include other education-related costs borne by students such as books, special laboratory fees, and living expenses (room and board if living on campus, or rent or related housing costs if the student lives off campus). Furthermore, for a large percentage of students and families, the price actually paid to attend college bears little resemblance to the tuition charged and other education-related expenses. This occurs because many students receive some form of financial aid (See Table 2.) In 1995-96, for example, 80 percent of full-time undergraduates at private four-year institutions (and 70 percent of part-time students) received aid. For public four-year institutions, 66 and 48 percent respectively received aid, and for two-year institutions, 63 and 36 percent.

Finally, since financial aid awards are often based on financial need, students from lower income families tend to pay less to attend the same institution as students from higher income families. In 1995-96, full-time undergraduates who were financially dependent on their parents and whose family incomes were less than \$40,000 paid, on average, \$5,412 to attend a public university (this estimate subtracts all financial aid awards from tuition and other education-related expenses). Undergraduates whose family incomes exceeded \$80,000 paid almost twice as much, \$10,376. Indeed, while much of the public attention focuses on increases in tuition, tuition is but one element of the price of attending college.

**Table 2: Percentage of Undergraduates Receiving Financial Aid, by Type of Institution: 1995-96**

	Public		Private	
	Four-year (%)	Two-year (%)	Four-year (%)	Two-year (%)
Full-Time Students				
Percent receiving any financial aid	66	63	80	82
Percent receiving grants	49	44	72	63
Percent obtaining loans	45	16	57	56
Percent participating in work-study	8	6	26	6
Part-Time Students				
Percent receiving any financial aid	48	36	70	49
Percent receiving grants	34	31	47	34
Percent obtaining loans	30	8	29	30
Percent participating in work-study	4	1	4	0

Source: National Postsecondary Student Aid Study, 1996.

Note: Percents for specific types of financial aid do not sum to the percent receiving any financial aid because students often receive more than one form of aid.

## Defining Terms and the Scope of Our Review

Understanding the Commission's review of costs and prices requires defining terms such as *cost*, *price*, and *general subsidy*. Defining these terms is not just a technical sidenote, of interest only to policy analysts; a major semantic challenge exists in our national discussion of college costs. The term "cost" is used interchangeably to mean at least four different things: it can mean the *production cost*, or the cost of delivering education to a single student. It can also mean the "sticker" price, or the posted *nominal price* students are asked to pay in tuition and fees. It is also used to describe the *cost to the student* to attend college — including not just tuition and fees, but room, board, books, supplies, and transportation. Finally, it can mean the *net price* paid by the student after financial aid awards are subtracted from the full cost to the student.

Despite their obvious differences, these different concepts are often discussed as if they were the same thing. This Commission believes the confusion arising from the careless use of these terms — as well as inattention within higher education to the relationships between cost and price — to be so serious that we have devoted considerable time and attention to distinguishing among them.

It is important to make a clear distinction between expenditures that *institutions incur* in order to provide education (costs) and expenses that *students and families face* (prices). Furthermore, there is another factor not considered in most conversations on these issues: what students pay is not the total cost of education. There is a *general subsidy* that goes to all students, regardless of the institution they attend or whether they receive any financial aid. Therefore, the Commission makes a major effort to define its terms carefully, and to use the terms "cost," "price," and "subsidy" consistently. (See Figure 1.)

**Figure 1: Definitions of Cost, Price, and General Subsidy**

**Costs:** What institutions spend to provide education and related educational services to students

- **Cost per student:** The average amount spent annually to provide education and related services to each full-time equivalent student

**Price:** What students and their families are charged and what they pay

- **Sticker price:** The tuition and fees that institutions charge
- **Total price of attendance:** The tuition and fees that institutions charge students as well as other expenses related to obtaining a higher education. These expenses could include housing (room and board if the student lives on campus, or rent or related housing costs if the student does not live on campus), books, transportation, etc. (This term typically is referred to by other higher education analysts as the "cost of attendance.")
- **Net price:** What students pay after financial aid is subtracted from the total price of attendance. Financial aid comes in different forms: *grants* are scholarships or "gifts" to the student that do not have to be repaid; *loans* are borrowed money that must be paid back, typically after the student leaves school; *work study* entails working to receive financial assistance. Because of the very different nature of grants vs. loans and work study, the Commission uses two different concepts of net price:
  - The first measure subtracts *only grants* from the total price of attendance. This concept provides a measure of *affordability*, or the amount of money a student actually pays to attend college.
  - The second measure subtracts *all financial aid* awarded — grants, loans, and work study — from the total price of attendance, to measure the amount of money a student needs in order to enter the college or university. This concept provides a measure of *access*, because, even though loans must be repaid, they allow a student to attend college, just like car loans allow many to buy a car who otherwise may not be able to afford one.

**General Subsidy:** The difference between the cost to the institution of providing an education ("cost per student") and the tuition and fees charged to students ("sticker price"). Students who attend institutions of higher education, regardless of whether they attend public or private colleges or universities, or whether they receive financial aid, typically receive a general subsidy. This general subsidy does not include subsidies some students receive from scholarships and other types of financial aid.

The Commission has also found that the traditional disregard of capital assets in discussions of educational expenditures is a major barrier to understanding the true costs of higher education. For this reason, the Commission has included capital expenditures in its estimates of the cost of education per student, and urges all colleges and universities to include its capital expenditures when estimating the cost of educating students.

The Commission also struggled with ways to classify and present the approximately 3,700 not-for-profit colleges and universities so as best to capture their diversity and character. In discussions of price, certainly the most important distinction to be made is that between private and public institutions. Because the nation's public colleges and universities receive considerable, but varying, support from the states in which they are located, tuitions at public institutions are typically much lower than those at private institutions. And, tuitions at public two-year colleges tend to be even lower than those at four-year institutions.

For the sake of simplicity, and given available data and their limitations, our analysis presents findings for three groups of institutions: public four-year colleges and universities; private four-year colleges and universities; and public two-year colleges (often referred to as community colleges). Moreover, our analysis is limited to one category of students — full-time undergraduates who are financially dependent on their parents and who attend schools in the not-for-profit sector.

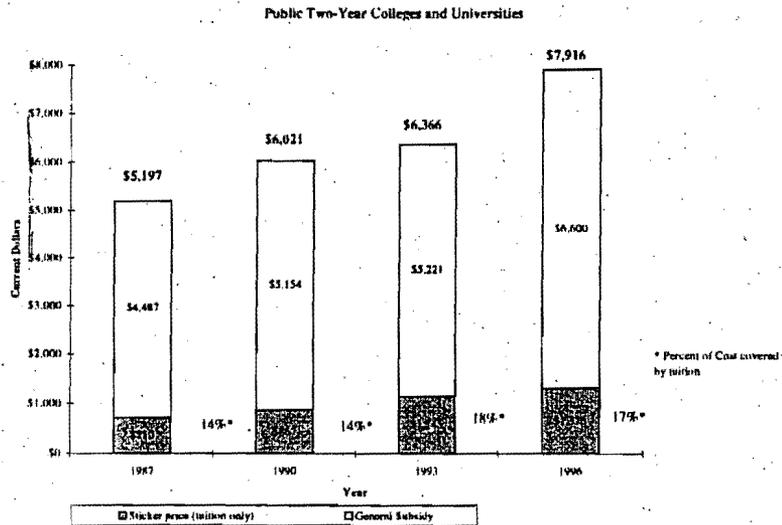
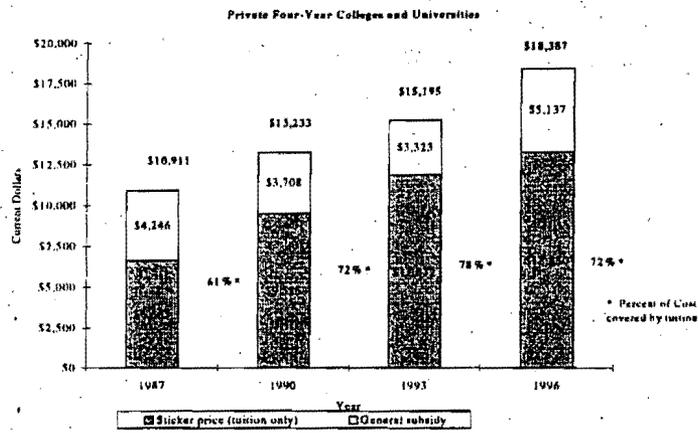
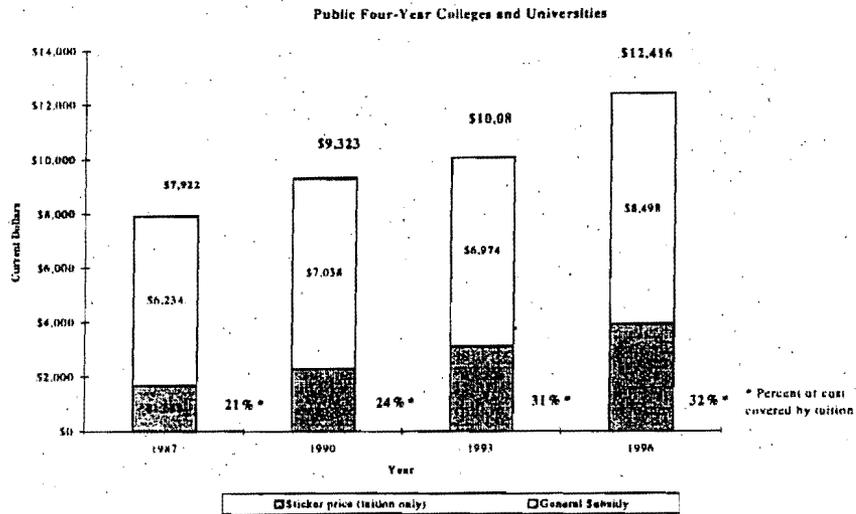
Of course, the Commission understands the limitations in its work. There are many ways to group institutions of higher education and the categories chosen do not reflect all institutions: it does not consider proprietary (i.e., profit-making) institutions. It also knows that it is not only full-time dependent undergraduates who experience difficulty covering their expenses. The Commission is concerned about students experiencing financial difficulty, whatever their status and wherever they go to school. However, given available data and their limitations, the Commission feels most confident drawing conclusions about full-time undergraduates in the not-for-profit sector using these institutional categories.

## Trends in Costs, Prices, and Subsidies

Although most public discussion of the affordability of higher education focuses on tuition charges and increases, tuition (i.e., "sticker price") is but one component of the college cost/price picture. As noted, the total price (tuition plus other educational expenses), net price, and instructional cost per student — and the complex interrelationships among these concepts — should all be included in discussions of why the price of attending college may be increasing. Below we present what we have learned about costs, prices, and generalized subsidy for our three types of institutions and how they have changed over time. (See Figure 2.)

**Public four-year colleges and universities.** Between 1987 and 1996,<sup>3</sup> the instructional cost per student increased from \$7,922, on average, to \$12,416, an increase of 57 percent. During this same period, the sticker price increased considerably faster, 132 percent, from an average of \$1,688 to \$3,918. The general subsidy, which averaged \$6,234 in 1987, increased 36 percent, to approximately \$8,500 in 1996. Thus, the sticker price, or tuition, increased much faster than either instructional costs or the subsidy. During part of this period — between fiscal years 1990-91 and 1992-93 — state appropriations in 16 states declined and tuitions in many of these states increased much higher than in previous years. In most of these states, appropriations began to increase again in 1994. Thus, declines in state appropriations to higher education during a small portion of this period cannot totally account for the rate at which public four-year tuitions rose between 1987 and 1996. In public four-year colleges and universities, the

**Figure 2**  
**Cost, Tuition, and General Subsidy: 1987 to 1996**



percentage of total student costs covered by the general subsidy declined from 79 percent to 68 percent.

