DOCUMENT RESUME

ED 368 303 HE 027 320

AUTHOR Mortenson, Thomas G.
TITLE Restructuring Higher Education Finance: Shifting Financial Responsibility from Government to Students.
PUB DATE 7 Apr 94
NOTE 46p.; Paper presented at the Annual Financial Aid Research Network Conference of the National Association of State Scholarship and Grant Programs and the National Council of Higher Education Loan Programs (11th, San Francisco, CA, April 7, 1994).
AVAILABLE FROM Postsecondary Education Opportunity, P.O. Box 127, Iowa City, IA 52244 ($10 first copy, $8 each additional copy).
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Access to Education; Family Income; Federal Government; Government Role; Higher Education; Local Government; *Parent Financial Contribution; *Paying for College; *Resource Allocation; State Government; *Student Financial Aid; *Student Needs; Trend Analysis

ABSTRACT

This study documents the redistribution that began about 1980 of responsibilities for financing higher education from social resources to private resources. It also examines the issues of affordability of higher education that arises from this shift in financial responsibility. Five sets of national data from different sources are examined to identify when the share of federal, state, and local government resources allocated to higher education reached their peaks, and to measure by how much these shares have declined between the peak and the most recent year of available data. As social resource commitments to higher education have declined, students and their families have assumed a greater share of the costs of higher education. Individuals are shown to be now paying about 138 percent of the 1980 level of effort. This shift in responsibilities for financing higher education has clear implications for the affordability of higher education by students and their families: only 18 to 38 percent of all freshmen come from families not requiring any financial aid. These trends argue for governments to become more concerned about meeting the financial needs of the needy population. Contains 11 references. (GLR)

Restructuring Higher Education Finance: Shifting Financial Responsibility from Government to Students

Eleventh Annual Financial Aid Research Network Conference
of the
National Association of State Scholarship and Grant Programs
and the
National Council of Higher Education Loan Programs

April 7, 1994
San Francisco, California

Thomas G. Mortenson
Iowa City, Iowa

Executive Summary

This study documents the redistribution of responsibilities for financing higher education from social resources to private resources that began about 1980. This study also examines the issue of affordabilty of higher education that arises from this shift in financial responsibility.

Five sets of national data from different sources are examined to identify when the share of federal, state and local government resources allocated to higher education reached their peaks, and to measure by how much these shares have declined between the peak and the most recent year of available data. Meta-analysis of the results indicates that the share of federal government resources allocated to higher education peaked between 1978 and 1982, and the average of the most recent data indicates that the federal government is now allocating about 71 percent of this peak allocation effort. At the state level, the share of state government resources allocated to higher education peaked between 1968 and 1982, and the average of the most recent data indicate that states are now allocating to higher education about 79 percent of that peak allocation effort. At the local government level, based on a single study, the peak was reached at or before 1976, and the most recent level of effort was 72 percent of the 1976 peak.

As social resource commitments to higher education have declined, students and their families have assumed a greater share of the costs of higher education. Using 1980 as a reference year, a meta-analysis of the most recent data indicates that individuals are now paying about 138 percent of the 1980 level of effort.

This shift in responsibilities for financing higher education has clear implications for the affordability of higher education by students and their families. Of those freshmen currently enrolled in higher education, between 9 and 30 percent (depending on institutional type and control) come from families with incomes so low that they cannot afford to pay any costs of attendance from their own resources, and they are totally dependent on student financial aid. Between 44 and 66 percent (depending on attendance costs at the type and control of the institution where the student is enrolled) of all freshmen come from families with sufficient

incomes to pay for a part of their college attendance costs from their own resources, but they still need financial aid to pay the remainder of (and any increases in) their costs of attending college. Between 18 and 38 percent of all freshmen come from families with high enough incomes that they can pay all college attendance costs from their own resources. They do not need financial aid to attend college.

The "one-price-fits-all model" of public higher education finance does not serve this diverse population well. Some students receive more assistance--through state subsidized tuitions--than they need, while others need financial aid to attend and absorb the increasing costs of attendance resulting from the shift in responsibilities for financing higher education from taxpayers generally to students and their families. This suggests that governments should be more concerned about meeting the financial aid needs of the needy population as the shift in responsibilities for financing higher education from social to private sources continues.

Contents

Restructuring Higher Education Finance: Shifting Financial Responsibility from Government to Students

The financing of public higher education has always been a shared responsibility between students and their families on one side, and state and sometimes local governments on the other. Then, beginning in the late 1950s, the federal government joined this arrangement to assist students with financial need to pay college attendance costs. These relationships have ebbed and flowed over time as demographic, social, political and economic forces have increased or decreased the efforts and shares of responsibilities of the participants.

The current trends were established about 15 years ago. This trend is to shift responsibilities for paying for higher education from taxpayers at all levels of government to students and their families. This shift has clear and immediate consequences for the affordability of higher education: the historical one-price-fits-all model of public higher education finance cannot work when only about a quarter of the population can afford to attend a public four-year college or university without adequate and appropriate student financial aid.

This paper has three sections. The first section examines data from a variety of sources to describe, quantify and date the retrenchment in social resources--state, federal and local--provided for higher education, and the increased costs to students and their families that result. The second section looks at who can and who cannot afford to pay these higher costs. This paper concludes with a brief discussion of government efforts to assist students and their families to pay the college attendance costs that result from the shift in financial responsibility from society to individuals.

A. Reduction in Social Resources for Higher Education

Data from five largely distinct sources all identify a steady and substantial reduction in the share of social resources provided to higher education over about the last fifteen to twenty-

five years. Mainly we concentrate here on data from the National Income and Product Accounts (NIPA), collected and reported by the Census Bureau, to highlight the decline in social resources committed to higher education from the federal, state and local government levels, and the increased share of higher education resources provided by individuals. The NIPA data portray the same picture described by other sources, but in a more comprehensive, extensive and direct manner than are possible with the other available data sets.

