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PRICING PROBLEMS FOR HIGHER EDUCATION.

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IN FEW INSTANCES IS PRICE A DECIDING FACTOR IN A STUDENT'S DETERMINING WHETHER OR NOT TO GO TO COLLEGE. IT LOOMS LARGEST TO THOSE STUDENTS WHO ARE WEAKLY MOTIVATED, TO THOSE WHO ARE ACADEMIC RISKS, AND TO THOSE WHOSE RESOURCES ARE QUITE LIMITED. COST IS A RELATIVELY MINOR CONSIDERATION IN PREVENTING BRIGHT YOUNGSTERS FROM ATTENDING COLLEGE. ONCE THE DECISION HAS BEEN MADE TO GO TO COLLEGE, HOWEVER, THE PRICE IS IMPORTANT IN ENCOURAGING APPLICATION TO A PARTICULAR INSTITUTION. AT THE INSTITUTIONAL LEVEL, HIGH QUALITY, HIGH PRICE INSTITUTIONS ARE NOT DRIVEN OUT BY POOR QUALITY OR LOW COST COLLEGES. FURTHERMORE, THE QUALITY OF PUBLIC INSTITUTIONS IN ALMOST EVERY STATE HAS BEEN RISING. FOUR CONCLUSIONS EMERGE CONCERNING THE PRICING PROBLEM FACING PRIVATE COLLEGES AND UNIVERSITIES--(1) PRIVATE INSTITUTIONAL COSTS HAVE RISEN FASTER THAN PUBLIC INSTITUTIONAL COSTS, PARTICULARLY OVER THE LAST SEVEN OR EIGHT YEARS, (2) PRIVATE INSTITUTIONAL COSTS HAVE RISEN LITTLE IN RELATION TO FAMILY INCOMES, (3) THE NUMBER OF COLLEGE STUDENTS FROM RELATIVELY AFFLUENT FAMILIES HAS RISEN TWICE AS FAST AS THE NUMBER OF PLACES IN PRIVATE INSTITUTIONS, AND (4) GREATER ECONOMIC SELECTIVITY OF STUDENTS IS OCCURRING AT A TIME WHEN MOST INSTITUTIONS WOULD PREFER TO BROADEN THE BASE FROM WHICH THEY DRAW ABLE STUDENTS. THIS PAPER WAS PRESENTED AT THE COLLEGE SCHOLARSHIP SERVICE COLLOQUIUM ON FINANCIAL AID (3D, FONTANA, WISCONSIN, MAY 22-25, 1966) AND THE COMPLETE DOCUMENT, OF WHICH THIS IS ONE PAPER, "THE ECONOMICS OF HIGHER EDUCATION," IS AVAILABLE FOR $2.00 FROM THE COLLEGE ENTRANCE EXAMINATION BOARD, PUBLICATIONS ORDER OFFICE, BOX 592, PRINCETON, NEW JERSEY 08540. (HW)

The Economics of Higher Education

The Economics of Higher Education

Papers Presented at the
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Foreword

In 1962 the College Scholarship Service held its first colloquium on student aid. Because of the long-standing concern of the CSS about gaining the maximum effect from a given amount of aid available, the CSS planned and conducted that Colloquium during both sessions of the Eighty-Seventh Congress. At that time aid to education bills, including a federal scholarship bill, were pending before Congress, but it was just before the time in America's history when Americans and the Congress were ready to back up the goal of equal access to higher education—not only with money, but, more important, with the moral support and commitment reflected in the dollar support.

In 1962 the federal government was in the student aid field primarily through the National Defense Student Loan Program. Since that program was enacted in 1958 as part of the defense-focused reaction to the new space age, federal appropriations for it have grown from an initial $57 million in 1959–60 to more than $190 million. The Congress added a work program in 1964 as part of the Economic Opportunity Act and, finally, a grant program under the Higher Education Act of 1965 to complete the three-part federal program of student aid at the undergraduate level. These new programs have already added $200 million annually to the available resources for financial aid. When they are fully operative in 1969–70, they will contribute approximately $400 million and bring the total federal support for these three programs to almost $600 million.

State governments have entered the student aid field in an accelerated fashion over the past 10 years; 17 states now have competitive scholarship programs open to candidates, without restriction as to field of study. Of these 17 programs, all but New York's have been established since 1956 (New York enacted the first program of this kind in 1913—the New York State Regents College Scholarship Program). And 9 of the 17 state programs have been established since 1963. Under these 17 programs, more than $100 million is available annually to roughly 200,000 students. When these funds are added to the $600 million from the three federal programs, the public share of the total student budget for college attendance will be greatly in excess of what it was five or even three years ago. In addition, the potential of the permanent GI Bill adds substantial funds, possibly $400 million a year, to these figures, depending on the extent to which veterans avail themselves of this opportunity.

Concurrent with this significant increase in public responsibility for student expenses, a number of other trends have been noticeable. First, and most important, the number and the percentage of students enrolled in public institutions of higher education have increased markedly, in comparison with enrollment in private institutions of higher education. In 1959–60, for example, enrollments were 1,474,000 in private and 2,136,000 in public colleges and universities. In 1964–65, the respective numbers were 1,916,000 and 3,655,000. This trend shows no sign of reversal and leads to some major questions about national policy.

It was in this context that the College Scholarship Service decided in 1965 to hold its third colloquium on the topic, "The Economics of Higher Education." The concern of this Colloquium, and an ongoing concern of

the 860 institutions that make up the membership of the College Scholarship Service Assembly is the pattern for the financing of higher education, including the pattern of attendance. To what degree are the problems of cost and facilities solved by the increasing pattern of public attendance – especially attendance in community colleges free of the financial burdens of construction, housing facilities, and housing fees to students? Even if the growth of these institutions solves certain financial problems, what is the cost in diversity, in student choice, and in the role of the private institution?