**Private four-year colleges and universities.** In these institutions, the cost per student increased between 1987 and 1996 from an average of \$10,011 to \$18,387. This represents a 69 percent increase. Tuition, or sticker price, increased by 99 percent — lower in percentage terms than for the public four-year colleges, but higher in real-money terms because of the higher base, from \$6,665 to \$13,250. Even in the private sector, the percentage of per-student costs covered by the general subsidy declined by 11 percentage points, from 39 percent in 1987 to 28 percent in 1996. The Commission does not understand the sources of subsidies in private institutions as well as it does subsidies in public institutions; endowment income cannot be a complete explanation since it only represents a significant contribution to a relatively small number of colleges and universities. ↙

**Public two-year colleges.** For these institutions, total costs per student increased by 52 percent between 1987 and 1996, from an average of \$5,197 to \$7,916. Sticker prices increased 85 percent, from \$710 to \$1,316. Similar to the situation for public four-year colleges and universities, subsidies to public two-year colleges declined for part of this period. Among all three institutional types, the decrease in the general subsidy was lowest for public two-year colleges; here the percentage of total costs covered by the general subsidy declined only from 86 to 83 percent.

In all three institutional categories, tuition (or sticker price) increased faster than cost per student between 1987 and 1996. It may be tempting to conclude that institutions acted irresponsibly, by charging students and their families higher tuition but not spending the additional revenue to improve or maintain the quality of the education provided. However, tuition is not the sole source of institutional revenue, and if other revenues declined, institutions may have been forced to increase their tuition revenue. We know that state appropriations to public higher education declined during part of this period and tuitions in many state institutions escalated even faster at that time. At best we can conclude that tuition appears to have increased faster than institutional costs in all types of colleges and universities. We believe that institutions themselves should explain to the public why this occurs.

## **Trends in College Affordability**

The above discussion sheds light on the relationship between trends in higher education costs and sticker prices; however, it says little about the affordability of higher education for those who pay for it. If tuition had doubled over the past decade but incomes tripled during that same time, the general public may not be nearly as concerned about the affordability of higher education. However, the fact is that by two common measures of income — median household income and per capita disposable income — college tuition increased faster than income.

Before turning to a comparison of tuition and income, it is important to reiterate that a discussion of college affordability must account for the fact that many students do not pay the

total price to attend college. Not only does total price not reflect the full *cost* of higher education, because of the subsidies described above, many students do not pay the total price of attendance, because they receive financial aid. A discussion of college affordability, therefore, must examine the prices that students *actually* pay for their education (i.e., after financial aid), which we refer to in this report as the *net price*.

**Income and net price.** Two calculations of net price are presented here since they represent two fairly different concepts. The first calculation only subtracts grants from the total price. The result represents a measure of *affordability*, the actual amount a student has to pay. The second calculation subtracts all financial aid (grants, loans, and work-study) from the total price. The Commission believes that this measure represents *access* to higher education, because, even though the loans must be repaid eventually and the student must work to receive work-study money, without this aid, the student might not be able to get in the door of any institution.

Between 1987 and 1996, median family income rose 37 percent and disposable per-capita income rose 52 percent. During this same period, both measures of net price rose considerably faster. (See Table 3.) Specifically, the price of attendance minus grants rose 114 percent at public four-year institutions, 81 percent at private four-year institutions, and 159 percent at public two-year institutions. Total price minus all financial aid (grants, loans, and work-study) demonstrates a similar pattern: this measure of net price increased 95 percent at four-year institutions, 64 percent at private four-year institutions, and 169 percent at public two-year institution.

It is important to note, however, that changes in net price appear to have moderated between 1993 and 1996. Indeed, for students attending public four-year institutions, our measure of affordability (total price minus grants) increased only 10 percent for this time period and our measure of access (total price minus all aid) actually did not increase. Private four-year institutions followed a similar pattern, with total price minus grants only increasing by 4 percent between 1993 and 1996 and total price minus all aid declining slightly, by approximately 7 percent. These changes should be interpreted cautiously; sticker price did not increase as fast relative to median family income or disposable per capita income across this time period as it did in earlier time periods, but increases nonetheless occurred. The apparent moderation in net price can more likely be attributed to increased availability of financial aid, particularly loans.

Over the total time period examined, 1987 to 1996, total student aid from all sources increased by 128 percent. Although three-quarters of all aid comes from Federal sources, the largest *rate* of increase in aid during this period came from institutional sources, which went up by 178 percent. Within the Federal programs, the lion's share of the increase was in loan volume under the guaranteed student-loan programs — the Federal Family Education Loan and Federal Direct Student Loan (FFEL/FDSL). The number of recipients obtaining loans under these programs increased by 87 percent between 1987 and 1996. Because a greater number of students received aid, Federal aid per recipient was less than the increase in aid spending. Average Pell grant awards, for example, increased 21 percent, and the FFEL/FDSL awards by 41 percent.

**Table 3: Changes in Total Price of Attendance and Net Prices, 1987 to 1996**

	Public Four-year		Private Four-year		Public Two-year	
	1987	1996	1987	1996	1987	1996
Total per-student price Percent change	\$5,146	\$10,759 (109%)	\$10,896	\$20,003 (84%)	\$2,808	\$6,761 (141%)
Total price minus grants Percent change	\$4,385	\$9,365 (114%)	\$8,307	\$15,069 (81%)	\$2,345	\$6,067 (159%)
Total price minus all aid Percent change	\$3,715	\$7,262 (95%)	\$6,823	\$11,205 (64%)	\$2,125	\$5,717 (169%)

*Source: National Postsecondary Student Aid Study, 1996.*

## **“COST AND PRICE DRIVERS” IN HIGHER EDUCATION**

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What lies behind increases in tuition? Several of the issues that Congress asked the Commission to address point to potential explanations for rising college costs with the assumption that rising costs result in rising prices. The “cost drivers” that the Commission reviewed can be grouped into six categories: (1) financial aid, (2) people, (3) facilities, (4) technology, (5) regulations, and (6) expectations.

**Financial Aid.** The Commission reviewed a number of studies on the connection between student financial aid in public and private non-profit institutions of higher education and costs and prices, and it commissioned two analyses of its own. (Figure 3 describes the major programs of Federal student aid — grants and work-study, loans, and newly-enacted tax incentives.)

The Commission finds no evidence to suggest any relationship between the availability of Federal grants and the costs or prices in these institutions. Less than one student in four receives a Federal grant, which pays for less than 10 percent of the total price of attendance in either sector. And, although the methodology of financial need analysis is tuition-sensitive, the maximum Pell grant award is capped at \$3,000.

The Commission has found no conclusive evidence that loans have contributed to rising costs and prices. One commissioned paper suggests that Federal loan availability has helped contribute to rising prices.<sup>4</sup> Another paper suggests that the capital available through loans has allowed colleges to increase their charges — and allowed independent colleges in particular to maintain enrollment — in ways that would not have been possible otherwise.<sup>5</sup> The Commission knows of other studies which come to conclusions opposite to these. This question should be studied in greater detail and with much greater attention to empirical facts.

The members of the Commission are, however, unanimously concerned about sharp increases in student borrowing. What is unclear is whether these increases have occurred because (1) higher loan limits and the new “un-subsidized” program permit more borrowing; (2) more families are choosing to finance college expenses through loans rather than from savings or current income; or (3) the price of attending higher education has increased. The Commission’s judgment is that all three factors are probably involved.

Finally, the Commission looked at the relationship between institutional financial aid and increases in student prices. In this instance, there is slightly stronger evidence that increases in institutional aid have been one of the cost and price drivers, as institutional aid grew by 178 percent between 1987 and 1996. Since most of the revenue for institutional aid comes from tuition dollars, it seems reasonable to conclude that tuitions could have increased slightly less had institutions not been putting these revenues into institutional aid. At the same time, however, had institutions not generated revenue to pay for institutional aid, student borrowing would have had to increase to maintain access, or access would have had to diminish.

**Figure 3**

**The Complex Picture of Student Financial Aid**

The major Federal programs providing financial assistance to students can be thought of in three categories: grants, loans and tax incentives of various kinds. Most of these are directed to low- and middle-income students with financial need.

**Grants and Work Study**

The **Pell Grant Program** provides awards of between \$400 and \$3,000 for low-income students, most of whom are from families with annual incomes below \$20,000. This program is funded at \$7.34 billion in Fiscal Year 1998.

The **Supplemental Educational Opportunity Grant Program** provides additional grant aid to students from extremely low-income families. This program is funded at \$614 million in Fiscal Year 1998.

The **Federal Work Study Program** helps to pay for jobs on- and off-campus as part of need-based financial aid packages. Unlike the Pell and supplemental grant programs, which are available only to undergraduate students, Federal Work Study aid also assists graduate and professional students. This program is funded at \$830 million in Fiscal Year 1998.

**Loan Programs**

A variety of loan programs, many with interest subsidized and deferred, exist to help cover college costs for undergraduate, graduate, and professional students. The **Perkins Loan Program** (formerly the National Defense Loan Program) provides low-interest loans to low-income students. Perkins Loan funds, which are a combination of Federal and institutional capital contributions, are administered on campus. Additional loan capital is generated as collections on prior loans are deposited into the institution's revolving fund.

**Stafford Loans** are available to students from all income levels. Students who demonstrate financial need are eligible for interest subsidies; students who do not demonstrate need, while not eligible for interest subsidies, may defer loan and interest payments while in school and under certain other circumstances. **PLUS Loans** provide assistance to parents of students of dependent undergraduate students in an amount up to the cost of college attendance less other financial aid. Both the Stafford and Plus loan programs are available through financial institutions (Federal Financial Education Loan Program) or directly through the Federal Government (William D. Ford Direct Loan Program). Roughly two-thirds of \$30 billion in current annual loan volume is provided through the former, the remaining loan capital is provided by the latter.

**Tax Incentives**

The budget agreement hammered out by Congressional and White House negotiators in August 1997 provided about \$40 billion over five years in tax breaks to help students pay for higher education. They include:

**Hope Scholarships**, aimed at making two years of college universally available, provide a dollar for dollar nonrefundable tax credit for 100 percent of the first \$1,000 of tuition and fees and 50 percent of the second \$1,000. Available for college enrollment after January 1, 1998, the credit phases out for joint filers with incomes between \$80,000 and \$100,000, and for single filers between \$40,000 and \$50,000.

**College juniors, seniors and graduate students** may receive a nonrefundable 20 percent tax credit on the first \$5,000 of tuition and fees through 2002 (and the first \$10,000, thereafter). To encourage lifelong learning, the credit is also available to working Americans. The credit, effective after July 1, 1998, is phased out at the same income levels as the Hope Scholarship. Unlike the Hope Scholarship, the Lifetime Learning Credit is calculated on a per family, rather than a per student, basis.

**Education and Retirement Savings Accounts** allow penalty-free IRA withdrawals for undergraduate and graduate programs and postsecondary vocational programs. In addition, eligible taxpayers can deposit \$500 annually into an education IRA which will accumulate earnings tax-free, with no taxes due until withdrawal for approved purposes.

**Other Major Provisions:** Workers can exclude \$5,250 of employer provided education benefits from taxable incomes; eligible taxpayers can deduct up to \$2,500 per year of interest paid on education loans and exclude from taxable income loan amounts forgiven for participating in community service jobs; and taxpayers are exempt from taxation on some earnings on pre-paid tuition plans.

**People.** Three groups of people are associated with higher education costs: students, administrators, and faculty. Changes in the composition of — or policies regarding — these groups can contribute to rising costs.

**Students.** Changes in the students who now attend our nation's colleges and universities have the potential for increasing institutional costs. In recent years, college campuses have found themselves populated with more part-time and older students. Between 1980 and 1994, the percentage of undergraduates enrolled part-time, for example, increased from 28 percent to 42 percent of all students enrolled.<sup>6</sup> "Nontraditional" students bring with them some nontraditional needs, such as child care, re-entry counseling, and tutoring, to name but a few possibilities. Since tuition structures typically do not reflect differing student needs and use of services, the cost of educating part-time and older students could be increasing costs. Furthermore, standard practices of estimating the educational costs per full-time-equivalent student (e.g., three part-time students are considered equivalent to one full-time student) probably do not capture the real costs of educating part-time students.