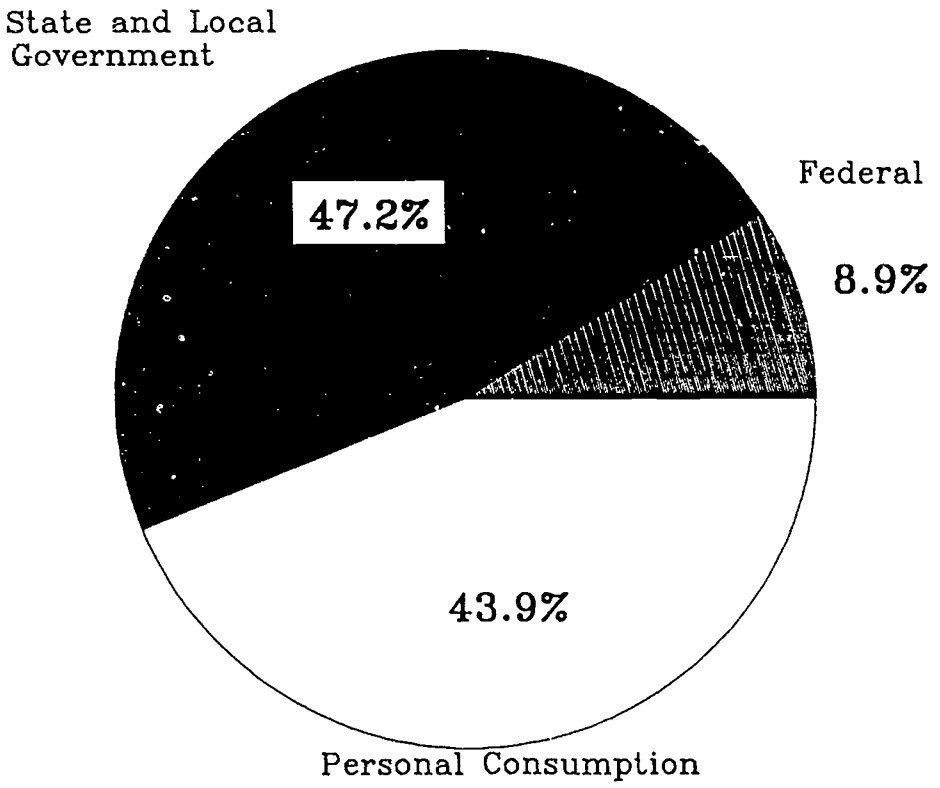
The other data sets examined and that provide confirming evidence to support the thesis of redistribution of responsibilities are: 1) state tax fund appropriations (per $1000 of personal income) collected by the Center for Higher Education at Illinois State University, 2) state (and local) government revenues and expenditures collected by the Census Bureau, 3) institutional revenues collected by the National Center for Education Statistics, and 4) state general fund appropriations collected by the National Conference of State Legislatures.

National Income and Product Account Analysis

The NIPA tables describe the expenditures on higher education in three broad categories: federal government, state and local government, and individuals. The NIPA tabulations are structured around the *instructional* mission of higher education. Federal expenditures are limited to financial aid and some direct institutional support, but exclude research. State and local government expenditures include appropriations to institutions, but exclude auxiliary enterprises such as dormitories, food service, hospitals, athletic activities, etc. Personal expenditures are limited to the tuition paid by students and thus exclude books, food, housing, and other costs of living while attending college. Public and private higher education are indistinguishable in the NIPA data.

For calendar year 1992, higher education expenditures of the federal, state and local governments and by individuals totalled $115.7 billion. State (and local) governments provided 47 percent of funds for higher education in calendar year 1992, individuals provided 44 percent, and the federal government provided 9 percent of the total.

Expenditures by Source for Higher Education 1992



Total: $115,717,000,000

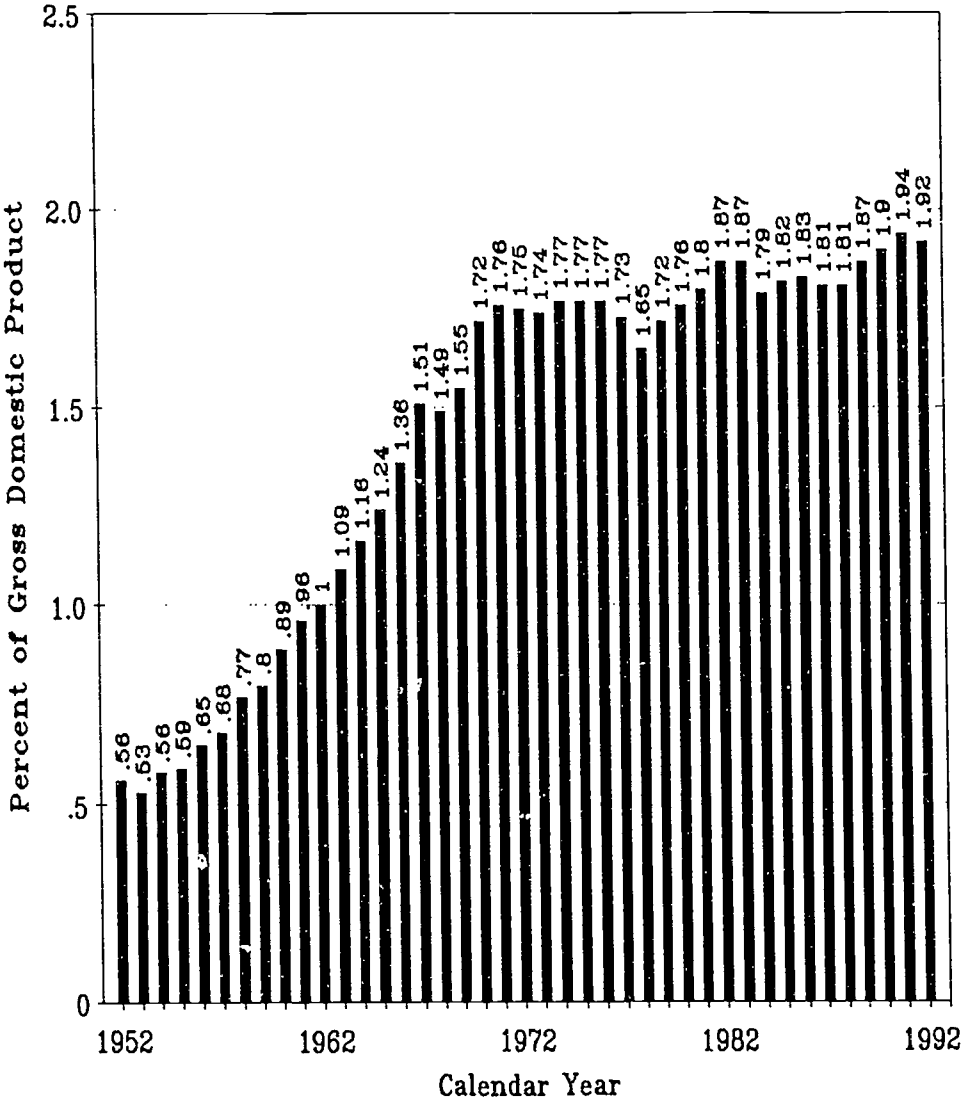
As a measure of the commitment of our country's resources for higher education, we calculate the share of Gross Domestic Product provided from government and individual sources for higher education over the last four decades. Higher education's share of GDP increased sharply between 1952 and 1970, from 0.56 percent to 1.72 percent of GDP. However, after 1970 higher education's share increased only slightly--by 0.2 percent--to 1.92 percent of GDP by 1992.

While higher education's share of Gross Domestic Process increased only slightly between 1970 and 1992, higher education enrollments' share of the U.S. population continued to increase after 1970. Between 1952 and 1970, the share of the population enrolled in higher education increased from 1.36 percent to 4.21 percent. Between 1970 and 1992 the enrollment share of population continued to increase to 5.71 percent by 1992. This increase was largely unfunded by increased resources from any source: compared to 1970, higher education enrollments (as a share of the U.S. population) increased by 35.6 percent while resources provided by government and individuals (as a share of GDP) increased by 11.6 percent. Since 1970 higher education has become more productive.