Even if some agreement can be reached in national policy about the respective roles of private and public institutions, what patterns can be agreed upon for the cost of college attendance to students? What percentage of the total institutional cost should the student bear in public institutions as well as in private institutions? What level of cost differential between the private and public institutions will the general public support? How high can the cost for the undergraduate years, grades 13 to 16, be set in a society that heavily subsidizes all other levels of education? If more public support were to be made available to private institutions, how can their independence be preserved?

These are difficult questions that must be faced and answered as America passes into the last third of the twentieth century. And this Colloquium was planned and held in an effort to help national thinking in finding the answers to some of these questions. It is the hope of those who planned the Colloquium that the published papers will stimulate some thinking about these key questions.

I want to take this opportunity to thank James L. Bowman for his work in directing the Colloquium. At the time of the Colloquium, Mr. Bowman was director of financial aid at Johns Hopkins University. He is now associate program director of the College Scholarship Service at Educational Testing Service, Princeton, New Jersey. I also want to thank the 12 speakers who, through their papers and in discussions, contributed much to this ongoing debate. The CSS hopes that these papers will prove valuable to the groups and commissions that have been established to study the structure of higher education in this country.

GRAHAM R. TAYLOR
Associate Director
College Scholarship Service

May 1967

Introduction

Reflecting on the Colloquium at which the papers in this volume were presented, I am reminded of a passage from Lewis Carroll's great children's classic:

" 'Will you tell me which way I ought to go
from here?'
'Depends on where you want to get to,'
replied the Cheshire cat.
'Well, I really don't very much care,'
replied Alice.
'Then, it doesn't matter much which way
you go,' said the cat."

For when looking at an area as broad as "The Economics of Higher Education," one can very readily feel like Alice. However, with the assistance of a very able advisory committee, the Colloquium planners were able to ascertain where they intended to go.

As envisaged by the planners of the meeting, the Colloquium was intended to deal broadly with the question of the most effective methods of financing higher education, and with the role and problems of the educational consumer. It was hoped that the Colloquium program would provide a guide to the problems, both present and implied, in current trends of financing higher education and would raise questions regarding the future that the participants could carry back to their own institutions. The role of the speakers, then, was not to present the results of research, but to present and discuss stimulating issues and assist the financial aid officers in looking at some of the implications for the future. That the speakers succeeded in this endeavor I think there can be little doubt.

I will not try to summarize the papers that were presented at the Colloquium and that now appear in this volume. To do so would not do justice to the presentations, for what one person views as important may be entirely irrelevant to another. It may be helpful, however, to review the framework of the program in which the papers were presented.

The initial address "Broadening the Socioeconomic Base of Higher Education in an Era of Rising Costs," by the Honorable Peter H. Dominick, Senator from Colorado, and the paper by Professor Seymour Harris on the economics of higher education, provided for discussions in the relatively broad area of the economic problems of higher education.

From this broad overview there followed discussion of the ways higher education can be financed, in view of the continued rise in the cost of education and society's desire to make higher education more accessible.

Of great concern, with respect to student accessibility to higher education, is the pricing problem of higher education and its concomitant effects on institutions, student choice and the socioeconomic mix of the student body. It is to this area that the papers presented by Allan Cartter and Fred Glimp were directed. As pointed out in the discussions that followed these papers, some source of funds other than parental income and college endowment must be used if access to higher education is to be broadened.

Given the fact that the resources of society must be used in the support of higher education if accessibility is to be broadened, what is the rationale for society's investment? Economists and sociologists have long been interested in the economic and social returns to the individual and to society that result from investment in higher education. There is

little doubt that there is some return from this kind of investment, and this reason is often advanced in support of proposals to rely upon long-term credit to the individual as the means of financing higher education. It was within this framework that Lee Hansen presented his paper. He left the thought with the Colloquium participants that, while there is a return to society and the individual, reliance on quantitative figures may be misleading, for there is much more work to be done in this area.

From the discussion of the rationale for society's investment, the participants progressed to discussions of the actual investment that is taking place within the public sector in the support of higher education and the broadening of accessibility to higher education. At the same time, alternative measures and future implications must also be of concern.

The United States government has long been a major provider of funds in support of education at all levels. Historically, the support has been directed toward the institutions in terms of grants, appropriations, tax support, and a host of other means. With the growing emphasis on accessibility to higher education for more of America's youth has come an increasing support of programs devoted to student financial aid. The interest of the federal government in educational opportunity was viewed by Peter Muirhead of the Office of Education in his discussion of federal financial aid programs. Within the area of state and local support of higher education, Selma Mushkin raised many questions for the future by projecting the need for expenditures in the decade ahead and the requirements that this expenditure will impose on the financial structure of state and local governments.

While current support of higher education by government is higher than ever before, a feeling exists that much more support is needed. An alternative solution that has been proposed, in lieu of increased direct federal support, is the provision of tax credits for educational expenditures. The pros and cons of such an approach to educational financing and its implications for the future are the target of the papers presented by Roger Freeman and Edwin Young. That the subject proved interesting to the Colloquium participants was demonstrated by the fact that the question and answer period continued long past the normal hour for adjournment.

The final phase of the Colloquium was devoted to some implications for the future in existing student financial aid programs. The growing proliferation of long-term credit for student financing of higher education has become of increasing concern to financial aid officers, and to institutions of higher education. As students continue to make substantial investments in current education from future repayments, what are the implications with respect to individual students and the institutions? In his paper relating to this area, Jack Critchfield gives financial aid officers great food for thought. Although concern has been expressed over the proliferation of loan funds, the judicious use of loans, in combination with other forms of financial assistance, is firmly entrenched in the student financial aid program. Consequently, the availability of funds for the purposes of [illegible]-term student credit is of importance. With increasing emphasis being placed on the commercial banking systems as the provider of funds for student credit, the effect of monetary policy on the ability of the banks to make loans is of great interest to financial aid officers. Many implications for the future were presented by Eliot Swan in his discussion of monetary policy and its effects on the financing of higher education.

