DOCUMENT RESUME

ED 154 677 HE 009 949

AUTHOR Proomkin, Joseph; McCully, Clinton
TITLE A Review of Financial Developments in Higher Education, 1970/71-1974/75, and a Prognosis for 1980-1985.
INSTITUTION Proomkin (Joseph) Inc., Washington, D.C.
PUB DATE Feb 77
CONTRACT 300-76-0026
NOTE 205p.; Not available in hard copy due to marginal reproducibility of original
AVAILABLE FROM Joseph Proomkin Inc., 1015 Eighteenth Street N.W., Washington, D.C. 20036

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS College Faculty; College Teachers; *Educational Demand; *Educational Economics; *Educational Finance; Enrollment Trends; *Futures (of Society); *Higher Education; Private Colleges; *Retrenchment; State Colleges; State Universities; Teacher Salaries

ABSTRACT

There is no evidence of financial crisis in higher education, if by "crisis" one means the failure of institutions to balance revenues and expenditures. Most institutions were and are making ends meet, though not without some difficulty; most colleges and universities have had trouble recruiting sufficient numbers of students. As a rule, the institutions that attracted more students increased their expenditures for instruction per student at a slower rate than those that lost students. In both public and private sectors, the institutions that have been losing students most rapidly have raised their tuition most rapidly; this threatens private enrollment more than public. Most savings have been made at the expense of teaching and professional staffs, whose salaries failed to keep up with the cost of living. Under most circumstances, there is likely to be a hair-breadth balance between expenditures and revenues in both the public and private sectors in 1980. By 1985, unless private enrollment declines, non-state supported schools are likely to face deficits in their instructional account, and the public sector books are likely to balance without any unusual effort. Serious problems are anticipated for some institutions. (Author/MSE)

JOSEPH FROOMKIN INC
1015 EIGHTEENTH STREET N W, WASHINGTON D C 20036

A REVIEW OF FINANCIAL DEVELOPMENTS IN HIGHER EDUCATION, 1970/71 - 1974/75, AND A PROGNOSIS FOR 1980 - 1985

By

Joseph Froomkin
Clinton McCully

EPRC for Higher Education and Society

Contract No. 300760026

February 1977

ABSTRACT

Is the concern about the current state of finances of higher education actually based on facts? Is the concern about the future justified?

It is easy to give a hard-nosed answer to the first question. There is no evidence of a financial crisis in higher education, if by crisis one means the failure of institutions to balance revenues and expenditures. Most postsecondary institutions were and are making ends meet, though not without some difficulty, and potential students are not being turned away by a lack of spaces in institutions strapped for operating moneys.

On the contrary, except for very selective institutions, most colleges and universities have had trouble recruiting sufficient numbers of students. Fall enrollment in 1974 compared to fall 1970, in fact, declined in roughly half of all private and a fourth of all public institutions. Campuses which lost enrollment accounted for one-third of all the postsecondary enrollment in 1970, but their share of total enrollment decreased in the next four years as growing institutions increased their enrollment by some 20 per cent.

As a general rule, institutions which attracted more students increased their expenditures for instruction per student at a slower rate than those which lost students. Although the losers in the enrollment competition started out with a lower level of spending per student, by the end of the period the expenditures per student were equal in both groups. Nevertheless, enrollment losses continued in the declining group.

In both the public and private sectors, the institutions that have been losing students most rapidly have raised their tuition most rapidly. This development threatens enrollments in the private sector probably much more than in the public. Private institutions with fast-declining enrollments, which used to charge considerably less than the average, now charge the average tuition for the private sector.

There is little doubt that higher education as a whole has been strapped for funds over the past few years. If past trends had continued into the 1970's, instructional budgets would have exceeded the estimated expenditures in 1974/75 by a billion in current dollars. Most of the savings were made at the expense of teaching and professional staffs, whose salaries failed to keep up with the cost of living. We estimated that, had there been no recession, enough money would have been available to obviate the need for the severe lid on salary increases. This fact, however, must be small comfort to professors who have seen their real income decline in both relative and absolute terms over the past few years.

The financial prospects of higher education in the next ten years are beclouded, mainly because total enrollments are likely to remain at current

levels, or perhaps even decline. The projections of enrollments presented in this study anticipate stability in the total number of students enrolled in higher education in the course of the next ten years. On the optimistic side, slow growth is projected in the work load of the public sector (measured in full-time equivalent students) and no significant change in enrollments for the private sector. If, on the other hand, anticipated shifts from full-time to part-time study were to materialize, the resulting pessimistic projection would anticipate that the work load of the private sector would decline by some 20 per cent between now and 1985, and that of the public sector would decline by some two per cent.

The effect of these declines on the balance between revenues and expenditures will, of course, depend both upon the developments in the economy as a whole, and upon the wage and salary policy of the administrations of higher education institutions. To bring realism to the projections, we have estimated both expenses and revenues in a full-employment, fast-growth economy, and also in the eventuality that productivity rises more slowly and unemployment remains at a fairly high level of six per cent.

It is surprising that under most circumstances, there is likely to be a hair-breadth balance between the expenditures and revenues in both the public and private sectors in 1980. By 1985, unless enrollment in the private sector declines, non-state supported schools are likely to face deficits on their instructional account; and the books of the public sector are likely to balance without any unusual effort.

The projected balance of finances in higher education as a whole was predicated on the following assumptions: (1) instructional personnel will not make up their real income losses sustained in the past three years, (2) in the future, their real income will increase one-half of one per cent less than average earnings in the slow-growth; and at the rate of average earnings in the fast-growth economy, and (3) state and local governments will continue to devote an increasing percentage of the gross national product of the country to subsidize higher education.

Even with these "optimistic" assumptions, we anticipate serious problems for some institutions. Currently, there is no evidence that institutions which have been losing enrollment are arresting their losses of students. With further erosion of their student base, these institutions, especially in the private sector, will have to either institute draconian economies or close their doors. In the public sector, the pressure to economize will be also strong, as the projected balance between income and outlay will not allow the profligate use of resources in institutions which fail to attract students.

What action, if any, should the federal government take to preserve the diversity and health of higher education? Probably, it will not need to take any drastic steps, such as across-the-board institutional support, but we do foresee pressure for mini-Lockheeds to bail out failing institutions. Given the outlook for the next ten years, such action is not recommended. It will merely weaken remaining private institutions, and serve to perpetuate the misallocation of resources in higher education. More importantly, it would make the federal government party to the misdirection of students to institutions which offer training or majors with little appeal.

In the light of the findings of this study, three modest thrusts for federal policy in higher education appear to be indicated: (1) to reverse the policy in awarding Basic Opportunity Grants, which favors low tuition in the public sector. This could be accomplished by either splitting the grant between tuition and living costs, or putting a relatively high limit on the level of tuition included in the calculation of need, (2) to encourage the private sector to enroll more part-time students, possibly by suggesting to the Fund for Postsecondary Education that the funding of experiments where much of the clerical, maintenance, and possibly student counseling effort is provided by part-time students would encourage schools which would otherwise shrink to an uneconomic size to appeal to the part-time student market. These schools located in areas where few part-time jobs are available could tap into this market. (3) Finally, to adopt measures to protect the financial well-being of the faculty. In the long-run, if professors' standards of living are depressed further, it is likely that teachers in specialties most in demand in the "real world" will be hired away, and the training available to students be further skewed to less economically viable professions. The possibility of improving the tone of the labor market for professors, through federal participation in retirement funds, or special health-insurance plans, immediately comes to mind.

TABLE OF CONTENTS

I.	A DISCUSSION OF TRENDS IN THE EXPENDITURES AND REVENUES OF HIGHER EDUCATION INSTITUTIONS, BY TYPE AND CONTROL	2
	All Institutions	2
	Expenditures	2
	Revenues	6
	Effects of slower growth	7
	The Public Sector	9
	Universities	10
	Other four-year institutions	11
	Two-year institutions	11
	The Private Sector	12
	Universities	13
	Other four-year schools	14
	Two-year schools	14
	Crisis Or No Crisis?	14
II.	A DIFFERENT LOOK AT RESOURCE ALLOCATION	16
	A Consistent Explanation of Enrollment Changes?	23
	"The Crisis" and the Situation of Students	27
III.	THE FINANCES OF THE POSTSECONDARY SECTOR TO 1985	29
	Projections of Future Enrollments	31
	Estimates of Instructional Costs	34
	Revenues	38
	The Next 10 Years--The Parameters of Solvency	41
IV.	AN EVALUATION OF FINANCIAL CONDITIONS	43
	Financial conditions in the past	44
	The balance between the public and private sector	47
	Schools which gained or lost enrollment	49
	Problems of academics	51
	Summary	53
FOOTNOTES		55
TABLES		59

TABLE OF CONTENTS (Cont'd)

APPENDIX A	A-1
APPENDIX B	B-1
APPENDIX C	C-1

FINANCIAL DEVELOPMENTS IN POSTSECONDARY EDUCATION, 1970/71 - 1974/75

The financial health of the postsecondary sector continues to be of concern to institutional administrators and to policy-makers. Ever since the early 1970's, when a forecast of the financial crisis in colleges and universities was published,[1] there has been persistent fear that financial stringency would affect the quality of postsecondary education and cause a number of schools, mainly in the private sector, to merge or to close their doors. The study below will try to explain the reasons for the pessimism about the prospects of the postsecondary sector, and highlight the factors which caused the direst predictions not to come true--at least, not up to now.

In the recent past, much of the discussion of the financial health of our colleges and universities has been beclouded by the lumping together of developments which affect the sector as a whole, developments which affect only certain groups of institutions, and circumstances relating to the pay and working conditions of instructional personnel. To clarify past trends and identify future issues more effectively, the present paper has been organized in the following manner:

I. A discussion of trends in the expenditures and revenues of higher education institutions, by type and control.

II. A different look at resource allocation. This consists of an analysis of key developments in selected institutions which either gained or lost enrollment during the intervening period.

III. A discussion of the enrollment and financial prospects of the postsecondary sector to 1985.

IV. An evaluation of the financial condition of postsecondary institutions, showing to what extent it depends upon the rates of pay and levels of employment of instructional personnel.

I. A DISCUSSION OF TRENDS IN THE EXPENDITURES AND REVENUES OF HIGHER EDUCATION INSTITUTIONS, BY TYPE AND CONTROL

All Institutions

Expenditures. After the prodigiously fast growth of expenditures in the five-year period ending with 1969/70, the rate of growth of resources devoted to postsecondary education slowed down considerably during the 1970/71 to 1974/75 period. The $10 billion increase in the first half of the 1970's which brought the total expenditures of postsecondary institutions to over $35 billion in 1974/75,[2] represented a rate of growth of nearly 50 per cent, only two-thirds the 72 per cent increase of the previous five-year period.[3] (See Table 1.) Most of the slowdown in the rate of growth of outlays was caused by the decline in the rate of growth of student enrollments. On a per full-time equivalent (FTE) student basis, outlays increased by 29 per cent between 1971 and 1975, as compared to 33 per cent between 1965 and 1970.

Once these expenditures are adjusted by the change in costs paid by institutions[4] in the course of the past ten years, however, current outlays per student appear to have remained practically constant. Despite the relatively higher rate of inflation in the economy during the latter five-year period, the costs of institutions increased at the same rate in both quinquennia. (See Table 2.) The reason for this is that instructional and

professional wages failed to keep up with inflation during the past five years, allowing the postsecondary system to increase its costs more slowly than the consumer price index during that time. By contrast, during the previous five years, the costs of higher education institutions rose some two per cent more rapidly than did the CPI during an average year.

The slowdown in the growth rate and the relative deterioration of wages paid by postsecondary institutions are undoubtedly difficult phenomena for administrators to deal with. Faculties accustomed to rapid promotions and increases in their standard of living have been increasingly disappointed on both counts. There is, hence, little wonder that talk about a crisis in higher education has become widespread in recent years.

The crisis, if there was one, was not acute enough to affect the distribution of major heads of expenditure. Most outlays maintained their relative importance as a percentage of current funds expenditure, despite the different rates of change in the relative prices of the components. Thus, for instance, instruction and departmental research continued to claim roughly one-third of all expenses. Educational and general expenditure, a category which includes expenses for administration, increased slightly from 12.8 to 13.7 per cent of outlays between 1971 and 1975. The share of research did not change much either, amounting to 9.5 per cent of all outlays at the beginning of the period and 9.1 per cent at the end, though in the interim it hit a low of 8.1 per cent.

Plant operation and maintenance, a closely watched and much discussed outlay item, increased from 7.4 to 8.7 per cent of total current fund expenditures between 1971 and 1975. The prices of the components comprising operation and maintenance rose some 46 per cent, more than 1.5 times as fast as factor prices of all goods and services purchased by the postsecondary sector. Some components of operation and maintenance, such as utilities, doubled in price during the same period. After operation and maintenance costs were deflated by the appropriate index, and other inputs were restated in constant 1966-67 prices, operation and maintenance declined from 7.6 per cent of total current expenditure in 1971 to 7.4 per cent in 1975. This decline in the share of real resources consumed by this item was not unexpected: as a greater proportion of FTE students enrolled in two-year schools, the proportion of operation and maintenance in total budgets could be expected to decline because two-year schools spend a smaller proportion of their budget on this item.

Notable changes in resource shares occurred in expenditures peripheral to instruction. Auxiliary enterprises (e.g., dining halls and dormitories) claimed a smaller share of the dollar, as their share of expenditures declined from 12.7 to 11.6 per cent. By contrast, extension and public service activities and hospitals appear to have claimed a bigger share of institutional budgets. Hospital outlays increased nearly two-and-a-half times in current dollars and nearly doubled in constant dollars during the past five years. Extension and public service activities appear

to have nearly doubled during the same time period in current dollars. Perhaps these increases are due to artifacts in reporting; as the form through which financial information was collected was changed in 1974/75, the year the most spectacular increases took place. It is possible that some costs were included under these headings which had been omitted hitherto.

As long as higher education institutions are involved in many activities, such as contracted research, for which they are reimbursed, and the provision of dormitories and dining halls, which are usually self-supporting, a better measure of the resources devoted to their principal activity is what we shall call instructional costs. In this study, as in previous studies,[5] we have estimated instructional costs by adding up expenditures for instruction, administration, non-reimbursed research, operations and maintenance, libraries, and the net gain or loss of institutions from the remaining operating activities. Instructional costs could never be calculated directly, since the portion of the costs of administration, operation and maintenance, which were reimbursed by research and development contracts or should be allocated to auxiliary enterprises was not reported on the HEGIS form. Instructional costs were derived for every year until 1974/75, and the series calculated this way appeared both consistent and plausible until then. Not so for 1974/75. Changes in the form and inconsistencies in the year-to-year reports of institutions made this calculation impossible.[6] Instead, instructional costs were calculated

on the basis of the reported instructional expenditures and departmental research of a set of institutions which appeared to have filled in the questionnaire in a consistent manner between 1973/74 and 1974/75.

According to our estimates, instructional costs increased some 49 per cent in current dollars in the 1971 to 19[illegible]. In real terms, this increase amounted to 16 per cent, equal to the increase in FTE students. Since the mix between undergraduate and graduate students did not change significantly, the cost, as measured by standard undergraduate students (SUS),[7] neither improved nor deteriorated either.

Revenues. Current fund revenues expanded more slowly than total current fund expenditures for all postsecondary institutions in the five-year period under review. They increased some 48 per cent, approximately two per cent slower than outlays, thus honing the knife-edge balance between expenditure and income. Again, the overall growth rate was roughly two-thirds of that experienced in the previous five-year period. Nevertheless, in the aggregate, income exceeded outgo, and there was no overall deficit for any of the past five years.

Among the important revenue sources, the most striking change took place in the share of revenues provided by states, which increased by more than two per cent from the 26 per cent of the revenues coming from state subsidies in 1970/71. By contrast, federal aid, excluding the moneys paid for research, scarcely changed its role in the income statement, rising from 2.4 to 2.5 per cent.

Despite the oft-heard complaints about increasing student charges, student tuition and fees actually contributed 0.5 per cent less of revenue in 1975 than in 1971. Their share of total revenue declined from 21.0 to 20.5 per cent

Other heads of revenue moved generally in concert with expenditures. Thus, auxiliary enterprises lost ground in the income budget, declining from 13.0 to 11.5 per cent of the total. Sponsored and separately-budgeted research accounted for slightly more than eight per cent of the current revenues at both the beginning and the end of the period, having dipped in the interim, as did expenses for such purposes. The revenues of service programs and hospitals went up roughly in concert with expenditures and accounted for a higher share of the total revenue at the end of the period than at the beginning.

Abstracting from the different types of revenues, some related to the primary function of institutions and some not, it is important to note that state appropriations increased from 64 to 66 per cent of instructional costs, and that tuition remained roughly constant at 38 per cent of this total.

Effects of slower growth. An analysis of expenditure and revenue trends in the finances in all postsecondary institutions, discussed in greater detail below, highlights the following developments:

(1) slower growth in real and current dollars of both income and outlay,

(2) the absence of deficits for the sector as a whole,

(3) slower rates of increase of costs in the post-secondary sector, compared to the Consumer Price Index, mostly due to a lag in professional wages,

(4) relative constancy in real resources expended per student,

(5) continued stability in the role of research and development in institutional budgets, after a dramatic decline in the 1960's.

In effect, the administrators of postsecondary institutions have been forced to gear down their expansion plans, since the purchasing power of the revenues available to them during the five years 1971 to 1975 increased at roughly two-thirds the rate of the preceding five years. A slower increase in the rate of growth of enrollments and the relative constancy of research not only put a crimp in the expansion plans but also created serious problems in promotion and hiring. Simultaneously, the slowdown in economic activity, which limited the increase in resources provided by the states and also reduced the rate of increase in tuition, held back the increase in available funds for all institutions.

If the trends of the late 1960's had continued into the 1970's, the instructional budgets of postsecondary institutions would have been some 5 per cent higher than they actually were.[8] The "savings" were effected in roughly equal parts by keeping down professional salaries, allowing them to lag behind increases in the cost of living during the past three years, and by the larger-than-expected shift of students to lower-cost two-year institutions. As we shall show below, the ebb and flow of

students between institutions in both the public and private sectors made the operation of individual institutions even more difficult than they otherwise might have been.

The Public Sector

Current fund expenditures of public institutions increased some seven per cent more rapidly than those of all institutions between 1971 and 1975, reflecting the growing share of students enrolled on public campuses. (See Table 3.) This impressive rate of growth of 57 per cent in five years, which brought total outlays of public institutions to $24 billion by 1975, was still only roughly half that of the preceding five-year period. In constant dollars, the increase in outlays of the public sector was less impressive, some 21 per cent, roughly two-fifths the rate at which resources were channelled into public institutions during the previous five years.

In current prices, the outlays per FTE student increased some 31 per cent during the past five-year period. Adjusting for changes in prices paid by institutions, the actual budget per FTE did not change significantly in the course of either the past five or ten years. Instructional costs, as defined by this study, grew 55 per cent, one per cent slower between 1971 and 1975 than during 1966 to 1970. In constant dollars, the increase was more modest, but still significant, amounting to 20 per cent of the base year's costs. Measured on an FTE basis, however, instructional costs remained virtually stable during the last five-year period.

There were not startling changes on the revenue side either.

Tuition and fees amounted to 22 per cent of instructional costs at both the beginning and the end of the period, although their importance increased slightly in the interim. As before, the lion's share of the instructional deficit was covered by state appropriations.

Universities. Instructional expenditures in doctoral granting systems[9] grew most slowly, compared to other institutions in the public sector. They increased some 40 per cent in current dollars and nine per cent in real terms. (See Table 4.) Thus, although universities accounted for some 50 per cent of public institution instructional outlays in 1971, their share had dropped to 46 per cent by 1975.

The decreasing importance of university systems in the total was due to two factors: (1) a slower than average increase in enrollments, and (2) slight declines, in real terms, of instructional outlays per FTE student.

University students' tuition and fees accounted for a quarter of instructional expenditures throughout the period. The variations of their contribution to the estimated instructional costs were never more than one per cent from year to year.

The only notable development in the finances of public universities was their increasing ability to attract research and development contracts. Their net outlays on research increased some 50 per cent in current dollars, and some 17 per cent in real terms, while in private universities the volume of research declined by three per cent in real

terms.

Other four-year institutions. Instructional costs increased one-third more rapidly in other four-year institutions than in universities, growing 56 per cent in current dollars, and 21 per cent in constant dollars during the five years ending with 1975. (See Table 5.) Roughly one-half of the increase in real cost was due to the increased resources devoted to the average FTE student. The costs per FTE student increased some 10 per cent in real terms. This increase was mainly due to the higher proportion of graduate students in total enrollment: costs per SUS, adjusted for the higher level of resources usually expended to educate students in graduate and professional schools, increased only three per cent.

Public funds contributed some 1.5 per cent more of instructional costs at the end of the period than at the beginning.

Two-year institutions. Outlays for instructional costs for two-year institutions nearly doubled in current dollars, and increased almost 50 per cent in constant dollars during the past five years. (See Table 6.) The increase was due mainly to increased enrollments, as the resources expended per FTE student increased only two per cent during the period.

It is significant that although, overall, the government subsidies to students in two-year colleges did not increase, the students in these colleges paid the lowest proportion of instructional costs of all enrollees in the public sector.

The Private Sector

Due to slow enrollment growth, current fund expenditures increased much more slowly in the private than in the public sector. The rise in expenditures of 38 per cent between 1971 and 1975 was only 9 per cent less than the one experienced during the previous five years. (See Table 7.) Yet in all probability it was more difficult to live with, since in real terms the resources of private institutions increased less than seven per cent during the past five years, as contrasted to nearly 18 per cent in the years 1965 to 1970.