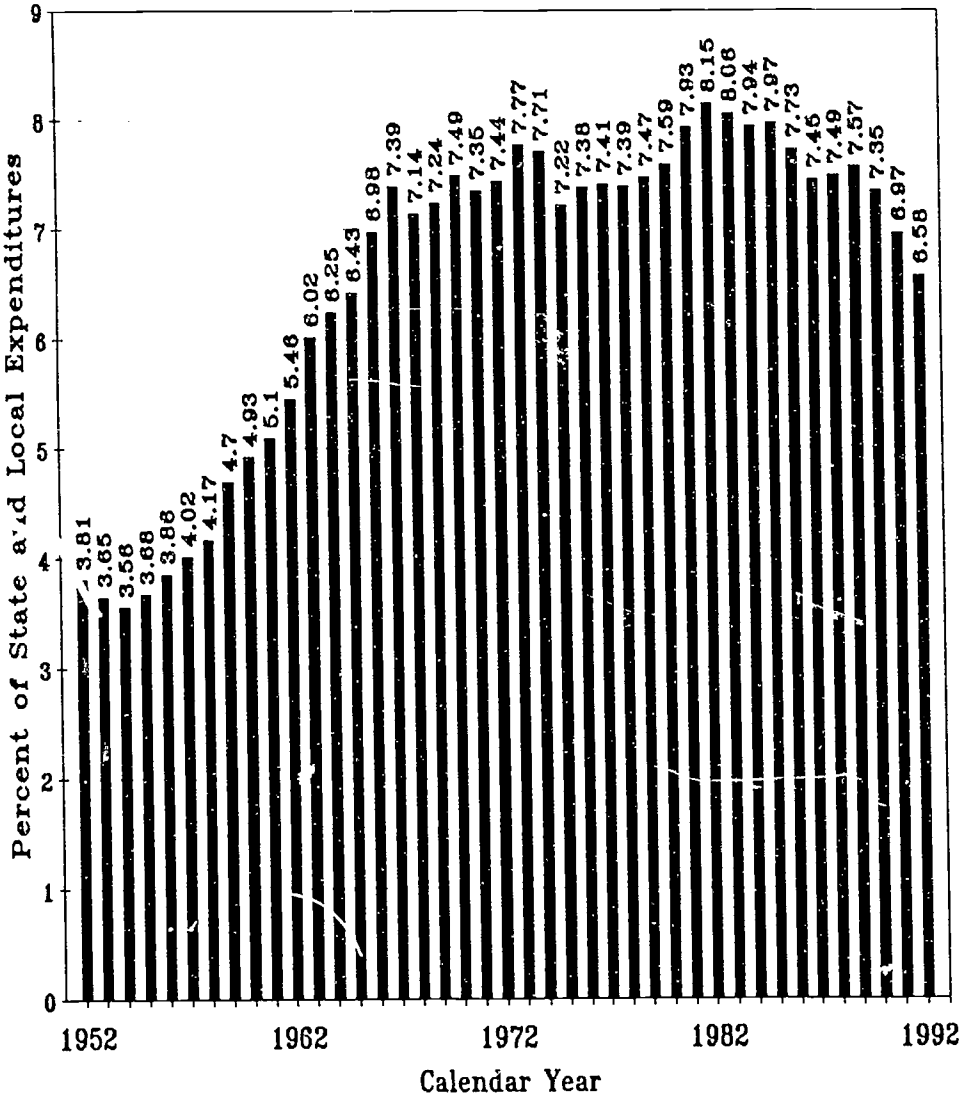
More important to our analysis here, however, is the level of effort--measured by share of available resources--provided by each of the three major participants in higher educational finance as defined in the NIPA accounts. Higher education's share of state and local government expenditures increased from 3.56 percent in 1954 to a peak of 8.15 percent in 1982, and has since dropped off to 6.58 percent in 1992. The 1992 share was 80.7 percent of the 1982 share of state and local government expenditures.

A similar pattern emerges from the NIPA data on the federal effort in financing higher education. Until 1960 NIPA recognized no federal government expenditures for higher education. Then in 1960 0.22 percent of all federal expenditures were allocated to higher education. This rose to a peak of 0.95 percent in 1981, and has since dropped off to 0.70 percent by 1992. The 1992 share of federal expenditures was 73.7 percent of the 1981 share.

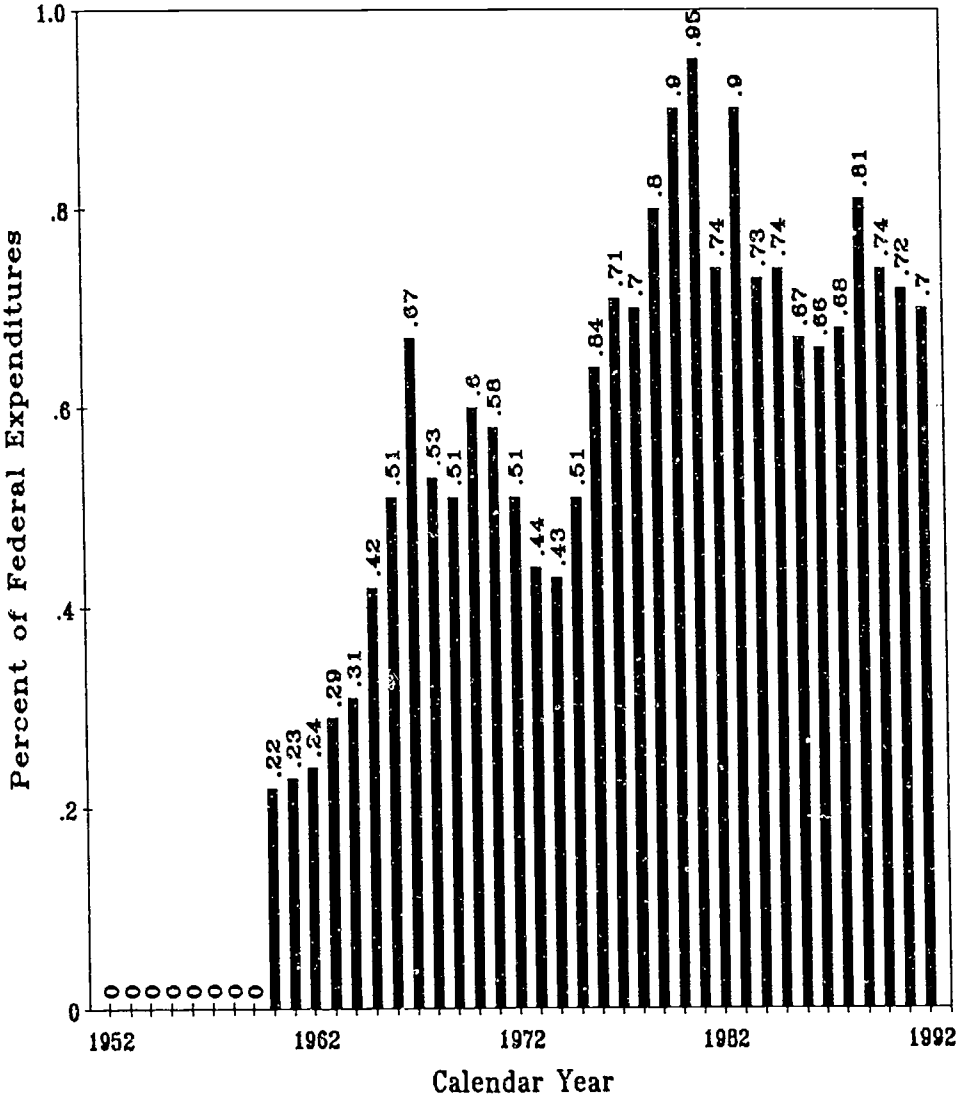
Higher Education's Share of Gross Domestic Product 1952 to 1992



Higher Education's Share of
Expenditures of State and Local Governments
1952 to 1992



Higher Education's Share of
Expenditures of the Federal Government
1952 to 1992



Thus at the federal, state and local levels of government, a declining share of social resources have been allocated to higher education since about 1980.