The need to offer remedial courses to students could also contribute to rising costs. Approximately 78 percent of all colleges and universities that enroll freshman offered some type of remedial course (typically reading, writing, or mathematics) in the fall of 1995. Although it is difficult to provide national estimates of the costs, data for individual institutions exists. For example, in 1993-94, California spent \$9.3 million to provide remedial courses for students on the 22 campuses of the California State University system, representing just under one percent of the system's total budget.<sup>7</sup> A Florida legislative report said that, with nearly 70 percent of community college freshman requiring remedial education courses, Florida community colleges are spending \$53 million a year providing this type of instruction.<sup>8</sup>

Increasing accessibility for students with disabilities is also a potential cost driver. While no one argues the necessity of providing access and related services, the cost is relatively new and it is real. Estimates of the cost of complying with the Americans with Disabilities Act (ADA) range from an average of \$694,000 for public two-year institutions to \$12,867,000 for public research institutions.<sup>9</sup>

**Administrators.** The need to employ more administrators to cover both expanded services and larger numbers of Federal, state, and local regulations combined with higher administrative salaries is thought to drive up administrative costs.

This contention may be true for the first half of the 1980s, when administrative expenditures increased as a share of total educational and general (E&G) expenditures, but, between 1987 and 1994, administrative expenditures either remained the same or fell, as a percentage of total E&G expenditures. Another way of looking at rising administrative costs is that administrative expenditures per full-time-equivalent (FTE) student increased over 22 percent between 1979 and 1986, but less than 1 percent between 1986 and 1993, after adjusting for inflation. The expenditures for student services costs increased 16 percent during each of the two time periods in question.<sup>10</sup>

**Faculty.** Many believe that the labor structure and tenure system of college faculty drive up college costs. It is true that higher education is a labor-intensive industry and that changes in policies that affect the number of faculty required to teach courses as well as the types of faculty hired (part-time vs. full-time, tenured vs. non-tenured) have an impact on an institution's cost of providing education.

There is little evidence to suggest, however, that changes in faculty hiring practices or workload have driven up college costs in the past decade. In fact, there has been movement in the opposite direction. In an effort to control costs, institutions have hired more part-time and non-tenured faculty and increased the number of hours faculty spend in the classroom: the proportion of part-time faculty and staff employed by colleges and universities increased from 33 percent of all instructional faculty and staff in 1987 to 42 percent in 1992. In the same period, the percentage of instructional faculty and staff with tenure declined from 58 to 54 percent. And, the reported number of student contact hours at all institutions increased from 300 in 1987 to 337 in 1992.<sup>11</sup>

**Facilities.** Growth in higher education enrollments over the past 30 years has meant that colleges and universities have had to construct new classrooms, laboratories, and dormitories to accommodate students. Serving students with special needs has also meant that higher education institutions have had to redesign classrooms, dormitories, and other public spaces.

Looking to the future with regard to campus facilities' needs does not provide a rosy picture. A 1997 study completed by the Association of Higher Education Facilities Officers, the National Association of College and University Business Officers, and Sallie Mae estimates deferred maintenance costs for all campus facilities to be approximately \$26 billion. Facilities could thus become a major cost driver in the next decade.

**Technology.** The percentages of courses using technology in a variety of capacities has risen significantly just since 1994.<sup>12</sup> Institutions must provide equipment for faculty and students as well as the infrastructure to accommodate it. Given the age of many campus buildings and the state of the infrastructure to support this equipment, this expense is substantial.

To cover the costs of technology, some campuses have instituted mandatory computer/instructional technology fees, thus passing on some of the costs to students. These fees ranged from an average of \$55 per student in community colleges to \$140 in public universities.<sup>13</sup> It appears that increasing costs for technology almost certainly translate into higher prices charged to students.

Although technology holds promise for making educational operations more efficient and less costly, there is no evidence to date to indicate that the use of technology in higher education has resulted in widespread cost savings to colleges and universities.

**Regulations.** The number and types of regulations with which colleges and universities are asked to comply have grown rapidly in recent years. Complying with these regulations costs money. The Federal government regulates colleges and universities through a maze of mandates covering personnel, students, laboratory animals, buildings, and the environment. Stanford University, for example, estimates that the university incurs approximately \$20 million a year (or 7.5 cents of every tuition dollar) in costs related to complying with a range of regulations.<sup>14</sup>

The cost of accreditation has also increased in recent years. There has been significant growth in the number of accrediting bodies, particularly specialized ones. Currently, accrediting activities are undertaken by approximately 60 specialized agencies overseeing more than 100 different types of academic programs. Institutions report that the self-study procedures involved with these accrediting efforts overlap and duplicate one another and absorb large amounts of faculty and administrator time.

**Expectations.** Less concrete than the other cost and price drivers are changing expectations about quality. Prospective students visiting college campuses today expect to see gyms equipped with state-of-the-art exercise equipment and facilities. Students also expect a complete range of course offerings, dormitories that are wired for computers as well as stereo equipment, and specialized counselors who can advise on personal as well as career and job placement matters. The changing student population has also brought changing expectations to campus. Parents look for child care on campus; older students returning to college anticipate counseling relevant to their interests; and part-time students who work during the day expect courses (and administrative services) to be available on evenings and weekends. These changing expectations cost money.

The expectations of faculty and administrators have also been changing. The curriculum has become more specialized and institutions now support entire disciplines that did not exist a generation or two ago. Many faculty also prefer to teach only certain courses, or to restrict their undergraduate teaching to upper-division courses. And, in many institutions, faculty also expect the university to provide space, equipment, and time for their research.

Many of these expectations — from parents and students and administrators and faculty members — are perfectly reasonable standing alone. But in combination, the accumulated effect of these expectations is continual institutional pressure to increase spending.

## **The Opaque Relationship between Costs and Prices**

A number of different factors contribute to increasing higher education costs. However, linking specific cost increases to price increases is a tricky matter: Quite simply, the available data on higher education expenditures and revenues make it difficult to ascertain direct relationships among cost drivers and increases in the price of higher education.

Institutions of higher education, even to most people in the academy, are financially opaque. Academic institutions have made little effort, either on campus or off, to make themselves more transparent, to explain their finances. As a result, there is no readily available information about college costs and prices — nor is there a common national reporting standard for either. (National does not mean Federal; it means a standard that is understood and commonly accepted in the profession.) Indeed, differences in financial reporting standards that have evolved in the current environment of quasi-self-regulation contribute to confusion about how to measure costs in a straightforward way. Colleges report on financial standards using one methodology; report expenditures using another; and conform to government cost-recovery principles with yet a third.

What the Commission can assert, however, is a basic fact about academic finance: Virtually no activity, other than self-supporting auxiliary enterprises such as dormitories and cafeterias, generates enough revenue to pay for itself. Everything is “subsidized” to a greater or lesser extent, either through tax revenues, endowment income, or private giving.

In addition, there are wide disparities in expenditure levels between and among different instructional levels and disciplines. For example, courses in the “hard” sciences typically are more expensive to offer than courses in the humanities or social sciences. Yet most institutions do not charge higher tuition for higher cost programs, and lab fees (when assessed) barely begin to cover the costs. Or, to take another example, it is clear that on most campuses undergraduate instruction usually, but not always, costs less to provide than graduate education. But differences in tuition and fee levels for undergraduate and graduate courses of study generally do not reflect the true cost differential.

The truth is that institutions prefer not to look too hard at these matters, both because a broad-based curriculum is a desirable thing in and of itself and because of a desire to base decisions on quality and not on costs.

This Commission, therefore, finds itself in the discomfiting position of acknowledging that the nation’s academic institutions, justly renowned for their ability to analyze practically every other major economic activity in the United States, have not devoted similar analytic attention to their own internal financial structures. Blessed, until recently, with sufficient resources that allowed questions about costs or internal cross-subsidies to be avoided, academic institutions now find themselves confronting hard questions about whether their spending patterns match their priorities and about how to communicate the choices they have made to the public.

## CONVICTIONS AND RECOMMENDATIONS

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Based on its review of college affordability, this Commission has arrived at five key convictions about the college cost and price crisis:

**Conviction 1: The concern about rising college prices is real.** The Commission has observed the anxiety in parents' faces as they talk about the price of sending their children to college. People consider a college degree as essential to their children's future, as something of great value because it promises their children a better life. And, they also worry that access and opportunity are slipping away. These are genuine public fears to which academic institutions must respond.

Although concerns and perceptions about price are not entirely wrong, they are not always based on sound factual information. Moreover, as we have noted, institutions of higher education are not always fiscally transparent. Academic leaders must address these issues.

Here, however, academic institutions face a genuine challenge. It is quite clear from parents this Commission talked with, that many members of the general public have little interest in complicated explanations of higher education finance. As important as these matters are for institutional leaders, parents are interested simply in what they will have to pay when their children go to college — indeed if they can afford to send them at all. In responding to public concerns about prices, academic leaders must provide information that is comprehensive, comprehensible, accessible, and persuasive.

**Conviction 2: The public and its leaders are concerned about where higher education places its priorities.** We have relearned something most academic leaders always knew: higher education costs are driven by people and by how these people spend their time.

But, because academic institutions do not account differently for time spent directly in the classroom and time spent on other teaching and research activities, it is almost impossible to explain to the public how individuals employed in higher education use their time. Consequently, the public and public officials find it hard to be confident that academic leaders allocate resources effectively and well. Questions about costs and their allocation to research, service, and teaching are hard to discuss in simple, straightforward ways — and the connection between these activities and student learning is difficult to draw. In responding to this growing concern, academic leaders have been hampered by poor information and sometimes inclined to take issue with those who asked for better data. Academic institutions need much better definitions and measures of how faculty members, administrators, and students use their time.

The skepticism underlying this concern about where higher education places its priorities is a major consequence of higher education's inability to explain its cost and price structure convincingly to the public. Some cost data are unavailable; much of the information that is

provided is hard to understand. College finances are far too opaque. Higher education has a major responsibility to make its cost and price structures much more "transparent," i.e., easily understandable to the public and its representatives.

**Conviction 3: Confusion about cost and price abounds and the distinction between the two must be recognized and respected.** Issues of cost, price, subsidy, and net price have been difficult for the members of this Commission to master. They are equally, if not more confusing to members of the public. These are complex topics, and higher education must strive continuously to clarify and communicate them clearly and candidly.

Beyond that, American families are confused and poorly informed — not only about costs and prices, but also about the entire matter of how to access higher education and its complicated system of financial aid.

The Commission believes that the message about prices (what students and families actually pay) is more encouraging than much of the public dialogue acknowledges, even if it is not entirely comforting. Moreover, the increase in the price students are asked to pay has begun to moderate in recent years. Academic institutions must continue their efforts to control costs — and hence prices — or risk the unpalatable alternative of government intervention.

**Conviction 4: Rising costs are just as troubling a policy issue as rising prices.** This Commission is concerned because institutional costs (not just prices) are also rising. Unless cost increases are reduced, prices in the long run cannot be contained without undermining quality or limiting access.

Some of the factors behind these cost increases can be understood and explained. As noted previously, tuition tends to go up as public subsidies go down. Administrative costs have increased as a share of total expenditures.<sup>15</sup> The expense of building or renovating facilities and of acquiring and implementing modern technologies has the potential of becoming a significant cost driver.<sup>16</sup> The cost of providing institutional aid (or discounting tuition sticker prices) for needy students increased by nearly 180 percent in the ten years between 1987-88 and 1996-97.<sup>17</sup> Federal, state, and local laws, regulations, and mandates have undoubtedly added to academic costs.<sup>18</sup>

Some policymakers worry that Federal financial aid might have encouraged tuition increases. This Commission is confident that Federal grants have not had such an effect, at either public or private institutions. The Commission believes no conclusive evidence exists with respect to *Federal loans* and believes this issue deserves serious and in-depth additional study.

Aside from such general observations, the Commission does not have solid information to help identify specific factors driving cost and price increases. The simple truth is that no single factor can be identified to explain how and why college costs rise. The Commission suspects that part of the underlying dynamic is the search for academic prestige and the academic reward systems governing higher education. This institutional emphasis on academic status is

reinforced by a system of regional and specialized accreditation that often encourages increased expenditures by practically every institution.

The complexity of the interrelationships among these and other factors convinces the Commission that policymakers should avoid simple, one-size-fits-all solutions to the challenge of controlling or reducing college costs. Costs are increasing for a variety of reasons. The response to these mixed and subtle causes, must be similarly mixed and sophisticated.