The modest growth in real resources was due half to the very slight increase in enrollments, and half to the increase in outlays other than those for instruction. The instructional costs per FTE student remained constant throughout the period, and those per SUS declined insignificantly.

It is notable that research and development expenditures stabilized at a little over nine per cent of outlays. At the end of the period, in real terms, fewer resources were expended on research than at the beginning. The share of auxiliary enterprises also declined, about as much as in the public sector. Instead, the growth in expenditures other than instruction was accounted for mainly by the increased share of resources consumed by hospitals, a share which nearly doubled during the five-year period.

An index of the financial stringency which affected the private

institutions is the slow growth of operation and maintenance expenses. Despite the fact that the expenses grew some one-half per cent as a share of the budget, expenditures per FTE student in real terms declined significantly. Some 10 per cent less per FTE student was spent on operation and maintenance in 1975 than in 1971.

On the revenue side, tuition and fees continued to be the mainstay of private institutional income. They accounted for 15 per cent of all revenues at the beginning of the period, and 14 at the end. The tuition covered 73 per cent of instructional costs at the beginning of the period, and some 75 per cent at the end, a small but significant increase. The share of endowment income and gifts remained relatively stable throughout the period, and amounted to between 24 and 25 per cent of instructional costs, thus bringing into precarious balance the income and outgo for instruction in private institutions.

Universities. Total current fund expenditures of private doctoral granting institutions grew somewhat more slowly than in public universities, where enrollment increased, while it stayed near 1971 levels in the private sector. (See Table 8.) Nevertheless, because of the stability in the number of students enrolled, expenditures per FTE student increased some three per cent in constant dollars from 1970 to 1975. Outlays per standard undergraduate student also rose slightly during this period.

Tuition revenue covered some 65 per cent of instructional

costs in 1971 and 67 per cent in 1975. In current dollars, tuition in private universities rose 40 per cent during the 1971-75 period.

Other four-year schools. The 36 per cent increase in instructional expenditures in private other four-year schools did not keep up with the increase in enrollments. (See Table 9.) Expenses per FTE student declined slightly, by two per cent, and those per SUS by six per cent between 1971 and 1975.

Tuition revenue contributed 78 per cent of instructional costs in 1971 and 80 per cent in 1975.

Two-year schools. These schools' enrollment was constant throughout the period. (See Table 10.) They account for an insignificant proportion of total enrollment, and less than six per cent of the enrollment in the private sector. Instructional costs in this group of schools increased some 9 per cent in real terms. Tuition's share of these costs declined from 83 to 74 per cent. There is little doubt that the finances of these schools were most hard-pressed.

Crisis Or No Crisis?

Aggregate figures for the public and private sectors, and analyses of schools by type of institution, do not give the impression that there was a financial crisis in higher education. However, there was penury, and it was probably felt most acutely in the private rather than the public sector. Outlays per student did not decline, even when adjusted for the increased costs incurred in teaching graduate students. Enrollments

by type of school and control did not decline, and budgets appeared to be balanced in each sub-sector in almost all instances.

There were certainly signs of cutting down, especially in the private sector, where operation and maintenance costs were controlled very strictly and the resources expended on them declined significantly in real terms. Other economies, at the expense of the salaries of professional staff, managed to keep costs down during this difficult period.

It is significant that despite the higher proportion of instruction paid out of tuition in the private sector, the private institutions did not price themselves out of the market, but just lost a share of it, a loss which was somewhat smaller than might have been anticipated by projecting the past erosion of their role in total postsecondary education.

A hard-nosed analyst who stopped his analysis at this stage would conclude that no crisis existed, since it was obvious that the institutions' capacity was at least equal to the students' demand for education, and the resources expended per student had not changed. Below, we shall show that the hard-nosed analyst would have been wrong. The ebb and flow of students between different institutions has created some significant disequilibria in resources, forced some hard choices for administrators, and created dilemmas for those concerned with maintaining the quality of postsecondary instruction.

II. A DIFFERENT LOOK AT RESOURCE ALLOCATION

The finding that real resources per student did not change significantly in the course of the past five years does not begin to fully describe the financial conditions of postsecondary institutions. Since the beginning of 1970, as the rates of increase in enrollments slowed down, a large number of institutions have failed to maintain their former enrollment levels. During the same period, other institutions have increased their enrollments.

The analysis below is based upon a comparison of institutions which reported financial and enrollment data for the full five-year period 1971/75. These institutions account for roughly 85 per cent of the total enrollment in both the public and private sectors. The institutions for which comparable data could not be obtained vary from selective private universities such as Harvard, to large universities, such as Michigan State, and to many smaller public and private two-year colleges. A comparison by type and control of the institutions which reported, and those which did not, leads us to believe that the reporting institutions are typical of the universe.[10]

We estimate that 63 per cent of all campuses in the U.S., with 67 per cent of the FTE students in 1971, did not lose any enrollment during the 1971-75 period. Some 14 per cent of the campuses, which enrolled 17 per cent of the students at the same date, lost 10 per cent or less of their enrollments. The remaining 23 per cent of the campuses, with 16

per cent of the 1971 enrollment; lost 10 per cent or more FTE students in the 1971-75 period. (See Table 11.)

The proportion of losers to gainers was lower in the public than in the private sector. Nearly three quarters of public campuses, with the same proportion of FTE enrollment, did not lose any enrollment. By contrast, in the private sector only half of the campuses, again with the same proportion of FTE enrollment, either did not lose or gained student workloads.

About 12 per cent of the public and 16 per cent of the private campuses lost less than 10 per cent of their enrollments. In 1971 these campuses accounted for 15 per cent of the public and 24 per cent of the private sector enrollment. While fewer than one in seven public campuses lost more than 10 per cent of their enrollment, as many as one in three private campuses were decimated. In 1971, 12 per cent of the students in the public sector and one student in four in the private sector were attending campuses which lost 10 per cent or more of their enrollment in the next five years.

Thus, both public and private sectors consisted of three types of institutions: one which appeared to be attractive to students, another which lost some students, and a third segment which was abandoned by students at a somewhat faster rate, a rate which could be considered alarming. Attractive institutions did make significant enrollment gains overall: 23 per cent for institutions in the public sector and 18 per cent

for campuses in the private sector. The smaller losers in the public and private sectors lost four and five per cent, respectively, of their enrollments in the course of the past five years, while the big losers lost 21 per cent of their enrollment in the public and 25 per cent of their enrollment in the private sector. (See Table 12.)

The factors which explain the relative attractiveness of schools are worth examining. Analysis based on a slightly more restricted sample (see Table 12, col. 2) indicates that schools with lower tuition in 1971 lost students. By 1975, the level of tuition was identical in all three groups, and the higher than average growth in tuition no doubt contributed to their recruitment problems. In the public sector, in 1971 the tuition charged by schools which either gained enrollment or lost less than 10 per cent was only $35 less than that of schools which lost a high proportion of their students. By 1975, the gap had widened to $100. (See Table 13.)

Instructional costs per student appear in 1971 to have more predictive value in forecasting the power of schools to attract students. In both the public and private sectors, schools which lost students had lower instructional costs per FTE or SUS in 1971 than schools which did not.

The effect of levels of costs per student in later years is more mixed. Thus, in the public sector, schools with a less than 10 per cent loss in enrollment caught up in their instructional costs per student with schools which had level or increasing enrollments, and their FTE enrollments did increase between the fall of 1974 and the fall of 1975. In the

private sector, schools in the same circumstances also appeared to have arrested the erosion of enrollment during the same time period, as their costs practically, but not quite, caught up with the successful schools. (See Tables 14 and 15.)

The increased expenditures per student in later years do not appear to have helped schools in the private sector which lost over 10 per cent of their enrollment in the interim period. Despite the fact that by 1974 expenditures per student there were as high or higher than in the rest of the private sector, their enrollments continued to decline.

In fact, many of the schools in both the public and private sectors which lost enrollment had by 1975 increased their costs above the levels of schools in their selectivity group which lost no enrollment. These trends may appear desirable on the surface, since the expenditures per student were more equal in 1975 than in 1971. From the point of view of administrators, however, this equalization did not come from a conscious program, but by happenstance. Schools which lost enrollment were unable to cut their expenses fast enough; those which gained enrollment were unable in many instances to keep their resources per student constant, especially among schools in the private sector, and had to be content with a slightly declining level of resources expended for instruction on either an FTE or SUS basis. (See Tables 16 and 17.)

It could, of course, be argued that schools with increasing enrollments were benefiting from economies of scale, and should not have

felt uncomfortable about economizing resources. Unfortunately, it is not at all clear at what level economies of scale operate in the postsecondary sector, and traditions with respect to class size and the faculty-student ratio are ingrained.

In addition, schools which lost more than 10 per cent of their enrollment, especially those in the private sector, must be hounded by increasing fears of pricing themselves out of the market. In both the public and private sectors, the tuition of such schools increased more as a percentage of the 1971 level than did the tuition of schools in which enrollment did not decline. (See Table 18.) The schools with the largest decrease in enrollment in the private sector, for instance, charged some $200 less than schools with no decline in enrollment in 1971, but by 1975 the average level of tuition was within a few dollars.

An analysis of the campuses that gained and lost enrollment, by geographical recruitment area, further illustrates the complexity of the problem of identifying factors which affect the attractiveness of schools. National schools, defined here as campuses in which 50 per cent or more of the freshmen originated from out of state, seldom lost enrollment. Regional schools, which drew more than 25 per cent of their freshmen from out of state, were the most frequent losers of students in the private sector, although such schools seldom lost enrollment in the public sector. In fact, if one looks at the proportion of schools likely to lose enrollment by geographical recruitment area, one comes away with the impression that in the private sector all schools except those in the

national and community categories had an equal chance of losing students. Among public sector schools, those which limited their recruitment to their own state were more often the losers. (See Table 19.)

In all probability, factors other than recruitment area and instructional costs played an important role in determining the attractiveness of different campuses. The shift to two-year schools and away from teachers colleges in the public sector no doubt was responsible for the declining enrollments of public institutions which recruited the vast majority of students within a state. In the private sector, the evidence is less clear. It can neither be explained by the average size of the school, nor, necessarily, by its academic orientation.

Prestige, measured in this study by the average SAT scores of the freshman class, was probably the most important factor in maintaining enrollments during the last five years. Thus, in the private sector, where two-year colleges do not account for a substantial share of total enrollment, 45 per cent of the enrollment in 1971 of schools which lost students was in campuses with below average selectivity (with freshmen mean scores below 1000) and 39 per cent of the enrollment was in institutions with average selectivity (where freshmen had mean SAT scores between 1000-1100). (See Table 20.)

By contrast, private schools with below-average selectivity accounted for only 36 per cent of the enrollment in campuses where the number of students remained stable or increased, and those with average

selectivity some 27 per cent. In other words, schools which were selective in 1971 were more likely to maintain or increase their enrollments than schools which were not. It is our impression that they were not only more likely to remain attractive to the "best and brightest" prospective students, but also able to fill their folls with students with lower scores, who were hitherto turned down, but now were accepted in these institutions.

The trends in the public sector are more difficult to interpret. Generally, schools with higher selectivity were not likely to lose much of their enrollment. Campuses which lost students were concentrated in the middle of the selectivity spectrum. Non-selective public colleges, mostly two-year institutions, attracted an increasing number of students.

The preceding discussion of different types of schools and the factors affecting their relative attractiveness has, we hope, shown that the crisis in the finances of the postsecondary sector, as perceived by administrators and special interest groups, does have some basis: On one hand important sectors of their constituency are losing enrollment while raising their tuition faster than the average, and engender fear that declining enrollments levels will make these institutions non-viable. On the other hand, the institutions which keep on attracting increasing numbers of students find their resources per student growing more slowly than their costs. In both cases, there appear to be legitimate grounds for unrest and concern.

A Consistent Explanation of Enrollment Changes?

A series of stepwise regressions were run to attempt to obtain consistent explanations of the factors which account for the ability of schools to attract and retain students. To this end, the change in enrollment between 1971 and 1975 (for all students and undergraduates only) was chosen as the dependent variable. A number of dependent variables were chosen to explain this change by either (1) the tuition level per FTE student in 1970, (2) the tuition level per FTE in 1974, (3) the ratio of the tuition in the late to the earlier year, (4) expenditures per SUS in 1974, (5) expenditures per FTE student in 1974, or perhaps (6) the subsidy (instructional costs less tuition) per SUS, or (7) per FTE student. In plain English, we expected that the changes in either the total level of enrollment, or changes in the enrollment of undergraduates could be explained by (1) the level of tuition in a school at the beginning (2) or end of the period, (3) the change in the rate of change of that tuition, since schools projected accustomed images of "cost." Other variables chosen as likely to influence enrollment levels were (4) the amount of resources expended on instruction or, perhaps, (5) the subsidy received by the student (the difference between costs and tuition).

For either the whole of the private or the public sector, these variables fail to explain a significant proportion in the enrollment change. When the dependent variable was total enrollment change, the R^2 for the private sector was 0.04, and for the public sector it was 0.08. By contrast, better results were obtained for the private sector when the campuses were

disaggregated by level of selectivity, and for the run-of-the-mill (average selectivity) public campuses where the SAT scores of freshmen in 1970 were average. (See Table 21.)

Despite the fairly high R^2, most of the regression equations are difficult to interpret. The easiest, perhaps, is the one with 32 per cent of the variance of total enrollment explained in selective private schools. The rate of change in tuition had an expected negative sign, and the level of tuition in 1974 had an unexpected positive sign. Other variables were not significant. This result can be interpreted to mean that the most prestigious of the selective schools did best in the competition for students, at the expense of schools which raised their tuition faster than the highly endowed institutions. In the case of undergraduate student enrollment changes, the same two variables entered the equation, but explained only 23 per cent of the variance.

Changes in total enrollment for the second selectivity group were explained to the extent of 27 per cent by the changes in the tuition rate, expenditures per standard undergraduate student (with an unexpected negative sign) and the subsidy per FTE, with the expected positive sign. In the case of undergraduate enrollment, subsidies per FTE, expenditures per SUS; both with expected signs, explain .24 of the variance. The tuition in the later year, and the increase in the tuition rate (with the wrong sign) add another 15 per cent to the explanation of the variance. Perhaps here too, slightly higher quality schools were able to attract more undergraduates than the average.

The R^2 for the total enrollment of the third selectivity group is .28. The change in the rate of tuition is most important, and has the expected negative sign, followed by tuition in 1974 (with a positive sign), expenditure per SUS (negative) and expenditure per FTE. A much lower explanatory equation for undergraduates only, only 18 per cent, has the following variables: the rate of change in tuition, expenditure per standard undergraduate student, subsidy per FTE, and tuition in 1974.

As the selectivity further declines, so does the goodness of the fit in the equation. Total enrollment changes for the fourth selectivity group are explained to the extent of 17 per cent, and for undergraduates only--13 per cent. For the total enrollment, tuition growth, expenditure per SUS (with the wrong sign) and subsidy enter in the equation. For undergraduates, tuition growth, expenditures, subsidy and tuition explain 13 per cent of the variance.

No good explanations could be derived for the private non-selective group, even after all-graduate, or divinity schools were excluded from the population. Equally disappointing results were obtained for all but average selectivity group for total enrollment change. There a respectable .37 of the variance was explained solely by the subsidy per standard undergraduate student. Somewhat but not significantly lower explanatory regressions could have been obtained from the subsidy per FTE student. or level of expenditure per FTE or standard undergraduate student, which were all highly intercorrelated.

In summary, it would appear that in the private sector the rate of increase in tuition, rather than the absolute levels of fees charged, is significant in explaining the luck of different schools in attracting students. In the case of undergraduates, the subsidy (the difference between what is paid and what is provided) does seem to affect the chances of schools to attract students. Within a homogeneous group, schools with higher tuition, and presumably with better reputations, did better than schools with lower tuition and presumably lesser reputations. Only in the case of non-selective schools (which presumably enrolled students in their immediate surroundings or some special groups) is some other factor responsible for their changes in enrollment.

The bad results for the public sector are not surprising either. During the past five years, a large number of junior colleges were established. The current model did not take this into consideration. Different models will have to be built to explain the changes in the rates of enrollment of public schools.

"The Crisis" and the Situation of Students

The uneven allocation of resources between institutions with different rates of growth has important implications for the students who attend institutions with different levels of selectivity. An analysis of resources expended on students, with instructional costs calculated per FTE student, in institutions which did not lose or gained enrollments shows that:

(1) In the private sector, both institutions with above-average selectivity and those with below-average selectivity reduced their resources per student in real terms. Only in non-selective institutions was there an increase in resources expended per student.

(2) In the public sector, institutions with average selectivity also cut down on instructional costs in real terms.

All the institutions with declining enrollments, except private highly selective institutions, increased their resources per student, once instructional costs are translated into dollars of constant value.

It is notable that highly selective institutions in the private sector (far too few institutions in the public sector reported data to enable one to generalize about this group) kept the level of their resources almost constant per FTE. The most gifted students were neither spoiled nor skimped on.[11]

A more precise measure of expenditures per student, which attempts to take into consideration the additional cost of teaching graduate and professional students, provides somewhat, but not startlingly, different results. Undergraduates in the private sector had fewer resources expended on their instruction in schools with medium, average and below-

average selectivity, which gained enrollment. Obviously these schools made an effort to keep up their rolls by increasing the proportion of graduate and professional students in their total enrollment.

A striking insight into the economics of the private sector can be gained by examining the proportion of tuition to instructional costs by FTE and SUS. With the exception of highly selective and non-selective schools, tuition covers 75-85 per cent of instructional costs per FTE student. Both highly selective and non-selective (probably religiously sponsored) schools content themselves with setting tuition to cover 15 or 20 per cent less of their instructional costs. (See Table 22.)

From the point of view of the standard undergraduate student, the picture is very different. If our calculations of the additional cost of providing graduate education are anywhere near accurate, undergraduate students in highly selective schools in the private sector pay the total of their own instructional costs. Those in the majority of schools with medium and average selectivity subsidize graduate studies, since their tuition is higher than the estimated cost per undergraduate. Only in schools with below-average selectivity (including non-selective schools) are undergraduates subsidized. (See Table 23.) It is interesting to note that the schools which did not show any decline in enrollment, and the schools which showed a small rate of decline in enrollment, virtually broke even on their undergraduate instruction. Roughly half of the selectivity groups made a profit on undergraduates who paid full tuition fees.

In the public sector, where tuition is lower, the proportion which tuition covers shows no very clear trend when the ratios are calculated on the basis of FTE students. The ratio of tuition to SUS cost, though, indicates that the more selective schools pass on a higher proportion of their costs to their undergraduates. It is also in the public sector that one can see clearly that schools whose tuition accounted for a higher proportion of instructional costs per SUS were most likely to lose students. No such clear trend can be discerned in the private sector.

III. THE FINANCES OF THE POSTSECONDARY SECTOR TO 1985

Many observers fear that the finances of most colleges and universities will continue to be in disarray for the next decade. This prognosis is largely based upon the outlook for enrollments. Optimists project that the workload of colleges and universities will remain at roughly the present level, while pessimists forecast significant declines in the course of the next few years.

While no one is certain about the levels of future enrollments, there is general agreement that the period of growth of the college and university market is past, and that the workload of colleges and universities is likely to stabilize, or could decline by as much as 15-20 per cent. The consequences of stability, not to mention a shrinking market, naturally worry administrators of individual institutions. They are not sure how their institutions will be affected. Even in the course of the past few years, when enrollments increased more slowly than in the 1960's and in some

institutions declined dramatically, costs per student increased, and the task of balancing expenditures and income became more difficult. The prospects of managing college and university budgets during a period of no-growth or decline gives shivers to university presidents.

In the following pages, we present an analysis of the impact of different levels of enrollment on the finances of higher education. This is followed by an exposition of policies which may be desirable to preserve the viability of the higher education sector.

Such analysis cannot be approached in a mechanical, statistical manner. Past developments offer very little guide to the future because in no period in recent history did higher education reach a steady state, and enrollment declines envisaged by pessimists have never occurred.

Thus, past trends cannot be used mechanistically to project future developments to 1985. Instead, the effect of stable or declining enrollments has to be estimated as it impacts upon different segments of the higher education sector. The only suitable technique for estimating the interaction of enrollments, costs, and revenues on the finances of higher education is simulation.

The results of any simulation are affected fundamentally by the underlying assumptions regarding the behavior of the components which enter the model. The choice of these relationships, and their form, predetermines the outcome of the exercise. Hence, it is extremely important to explain how the estimates fed into the simulation model are

derived, especially since there is no consensus about the way costs or revenues will behave.

We have taken great pains to spell out the assumptions in detail at the very outset of this study and describe in detail projections of enrollments and costs. Also, in order to make the study as useful as possible, we have chosen to simulate the revenues and expenditures of higher education using a variety of assumptions, some optimistic, and others on the pessimistic side. The band between the pessimism and optimism is based upon insights we gained in performing other analyses of past developments in higher education, and while it may be narrower than that preferred by some writers, we believe it to be realistic.

Projections of Future Enrollments

An illustration of this approach, and the reasoning which underlies it, is highlighted in the projections of enrollments presented below. One is relatively optimistic about the demand for higher education, the other is not. Based on past propensities to attend higher education institutions, we estimate that the total number of students will number 11.3 - 11.4 million students in both 1980 and 1985 (Table 24). This estimate for younger age groups was based on participation rates borrowed from U. S. Bureau of the Census studies. Enrollment for older groups, ages 24 and up, were derived by trending estimates of recent growth in participation in adult postsecondary education, and the possible impact of the end of Veteran's Benefits.