A different picture emerges from NIPA data with respect to personal consumption expenditures for higher education. In 1952 0.46 percent of all personal consumption went for higher education. This proportion increased almost steadily--except for a brief period in the mid-1970s--to a peak of 1.23 percent by 1992. This growth is partly attributed to the growing share of the U.S. population enrolled in higher education and hence is paying tuition, and partly attributed to the increase in tuition charges resulting from reduced state government support.

What these data portray is a shift in responsibilities for financing higher education, from taxpayers at all levels of government to students and their families through their tuition payments.

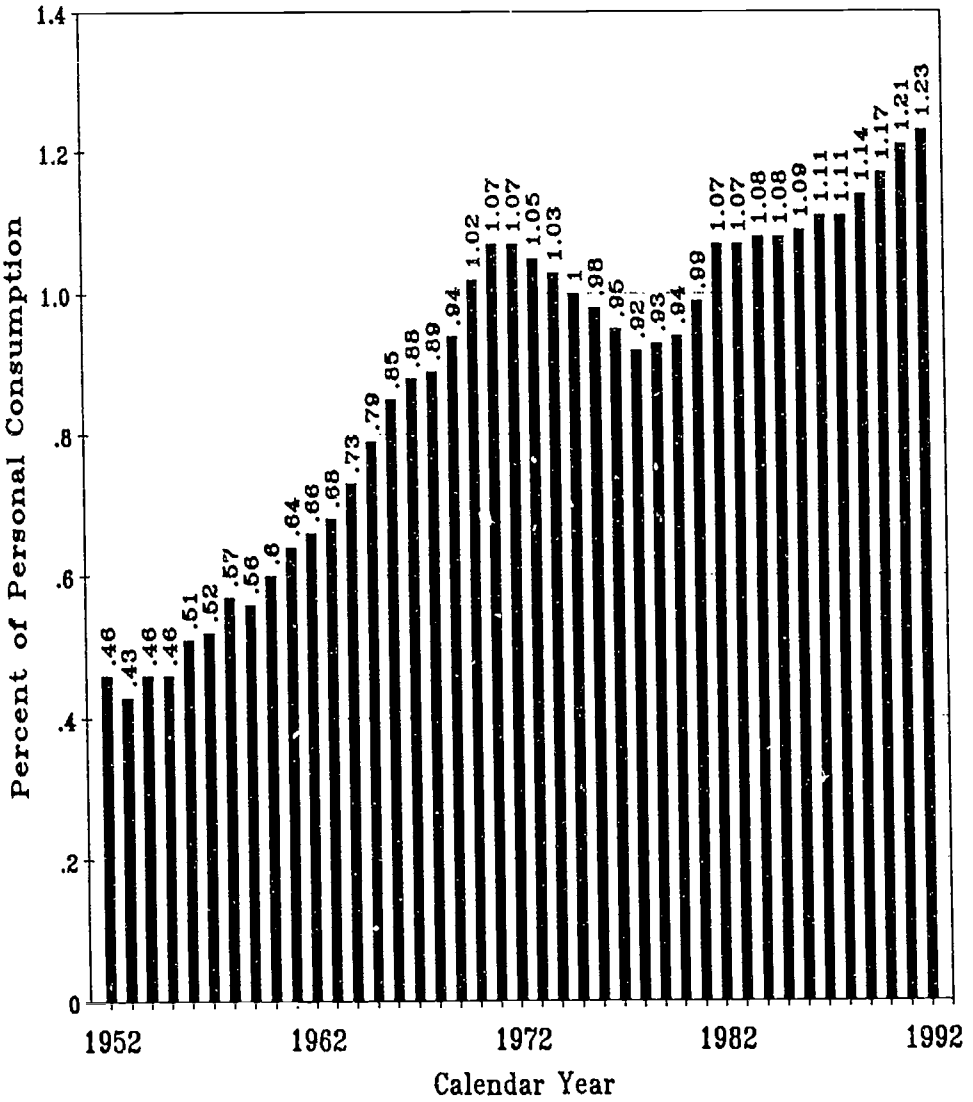
Three points summarize the shifting responsibilities for paying for higher education that have occurred between 1952 and 1992.

- The proportion of the costs of higher education borne by individuals dropped from 51.3 percent in 1952 to a low of 34.4 percent in 1979. Since 1979 the proportion of costs of education borne by individuals through tuition payments has increased steadily to 43.9 percent by 1992.

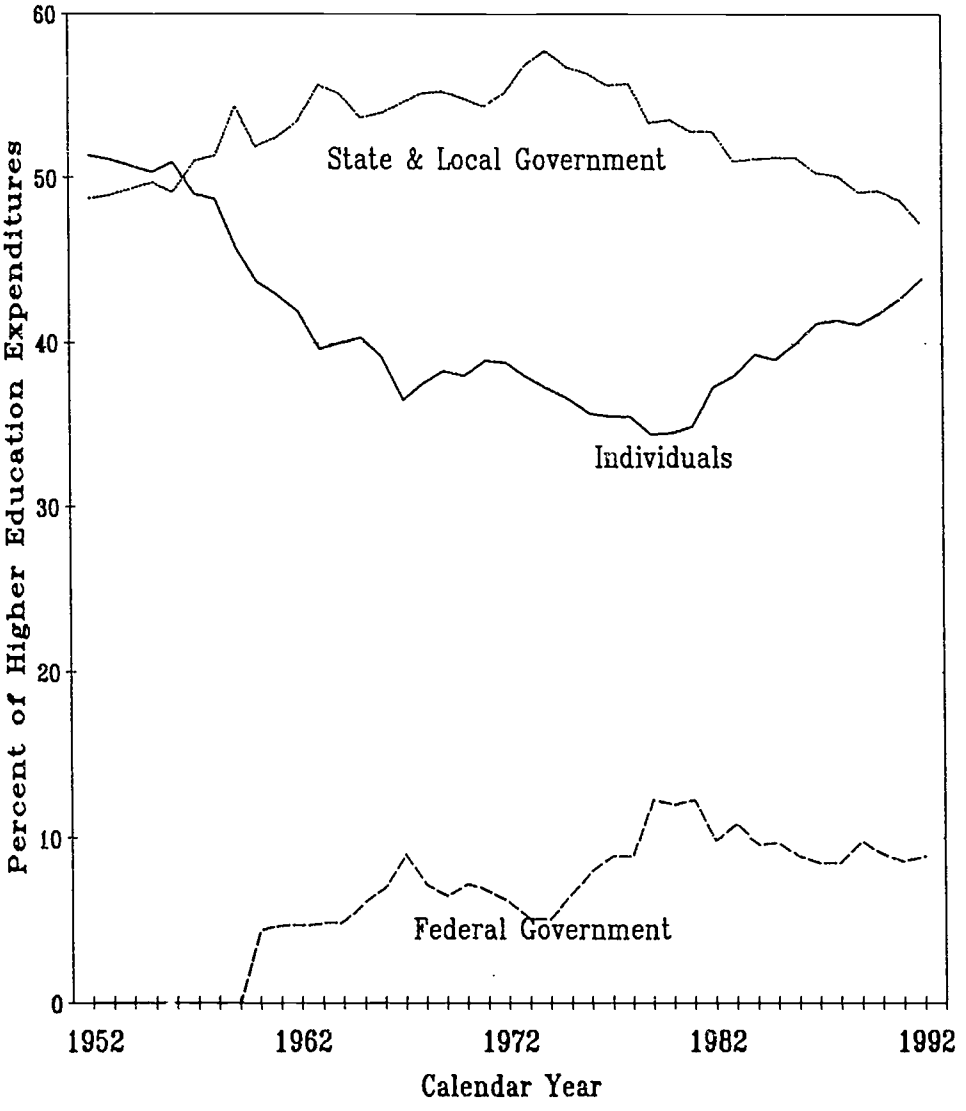
- The share paid by state and local governments increased from 48.7 percent in 1952 to a peak of 57.7 percent in 1974 and has since dropped to an all-time low of 47.2 percent in 1992.