**Conviction 5: The United States has a world-class system of higher education.** The United States has a diverse system, one that provides more opportunities to acquire a high-quality education, for citizens of all ages and backgrounds, than any other society. American higher education is a public *and* a private good. American academic institutions represent an investment in the nation's future, one that yields dividends every day, for both individuals and society. It is little wonder that the world has beaten a path to the door of the American university.

Nonetheless, Academic leaders cannot take the continued pre-eminence of their institutions for granted. Although it requires a long time to build an outstanding nationwide system of higher education, such a system can deteriorate very rapidly. In the Commission's judgment, one of the few things capable of precipitating such a decline in the United States would be an erosion of public trust so serious that it undermined ongoing financial support for the nation's academic enterprise. Continued inattention to the imperative to make academic institutions more financially transparent threatens just such an erosion.

### **Recommendations: An Action Agenda**

The Commission believes its analysis of some of the national data about higher education finance has broken new ground, especially in clarifying the connections between and among cost, price, subsidy, and affordability. Nevertheless, the best national data are insufficient to provide the kind of clear information on these trends that policymakers and the general public need. For example, the terms of analysis used by different parties are not always consistently defined: institutional costs and student costs are two different things; prices and costs are not the same; and prices charged and prices paid often bear little relationship to each other.

The persistent blurring of terms (both within and beyond higher education) contributes to system-wide difficulties in clarifying the relationship between cost and quality; defining the difference between price and cost; distinguishing between what institutions charge and what students pay; and ultimately to systemic difficulties in controlling costs and prices.

If we are to clarify these relationships and control expenses, several things must happen. Academic institutions should start to use these terms systematically and regularly; policymakers must realize that costs and subsidies need to be better managed if prices are to be controlled; and academic leaders must acknowledge that, before they can manage costs and explain prices to the public, they themselves have to do a better job of measuring and understanding both.

The Commission organizes its recommendations around a five-part action agenda grounded in the concept of shared responsibility. Many different participants have contributed to the academic cost dilemma; all of them must be involved in resolving it. In the Commission's view, these actors have a shared responsibility for achieving five policy goals:

- **strengthening institutional cost control;**
- **improving market information and public accountability;**
- **deregulating higher education;**
- **rethinking accreditation; and**
- **enhancing and simplifying Federal student aid.**

**Sharing Responsibility.** The Commission is convinced that many different stakeholders have contributed to the college cost and price crisis; consequently, all of them will have to contribute to the solutions. We believe institutions of higher education, government at all levels — Federal, state and local — the philanthropic community, and families and students have essential and complementary roles to play in maintaining affordable, high-quality education well into the future. Each of these stakeholders in some fashion influences or subsidizes the cost and price of American higher education. They have a common obligation to respond to the issues outlined in this report: Government needs to invest in higher education as a public good; foundations should continue to support policy research and the search for innovation; parents should be prepared to pay their fair share of college expenses; and students should arrive at college prepared for college-level work.

But without doubt, the greatest benefits depend on academic institutions shouldering their responsibility to contain costs, and ultimately prices. Although the responsibility for controlling costs and prices is widely shared, the major onus rests with the higher education community itself.

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## I. Strengthen Institutional Cost Control

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**THE COMMISSION RECOMMENDS** *that academic institutions intensify their efforts to control costs and increase institutional productivity.*

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The Commission is convinced that academic institutions have done a lot to control costs but they must achieve more in the way of cost containment and productivity improvement. The drive for greater efficiency, productivity, and fiscal transparency requires an expanded definition of academic citizenship, one that is broadly participatory, involving faculty, administrators, students, staff, and trustees.

The effort the Commission is calling for should challenge the basic assumptions governing how institutions think about quality and costs. This will require a greater willingness to focus institutional resources on a few priority areas where excellence can be sustained. It should include new cost saving partnerships among institutions.

The Commission believes it is impossible to formulate an effective single set of directives on cost control applicable to the diverse institutional settings and missions of American colleges and universities. The responsibility for cost control, like the responsibility for quality improvement, must be shouldered by each institution.

In recent years, American colleges and universities have made major efforts to reduce expenditures and control costs.<sup>19</sup> The Commission applauds this progress; however, it also believes that much more must be accomplished. To do so, the academic community must focus sustained attention on its own internal financial structures, the better to understand and ultimately control costs and prices. To that end, the Commission makes ten implementing recommendations to strengthen cost control and improve institutional productivity.

### **Implementing Recommendations:**

1. Individual institutions, acting with technical support from appropriate higher education associations, should conduct efficiency self-reviews to identify effective cost-saving steps that are relevant to institutional mission and quality improvement.
2. Academic leaders should communicate the results of these self-reviews widely, providing the campus community and institutional constituents with information on issues such as administrative costs, faculty teaching loads, average class size, faculty and student ratios, facilities management, and expenditures on technology.

3. The Commission recommends the creation of a national effort led by institutions of higher education, the philanthropic community, and others to study and consider alternative approaches to collegiate instruction which might improve productivity and efficiency. The Commission believes significant gains in productivity and efficiency can be made through the basic way institutions deliver most instruction, i.e., faculty members meeting with groups of students at regularly scheduled times and places. It also believes that alternative approaches to collegiate instruction deserve further study. Such a study should consider ways to focus on the results of student learning regardless of time spent in the traditional classroom setting.
4. The Commission recommends similar national attention be devoted to developing new alternative approaches to thinking about faculty careers, beginning with graduate school education and extending to tenure and post-tenure review. These should explicitly consider the many ways in which tenure policies vary across institutions.
5. The Commission recommends greater institutional and regional cooperation in using existing facilities at institutions of higher education. Implementation of this recommendation will vary within and across states. Whenever expansion of higher education is contemplated, the existing capacity of all institutions should be considered, including the promotion of greater access through financial aid.
6. The Commission recommends maximizing the opportunity for cost savings through joint campus purchase of goods and services and joint use of facilities, pursuing these opportunities through many different kinds of partnerships. Where necessary, states should consider statutory changes to make such partnerships possible.
7. The Commission recommends greater use of consortia and joint planning to maximize access to expensive academic programs. While acknowledging that some inefficiencies and redundancies are inevitable in America's diverse and decentralized system of higher education, the Commission believes that greater emphasis on consortia and joint planning offers significant opportunities for cost control. In states and regions with large numbers of institutions, creative ways need to be found to make the programmatic variety of each campus available to as many students as possible.
8. The Commission recommends that the philanthropic community, research institutes, and agencies of state and local government adopt the topic of academic cost control as a research area worthy of major financial support. In addition to grants to support efforts to undertake such changes, best-practice and recognition-award programs should be established and supported.
9. As part of the recognition-award effort, the National Association of College and University Business Officers should, in consultation with major higher education associations, develop programs that publicize innovative institutional practices that help control costs. As part of this effort, higher education associations should jointly

seek foundation support for annual awards to public and independent colleges and universities that have pioneered cost-management strategies.

10. Finally, we urge Congress to support academic efforts to control costs and improve productivity by:

- a) amending Public Law 100-107 (which created the Malcolm Baldrige Award to recognize continuous quality improvement in the corporate sector) to include education; and
- b) authorizing in the next reauthorizing cycle the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE) to continue to offer financial support for projects addressing issues of productivity, efficiency, quality improvement, and cost control.

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## II. Improve Market Information and Public Accountability

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**THE COMMISSION RECOMMENDS** *that the academic community provide the leadership required to develop better consumer information about costs and prices and to improve accountability to the general public.*

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The Commission is convinced that both policymakers and the general public need more useful, accurate, timely, and understandable information on college costs, prices, and the different subsidies that benefit all students. Leadership for this effort should come from the academy, from both institutions and higher education associations; but to be really effective of the entire thrust requires a partnership engaging appropriate Federal agencies, states, leaders of the press and electronic media, and the private sector.

For policymakers and the general public to act in a well-informed manner, more timely and reliable data are essential. The Commission was troubled by the sheer amount of incomplete and outdated information available from academic and government sources. Terms of analysis like cost, price, and subsidy are not clearly defined or generally understood. Financial standards, expenditure reports, and cost-recovery principles all rely on different methodologies. There is no common national reporting standard to measure costs or prices.

What is required, first, are comprehensive, easy-to-understand analyses of cost and price issues for different types of institutions by sector (e.g., public and private institutions, two- and four-year, with distinctions between four-year colleges and universities). These analyses should then be transformed into handbooks, available to the public, that provide the following cost and price information:

- the cost of educating students (i.e., the total institutional expenditure — capital costs included — to provide the education);
- actual tuition charges (i.e., sticker prices);
- the general subsidy (i.e., the cost minus the tuition charge);
- instructional costs by level of instruction;
- the total price of attendance (i.e., tuition, fees and other expenses);
- a net price “affordability” measure (i.e., total price minus grants); and
- a net price “accessibility” measure (i.e., total price minus all financial aid).

Although the Commission was not always able to obtain complete data on all these issues, the approach outlined above is consistent with the one used in this report. The Commission is convinced that these materials should also include information on financial-aid availability and options along with information on different types of institutions and their

different price structures. To the extent possible, information should also include total and net prices for full- and part-time, dependent and independent students.

Above all, to be useful, these data should be issued annually. The aim is to provide up-to-date information and illustrate how all potential students — but especially those of limited financial means — can gain access to high-quality postsecondary education. The Commission understands that new accounting standards have been developed for private institutions and are currently being developed for public institutions. Further, the Commission is aware of efforts underway to redesign the Department of Education's Integrated Postsecondary Education Data Survey (IPEDS) to make it compatible with such standards. The recommendations below are offered to emphasize the Commission's belief in the importance of these efforts to the Commission's call for institutions of higher education to become more fiscally transparent, that is, more straightforward in describing to the public where they get their money and how they spend it.

To that end, the Commission makes eight implementing recommendations designed to improve market information and public accountability.

#### **Implementing Recommendations:**

1. The Commission calls on the higher education community to take the lead in organizing a major public-awareness campaign to inform the public about the actual price of a postsecondary education, the returns on this investment, and family preparation for college.
2. The Commission recommends that individual institutions of higher education annually issue to their constituent families and students information on costs, prices, and subsidies in the way the Commission has approached these issues in this report.
3. The Commission recommends that the U.S. Department of Education collect and make available for analysis not only annual tuition and price data but also information on the relationship between tuition and institutional expenditures.
4. The Commission strongly encourages multiple agencies in the private sector to use those data for developing college-cost reports or handbooks that are widely disseminated to prospective students, their parents, and the media — in print and over the Internet.
5. The Commission recommends that, where necessary, the format of existing governmental and private higher education data-collection systems and financial reports be modified to allow for collecting and reporting information that calculates costs, prices, and subsidies the way the Commission has approached them in this document.
6. In that regard, IPEDS should be redesigned to collect such information. It can then be made available to any person or institution, in a form that is comparable for public

and private institutions. The redesigned survey should include estimates of direct instructional costs by level of instruction, capital expenditures, and the replacement value of capital assets. It should also be expanded to improve data (and data comparability) on faculty compensation and workload as well as on factors related to administrative efficiency.

7. The Commission urges the national accounting standards bodies for institutions of higher education (The Financial Accounting Standards Board for private institutions and the Government Accounting Standards Board for public institutions) take whatever steps are necessary to assure that the financial reports of these institutions offer fiscally transparent information about college finances that allow for valid comparisons between public and private institutions.
8. The Commission recommends the following with respect to the collection and analysis of different kinds of data, particularly financial data:
  - a) The National Center for Education Statistics, working with the appropriate organizations, especially higher education associations, should redouble its efforts to ensure that institutions respond in a timely manner to surveys and that survey data are edited and released in a timely manner.
  - b) The National Center for Education Statistics should take steps to understand how institutions respond to the IPEDS financial survey, particularly given changes in accounting and reporting standards for private, not-for-profit institutions. This is necessary because there are several acknowledged inconsistencies in the way institutions report the information they are required to submit.
  - c) The U.S. Department of Education should undertake a study to gather comprehensive data on the needs of part-time students, including the actual costs to the institutions educating high numbers of such students. This study should be integrated into the Department's higher education data-collection efforts. Given increasing numbers of part-time students and reliance on a formula that equates three part-time students to one full-time student, such a study would provide more accurate and reliable cost measures.
  - d) The Commission recommends that the U.S. Department of Education investigate the feasibility of gathering data on proprietary schools and the students who attend them.