The resulting estimates were then allocated to different levels of higher education. Constant proportions of students, by age group, were allocated to undergraduate and graduate programs. The estimate of total undergraduate students was further subdivided between the pool of students taking degree-credit programs, and those enrolled in non-degree credit courses of study. This latter estimate was borrowed from the NCES projections.

The high estimate of enrollments was derived by allocating undergraduate degree credit, non-degree credit, and graduate and first professional students into full and part-time categories using the estimates of the NCES. The shares of the public and private sectors in each of these categories was kept constant throughout the period, an assumption substantiated by the past ten-year trends (Table 25). The resulting projections anticipate slow growth in the public sector between 1974/75 and 1979/80 from 5.9 million to 6.6 million FTE students, and a leveling off of enrollments during the next five years. In the private sector, enrollments are expected to remain at the 1974/75 levels between now and 1980, i.e., 1.9 million FTE students, and to be 100 thousand less in 1985.

The low estimate of enrollment is predicated on the assumption that an increasing proportion of students will attend part-time, and that the share of part-time enrollments for degree-credit undergraduates will increase from the current level of 36-37 per cent of the total to 51 per cent, the attendance pattern of non-degree students. The share of non-degree students attending part-time was estimated to increase 10 per cent,

to 61 per cent of the total, equal to that of graduate students today. In the case of graduate and first professional students, their share of part-time enrollment was increased by 10 per cent, to 71 per cent of the total, in proportion to the estimated increase in part-time attendance of non-degree students (Table 26). These enrollments were then translated into SUS (Table 27).

The assumptions underlying the low projections, though fairly arbitrary, are not difficult to justify. In the first place, the share of part-time students has been growing faster than projected by NCES. In the second place, there are sound economic reasons why the proportion of part-time students is likely to increase. As the financial returns from attending college for the average student decline, the rational response for students is to reduce their investment in acquiring additional education. As long as their most important single component of cost is foregone income, it would make sense for students to minimize this component and attend part-time.

Such a shift in enrollment patterns will reduce the FTE load of public institutions by 12 per cent from the high projections and that of private institutions by a little over 20 per cent. These projections are based on the assumption that both types of institutions keep the same share of market by type of student. Of course, if private institutions start competing more actively for part-time students, their enrollments may be higher than those in the low projection.

Estimates of Instructional Costs

As with enrollment projections, crucial assumptions, or choices, also must be made about the behavior of different components of instructional costs in the future. The most difficult decisions relate to the behavior of professional, especially faculty, wages. It will be remembered that during each of the ten years ending with 1970, faculty wages increased three per cent faster than the CPI. By contrast, in the five years which followed, faculty wage increases lagged the CPI index gains by 1.1 per cent a year on the average.

How will wages of faculty grow in the future? It can be argued that professors have already taken a sizable beating in living standards, and projections of large erosions of purchasing power are not warranted for an exercise designed to measure the extent of the possible financial crisis of higher education. It can also be argued that, with the plethora of instructional staff continuing unabated, it is unrealistic to project wage increases reflecting conditions when faculty was in short supply.

Rather than take an unpopular position, we decided to present two alternative cost estimates based on different assumptions related to wage developments. The first, and higher one, assumes that wages of teachers will increase three per cent a year for each rank, or as fast as productivity in a fast-growing, full-employment economy. The second estimate places the increase in wages at 2.0 per cent a year, one-half of one per cent under the growth of productivity in a slower-growing

economy characterized by higher unemployment levels.

The rate of growth of clerical wages, other instructional and departmental research, and administrative costs was projected to increase at 3.0 per cent for the fast-growth (full employment) economy, and 2.5 per cent for the slower-growth model. Operation and maintenance expenses were allowed to grow 3.7 per cent faster than the price level, in line with past trends. Finally, library expenses were allowed to increase by 3.5 per cent per year in the slow-growth projection, and 5.0 per cent in the fast-growth model. Again, these rates realistically reflect past growth rates.

On the assumption that resources per standard undergraduate student will remain constant, these assumptions were translated into estimated costs per SUS for five years of 13-14 per cent increases in constant dollars for the slow-growth model, and a 17-18 per cent increase for the high-growth model. In ten years, ending with 1985, the costs are projected to increase by 28 to 30 per cent for the low, and 37 to 39 per cent for the high projection, for the public and private sectors respectively (Table 28).

In practice, total costs per student are likely to increase somewhat faster than these projections. The near stagnation or possible decline in enrollment will increase the proportion of senior faculty and administrators in total employment. Based on a simulation of the rank distribution of the teaching staff, estimates were prepared to take into account these developments. Since roughly half of the total cost is accounted for by this

type of personnel, the growth in real costs was consequently increased by one to two per cent for the public sector, and by six-tenths to 3 per cent for the private sector for the first five years, depending upon the enrollment projection. For the sum-total of ten years, the increase in costs, from increasing seniority was from 2.5 to 3.5 per cent for the public, and from 2 to 4 per cent for the private sector.[12]

Alternative assumptions, which would have permitted the costs in public schools with declining enrollments to rise considerably, could have resulted in higher expenditure projections. For instance, if the budgets of public schools which were projected to lose students were not cut and just kept constant for the next 10 years, the total costs of the public sector could conceivably be some seven per cent higher.[13]

In the private sector, only one assumption was made about costs. In the course of the past five years, schools with declining enrollment, which had started with lower costs per student compared to schools which held their own or gained enrollment, have caught up to the costs of the more successful schools, and so have their tuition charges. It would be unrealistic to project that weak schools could spend substantially more, and charge much more, than schools which were more popular. Hence, the estimated outlay for the private sector was built up on the basis of the experience of strong schools, and it was assumed that they would impose their levels of costs and tuition on the others.

Under the low projection, the enrollment in institutions which

managed to increase their enrollment in the past is projected to decline slightly. We adjusted the costs per student by four per cent in 1980 and 1985 to allow for the increased cost of maintaining increased plant, in addition to the previous adjustments for the seniority of the faculty.

Back of the envelope estimates, where it was assumed that budgets of schools losing enrollments would not decline in constant dollars, so that they would be allowed to operate, increased outlays of 15 to 25 per cent were the ones estimated. The budgets per student of some schools with declining enrollments would have to exceed by two-thirds those of schools where enrollments stayed at present levels.

The resulting estimates of costs per standard undergraduate student and FTE appear in Table 29. They are quite consistent with past experience. The costs per standard undergraduate student are slightly higher in the private sector than in the public sector under all assumptions, and the costs per full-time equivalent student quite a bit higher, as the proportion of graduate to undergraduate students in that sector is expected to increase.

It is significant that even with the "stingy" increases projected for the private sector, the spread between the costs in the private sector either on a SUS basis, and, especially on an FTE basis, are likely to widen. Thus, unless (1) the private sector either economizes on resources per student, or (2) allows wages of its employees to lag behind those in the public sector, or (3) cuts resources devoted to graduate students, its cost

structure will make it increasingly difficult for it to compete with the public sector. A range of total cost estimates appears in Table 30.

Revenues

Projections of revenues were prepared for (1) tuition, (2) state and local government appropriations, (3) student aid revenues, and (4) endowment and gifts separately for the public and private sectors.

Regression equations were fitted for data for the past 10 to 15 years. In the case of all important revenue sources, simple regression explained between 80 and 99 per cent of the variance, and thus produced reliable forecasts on the assumption that support patterns in the higher education sector do not change drastically. These resulting projections, expressed in 1974/75 prices, are summarized below.[14]

For instance, the R^2 for the tuition equation for both the public and private sectors, which explained the level of tuition as a function of per capita disposable income, was .97 for the public and .98 for the private sectors respectively. The tuition levels forecast by these equations, of course, depended on the growth level of the output of the economy, and in the case of the high growth GNP were $646 per FTE student in 1980 and $747 in 1985 for the public, and $2,783 in 1980 and $3,244 in 1985 for the private sector. For the low-growth economy, the tuition levels forecast were lower, i.e., $620 and $703 for 1980 and 1985 for the public sector, and $2,665 and $3,042 for the same two years for the private sector. Thus, both public and private sector tuitions are projected to increase by 45 per

cent within the next ten years under the high GNP assumption. Under the low GNP projections, tuition rates, although rising less steeply, still result in a widening dollar gap between public and private tuitions. The ratio between the two, which stood at slightly over 4.3 in 1974/75, will remain at roughly that level under either assumption (Table 31).

It should be noted, in addition, that the share of tuition in instructional expenditure is projected to grow from 16 to 19 per cent or more of the total in the public sector and decline from 74 to less than 70 per cent of the total in the private sector.

The variance explained by the regression equation used to forecast state and local appropriations was much higher for the public, as contrasted to the private sector. This is lucky, since these moneys play a larger part in the finances of public schools. We estimated, on the basis of the equation that with a high GNP and high enrollment, $16 billion would be available for the public sector in 1980, and that this source of funds would grow to $20 billion by 1985. With low enrollment, the revenues are reduced by a billion. Another billion could be shaved by low GNP and low enrollment in 1980 and $2 billion in 1985 (Table 32). State and local appropriations have always played a much smaller role in the private sector, and the amounts forecast for 1980 and 1985 were in no case greater than $435 million.

The best regression for student aid funds channelled through institutions tied the amounts to the gross national product, and had a

respectable R^2 of .83 and .86 for the public and private sectors respectively. For the public sector, the amounts forecast were $146 million in 1980 and $179 million in 1985 for the high GNP projection, and $139 million and $168 million for the low projection. Corresponding figures for the private sector (in millions) were, for the high projection, $256 and $307 in 1980 and 1985, respectively, and $247 and $290 for the low GNP projection (Table 33).

The only disappointment in our simple regression equations was the forecast of endowment and gift income in the public sector. The R^2 of the equation was a mere .5. By contrast, the same equation explained .98 of the variance for private institutions. Since endowment and gift income plays a minor part in the finances of public institutions, and was forecast to contribute less than one per cent of the total revenue in most years, we decided not to look for better equations. By contrast, in the private sector, endowment and gifts contribute as much as a quarter of the moneys devoted to instruction, and they were forecast to grow to between $2.0 and $2.1 billion, depending upon the growth of GNP (Table 34).

Once the projections are summed, they indicate that the revenues available for instruction in the public sector may be close to $19-20 billion in 1980, depending upon the level of economic activity and enrollment, and those of the private sector may reach between $6.2 to $7.5 billion. Between 1980 and 1985, the revenues are projected to grow close to 20 per cent in real terms for the public and 15 per cent for the private sector in constant dollars (Table 35).

The Next 10 Years--The Parameters of Solvency

A comparison of expenditures and outlays for the next ten years in the public sector leaves one with a fairly optimistic feeling about the finances of that sector. For all four alternatives, be it high or low levels of enrollment, and high or low growth, sufficient resources seem to be generated to pay for the instructional costs of students in that part of the higher education establishment.

It should be stressed, though, that the hair-breadth balance between the projections of expenditures and revenues depends upon the following crucial assumptions: (1) That states and localities will continue their pattern of support to the higher education sector. If legislatures decide to dig in their heels by allocating the same proportion of GNP to higher education institutions, sometime after 1980 public colleges and universities will have to economize drastically (Table 35). (2) That drastic economy measures will be taken to control the costs of institutions which lose students. Otherwise, as we mentioned above, costs could exceed our estimates by as much as eight per cent, and either professional salaries would be depressed, or other resources per student would have to be econotnized. (3) That the relative losses of earning power of members of the faculty during the past three years not be made up, but that further erosion of earnings relative to the average wages of the remaining population be stopped.

In the private sector, the balance between anticipated income

and outlays is more erratic. For the next five years, our projections do not anticipate an accentuation of the overall penury of the private sector. In that period, unless the economy grows at a fast rate, the private sector will be squeezed slightly if its enrollments remain at their present levels. In ten years, serious deficits will materialize with high enrollment, and lower ones with fewer students.

The following assumptions underlie all projections: (1) The balance between 1975 and 1980 depends upon state and local authorities not cutting down the growth of these moneys to the level of the increase of the GNP.

(2) If certain schools continue to increase their enrollments at the expense of other schools in the private sector, nearly one-sixth of the capacity with the high enrollment, and close to one-quarter of the capacity with the low enrollment will become redundant (and will have to be withdrawn). Whether some private colleges and universities will close, or whether they will just reduce their plant and equipment to the scale of their projected enrollments is not clear. In the long run, the schools with declining enrollment, as a group, will have to take drastic steps to reduce the numbers of their faculty, probably by some 20 per cent. In other words, the balance between revenue and expenditures in the private sector is predicated upon vigorous management cuts to reduce outlays in schools where enrollment will continue to decline. This will be a tough pill to swallow.

(3) Finally, just like in the public sector, we have not provided for a catch-up factor for the faculty. Their salaries were projected to rise in concert with general productivity.

A skeptical reader might also wish to question some of the assumptions about the growth of endowment and gifts income to the private sector, especially if enrollments decline there drastically. If endowments and gifts income is proportional to the enrollment in that sector, the projected revenues under the low projection are overstated by a shade over six per cent. The relative ease of the private sector in catering to fewer students could be an illusion. If the economy grows slowly, even the low enrollment projection revenue is not sufficient to support the projected expenses in 1980. Irrespective of the growth of the economy, if endowment and gift income is overestimated, expenditures and revenues of the private sector will be seriously out of balance by 1985 (Tables 36 and 37).

In summary, if past trends hold, we anticipate only minor problems in the public sector, and some financial problems after 1980 in the private sector. The maintenance of diversity, another way of saying that not too many private schools will have to close, will remain a hot topic for the next ten years, and especially during the 1980's.

IV. AN EVALUATION OF FINANCIAL CONDITIONS

Federal policy to meet the financial needs of the postsecondary sector should be formulated in the context of a three-pronged analysis along the following lines: (1) financial developments in the whole of the

public and private sectors, (2) an analysis of schools which gained or lost enrollments, and (3) recommendations for dealing with the problems of the academics, who are the real losers of the present penury.

Financial conditions in the past. Recent surveys by Bowen and Minter[15] have documented the uneasy balance between expenditures and revenues in the private sector. The two authors concluded that the dire predictions which had been made about the private schools' impending bankruptcy were not coming true. They also identified the following as the principal sources of savings in private schools: (1) keeping the rate of growth of professionals' salaries below that of the general price level, and (2) working the existing faculty harder, both by reducing the faculty/student ratio and by expanding offerings by faculty members, whose numbers are either constant or declining.

The travail of the public sector has been more spottily documented. News about the City of New York's difficulties and the tough ceilings on spending in several states have made headlines. As a general rule, states and localities have tried to reduce the rate of growth of subsidies to postsecondary institutions and have forced a large number of institutions to tighten their belts.[16]

A simple but dramatic way to measure the extent of the economies made during the years 1971 to 1975 is to compare earlier projections with actual expenditures in 1974/75. We prepared such a series of projections[17] for 1975/76 four years ago, and we have re-estimated them

for the academic year ending in 1975 for this report. This shows that even if one uses the model which projected the lowest level of increase in costs (the one which assumed that (1) professional wage levels were likely to deteriorate in relation to average wages, and (2) that the economy was likely to grow at a relatively slow rate), the projected expenditures exceed the amounts actually spent.

We estimate that public institutions spent three per cent less than projected, and private institutions four per cent less than projected for them. By far the major part of the "savings" was realized by keeping professional wages below projected levels. We estimate that real wages in 1975 were seven per cent less than anticipated by our pessimistic projection. Thus the total savings in the public sector came out of the pockets of the professional and teaching staffs. In the private sector, roughly three-quarters of the savings could be explained in the same way. The lion's share of the remaining savings came from lower real levels of expenditures on operation and maintenance. The use of other resources and their proportions remained relatively constant throughout the period.

The short-fall of resources which necessitated this policy of professional wage restraint was caused by the slower-than-expected growth of the economy. Receipts from tuition, endowments and gifts, and state appropriations were all reduced by the effects of the current recession.

The level of tuition in both the public and private sectors is unusually highly correlated to the level of per capita disposable income.

Since incomes were depressed by the recession, the level of tuition was set lower than it would have been under full employment. We estimate that public institutions could have charged $56 more per FTE student in 1975 had there been full employment, and private institutions could have charged $140 more. In that year, the increased tuition could have brought $335 million more to the public sector and $282 million more to the private sector.

The income from endowment and gifts was also depressed by the lower level of the gross national product. In a full employment economy, public postsecondary institutions could have received an additional $20 million in endowment and gift income, and private institutions could have received $140 million more. Assuming that the relationship between gross national product, enrollment and state appropriations continued as in the past 15 years, $280 million more would have been appropriated by states for the public sector if there had been no recession. The combined costs of the recession were roughly a billion dollars for the public and private schools.

This additional sum would have been sufficient to prevent professional and instructional wages from lagging behind the price level. Of course, under full employment, per capita personal incomes would have been higher and probably an additional billion dollars would have been required to maintain proportionality between professors' average compensation and average earnings. In other words, even in a full employment

economy the average faculty member could have been expected to be comparatively worse off in 1975 than in 1971, but he would not have lost actual purchasing power.

The balance between the public and private sector. Projections of enrollments by sector presented in this study were based on past trends. These trends are not immutable. A number of reasons can be adduced to project either gains or losses by the private sector between now and 1985.

On the optimistic side, the slowdown, if not the virtual halt, of new campuses established under public auspices will remove some of the pressure upon private institutions. On the pessimistic side, the ever-widening gap between public and private tuition will probably continue to undermine the proportion of students going to private schools.

Although it may sound as an anathema to the representatives of public schools, federal incentives to increase public tuition levels may not be out of place. If Basic Opportunity Grants were increased in such a way that a significant portion, up to $1,000 a year, was reserved for the payment of tuition, the incentive to states to take advantage of this increased money could be irresistible. Most dispassionate observers, witness the recent recommendations submitted to the New Jersey State Department of Education, do bemoan the large subsidy to children of rich parents who attend public schools.

In conclusion, it may be appropriate to stress that the segment of students traditionally served by the private sector may be shrinking

faster than total enrollment. Some private schools were either unable or unwilling to make suitable arrangements to attract part-time students. If the conditions described by the low enrollment projection do materialize, either their attitude will have to change, or many schools will lose enrollment and some will be forced to close their doors. It has been argued that schools threatened with extinction are located in areas where there is little opportunity for part-time employment, and that they have been victims of a trend. It is suggested that they take some action to provide part-time jobs, possibly cutting down on full-time staff for clerical, maintenance and, perhaps, student counselling endeavors, and cut up these jobs to make part-time earning opportunities for their own students. The designing of attractive earn-while-you-learn programs could well be encouraged by the Fund for Postsecondary Education. Should the pilot studies prove a success, the judicious use of work-study money could go a long way toward preserving smaller institutions.

We have shown below that if it is believed desirable for the relative wages of teachers to return to their former levels, institutional aid may be required to achieve this purpose. On the other hand, one could argue that the deterioration of wages of college teachers could have the positive effect of acting as a signal to potential graduate students to stay away from school. One could buttress this argument with the fact that most of the deficits in the private sector are caused by graduate students, and that aid to institutions will not help undergraduates, the group to which

most federal aid is targeted.

Institutional aid to postsecondary institutions seems more justified if one is pessimistic about the ability of the economy to come back to full employment. Our projections indicate that if there is light at the end of the economic tunnel, it would appear that federal institutional programs are less easy to advocate.

We have searched our conscience at length, and have not come to a firm conclusion about the desirability of institutional aid. On balance, we have come out against it. If states and localities continue their subsidy policy, there will certainly be enough money for the public sector. Popular schools in the private sector also ought to make ends meet. Subsidies to schools not able to take energetic enough action either to scale down expenses or attract more students are likely to encourage profligacy and waste, and be disfunctional from an economic point of view.

Schools which gained or lost enrollment. Our analysis has highlighted the fact that the offerings of the school, its location, its reputation, or some other factors that are difficult to measure have affected the recent growth or decline of schools. These intangibles are probably more important than the resources expended per student, tuition charges, or the ratio of tuition to instructional costs.

It is not at all clear whether a change in taste or an increase in the state subsidies to students who attend private institutions was responsible for the better-than-expected showing of some schools in the private

sector. However, it is quite clear that the increased acceptance of sub-professional preparation has benefited a number of public sector junior colleges, while the well-publicized surplus of teachers has hurt state institutions which specialize in teacher-training.

The most significant finding in the analysis of schools which gained or lost enrollment was that the schools which were most popular with students did not gain resources per student. On the other hand, schools which could no longer attract the same number of students from year to year did increase their resources. Either they were suffering from diseconomies of scale, or they could not cut down their outlays fast enough.

Aid to institutions with declining enrollments is likely to weaken those institutions which are popular with students. In the public sector, where the allocations to the postsecondary sector are probably fixed in the aggregate, support to failing institutions reduces the resources available to the successful ones. States should realize that a bail-out of losers in the public sector will adversely affect the private sector. The availability of places in highly subsidized schools with low levels of enrollment is likely to attract students who would otherwise enroll in smaller private schools.

It is equally difficult to justify a program to save private schools which fail to attract students. If this help made it possible for them to lower their tuition below the level of other private schools, we

would be consciously encouraging students to choose schools with offerings which they consider to be less economically viable than others. With college graduates competing increasingly for professional and other high-status jobs, specific preparation for the world of work is likely to become more popular, and traditional liberal arts colleges may have to widen their offerings. Trustees and administrators of private campuses that continue to lose enrollment should seriously think about either consolidating these schools and/or reorienting their offerings to specialties that are demanded by students. If any federal action is indicated, it is to encourage the schools' self-study to adjust their mission in tomorrow's student enrollment patterns and the economy.