An area of concern to institutions of higher education and to student financial aid officers is the effect on private philanthropy of the expanding role of government in the provision of student financial aid. The discussion by Robert Kreidler within the framework of support to higher education provided great insight.

While this summary has briefly sketched the framework of the Colloquium and the individual papers collected in this book, there is no way to reflect the discussions and interchanges, in both formal and informal settings, that took place among the participants in the Colloquium. That those who came were interested was evidenced by the fact that there was full attendance at all the sessions, in spite of the many diversions offered by the meeting place.

As director of the Colloquium, I would be remiss if I did not express my appreciation to the speakers for their excellent presentations, to the participants for their warmth and responsiveness, and to the staff of the College Scholarship Service for attending, in such a competent way, to the myriad of administrative details that are involved in such a meeting.

JAMES L. BOWMAN
Director of the Colloquium

April 1967

Pricing problems for higher education

by ALLAN M. CARTTER

Like many aspects of education, price both is and is not a problem. It certainly is a problem to every parent or self-financed student – but then it always has been. It is also a problem to every academic administrator who must face the annual decision of whether or not to raise fees, but then this is nothing new. I assume that the thorn causing the irritation is the question of rising real costs borne by the student and his family, and that the dilemma educators must grapple with is the perennial question of how much farther the tuition escalation can go without beginning to have serious effects on the demand for educational services – not just the total demand for places in college, but the intellectual and social mix of potential students that constitutes that demand.

First, let me suggest that this problem seems somewhat more pressing just now because the $2,000 level of tuition and fees is roughly analogous to the 4-minute mile. A very few colleges and universities have gingerly put their toe over the line, but as of 1966 the barrier is not clearly broken. There was a similar hesitancy just after World War II, when $1,000 fell by the wayside as a fee for attending the more prestigious colleges, although the GI Bill eased the path. Somehow odd sums like $650, $1,375, and probably $2,250 do not represent the same emotional hurdle for school or parent as the rounded sums do.

Because figures in current dollars tend to give a misleading impression – I, too, remember that my first new car cost only $1,200 in 1947, although I tend to forget that I was then saving money on a $2,600 instructor's salary – let me illustrate price trends in constant dollars, converting to 1964 prices. Table 1 shows the level of tuition and fees, and room and board costs, for three groups. An average is shown for 32 public institutions for in-state students and for out-of-state students, and also an average for 99 private colleges and universities. These are all the institutions that have reported such data consistently for each of the nine editions of *American Universities and Colleges*. Prices prior to 1964 have been inflated to 1964 equivalent levels by the use of United States Department of Commerce indexes. I have carried the series back as far as possible, for the choice of a beginning date markedly affects the results. Many tables like this one start with the postwar period, thus throwing into even bolder relief the relatively rapid rise of tuition costs at private institutions of higher education.

Several interesting points emerge. First, the real costs of attending college have increased since 1928 in each category of institution; total costs have risen 27 percent for in-state students at public institutions, 57 percent for out-of-state students, and 64 percent for students at private institutions. Compared with 1932 – or, for that matter, with any year in the 1930s – the change has been surprisingly minor. Total cost has actually declined for in-state public institutions and risen by only 10 percent for out-of-state public institutions, and a relatively modest 20 percent rise has occurred in the private institutions.

Second, for any year in the postwar period up to about 1960, the real costs were less than they had been during the prewar decade. That is to say, for anyone at a given income level such as $10,000 or its real equivalent in earlier years, for example, $3,700 in 1932, $4,000 in

1936, $4,250 in 1940, $7,400 in 1948, the cost of higher education was lower in the 1950s than in the 1930s.

Third, the most rapid relative increase has taken place over the last six or seven years. This increase is particularly noticeable in the case of out-of-state students in public universities and in the private institutions.

Fourth, room and board costs in real terms have hardly changed, the increase being 15 percent and 6 percent for the public and private institutions from 1928 to 1964, and the change being minus 14 percent and minus 22 percent respectively since 1932. Highlighted is the fact that tuition charges are responsible for almost all the real increase in costs. For example, for out-of-state students at public institutions, tuition and fees represented less than 30 percent of the total major costs in 1928 but were nearly equal to room and board charges by 1964. For private institutions, tuition and fees were 36 percent of the cost in 1928 but accounted for 60 percent by 1964. The marked increases in tuition levels reflect the increases in instructional costs, matching the more rapid rise of academic salaries over the past 8 or 10 years.

Table 2 makes a similar comparison of the 1928–64 period. The first three columns show indexes (1928 = 100) for total major costs in current dollars. The next several columns give various indexes of family and per capita income. Again they reinforce the view that the cost of higher education was a relative bargain

Table 1. Major college costs in constant dollars (converted to 1964 prices), 1928–64

	Public institutions (in state)[1]			*Public institutions (out of state)*[1]			*Private institutions*[2]		
Year	*Tuition and fees*	*Room and board*	*Total*	*Tuition and fees*	*Room and board*	*Total*	*Tuition and fees*	*Room and board*	*Total*
1928	168	651	819	267	651	918	449	798	1,247
1932	257	878	1,135	429	878	1,307	716	1,087	1,703
1936	268	741	1,009	471	741	1,212	696	944	1,640
1940	282	798	1,080	504	798	1,302	746	949	1,695
1948	189	615	804	390	615	1,005	574	699	1,273
1952	196	664	860	424	664	1,088	724	731	1,455
1956	215	682	897	475	682	1,157	731	752	1,483
1960	260	725	985	590	725	1,315	942	807	1,749
1964	294	751	1,044	690	752	1,442	1,200	849	2,049
Change (in percent)									
1928–64	+75	+15	+27	+159	+15	+57	+167	+ 6	+64
1932–64	+14	−14	− 8	+ 61	−14	+10	+ 68	−22	+20
Average annual $ increase									
1956–64	+10	+ 8	+18	+ 27	+ 9	+36	+ 58	+12	+70

1. Includes *20* large and *12* small public institutions which have reported student cost data in each edition of *American Universities and Colleges* since 1928.