- The share paid by the federal government stood at zero between 1952 and 1959, then went to 4.4 percent in 1960. In 1980 and 1982 the federal share peaked at 12.2 percent, dropped to 8.5 percent in 1987 and 1988, and stood at 8.9 percent in 1992.

Higher Education's Share of Personal Consumption Expenditures 1952 to 1992



Distribution of Responsibilities for
Financing Higher Education
1952 to 1992



These patterns indicate shifting responsibilities: total taxpayer support peaked in 1979 and has dropped continuously since then. The state and local government share peaked in 1974, and the federal share peaked in 1980 and 1982. This increase in taxpayer support for higher education reduced the financial responsibilities of tuition paying students and their families from 1952 through 1979. However, since 1979 students and their families have assumed a steadily growing share of the responsibility for paying for higher education. If recent trends continue the 1994 NIPA data will show students and their families paying a larger share of the costs of education than will state and local government taxpayers for the first time in 35 years.

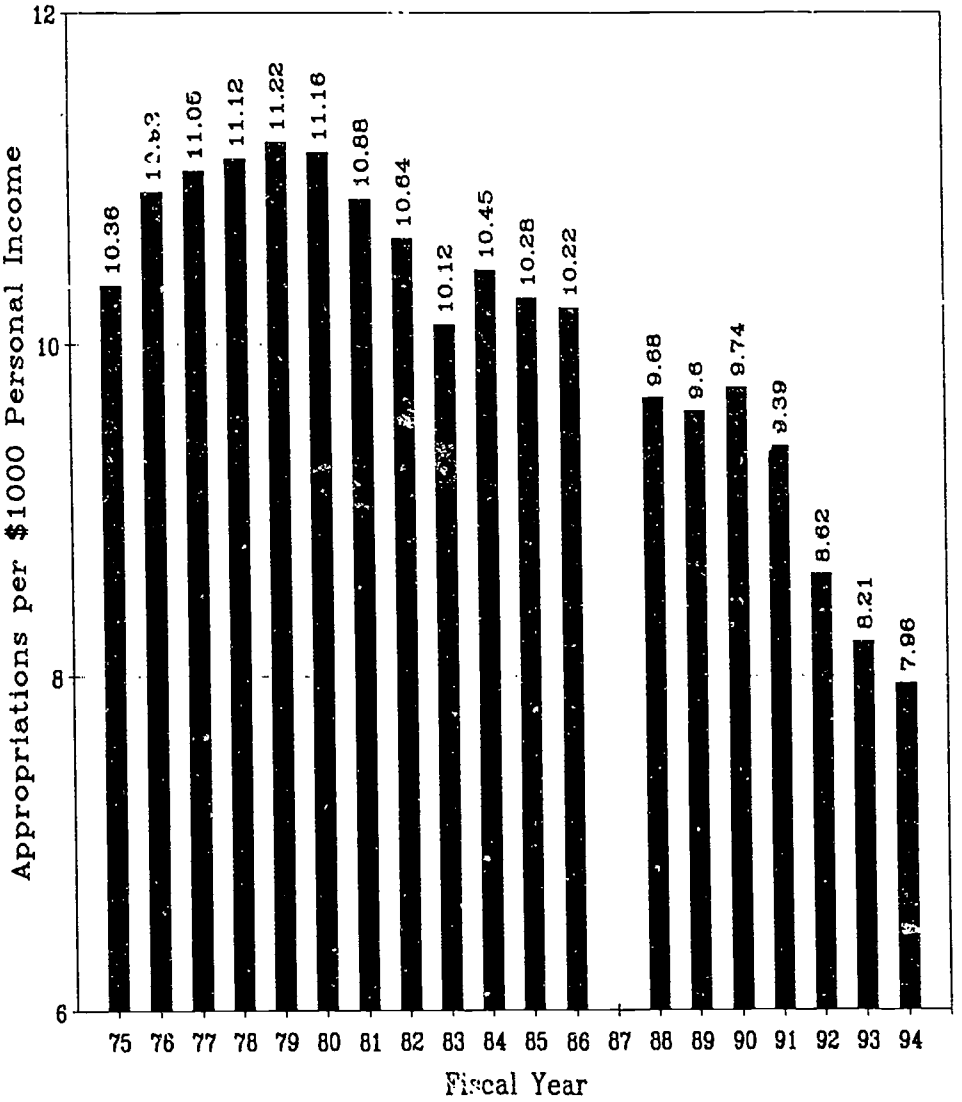
State Tax Fund Appropriations

The "Chambers" survey of state tax fund appropriations for higher education from Illinois State University provides a second source of information to examine the question of state taxpayer support for higher education. This is primarily support for public institutions. The data on state tax fund appropriations for operating expenses of higher education are collected by the Center for Higher Education at Illinois State University. These data have been published by *The Chronicle of Higher Education* with some analytical additions by the *Chronicle* such as appropriations per $1000 of personal income. We use the *Chronicle*'s form of the data to highlight again the reduction in social resource support for higher education.

The chart on the following page shows the national totals of state tax funds appropriated for higher education per $1000 of personal income between 1975-76 and 1993-94. The pattern is one of growth from the beginning of the time-series to a peak in 1978-79. After that state tax fund appropriations per $1000 of personal income have dropped off sharply. By 1993-94 the state tax support was 70.9 percent of the peak reached in 1978-79.