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### III. Deregulate Higher Education

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**THE COMMISSION RECOMMENDS** *that governments develop new approaches to academic regulation, approaches that emphasize performance instead of compliance, and differentiation in place of standardization.*

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Members of the Commission believe that institutions of higher education have a responsibility to be good public citizens, not just in their teaching, research, and service missions, but also as employers, vendors, and good neighbors in their communities. The Commission is also aware that a variety of regulations, some accompanying public funding and some independent of it, are intended to ensure public health and safety or accountability in the use of tax dollars. The Commission clearly supports these goals.

But the Commission is equally convinced that a fresh approach to academic regulation is required — on the part of government at all levels. This Commission received a lot of testimony about the impact of the regulatory environment on college costs. Academic institutions handling small amounts of toxic substances, for example, are subject to the same regulations as manufacturing enterprises handling the same materials by the ton. Prohibitions against mandatory retirement ages were imposed on academic institutions in recent years (after several decades in which colleges and universities had been legislatively exempt from them) without considering the implications of the change on tenure or maintaining faculty vitality. And regulations regarding such issues as student privacy, the right of students to examine their records, and the incidence of crime on campus are redundant and repetitive.

New approaches need to be developed to ensure public accountability in ways that are less costly and more easily manageable. The Commission believes it is time to replace the current command-and-control approach to academic regulation with an approach that emphasizes performance and accommodates the type and volume of regulation to institutional history, size, and need.

To deal with these issues, the Commission presents nine implementing recommendations

#### **Implementing Recommendations:**

1. The Commission recommends the repeal of recently-enacted statutory provisions (from the Tax-payer Relief Act of 1997) requiring that academic institutions provide the Internal Revenue Service with personal financial information on enrolled students and their parents. The Commission believes that the reporting burden this creates for institutions has the potential to add major administrative costs to an institution's budget. While acknowledging the need to ensure reasonable taxpayer compliance

with IRS provisions, Congress should work with the appropriate representatives of the higher education community to resolve this issue.

2. The Commission recommends that Congress fund a project by the National Research Council, or some appropriate Federal agency, to develop standards in environmental, health, and safety areas to provide for differential regulation of industrial facilities, on the one hand, and research and teaching laboratories and facilities, on the other. The report should make specific recommendations for statutory and regulatory changes that are needed to develop such a differential approach.
3. The Commission recommends that, where possible, statutes require agencies to adopt performance-based models for monitoring compliance rather than command-and-control regulations that prescribe specific approaches. Likewise, statutes should avoid command-and-control language and move toward performance-based requirements.
4. The Commission recommends that state and county governments undertake a thorough examination of the regulatory requirements they have imposed on academic institutions, particularly those that go beyond or differ from Federal requirements. The purpose would be to determine the cost implications of these requirements and whether their benefits justify the costs they impose. Those deemed to be overly burdensome should be repealed.
5. The Commission recommends that, as Congress and the Executive Branch examine issues related to the electronic production of information, colleges and universities be included in the discussions. As both producers and consumers of electronic information, academic institutions are in a unique central position to provide advice on the complex intellectual property issues involved in this area.
6. The Commission recommends that Congress enact a clarification to the Age Discrimination in Employment Act to assure that institutions offering defined-contribution retirement programs are able to offer early retirement incentives to tenured faculty members. The Commission endorses pending Senate Bill 153, which would accomplish this purpose.
7. The Commission recommends that the Higher Education Act and accompanying regulations be rewritten to consolidate provisions related to the mandated disclosure of information to students and employees under legislation such as the Student Right to Know and Campus Crime and Security Acts.
8. The Commission recommends a change in the refund law and implementing regulations to permit institutions of higher education to require students withdrawing from programs to sign a withdrawal form establishing a firm date of withdrawal for refund purposes.

9. The Commission recommends Congress stipulate that institutions with a demonstrated history of sound financial operations and capable administration be deemed "fiscally responsible and administratively capable" of meeting the eligibility requirements under the Higher Education Act. Evidence of such a sound operation could include a showing that the institution is a public institution (i.e., state controlled); that it has been in continuous existence since November 8, 1965 (the date of enactment of the Higher Education Act); or that it has participated successfully in Title IV programs for ten years or longer. Congress and the U.S. Department of Education might consider adopting the principles of the Federal Trade Commission's successful voluntary compliance programs.

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## IV. Rethink Accreditation

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**THE COMMISSION RECOMMENDS** *that the academic community develop well-coordinated, efficient accrediting processes that relate institutional productivity to effectiveness in improving student learning.*

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Accreditation is an honored and essential part of higher education. It assures the education community and the public, as well as funding agencies, that the institutions they are attending or supporting merit their confidence. In addition, it provides a useful tool for institutional self-study and accountability that would be inappropriate to government.

Accreditation strives to assure educational quality and institutional integrity. Basic to the accreditation process are periodic self-studies that evaluate an institution or program in light of publicly-stated objectives — and peer evaluation of those self-studies by a visiting team of academic colleagues. Accreditation seeks not only to judge and assure quality and integrity, but to promote improvement through continuous self-study and evaluation. Regional associations accredit an institution as a whole, while specialized accrediting groups accredit specific educational programs within an institution.

The Commission recognizes and encourages the movement underway at all six regional accrediting associations to focus more on assessing student achievement. Accreditation bodies — both regional and specialized — have been inclined to emphasize traditional resource measures as proxies for quality. Such traditional measures are often difficult to link to demonstrated student achievement. Specialized or professional accreditation has, for the most part, continued to focus on resource measures in making judgments about quality. In fact, to many campus observers, they appear often to be acting more in the economic interest of the professions they represent than in the interest of assuring student achievement.

Moreover, specialized accreditation has, in the eyes of many, taken on a life of its own. It has become too complicated, occurs too often, and makes the case for additional resources to support programs of interest to them without regard to the impact on the welfare of the entire institution.

Today, some 60 specialized accrediting agencies oversee more than 100 different academic programs — ranging from architecture, business, and engineering to journalism, law, medicine, and far beyond. The time-consuming self-study procedures involved with specialized accreditation, the focus on additional resources without regard to their connection to student learning or the welfare of the larger institution, and the expensive duplication involved with different entities, increase red tape and drive up costs.

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## V. Enhance and Simplify Federal Student Aid

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**THE COMMISSION RECOMMENDS** *that Congress continue the existing student aid programs and simplify and improve the financial aid delivery system.*

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Despite the complexity of the current Federal student-aid system of grants, loans, campus-based aid, and tax benefits, it provides crucial support to students from widely varying personal and financial circumstances. There is value in preserving the current mix of programs that enhance student choice among a variety of institutions. Nevertheless, the manner in which that aid is delivered confuses students and families, and, despite its variety, the aid system struggles to serve the diverse needs of the many different types of students now attending postsecondary institutions. Meanwhile, student aid regulations from the U.S. Department of Education are so extensive, internally inconsistent, and excessive that it is almost impossible for any college, university or other financial aid provider in the country to be sure it is ever in full compliance.

To maintain a strong Federal financial aid system that will improve access to higher education and make it more affordable to students and families, the Commission makes eight implementing recommendations.

### **Implementing Recommendations:**

1. The Commission recommends that Congress continue the existing Federal grant, loan, and campus-based financial aid programs and where possible, strengthen them and provide additional resources.
2. The Commission recommends that Congress simplify and improve the student financial-aid delivery system. This system should have as its primary goals improving the level of service to students and program participants; reducing the costs of administering Federal student-aid programs; increasing accountability; and providing greater flexibility in managing the functions and operations of the grant, loan, and campus-based aid programs.
3. As part of the effort to streamline aid, the Commission supports involvement of the U.S. Department of Education in efforts to develop Electronic Data Interchange (EDI) standards and other experiments in the use of modern technologies for information sharing among institutions.
4. The Commission recommends that Congress monitor the effectiveness of the new higher education and lifelong-learning tax provisions to determine what effect they have on access, the nature of student financial assistance, and institutional decisions about awards of institutional aid and campus-based financial aid.

5. The Commission recommends that Congress investigate the feasibility of broadening eligibility requirements for Federal student aid to include students attending less than half time. Federal aid should also become more flexible to meet a variety of student circumstances, including accelerated degree completion and year-round eligibility for part-time students and lifelong learners.
6. The Commission recommends that the Secretary of Education be required to review and simplify the Department's financial aid regulations, procedures, and forms, especially forms that families must complete to apply for financial aid. Institutional compliance with regulations and procedures is now extraordinarily difficult and expensive because of the inconsistencies and redundancies in statutes and regulations.
7. The Commission recommends that the U.S. Department of Education consider expanding and strengthening the "case management" approach to eligibility and compliance issues associated with the Higher Education Act. This will allow the Department and institutions of higher education to consider simultaneously issues like institutional audit, program review, and re-certification, thereby allowing both to better coordinate the use of resources and potentially reduce costs.
8. The Commission recommends that Congress require the Program Review branch of the U.S. Department of Education to make available to every institution certified for Title IV participation, a complete, non-redacted copy of its review guidelines and procedures. The Higher Education Act should also be amended to permit institutions to cure inadvertent errors without penalty.

## A WORD TO STUDENTS AND FAMILIES

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Finally, this Commission wants to speak directly to students and their families. We realize that decisions about selecting a college and paying for a college education present tough choices to American families. Our system of higher education is big, diverse, and full of opportunity, but making good decisions about college requires information and preparation. Early in the high school years, students and their families need to be asking questions about what they value and want the most from higher education. What type of school are you looking for? What is most important to you? Who has the information you need and where can you find it?

Selecting the right college takes work and the selection process must begin with the family's own assessment of what it wants. Parents and students need to remember that "more expensive" does not always mean "better." And, just because a school ranks high on a "reputational" survey, does not mean your son or daughter will be happy there.

Beyond that, preparation for college starts with families and students working together on the academic preparation necessary for a successful college experience. The first semester of the senior year is too late to begin laying this foundation. Families and students must begin with a solid foundation in elementary school. The next step is taken when they begin to plan for a rigorous course of study in high school, preferably one that involves four years of college-preparatory English and mathematics, and three years each of science, history and social studies, and foreign language. Once the program is defined, success depends on students really concentrating on their schoolwork and getting the support they need from family and teachers.

The members of this Commission also understand the anxiety involved when families face the prospect of paying for a college education. We do not dismiss it; in no way do we minimize it. On the contrary, all the recommendations in this document were developed with one goal in mind: to keep open the door of higher education by maintaining access at prices students and families can afford.

But institutions, governments, and the philanthropic and higher education communities can only do so much. Students and families have a responsibility to do their part as well. Because a major beneficiary of a college education is the individual involved, those with a genuine commitment to their future rightfully shoulder part of the load.

The weight of that load can be substantially lessened with careful financial planning. Families obviously need better information in order to plan well; this Commission has laid out an action agenda to provide much of the needed information. A number of states offer widely-publicized tuition pre-payment plans, and financial institutions are eager to encourage regular savings and investment for higher education. Moreover, the 1997 budget agreement incorporated many attractive new tax features to encourage parents to lay aside funds for their children's education — including permission to establish tax-deferred educational accounts and to withdraw IRA funds for educational purposes. Combined with the widespread availability of grants and loans, the establishment of new Hope Scholarships, and provisions for tax credits for

upperclassmen and women, these new provisions promise to bring a baccalaureate education within the grasp of practically everyone.

Most families need to become better informed about these possibilities, and those with the financial means should make an effort to set aside something for their children's future. The Commission encourages them to do so, confident that higher education is not just an expense but also an investment. The long-term financial return on the investment far exceeds the price students and families pay.

### **Next Steps: Putting it All Together**

Those, then, are the Commission's recommendations. They constitute a framework of shared responsibility to control institutional costs, improve market information and public accountability, deregulate higher education, redesign accreditation, and enhance and simplify Federal financial aid.