2. Includes 99 private institutions regularly reporting student cost data, in the following categories: 14 large universities, 14 medium-size universities, 30 coeducational liberal arts colleges, 20 men's colleges, and 21 women's colleges.

Table 2. Indexes of income and college costs (tuition and fees, room and board), 1928–64

Year	Public in-state major costs	Public out-of-state major costs	Private major costs	Per capita disposable income	Pre-tax average family income	Post-tax average family income	Ratio of private to public (in-state) cost	Ratio of private to public (out-of-state) cost
1928	100	100	100	100	100	100	1.53	1.37
1932	108	112	111	58	Not available	Not available	1.58	1.37
1936	102	112	109	77	73	72	1.63	1.35
1940	112	121	115	86	80	79	1.57	1.30
1948	152	170	159	193	187	171	1.58	1.27
1952	180	205	185	226	228	205	1.58	1.24
1956	200	233	218	260	265	240	1.65	1.28
1960	238	286	279	287	303	276	1.78	1.33
1964	268	333	346	336	356	322	1.96	1.42

in the postwar decade and only in the last several years has returned to about parity with per capita incomes.

Perhaps the figures that best illustrate the unease today's academic administrator feels about tuition levels are in the two right-hand columns of Table 2. Here is shown a ratio of total major costs between the public and private institutions from 1928 to 1964. The ratios were surprisingly stable throughout the period until the 1960s. The cost to the student in the average private institution remained about one and a half times the cost of attending an in-state public institution as a resident student until nearly 1960, but it has now quickly risen to double. The ratio between out-of-state public and private institutional costs had risen in 1964 above the 1928–32 level for the first time. This widening differential should be a cause for concern to all parties – to private institutions, because a rising price differential will probably have serious effects upon the type of student body they can attract; and to public institutions, because this increasing spread creates more local pressures for instituting or raising tuition. If there were a corresponding divergence in the quality of education offered by public and private institutions, this widening price differential might not be a cause for concern; however my impression is that over the last generation the qualitative differential has, if anything, been reduced (and in some areas public institutions are superior to private institutions in the quality of education offered).

In order not to overstress this point, however, let me add one major qualification. In 1940 only about 9 percent of family units had incomes of $10,000 and above in 1964 dollars (roughly the equivalent of $4,250 in the dollars of the day), as contrasted with about 20 percent today. Further, in 1940 only about half of the children in such families entered college, whereas about three quarters of them do today. Finally, the total college-age population has risen by one-third since 1940. Combining these factors, I estimate that only about 400,000 college students came from families whose income was $10,000 and above (1964 dollars) in 1940, as contrasted with 1.8 million today. This increase of four and a half times should be contrasted with the fact that enrollment in private colleges and universities has increased only about two and a half times over the same 25 years. Thus, there are nearly twice as many students from relatively affluent families compared with the number of places

in institutions of higher learning as there were 25 years ago. I would conclude from this that were the private colleges and universities content with the same mix of students – socially and intellectually – that they had in 1940, they could probably charge from a third to a half more than their current price. Because academicians by and large are men of conscience, they are hesitant to charge what the market will bear. Thus they have resorted to the only other seemingly equitable and administratively simple device of rationing students – that is, greater selectivity on the basis of academic achievement and aptitude. It is no wonder that this is an age of educational testing, for educators have tended to substitute such tests for market instruments of rationing. But now research studies are subverting educators' faith, by indicating that academic grades have little predictive value for later career success and that "neutral" tests have a strong and indelible cultural bias; thus educators are left in an increasingly uncomfortable position. Oh for the faith of the Robbins Committee, debating at length whether the proper cutoff point for university education in Great Britain should be 111.5 or 118!

Let me summarize again what I conclude from Table 1 and Table 2 concerning the pricing problem facing private colleges and universities. First, private institutional costs have risen faster than public institutional costs, particularly over the last seven or eight years. Second, private institutional costs, however, have risen little in relation to family incomes – in fact, in relation to the incomes of families that have traditionally sent their children to private institutions, costs of private colleges may still be below their level in the 1920s and 1930s. Third, the number of college students from relatively affluent families ($10,000 and above) has risen twice as fast as the number of places in private institutions. Thus the opportunity to raise tuition levels has certainly not been exhausted, although many institutions will not be able to retain their newly found and now cherished selectivity in admissions if tuition levels continue to rise at their recent rate. Fourth, greater economic selectivity of students (implied in the rapid tuition rise in private colleges) is occurring just at a time when most institutions would prefer to broaden the base from which they draw able students; thus many private institutions are caught between economic necessity on the one hand and an enhanced sense of social obligation on the other.

Until now I have concentrated on the institutional view of college pricing. A preliminary comment should be added from the consumer's perspective. The growth of the public institutions of higher education has broadened the range of alternatives available to the individual student. Fifty years ago public collegiate education was by and large an "inferior good" in the economist's terminology – cheaper both in price and in quality. In most states this is no longer true, and the best public colleges and universities now provide educational services that are the equal of those offered by private institutions. The public institutions are very diverse, providing a range of low-cost alternatives from junior college through university level. Thus in terms of price, quality, accessibility, and admissibility, the individual student has a much wider range of choice than ever before. In addition, the growth of state scholarship and partial-tuition grant programs, and the ready availability of both private and public loan funds, have tended to lessen the financial burden regardless of the stated institutional price level. Thus the total collegiate system is achieving a more desirable balance in terms of composition of the student body – drawn from the whole range of economic and social strata. Most educators, whether they represent public or private institutions, are less content with the particular "student mix" in any single institution, but the whole system works remarkably well.