Problems of academics. The sympathy for the penury of post-secondary institutions expressed in this report could ring false in the light of the limited action recommendations above. The reader should not be deceived by this apparent contradiction. Others, besides us, have documented the fact that institutions are coping with the crisis, but that academics are the real losers.

There is little relief in sight for teachers. In the first place, their bargaining position is poor. The well-documented glut of Ph.D.'s has resulted in excessive numbers of applicants for academic jobs in both humanities and the hard sciences. Administrators have discovered a new power over established academics. As movement between institutions has stopped, the chances of losing a valuable member of the faculty to

another institution have been greatly reduced. In this, and in future crises, it is likely that teachers will bear the brunt of the economizing.

The decline in teachers' earnings is likely to have deleterious effects. In the short run, if academic wages deteriorate in relation to average wages, we can expect some lowering of the quality of the faculty in areas such as economics, law and medicine, where teachers can easily switch to employment in other sectors. In the long run, this deterioration may become very serious, if embittered professors unionize and wages are set on the basis of seniority, rather than specialty.

The brunt of the burden of the financial crises in academia will probably continue to be borne by professionals. Our projections indicate that under certain circumstances, teachers may continue to experience a relative deterioration of their earning levels to relieve the financial crunch on institutions.

In all probability, administrators have not pushed teachers to the limit of their tolerance nor have they exhausted their options in keeping costs down. For instance, the elimination of classes with low enrollments and the elimination of redundant departments has just begun. The opportunity to employ on a part-time basis the large number of Ph.D.'s who have jobs outside of the academic establishment, to teach part-time students at night, has not been fully exploited. This adjunct faculty is generally badly paid, and does not receive any fringe benefits. With increasing proportions of those enrolled attending college part-time, this

opportunity to cut down on faculty costs does not appear to be trivial.

The consequent reduction of demand for full-time faculty will strengthen the hand of administrators in their negotiations with unions or individual faculty members. The extent to which the spirit of academic collegiality is likely to be affected cannot be gauged.

If policy-makers share our concern about the academics' losses in the economic pecking order, special attention ought to be paid to improving conditions in the academic labor market. There are two measures which could be suggested to this end: (1) providing a special fund to make it possible for academics to retire early, both by matching funds to the retirement funds and, additionally, by providing special appropriations to index their retirement benefits to the cost of living, and (2) subsidizing the fringes, if not the salaries of academics, in order to increase the funds that are available for their salaries. Federal policy planners should consider both the possibility of government funding for the retirement benefits mentioned above, and possibly the funding of a special program to reimburse academics for their medical costs or for their children's college tuition.

Summary.

The comparative penury of postsecondary institutions, which we ascribe mostly to the slowdown in the economic growth of the U.S., has not significantly affected the resources expended to educate students. Instead, as we have shown, there has been an increasing misallocation of resources during the past five years, with the schools that attract more

students having to make do with less, while the schools that lose students are spending more. In the next ten years, we believe that sufficient funds will be generated for a parsimonious operation of higher education.

Footnotes

[1]Earl F. Cheit, The New Depression in Higher Education: A Study of Financial Conditions at 41 Colleges and Universities (McGraw Hill Book Company, 1971).

[2]See Appendix A.

[3]See Appendix Table A-1

[4]See Appendix B.

[5]Joseph Froomkin et al., The Financial Prospects of the Post-Secondary Sector, 1975 to 1990 (Washington: Joseph Froomkin Inc., 1972)

[6]See Appendix C.

[7]The number of standard undergraduate students was derived by using a weighted measure of FTE enrollment at different levels of instruction and in different types of institutions. The weighting was as follows:

	Pre-Baccalaureate	First Professional	Graduate
Public Universities	1.04	2.8	3.1
Other Four-Year	1.04	2.8	2.8
Two-Year	.84	-	-
Private Universities	1.09	2.8	3.1
Other Four-Year	1.03	2.8	2.9
Two-Year	.84	-	-

[8]Froomkin, op. cit. Also see Section IV of this report.

[9]The comparisons for the 1970/71 to 1974/75 period are made more difficult not only by changes in the form, but also by the change in the definition of enrollments by type of institution. In 1973/74 NCES reasonably decided to disaggregate satellite campuses from parent institutions. Thus, instead of reporting four-year and two-year colleges as part of a parent university system, these schools were reported in their appropriate categories. For the sake of comparability, we have adjusted some financial statistics, and labeled them as old aggregation, in the first, descriptive chapter of the study. Since statistics on both bases were available in 1973/74, the ratios developed from that year's experience were applied to 1974/75, to derive estimates based on the old aggregation.

In the second part of our study, we have used the original HEGIS data to regroup all institutions in a consistent manner. Thus, all doctorate-granting institutions are under the heading of universities. For certain analyses, they have been disaggregated with divinity schools, service schools, certain technical schools, and schools with medical schools reported separately. Four-year schools include campuses which offer a bachelor's or master's degree, and two-year schools those institutions with offerings generally below the bachelor's.

[10] See Appendix Table A-3.

[11] This statement is not strictly true. Slightly different changes in ratios of full-time faculty for SUS were observed in different types of schools. Only if one assumes that pay is related to benefits to students can this statement be rationalized.

[12] In estimating the composition of faculty by rank, it was assumed, first of all, that the combined death and retirement rate for faculty would be 1.8 per cent per year. This is consistent with estimates derived by Cartter (Allan M. Cartter and Robert L. Farrell, "Academic Labor Market Projections and the Draft," The Economics and Financing of Higher Education in the United States (Washington: U.S.G.P.O., 1969, p. 361). It was further assumed that such deaths and retirements as did occur would be confined to the top two academic ranks, professors and associate professors. Additionally, on the basis of HEGIS data, estimates were made of the number of promotions and losses at each academic rank and for both the public and private sectors for the period 1970/71 to 1975/76. These rates of promotion and loss were then used to estimate the rank distribution of faculty for 1980 and 1985, with estimates of total faculty needed and new hires derived by assuming a constant faculty-student ratio to 1980 and 1985.

[13] The estimates are based on the assumption that the growth of each type of schools (growing, declining less than 10 per cent, and declining more than 10 per cent) would be similar to the experience of the past 5 years:

$$\frac{Git-1}{Gt} \times Gt$$

Where G is the ra[illegible]nge in enrollment for type of school i, t-1 is the previous five-yea[illegible]od, and t is the period for the projections. This allocation results in the following projection:

(enrollment in thousands of FTE)

PRIVATE

	High Enrollment			Low Enrollment	
	1975	1980	1985	1980	1985
No Decline	962	1,112	1,203	889	945
Less Than 10 Per Cent Decline	493	457	397	365	312
Greater Than 10 Per Cent Decline	403	299	208	239	163
	1,857	1,868	1,808	1,493	1,420

PUBLIC

No Decline	4,630	5,524	5,775	4,870	5,067
Less Than 10 Per Cent Decline	771	713	575	628	504
Greater Than 10 Per Cent Decline	494	370	248	326	216
	5,895	6,607	6,598	5,824	5,789

Taking FTE costs as of 1974/75 and newly projected enrollments, the figures cited in the text were derived.

[14] For both the high and low GNP projections, the following estimates of the civilian labor force in 1980 and 1985 were used (figures are in thousands):

(1) 1980: 101,673
(2) 1985: 108,602

These estimates were taken from the Monthly Labor Review (Washington: U.S.G.P.O., December 1976), Table 3, page 7.

For the high GNP projection, the following assumptions were made:

(1) Productivity increase: 3 per cent per year.
(2) Unemployment: 4 per cent.
(3) Hours per week: down .2 per cent per year.

For the low GNP projection, the following assumptions were made:

(1) Productivity: up 2.5 per cent per year.
(2) Unemployment: 6 per cent.
(3) Hours per week: down .2 per cent per year.

Applying these growth rates to 1974-75 GNP, we obtained GNP estimates (in 1974/75 prices) for the 1979/80 and 1984/85 school years. Personal and disposable personal incomes were assumed to maintain the same

relationship to GNP as in the recent past. Thus, the following projections of GNP, personal income, and disposable personal income were derived:

GROSS NATIONAL PRODUCT, PERSONAL INCOME AND DISPOSABLE INCOME, ACTUAL 1974-1975 AND HIGH AND LOW PROJECTIONS

	1974/75	1979/80	1984/85
Total (billions of 1974/75 dollars)			
Gross National Product	1,464.8		
High		1,881.6	2,299.7
Low		1,802.7	2,157.8
Personal Income	1,201.5		
High (.82)		1,542.9	1,885.8
Low		1,478.2	1,769.4
Disposable Income	1,031.9		
High (.7)		1,317.1	1,609.8
Low		1,261.9	1,510.5

Note: For 1974/75 uses, GNP price deflator for GNP and CPI as deflator for personal income and disposable personal income.

[15]Howard R. Bowen and W. John Minter, Private Higher Education: Annual Reports on Financial and Educational Trends in the Private Sector of American Higher Education (Washington, D. C.: Association of American Colleges, 1975-76).

[16]Garven Hudgins and Ione Phillips, People's Colleges in Trouble: A Financial Profile of the Nation's State Universities and Land-Grant Colleges (Washington, D. C.: National Association of State Universities and Land Grant Colleges, 1976).

Jack Maggarrel, "State Appropriations Up 24 Pct. in Two Years," Chronicle of Higher Education (Washington, D. C.), Volume XIII, Number 8 (October 25, 1976), pp. 9-11.

[17]Froomkin, loc. cit.

TABLE 1

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	All Institutions				
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975
Full-Time Equivalent Students (thousands)	6,793	7,211	7,321	7,529	7,887
Standard Undergraduate Students (thousands)	8,265	8,652	8,821	9,137	9,572
Total Current Funds Revenues	$24,021	$26,401	$28,802	$31,927	$35,935
Total Current Funds Expenditures	$23,315	$25,717	$28,141	$30,916	$35,301
(1967 dollars)	($18,574)	($19,322)	($20,158)	($20,583)	($21,486)
Total Current Funds Expenditures/FTE	$3,462	$3,566	$3,844	$4,106	$4,476
(1967 dollars)	($2,735)	($2,679)	($2,754)	($2,734)	($2,724)
Total Current Funds Expenditures/SUS	$2,838	$2,972	$3,190	$3,384	$3,688
(1967 dollars)	($2,242)	($2,233)	($2,285)	($2,253)	($2,245)
Instructional Costs	$13,282	$14,766	$16,186	$17,919	$19,793
(1967 dollars)	($10,320)	($10,873)	($11,335)	($11,727)	($11,923)
Instructional Costs/FTE	$1,955	$2,048	$2,211	$2,380	$2,510
(1967 dollars)	($1,519)	($1,508)	($1,548)	($1,558)	($1,512)

TABLE 1 (Cont'd)

	All Institutions				
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975
Instructional Costs/SUS	$1,603	$1,707	$1,835	$1,961	$2,068
(1967 dollars)	($1,246)	($1,257)	($1,285)	($1,283)	($1,246)
Tuition Revenue/Instructional Costs	0.[illegible]	0.38	0.37	0.37	0.37
Per Cent of Total Current Funds Expenditures					
Instructional Costs	56.5	57.4	57.5	58.0	56.1
Research	9.5	8.9	8.6	8.1	9.1
Auxiliary Enterprises	12.7	12.4	11.9	11.7	11.6
Operation and Maintenance	7.4	7.5	7.7	8.1	8.7
Hospitals	3.6	3.9	4.2	4.6	6.1
Per Cent of Total Current Funds Revenues					
Tuition and Fees	21.0	21.3	21.0	20.5	20.5
Federal Appropriations	2.4	2.5	2.7	2.7	2.6
State Appropriations	26.5	26.4	26.9	28.2	29.5
Auxiliary Enterprises	13.0	12.6	12.1	11.7	[illegible]
Service Programs	6.9	7.4	7.7	7.7	10.6
Hospitals	3.4	3.8	4.1	4.5	6.1
Other Service Programs	3.5	3.6	3.6	3.2	4.5

TABLE 1 (Cont'd)

Sources: National Center for Educational Statistics, Fall Enrollment in Higher Education (Washington: U. S. G. P. O., relevant issues); National Center for Educational Statistics, Financial Statistics of Institutions of Higher Education: Current Funds, Revenues, and Expenditures (Washington: U. S. G. P. O., relevant issues); D. Kent Halstead, Higher Education Prices and Price Indexes (Washington, U. S. G. P. O., 1975); D. Kent Halstead, Higher Education Prices and Price Indexes, 1975 Supplement (Washington: U. S. G. P. O., 1976); NCES, unpublished expenditures and revenue data (1973-74 and 1974-75).

1974-75 Financial Data Estimates, see Appendix

TABLE 2

PRICE INDEXES RELEVANT TO HIGHER EDUCATION, 1965-75
(1966-67 = 100)

	1965-66	1969-70	1970-71	1971-72
Higher Education Price Index*	95.0	121.0	128.7	135.8
Consumer Price Index	97.2	114.7	120.7	125.1
Higher Education Aggregate Expenditures Price Index	95.4	119.5	126.6	133.1
Public	95.4	119.7	126.9	133.5
Private	95.5	119.2	126.2	132.5
Research and Development Price Index	94.7	119.3	126.3	133.0
Operation and Maintenance Price Index	--	--	123.8	133.0
Hospital Expenditures Price Index	94.6	121.0	129.1	135.2
Auxiliary Enterprises Price Index	97.0	116.4	120.4	125.2
Faculty Compensation Price Index	--	--	131.0	137.0
(Expressed in terms of percentage change from previous year)				
Higher Education Price Index	--	6.3	6.4	5.5
Consumer Price Index	--	4.2	5.2	3.6
Higher Education Aggregate Expenditures Price Index	--	5.8	6.0	5.1
Public	--	5.9	5.9	5.1
Private	--	5.7	5.9	5.0
Research and Development Price Index	--	6.2	5.9	5.3
Operation and Maintenance Price Index	--	--	--	7.4
Hospital Expenditures Price Index	--	6.4	6.7	4.7
Auxiliary Enterprises Price Index	--	4.6	3.4	4.0
Faculty Compensation Price Index	--	--	--	4.6

TABLE 2 (Cont'd)

PRICE INDEXES RELEVANT TO HIGHER EDUCATION, 1965-75
(1966-67 = 100)

	1972-73	1973-74	1974-75	% Change 1970-75
Higher Education Price Index*	142.8	152.8	166.0	29.0
Consumer Price Index	130.0	141.6	157.4	30.4
Higher Education Aggregate Expenditures Price Index	139.6	150.2	164.3	29.8
Public	140.0	150.5	164.5	29.6
Private	138.9	149.6	164.0	30.0
Research and Development Price Index	139.1	148.1	162.0	28.3
Operation and Maintenance Price Index	141.1	157.2	180.2	45.6
Hospital Expenditures Price Index	139.3	147.3	165.7	28.4
Auxiliary Enterprises Price Index	132.1	148.8	165.9	37.8
Faculty Compensation Price Index	144.0	152.9	162.0	23.7

(Expressed in terms of percentage change from previous year)

				Average Yr. To Yr. Change 1970-75
Higher Education Price Index	5.2	7.0	8.6	6.5
Consumer Price Index	3.9	8.9	11.2	6.6
Higher Education Aggregate Expenditures Price Index	4.9	7.6	9.4	6.6
Public	4.9	7.6	9.4	6.6
Private	4.8	7.7	9.6	6.6
Research and Development Price Index	4.6	6.5	9.4	6.3
Operation and Maintenance Price Index	6.1	11.4	14.6	9.9
Hospital Expenditures Price Index	3.0	5.7	12.5	6.5
Auxiliary Enterprises Price Index	5.5	12.6	11.5	7.4
Faculty Compensation Price Index	5.1	6.2	6.0	5.5

TABLE 2 (Cont'd)

PRICE INDEXES RELEVANT TO HIGHER EDUCATION, 1965-75
(1966-67 = 100)

(Note: See Appendix B for notes on derivation of aggregate expenditures index, hospital expenditures index, faculty compensation price index, auxiliary enterprises index and operation and maintenance price index.)

*Price index for educational and general expenditures, excluding organized research.

Sources: D. Kent Halstead, Higher Education Prices and Price Indexes (Washington: U.S.G.P.O., 1975).

D. Kent Halstead, Higher Education Prices and Price Indexes, 1975 Supplement (Washington: U.S.G.P.O., 1976);

U. S. Department of Commerce, Survey of Current Business (Washington, U.S.G.P.O., relevant issues).

TABLE 3

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	All Public Institutions				
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975
Full-Time Equivalent Students (thousands)	4,992	5,385	5,495	5,677	5,995
Standard Undergraduate Students (thousands)	5,863	6,227	6,375	6,620	6,983
Total Current Funds Revenues	$15,645	$17,211	$18,938	$21,376	$24,201
Total Current Funds Expenditures	$15,112	$16,608	$18,348	$20,493	$23,684
(1967 dollars)	($11,909)	($12,440)	($13,106)	($13,617)	($14,398)
Total Current Funds Expenditures/FTE	$3,027	$3,084	$3,339	$3,610	$3,951
(1967 dollars)	($2,385)	($2,310)	($2,385)	($2,399)	($2,402)
Total Current Funds Expenditures/SUS	$2,578	$2,667	$2,878	$3,096	$3,392
(1967 dollars)	($2,032)	($1,998)	($2,056)	($2,057)	($2,068)
Instructional Costs	$9,158	$10,315	$11,427	$12,731	$14,174
(1967 dollars)	($7,116)	($7,596)	($8,002)	($8,332)	($8,539)
Instructional Costs/FTE	$1,835	$1,916	$2,080	$2,243	$2,364
(1967 dollars)	($1,426)	($1,411)	($1,457)	($1,468)	($1,424)

TABLE 3 (Cont'd)

	All Public Institutions				
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975
Instructional Costs/SUS	$1,562	$1,656	$1,835	$1,997	$2,030
(1967 dollars)	($1,214)	($1,219)	($1,285)	($1,307)	($1,223)
Tuition Revenue/Instructional Costs	0.22	0.23	0.22	0.22	0.22
Per Cent of Total Current Funds Expenditures					
Instructional Costs	60.6	62.1	62.3	62.1	59.8
Research	8.8	8.2	8.3	7.8	8.7
Auxiliary Enterprises	11.8	11.5	11.0	10.8	10.7
Operation and Maintenance	7.6	7.8	7.9	8.4	9.3
Hospitals	3.6	3.8	3.8	4.3	4.9
Per Cent of Total Current Funds Revenues					
Tuition and Fees	13.0	13.6	13.3	12.8	12.9
Federal Appropriations	3.0	3.2	3.2	3.2	3.2
State Appropriations	40.1	39.8	40.2	41.3	43.1
Auxiliary Enterprises	12.1	11.7	11.3	10.9	10.7
Service Programs	5.8	6.0	5.9	6.3	7.8
Hospitals	3.3	3.6	3.6	4.1	4.7
Other Service Programs	2.5	2.4	2.2	2.2	3.1

Sources: See Table 1.

TABLE 4

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

Public Universities

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
FTE Students (1000's)	1,944	2,032	2,022	2,090	2,154	1,683	1,730
SUS Students (1000's)	2,719	2,786	2,796	2,925	3,005	2,387	2,470
Total Current Funds Revenues	$9,144	$9,845	$10,584	$11,884	---	$9,382	$10,407
Total Current Funds Expenditures	$8,928	$9,546	$10,328	$11,481	$12,493	$9,070	$10,239
(1967 dollars)	($7,035)	($7,151)	($7,377)	($7,629)	---	($6,027)	($6,224)
Expenditures/FTE	$4,593	$4,698	$5,108	$5,493	$5,800	$5,389	$5,918
(1967 dollars)	($3,619)	($3,519)	($3,649)	($3,650)	($3,526)	($3,581)	($3,598)
Expenditures/SUS	$3,284	$3,426	$3,694	$3,925	$4,116	$3,800	$4,145
(1967 dollars)	($2,588)	($2,566)	($2,639)	($2,608	($2,502)	($2,525)	($2,520)
Instructional Costs	$4,603	$5,027	$5,356	$5,938	$6,467	$4,751	$5,176
(1967 dollars)	($3,577)	($3,702)	($3,751)	($3,886)	($3,896)	($3,109)	($3,118)

TABLE 4 (Cont'd)

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
Instr. Costs/FTE (1967 dollars)	$2,368 ($1,840)	$2,474 ($1,822)	$2,649 ($1,855)	$2,841 ($1,859)	$3,002 ($1,808)	$2,823 ($1,876)	$2,992 ($1,819)
Instr. Costs/SUS (1967 dollars)	$1,693 ($1,315)	$1,804 ($1,328)	$1,916 ($1,342)	$2,030 ($1,329)	$2,131 ($1,284)	$1,990 ($1,302)	$2,096 ($1,263)
Tuition Revenue/ Instructional Costs	0.246	0.256	0.249	0.240	0.245	0.252	0.25
% of Total Current Funds Expenditures							
Instr. Costs	51.6	52.7	51.9	51.7	------	52.4	50.6
Research	13.6	12.9	13.4	12.7	14.6	13.3	14.8
Aux. Enterprises	11.9	12.0	11.6	11.5	---	12.8	12.7
Op. and Maint.	6.4	6.5	6.6	6.9	---	7.0	8.2
Hospitals	5.0	5.4	5.8	6.1	---	5.2	6.0
% of Total Current Funds Revenues							
Tuition and Fees	12.4	13.1	12.6	12.3	----	12.8	12.6
Federal Approp.	2.0	1.8	1.9	1.9	----	2.1	2.6
State Approp.	36.8	36.4	36.6	37.3	----	37.4	39.7
Aux. Enterprises	12.2	12.1	11.9	11.8	----	13.1	12.7
Service Programs	8.6	9.1	9.4	9.7	----	7.7	9.6
Hospitals	4.6	5.0	5.5	5.7	----	5.0	5.7
Other	4.1	4.1	4.0	4.0	----	2.7	4.1

Sources: See Table 1.

