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Trends in Revenues and Expenditures
in U.S. Higher Education:
Where Does the Money Come From?
Where Does it Go?

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Trends in Revenues and Expenditures in U.S. Higher Education:
Where Does the Money Come From? Where Does it Go?

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Over the past decade or so there has been a great deal of speculation concerning the course of revenues and expenditures in U.S. higher education. However, presumably due to data limitations, there have been few attempts to analyze the recent history of higher education finances at the national level. This paper seeks to fill this void by asking two simple questions for different groups of colleges and universities: Where does the money come from? Where does it go?

Section I describes the data set employed in our analysis. Section II presents a detailed look at the recent behavior of higher education institutions in the nation. Section III looks explicitly at changes over time in the composition of expenditures and revenues. Section IV concludes.

I. The Data

Our data set consists of financial and other information on individual colleges and universities during the period from 1978-79 to 1988-89. It was constructed by merging three smaller data sets. One, the Financial Statistics report from the Higher Education General Information Survey (HEGIS) for the period up to 1985-86, and the Integrated Postsecondary Education Data System (IPEDS) for the more recent period, describes the basic financial accounts of almost all public and private non-profit post-secondary institutions in the United States. The second, the Fiscal-Operations Report and Application to Participate (FISAP) data base, provides more detailed information on student aid spending and revenues, and on the aided population at colleges

and universities who apply for federal assistance under any of the so-called "campus-based programs" (direct loans, Supplementary Educational Opportunity Grants (SEOG's), and college work study). The third, the HEGIS and IPEDS Enrollment Survey, reports full- and part-time enrollment for all institutions, allowing us to construct estimates of full-time-equivalent enrollment (FTE), which we use to express all of the financial data on a per FTE enrollment basis. We have these merged data sets for the majority of private non-profit and public colleges and universities and concentrate here on three academic years -- 1978-79 (referred to as 1979 in the tables and text that follow), 1985-86 (referred to as 1986), and 1988-89 (referred to as 1989). All of our numbers are adjusted for inflation and are presented in 1990-91 dollars. The data set has been constructed as a panel, so that only those schools with data for all three observation years are included. Painstaking efforts have been made to clean the final data set of reporting and recording errors.

In the tables summarizing these data, we disaggregate institutions by type (university/four-year college/two-year college) and control (public/private). Table 1 presents data on university expenditures, while Table 2 presents analogous data on university revenues. Tables 3 and 4 examine four-year colleges, while Tables 5 and 6 examine two-year colleges.

All of our expenditure and revenue categories are explained in detail in the glossary attached to this paper. Briefly,

expenditure categories include total per FTE spending net of student aid (NETSPEND)¹, which is then broken down into spending on instruction and self-supported research (INSTRUCT), externally supported research (RESEARCH), public service (PUBSERV), academic support other than library expenditures (ACADSUPP), library expenditures (LIBRARY), student services (STUDSERV), institutional support (INSTSUPP), operation and maintenance (OPMNEXP), and a residual category (OTHER). Restricted scholarships (SCLREST), unrestricted scholarships (SCLUNRES), and plant additions (PLANTADD) complete the list of expenditures. Revenue categories include per FTE values of gross tuition and fees (TANDF), federal grants and contracts (FEDGRCN), state and local grants and contracts (SLGRCN), state and local appropriations (SLAPP), resources from gifts and endowment earnings (GIFT&END), tuition and fee revenue net of institutional aid (NETTANDF), total scholarship aid from institutional funds (TOTSCH), and federal financial aid (FEDFNAID).

A number of these variables are related to each other. Net spending equals the sum of all expenditure variables except for scholarships and plant additions. Unrestricted scholarships plus restricted scholarships less federal financial aid equals total scholarship aid from institutional funds. Finally, gross tuition and fees less scholarship aid from institutional funds equals net

¹We have netted out student aid spending because part of this spending is directly "passed through" from federal student aid, and the rest is best seen as foregone institutional revenue, rather than as spending on educational programs.

tuition and fee revenues.

II. Expenditures and Revenues: Levels and Trends

Table 1 shows that net spending per student at private universities in 1989 was almost twice that in the public sector (\$26,301 versus \$14,412, in 1990-91 academic year dollars) and that the difference grew over time (net spending increased at an annual real growth rate of 3.36% at private universities versus 1.82% at public universities). While some public sector expenditures are "off-budget" and are therefore not included in these financial data, it is undoubtedly the case that expenditures per student are strikingly different between sectors and that this difference has grown over the past decade.² The disparity in levels of spending is apparent in the important category of instruction and self-supported research, as well as in every expenditure category with the exception of public service where public universities spend slightly more per student than do their private counterparts. Moreover, most categories grew faster in the private sector, suggesting the gap in spending in these areas will widen further. While all but the last expenditure category relates to the operating budget, the final category, plant additions, relates to the capital budget. In

²An example of an off-budget item is that, in some states, certain parts of employee benefits (such as pension plans) appear on state government budgets rather than institutional budgets. The underestimation of public expenditures may be especially important in analyzing capital spending, where significant plant additions may be off-budget.

1979, additions to plant and equipment were almost identical in the public and private sectors, with additions of about \$1,400 per FTE student during that academic year. By 1989, however, plant additions were twice as large on a per student basis at private universities than at public universities. This reflects an enormous acceleration in building at private universities, especially between 1986 and 1989, when the annual real growth rate was 14.54%. Hence, the building boom from 1979 to 1986 at private universities reached even higher levels after 1986.