Let me turn now to some questions of pricing in public systems of higher education. Ta-

Table 3. State indexes of college cost, enrollment, quality, and public support

States ranked by price	Representative public price for undergraduates (in dollars)[1]	Ratio of in-state public enrollment to 18-21 age group	Ratio of private plus out-of-state public enrollment to 18-21 age group	Quality index for public sector (5-point scale)[2]	Index of state effort[3]
1. California	387	.54	.09	2.5	.25
2. Florida	393	.27	.16	2.3	.24
3. Mississippi	510	.23	.07	1.6	.58
4. Texas	570	.30	.10	1.7	.23
5. Idaho	586	.25	.20	2.9	.49
6. Illinois	589	.25	.19	2.7	.16
7. Louisiana	631	.28	.08	2.0	.55
8. Missouri	648	.22	.16	2.0	.14
9. Maryland	651	.19	.22	2.2	.14
10. Kansas	656	.39	.15	2.2	.35
11. Oklahoma	675	.34	.12	1.9	.36
12. Wyoming	696	.33	.14	3.1	.39
13. Arizona	703	.43	.06	2.4	.35
14. Washington	703	.34	.14	3.0	.35
15. Kentucky	715	.17	.13	2.4	.31
16. Tennessee	745	.18	.13	1.5	.23
17. Georgia	748	.13	.09	1.6	.25
18. Arkansas	767	.19	.11	1.6	.46
19. Massachusetts	771	.11	.37	1.7	.04
20. Nebraska	771	.31	.15	2.3	.28
21. North Dakota	776	.35	.20	1.7	.79
22. North Carolina	779	.13	.11	2.1	.28
23. West Virginia	787	.22	.10	1.3	.39
24. Alabama	813	.15	.10	1.6	.30
25. South Dakota	827	.27	.17	2.5	.39
26. New York	839	.18	.21	2.1	.07
27. Michigan	843	.32	.13	2.3	.26
28. Virginia	843	.14	.16	2.3	.19
29. Ohio	853	.24	.20	2.5	.12
30. Iowa	861	.20	.26	3.4	.34
31. Connecticut	866	.16	.37	1.8	.07
32. Utah	906	.40	.13	3.0	.45
33. Colorado	910	.29	.12	2.2	.24
34. Delaware	934	.15	.19	3.7	.12
35. New Mexico	942	.26	.09	3.2	.41
36. Montana	946	.33	.15	2.7	.42
37. New Hampshire	948	.14	.18	3.1	.17
38. Wisconsin	955	.30	.14	2.6	.21
39. Minnesota	973	.31	.15	2.8	.26

Table 3. State indexes of college cost, enrollment, quality, and public support (continued)

States ranked by price	*Representative public price for undergraduates (in dollars)*[1]	*Ratio of in-state public enrollment to 18–21 age group*	*Ratio of private plus out-of-state public enrollment to 18–21 age group*	*Quality index for public sector (5-point scale)*[2]	*Index of state effort*[3]
40. Oregon	984	.31	.15	2.8	.35
41. Maine	992	.14	.12	3.0	.17
42. Nevada	1,001	.26	.10	4.0	.19
43. South Carolina	1,004	.09	.11	1.8	.32
44. Pennsylvania	1,028	.10	.30	2.1	.05
45. New Jersey	1,057	.16	.34	2.4	.05
46. Indiana	1,113	.24	.16	3.5	.26
47. Rhode Island	1,114	.13	.20	2.3	.15
48. Vermont	1,149	.15	.16	3.1	.29
Average of lowest-price 10 states	$562	.292	.142	2.52	.313
Average of highest-price 10 states	$1,042	.189	.179	2.78	.209

1. Average major costs, weighted by enrollment in junior colleges, senior colleges, and universities.

2. Weighted quality index for public institutions, from dissertation in progress by R. Farrell.

3. State and local expenditures for current operations for public institutions of higher learning, stated as percent of state per capita personal income.

ble 3 presents some preliminary data drawn from a dissertation in progress by Robert Farrell, a research associate working with me. Column one indicates the weighted-average level of major costs (including room and board for resident students) for all public institutions of higher education in all states except Hawaii and Alaska. California is the least expensive, not only because of the low level of fees (no tuition charges are made in state institutions), but also because a very high percentage of the students enrolled live at home. The states at the high end of the list generally have relatively high tuition, a high percentage of resident students, and very few public junior colleges in the state.

These selected indexes reflect some of the economic choices faced by each state in higher education. I would have anticipated the following relationships between the level of public prices and the other variables. States that have below-average price levels would have above-average ratios of in-state public enrollment in the 18 to 21 age group, below-average ratios of private plus out-of-state enrollment to population, and a larger total ratio (the two combined). Low prices would also be associated with a high index of state effort. Overall quality would probably depend upon a combination of the factors reflected in the first and last column.

As one runs down the columns of Table 3, the figures for particular states do not seem to comprise a clear-cut pattern. However, the general presumptions referred to above are evident. For example, the averages shown for the top 10 and bottom 10 states indicate that the ratio of columns 2 and 3 is approximately 2 to 1 for the low-price states, and 1 to 1 for the high-price states; and the combined enroll-

ment ratios are .434 for the low-price states, and .368 for the high-price states, as expected. Tuition levels and state support through public revenues are seen to be inversely related. Quality does not differ significantly between the two categories.