TABLE 5

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

Public Other Four-Year Institutions

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
FTE Students (1000's)	1,635	1,739	1,790	1,741	1,807	2,076	2,155
SUS Students (1000's)	1,957	2,085	2,166	2,144	2,241	2,594	2,718
Total Current Funds Revenues	$4,234	$4,750	$5,302	$5,870	---	$8,184	$9,399
Total Current Funds Expenditures	$4,087	$4,592	$5,143	$5,647	---	$7,872	$9,234
(1967 dollars)	($3,221)	($3,440)	($3,674)	($3,752)	---	($5,231)	($5,613)
Expenditures/FTE	$2,500	$2,641	$2,873	$3,244	---	$3,792	$4,285
(1967 dollars)	($1,970)	($1,978)	($2,052)	($2,155)	---	($2,520)	($2,605)
Expenditures/SUS	$2,088	$2,202	$2,374	$2,634	---	$3,035	$3,397
(1967 dollars)	($1,645)	($1,649)	($1,696)	($1,750)	---	($2,017)	($2,065)
Instructional Costs	$2,762	$3,140	$3,582	$3,862	$4,309	$4,935	$5,521
(1967 dollars)	($2,146)	($2,312)	($2,508)	($2,527)	($2,596)	($3,230)	($3,326)

TABLE 5 (Cont'd)

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
Instr. Costs/FTE (1967 dollars)	$1,689 ($1,312)	$1,806 ($1,330)	$2,001 ($1,401)	$2,218 ($1,452)	$2,386 ($1,437)	$2,377 ($1,556)	$2,562 ($1,543)
Instr. Costs/SUS (1967 dollars)	$1,411 ($1,096)	$1,506 ($1,109)	$1,654 ($1,158)	$1,801 ($1,179)	$1,923 ($1,158)	$1,902 ($1,245)	$2,031 ($1,223)
Tuition Revenue/ Instructional Costs	0.221	0.224	0.222	0.213	0.217	0.211	0.215
% of Total Current Funds Expenditures							
Instr. Costs	67.6	68.4	69.6	68.4	----	62.7	59.8
Research	2.8	2.7	2.7	2.6	----	4.8	6.2
Aux. Enterprises	14.3	13.6	12.9	12.2	----	10.6	10.7
Op. and Maint.	9.2	9.2	9.6	10.4	----	9.3	10.1
Hospitals	2.6	2.3	2.0	3.2	----	5.1	6.1
% of Total Current Funds Revenues							
Tuition and Fees	14.4	14.8	15.0	14.0	----	12.7	12.7
Federal Approp.	4.8	5.5	4.1	5.3	----	4.1	4.2
State Approp.	47.6	46.5	47.3	48.2	----	44.9	46.3
Aux. Enterprises	14.9	14.3	13.3	12.3	----	10.7	10.5
Service Programs	2.6	2.8	2.1	3.3	----	7.5	9.3
Hospitals	2.4	2.6	2.0	3.2	----	4.9	5.7
Other	0.2	0.2	0.1	0.1	----	2.6	3.9

Sources: See Table 1.

TABLE 6

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

Public Two-Year Institutions

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
FTE Students (1000's)	1,413	1,614	1,682	1,846	2,032	1,918	2,110
SUS Students (1000's)	1,187	1,356	1,413	1,551	1,707	1,611	1,772
Total Current Funds Revenues	$2,266	$2,616	$3,052	$3,621	---	$3,810	$4,395
Total Current Funds Expenditures	$2,097	$2,472	$2,877	$3,365	---	$3,552	$4,210
(1967 dollars)	($1,652)	($1,852)	($2,055)	($2,236)	---	($2,360)	($2,559)
Expenditures/FTE	$1,484	$1,532	$1,710	$1,823	---	$1,852	$1,995
(1967 dollars)	($1,169)	($1,148)	($1,221)	($1,211)	---	($1,231)	($1,213)
Expenditures/SUS	$1,767	$1,823	$2,036	$2,170	---	$2,205	$2,376
(1967 dollars)	($1,392)	($1,366)	($1,454)	($1,442)	---	($1,465)	($1,444)
Instructional Costs	$1,793	$2,148	$2,489	$2,931	$3,398	$3,045	$3,477
(1967 dollars)	($1,393)	($1,582)	($1,743)	($1,918)	($2,047)	($2,023)	($2,114)

TABLE 6 (Cont'd)

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
Instr. Costs/FTE (1967 dollars)	$1,269 ($986)	$1,331 ($980)	$1,480 ($1,036)	$1,588 ($1,039)	$1,672 ($1,007)	$1,588 ($1,039)	$1,648 ($993)
Instr. Costs/SUS (1967 dollars)	$1,511 ($1,174)	$1,584 ($1,166)	$1,762 ($1,234)	$1,890 ($1,237)	$1,991 ($1,199)	$1,890 ($1,237)	$1,962 ($1,181)
Tuition Revenue/ Instructional Costs	0.16	0.16	0.16	0.16	----	0.17	0.17
% of Total Current Funds Expenditures							
Instr. Costs	85.5	86.9	86.5	87.1	----	85.7	82.6
Research	0.1	0.2	0.1	0.1	----	0.1	0.1
Aux. Enterprises	6.5	5.9	5.7	5.9	----	6.1	6.0
Op. and Maint.	9.4	10.1	10.0	10.4	----	10.4	10.4
Hospitals	0.0	0.0	0.0	tr	----	tr	0.0
% of Total Current Funds Revenues							
Tuition and Fees	13.0	13.5	13.2	12.8	----	13.3	13.8
Federal Approp.	3.4	4.1	4.1	4.0	----	3.9	2.5
State Approp.	39.7	40.6	40.4	42.8	----	42.8	44.0
Aux. Enterprises	6.3	5.9	5.5	5.6	----	5.8	5.9
Service Programs	tr	tr	tr	tr	----	tr	tr
Hospitals	0.0	0.0	tr	tr	----	tr	tr
Other	tr	tr	tr	tr	----	tr	tr

Sources: See Table 1.

TABLE 7

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	All Private Institutions				
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975
Full-Time Equivalent Students (thousands)	1,802	1,826	1,827	1,852	1,892
Standard Undergraduate Students (thousands)	2,402	2,425	2,446	2,517	2,589
Total Current Funds Revenues	$8,377	$9,190	$9,864	$10,552	$11,617
Total Current Funds Expenditures	$8,403	$$9,111	$9,795	$10,422	$11,733
(1967 dollars)	($6,658)	($6,876)	($7,052)	($6,967)	($7,084)
Total Current Funds Expenditures/FTE	$4,663	$4,990	$5,361	$5,627	$6,140
(1967 dollars)	($3,695)	($3,766)	($3,860)	($3,761)	($3,744)
Total Current Funds Expenditures/SUS	$3,506	$3,757	$4,004	$4,141	$4,487
(1967 dollars)	($2,778)	($2,835)	($2,883)	($2,768)	($2,736)
Instructional Costs	$4,124	$4,451	$4,759	$5,188	$5,619
(1967 dollars)	($3,204)	($3,278)	($3,333)	($3,395)	($3,385)
Instructional Costs/FTE	$2,289	$2,438	$2,605	$2,801	$2,970
(1967 dollars)	($1,779)	($1,795)	($1,824)	($1,833)	($1,789)

TABLE 7 (Cont'd)

	All Private Institutions				
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975
Instructional Costs/SUS	$1,720	$1,885	$1,946	$2,061	$2,170
(1967 dollars)	($1,336)	($1,385)	($1,401)	($1,378)	($1,307)
Tuition Revenue/Instructional Costs	0.73	0.74	0.74	0.73	0.75
Per Cent of Total Current Funds Expenditures					
Instructional Costs	49.1	48.9	48.6	49.8	48.4
Research	10.6	10.2	9.0	8.6	9.6
Auxiliary Enterprises	14.4	13.9	13.5	13.5	13.3
Operation and Maintenance	7.1	7.1	7.1	7.5	7.5
Hospitals	3.5	4.1	4.9	5.3	8.5
Per Cent of Total Current Funds Revenues					
Tuition and Fees	35.9	35.7	35.7	36.0	36.1
Federal Appropriations	1.2	1.3	1.6	1.7	1.2
State Appropriations	1.2	1.4	1.4	1.8	1.4
Auxiliary Enterprises	14.8	14.1	13.6	13.4	13.2
Service Programs	8.9	10.1	11.1	10.6	16.1
Hospitals	3.6	4.2	5.0	5.3	8.9
Other Service Programs	5.3	5.9	6.2	5.3	7.2

Source: See Table 1.

TABLE 8

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

Private Universities

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
FTE Students (1000's)	574	572	572	572	583	551	[illegible]
SUS Students (1000's)	972	961	968	980	994	942	963
Total Current Funds Revenues	$4,147	$4,496	$4,770	$5,101	---	$4,933	$5,528
Total Current Funds Expenditures	$4,184	$4,469	$4,780	$5,051	---	$4,882	$5,476
(1967 dollars)	($3,315)	($3,373)	($3,441)	($3,376)	---	($3,263)	($3,339)
Expenditures/FTE	$7,289	$7,813	$8,339	$8,918	---	$8,860	$9,726
(1967 dollars)	($5,776)	($5,897)	($6,004)	($5,961)	---	($5,922)	($5,930)
Expenditures/SUS	$4,305	$4,650	$4,938	$5,154	---	$5,237	$5,686
(1967 dollars)	($3,411)	($3,509)	($3,555)	($3,445)	---	($3,501)	($3,467)
Instructional Costs	$1,707	$1,832	$1,910	$2,066	$2,320	$1,960	$2,204
(1967 dollars)	($1,326)	($1,349)	($1,338)	($1,352)	($1,398)	($1,283)	($1,328)

TABLE 8 (Cont'd)

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
Instr. Costs/FTE (1967 dollars)	$2,974 ($2,311)	$3,203 ($2,359)	$3,339 ($2,338)	$3,612 ($2,414)	$3,979 ($2,426)	$3,557 ($2,328)	$3,915 ($2,358)
Instr. Costs/SUS (1967 dollars)	$1,756 ($1,364)	$1,906 ($1,404)	$1,973 ($1,382)	$2,108 ($1,380)	$2,334 ($1,406)	$2,081 ($1,362)	$2,289 ($1,379)
Tuition Revenue/ Instructional Costs	0.65	0.66	0.68	0.68	0.67	0.70	0.69
% of Total Current Funds Expenditures							
Instr. Costs	40.8	41.0	40.0	40.9	---	40.1	40.2
Research	18.3	17.8	15.5	15.0	----	14.7	16.4
Aux. Enterprises	10.1	10.0	9.8	10.0	----	10.1	10.0
Op. and Maint.	5.8	5.9	5.9	6.4	----	6.3	6.2
Hospitals	5.3	5.3	6.1	6.7	----	6.9	11.5
% of Total Current Funds Revenues							
Tuition and Fees	26.7	26.8	27.3	27.6	----	27.7	27.6
Federal Approp.	1.4	1.5	1.6	1.9	----	1.7	1.2
State Approp.	1.7	1.8	1.8	2.2	----	1.3	1.3
Aux. Enterprises	9.9	9.6	9.5	9.5	----	9.6	9.7
Service Programs	11.9	12.1	14.2	13.4	----	13.9	20.1
Hospitals	5.4	5.4	6.3	6.8	----	7.0	12.1
Other	6.5	6.7	7.9	6.6	----	6.9	8.0

TABLE 9

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

Private Other Four-Year Institutions

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
FTE Students (1000's)	1,118	1,144	1,151	1,170	1,205	1,186	1,216
SUS Students (1000's)	1,338	1,372	1,391	1,445	1,506	1,472	1,528
Total Current Funds Revenues	$3,990	$4,445	$4,838	$5,166	---	$5,325	$5,904
Total Current Funds Expenditures	$3,986	$4,396	$4,765	$5,098	---	$5,258	$5,845
(1967 dollars)	($3,158)	($3,318)	($3,431)	($3,408)	---	($3,515)	($3,564)
Expenditures/FTE	$3,567	$3,844	$4,140	$4,357	---	$4,433	$4,807
(1967 dollars)	($2,826)	($2,901)	($2,981)	($2,912)	---	($2,963)	($2,931)
Expenditures/SUS	$2,979	$3,204	$3,426	$3,528	---	$3,572	$3,825
(1967 dollars)	($2,361)	($2,418)	($2,467)	($2,358)	---	($2,388)	($2,332)
Instructional Costs	$2,272	$2,461	$2,683	$2,934	$3,094	$3,032	$3,205
(1967 dollars)	($1,765)	($1,812)	($1,932)	($1,920)	($1,864)	($1,984)	($1,931)

TABLE 9 (Cont'd)

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
Instr. Costs/FTE (1967 dollars)	$2,032 ($1,579)	$2,151 ($1,584)	$2,331 ($1,632)	$2,508 ($1,641)	$2,568 ($1,547)	$2,556 ($1,673)	$2,636 ($1,588)
Instr. Costs/SUS (1967 dollars)	$1,698 ($1,319)	$1,794 ($1,321)	$1,929 ($1,351)	$2,030 ($1,329)	$2,054 ($1,237)	$2,060 ($1,348)	$2,098 ($1,264)
Tuition Revenue/ Instructional Costs	0.78	0.79	0.78	0.78	0.80	0.75	0.79
% of Total Current Funds Expenditures							
Instr. Costs	57.0	56.0	56.3	57.6	----	57.6	54.8
Research	3.0	2.9	2.9	2.8	----	3.4	3.4
Aux. Enterprises	18.5	17.6	16.8	16.8	----	16.4	16.1
Op. and Maint.	8.2	8.1	8.2	8.4	----	8.4	8.5
Hospitals	1.8	3.1	3.9	4.2	----	4.1	6.0
% of Total Current Funds Revenues							
Tuition and Fees	44.5	43.9	43.2	43.5	----	42.8	43.1
Federal Approp.	1.0	1.1	1.6	1.5	----	1.6	1.1
State Approp.	0.7	0.9	1.1	1.5	----	2.3	1.4
Aux. Enterprises	19.2	18.1	17.2	16.8	----	16.5	16.2
Service Programs	6.4	8.6	8.7	8.5	----	8.2	13.1
Hospitals	1.9	3.2	3.9	4.2	----	4.1	6.3
Other	4.5	5.4	4.8	4.3	----	4.1	6.8

TABLE 10

ENROLLMENT, EXPENDITURES, AND REVENUES, 1970 - 1975

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

Private Two-Year Institutions

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
FTE Students (1000's)	109	110	103	109	106	114	113
SUS Students (1000's)	92	92	87	92	89	96	95
Total Current Funds Revenues	$240	$249	$255	$284	---	$293	$301
Total Current Funds Expenditures	$232	$243	$250	$273	---	$282	$296
(1967 dollars)	($184)	($183)	($180)	($182)	---	($189)	($180)
Expenditures/FTE	$2,128	$2,209	$2,427	$2,606	---	$2,474	$2,619
(1967 dollars)	($1,686)	($1,667)	($1,747)	($1,742)	---	($1,654)	($1,597)
Expenditures/SUS	$2,522	$2,641	$2,874	$3,087	---	$2,938	$3,116
(1967 dollars)	($1,998)	($1,993)	($2,069)	($2,064)	---	($2,964)	($1,900)
Instructional Costs	$145	$158	$166	$188	---	$196	$210
(1967 dollars)	($113)	($116)	($116)	($123)	---	($128)	($127)

TABLE 10 (Cont'd)

	Old Aggregation					New Aggregation	
	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1973-1974	1974-1975
Instr. Costs/FTE (1967 dollars)	$1,330 ($1,033)	$1,436 ($1,057)	$1,612 ($1,129)	[illegible] ($1,129)	$1,934 ($1,165)	$1,719 ($1,125)	$1,858 ($1,119)
Instr. Costs/SUS (1967 dollars)	$1,576 ($1,225)	$1,717 ($1,264)	$1,908 ($1,336)	$2,043 ($1,337)	$2,303 ($1,387)	$2,042 ($1,336)	$2,211 ($1,332)
Tuition Revenue/ Instructional Costs	0.83	0.79	0.76	0.77	0.74	0.78	0.77
% of Total Current Funds Expenditures							
Instr. Costs	62.5	65.0	66.4	68.9	---	69.5	70.9
Research	0.4	0.4	0.4	0.4	----	0.4	0.3
Aux. Enterprises	22.0	21.0	19.6	18.3	----	17.7	17.9
Op. and Maint.	11.6	11.1	11.2	11.4	----	11.7	11.5
Hospitals	0.0	0.0	0.0	0.0	----	0.0	0.0
% of Total Current Funds Revenues							
Tuition and Fees	50.0	50.2	49.4	51.0	----	52.6	54.4
Federal Approp.	1.7	2.0	2.4	1.8	----	1.7	1.0
State Approp.	0.4	0.8	1.2	1.4	----	1.4	1.4
Aux. Enterprises	26.3	24.0	22.7	20.4	----	19.8	20.3
Service Programs	tr	tr	tr	tr	tr	tr	1.7
Hospitals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	tr	tr	tr	tr	tr	tr	1.7

TABLE 11

FTE STUDENT ENROLLMENT AND NUMBER OF CAMPUSES, BY ENROLLMENT CHANGE AND CONTROL, 1970-71

(students in thousands)

	Students				Campuses			
	FTE's (1000's)	% of Total	% of All Public	% of All Private	Number	% of Total	% of All Public	% of All Private
No FTE Decline, 1970-75								
Public	3,343	54.0	73.2	--	890	35.5	73.7	--
Private	798	12.9	--	49.3	681	27.2	--	52.4
Less Than 10% FTE Decline								
Public	684	11.1	15.0	--	147	5.9	12.2	--
Private	393	6.3	--	24.3	206	8.2	--	15.9
Greater Than 10% FTE Decline								
Public	543	8.8	11.9	--	171	6.8	14.2	--
Private	429	6.9	--	26.5	412	16.4	--	31.7
Total Public	4,570	73.8	100.0	--	1,208	48.2	100.0	--
Total Private	1,620	26.2	--	100.0	1,299	51.8	--	100.0
Total	6,190	100.0	--	--	2,507	100.0	--	--

Source: Special tabulations from HEGIS file.

TABLE 12

FTE STUDENT ENROLLMENT CHANGE AND CONTROL, 1970-75

(students in thousands)

	[1]1970-71	[2]1970-71	[1]1974-75	[2]1974-75
No Decline	4,141	3,522	5,061	4,304
Public	3,343	2,871	4,115	3,539
Private	798	651	946	765
Less Than 10% Decline	1,077	997	1,031	955
Public	684	656	657	630
Private	393	341	374	324
More Than 10% Decline	972	874	753	681
Public	543	519	430	410
Private	429	355	324	271
Total Public	4,570	4,046	5,202	4,579
Total Private	1,620	1,347	1,644	1,360
Total	6,190	5,392	6,846	5,941

[1] All institutions which reported enrollment for every year of the 1970-75 period.

[2] All institutions which reported enrollment and instructional expenditures for every year of 1970-75 period.

Source: Special tabulations from HEGIS data.

TABLE 13

TUITION REVENUE PER FTE STUDENT, BY ENROLLMENT CHANGE AND CONTROL, 1970 - 1975

(Current Dollars in Thousands)

	1970 - 1971	1971 - 1972	1972 - 1973	1973 - 1974	1974 - 1975
Public Institutions					
No Decline	395	425	446	469	496
Less than 10% Decline	396	440	472	503	547
More than 10% Decline	430	473	506	526	598
Private Institutions					
No Decline	1,756	1,885	2,009	2,139	2,288
Less than 10% Decline	1,602	1,708	1,853	1,999	2,218
More than 10% Decline	1,580	1,787	1,925	2,080	2,287

Source: Special tabulations from HEGIS data.