While the above paragraph highlights some of the most notable information in Table 1, there is a plethora of information of likely interest to particular readers. In terms of the financial aid budget, for example, the annual rate of increase in scholarships from unrestricted funds at private universities slowed after 1986 (from 7.98% from 1979 to 1986 to 5.78% from 1986 to 1989) although the real increase continues to be very high. While the recent rate of increase in unrestricted aid at private universities is lower than earlier, the increase in restricted aid has accelerated (from .47% to 5.30%).

Turning to other expenditure categories, real growth in operation and maintenance expenditures at private universities has almost ceased after 1986 (going from 1.98% per year to .49%), while expenditure growth in institutional support and in student services has slowed modestly (going from 4.93% to 4.36%, and from 4.68% to 3.02%). On the other hand, the rate of increase in academic support spending has increased substantially (from 3.97%

to 7.71%). Real library spending has been increasing somewhat more rapidly of late (the annual real increase rose from .90% to 1.55%), although such increases are still rather small. Research expenditures have accelerated considerably at private universities (1.01% to 4.75%), with a similar change taking place in the public sector (1.99% to 4.99%). Finally, the rate of increase in instruction and self-supported research rose at both private and public universities (3.14% to 4.99% and 1.17% to 1.72%).

Table 2 shows that, while gross tuition and fees (sometimes called the "sticker price") are far greater at private universities than at public universities (\$11,735 versus \$3,014), annual real growth rates over the entire period were quite similar (4.07% in the private sector versus 3.68% in the public sector). Note that over the period 1986-89, private tuition increased at a slower rate than public tuition, reversing the trend from 1979-86. While both federal grants and contracts and state and local grants and contracts are also much larger at private universities (\$6,435 versus \$2,139, and \$1,120 versus \$379), federal grants and contracts mirror the pattern for tuition and fees, with the rate of growth from 1986-89 being higher at public universities than in the private sector. As expected, state and local appropriations for public universities are very important, although the figure grew only slightly in real terms over the 1979-89 period. Revenues from gifts and endowment earnings, while a bit more than twice as high at

private universities in 1979, was almost four times as high in 1989. Net tuition revenues, on the other hand, have increased at about the same rate over the period in the two sectors (with an annual real increase of roughly 3.6%), although the rate of increase for 1986-89 was higher in the public sector (3.70%) than in the private sector (3.24%). Total scholarships from institutional sources increased more rapidly at private universities over the period while federal financial aid increased modestly at public universities as opposed to private universities where it failed to keep pace with inflation.

In order to examine the average net price faced by students, as opposed to net tuition revenues received by schools, we subtract federal financial aid contributions from net tuition and fees. Thus, the average private university has a sticker price of \$11,735, provides \$2,664 in institutional aid, and therefore receives net tuition revenues of \$9,071 per student. The average student attending a private university also receives \$234 in federal aid, making the average net price faced by students equal to \$8,837. The comparable price to attend a public university is \$2,094. The ratio of the average net price at a private university to the average net price at a public university is 4.2, exactly the same as the value in 1979. Hence, the real decline in federal financial aid for students attending private universities and the higher rate of increase in gross tuition were compensated for by the relatively high rate of increase in institutional aid.

Let's step back for a minute to reflect on the most important findings of this discussion of universities. The most striking part of the expenditure analysis is probably the extraordinary building boom in the private sector, with expenditures per student in 1989 (\$4,862) substantially higher than in any other category with the exception of research expenditures (\$5,635) and expenditures on instruction and self-supported research (\$10,590). Capital expenditures in the public sector are much more modest (\$2,369), although here too this figure exceeds spending in all categories with the exception of research and instruction. On the revenue side, it will surprise some to find out that real annual percentage increases in net tuition and fee revenues over the entire period were virtually identical in the two sectors, with rates of increase from 1986-89 being higher in the public sector. The largest revenue source for private universities, resources from gifts and endowment earnings, rose at a very rapid annual rate over the entire period (8.69%)³, as did the second most important revenue source, net tuition and fees (which increased at a rate of 3.71% per year). However, the third most important revenue source, federal grants and contracts, increased by only 1.31% annually. Over the 1986-89 period, increased resources from gifts and endowment earnings

³Of course, this revenue source varies year to year by a significant amount depending largely on the performance of the stock market and the existence of major capital campaigns. For example, the Dow Jones Industrial Average increased by only 2.6% in 1978-79 (while the CPI rose by 9.2%) but increased by 42.4% in 1985-86 (while the CPI rose by 2.7%).

rose much more slowly (1.63% per year), tuition revenues increased at a slightly lower rate than in the longer period (3.24%) while federal grants and contracts did relatively well (increasing at a real rate of 2.95% per year).

The situation for public universities is far more precarious. The principal revenue source, state and local appropriations, increased by about one percent per year after adjusting for inflation (.98%), while -- going in order of budgetary importance -- gifts and endowment earnings rose by 3.11% annually, net tuition and fee revenues rose by 3.58%, and federal grants and contracts increased at a rate of only .81% per year. The single most worrying fact is that public universities are much more reliant on state and local appropriations than they are on any other revenue source. (The ratio of state and local appropriations to net tuition and fees, for example, equals 3.0.) The minuscule real increase in these appropriations, particularly over the most recent period (where the annual increase in state and local appropriations from 1986-89 was .35%), and the well-known budgetary crises in states throughout the nation, implies that these universities are going to have to gain an increased share of their revenues from other sources. While gifts and endowment earnings as well as federal grants and contracts are two possibilities, revenue from tuition and fees is the most likely candidate to take up the slack from reductions in state and local appropriations, thereby continuing the recent trend in which public universities have become more tuition dependent and

costs to their students have risen at a rapid real rate.