The quality index in Table 3 deserves an added word, for it may seem surprising to find Wyoming above Michigan, and Idaho above California. R. Farrell, whose index this is, based his rating of four-year institutions on a study by David Brown, professor of economics of the University of North Carolina to be published by the American Council on Education in 1967.[1] For the two-year institutions Farrell developed his own rating index based partly on the ratio of associates degrees to enrollment, and partly on the experience of junior colleges in sending their students on to senior institutions. For the universities, four-year colleges, and two-year colleges, institutions were rated on a five-point scale. The overall state index reflects these ratings, weighted by the percentage of students in each type of institution. Thus the University of California is admittedly outstanding, but only 9½ percent of Californians attend the university, as contrasted with about 25 percent in state colleges and 66 percent in junior colleges.

At the other extreme the University of Wyoming is not generally thought of in a class with the University of California at Berkeley, but the majority of students in public institutions in Wyoming were attending the university. States that rank about 2.5 are generally quite good, as a system; states below 2.0 probably leave something to be desired as a system, even though some units of the system may stand out qualitatively (as is the case in Texas). California does reasonably well on overall quality, even though it charges the lowest fees and was twenty-seventh in order of state effort. Somehow the sheer size of California, plus the unusually high level of per capita income, permits it to have a quality system at a relatively small cost. Some of the poorest states in terms of per capita income have high effort ratings – for example, Mississippi, Louisiana, North Dakota, and Arkansas – but they are not absolutely well enough off to provide high quality systems of public education.

When I reviewed these quality indexes for the public institutions I suggested to Farrell that it would be interesting to compute them for the private institutions in each state, for one would expect a close correlation. In such states as California, Washington, Utah, Iowa, Delaware, and Indiana, it probably is more difficult for a medium quality private institution to make the grade in the face of quality competition from the public institutions. By contrast, I would imagine that the relatively low quality index for the public-institution system in Mississippi, Texas, Tennessee, West Virginia, and South Carolina would permit relatively poor private institutions to hold their own in these states.

Similarly, one would expect private institutions to fare better in states where the level of charges at public institutions is high. The competition for in-state students is tough in California and Florida, but more favorable to the private college in Vermont, New Jersey, and Pennsylvania. If the price differential between the public and private institutions is quite large, then the private institutions must work doubly hard to offer a type of educational experience that is not, or cannot, be offered by public institutions. One factor in favor of the private institution is that there seems to be something in the nature of the political or state budgetary process that puts a premium on rapid expansion of public institutions. The kind of public institution that might have represented a real challenge to the private liberal arts college was illustrated on either coast by Harpur College in the New York State system and by The University of California at Santa

1. David Brown, *Academic Labor Markets*. The study was conducted with support from the U.S. Department of Labor.

Cruz. Within a few short years, however, Harpur has determined to become a full-fledged university rather than a prototype excellent public liberal arts college, and Santa Cruz is being permitted only that degree of deviation from the university pattern that can be shoehorned into the standard budgetary formula. The small private colleges on either coast should be grateful to the respective regents for preventing poaching on their territory.

For emphasis, let me state the above point in the form of a question. Administrators in private colleges and universities must constantly ask themselves: What do we offer the student that justifies the price differential between private institutions and competing public institutions? It may satisfy *some* administrators that they experience more autonomy vis-à-vis the statehouse and exhibit academic independence, but this is not a sufficient answer to the student (or his parents) who must shoulder the higher cost. Nor is low quality personalized education a good substitute for high quality depersonalized education, in my judgment. Several months ago I might have posed this question merely as a challenge; today I am losing some of my own sleep asking what it is that New York University can do sufficiently better to justify the price differential between it and The City University of New York, the State University of New York at Stony Brook, or Rutgers – The State University. If there is not a convincing answer to this question – and I honestly believe there is – then there is no particular future for this type of private institution.

Finally, let me turn to the question of the characteristics of students attracted to different types of institutions – most particularly types according to cost category.

The Office of Research of the American Council on Education, under the direction of Alexander Astin, has recently initiated a student data bank, which assembles information about student and institutional characteristics on an annual basis. Work done in the 1965–66 academic year was a pilot operation, and 62 participating institutions were chosen as a balanced representative sample. In 1966-67 the Council will have about 300 institutions involved. Figures 1 and 2, and Table 4, summarize a few selected items I requested as background for this paper. The data cover about 40,000 entering freshmen who answered questionnaires at the time of their registration in September 1965. Within six weeks the institutions had received full particulars about their entering classes, and national norms for their particular type of institution.