Developing recommendations is easier than implementing them. Reports do not implement themselves, but must be put into practice by policymakers, members of the academic community, and citizens. Unfortunately, most reports of this nature rest unread on bookshelves. If that becomes the fate of this document and its recommendations, financial support for higher education could erode and others may step in to impose their own regulatory solutions.

The first step to implementing these recommendations is really in the nature of a plea. Everyone must shoulder his or her share of the burden of improving the situation described herein. If academic leaders, policymakers, and the general public satisfy themselves by blaming others, the situation will not change. All of us together must rise above polemics. We must avoid oversimplification. We believe it is time for straight talk about college costs and prices. To maintain access to higher education at a reasonable price, everyone will have to do more, make sacrifices, and work harder. There is ample work ahead for everyone.

The second step is to move forward with the recommendations outlined above. The Commission's charge from Congress was really quite simple: develop a set of recommendations to help keep college education affordable in the United States. No report can guarantee that result. But the steps outlined in this one point the nation, its educational leaders, its citizens, and its public officials in the right direction.

The third step is to continue the research, at both a technical and a policy level, on issues identified in this report and enumerated in Appendix A, The Unfinished Agenda. We believe we have made good progress in shedding new light on questions of cost, price and affordability. Yet much more can and needs to be done to continue research before we or others can claim to fully understand our own enterprise.

The entire Commission has learned during this study process that the profile of America's college students is changing profoundly. As noted in the text, more students are older, attending part time while working, first generation college attendees, lower income, and ethnically diverse.

At the same time, there is a growing wave of more traditional full time 18-22 year olds headed toward our universities. Therefore, it is essential that the academic and political communities learn a great deal more about these trends, and then adjust major state and Federal programs accordingly.

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## Appendices

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## **APPENDIX A: THE UNFINISHED AGENDA**

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Colleges and universities are complex institutions serving millions of students. In the relatively short period of time since the establishment of the National Commission on the Cost of Higher Education, numerous issues have been identified that could contribute to rising college tuitions. Time, as well as the availability of data, did not allow for the thorough review of all of these issues.

- **Graduate Education.** How has the price of graduate education changed over time? What are the relative costs of graduate education as compared to undergraduate education? How can we distinguish these costs? Are undergraduate tuitions paying for graduate programs? Is the time to obtain a Ph.D. increasing?
- **Part-time Students.** How much do part-time students pay to attend a postsecondary institution? What is their price of attendance? How much and what types of financial aid do they receive? How much does it cost institutions to educate part-time students? Do part-time students need special types of services that differ from those of full-time students?
- **Nontraditional Students.** (Often considered to be students over the age of 22 who do not necessarily attend full-time; part-time students can be subsumed under nontraditional students). What types of financial aid do nontraditional students receive? What types of additional supports do they need?
- **Faculty Workload.** How do faculty spend their time? How can we improve upon current methods of obtaining data on faculty work? How much are they asked to teach? How frequently are faculty able to substitute activities for actual classroom teaching? Are there more efficient ways to teach?
- **Persons Who Do not Attend.** Why do some high school graduates not pursue a college education? To what extent do financial concerns keep persons from enrolling?
- **Proprietary Schools.** How much do proprietary students pay to attend their institutions? What does it cost a proprietary school to educate students? How much and what types of financial aid do proprietary school students receive? Has the availability of Federal aid, both loans and grants, influenced tuition growth in proprietary schools?
- **Costs and Quality.** To what extent are changes in higher education costs related to changes in the quality of higher education? How are higher education products affected by changes in costs? How can quality be improved and costs reduced?
- **Technology.** How can advances in technology change the delivery of higher education? How can technology help colleges and universities to reduce their costs?
- **Saving to Pay for College.** How can students and their families save more efficiently to pay for college? What types of incentives might encourage families to save?
- **Higher Education and the Business Community.** How can businesses become more involved to help reduce some of the costs of higher education? To what extent are businesses currently providing tuition benefits for employees?
- **Remedial Education.** What does it cost colleges and universities to offer remedial education? How can higher education work with elementary and secondary schools to ensure that students are better prepared for college work?

- **Tuition Remission.** Does offering faculty tuition remission for family members drive institutional costs up?
- **Information Needs.** What kinds of information and publications would assist parents and students to make informed decisions about attending college?

## APPENDIX B: TECHNICAL NOTE

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Most of the data contained in this report were previously published elsewhere. The reader should consult the original sources for further details concerning cited data. Several of the tables do contain original tabulations of recent college cost and price trends (Issue 1). This technical note provides information concerning how these figures were derived. It describes: the data sources used to produce these estimates; the classification of students; the classification of institutions; the method used to estimate what it costs colleges and universities to provide higher education to students (cost per FTE); and the derivation of "net price" estimates. At the end of this note, several terms that are used throughout the report are defined.

### Data Sources

Multiple years of two U.S. Department of Education data sources, the National Postsecondary Student Aid Study (NPSAS) and the Integrated Postsecondary Education Data System (IPEDS) were used to estimate trends in average college costs and prices. NPSAS data were used to estimate student level information (e.g., tuition and total price of attendance) and IPEDS data were used to estimate institutional level figures (e.g., enrollment and cost to institutions of providing higher education).

NPSAS data are not collected annually, but rather every three years: 1986-87, 1989-90, 1992-93, and 1995-96. The Data Analysis Systems (DAS) software and website (<http://www.pedar-das.org>) maintained by MPR Associates under contract with the National Center for Education Statistics (NCES) were used to generate the NPSAS based estimates.

IPEDS finance and enrollment data were combined to derive estimates of the cost of providing higher education incurred by institutions per full-time-equivalent student. Based on the ongoing work of Gordon Winston<sup>20</sup>, information concerning how colleges and universities spend their money as reported on the IPEDS financial form was combined to reflect the fact that these institutions are multi-product entities and produce goods and services beside instruction. The capital costs associated with the value of the land, buildings, and equipment devoted to instruction are also factored into the estimate of the cost of providing higher education. (A more detailed explanation of this calculation is provided under the "Cost per Student" discussion.)

IPEDS finance data are collected every fiscal year. Finance data from fiscal years 1987, 1990, 1993, and 1996 were desired to correspond with the student level information available from the four waves of NPSAS. Final finance data are not, however, available for 1996, so data from 1995 and 1993 were used to estimate 1996 figures. The annual rate of change in the cost of providing instruction observed for each type of institution between 1993 and 1995 was assumed to remain the same through 1996. Comparing the results of this assumption with estimates derived from early release 1996 finance data revealed similar values. Enrollment data from the fall of the academic years in question were used to calculate full-time-equivalent enrollment (FTE). FTE is defined as the number of full-time students plus one third of the number of part-time students attending a given institution.

The first three years of IPEDS finance (1987, 1990, and 1993) and fall enrollment data (1986, 1989, and 1992) were acquired via the CASPAR website (<http://caspar.nsf.gov>). The 1995 finance and fall 1994 enrollment data were acquired through the NCES website (<http://nces.ed.gov>).

### Classification of Students

Data presented in this report are for full-time, full-year dependent students attending a single institution only. These students are considered for financial aid reasons to be financially dependent on their parents. Parental as well as the student's own income and assets are considered in the determination of need-based financial aid. Approximately 74 percent of full-time, full-year undergraduates were classified as dependent in 1996. While part-time or part-year students comprise the majority, 62 percent, of all undergraduates, the price paid by full-time, full-year students is more readily interpreted and compared across years.

## **Classification of Institutions**

Institutions were classified based on control, public or private not-for-profit, and level of degree offered. Trends in prices and costs are estimated separately for public four-year, private four-year, and public two-year institutions. In 1996, approximately 78 percent of all undergraduates attended a public institution; 46 percent were in two-year schools, 31 percent attended four-year schools, and the remaining 1 percent were enrolled in institutions offering programs lasting less than two years. Public institutions receive a share of current revenue from state appropriations; therefore tuition charged state residents at these schools is often considerably lower than in the private sector.

## **Cost per Student**

As noted above, the derivation of the cost of instruction per full-time-equivalent student draws heavily from the work of Gordon Winston. Winston's work makes two conceptual improvements over past measures of institutions' cost of providing higher education. First, Winston recognizes that colleges and universities spend money in areas that are clearly related, areas that are partially related, and areas that are completely unrelated to instruction. Second, Winston accounts for the capital costs of the physical resources associated with providing higher education.

Based on Winston's method, instruction costs are the sum of: clearly instructional expenditures; a proportion of the partially related expenditures; and a proportion of the capital costs of all the physical assets used by the institution. The proportion used in these calculations reflects the share instruction holds in the overall operation of the institution. The specific formulation of the cost per student estimation is described below and summarized in Exhibit B-1.

The two IPEDS expenditure categories of instruction and student services were treated as being clearly instructional and all the expenditures in these two categories was included in the instructional cost measure. The three IPEDS expenditure categories of institutional support, academic support, and operation of the physical plant were treated as being partially related to instruction and a proportion of the value of expenditures in these categories was added to the instructional cost measure. This proportion was calculated by dividing the sum of the two clearly instructional expenditure categories (instruction and student services) by the total current fund expenditures less mandatory and non-mandatory transfers, scholarship and fellowship expenditures, and the sum of the three partially instructional expenditure categories (institutional support, academic support, and operation of the physical plant).

**EXHIBIT B-1: Annotated Formula for Cost Per Student**

<b>Cost =</b>				
<b>Clearly Instruction</b>	+	<b>Proportion Partially Instruction</b>	+	<b>Proportion Capital Costs</b>
Current expenditures on: Instruction Student Services		Current expenditures on: Academic Support Institutional Support Operation of Physical Plant		Depreciation (2.5%): Replacement value of Buildings Replacement value of Equipment  plus  Opportunity Cost (9.12%) : Replacement value of Buildings Replacement value of Equipment Replacement value of Land
<p><b>Where proportion equals</b>            Current expenditures on instruction and student services            divided by            Total current fund expenditures less: current expenditures on            academic support, institutional support, operation of physical plant,            scholarships and fellowships, mandatory and non-mandatory            transfers</p>				
<p><b>Cost Per Student =</b>            Cost divided by full-time-equivalent enrollment</p>				

Capital costs include both the real depreciation of physical assets and the opportunity costs associated with their use for higher education. IPEDS collects information concerning the replacement and book value of buildings and equipment used by colleges and universities. While the replacement value for land is not collected, book value for land used is. Land book value was converted to replacement or market value by multiplying land book value by 2.138. This correction of land value was based on the relationship observed by Winston and Yen (1995) between the book value and replacement value of buildings. Depreciation was assumed to be 2.5 percent and the opportunity cost was set to equal the average return over the past twenty years of 30 Year Treasury Bills, 9.12 percent. Land values were assumed not to depreciate in value. Hence, the value of all capital resources consumed in the provision of instructional services is computed as follows; 2.5 percent of (Building replacement value + Equipment replacement value) plus 9.12 percent (Building replacement value + Equipment replacement value + 2.138 x Land Book Value).

Due to a high level of missing data in the physical asset information in the IPEDS data, the data imputation techniques discussed in the appendix of Winston and Yen (1995, p.39-40) were adopted. In order to lessen the

impact of outlying cases, the highest one percent of estimated values of instructional costs per full-time-equivalent student in each year were deleted from the analysis.

### **Net Price Calculations**

The posted tuition, the "sticker price" is not paid by a substantial portion of undergraduate students due to financial aid. Roughly half of all undergraduates receive some sort of aid. Among dependent students attending a college or university full-time for the entire academic year, the group of students that tables included in Issue 1 focus on, the percentage receiving some type of financial aid is higher still, 64 percent.

Two different definitions of net price are used. In the first version of net price, only grant aid is subtracted from the total price of attendance. In the second version, all financial aid, including loan and work study earnings, is subtracted from the total price. The first definition captures the actual price paid by students and families, regardless of the mechanisms used to finance the purchase of higher education. The second captures the actual cash outlay that students and their families encounter during the year of college attendance.