Unlike the NIPA data, state tax appropriations are tabulated by state. When combined with state-specific personal income data, we can examine the trends and patterns in higher education support for each state. The following spreadsheet presents these data. The results are significant:

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income 1974-75 to 1993-94



Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income

State	1974-75	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	Change: 1978-79 to 1993-94 Dollars	Change: 1978-79 to 1993-94 Percent
Alabama	$11.54	$16.03	$16.62	$18.04	$16.02	$16.29	$14.31	$12.64	$11.67	$13.73	$15.69	$12.42	$15.65	$14.73	$15.45	$13.02	$12.98	$13.00	$-5.04	-27.9%
Alaska	18.42	19.50	16.09	16.64	16.42	17.98	23.84	25.91	20.85	20.26	26.98	16.55	17.21	17.59	15.94	15.05	14.49	13.67	-2.97	-17.8%
Arizona	15.80	15.52	16.38	14.60	13.41	13.59	12.81	11.83	11.09	11.84	11.96	11.00	11.23	10.91	10.92	10.31	9.74	9.29	-5.31	-36.4%
Arkansas	10.24	11.76	12.12	11.81	13.00	12.41	11.05	10.73	9.87	11.93	12.99	10.63	10.42	10.29	10.28	11.49	11.87	10.93	-0.88	-7.5%
California	12.01	13.10	12.75	13.47	14.14	13.85	12.82	11.35	8.83	11.42	11.34	10.41	10.17	10.81	10.53	9.14	7.64	6.57	-6.90	-51.2%
Colorado	13.64	13.60	13.28	12.66	11.41	10.44	10.53	10.53	9.90	9.57	9.23	8.86	9.25	9.29	8.88	8.40	8.10	7.46	-5.20	-41.1%
Connecticut	7.40	6.76	7.17	8.26	7.68	7.93	7.12	6.29	6.15	6.48	6.32	6.55	6.84	6.22	6.08	6.01	5.68	5.56	-2.70	-32.7%
Delaware	11.18	11.50	10.80	10.91	10.71	11.76	11.69	11.58	10.64	11.07	10.90	10.67	10.00	9.91	9.84	9.03	8.65	8.23	-2.68	-24.6%
Florida	10.91	9.24	9.66	9.48	9.37	9.32	9.05	8.75	8.06	8.29	8.07	7.99	7.87	7.66	7.30	6.15	5.61	5.99	-3.49	-36.8%
Georgia	11.29	10.60	10.98	11.42	11.30	11.06	11.28	10.73	10.18	10.28	9.86	9.25	9.13	8.14	9.30	7.88	8.24	8.29	-3.13	-27.4%
Hawaii	12.74	17.25	17.69	16.80	15.95	16.20	15.83	17.10	15.17	15.14	15.40	16.10	16.15	15.90	14.49	14.17	14.21	14.70	-2.10	-12.5%
Idaho	14.78	16.57	16.45	16.34	13.58	13.74	12.47	12.13	10.94	11.65	12.06	12.37	12.24	12.46	13.24	12.70	12.09	11.42	-4.92	-30.1%
Illinois	9.45	9.00	8.97	9.34	8.76	8.77	8.28	7.76	7.73	8.29	8.27	7.40	7.35	8.21	7.85	7.42	7.18	7.07	-2.27	-24.3%
Indiana	9.32	10.73	10.68	10.42	9.93	9.93	9.81	9.13	8.89	9.51	9.43	9.75	9.82	9.82	9.93	9.59	9.28	8.81	-1.61	-15.5%
Iowa	9.65	12.77	13.63	13.77	13.10	13.05	12.51	12.55	11.88	12.62	11.25	11.60	11.87	12.09	13.12	11.77	12.45	11.94	-1.83	-13.3%
Kansas	10.47	12.73	12.64	13.39	12.91	11.88	11.78	12.11	10.88	11.51	10.89	10.10	10.21	11.31	11.07	9.91	10.19	9.78	-3.61	-27.0%
Kentucky	12.58	12.12	11.79	13.27	12.96	11.80	12.72	11.79	11.97	11.69	11.29	11.92	11.53	11.51	11.86	11.59	10.72	9.97	-3.30	-24.9%
Louisiana	12.54	11.56	11.68	12.03	12.39	13.07	12.76	12.24	10.26	12.19	11.87	10.21	9.44	9.65	10.35	9.38	9.70	8.34	-3.69	-30.7%
Maine	10.89	8.33	7.89	7.87	8.34	8.11	7.48	7.44	6.29	7.23	8.07	9.37	9.81	9.71	9.86	8.83	8.03	7.71	-0.16	-2.0%
Maryland	8.13	9.68	9.33	9.34	9.34	9.50	8.73	8.84	8.14	8.64	8.47	8.17	8.46	9.14	8.97	7.69	7.31	6.58	-2.76	-29.6%
Massachusetts	6.54	6.75	6.58	6.51	6.88	6.29	6.26	6.42	5.38	8.39	8.30	8.66	7.75	6.66	5.32	4.30	4.63	5.79	-0.72	-11.1%
Michigan	10.44	10.51	10.74	10.55	10.37	9.43	9.19	8.71	8.54	9.67	10.02	9.72	9.45	9.21	9.19	9.02	8.81	8.33	-2.22	-21.0%
Minnesota	9.71	14.20	15.54	13.88	14.53	13.28	12.96	11.82	13.07	12.70	13.11	12.82	12.74	13.19	13.38	12.11	11.39	11.02	-2.86	-20.6%
Mississippi	16.12	16.21	17.50	18.22	17.59	17.41	18.08	15.81	16.80	15.58	17.49	14.20	15.76	14.87	14.43	12.49	12.66	12.43	-5.79	-31.8%
Missouri	8.59	9.02	9.13	8.92	8.81	8.80	7.97	7.51	6.98	7.37	7.46	7.20	7.35	7.60	7.58	6.36	6.39	6.17	-2.75	-30.8%
Montana	11.33	11.62	12.20	11.81	11.42	11.01	12.43	12.77	12.73	13.22	12.45	10.87	10.54	10.57	10.28	10.81	9.93	8.73	-3.08	-26.1%
Nebraska	10.51	13.00	13.88	13.40	12.72	12.16	12.70	11.60	11.35	11.91	10.77	10.35	11.10	12.27	13.23	12.26	12.71	11.77	-1.63	-12.2%
Nevada	9.44	10.76	10.42	9.91	9.13	8.41	7.66	7.35	7.02	6.99	7.78	7.58	7.36	7.94	7.63	8.23	8.17	6.87	-3.04	-30.7%
New Hampshire	4.95	5.26	4.63	4.97	4.65	4.44	4.67	3.77	2.93	3.70	3.90	4.09	3.91	3.53	3.25	3.25	3.08	3.20	-1.77	-35.6%
New Jersey	6.73	6.41	6.29	6.33	6.23	6.08	5.76	5.55	5.31	5.56	7.31	7.14	7.23	6.73	5.74	5.87	5.91	5.93	-0.40	-6.3%
New Mexico	14.40	14.98	15.40	16.42	15.78	15.27	16.79	16.26	14.83	16.37	16.06	14.37	15.09	15.75	16.71	16.12	16.10	15.98	-0.44	-2.7%
New York	11.13	10.52	10.23	10.52	10.57	10.23	10.27	9.96	9.66	10.27	10.02	9.66	9.69	9.21	8.31	6.94	6.63	6.82	-3.70	-35.2%
North Carolina	14.93	15.11	15.46	15.91	15.82	15.96	16.00	15.41	15.23	16.13	16.13	16.30	15.57	15.71	14.86	13.34	13.58	13.25	-2.66	-16.7%
North Dakota	8.71	13.38	16.28	15.14	16.18	13.99	18.97	16.14	14.12	13.70	14.68	13.95	13.51	16.34	14.49	15.03	14.70	13.14	-2.00	-13.2%
Ohio	7.09	8.03	8.04	7.98	7.93	7.70	6.82	7.61	7.41	7.92	8.17	8.41	8.38	8.46	8.51	7.66	7.08	7.08	-0.90	-11.3%
Oklahoma	9.17	10.69	10.97	11.02	11.13	11.02	11.78	12.59	11.22	10.17	11.08	9.52	10.11	10.49	11.16	11.15	11.30	10.19	-0.83	-7.5%
Oregon	12.08	13.38	13.60	12.25	12.62	11.09	10.27	9.07	9.61	9.85	10.05	9.73	9.44	9.61	9.36	9.37	9.45	7.81	-4.44	-36.2%
Pennsylvania	8.17	9.39	8.85	8.46	8.12	7.39	7.36	7.08	5.83	7.23	7.26	6.94	6.98	6.99	6.84	6.67	6.01	6.18	-2.28	-27.0%
Rhode Island	9.99	11.97	11.37	10.48	10.23	9.91	9.50	9.41	9.16	9.44	8.95	8.88	9.05	8.62	7.88	6.15	6.16	5.62	-4.86	-46.4%
South Carolina	17.06	16.15	15.49	16.38	16.31	16.65	15.89	14.69	13.82	15.04	15.13	13.66	14.02	13.66	13.47	11.97	11.50	10.18	-6.18	-37.8%
South Dakota	9.98	11.41	11.70	11.09	10.54	9.97	9.64	8.83	7.81	8.45	7.93	8.85	8.70	9.46	9.34	8.85	9.24	9.22	-1.87	-16.9%
Tennessee	10.05	9.80	10.20	11.28	11.15	10.51	10.05	9.61	9.14	10.62	11.15	11.09	10.78	10.71	10.25	8.93	9.16	8.06	-2.22	-19.7%
Texas	9.44	13.33	13.56	11.94	13.08	12.46	13.99	12.85	12.84	12.87	10.97	9.92	9.65	10.68	9.67	9.90	9.37	9.85	-2.09	-17.5%
Utah	16.08	17.34	17.83	17.58	16.93	16.35	15.54	15.56	14.10	15.54	15.52	14.07	13.60	13.21	13.25	13.21	13.36	12.84	-4.74	-27.0%
Vermont	10.70	8.62	8.92	9.41	8.46	8.43	8.44	8.38	7.92	7.96	7.80	7.00	6.87	7.03	6.45	5.64	5.38	5.03	-4.38	-46.5%
Virginia	10.31	11.00	10.36	12.08	11.24	11.42	10.81	10.97	9.84	10.53	10.27	10.27	10.59	10.42	9.34	8.43	7.40	7.03	-5.05	-41.8%
Washington	13.15	14.00	15.48	13.81	14.59	12.46	11.66	10.47	11.01	10.82	10.59	10.13	10.16	10.32	10.00	9.74	9.31	8.81	-5.00	-36.2%
West Virginia	12.53	12.91	12.71	13.31	12.88	12.27	12.60	11.81	11.41	12.23	12.27	11.66	12.08	11.42	11.46	11.29	11.05	10.69	-2.62	-19.7%
Wisconsin	15.08	13.94	14.17	13.53	13.30	12.76	12.06	11.56	11.69	11.46	11.02	10.60	10.42	10.55	10.54	10.02	10.16	9.76	-3.77	-27.9%
Wyoming	14.67	14.74	16.54	15.31	14.12	15.79	16.04	16.94	16.64	16.45	17.65	17.61	18.43	17.81	17.54	16.93	15.69	14.74	-0.57	-3.7%
All States	**$10.36**	**$11.05**	**$11.12**	**$11.22**	**$11.16**	**$10.88**	**$10.64**	**$10.12**	**$10.45**	**$10.28**	**$10.22**	**$9.68**	**$9.60**	**$9.74**	**$9.39**	**$8.62**	**$8.21**	**$7.96**	**$-3.26**	**-29.1%**