TABLE 14

INSTRUCTIONAL COSTS PER FTE STUDENT BY ENROLLMENT CHANGE AND SELECTIVITY, 1971, 1974, AND 1975

(Current Dollars)

	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975
No Decline										
High Selectivity	3,110	3,999	4,089	1.29	1.31	3,960	4,513	5,116	1.14	1.29
Medium Selectivity	2,627	3,471	3,925	1.32	1.49	2,598	2,998	3,108	1.15	1.20
Average Selectivity	2,279	2,668	2,826	1.17	1.24	2,156	2,569	2,742	1.19	1.27
Below Average Selectivity	1,524	1,952	2,173	1.28	1.43	1,735	2,015	2,113	1.16	1.22
Non-Selectivity	1,396	1,694	1,837	1.21	1.32	1,001	2,573	2,973	1.29	1.49
Average, No Decline	1,824	2,197	2,367	1.20	1.30	2,519	2,941	3,198	1.17	1.27
Less than 10% Decline										
High Selectivity	---	---	---	--	--	5,343	5,732	6,618	1.07	1.24
Medium Selectivity	2,382	3,002	3,422	1.26	1.44	2,350	3,143	3,307	1.34	1.41
Average Selectivity	1,828	2,275	2,660	1.24	1.46	1,826	2,229	2,406	1.22	1.32
Below Average Selectivity	1,687	2,166	2,498	1.28	1.48	1,762	2,319	2,520	1.32	1.43
Non-Selectivity	1,378	1,807	1,888	1.31	1.37	1,474	1,896	2,107	1.29	1.43
Average, Less than 10% Decline	1,690	2,156	2,428	1.28	1.44	2,184	2,684	2,940	1.23	1.35

TABLE 14 (Cont'd)

More than 10% Decline	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975
High Selectivity	---	---	---	--	--	3,877	4,609	4,725	1.19	1.22
Medium Selectivity	3,053	4,117	4,660	1.35	1.53	3,049	4,330	4,695	1.42	1.54
Average Selectivity	1,831	2,481	2,726	1.35	1.49	1,964	2,630	2,946	1.34	1.50
Below Average Selectivity	1,323	1,902	2,236	1.44	1.69	1,785	2,376	2,665	1.33	1.49
Non-Selectivity	1,342	1,922	2,069	1.43	1.54	1,728	2,467	2,732	1.43	1.58
Average, More than 10% Decline	1,504	2,110	2,360	1.40	1.57	2,137	2,866	3,169	1.34	1.48
Average - All	1,763	2,183	2,374	1.24	1.35	2,337	2,865	3,133	1.23	1.34

Note: Based on all campuses which reported non-negative instructional expenditures every year of 1970 - 1975 period.

Source: Special tabulations from HEGIS data.

TABLE 15

INSTRUCTIONAL COSTS PER SUS STUDENT BY ENROLLMENT CHANGE AND SELECTIVITY, 1971, 1974, AND 1975

(Current Dollars)

	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/ 1974	Ratio 1971/ 1975	1971	1974	1975	Ratio 1971/ 1974	Ratio 1971/ 1975
No Decline										
High Selectivity	2,664	2,903	3,163	1.09	1.18	2,561	2,937	3,312	1.15	1.29
Medium Selectivity	1,924	2,567	2,853	1.33	1.48	1,796	2,120	2,244	1.18	1.25
Average Selectivity	1,713	2,017	2,356	1.18	1.38	1,664	1,944	2,030	1.17	1.22
Below Average Selectivity	1,388	1,703	1,873	1.23	1.35	1,612	1,857	1,975	1.15	1.23
Non-Selectivity	1,636	1,995	2,204	1.22	1.35	1,539	1,928	1,974	1.25	1.28
Average, No Decline	1,684	2,039	2,294	1.21	1.36	1,889	2,202	2,352	1.17	1.25
Less than 10% Decline										
High Selectivity	---	---	---	--	--	2,754	3,010	3,435	1.09	1.25
Medium Selectivity	---	---	---	--	--	1,841	2,429	2,535	1.32	1.37
Average Selectivity	1,429	1,794	2,067	1.25	1.45	1,468	1,760	1,887	1.20	1.28
Below Average Selectivity	1,363	1,722	1,958	1.26	1.43	1,498	1,905	2,056	1.27	1.37
Non-Selectivity	1,446	1,873	1,956	1.30	1.44	1,650	2,043	2,270	1.24	1.38
Average, Less than 10% Decline	1,491	1,893	2,031	1.27	1.36	1,730	2,091	2,268	1.21	1.31

TABLE 15 (Cont'd)

More than 10% Decline	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/ 1974	Ratio 1971/ 1975	1971	1974	1975	Ratio 1971/ 1974	Ratio 1971/ 1975
High Selectivity	---	---	---	--	--	2,260	2,558	2,635	1.13	1.16
Medium Selectivity	---	---	---	--	--	2,112	2,766	3,007	1.30	1.42
Average Selectivity	1,531	1,949	2,152	1.27	1.41	1,706	2,234	2,463	1.30	1.44
Below Average Selectivity	1,179	1,659	1,942	1.40	1.64	1,674	2,182	2,440	1.30	1.45
Non-Selectivity	1,367	1,927	2,028	1.41	1.48	1,646	2,427	2,663	1.47	1.61
Average, More than 10% Decline	1,368	1,871	2,043	1.37	1.49	1,806	2,364	2,594	1.31	1.43
Average - All	1,616	2,004	2,254	1.24	1.39	1,828	2,210	2,380	1.21	1.30

Note: Based on all campuses which reported non-negative instructional expenditures every year of 1970 - 1975 period.

Source: Special tabulations from HEGIS data.

TABLE 16

INSTRUCTIONAL COSTS PER FTE STUDENT BY ENROLLMENT CHANGE AND SELECTIVITY, 1971, 1974, AND 1975

(Constant 1967 Dollars)

	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975
No Decline										
High Selectivity	2,416	2,617	2,463	1.08	1.02	3,077	2,954	3,082	0.96	1.00+
Medium Selectivity	2,041	2,272	2,364	1.11	1.16	2,019	1,962	1,872	0.97	0.93
Average Selectivity	1,771	1,746	1,702	0.99	0.96	1,675	1,681	1,652	1.00+	0.99
Below Average Selectivity	1,187	1,277	1,309	1.08	1.10	1,348	1,319	1,273	0.98	0.94
Non-Selectivity	1,085	1,109	1,107	1.02	1.02	1,555	1,684	1,791	1.08	1.15
Average, No Decline	1,417	1,438	1,426	1.01	1.01	1,957	1,925	1,772	0.98	0.91
Less than 10% Decline										
High Selectivity	---	---	---	--	--	4,152	3,752	3,987	0.90	0.96
Medium Selectivity	1,851	1,965	2,240	1.06	1.21	1,826	2,057	1,992	1.13	1.09
Average Selectivity	1,420	1,489	1,602	1.05	1.13	1,419	1,459	1,449	1.03	1.02
Below Average Selectivity	1,311	1,418	1,505	1.08	1.15	1,369	1,518	1,518	1.11	1.11
Non-Selectivity	1,071	1,183	1,137	1.10	1.06	1,145	1,241	1,269	1.08	1.11
Average, Less than 10% Decline	1,313	1,411	1,463	1.07	1.11	1,697	1,757	1,771	1.04	1.04

TABLE 16 (Cont'd)

More than 10% Decline	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975
High Selectivity	---	---	---	--	--	3,012	3,016	2,846	1.00+	0.94
Medium Selectivity	2,372	2,694	2,807	1.14	1.18	2,369	2,834	2,828	1.20	1.19
Average Selectivity	1,423	1,624	1,642	1.14	1.15	1,526	1,721	1,775	1.13	1.16
Below Average Selectivity	1,028	1,245	1,347	1.21	1.31	1,387	1,555	1,605	1.12	1.16
Non-Selectivity	1,043	1,258	1,246	1.21	1.19	1,343	1,615	1,646	1.20	1.23
Average, More than 10% Decline	1,169	1,381	1,422	1.18	1.22	1,660	1,876	1,909	1.13	1.15
Average - All	1,370	1,429	1,430	1.04	1.04	1,816	1,875	1,887	1.03	1.04

Note: Based on all campuses which reported non-negative instructional expenditures every year of 1970 - 1975 period.

Source: Special tabulations from HEGIS data.

TABLE 17

INSTRUCTIONAL COSTS PER FTE STUDENT BY ENROLLMENT CHANGE AND SELECTIVITY, 1971, 1974, AND 1975

(Constant 1967 Dollars)

	Public Institutions					Private Institutions				
	1971	1974	1975	Ratio 1971/ 1974	Ratio 1971/ 1975	1971	1974	1975	Ratio 1971/ 1974	Ratio 1971/ 1975
No Decline										
High Selectivity	2,070	1,900	1,905	0.92	0.92	1,990	1,922	1,995	0.97	1.00+
Medium Selectivity	1,495	1,680	1,719	1.12	1.15	1,395	1,387	1,352	0.99	0.97
Average Selectivity	1,331	1,320	1,419	0.99	1.07	1,293	1,272	1,223	0.98	0.95
Below Average Selectivity	1,078	1,115	1,128	1.03	1.05	1,253	1,215	1,190	0.97	0.95
Non-Selectivity	1,271	1,306	1,328	1.03	1.04	1,196	1,262	1,189	1.06	0.99
Average, No Decline	1,308	1,334	1,382	1.02	1.06	1,468	1,441	1,417	0.98	0.97
Less than 10% Decline										
High Selectivity	---	---	---	--	--	2,140	1,970	2,069	.92	.97
Medium Selectivity	1,360	1,343	1,422	0.99	1.05	1,430	1,590	1,527	1.11	1.07
Average Selectivity	1,110	1,174	1,245	1.06	1.12	1,141	1,152	1,137	1.01	0.99+
Below Average Selectivity	1,059	1,127	1,180	1.06	1.11	1,164	1,247	1,239	1.07	1.06
Non-Selectivity	1,124	1,226	1,178	1.09	1.05	1,282	1,337	1,367	1.04	1.07
Average, Less than 10% Decline	1,159	1,239	1,228	1.07	1.06	1,344	1,368	1,366	1.02	1.02

TABLE 17 (Cont'd)

More than 10% Decline	Public institutions					Private institutions				
	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975	1971	1974	1975	Ratio 1971/1974	Ratio 1971/1975
High Selectivity	---	---	---	--	--	1,756	1,674	1,587	.95	.90
Medium Selectivity	1,515	1,875	1,933	1.24	1.28	1,641	1,810	1,811	1.10	1.10
Average Selectivity	1,190	1,276	1,296	1.07	1.09	1,326	1,462	1,484	1.10	1.12
Below Average Selectivity	916	1,086	1,170	1.19	1.28	1,301	1,428	1,470	1.10	1.13
Non-Selectivity	1,062	1,261	1,222	1.19	1.15	1,279	1,588	1,604	1.24	1.25
Average, More than 10% Decline	1,063	1,224	1,231	1.15	1.16	1,403	1,547	1,563	1.10	1.11
Average - All	1,256	1,312	1,358	1.04	1.08	1,420	1,446	1,434	1.02	1.01

Note: Based on all campuses which reported non-negative instructional expenditures every year of 1970 - 1975 period.

Source: Special tabulations from HEGIS data.

TABLE 18

RATIO OF 1973/1974 AND 1974/1975 TO 1970/1971 TUITION REVENUE

	Public		Private	
	1973/74	1974/75	1973/74	1974/75
No Decline				
High Selectivity	1.33	1.41	1.25	1.35
Medium Selectivity	1.30	1.35	1.19	1.27
Average Selectivity	1.18	1.26	1.23	1.31
Below Average Selectivity	1.26	1.35	1.19	1.29
Non-Selective	1.18	1.28	1.30	1.43
Average, No Decline	1.19	1.26	1.22	1.30
Less Than 10% Decline				
High Selectivity	--	--	1.08	1.29
Medium Selectivity	1.30	1.35	1.33	1.44
Average Selectivity	1.24	1.32	1.24	1.38
Below Average Selectivity	1.28	1.46	1.29	1.38
Non-Selective	1.27	1.40	1.29	1.46
Average, Less Than 10% Decline	1.27	1.38	1.25	1.38
Greater Than 10% Decline				
High Selectivity	--	--	1.78	1.94
Medium Selectivity	1.23	1.28	1.37	1.50
Average Selectivity	1.25	1.36	1.26	1.37
Below Average Selectivity	1.20	1.41	1.25	1.38
Non-Selective	1.22	1.43	1.25	1.39
Average, Greater Than 10% Decline	1.22	1.39	1.32	1.45
All Institutions	1.20	1.28	1.25	1.36

132

Source: Special Tabulations from HEGIS file.

TABLE 19

FTE STUDENT ENROLLMENT, 1970/71, 1973/74, 1974/75
BY GEOGRAPHICAL RECRUITMENT AREAS

	Public					Private				
	1970/71	1973/74	1974/75	Ratio 1971/74	Ratio 1971/75	1970/71	1973/74	1974/75	Ratio 1971/74	Ratio 1971/75
No Decline										
National	5	5	5	1.00	1.00	126	137	139	1.09	1.10
Regional	204	229	245	1.12	1.20	316	352	367	1.11	1.16
State	1,150	1,268	1,309	1.10	1.14	114	130	138	1.14	1.21
Community	1,511	1,838	1,980	1.22	1.08	95	112	121	1.18	1.27
Total	2,871	3,341	3,539	1.16	1.23	651	731	765	1.12	1.18
Less Than 10% Decline										
National	---	---	---	---	---	24	23	23	.96	.96
Regional	39	36	37	.92	.95	211	201	200	.95	.95
State	299	287	287	.96	.96	48	47	46	.98	.96
Community	318	299	307	.94	.97	58	55	56	.95	.97
Total	656	122	630	.95	.96	341	326	324	.96	.95
More Than 10% Decline										
National	---	---	---	---	---	24	17	17	.71	.71
Regional	17	14	14	.82	.82	199	163	154	.82	.77
State	346	286	273	.83	.79	96	79	75	.82	.78
Community	155	127	123	.82	.79	36	27	25	.75	.69
Total	519	428	410	.82	.79	355	285	271	.80	.76
All National	5	5	5	1.00	1.00	174	177	179	1.02	1.03
All Regional	260	279	296	1.07	1.14	726	716	721	.99	.99
All State	1,795	1,841	1,869	1.03	1.04	258	256	259	.99	1.003
All Community	1,984	2,264	2,410	1.14	1.21	189	194	202	1.03	1.07
All Total	4,046	4,389	4,580	1.08	1.13	1,347	1,342	1,361	.996	1.01

TABLE 19 (Cont'd)

FTE STUDENT ENROLLMENT, 1970/71, 1973/74; 1974/75
BY GEOGRAPHICAL RECRUITMENT AREAS

Sample restricted to those institutions which reported enrollment and non-negative instructional expenditures in all five years.

Detail may not add to total because of rounding.

Source: Special Tabulations from HEGIS File.

TABLE 20

FTE STUDENT ENROLLMENT, 1970/71, 1973/74, 1974/75 BY SELECTIVITY

	Public					Private				
	1970/71	1973/74	1974/75	Ratio 1971/74	Ratio 1971/75	1970/71	1973/74	1974/75	Ratio 1971/74	Ratio 1971/75
No Decline										
High Selectivity	28	33	34	1.18	1.21	126	137	139	1.09	1.10
Medium Selectivity	241	266	273	1.10	1.13	114	125	128	1.10	1.12
Average Selectivity	884	968	1,002	1.10	1.13	174	191	200	1.10	1.15
Below Average Selectivity	524	607	635	1.16	1.21	131	154	164	1.18	1.25
Non-Selective	1,194	1,467	1,595	1.23	1.34	106	123	134	1.16	1.26
Total	2,871	3,341	3,539	1.16	1.23	651	731	765	1.12	1.18
Less Than 10% Decline										
High Selectivity	---	---	---	---	---	24	23	23	.96	.96
Medium Selectivity	61	55	58	.90	.95	44	43	43	.98	.98
Average Selectivity	184	176	177	.96	.96	144	139	136	.97	.94
Below Average Selectivity	186	179	179	.96	.96	97	91	91	.94	.94
Non-Selective	226	212	216	.94	.96	33	31	31	.94	.94
Total	656	622	630	.95	.96	341	326	324	.96	.95
More Than 10% Decline										
High Selectivity	---	---	---	---	---	24	17	17	.71	.71
Medium Selectivity	12	10	9	.83	.75	21	18	17	.86	.81
Average Selectivity	138	113	108	.82	.96	128	109	103	.85	.80
Below Average Selectivity	211	178	169	.84	.80	101	81	77	.80	.76
Non-Selective	158	127	124	.80	.78	81	60	56	.74	.69
Total	519	428	410	.82	.79	355	285	271	.80	.76

TABLE 20 (Cont'd)

FTE STUDENT ENROLLMENT, 1970/71, 1973/74, 1974/75 BY SELECTIVITY

	Public					Private				
	1970/71	1973/74	1974/75	Ratio 1971/74	Ratio 1971/75	1970/71	1973/74	1974/75	Ratio 1971/74	Ratio 1971/75
All Institutions	4,046	4,391	4,579	1.09	1.13	1,347	1,342	1,360	.996	1.01
High Selectivity	28	33	34	1.18	1.21	174	177	179	1.02	1.03
Medium Selectivity	314	330	340	1.05	1.08	179	186	188	1.04	1.05
Average Selectivity	1,206	1,257	1,287	1.05	1.07	446	439	439	.98	.98
Below Average Selectivity	921	964	983	1.05	1.07	329	326	332	.99	1.01
Non-Selective	1,578	1,806	1,935	1.14	1.23	220	214	221	.97	1.005

Source: Special Tabulations from HEGIS File.

TABLE 21

BEST REGRESSION EQUATIONS WHICH EXPLAINED FTE ENROLLMENT CHANGE, 1970-71 TO 1974-75

Public Sector - All

FTE RATIO = f (TUIT 70, EXP/SUS, SUBS - FTE, SUBS - SUS)

= 1260.0 + .286 TUIT 70 - .514 EXP/SUS
(3.67) (7.449)

+ .024 SUBS - FTE + .562 SUBS - SUS
(2.667) (8.029)

F RATIO = 24.616

Multiple R^2 = .0786

Standard Error of Estimate = 503.6682

(1) SAT Group 3

FTE RATIO = fn (SUBS - SUS)

= 953.230 + .114 SUB SUS
(8.769)

F RATIO = 75.575

Multiple R^2 = .3636

Standard Error of Estimate = 266.4436

Private Sector - All

FTE RATIO = f (TUIT 74, EXP/SUS, SUBS - FTE, SUBS - SUS)

= 1143.304 + .294 TUIT 74 - .354 EXP/SUS
(6.533) (7.08)

+ .033 SUBS - FTE + .307 SUBS - SUS
(1.9412) (5.904)

F RATIO = 14.405

Multiple R^2 = .0434

Standard Error of Estimate = 799.9563

TABLE 21 (Cont'd)

BEST REGRESSION EQUATIONS WHICH EXPLAINED FTE ENROLLMENT CHANGE, 1970-71 TO 1974-75

(1) SAT Group 1

FTE RATIO = f (TUIT RAT, TUIT 74)

= 1347.580 - .416 TUIT RATIO
(-5.547)

+ .092 TUIT 74
(2.486)

F RATIO = 16.300

Multiple R^2 = .3241

Standard Error of Estimate = 140.4630

FTE-UG RATIO = 1893.044

- .847 TUIT RATIO - .401 TUIT 70
(-3.731) (-2.475)

+ .404 TUIT 74
(3.132)

F RATIO = 9.379

Multiple R^2 = .2989

Standard Error of Estimate = 133.3218

(2) SAT Group 2

FTE RATIO = f (TUIT RATIO, EXP/SUS, SUBS - FTE)

= 1803.821 - .402 TUIT RAT
(4.517)

- .098 EXP/SUS + .064 SUBS - FTE
(3.920) (3.765)

F RATIO = 11.086

Multiple R^2 = .2720

Standard Error of Estimate = 190.0957

TABLE 21 (Cont'd)

BEST REGRESSION EQUATIONS WHICH EXPLAINED FTE ENROLLMENT CHANGE, 1970-71 TO 1974-75

(2) SAT Group 2 (Cont'd)

FTE-UG RATIO = f (EXP/SUS, SUBS - FTE)

= 1527.095 - .250 EXP/SUS
(3.906)

+ .291 SUBS - FTE
(5.291)

F RATIO = 14.085

Multiple R^2 = .2446

Standard Error of Estimate = 448.9082

FTE-UG RATIO = f (TUIT RAT, TUIT 74, EXP/SUS, SUBS - FTE)

= 1716.548 - .662 TUIT RAT + .335 TUIT 74
(3.229) (3.807)

- .354 EXP/SUS + .409 SUBS - FTE
(5.531) (7.052)

F RATIO = 13.863

Multiple R^2 = .3948

Standard Error of Estimate = 406.5051

(3) SAT Group 3

FTE-RATIO = f (TUIT RATIO, TUIT 74, EXP/SUS, SUBS - FTE)

= 1492.418 - .327 TUIT RATIO
(5.450)

+ .133 TUIT 74 - .192 EXP/SUS
(4.750) (8.348)

+ .165 SUBS FTE
(5.893)

TABLE 21 (Cont'd)

BEST REGRESSION EQUATIONS WHICH EXPLAINED FTE ENROLLMENT CHANGE, 1970-71 TO 1974-75

(3) SAT Group 3 (Cont'd)

F RATIO = 22.080

Multiple R^2 = .2837

Standard Error of Estimate = 167.1558

FTE-UG RATIO = f (TUIT RAT, TUIT 74, EXP/SUS, SUBS FTE)

= 1442.33 - .308 TUIT RAT
(4.813)

+ .089 TUIT 74 - .146 EXP/SUS
(3.069) (5.840)

+ .130 SUBS - FTE
(4.333)

F RATIO = 13.015

Multiple R^2 = .1893

Standard Error of Estimate = 177.5802

(4) SAT Group 4

FTE RATIO = f (TUIT 70, TUIT 74, EXP/FTE, SUBS - FTE)

= 1329.574 + .369 TUIT 70
(4.613)

- .151 TUIT 74 - .259 EXP/FTE
(2.157) (6.816)

+ .169 SUBS - FTE
(4.971)

TABLE 21 (Cont'd)

BEST REGRESSION EQUATIONS WHICH EXPLAINED FTE ENROLLMENT CHANGE, 1970-71 TO 1974-75

(4) SAT Group 4 (Cont'd)

F RATIO = 18.678

Multiple R^2 = .1676

Standard Error of Estimate = 389.6768

FTE-UG RATIO = f (EXP/SUS, SUBS - FTE)

= 1250.240 + .192 TUIT 70
(3.368)

- .267 EXP/SUS + .186 SUBS FTE
(7.417) (5.813)

F RATIO = 19.167

Multiple R^2 = .1348

Standard Error of Estimate = 416.6743

TABLE 22

TUITION REVENUE AS A PERCENTAGE OF INSTRUCTIONAL COSTS, 1970/71, 1973/74, 1974/75

	Public			Private		
	1970/71	1973/74	1974/75	1970/71	1973/74	1974/75
No Decline						
High Selectivity	.307	.318	.330	.588	.644	.614
Medium Selectivity	.242	.238	.218	.820	.846	.868
Average Selectivity	.228	.230	.231	.829	.854	.855
Below Average Selectivity	.251	.247	.233	.765	.786	.809
Non-Selective	.170	.165	.165	.564	.569	.544
Average, No Decline	.217	.213	.210	.697	.727	.715
Less Than 10% Decline						
High Selectivity	---	---	---	.480	.480	.495
Medium Selectivity	.234	.242	.221	.751	.805	.825
Average Selectivity	.281	.279	.254	.783	.794	.819
Below Average Selectivity	.258	.257	.253	.850	.833	.821
Non-Selective	.161	.157	.164	.818	.822	.835
Average, Less Than 10% Decline	.234	.233	.225	.734	.745	.754
Greater Than 10% Decline						
High Selectivity	---	---	---	.437	.656	.695
Medium Selectivity	.275	.208	.192	.676	.650	.657
Average Selectivity	.286	.264	.260	.807	.845	.810
Below Average Selectivity	.293	.245	.241	.804	.755	.740
Non-Selective	.268	.243	.210	.706	.616	.621
Average, Greater Than 10% Decline	.286	.249	.253	.739	.725	.722
All Institutions	.226	.219	.215	.715	.731	.735

Source: Special Tabulations from HEGIS Data.