Tables 3 and 4 provide expenditure and revenue data for four-year colleges and tell a slightly different story. While private four-year colleges spend more than public four-year colleges (\$10,142 per FTE student in 1989 versus \$8,174 for NETSPEND), the difference is much smaller than in the case of universities (\$26,301 versus \$14,412), especially in the important instruction and self-supported research category (\$4,081 versus \$3,956 at four-year colleges; \$10,590 versus \$5,684 at universities). While, again, plant additions have been considerable, especially in the private sector (where they equaled \$1,647) the levels and rates of change are far more modest than in the earlier case.

It is interesting to note that, in comparing recent expenditure trends at private four-year colleges versus private universities, the colleges have had a more modest increase in instruction and institutional support, while having a small absolute decline in real library spending.⁴ On the other hand, they have closed some of the gap in academic support and, at least over 1986-89, in student services. It is important to keep in mind, however, the very different structures and academic missions of these two types of institutions that in part drive these different patterns.

⁴Note that comparisons between colleges and universities should be made with caution because we are unable to separate undergraduate from graduate and professional school expenditures at universities.

Net tuition revenues are the most important revenue source at four-year private colleges (\$6,578), although gifts and endowment earnings (\$4,321) again figure prominently (although not nearly as prominently as in the case of private universities where the FTE value was almost three times as large as the figure for private four-year colleges, and gifts and endowment earnings were more important than net tuition revenues).⁵ Federal and state and local grants and contracts are relatively unimportant for four-year colleges. Real rates of increase in gifts and endowment earnings (5.09%) and in net tuition revenues (2.82%) are below those at private universities (8.69% and 3.71%), but nonetheless represent substantial growth over the period. The two major revenue sources for public four-year colleges -- state and local appropriations and net tuition revenues (the ratio of state and local appropriations to net tuition and fees is even higher at public four-year colleges (3.2) than at public universities (3.0)) - increased at a rate approximately equal to that for public universities (.74% and 3.57% versus .98% and 3.58%). However, the third most important revenue source, increased resources from gifts and endowment earnings, actually declined in real terms for public four-year colleges. Hence, these schools are even more vulnerable to cuts in state operating subsidies than are public universities, a fact that will be

⁵The degree to which these differentials in gifts and endowment earnings are directly attributable to the particular development activities and endowment funds of the professional schools **at the** universities is not determinable through these data.

discussed in greater detail in section III.

Lastly, we can again use the information in the table to compute the average net price faced by students attending four-year colleges -- \$6,084 in the private sector and \$1,242 in the public *sector* (a ratio of 4.9). These numbers can be contrasted with \$4,422 and \$810 in 1979 (a ratio of 5.5). It is clear that, despite the real decline in federal financial aid for students attending private colleges, high rates of increase in institutional aid at private colleges, along with virtually identical increases in sticker prices, have decreased the net price of attending private colleges relative to their public counterparts.

Finally, Tables 5 and 6 present expenditure and revenue data for two-year colleges. An obvious change from the earlier discussion is that the difference in spending between private and public two-year colleges is only \$991 per student, in contrast to \$11,890 for universities and \$1,968 for four-year colleges. It is interesting to note that spending on instruction and self-supported research is actually higher at public two-year colleges than at private two-year colleges (\$2,661 versus \$2,201).⁶

A comparison between expenditure levels and trends at public four-year colleges versus public two-year colleges shows that the advantage in net spending at four-year colleges (\$8,174 in 1989

⁶The fact that net spending is higher at private two-year colleges than at public two-year colleges despite relatively low spending on instruction and self-supported research results mainly from relatively high spending on student services and institutional support.

versus \$5,265) has basically been holding steady in recent years (from 1979 to 1989 net spending rose by 1.11% and .88% at public four-year colleges and public two-year colleges, respectively). For academic support and student services, however, public two-year colleges have narrowed the gap (with growth rates of 3.94% and 1.85% versus 2.61% and .69%). Public two-year colleges have also increased restricted scholarship spending at a faster rate (2.86%) than public four-year colleges (1.91%).

As was the case for private four-year colleges, net tuition revenues are the most important revenue source at private two-year colleges (\$4,212), although gifts and endowment earnings (\$1,830) are again important. Real rates of increase in gifts and endowment earnings (.76%) have been quite modest while growth in net tuition revenues (2.78%) track closely the growth in net tuition revenues at private four-year colleges. Net tuition revenues at public two-year colleges (\$937) also increased at a healthy real rate (2.98%) although the major revenue source for public two-year colleges, state and local appropriations (\$3,723), was basically stagnant in real terms (with an increase of .29%). Even more worrying is the fact that state and local appropriations for public two-year colleges failed to keep pace with inflation over the 1986-89 period (with an annual decline of .41%). Thus, while state and local appropriations grow only slightly from 1979 to 1989 for all types of public institutions (with growth rates of .98%, .74%, and .29% at public universities, four-year colleges, and two-year colleges), the

growth rate was lowest at community colleges. Over the more recent period, 1986 to 1989, the real decline in state and local appropriations at public two-year colleges can be contrasted with small increases at public universities (.35%) and at public four-year colleges (.74%).

Lastly, the average net price faced by students attending two-year colleges -- \$3,396 in the private sector in 1989 and \$558 in the public sector (a ratio of 6.1) -- can be contrasted with \$2,062 and \$401 in 1979 (a ratio of 5.1). The rapid increase in institutional aid at private two-year colleges was not enough to maintain the net price to students relative to public two-year colleges given the decline in federal financial aid and the relatively large increase in sticker prices at the private schools.

III. Expenditures and Revenues: Changes in Composition

Tables 7 and 8 present the expenditure and revenue data in a different manner. Table 7 shows the share of operating expenditures going to each expenditure category in 1979 and 1989 for each type of institution.