To maintain a consistent measure of total price of attendance over time, certain adjustments had to be made to the student self-reported total price information available in the NPSAS data for 1987 and 1990. The 1996 NPSAS includes a revised measure of total price, a student budget variable based on the combination of student self-reports and institution provided data. A 1996 comparable version of this student budget variable was added to the 1993 NPSAS data which also contains student self-reports of total price. Using 1993 NPSAS data, which contained both measures, ratios of the revised student budget variable to student self-reports were calculated for each type of institution addressed by the report. The institution specific ratios were then applied to the self-reported total price information available in 1987 and 1990 to make these data comparable to the 1996 student budget estimates.

### **Definitions**

**Consumer price index (CPI).** This price index measures the average change in the cost of a fixed market basket of goods and services purchased by consumers.

**Dependent student.** Students who are considered for financial aid reasons to be financially dependent on their parents. Parental as well as the individual student's income and assets are included in the calculation of the expected family contribution and thus financial aid awards.

**Independent student.** Students who are considered for financial aid reasons to be financially independent from their parents. Parental income and financial assets are not considered when calculating financial aid awards for independent students. Any one of the following criteria is sufficient for defining a student as independent: being 24 years of age or older by December 31 of the academic year in question; past service in the armed forces; being an orphan or ward of the court; being married; having legal dependents other than a spouse; or is a graduate or professional student.

**Financial need.** The difference between the institution's price of attendance and the student's expected family contribution.

**Unmet need.** The student's price of attendance at a specific institution less the student's expected family contribution and other financial assistance received.

**Full-time-equivalent (FTE) enrollment.** For institutions of higher education, enrollment of full-time students plus the full-time equivalent of part-time students. The full-time equivalent of part-time students is calculated in this report as: three part-time students are equivalent to one full-time student. Students are considered *part-time* if their total credit load is less than 75 percent of the normal full-time load.

## **Income**

**Median family income.** That level of family income that divides the upper from the lower half of all families.

**Personal disposable per capita income.** The amount of money available per person to spend. The calculation involves subtracting all taxes, depreciation, and corporate reinvestment from the country's Gross National Product, adding transfer payments (e.g., social security payments), and dividing the result by the number of people in the population.

## **Regulatory Approaches**

**Performance-based approach.** The performance-based regulatory approach fixes a standard of performance but generally leaves to the institution the choice of procedures to meet the standard.

**Command and control approach.** In the command and control regulatory approach, a government agency fixes both the performance standard and the procedure to meet the standard.

## APPENDIX C: COMMISSIONER BIOGRAPHIES

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### **Martin Anderson**

Senior Fellow, Hoover Institution of Stanford University, Stanford, California

Martin Anderson is a Senior Fellow at the Hoover Institution of Stanford University. A former professor at Columbia University, he directed the policy research efforts of three presidential campaigns, and was the domestic and economic policy adviser to President Reagan, 1981-82.

Anderson graduated summa cum laude from Dartmouth College, and received a M.S. from the Thayer School of Engineering and the Amos Tuck School of Business, and his Ph.D. from the Massachusetts Institute of Technology. He is the author of eight books including *Impostors in the Temple: A Blueprint for Improving Higher Education in America*.

### **Jonathan A. Brown**

President, Association of Independent California Colleges and Universities, Sacramento, California

Dr. Brown has been President of the Association of Independent California Colleges and Universities since 1991. Prior to his appointment he was Vice President of the Association. Before that, he served in a variety of political positions including work in the White House, the U.S. Senate, the House of Representatives and the California Legislature. Brown has also served on a variety of boards including the National Association of Independent Colleges and Universities; as founding Chairman of United Educators Risk Retention Group and as a member of the Economics Council for the Universidad Anahuac del Sur in Mexico City.

Brown received his A.B. (Honors) in International Relations from the University of the Pacific. He also studied at George Washington University, Catholic University and the Harvard Institute for Educational Management. He received a D.P.A. from the University of Southern California. His dissertation, on tax simplification, was nominated for dissertation of the year by the American Society of Public Administration. He has been an adjunct professor at USC and Golden Gate University and a visiting professor at Universidad Anahuac del Sur in Mexico City.

*"In one sense, the Commission was created as a result of a pervasive syntactic confusion that invades any discussion of higher education. Higher education lives in an environment where an average cost of production of \$20,000(COST) is sold for \$6,000(PRICE). If we concentrate only on price, we will be unsuccessful in keeping higher education accessible. The balance of our recommendations try to build on the strength of the American system of higher education — one size does not fit all because we have a diverse system. Better focus on and understanding of the costs of higher education among administrators, faculty, students, families and policymakers, will assure a higher educational system that remains able to meet a diverse set of needs, but always in a cost effective manner."*

### **Robert V. Burns**

Distinguished Professor and Head of Political Science, South Dakota State University, Brookings, South Dakota

Dr. Robert Burns is Distinguished Professor and Head of Political Science at South Dakota State University in Brookings, South Dakota. He is a Commissioner with the Western Interstate Commission on Higher Education, and former Chairperson of two Governor's Committees focusing on education in the state of South Dakota. He has held teaching positions at the University of Missouri-Columbia and at the University of South Dakota.

He received his B.S. in Political Science from South Dakota State University, and his M.A. and Ph.D. in Political Science from the University of Missouri-Columbia. He is the recipient of several teaching awards, including Teacher of the Year in the College of Arts and Science three separate years, the Burlington Northern Excellence in Teaching Award in 1989, and the 1995 South Dakota Professor of the Year by the Carnegie Foundation for the

Advancement of Teaching. He is a former member and president of the Brookings, South Dakota, School Board and candidate for the state legislature. He was awarded the Bronze Star and Air Medal with Oak Leaf Cluster for his duty in Vietnam as a Captain with the United States Army.

*"I am convinced that each of the eleven members of the Commission is committed to quality, affordable higher education opportunities for the adult public as a means toward individual and community well being in our nation. The common good and not narrow selfish interests directed the work of the Commission. We were required by law to investigate eleven complex topics in American higher education including costs, prices and subsidies. If our product appears to be overly broad in focus it is because we have sought to be true to our statutory mandate. It is our hope that individuals and communities alike will benefit from our effort to make higher education even more accessible through implementation of our many recommendations."*

**Clare M. Cotton**

President, Association of Independent Colleges and Universities in Massachusetts, Boston, Massachusetts

Clare Cotton has served as the President of the Association of Independent Colleges and Universities of Massachusetts (AICUM) since 1987. AICUM represents 55 independent colleges and universities in Massachusetts. He served as President of the Boston-Fenway Program, Inc., a consortium of 12 non-profit educational, cultural and medical institutions from 1977-1987. Earlier he was Vice President for Government and University Relations at Boston University, Director of European Securities Publications, Inc. in London and a Special Writer for *The Wall Street Journal*.

He received his undergraduate degree from Randolph-Macon College and his masters degree in philosophy from the University of North Carolina, Chapel Hill. He has received honorary doctorate degrees from Randolph-Macon College, Wentworth Institute of Technology, Mount Ida College, Becker College and Northeastern University. He received the Dean College Cameron E. Thompson Medal and the Becker College award for Distinguished Service to Higher Education. He is a member of the Public Education Nominating Council of Massachusetts and a founding member of the Brookline (MA) Chorus.

*"The Federal student aid programs, together, represent a kind of policy genius. The variety of the programs combines the Pell national grant system and the national loan systems with campus-based grant, work and loan programs, providing great flexibility in final awards to meet unforeseeable differences in student needs and changing student needs. The principle that need is the basis of awards under-girds these programs. Needs analysis covers the two relevant factors: the resources available to the student/family and the funding needed for the proposed educational program. Basing financial aid solely on income would limit choice and flexibility, and would tend to transform student aid into a part of the welfare system. Support for the Federal system, in my view, entails support for its basic philosophy of needs-based awards."*

**William D. Hansen**

Executive Director, Education Finance Council, Washington, D.C.

Since 1993, Bill Hansen has been the Executive Director of the Education Finance Council (EFC) in Washington, D.C. EFC is a not-for-profit association organized to represent the common interests of state student loan secondary market organizations. Prior to joining EFC, Hansen was the Assistant Secretary of Education for Management and Budget and Chief Financial Officer; the Deputy Under Secretary of Education for Planning, Budget and Evaluation (acting); and Deputy Assistant Secretary of Education for Legislation and Congressional Affairs. He also managed the public affairs office at the U.S. Department of Commerce, directed intergovernmental and industry affairs at the U.S. Department of Energy and served as Deputy Assistant Secretary for Elementary and Secondary Education.

Governor George Allen appointed Mr. Hansen to the Virginia Commission on the Future of Public Education. He also served on the Governor's Commission on Champion Schools in Virginia. He attended Idaho State University and graduated from George Mason University with a B.S. degree in Economics. He lives with his wife and six children in McLean, Virginia.

**Walter E. Massey**

President, Morehouse College, Atlanta, Georgia

In June of 1995, Dr. Walter Massey was named president of his alma mater, Morehouse College, the nation's only historically black, private, liberal arts college for men. Prior to his appointment at Morehouse, Dr. Massey was a professor of physics and Dean of the College at Brown University, Director of Argonne National Laboratory, Vice President for Research at The University of Chicago, Director of the National Science Foundation and Provost and Senior Vice President for the University of California System.

Dr. Massey received his B.A. in Physics and Mathematics from Morehouse, and his M.S. and Ph.D. in Physics from Washington University. As an expert in the fields of science and technology, Dr. Massey has traveled and consulted around the world for different countries and organizations. He currently serves on the Board of Directors of Rockefeller University and three additional corporate boards. He was previously a trustee for Brown University and the MacArthur Foundation.

*"I hope this report becomes a resource for policymakers as they struggle with the critical choices as to how to maintain the excellent system of American higher education. I also hope it will help families and students to prepare early on to finance a college education. We in the education community must do our part by keeping college affordable."*

**Barry Munitz**

President and CEO, The J. Paul Getty Trust, Los Angeles, California  
Former Chancellor, The California State University  
Vice Chairman, National Commission on the Cost of Higher Education

During the work period of this Commission, Dr. Munitz was Chancellor and Chief Executive Officer of the California State University, a 23-campus system of state universities. He is now the President of the J. Paul Getty Trust, effective January 5, 1998. He is immediate past Chair of the American Council on Education, is a member of the Executive Committee of Los Angeles' KCET Public Television Station, has chaired the Education Round Table in California for the past five years, and is Chairman of the new National Advisory Group for the Ford Foundation-supported Millennium Project on Higher Education Costs, Pricing and Productivity.

He received a B.A. in Classics from Brooklyn College and a M.A. and Ph.D. from Princeton in Comparative Literature. After teaching at Berkeley and serving as Clark Kerr's assistant on the Carnegie Commission on the Future of Higher Education, he worked as the Academic Vice President of the University of Illinois system, as the Chancellor of the University of Houston, and as president of a Fortune 200 corporation. He has written widely on organizational theory, higher education, planning and governance.

*"American higher education is the envy of the world, and an absolute requirement for social and economic success. Our colleges and universities must be strongly supported and families must plan to afford them; however, they must make themselves much easier to understand and much easier to afford. This Commission is absolutely and unanimously convinced that America's colleges and universities remain an extraordinary value; but, it is also deeply concerned that most of them obfuscate their current funding patterns and refuse to confront seriously basic strategies for reducing their instructional costs."*

**Frances M. Norris**

Vice President for Congressional Affairs, U.S. West, Inc., Washington, D.C.

Ms. Norris was recently named Vice President of U.S. West, Inc. in Washington, D.C. She is responsible for advocacy before Congress of the company's cable, wireless and telephone strategies. Prior to joining U.S. West, Ms. Norris was the Vice President of the Dutko Group in Washington. Her career in Washington includes a

multitude of positions, including Special Assistant to President Bush for Legislative Affairs, Director of Congressional Relations for the Office of National Drug Control Policy, Assistant Secretary of Education, Deputy Assistant Secretary of Education, Assistant to then House Republican Whip, Trent Lott, and Legislative Assistant to Congressman G.V. Montgomery of Mississippi.