TABLE 23

PER CENT OF INSTRUCTIONAL COSTS PAID BY SUS STUDENTS

	Public			Private		
	1970/71	1973/74	1974/75	1970/71	1973/74	1974/75
No Decline						
High Selectivity	36	44	43	90	99	95
Medium Selectivity	33	32	30	119	119	120
Average Selectivity	30	30	28	107	113	116
Below Average Selectivity	28	28	27	83	85	87
Non-Selective	14	14	14	60	76	82
Average, No Decline	23	23	22	93	97	101
Less Than 10% Decline						
High Selectivity	--	--	--	92	91	95
Medium Selectivity	32	35	32	103	104	108
Average Selectivity	36	35	33	97	101	105
Below Average Selectivity	32	32	32	100	101	101
Non-Selective	15	15	16	73	76	78
Average, Less Than 10% Decline	27	27	27	93	96	98
Greater Than 10% Decline						
High Selectivity	--	--	--	92	118	124
Medium Selectivity	36	30	28	98	102	103
Average Selectivity	34	34	33	102	101	98
Below Average Selectivity	33	28	28	86	82	81
Non-Selective	28	24	27	74	62	63
Average, Greater Than 10% Decline	31	28	29	87	88	88
All Institutions	25	24	23	91	95	96

Source: Special Tabulations from HEGIS Data.

TABLE 24

PROJECTED ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION, 1980 AND 1985: TOTAL, BY LEVEL OF ENROLLMENT, AND BY ENROLLMENT STATUS

(thousands of students)

			1980		1985	
	1980	1985	Undergraduate	Graduate	Undergraduate	Graduate
14-21	5,524	4,823	5,466	58	4,772	51
22-24	1,717	1,918	1,099	618	1,228	690
25-29	1,535	1,780	936	599	1,086	694
30-34	1,186	1,218	785	401	806	412
35+	1,336	1,661	671	665	857	804
	11,298	11,400	8,957	2,341	8,749	2,651

Sources: U. S. Department of Commerce, Bureau of the Census:

Current Population Reports (P-20, #303), (Washington: U.S.G.P.O., 1976), Table 17.

Current Population Reports, "Projections of School and College Enrollment," 1971 to 2000 (P-25, #473), (Washington: U.S.G.P.O., 1972), Table 1, page 10.

1970 Census of Population, Subject Reports, "School Enrollment" (PC(2)-5A), (Washington: U.S.G.P.O., 1973).

TABLE 25

SHARES (IN PER CENT) OF PUBLIC SECTOR BY TYPE OF STUDENT

	1967	1968	1969	1970	1971	1972	1973	1974	1975
Degree Credit - Undergraduate									
Full Time	69.0	70.0	71.3	72.2	73.2	73.2	73.5	73.7	73.8
Part Time	76.5	78.1	82.9	84.4	84.8	85.9	86.1	87.4	87.4
Non-Degree Credit									
Full Time	NA	90.6	91.1	94.5	93.8	93.5	92.4	92.9	94.9
Part Time	NA	93.0	93.6	95.8	96.3	97.7	97.1	97.9	99.0
Graduate and First Professional									
Full Time	58.2	59.5	60.9	61.2	61.7	60.9	61.3	61.4	60.7
Part Time	58.4	65.0	70.1	70.9	70.1	71.5	71.6	71.9	72.0

Source: U. S. Department of Health, Education, and Welfare, Office of Education, National Center for Educational Statistics, Fall Enrollment in Institutions of Higher Education, 1967, 1968, 1971-1974 (Washington; U.S.G.P.O.);
NCES, Fall Enrollment in Higher Education, Supplementary Information, 1969-1970;
NCES unpublished data, 1975.

TABLE 26

PROJECTED ENROLLMENT BY ENROLLMENT STATUS AND INSTITUTIONAL CONTROL, 1979-80 AND 1984-85

(thousands of FTE students)

	FTE Students	Total	Under-graduate	Degree Credit	Full Time	Part Time	Non-Degree Credit	Full Time	Part Time	Graduate	Full Time	Part Time	Total Full Time	Total Part Time
High Projection - 1980														
Total	8,475	11,298	8,958	7,284	4,910	2,374	1,674	771	903	2,341	1,046	1,295	6,727	4,571
Public	6,607	9,053	7,483	5,857	3,722	2,135	1,626	732	894	1,570	638	932	5,092	3,961
Private	1,868	2,245	1,474	1,426	1,188	238	48	39	9	771	408	363	1,635	610
1985														
Total	8,406	11,400	8,749	6,943	4,542	2,401	1,806	831	974	2,651	1,185	1,466	6,558	4,841
Public	6,598	9,191	7,412	5,659	3,484	2,175	1,753	789	964	1,779	723	1,056	4,996	4,195
Private	1,808	2,209	1,497	1,444	1,058	226	53	42	10	872	462	410	1,562	646
Low Projection - 1980														
Total	7,317	11,298	8,957	7,283	3,485	3,798	1,674	653	1,021	2,341	702	1,639	4,840	6,458
Public	5,824	9,254	7,644	6,013	2,640	3,373	1,631	620	1,011	1,610	429	1,181	3,689	5,565
Private	1,493	2,044	1,313	1,270	845	425	43	33	10	731	273	458	1,151	893
1985														
Total	7,209	11,400	8,749	6,943	3,108	3,835	1,806	704	1,102	2,651	796	1,855	4,608	6,792
Public	5,789	9,415	7,594	5,836	2,384	3,452	1,758	668	1,090	1,821	485	1,336	3,537	5,878
Private	1,420	1,985	1,155	1,107	724	383	48	36	12	830	311	519	1,071	914

Source: See text.

TABLE 27

PROJECTED DISTRIBUTION OF FULL-TIME EQUIVALENT AND STANDARD UNDERGRADUATE STUDENT ENROLLMENTS, 1980 AND 1985

Full-Time Equivalent Students
(thousands of students)

		High Projection		Low Projection	
	1974-75	1980	1985	1980	1985
Public					
University	2,338	2,412	2,408	2,126	2,113
Four-Year	1,479	1,440	1,438	1,270	1,262
Two-Year	2,053	2,755	2,751	2,429	2,414
Total Public	5,870	6,607	6,598	5,824	5,789
Private					
University	716	747	723	597	568
Four-Year	1,040	1,022	989	817	777
Two-Year	109	99	96	79	75
Total Private	1,865	1,868	1,808	1,493	1,420
Total	7,735	8,475	8,406	7,317	7,209

Standard Undergraduate Students
(thousands of students)

Public		8,098	8,332	7,102	7,279
Private		2,923	2,996	2,361	2,386

Sources: Special tabulations from HEGIS file (for 1974-75 data).
1980 and 1985 Projections: see text.

TABLE 28

PROJECTED LEVELS OF CONSTANT DOLLAR COSTS PER STANDARD UNDERGRADUATE STUDENT, 1980 AND 1985

(1974-75 = 100)

	1974-75 Per Cent of Total		Yearly	High Projection			
				1979-80		1984-85	
	Public	Private	Increase	Public	Private	Public	Private
Faculty	39.6	37.5	1.03	45.9	43.5	53.2	50.4
Clerical	12.2	11.5	1.03	14.1	13.3	16.4	15.5
Other Instruction and Departmental Research	9.1	8.7	1.03	10.5	10.1	12.2	11.7
Library	4.8	5.8	1.05	6.1	7.4	7.8	9.4
Scholarship (unrestricted funds)	1.9	6.5	1.045	2.4	8.1	3.0	10.1
Operation and Maintenance	15.5	15.7	1.037	18.6	18.8	22.3	22.6
Balancing Figure (primarily administrative costs)	16.8	14.3	1.03	19.5	16.6	22.6	19.2
	100.0	100.0		117.1	117.8	137.5	138.8
With Faculty Seniority Factor							
High Enrollment				117.9	118.4	140.0	140.6
Low Enrollment				119.0	120.9	141.0	142.7

TABLE 28 (Cont'd)

PROJECTED LEVELS OF CONSTANT DOLLAR COSTS PER STANDARD UNDERGRADUATE STUDENT, 1980 AND 1985

(1974-75 = 100)

	1974-75 Per Cent of Total		Yearly	Low Projection			
				1979-80		1984-85	
	Public	Private	Increase	Public	Private	Public	Private
Faculty	39.6	37.5	1.02	43.7	41.4	48.3	45.7
Clerical	12.2	11.5	1.025	13.8	13.0	15.6	14.7
Other Instruction and Departmental Research	9.1	8.7	1.025	10.3	9.8	11.6	11.1
Library	4.8	5.8	1.035	5.7	6.9	6.8	8.2
Scholarship (unrestricted funds)	1.9	6.5	1.025	2.1	7.4	2.4	8.3
Operation and Maintenance	15.5	15.7	1.037	18.6	18.8	22.3	22.6
Balancing Figure (primarily administrative costs)	16.8	14.3	1.025	19.0	16.2	21.5	18.3
	100.0	100.0		113.2	113.5	128.5	128.9
With Faculty Seniority Factor							
High Enrollment				114.0	114.1	131.0	130.6
Low Enrollment				115.1	116.6	132.0	132.7

Source: See text.

TABLE 29

PROJECTED INSTRUCTIONAL EXPENDITURES PER FULL-TIME EQUIVALENT (FTE) AND STANDARD UNDERGRADUATE STUDENT (SUS), 1980 AND 1985

(1974-75 dollars)

	Public				Private			
	High GNP		Low GNP		High GNP		Low GNP	
	1980	1985	1980	1985	1980	1985	1980	1985
High Enrollment								
SUS	2,401	2,862	2,320	2,680	2,582	3,103	2,496	2,886
FTE	2,953	3,606	2,854	3,377	4,028	5,151	3,894	4,791
Low Enrollment								
SUS	2,485	2,892	2,355	2,720	2,691	3,190	2,604	2,973
FTE	3,057	3,644	2,897	3,427	4,252	5,359	4,114	4,994

Source: See text.

TABLE 30

PROJECTED TOTAL INSTRUCTIONAL EXPENDITURES, 1980 AND 1985

(millions of 1974-75 dollars).

High Enrollment

	Public				Private			
	High GNP		Low GNP		High GNP		Low GNP	
	1980	1985	1980	1985	1980	1985	1980	1985
Total	19,510	23,792	18,856	22,281	7,524	9,313	7,274	8,662

Low Enrollment

Total	17,802	21,095	16,870	19,840	6,348	7,610	6,143	7,092

Source: See text.

TABLE 31

PROJECTED TUITION PER FULL-TIME EQUIVALENT STUDENT, UNDER HIGH AND LOW GNP ASSUMPTIONS, BY SECTOR, 1980 AND 1985

(1974-75 dollars)

	High GNP		Low GNP	
	Public	Private	Public	Private
1974-75	515.2	2,217.8		
1980	645.8	2,783.2	619.9	2,665.1
1985	746.9	3,243.8	702.5	3,041.6

Estimation Equation Tuit-Pub = 27.108 + 10.415 DIsy R^2 = .97
Tuit-Priv = -34.931 +47.44 DIsy R^2 = .99

Sources: (for estimation equation)

U. S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics, Financial Statistics of Institutions of Higher Education, relevant issues.

NCES, unpublished data (1974-75 school year).
NCES, Projections of Educational Statistics to 1983-84, 1974 Edition, Table 12, p. 30.
NCES, Fall Enrollment in Institutions of Higher Education, relevant issues.
U.S. Bureau of the Census, Statistical Abstract of the United States: 1975 (96th Edition) Washington, D.C., 1975, p. 312.
U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, July 1976, Tables 1.1 and 2.1.

TABLE 32

PROJECTED STATE AND LOCAL APPROPRIATIONS, 1980 AND 1985

(millions of 1975 dollars)

	High Enrollment				Low Enrollment			
	High GNP		Low GNP		High GNP		Low GNP	
	Public	Private	Public	Private	Public	Private	Public	Private
1980	16,080	282.4	15,360	261.4	14,730	299.6	14,070	277.4
1985	19,960	406.1	18,630	180.2	18,220	431.9	17,000	384.7

Estimation Equation

$$\text{Log App}_{s\&l} - \text{Pub} = -.272 + 1.079 \log \text{DI} + .698 \log \text{ENR-Pub} \qquad R^2 = .99$$

$$\text{Log App}_{s\&l} - \text{Priv} = 1.286 + 1.806 \log \text{DI} - .471 \log \text{ENR-Pub} \qquad R^2 = .84$$

Sources: (for estimation equation)

See Table 31.

TABLE 33

PROJECTED INSTITUTIONAL STUDENT AID, 1980 AND 1985, FOR HIGH AND LOW GNP ASSUMPTIONS, BY SECTOR

(millions of 1974-75 dollars)

	High GNP		Low GNP	
	Public	Private	Public	Private
1980	145.5	256.1	139.3	246.6
1985	179.0	306.7	167.6	290.0

Estimation Equation: SAG (PUB) = - 5.019 + .08 GNP R^2 = .83

SAG (PRIV) = 28.473 + .121 GNP R^2 = .86

Sources: (for estimation equation)

See Table 31.

TABLE 34

PROJECTED ENDOWMENT AND GIFTS INCOME, 1980 AND 1985, FOR HIGH AND LOW GNP ASSUMPTIONS, BY SECTOR

(millions of 1974-75 dollars)

	High GNP		Low GNP	
	Public	Private	Public	Private
1980	219.8	1,767.6	212.6	1,696.8
1985	258.3	2,142.1	245.2	2,014.9

Estimation Equation: E&GI-Pub = 46.709 + .092 GNP R^2 = .52

E&GI-Priv = 81.535 + .896 GNP R^2 = .98

Sources: (for estimation equation)

See Table 31.

TABLE 35

PROJECTED TOTAL INSTRUCTIONAL REVENUE, PUBLIC AND PRIVATE SECTORS, 1980 AND 1985, UNDER HIGH AND LOW ENROLLMENT AND GNP ASSUMPTIONS

(millions of 1974-75 dollars)

High Enrollment

	Public				Private			
	High GNP		Low GNP		High GNP		Low GNP	
	1980	1985	1980	1985	1980	1985	1980	1985
Tuition	4,267	4,928	4,096	4,635	5,199	5,865	4,978	5,499
State and Local Appropriations	16,080	19,960	15,360	18,630	282	406	261	180
Student Aid	146	179	139	168	256	307	247	290
Endowment and Gifts	220	258	213	245	1,768	2,142	1,697	2,015
Total	20,712	25,325	19,808	23,678	7,505	8,719	7,183	7,984

Low Enrollment

Tuition	3,761	4,324	3,610	4,067	4,155	4,606	3,979	4,319
State and Local Appropriations	14,730	18,220	14,070	17,000	300	432	277	385
Student Aid	146	179	139	168	256	307	247	290
Endowment and Gifts	220	258	213	245	1,768	2,142	1,697	2,015
Total	18,856	22,981	18,032	21,480	6,479	7,487	6,200	7,009

TABLE 35 (Cont'd)

PROJECTED TOTAL INSTRUCTIONAL REVENUE, PUBLIC AND PRIVATE SECTORS, 1980 AND 1985, UNDER HIGH AND LOW ENROLLMENT AND GNP ASSUMPTIONS

(per cent of total)

High Enrollment

	Public				Private			
	High GNP		Low GNP		High GNP		Low GNP	
	1980	1985	1980	1985	1980	1985	1980	1985
Tuition	20.6	19.5	20.7	19.6	69.3	67.3	69.3	68.9
State and Local Appropriations	77.6	78.8	77.5	78.7	3.8	4.7	3.6	2.3
Student Aid	.7	.7	.7	.7	3.4	3.5	3.4	3.6
Endowment and Gifts	1.1	1.0	1.1	1.0	23.6	24.6	23.6	25.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Low Enrollment

Tuition	19.9	18.8	20.0	18.9	64.1	61.5	64.2	61.6
State and Local Appropriations	78.1	79.3	78.0	79.1	4.6	5.8	4.5	5.5
Student Aid	.8	.8	.8	.8	4.0	4.1	4.0	4.1
Endowment and Gifts	1.2	1.1	1.2	1.1	27.3	28.6	27.4	28.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: See Tables 27 and 31-34.

TABLE 36

TOTAL REVENUE - MINIMAL ASSUMPTIONS, 1980, 1985

(millions of 1974-75 dollars)

	Public				Private			
	High GNP		Low GNP		High GNP		Low GNP	
	1980	1985	1980	1985	1980	1985	1980	1985
High Enrollment								
Estimated Revenue (Low Projection)	19,351	23,329	18,552	19,436	7,368	8,[illegible]3	7,067	7,911
Difference Between High and Low Revenue Estimates	1,361	1,996	1,256	4,242	137	306	116	73
Low Enrollment								
Estimated Revenue (Low Projection)	18,845	22,725	18,066	18,868	6,324	7,155	6,069	6,731
Difference Between High and Low Revenue Estimates	11	256	-34	2,612	155	332	131	278

Assumptions: See text.

Source: See Tables 27 and 31-34.

175

TABLE 37

PROJECTED SURPLUSES AND (DEFICITS), PUBLIC AND PRIVATE SECTORS, 1980 AND 1985, UNDER HIGH AND LOW ENROLLMENT AND GNP PROJECTIONS

(millions of 1974-75 dollars)

	Public				Private			
	High GNP		Low GNP		High GNP		Low GNP	
	1980	1985	1980	1985	1980	1985	1980	1985
High Enrollment								
Projection	1,202	1,533	952	1,397	(19)	(593)	(91)	(678)
Per Cent of Total Instructional Expenditures	6.2	6.4	5.0	6.3	.3	6.4	1.3	7.8
Low Assumption	(159)	(463)	(304)	(2,845)	(156)	(900)	(207)	(751)
Per Cent of Total Instructional Expenditures	.8	1.9	1.6	12.8	2.1	9.7	2.8	8.7
Low Enrollment								
Projection	1,054	1,886	1,162	1,640	131	(123)	57	(83)
Per Cent of Total Instructional Expenditures	5.9	8.9	6.9	7.4	2.1	1.3	.8	1.2
Low Assumption	1,043	1,630	1,196	(972)	(24)	(456)	(75)	(361)
Per Cent of Total Instructional Expenditures	5.9	7.7	7.1	4.9	.4	6.0	1.2	5.1

TABLE 37 (Cont'd)

PROJECTED SURPLUSES AND (DEFICITS), PUBLIC AND PRIVATE SECTORS, 1980 AND 1985, UNDER HIGH AND LOW ENROLLMENT AND GNP PROJECTIONS

Note: Projection - see Table 34; Low Assumption - see Table 35.

Source: Cf. Tables 29, 33 and 35.

APPENDIX A

1974/75 FINANCIAL STATISTICS

Financial statistics for the academic year 1974/75 are not strictly comparable with those cited for previous years. NCES drastically changed the form used to collect statistics during that year and, in our opinion, has introduced a number of items which are not comparable from one year to the next, muddled the definitions, and lowered the quality of reporting by institutions.

In some instances, where the differences are small, we merely draw the attention of the reader to the non-comparability of year-to-year totals. In other instances, where we believed that the differences were quite substantial, we attempted to re-estimate the relevant variables to make them consistent from year to year.

Current Fund Revenues. In 1974/75, interest income and investment gains should have been included in "other sources" of income according to the NCES guide issued to help compare the subject survey with previous data collection efforts. (NCES, HEGIS FY1975 /HEFM/, Financial Categories and the Corresponding Elements in Earlier HEGIS Financial Reports.) These sources of revenue were not specifically mentioned in earlier surveys, and it is reasonable to assume that most institutions did not report them.