The most striking finding in terms of the important category of instruction and self-supported research is that two institutional groups -- public four-year colleges and public two-year colleges -- allocate an unusually large percentage of their operating expenditures. This category accounts for about half of the expenditures for these groups, both in 1979 and in 1989. On

the other hand, for both years, instruction and self-supported research accounts for only about 40% of operating expenditures at universities (public and private) and at private two-year and four-year colleges. The relatively small allocation to the instruction category for universities is explained by the large role that funded research plays in both the public and private sectors; for private two-year and four-year colleges it is institutional support and student services that take an unusual percentage of operating expenditures.

The role of institutional support has been growing for all institutional types, and now accounts for a substantial percentage of operating expenditures, particularly, as mentioned above, at private four-year (20.9%) and two-year colleges (26.4%). Academic support also has garnered an increasing percentage of spending over time while both library and operations and maintenance account for smaller percentages of operating expenditures in 1989 than in 1979 at all six institutional types.

We turn now to revenues. Given the various uncertainties relating to revenue sources in the future, it is worth asking if certain types of institutions are more diversified in terms of revenue sources than others. Taking total revenue as the sum of federal grants and contracts, state and local grants and contracts, state and local appropriations, gift and endowment income, and net tuition revenue, we find the distribution of revenues in 1979 and 1989 shown in Table 8.

All institutional groups reduced their reliance on federal grants and contracts over the period, with a particularly large change taking place at private universities (where federal grants and contracts fell from 31.5% of revenues in 1979 to 21.8% of revenues in 1989). State and local grants and contracts, on the other hand, increased their contribution to total revenues, although their role remains small in all cases.

Public institutions remain highly reliant on state and local appropriations although there have been some interesting changes over the past decade. The four percentage point decline in the contribution of state and local appropriations at public universities has been compensated for by modest increases in the contribution of both gift and endowment earnings and net tuition revenues. At public four-year and two-year colleges, gift and endowment earnings have become much less important over time. These institutions have instead become more reliant on state and local appropriations while at the same time experiencing considerable increases in the role of net tuition revenues. Hence, net tuition revenues play a larger role in 1989 than in 1979 for all types of public institutions, although the degree of change is far greater at four-year colleges (14.1% to 19.5%) and at two-year colleges (12.8% to 17.0) than at universities (13.1% to 15.6%).

The contribution of net tuition revenues, on the other hand, has declined at private universities (34.9% to 30.7%) and private four-year colleges (58.3% to 55.5%), although net tuition

revenues became more important at private two-year colleges (60.8% to 64.2%). This presumably reflects the rapid growth in the role of gift and endowment earnings at private universities (29.6% to 42.8%) and at private four-year colleges (30.5% to 36.4%).

To summarize the revenue figures, the most dramatic change over the decade was the large decline in the role of federal grants and contracts which took place at private universities (a ten percentage point fall) and the compensating increase in gift and endowment earnings (a thirteen percentage point increase). Gift and endowment earnings also allowed private four-year colleges (where their contribution to revenues rose by six percentage points) to compensate for the decreasing role of federal grants and contracts (a four percentage point fall). Rises in the importance of net tuition revenues at public four-year and two-year colleges (averaging about five percentage points) helped reduce the shortfall due to the decline in the contribution of gift and endowment earnings (about seven percentage points). Finally, the revenue patterns at public universities and private two-year colleges were relatively stable over time.

IV. Conclusion

The aim of this paper is to provide an empirical basis for answering questions about levels and trends in expenditures and revenues in U.S. higher education. At the university level,

expenditures per student are strikingly different between the public and private sectors, with the private university advantage growing over the past decade. The most prominent example of this divergence is in additions to plant and equipment which were almost identical in the public and private sectors in 1979 but, by 1989, were twice as large on a per student basis at private universities than at public universities.

While both gross tuition and fees (sticker prices) and net tuition revenues are far greater at private universities than at public universities, annual real growth rates from 1979 to 1989 were quite similar. Over the period 1986-89, private tuition (gross and net) increased at a slower rate than public tuition, reversing the trend during the 1979-86 period.

The single most important revenue source for private universities, resources from gifts and endowment earnings, rose at a very rapid annual rate during the 1979-89 period, as did the second most important revenue source, net tuition and fees. However, the third most important revenue source, federal grants and contracts, increased only modestly.

The principal revenue source at public universities, state and local appropriations, increased only slightly after adjusting for inflation. Given the budgetary situation in most states, it is quite likely that these universities are going to have to gain an increased share of their revenues from other sources.

Turning to the nation's colleges, private four-year colleges spend more than public four-year colleges, although the

difference is much smaller than in the case of universities. Plant additions have once again been considerable, but are modest relative to universities. At two-year colleges, differences in spending between private and public schools are quite small compared to differences in spending at four-year colleges and at universities. In fact, spending on instruction and self-supported research is higher at public two-year colleges than at private two-year colleges. Comparing expenditures at public four-year colleges and public two-year colleges shows stability in the net spending advantage at four-year colleges. An examination of the net price faced by students attending four-year colleges shows that the high rate of increase in institutional aid in the private sector has led to a decrease in the cost of attending private four-year colleges relative to their public counterparts.

Real rates of increase in gift and endowment earnings and in net tuition revenues are lower at private four-year colleges than at private universities, but nonetheless represent substantial growth over the 1979-89 period. Net tuition revenues at both private and public two-year colleges also increased at a healthy real rate although the major revenue source for public two-year colleges, state and local appropriations, barely increased in real terms over the entire period and failed to keep pace with inflation from 1986 to 1989. Finally, despite the rapid increase in institutional aid at private two-year colleges, the net price to students at such institutions increased relative to public

two-year colleges.