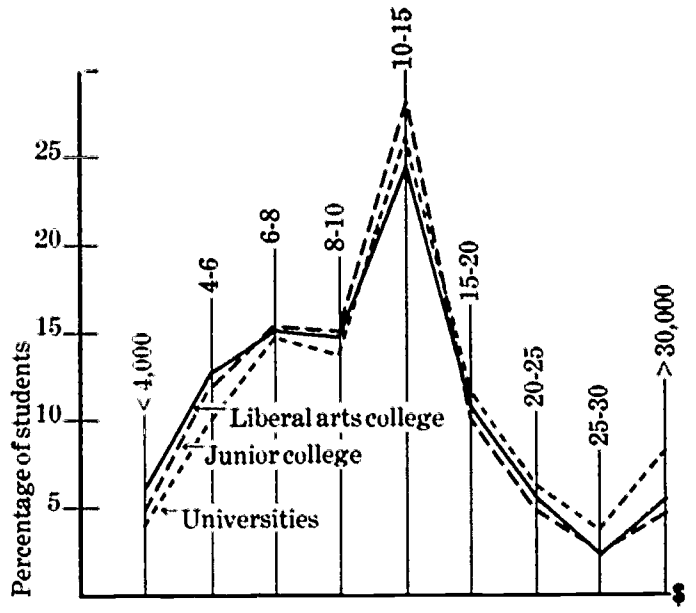

Figure 1

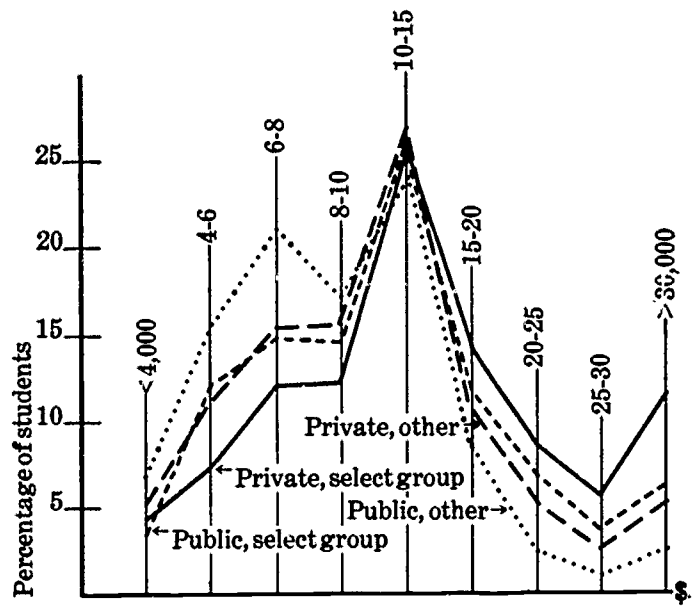

Figure 2

Table 4. Some characteristics of 1965–66 freshmen in four categories of institutions

	Private institutions		Public institutions	
	Select group	*Other*	*Select group*	*Other*
Highest degree planned:				
None	.8	2.1	.9	2.6
Bachelor's	21.8	36.7	41.1	34.7
Master's	34.8	39.0	30.3	44.6
Professional degree	16.9	9.9	15.2	7.2
Doctorate (Ph.D. or Ed.D.)	25.4	11.9	11.9	10.7
Other schools applied to:				
No other	25.3	34.2	52.1	42.8
One other	17.9	21.5	21.6	20.6
Two others	20.2	19.7	13.0	17.9
Three others	17.7	13.6	8.0	11.3
Four or more	18.5	10.8	5.0	7.2
Average number of applications	2.8	2.5	1.9	2.2
Other schools, number of acceptances:				
No other	28.5	34.2	48.7	42.8
One other	29.0	31.5	28.1	28.3
Two others	23.4	20.7	14.6	18.4
Three or more	28.7	13.3	8.2	10.2
Average number of acceptances	2.4	2.2	1.8	1.9
Schools preferred to current one:				
No other	79.1	77.8	86.0	81.4
One other	17.4	18.8	11.6	16.1
Two or more others	3.5	4.4	2.4	2.5
Type of secondary school attended:				
Public	73.7	74.2	89.5	88.7
Denominational	10.9	20.1	5.4	7.5
Private	15.4	5.7	5.1	3.8
Average grade in secondary school:				
A	38.5	16.1	27.2	11.7
B+	23.7	17.7	22.9	18.8
B	17.6	21.9	22.2	26.4
B−	9.3	17.0	13.6	18.2
C	10.4	26.3	13.7	23.9
D	.2	.5	.1	.6
Father's educational attainment:				
Grammar school or less	4.1	7.4	5.0	8.3
Some high school	6.9	12.5	8.2	15.6
High school graduate	18.4	26.0	25.8	33.2
Some college	17.9	20.2	22.5	18.9
College graduate	26.6	20.8	23.5	16.2
Postgraduate degree	25.8	12.9	14.6	7.5
Mother's educational attainment:				
Grammar school or less	2.5	4.8	2.8	4.5

Table 4. Some characteristics of 1965–66 freshmen in four categories of institutions (continued)

	Private institutions		*Public institutions*	
	Select group	*Other*	*Select group*	*Other*
Some high school	6.1	9.4	6.3	12.9
High school graduate	27.9	38.0	37.3	45.3
Some college	25.0	23.9	26.5	20.1
College graduate	30.4	20.1	23.4	14.7
Postgraduate degree	7.9	3.6	3.4	2.2
Estimated parents' income:				
$4,000 and below	4.0	5.4	3.9	6.7
$4,000–$6,000	7.4	11.3	11.5	15.5
6,000– 8,000	11.4	15.2	14.9	21.1
8,000–10,000	12.0	15.9	14.2	16.5
10,000–15,000	24.6	26.6	26.3	24.2
15,000–20,000	14.0	10.7	11.9	8.4
20,000–25,000	8.5	6.0	6.7	3.2
25,000–30,000	5.5	2.6	3.5	1.5
30,000 and above	12.1	5.8	6.7	2.5
Estimated median	$13,750	$10,500	$11,000	$8,500
Concern about financing education:				
None	41.0	37.6	40.9	33.5
Some concern	50.4	52.9	50.7	57.0
Major concern	8.4	9.4	8.3	9.3
Secondary school achievements:				
President of student organization	36.8	29.7	35.0	24.9
Major part in student plan	22.9	22.9	26.1	21.3
Edited school paper	19.1	14.0	16.8	12.1
Original writing published	30.1	20.7	23.0	15.3
Participant, National Science Foundation Summer Program	5.4	1.0	2.3	.7
Scholastic honor society	53.4	31.4	40.6	25.3
National Merit recognition	29.6	8.5	12.3	5.8
Average level of tuition at institutions studied	$1,534	$960	$308	$326

The grouping of senior institutions into four categories in Table 4 was my own choice. The data are summarized for (column one) prestige private institutions such as Reed College, Williams College, California Institute of Technology, and Tulane University; (column two) representative private institutions such as Whitman College, University of Denver, George Peabody College for Teachers, and Gonzaga University; (column three) prestige public universities such as the University of North Carolina and the State University of Iowa; and (column four) representative public institutions such as the State University of New York at Oswego, Arizona State University, and Northwest Missouri State College. The two categories of private institutions had tuition levels of $1,534 and $960, respectively; the public institutions averaged about $310.