There is no ready way to estimate the magnitude of the newly reported source of income. In our opinion, it is not very important, and

does not exceed one per cent of the total revenue. The estimate of one per cent was derived on the assumption that the difference between expenditures and revenues of institutions would remain the same in 1974/75, the improvement in the revenue statements (excess of revenue over expenditure) would be accounted by the inclusion of the new source. (See Table A-1.) No correction was made for this inconsistency.

Total current fund expenditures. Here the confusion about what is or is not included is somewhat more serious. According to the guide, mandatory transfers were included for the first time in the 1974/75 data. These account for roughly two per cent of the total expenditures. If the instructions were to be followed, this amount should be subtracted to arrive at a consistent figure for current fund expenditures for the period 1971/75.

According to George Lind, a knowledgeable member of the NCES staff, mandatory transfers consist almost entirely of expenditures for physical plants and assets, which was included in earlier surveys. This observation makes eminently good sense, is supported by a comparison of the two differently labeled sets of items in 1973/74 with 1974/75, and Mr. Lind's opinion is reflected in our tabulations.

Operations and maintenance and hospital expenditures. It appears likely that the reporting of operations and maintenance and hospital expenses are not consistent from year to year. There is some evidence that the operations and maintenance expenses were included together

with hospital expenditure in the 1974/75 survey.

In the public sector, where prior to 1974/75 hospital expenses exceeded hospital revenue by a small amount, statistics for the later year showed a deficit of $247 million. This was believed to be unreasonable. After allowing for the same proportion of expense to exceed income, $220 million of expenditure were transferred to operation and maintenance. The allocation by type of institution was in proportion to the hospital expenditures in each category.

In the private sector, where hospital revenue generally exceeds hospital expenditures, the "profit" in 1974/75 actually widened. We could only assume that most private institutions reported their operation and maintenance outlays consistently in both years.

APPENDIX TABLE A-1

ENROLLMENT, EXPENDITURES AND REVENUES, 1965-66 AND 1969-70

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	All Institutions		All Public Institutions		Public Universities	
	1965-66	1969-70	1965-66	1969-70	1965-66	1969-70
Full-Time Equivalent Students (000's)	4,672	6,398	3,094	4,638	1,359	1,849
Standard Undergraduate Students (000's)	---	7,689	---	5,363	---	2,539
Total Current Funds Revenues	$12,796	$21,639	$7,398	$13,871	$4,929	$8,309
Total Current Funds Expenditures	$12,324	$21,162	$6,996	$13,350	$4,733	$8,090
(1967 dollars)	($12,918)	($17,709)	($7,333)	($11,153)	($4,961)	($6,759)
Total Current Funds Expenditures/FTE	$2,739	$3,308	$2,261	$2,878	$3,483	$4,375
(1967 dollars)	($2,871)	($2,768)	($2,370)	($2,404)	($3,651)	($3,655)
Total Current Funds Expenditures/SUS	---	$2,752	---	$2,489	---	$3,186
(1967 dollars)	---	($2,308)	---	($2,079)	---	($2,662)
Instructional Costs	$7,447	$13,135	$4,477	$8,546	$2,699	$4,455
(1967 dollars)	($7,839)	($10,855)	($4,713)	($7,063)	($2,841)	($3,682)
Instructional Costs/FTE	$1,594	$2,053	$1,447	$1,843	$1,594	$2,053
(1967 dollars)	($1,678)	($1,697)	($1,523)	($1,523)	($1,173)	($1,110)
Instructional Costs/SUS	---	$1,708	---	$1,594	---	$1,755
(1967 dollars)	---	($1,412)	---	($1,317)	---	($1,450)
Tuition Revenue/Instructional Costs	.36	.33	.19	.20	.19	.22

APPENDIX TABLE A-1 (Cont'd)

ENROLLMENT, EXPENDITURES AND REVENUES, 1965-66 AND 1969-70

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	Public Other Four-Year		Public Two-Year	
	1965-66	1969-70	1965-66	1969-70
Full-Time Equivalent Students (000's)	1,049	1,505	686	1,284
Standard Undergraduate Students (000's)	---	1,745	576	1,079
Total Current Funds Revenues	$1,772	$3,701	$796	$1,861
Total Current Funds Expenditures	$1,647	$3,521	$616	$1,739
(1967 dollars)	($1,726)	($2,942)	($646)	($1,453)
Total Current Funds Expenditures/FTE	$1,570	$2,340	$898	$1,354
(1967 dollars)	($1,646)	($1,955)	($941)	($1,131)
Total Current Funds Expenditures/SUS	---	$2,018	$1,069	$1,612
(1967 dollars)	---	($1,686)	($1,121)	($1,347)
Instructional Costs	$1,222	$2,541	$555	$1,549
(1967 dollars)	($1,286)	($2,100)	($584)	($1,280)
Instructional Costs/FTE	$1,165	$1,668	$809	$1,291
(1967 dollars)	($1,226)	($1,379)	($852)	($1,067)
Instructional Costs/SUS	---	$1,456	$964	$1,280
(1967 dollars)	---	($1,203)	($1,015)	($1,058)
Tuition Revenue/Instructional Costs	.21	.20	.19	.16

A-5

APPENDIX TABLE A-1 (Cont'd)

ENROLLMENT, EXPENDITURES AND REVENUES, 1965-66 AND 1969-70

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	All Private Institutions		Private Universities	
	1965-66	1969-70	1965-66	1969-70
Full-Time Equivalent Students (000's)	1,577	1,760	507	556
Standard Undergraduate Students (000's)	---	2,326	---	994
Total Current Funds Revenues	$5,399	$7,768	$2,511	$3,870
Total Current Funds Expenditures	$5,328	$7,812	$2,589	$3,912
(1967 dollars)	($5,579)	($6,526)	($2,711)	($3,282)
Total Current Funds Expenditures/FTE	$3,379	$4,439	$5,107	$7,036
(1967 dollars)	($3,538)	($3,708)	($5,348)	($5,903)
Total Current Funds Expenditures/SUS	---	$3,359	---	$3,936
(1967 dollars)	---	($2,818)	---	($3,302)
Instructional Costs	$2,968	$4,477	$1,316	$1,912
(1967 dollars)	($3,124)	($3,700)	($1,385)	($1,580)
Instructional Costs/FTE	$1,882	$2,551	$2,596	$3,458
(1967 dollars)	($1,981)	($2,108)	($2,733)	($2,858)
Instructional Costs/SUS	---	$1,925	---	$1,924
(1967 dollars)	---	($1,591)	---	($1,590)
Tuition Revenue/Instructional Costs	.61	.60	.52	.53

APPENDIX TABLE A-1 (Cont'd)

ENROLLMENT, EXPENDITURES AND REVENUES, 1965-66 AND 1969-70

(Costs for FTE and SUS in $'s;
Aggregate Expenditure and Revenue Data in Millions of $'s)

	Private Other Four-Year		Private Two-Year	
	1965-66	1969-70	1965-66	1969-70
Full-Time Equivalent Students (000's)	960	1,083	110	121
Standard Undergraduate Students (000's)	---	1,280	92	102
Total Current Funds Revenues	$2,708	$3,666	$179	$232
Total Current Funds Expenditures	$2,580	$3,673	$160	$227
(1967 dollars)	($2,702)	($3,081)	($168)	($190)
Total Current Funds Expenditures/FTE	$2,688	$3,392	$1,455	$1,876
(1967 dollars)	($2,800)	($2,846)	($1,524)	($1,574)
Total Current Funds Expenditures/SUS	---	$2,870	$1,739	$2,225
(1967 dollars)	---	($2,408)	($1,821)	($1,867)
Instructional Costs	$1,535	$2,401	$115	$166
(1967 dollars)	($1,599)	($2,217)	($121)	($137)
Instructional Costs/FTE	$1,599	$2,221	$1,045	$1,372
(1967 dollars)	($1,666)	($2,051)	($1,100)	($1,134)
Instructional Costs/SUS	---	$1,876	$1,250	$1,627
(1967 dollars)	---	($1,550)	($1,316)	($1,345)
Tuition Revenue/Instructional Costs	.68	.66	.80	.70

APPENDIX TABLE A-1 (Cont'd)

ENROLLMENT, EXPENDITURES AND REVENUES, 1965-66 AND 1969-70

Sources: National Center for Educational Statistics, Fall Enrollment in Higher Education (Washington, D.C.: U.S.G.P.O., relevant issues);

National Center for Educational Statistics, Financial Statistics of Institutions of Higher Education (Washington, D.C.: U.S.G.P.O., relevant issues).

APPENDIX TABLE A-2

FTE STUDENT ENROLLMENT AND INSTRUCTIONAL COST, USING OLD AND NEW AGGREGATIONS, 1973-74 AND 1974-75

(Enrollment in thousands; aggregate instructional expenditures in millions)

	Enrollment Data				Instructional Costs	
	1973-74		1974-75		1973-74	
	Old Aggregation	New Aggregation	Old Aggregation	New Aggregation	Old Aggregation	New Aggregation
Public Institutions	5,677	5,677	5,995	5,995	$12,731	$12,731
Universities	2,090	1,683	2,148	1,730	$ 5,938	$ 4,751
(per FTE)					($ 2,841)	($ 2,823)
Other Four-Year	1,741	2,076	1,816	2,155	$ 3,862	$ 4,935
(per FTE)					($ 2,218)	($ 2,377)
Two-Year	1,846	1,918	2,031	2,110	$ 2,931	$ 3,045
(per FTE)					($ 1,588)	($ 1,588)
Private Institutions	1,851	1,851	1,892	1,892	$ 5,188	$ 5,188
Universities	572	551	584	563	$ 2,066	$ 1,960
(per FTE)					($ 3,612)	($ 3,557)
Other Four-Year	1,170	1,186	1,198	1,216	$ 2,934	$ 3,032
(per FTE)					($ 2,508)	($ 2,556)
Two-Year	109	114	110	113	$ 188	$ 196
(per FTE)					($ 1,725)	($ 1,719)
Total	7,529	7,529	7,887	7,887	$17,919	$17,919

Detail may not add to total because of rounding.

Sources: National Center for Educational Statistics, Fall Enrollment in Higher Education (Washington, D.C.: U.S.G.P.O., 1974, 1975); Special Tabulations from HEGIS Data.

APPENDIX TABLE A-3

COMPARISON OF FTE STUDENT ENROLLMENT IN INSTITUTIONS WHICH REPORTED FINANCIAL AND ENROLLMENT DATA FOR ALL OF 1970-75 PERIOD WITH ALL HIGHER EDUCATION INSTITUTIONS

(Enrollment in thousands)

	1970-71				1974-75			
	Sample	Per Cent of Total	All	Per Cent of Total	Sample	Per Cent of Total	All	Per Cent of Total
Public Institutions	4,344	73.0	4,991	74.0	4,935	75.2	5,863	76.4
High Selectivity	43	.7	71	1.1	46	.7	77	1.0
Medium Selectivity	344	5.8	458	6.8	371	5.7	497	6.5
Average Selectivity	1,311	22.0	1,517	22.5	1,404	21.4	1,605	20.9
Below Average Selectivity	947	15.9	1,049	15.6	1,009	15.4	1,135	14.8
Non-Selective	1,698	28.5	1,895	28.1	2,105	32.1	2,549	33.2
Private Institutions	1,604	27.0	1,753	26.0	1,629	24.8	1,815	23.6
High Selectivity	243	4.1	274	4.1	251	3.8	292	3.8
Medium Selectivity	244	4.1	249	3.7	246	3.7	253	3.3
Average Selectivity	472	7.9	504	7.5	465	7.1	493	6.4
Below Average Selectivity	373	6.3	416	6.2	384	5.8	433	5.6
Non-Selective	272	4.6	309	4.6	283	4.3	344	4.5
	5,948	100.0	6,743	100.0	6,565	100.0	7,678	100.0

APPENDIX TABLE A-3 (Cont'd)

COMPARISON OF FTE STUDENT ENROLLMENT IN INSTITUTIONS WHICH REPORTED FINANCIAL AND ENROLLMENT DATA FOR ALL OF 1970-75 PERIOD WITH ALL HIGHER EDUCATION INSTITUTIONS

Distribution by Size of Campus, 1974-75

(Enrollment in thousands)

	Public		Private	
	Sample	All*	Sample	All*
Less Than 200	1	2	22	36
201 - 500	31	48	97	118
501 - 1,000	158	205	272	291
1,001 - 2,500	548	636	488	536
2,501 - 5,000	929	1,035	252	299
5,001 - 10,000	1,412	1,546	296	337
10,001 - 20,000	1,252	1,417	173	201
Greater Than 20,000	871	980	46	46
	5,202	5,871	1,646	1,865

Proportion of Enrollment

	Public		Private	
	Sample	Population	Sample	Population
No Decline	.785	.791	.518	.575
Under 10% Decline	.131	.126	.265	.227
Over 10% Decline	.084	.083	.217	.196
	1.000	1.000	1.000	1.000

APPENDIX TABLE A-3 (Cont'd)

COMPARISON OF FTE STUDENT ENROLLMENT IN INSTITUTIONS WHICH REPORTED FINANCIAL AND ENROLLMENT DATA FOR ALL OF 1970-75 PERIOD WITH ALL HIGHER EDUCATION INSTITUTIONS

*Includes approximately 98-99 per cent of all higher education enrollment.

Note: Estimates from population assume that the distribution of campuses by rate of growth are the same as in sample.

Sources: Special tabulations from HEGIS data;
John R. Endriss, A System for Combining HEGIS Institutional Data Files (Washington, D.C.: Joseph Froomkin Inc., 1976), pp. 41-42.

APPENDIX B

DERIVATION AND SOURCES OF PRICE INDEXES

1) The Higher Education Price Index (HEPI), developed by Halstead,[1] measures price changes of "educational and general expenditures": instruction and departmental research, organized activites of educational departments, other sponsored programs, extension and public service, libraries, physical plant maintenance and operation and other educational and general (largely, administrative) expenses. Research costs are specifically excluded in the computation of the Higher Education Price Index. Instead, a separate research and development price index has been computed, also by Halstead.[2]

HEPI is a fixed weight price index based on 1964-65 budget proportions through 1966-67, and on implied 1971-72 budget proportions thereafter. The single largest component of HEPI is faculty salaries, which in 1971-72 accounted for 42.2 per cent of educational and general expenditures.[3] Thus, the fact that faculty salaries have increased less than 20 per cent over the past five years[4] while the Consumer Price Index increased over

---

[1] D. Kent Halstead, Higher Education Prices and Price Indexes (Washington: U.S.G.P.O., 1975).

[2] Ibid.

[3] Ibid., p. 41.

[4] D. Kent Halstead, Higher Education Prices and Price Indexes, 1975 Supplement (Washington: U.S.G.P.O., 1976)

30 per cent helps explain the sources of savings for higher education i
tutions.

2) The Consumer Price Index used in this study was calculate
two slightly different ways. For the 1965-70 period, it is a simple ave
of the Consumer Price Index for two calendar years to represent price
changes in an academic year, i.e., for the 1965-66 academic year, an
average of the consumer price index in 1965 and 1966 was taken. The
of the index in 1966-67 was made equal to 100 and index value for othe
years adjusted accordingly to make them comparable to the Higher Edu
tion Price Index and the Research and Development Price Index.

For the 1970-75 period, the Consumer Price Index was ave
on a July to June basis, to correspond to the academic year, and it, too
was adjusted by computing the ratio of the index to its value in 1966-6

3) The hospital expenditures price index was computed using
health care subindex of the Consumer Price Index, in the same manner
was the Consumer Price Index.

4) The housing and food services price index was computed fr
the housing and food price subindexes of the Consumer Price Index. Av
ages for each of these subindexes were computed as described above fo
the Consumer Price Index, and then each of the indexes thus computed
given equal weight in computing a composite index. The decision to giv
each of the subindexes equal weight in computing the composite index w
admittedly an arbitrary one. It was done because no data was available

which disaggregated auxiliary enterprise expenditures into its component parts. If more weight had been given to housing expenditures, 1970-71 index would have been higher and the computed rate of increase slower than was the case with the index actually used.

5) The higher education aggregate expenditures price index is a fixed weight index based on implied 1971-72 budget proportions. Educational and general expenditures (excluding research) were deflated using the Higher Education Price Index, research expenditures with the Research and Development Price Index, hospital expenditures with the health care price index, housing and food services with the composite index described in section 4 above, and other service programs, other auxiliary enterprises, and student aid with the Consumer Price Index. The implied budget proportions for 1972 used in deriving this fixed weight index were as follows (in percentage terms):

	All Institutions	Public Institutions	Private Institutions
Education and general	64.3	69.0	57.6
Organized research	8.8	8.2	10.1
Student aid grants	5.4	4.2	7.5
Major service programs			
Hospitals	3.8	3.6	3.8
Other service programs	4.1	2.8	6.3
Auxiliary enterprises			
Housing and food services	7.9	6.5	9.5
Other auxiliary enterprises	5.7	5.9	5.3
	100.0	100.0	100.0

(Detail may not add to total because of rounding.)

6) The faculty compensation index was adapted from publications of the American Association of University Professors.

7) The plant maintenance and operation price index is a fixed weight index based upon estimates of the relative importance of various inputs into plant maintenance and operation. Using the information provided by Halstead, and allocating manpower and resources most likely to be used for that purpose, the following budget proportions were developed:

	(1) Per Cent of Educational and General Expenditures	(2) Relative Weight (Percentage)
Craftsmen	1.0	8.8
Students	.2	1.8
Service employees	4.0	35.1
Operators and laborers	1.1	9.7
Fringe benefits	.8	7.0
Supplies and materials	.8	7.0
Equipment	.5	4.4
Utilities	3.0	26.3
	11.4	100.0

Using the budget proportions estimated above, and the price index for the various categories of expenditures as detailed in Halstead,[5] unknown and relative weights were estimated for 1971-72, as shown:

	Known Budget Proportions		Price Relative		Absolute Weight	Relative Weight
Craftsmen	.0877	=	137.9	x	.0636	.0846
Students	.0175	=	138.5	x	.0126	.0168
Service	.3509	=	138.7	x	.2530	.3364
Operators and laborers	.0965	=	138.5	x	.0697	.0927
Fringe benefits	.0702	=	180.2	x	.0390	.0519
Supplies and materials	.0702	=	112.6	x	.0623	.0828
Equipment	.0439	=	119.4	x	.0368	.0489
Utilities	.2632	=	122.4	x	.2150	.2859
					.7520	100.0

[5] Ibid., pp. 27-63.

From the estimated relative quantities, price indexes were constructed for the 1970-75 period:

APPENDIX C

INSTRUCTIONAL COSTS, PROBLEMS WITH 1975 DATA

In the course of our analyses of the financial conditions of higher education, we have tried to develop some helpful concepts which highlight the meaning of changes in various items of expenditure and revenue which make up the income statements or balance sheets of these institutions.

One such concept is instructional costs, an estimate of what it costs a given institution to offer instruction to its students and to attract a desirable student body. In order to calculate this figure, we have subtracted from total expenditures the revenues which the institution has derived from a variety of non-instructional functions: the sale of its staff time to perform research and development, earmarked endowments and gifts, reimbursed public service and extension activities, the cost of running auxiliary enterprises, such as dormitories, dining halls, bookstores, etc., as well as the income from operating hospitals. The difference between total current funds expenditures and these revenues is in this study labeled instructional costs.

We have argued that profits from Research and Development, or for that matter dormitories, should be partly allocated to operations and maintenance or administration, and reduce the cost of instruction. Also, the decision to allocate discretionary funds to student aid, presumably to diversify the student body, is as much a part of instructional costs as paying teachers.

This involved procedure was necessary because NCES reporting forms instructed higher education institutions not to allocate overhead costs to research or auxiliary enterprises. Without better guidelines on how these costs were to be allocated, our procedure to estimate the cost of the important teaching function appeared to be reasonable.

This procedure worked remarkably well for the period 1966 to 1974. It is not likely to work again because NCES has changed the financial reporting form again. It is now virtually impossible to isolate research and development and private research grants from the total. Our attempt to differentiate between restricted and unrestricted grants and gifts to arrive at a comparable total for 1974/75 was completely frustrated by (1) the changes in the form which was used to collect the information on finances of postsecondary institutions, and (2) the way institutions responded to the survey.

In theory, it ought to be possible to derive the instructional costs, using our methodology, by subtracting tuition, and restricted public and private grants to derive the "sales" of postsecondary institutions. As in previous years, this figure would be subtracted from total expenditures. In fact, the results of this calculation were not consistent with the calculations of costs for past years, especially for public and private universities.

An examination of records of some 250 institutions for the 1973/74 and 1974/75 academic years showed that reporting inconsistencies were not systematic. For instance, the University of North Carolina at Chapel Hill

included $27 million worth of grants in the latter, but not in the former year, for a special program administered by the University. In the case of New York University, instructional expenditures per student halved from one year to the next, while at Georgetown University, they increased fifty per cent. In both institutions, the number of faculty members and the mix by rank did not change appreciably from 1973/74 to 1974/75. We can only suspect that the form was filled in inconsistently from one year to the next.

It would be highly desirable if NCES would compare year-to-year reporting by institutions, especially for those periods when the format of the questionnaire changes, and follow up on the discrepancies. Unfortunately, it did not, and in the interest of getting this report out on time, we had to estimate instructional costs for institutions in 1974/75.

Our analysis of 1974/75 data drove us to the conclusion that most institutions which reported outlay inconsistently had some connection with medical schools. Those without medical schools reported fairly consistent increases in expenses for instructional staff and departmental research if not instructional costs. Estimates of instructional costs for 1974/75 were thus prepared by estimating the relationship of instructional staff and departmental research to instructional costs for these institutions.