Our comparison of changes in the composition of revenues and expenditures uncovered substantial changes in revenue sources for private universities, public four-year and two-year colleges, and private four-year colleges. At private universities, there was a large decline in the role of federal grants and contracts. Gift and endowment earnings more than compensated for this decline and also allowed private four-year colleges to make up for a decreasing role of federal grants and contracts. Declines in the contribution of gift and endowment earnings at public four-year and two-year colleges were offset in part by rises in the importance of net tuition revenues.

In terms of expenditures, public four-year colleges and public two-year colleges allocate unusually large percentages to instruction and self-supported research compared with other classes of institutions. At both public and private universities, funded research plays a substantial role while, at private two-year and four-year colleges, institutional support and student services absorb relatively high percentages of operating expenditures. The role of institutional support has been growing for all institutional types, as has academic support. However, for all groups, both library and operations and maintenance expenditures account for smaller percentages of operating expenditures in 1989 than in 1979.

The bottom line is that there have been substantial changes in higher education expenditures and revenues in recent years.

But different institutional groups have generally had very different experiences. Unless we recognize the degree of heterogeneity in U.S. higher education, we can not hope to understand the factors affecting recent history and anticipate the course of the decade ahead.

TABLE 1
 University Expenditure Levels in 1979,1986 & 1989 and Annual Rates of Change.
 Expenditure Levels in 1990-1991 Dollars.

Expenditure Category	Institutional Control	N	Annual % Change 1979 to		Annual % change 1986-		Annual % Change 1979-	
			1979	1986	1986	1989	1989	1989
NETSPEND	Public	71	1201222	1.54%	13379.01	2.48%	14411.66	1.82%
	Private	52	18796.30	2.76%	22797.44	4.76%	26300.51	3.36%
INSTRUCT	Public	71	4972.55	1.17%	5397.21	1.72%	5683.58	1.34%
	Private	52	7315.68	3.14%	9117.13	4.99%	10589.53	3.70%
RESEARCH	Public	71	2195.37	1.99%	2522.93	4.99%	2930.72	2.89%
	Private	52	4553.42	1.01%	4887.43	4.75%	5635.38	2.13%
PUBSERV	Public	71	1060.11	0.96%	1133.94	2.53%	1223.25	1.43%
	Private	52	508.65	3.91%	668.95	13.89%	1014.89	6.91%
ACADSUPP	Public	71	731.27	2.34%	861.47	4.07%	913.49	2.86%
	Private	52	909.84	3.97%	1200.98	7.71%	1513.62	5.09%
LIBRARY	Public	71	414.59	1.80%	470.11	-0.03%	469.73	1.25%
	Private	52	846.18	0.90%	901.41	1.55%	944.24	1.10%
STUDSERV	Public	71	478.65	1.67%	538.03	2.14%	573.74	1.81%
	Private	52	703.12	4.68%	975.64	3.02%	1068.02	4.18%
INSTSUPP	Public	71	898.86	3.10%	1116.69	2.20%	1193.00	2.83%
	Private	52	1855.51	4.93%	2619.34	4.36%	2985.72	4.76%
OPMNEXP	Public	71	1136.94	0.82%	1203.99	-0.76%	1176.68	0.34%
	Private	52	1833.10	1.98%	2105.47	0.49%	2136.60	1.53%
OTHER	Public	71	123.93	1.18%	134.62	11.03%	187.43	4.14%
	Private	52	270.81	2.44%	321.15	8.35%	41262	4.21%
SCLREST	Public	71	493.13	2.25%	577.35	2.09%	614.79	2.21%
	Private	52	997.91	0.47%	1031.12	5.30%	1208.67	1.92%
SCLUNRES	Public	71	167.90	4.68%	233.05	9.04%	305.66	5.9%
	Private	52	81259	7.98%	1420.32	5.78%	1689.23	7.32%
PLANTADD	Public	71	1387.49	8.22%	2466.85	-1.34%	2369.39	5.35%
	Private	52	1445.46	11.10%	3143.76	14.54%	4862.44	12.13%

TAEIL 2

University Revenue Levels in 1979,1986 & 1989 and Annual Rates of Change.
Revenue Levels in 1990- 1991 Dollars.

Revenue Category	Institutional control	N	1979	Annual % Change	1986	Annual % change	1989	Annual % Change
				1919 to 1986		1986- 1989		1979- 1989
TANDF	Public	71	2086.14	3.44%	2653.50	4.25%	3014.01	3.68%
	Private	52	7807.83	4.13%	10423.59	3.95%	11735.18	4.07%
FEDGRCN	Public	71	197292	-0.31%	1930.01	3.43%	2139.22	0.81%
	Private	52	564284	0.61%	5890.23	2.95%	6434.60	1.31%
SLGRCN	Public	71	304.00	-0.88%	285.82	9.41%	379.01	2.21%
	Private	52	415.05	2.84%	506.44	26.45%	1119.84	9.93%
SLAPP	Public	71	6707.22	1.25%	7321.22	0.35%	7397.52	0.98%
	Private	52	300.62	-0.34%	293.50	-4.01%	260.27	-1.44%
GIFT&END	Public	71	2355.85	4.69%	327223	-0.57%	3216.35	3.11%
	Private	52	5297.30	11.71%	12025.96	1.63%	12629.82	8.69%
NETTANDF	Public	71	1701.85	3.53%	2179.38	3.70%	2435.59	3.58%
	Private	52	6256.76	3.92%	8231.71	3.24%	9071.06	3.71%
TOTSCH	Public	71	384.30	3.00%	474.08	6.63%	578.46	4.09%
	Private	52	1551.02	4.94%	2191.86	6.50%	2664.06	5.41%
FEDFNAID	Public	71	276.72	2.79%	336.33	0.56%	341.99	2.12%
	Private	52	259.47	0.01%	259.58	-3.48%	233.84	-1.04%

TABLE 3

Four-Year College Expenditure Levels in 1979,1986 & 1989 and Annual Rates of Change.
Expenditure Levels in 1990-1991 Dollars.