Figures 1 and 2 summarize the family income

data. Figure 1 is particularly striking, for it indicates that there is little difference in the economic background of undergraduates in junior colleges, four-year colleges, and universities. The median income of families of students in the three types of colleges is approximately $11,000 for university students, $10,250 for junior college students, and $9,750 for liberal arts college students.

Figure 2, however, shows much greater diversity in high- and medium-reputation private and public institutions. The estimated medians in this case are $13,500 for the select private institutions, $11,000 for the select public institutions, $10,500 for the other private institutions, and $8,500 for the other public four-year institutions. In this case the select public institutions and medium-quality private institutions show great similarity, between the extremes represented by the others.

The similarity of the select public-institution students and representative private-institution students is also evident in many other characteristics shown in Table 4. Their parents' educational backgrounds are almost identical, their degree aspirations and their achievement patterns are quite similar.

Let me briefly pick out a few salient points from Table 4. Clearly a majority of freshmen today hope to obtain an advanced degree beyond the baccalaureate. About 65 percent of the 1965 freshmen planned some postgraduate study, as contrasted with only 44 percent of the 127,000 freshmen asked the same question by Astin in a similar sample study in 1961. In 1961 about 8 percent hoped to get the doctorate, and 11 percent an advanced professional degree; by 1965 these percentages were about 14 percent and 10 percent. Interestingly, a majority of students in each type of institution planned advanced study, although, as expected, the concentration was heaviest in the prestige private institutions (but, surprisingly, lowest in the select public institutions).

The next two items provide an interesting insight into the admissions problem. The average number of applications for college admission was about two and a half per student (highest in the private institutions); the average number of acceptances received was about two. These figures suggest that the 1965 admission volume was more than four million applications, more than three million acceptances, and one and a half million students who finally registered. Although students may have been tempted to understate slightly the number of applications made and to overstate the number of acceptances, the data suggest that only about one-fourth of student applications are actually rejected by the receiving institutions, but that more than half the accepted students in any particular institution do not finally enroll (declined admission and "no shows" were 58 percent for select private colleges, 55 percent for other private institutions, and about 45 percent for public institutions). The answers to the next question about school of preference are either a justification after the fact, or a note of praise for the complex admissions system that put 4 out of 5 students where they wanted to be in the first place.

In terms of secondary school background, the select private colleges draw more heavily from the nondenominational private secondary schools, and the other private colleges draw more heavily from the denominational schools (three-fourths of this number were from Catholic schools), than do the public institutions. In secondary school academic achievement the select private colleges, on the average, attract the most promising students, followed by the select public institutions (who get relatively fewer, but absolutely as many, distinguished students); the other private and public colleges follow in that order.

Although about a third of the parents of students in the prestige private colleges did not have any college experience of their own, for the rest of the student families the number is closer to half. This says a great deal about the impact of expanded college opportunities in the post-World War II years and is a trib-

ute both to parental aspirations and to the open-door policy of most of American higher education. Perhaps the distribution of parental attainment is still too skewed in favor of college graduates begetting college graduates to suit some social architects, but figures of this sort always renew my optimism about the future of America.

Finally, the last section of Table 4 shows the distribution of parental incomes, which is shown also in Figure 2. A number of colleges were requested to compare the parental income figures provided by students with the figures supplied by parents to the CSS, and the close approximation was a pleasant surprise. Parents beware: children know more about your affairs than you think they do.

In conclusion, let me offer a few reflections on the material presented here. There are few surprises in the data – although I found it useful to confirm some of my presuppositions and to qualify others. Gresham's law apparently does not apply to higher education, for poor quality or low cost colleges do not drive out high quality–high price institutions. If anything, it works the other way around for the several hundred private colleges and universities that have developed a wide reputation for both educational quality and selectivity. If the colleges that are less well endowed both financially and intellectually are facing the future with less optimism, I believe the root cause is basically that the quality of the public institutions has been rising in almost every state. Thus "the plight of the small college" one hears so much about today is itself a symptom of the success of public higher education. From the vantage point of the nation as a whole this probably represents a substantial net gain, even though it may be disheartening to those whose lives are invested in these struggling private institutions. However, it should be pointed out that rarely in the last 20 years has an institution doing even a reasonably good job of education ever failed and disappeared – although a modest number have merged with stronger colleges, and a small number have become public institutions.

My impression is that price is a deciding factor in surprisingly few instances in determining whether or not to go to college – it looms largest to those students who are weakly motivated, to those who are somewhat dubious academic risks, and to those whose resources are quite limited. Few would disagree that educators should do everything possible, at the institutional, state, and federal level to minimize the problem for the last of these three groups. A number of studies have indicated that cost is a relatively minor consideration in preventing bright youngsters from attending college. Interestingly, in Table 4 there is almost no difference in the concern over finances of students in any of the four categories. But once the decision has been made to go to college, I think it goes without saying that price is important in encouraging or discouraging an application to a particular institution. Given the applications received, most private and public colleges will bend over backwards to admit students on the basis of merit and to find the necessary means of finance for the student in need. The differences among categories of institutions that show up in Table 4 – I am convinced, although I cannot prove the point – are probably less than the differences that would exist if one compared the total group of applicants. Perhaps Astin's data bank can answer this question several years from now. One useful finding that it will be able to provide in a few years is a description of the ways the economic, social, and intellectual characteristics of the student body in any given college, or group of colleges, changes over time. I, for one, will be eagerly awaiting the results, for as chief administrative officer of a private university that has raised the average entering Scholastic Aptitude Test score by 100 points in three years (coincident with a decrease in freshman enrollment of nearly one-fourth), I would find the answers to such questions invaluable.