- In each and every state, state tax appropriations per $1000 of personal income for higher education declined between 1978-79 and 1993-94.

The declines have averaged about 29 percent, or $3.26 per $1000 of personal income, between 1978-79 and 1993-94. The declines have occurred during economic expansion and recession, under democrats and republicans, in states with both high and low historical levels of support for higher education. The pervasiveness of the reduction in state tax support for higher education is a key finding.

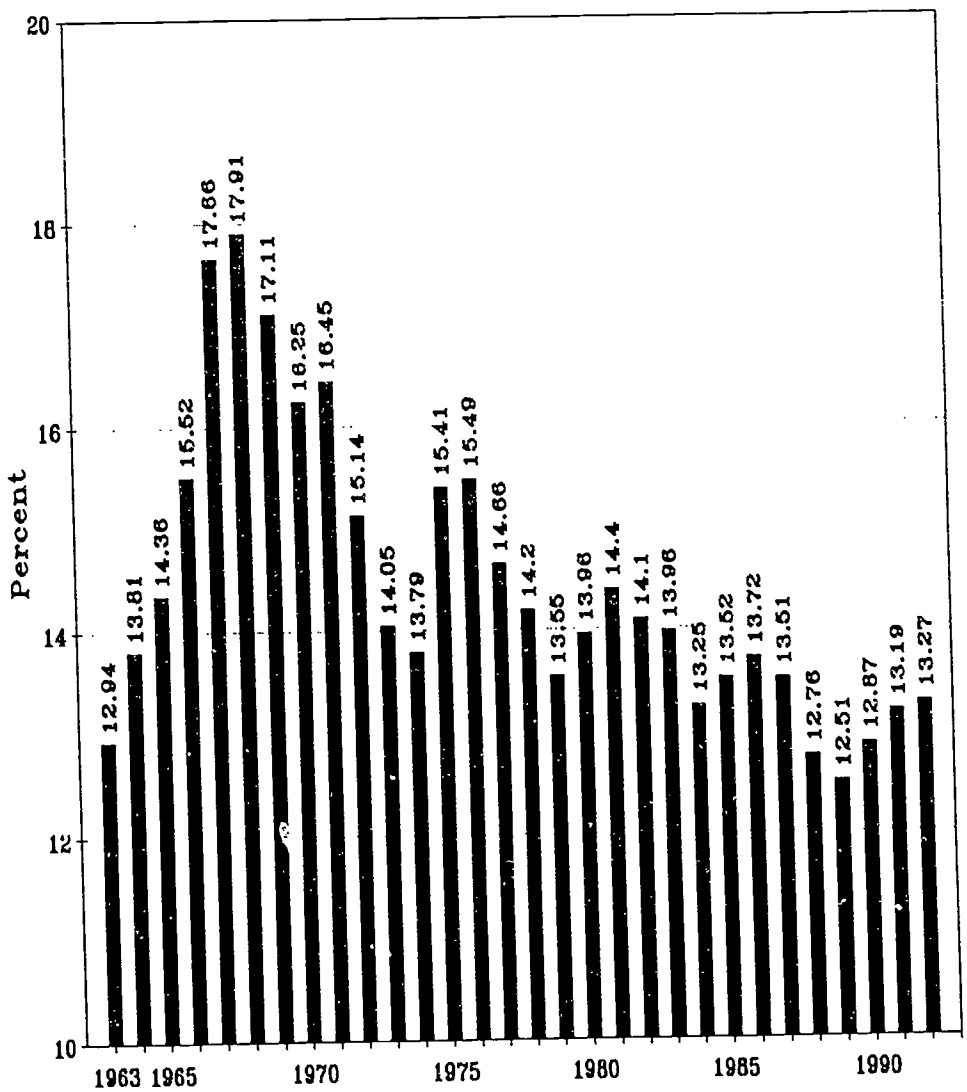
The declines varied greatly between states. At one extreme states like **Maine, New Mexico, Wyoming, Arkansas** and **Oklahoma** have struggled to maintain historical levels of support for higher education. These states have reduced state tax fund appropriations per $1000 of personal income by less than 10 percent between 1978-79 and 1993-94. At the other extreme states like **Vermont, Rhode Island, Virginia** and **Colorado** have reduced their state tax support for higher education by more than 40 percent over the last 15 years. **California** has reduced its state tax support by more than 50 percent during this period.