She earned her B.S. from the University of Mississippi and her M.S.L.S. from the University of Kentucky. Ms. Norris is listed in *Who's Who in America*, *Who's Who of American Women*, *Who's Who in American Politics*, *Who's Who in Emerging Leaders in America*, *World Who's Who of Women*, and *International Who's Who of Professional and Business Women*.

**Blanche M. Touhill**

Chancellor, University of Missouri at St. Louis, St. Louis, Missouri.

Six years ago, Dr. Blanche M. Touhill became the Chancellor of the University of Missouri at St. Louis. Prior to this, she served numerous other positions at the same university, including Interim Chancellor, Vice Chancellor for Academic Affairs, Associate Vice Chancellor for Academic Affairs, Associate Dean of Faculties, and Professor of History and Education. She has held teaching positions at three other colleges and was also a public school teacher in New York City, St. Louis, and Montgomery County, Maryland. In addition to authoring and editing several books, Dr. Touhill has written over 60 papers on topics ranging from Irish immigration to America, to the issues surrounding campus extension on urban and land grant university campuses. She has also authored numerous articles and book reviews.

Dr. Touhill received all of her degrees from Saint Louis University in St. Louis, Missouri. Her B.S. and Ph.D. are in history and her M.A. is in geography. During her career, she has been on the boards of directors of 29 different organizations. She has devoted much time to the National Association of State Universities and Land-Grant Colleges, the American Association of State Colleges and Universities, the American Council on Education and of the Urban 13 institution group. Dr. Touhill has been honored by many organizations, including a Distinguished Service Award from the Dr. Martin Luther King, Jr. State Celebration Commission and the Humanist of the Year from the James F. Hornback Ethical Society.

*"I want to express my appreciation for having been selected to be a member of this Commission. Higher Education is a pathway to opportunity in our country and must provide access and quality offerings to the citizenry through its diverse types of institutions. I am pleased that the Commission favors a national gathering approach focused on the part-time students in the Higher Education system."*

**William E. Troutt**

President, Belmont University, Nashville, Tennessee  
Chairman, National Commission on the Cost of Higher Education

Dr. Troutt has been President of Belmont University in Nashville, Tennessee for the last 17 years. During his presidency, Dr. Troutt has helped Belmont increase its enrollment by 75 percent, raise the average ACT score of its incoming students by eight points, and add to the geographic diversity of the student body. He has raised more than \$100 million for the endowment and the university gained national recognition when it won the 1995 Innovative Management Achievement Award from the National Association of College and University Business Officers.

He received his B.A. in Philosophy and Religion from Union University, a M.A. in Higher Education and Philosophy from the University of Louisville and a Ph.D. from Vanderbilt University in Higher Education. After working as an admission officer at Union University, he worked as the Assistant Director of the Tennessee Higher Education Commission, as a Senior Associate with McManis Associates of Washington, DC, and then as Executive Vice President at Belmont, prior to becoming President. He was recently named one of the Nation's Most Effective College Presidents by an Exxon Foundation Study and as one of Nashville's Most Influential Citizens.

*"Can higher education think about achieving student learning in ways other than faculty meeting with groups of students at regularly scheduled times and places? Can higher education organize itself differently and ultimately use technology both to improve quality and lower costs? Can higher education shift its focus from teaching to learning and from time served to results? The long-term challenge of managing college costs will require creative new thinking about teaching and learning."*

**George W. Waldner**

President, York College of Pennsylvania, York, Pennsylvania

Dr. George Waldner has been the President of York College since 1991, leading the institution to attain national recognition for achieving both quality and efficiency in higher education. In addition, he serves as the President of the Board of Directors of the Historical Society of York County and is a member of the board of directors of the Byrnes Health Education Center and South George Street Community Partnership, an urban re-development agency. Dr. Waldner has been active in regional accreditation, serving on evaluation committees for both the Southern Association of Colleges and Schools and the Middle States Association.

Prior to becoming President at York, Dr. Waldner was the Vice President for Academic Affairs at Wilkes University and Provost and Faculty Member at Ogelthorpe University, where he was honored twice as the outstanding classroom teacher. He is the author of numerous publications and papers related to the economics and politics of Japan as well as the economics of higher education. He received his A.B. from Cornell University, his M.A. and Ph.D. from Princeton University, and is a certificate recipient from the Inter-University Center for Japanese Studies in Advanced Written and Spoken Japanese Language.

*"Colleges and universities must begin to pursue efficiency with as much fervor as they pursue quality. With creativity and commitment, each institution can find ways to enhance both excellence and value in higher education."*

## **APPENDIX D: COMMISSION MEETINGS**

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### **COMMISSION MEETING**

August 11, 1997  
Washington, DC

#### *Presentation:*

The Honorable Howard P. McKeon, Member, United States Congress, California

### **COMMISSION MEETING**

September 7-8, 1997  
Washington, DC

#### *Presentations:*

The Honorable Howard P. McKeon, Member, United States Congress, California  
Dr. William F. Massy, The National Center for Postsecondary Improvement, Stanford University, The Jackson Hole  
Higher Education Group, Inc.

### **COMMISSION MEETING**

October 16, 1997  
Hoover Institution, Stanford University, Palo Alto, California

#### *Presentation:*

Mr. Gerhard Casper, President, Stanford University

#### *Panel of Presidents*

Dr. James L. Doti, President, Chapman University  
Dr. Stephen C. Morgan, President, University of LaVerne  
Dr. Leo E. Chavez, Chancellor, Foothill-DeAnza Community College District  
Dr. Robert L. Caret, President, San Jose State University

### **PUBLIC HEARING**

October 27, 1997  
Washington, DC

#### *Presentations:*

##### *American Association of Community Colleges*

Dr. David R. Pierce, President  
Dr. Robert C. Messina, President, Burlington County College

##### *Association of Jesuit Colleges and Universities*

Father James C. Carter, S.J., Chancellor, Loyola University New Orleans

##### *Modern Language Association of America*

Dr. Herbert S. Lindenberger, President

##### *Urban 13 Institutions*

Dr. Gerald L. Bepko, Chancellor, Indiana University-Purdue University  
Dr. Patrick M. Rooney, Special Assistant to the Vice President and Associate Professor of Economics, Indiana  
University-Purdue University  
Dr. Gregory M. St. L. O'Brien, Chancellor, University of New Orleans

##### *Association of American Universities*

Dr. Cornelius J. Pings, President

*State Higher Education Executive Officers*

Mr. J. Michael Mullen, Interim Director, State Council of Higher Education of Virginia

*United States Congress*

The Honorable Michael N. Castle, Delaware

*American Association of University Professors*

Dr. James E. Perly, President

*National Association of College and University Business Officers*

Mr. James E. Morley, Jr., President

*Committee for Economic Development*

Mr. Charles M. Kolb, President

**COMMISSION MEETING**

November 7, 1997

Northeastern University, Boston, Massachusetts

*Presentations:*

Dr. Gordon C. Winston, Orrin Sage Professor of Political Economy, Williams College

Dr. Richard M. Freeland, President, Northeastern University

Dr. Neil L. Rudenstine, President, Harvard University

Panel of Faculty Members

Dr. Phyllis W. Barrett, Professor of English, Holyoke Community College

Dr. Robert L. Silbey, Professor of Chemistry, Class of '42 Professor, Massachusetts Institute of Technology

Dr. Jeffrey L. Roberts, Professor of English, Worcester State College

Dr. Raymond J. Starr, Theodora Stone Sutton Professor of Classics, Wellesley College

**DISCUSSION GROUP WITH PARENTS**

November 10, 1997

Hume Fogg Magnet School

Nashville, Tennessee

**COMMISSION MEETING**

November 17-18, 1997

Belmont University, Nashville, Tennessee

*Presentations:*

Dr. Terry W. Hartle, Senior Vice President for Government and Public Affairs, American Council on Education

Mr. Arthur M. Hauptman, Consultant, Arlington, Virginia

**COMMISSION MEETING**

December 4, 1997

Washington, DC

**REPORT RELEASE**

January 21, 1998

Washington, DC

## APPENDIX E: EXPERT PAPERS

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*Are Postsecondary Education and Training Worth It? How Do You Know?*

Educational Testing Service

Anthony P. Carnevale

Donna M. Desrochers

Marlies A. Dunson

Richard A. Fry

Neal C. Johnson

*Federal Student Aid and the Growth in College Costs and Tuition: Examining the Relationship*

Arthur M. Hauptman

Cathy Krop

*Remarks on Restructuring Higher Education*

William F. Massy

*Student Aid & Tuition: Toward a Causal Analysis*

The American Institutes for Research

Roy J. Pearson

Stéphane Baldi

*The Real Cost of Higher Education, Who Should Pay and How?*

Alan Reynolds

*College Costs: Subsidies, Intuition and Policy*

Gordon C. Winston

## **APPENDIX F: CONSULTANTS**

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### **American Institutes for Research**

Rita J. Kirshstein, Project Director  
Amy Smith O'Malley  
Roy J. Pearson  
David A. Rhodes

### **James Harvey and Associates**

James Harvey  
Roger M. Williams

### **The Ingram Group**

Lewis Lavine  
Joe Hall  
Chris Jewell

### **The Institute for Higher Education Policy**

Jane V. Wellman

### **Levine and Associates, Inc.**

John Vance

## ENDNOTES

- <sup>1</sup> U.S. Department of Education, *Digest of Education Statistics 1996*, Table 309.
- <sup>2</sup> James Harvey and John Immerwahr, *Goodwill and Growing Worry: Public Perceptions of Higher Education*. (Washington: American Council on Education, 1994.)
- <sup>3</sup> These years are examined because our basic financial aid data come from the National Postsecondary Student Aid Study, which was conducted in 1987, 1990, 1993, and 1997.
- <sup>4</sup> Arthur M. Hauptman and Cathy Krop, *Federal Student Aid and the Growth in College Costs and Tuition: Examining the Relationship*. (Paper prepared for the National Commission on the Cost of Higher Education.)
- <sup>5</sup> Alan Reynolds, *The Real Cost of Higher Education, Who Should Pay and How?* (Paper prepared for the National Commission on the Cost of Higher Education.)
- <sup>6</sup> U.S. Department of Education, *Digest of Education Statistics*, 1996.
- <sup>7</sup> Board of Trustees Report, California State University, January 24-25, 1995.
- <sup>8</sup> *The New York Times*, February 13, 1996.
- <sup>9</sup> Association of Higher Education Facilities Officers. 1987. *A Foundation to Uphold*.
- <sup>10</sup> U.S. Department of Education, *Digest of Education Statistics*, 1996.
- <sup>11</sup> (U.S. Department of Education. National Center for Education Statistics. *1993 National Study of Postsecondary Faculty [NSOPF-93] Instructional Faculty and Staff in Higher Education Institutions: Fall 1987 and Fall 1992*.)
- <sup>12</sup> Kenneth C. Green, *The National Survey of Information Technology in Higher Education*, October 1997.
- <sup>13</sup> Kenneth C. Green, *The National Survey*, October 1997.
- <sup>14</sup> Testimony of Gerhard Casper, President, Stanford University. *The Cost of Higher Education: A Discussion with Commission Members*, October 16, 1997.
- <sup>15</sup> National Commission on the Cost of Higher Education, *Straight Talk about College Costs and Prices*. (American Institutes for Research, December 1997, Issue 3, no page).
- <sup>16</sup> National Commission on the Cost of Higher Education, *Straight Talk about College Costs and Prices*. (American Institutes for Research, December 1997, Issue 5, no page).
- <sup>17</sup> National Commission on the Cost of Higher Education, *Straight Talk about College Costs and Prices*. (American Institutes for Research, December 1997, Issue 6, no page).
- <sup>18</sup> National Commission on the Cost of Higher Education, *Straight Talk about College Costs and Prices*. (American Institutes for Research, December 1997, Issue 7, no page).
- <sup>19</sup> See National Commission on the Cost of Higher Education, *Straight Talk about College Costs and Prices*. (American Institutes for Research, December 1997, Issue 2, no page).
- <sup>20</sup> Primarily, on Williams Project Discussion Paper (DP)-32, "Costs, Prices, Subsidies, and Aid in U.S. Higher Education," July, 1995, written with Ivan C. Yen.