Expenditure Category	Institutional Control	N	Annual % Change		1986	Annual % Change		1989	Annual % Change	
			1979	1986		1986	1989		1979-	1989
NETSPEND	Public	276	7318.21	1.26%	799282	0.75%	8173.78	1.11%		
	Private	753	7843.05	2.52%	9358.55	2.68%	10141.54	2.57%		
INSTRUCT	Public	276	3598.75	0.84%	3817.92	1.19%	3956.38	0.95%		
	Private	753	3348.83	1.88%	3820.39	2.20%	4081.49	1.98%		
RESEARCH	Public	276	309.95	3.62%	399.32	8.09%	509.07	4.96%		
	Private	753	238.08	1.40%	26252	1.79%	276.98	1.51%		
PUBSERV	Public	276	167.55	3.23%	209.99	2.98%	229.62	3.15%		
	Private	753	148.38	5.78%	222.43	6.28%	268.51	5.93%		
ACADSUPP	Public	276	406.99	1.14%	440.95	6.01%	528.12	2.61%		
	Private	753	33280	3.62%	428.76	10.61%	589.49	5.72%		
LIBRARY	Public	276	327.29	-0.00%	327.20	-3.77%	29226	-1.13%		
	Private	753	343.95	1.32%	377.27	-3.37%	341.03	-0.09%		
STUDSERV	Public	276	531.40	1.24%	579.70	-0.60%	569.43	0.69%		
	Private	753	737.63	4.12%	984.06	4.23%	1117.21	4.15%		
INSTSUPP	Public	276	834.91	4.21%	1121.29	-2.27%	1047.45	2.27%		
	Private	753	1478.03	3.49%	1886.87	2.97%	206276	3.33%		
OPMNEXP	Public	276	926.21	-0.39%	901.31	-1.05%	873.41	-0.59%		
	Private	753	1000.21	1.74%	1130.05	0.56%	1149.36	1.39%		
OTHER	Public	276	215.17	-1.40%	195.14	-4.99%	168.04	-2.47%		
	Private	753	215.14	1.93%	246.21	1.13%	254.72	1.69%		
SCLREST	Public	276	501.84	1.30%	549.76	3.32%	607.29	1.91%		
	Private	753	848.36	1.50%	94216	3.05%	103248	1.96%		
SCLUNRES	Public	276	80.37	5.81%	120.72	4.70%	139.01	5.48%		
	Private	753	474.97	8.20%	843.07	9.23%	1111.99	8.51%		
PLANTADD	Public	276	963.34	0.61%	1005.67	1.71%	1058.54	0.94%		
	Private	753	944.30	4.92%	133267	7.05%	1646.59	5.56%		

TABLE 4

Four-Year College Revenue Levels in 1979,1986 & 1989 and Annual Rates of Change.
Revenue Levels in 1990-1991 Dollars.

Revenue Category	Institutional Control	N	Annual % Change		1986	Annual % Change		1989	Annual % change	
			1979 to 1986	1986 to 1989		1986- 1989	1989 to 1990-1991			
TANDF	Public	276	1391.75	3.96%	1836.62	2.64%	1987.92	3.57%		
	Private	753	5745.87	3.28%	7226.59	4.33%	8228.06	3.59%		
FEDGRCN	Public	276	600.12	-3.27%	477.35	1.37%	497.41	-1.88%		
	Private	753	647.32	-4.62%	468.45	-2.84%	430.14	-4.09%		
SLGRCN	Public	276	155.59	2.50%	185.37	9.27%	244.83	4.53%		
	Private	753	18208	5.88%	274.79	13.44%	411.29	8.15%		
SLAPP	Public	276	5132.82	0.75%	5407.71	0.74%	5528.73	0.74%		
	Private	753	118.90	-0.10%	118.06	0.68%	120.48	0.13%		
GIFTEEND	Public	276	1484.48	1.50%	1649.19	-20.64%	887.98	-5.14%		
	Private	753	2597.02	8.21%	4614.76	-2.19%	4320.78	5.09%		
NETTANDF	Public	276	1209.91	4.29%	1633.19	1.89%	1728.66	3.57%		
	Private	753	4959.11	2.66%	5975.16	3.20%	6577.74	2.82%		
TOTSCH	Public	276	181.85	1.60%	203.43	8.08%	259.25	3.55%		
	Private	753	786.78	6.63%	1251.45	9.22%	1650.31	7.41%		
FEDFNAID	Public	276	400.36	2.20%	467.06	1.40%	487.04	1.96%		
	Private	753	536.56	-0.07%	533.79	-2.57%	494.15	-0.82%		

Table 5

Two-Year College Expenditure Levels in 1979,1986 & 1989 and Annual Rates of Change.
Expenditure Levels in 1990-1991 Dollars.

Expenditure category	Institutional Control	N	Annual % change 1979 to		Annual % change 1986-		Annual % change 1979-	
			1979	1986	1986	1989	1989	1989
NETSPEND	Public	624	4819.58	0.99%	5166.18	0.63%	5264.50	0.88%
	Private	94	4751.25	2.83%	5793.73	2.56%	6256.32	2.75%
INSTRUCT	Public	624	2467.53	0.88%	2624.86	0.46%	2660.98	0.75%
	Private	94	178564	2.04%	2089.63	2.21%	2200.96	2.09%
RESEARCH	Public	624	8.57	-9.37%	4.4s	11.28%	6.24	-3.18%
	Private	94	236	-11.59%	1.05	29.36%	2.53	0.69%
PUBSERV	Public	624	9278	2.21%	108.27	7.68%	136.31	3.85%
	Private	94	29.81	1.11%	3222	4.25%	36.60	2.05%
ACADSUPP	Public	624	237.30	3.08%	294.45	5.95%	351.96	3.94%
	Private	94	215.85	3.59%	277.47	4.44%	317.01	3.84%
LIBRARY	Public	624	166.52	-1.30%	152.05	-7.57%	121.16	-3.18%
	Private	94	165.06	0.53%	171.24	0.33%	17294	0.47%
STUDSERV	Public	624	424.87	1.84%	483.11	1.90%	511.45	1.85%
	Private	94	611.82	4.08%	814.30	4.38%	935.60	4.17%
INSTSUPP	Public	624	731.94	1.28%	800.42	1.41%	835.04	1.32%
	Private	94	1137.83	3.71%	147501	2.67%	1598.09	3.40%
OPMNEXP	Public	624	568.44	1.34%	624.43	-1.40%	598.83	0.52%
	Private	94	645.02	2.54%	770.34	0.85%	790.18	2.03%
OTHER	Public	624	121.63	-7.07%	74.14	-18.53%	42.52	-10.51%
	Private	94	157.87	2.83%	19249	2.81%	209.43	2.83%
SCLREST	Public	624	349.36	2.90%	427.98	2.78%	465.19	2.86%
	Private	94	1289.93	-1.15%	1190.37	-0.94%	1157.13	-1.09%
SCLUNRES	Public	624	25.36	1.20%	27.58	-1.03%	26.75	0.53%
	Private	94	192.86	7.45%	324.80	13.07%	480.69	9.13%
PLANTADD	Public	624	662.13	-3.07%	534.18	-0.60%	524.60	-2.33%
	Private	94	624.95	1.80%	709.10	9.36%	939.08	4.07%

TABLE 6
Two-Year College Revenue Levels in 1979, 1986 & 1989 and Annual Rates of Change.
Revenue Levels in 1990-1991 Dollars.

Revenue Category	Institutional Control	N	Annual % Change			Annual % Change		
			1979	1979 to 1986	1986	1986-1989	1989	1979-1989
TANDF	Public	624	77636	3.14%	967.16	2.75%	1050.46	3.02%
	Private	94	3545.06	3.22%	4440.87	4.18%	5033.91	3.51%
FEDGRCN	Public	624	284.91	-2.69%	236.00	-2.85%	216.67	-2.74%
	Private	94	197.50	-1.04%	183.68	3.15%	201.86	0.22%
SLGRCN	Public	624	122.36	6.52%	193.19	17.27%	324.36	9.75%
	Private	94	99.89	7.14%	164.68	13.62%	247.80	9.09%
SLAPP	Public	624	3614.90	0.60%	3769.06	-0.41%	3722.80	0.29%
	Private	94	64.26	-7.11%	39.07	20.57%	72.43	1.20%
GIFT&END	Public	624	698.41	-1.68%	620.74	-21.55%	325.22	-7.64%
	Private	94	1695.06	3.06%	2100.41	-4.60%	1829.80	0.76%
NETTANDF	Public	624	695.15	3.25%	872.66	2.37%	936.85	2.98%
	Private	94	3188.93	4.50%	4369.23	-1.22%	4212.10	2.78%
TOTSCH	Public	624	81.20	2.17%	94.51	6.13%	113.60	3.36%
	Private	94	356.13	-22.91%	71.65	81.33%	821.81	8.36%
FEDFNAID	Public	624	293.51	2.96%	361.04	1.56%	378.34	2.54%
	Private	94	1126.67	3.54%	1443.53	-19.01%	816.00	-3.23%

Table 7
Composition of Expenditures: 1979 and 1989

1979

	<u>Universities</u>		<u>4-Yr. Colleges</u>		<u>2-Yr. Colleges</u>	
	Public	Private	Public	Private	Public	Private
Instruction and Self-Supported Research	41.8%	39.5%	50.7%	43.9%	52.5%	38.9%
Funded Research	18.5	24.6	4.4	3.1	0.2	0.0
Public Service	8.9	2.7	2.4	1.9	2.0	0.7
Academic Support	6.1	4.9	5.7	4.4	5.0	4.7
Library	3.5	4.6	4.6	4.5	3.6	3.6
Student Services	4.0	3.8	7.5	9.7	9.0	13.3
Institutional Support	7.6	10.0	11.8	19.4	15.6	24.8
Operations and Maintenance	9.6	9.9	13.0	13.1	12.1	14.0

1989

	<u>Universities</u>		<u>4-Yr. Colleges</u>		<u>2-Yr. Colleges</u>	
	Public	Private	Public	Private	Public	Private
Instruction and Self-Supported Research	40.0%	40.9%	49.4%	41.3%	51.0%	36.4%
Funded Research	20.6	21.8	6.4	2.8	0.1	0.0
Public Service	8.6	3.9	2.9	2.7	2.6	0.6
Academic Support	6.8	5.8	6.6	6.0	6.7	5.2
Library	3.3	3.6	3.6	3.4	2.3	2.9
Student Services	4.0	4.1	7.1	11.3	9.8	15.4
Institutional Support	8.4	11.5	13.1	20.9	16.0	26.4
Operations and Maintenance	8.3	8.3	10.9	11.6	11.5	13.1

Table 8
Composition of Revenues: 1979 and 1989

1979

	<u>Universities</u>		<u>4-Yr. Colleges</u>		<u>2-Yr. Colleges</u>	
	Public	Private	Public	Private	Public	Private
Federal Grants and Contracts	15.1%	31.5%	7.0%	7.6%	5.3%	3.8%
State and Local Grants and Contracts	2.3	2.3	1.8	2.1	2.3	1.9
State and Local Appropriations	51.4	1.7	59.8	1.4	66.8	1.2
Gift and Endowment Earnings	18.1	29.6	17.3	30.5	12.9	32.3
Net Tuition Revenue	13.1	34.9	14.1	58.3	12.8	60.8

1989

	<u>Universities</u>		<u>4-Yr. Colleges</u>		<u>2-Yr. Colleges</u>	
	Public	Private	Public	Private	Public	Private
Federal Grants and Contracts	13.7%	21.8%	5.6%	3.6%	3.9%	3.1%
State and Local Grants and Contracts	2.4	3.8	2.8	3.5	5.9	3.8
State and Local Appropriations	47.5	0.9	62.2	1.0	67.4	1.1
Gift and Endowment Earnings	20.7	42.8	10.0	36.4	5.9	27.9
Net Tuition Revenue	15.6	30.7	19.5	55.5	17.0	64.2

Glossary of Expenditure and Revenue Categories

Expenditures

NETSPEND: net spending per FTE student -- We compute this number as the average per FTE-student value of educational and general spending net of student aid. We have netted out student aid spending because part of this spending is directly "passed **through**" from federal student aid, and the rest is best seen as foregone institutional revenue, rather than as spending on educational programs.

INSTRUCT: instruction and self-supported research per FTE student -- Expenditures of the colleges, schools, departments, and other instructional divisions of the institution and expenditures for departmental research and public service which are not separately budgeted are included. Expenditures for academic administration where the primary function is administration (e.g. academic deans) are excluded.

RESEARCH: research per FTE student -- All funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution are included.

PUBSERV: public service per FTE student -- This category includes all funds budgeted specifically for public service and expended for activities established primarily to provide noninstructional services beneficial to groups external to the institution. Examples are seminars and projects provided to particular sectors of the community, community services, and cooperative extension projects.

ACADSUPP: academic support per FTE student -- Expenditures for the support services that are an integral part of the institution's primary missions of instruction, research, or public service are included. Expenditures for museums, galleries, audio/visual services, academic computing support, ancillary support, academic administration, personnel development, and course and curriculum development are examples. We have taken out library expenditures and treated it as a separate category.

LIBRARY: library spending per FTE student -- Expenditures on library.

STUDSERV: student services per FTE student -- This category includes funds expended for admissions, registrar activities, and activities whose primary purpose is to contribute to students' emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instruction program. Examples are career guidance, counseling, financial aid administration, student health services

(except when operated as a self-supporting auxiliary enterprise), and the administrative allowance for Pell grants.

INSTSUPP: institutional support per FTE student -- Included are expenditures for the day-to-day operational support of the institution, excluding expenditures for physical plant operations. Examples are general administrative services, executive direction and planning, legal and fiscal operations, and community relations.

OPMNEXP: operation and maintenance per FTE student -- Includes all expenditures for operations established to provide service and maintenance related to campus grounds and facilities used for educational and general purposes. Expenditures made from institutional plant funds accounts are excluded.

OTHER: other spending per FTE student -- This is our residual category, equal to the difference between netspend and the sum of the eight components.

SCLREST: scholarships from restricted funds per FTE student -- Included are scholarships and fellowships awarded from restricted funds, including Pell grants.

SCLUNRES: scholarships from unrestricted funds per FTE student - - Included are scholarships and fellowships awarded from unrestricted funds. This category, as well as the one above, applies only to moneys given in the form of outright grants and trainee stipends to individuals enrolled in formal coursework, either for credit or not. Aid to students in the form of tuition or fee remissions are included (except those remissions granted because of faculty or staff status). College work study program expenses are reported where the student served, not in either of the scholarship categories.

PLANTADD: plant additions per FTE student -- We compute this number by summing over the three categories of physical plant additions during the year - land, buildings, and equipment. Additions during the year are additions to plant made through purchase, by gift-in-kind from donors, and from other additions. Construction in progress and plant expenditures which represent capital fund investments in real estate are excluded.

Revenues

TANDF: gross tuition and fee revenue per FTE student -- The convention followed by academic institutions is to calculate this amount by assuming that every student pays the sticker or list price - hence this variable is gross of financial aid. Charges for room, board, and other services rendered by auxiliary enterprises are excluded.

FEDGRCN: federal grants and contracts per FTE student less Pell and SEOG amounts -- Examples are research projects, training

programs, and similar activities for which amounts are received or expenditures are reimbursable under the terms of a government grant or contract.

SLGRCN: state and local grants and contracts per FTE student.

SLAPP: state and local appropriations per FTE student -- Includes all amounts received or made available to an institution through acts of a legislative body, except grants of contracts. These funds are for meeting current operating expenses and not for specific projects or programs.

GIFT&END: gift and endowment income per FTE student -- The sum of gifts to the endowment, gifts to the operating budget, realized and unrealized capital gains, interest, and dividends.

NETTANDF: net tuition and fee revenue per FTE student -- We subtract the total amount of scholarship aid from institutional funds (TOTSCH) from gross tuition and fees (TANDF) to calculate this net revenue figure.

TOTSCH: total scholarship aid from institutional funds per FTE student -- We add scholarships and fellowships awarded from unrestricted (SCLUNRES) and restricted funds (SCLREST) and then subtract the financial aid contribution of the federal government (FEDFNAID) which is made in the form of Pell and SEOG grants.

FEDFNAID: the sum of Pell and SEOG grants disbursed per FTE student -- Administrative expenses are included for SEOG