Census Bureau Data on Governmental Finances

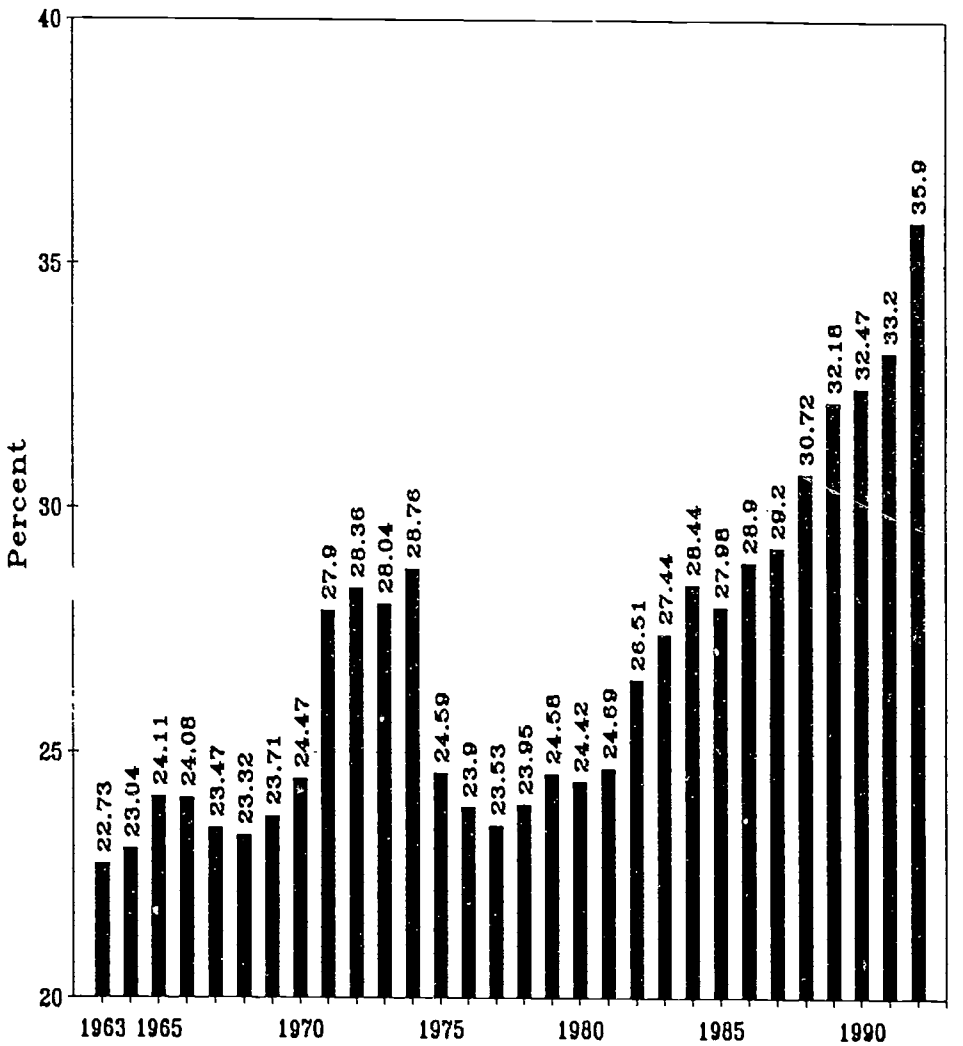
The Census Bureau's annual surveys published in the *Government Finances* series provide additional insight into shifting responsibilities for financing public higher education in the states. Thirty fiscal years worth of comparable data are available from 1963 through 1992. Excluding capital outlays and auxiliary enterprises, the functional balance is the traditional educational mission of public higher education.

The expenditures of public higher education institutions as a proportion of state tax revenues from fiscal years 1963 through 1992 are shown in the chart on the following page. The pattern is one of sharp growth from 12.9 percent in FY1963 at the beginning of the time series to a peak of 17.9 percent in FY1968 followed by a bumpy, cyclical decline through the present. The smallest share was reached in FY1989 at 12.5 percent. The FY1992 share was 74.1 percent of FY1968 share.

Proportion of State Tax Revenues for Public Higher Education Institutions 1963 to 1992



Proportion of Current Operations Expenditures
Covered by Institutional Charges in
Public Higher Education Institutions
1963 to 1992



Institutional charges have been used aggressively by public institutions of higher education to offset the reduction in state tax revenue support for higher education. Between FY1963 and FY1981 the proportion of current operations expenditures covered by institutional charges grew modestly, from 22.7 percent of operational expenditures to 24.7 percent. However, between FY1981 and FY1992, institutional charges as a proportion of current operations expenditures increased to 35.9 percent. The annual rate of increase from FY1982 to FY1992 was nine times the average annual rate of increase between FY1963 and FY1981. (The Census Bureau data offer further opportunities for fiscal analysis of higher education. The major analyses are by state, with capital outlay and auxiliary enterprise also possible.)

Higher Educational General Information Survey

The Higher Education General Information Survey's (HEGIS) financial reports have been collected and reported by the National Center for Education Statistics in the current format since 1975-76. In this analysis we exclude revenues from auxiliary enterprises and other sources. Our analysis is limited to revenues from students, government and gifts. When these data are analyzed the usual pattern emerges: decreasing shares of institutional revenues are coming from federal, state and local governmental sources, and increasing shares are coming from tuition charges and gifts.

Public higher education revenues from governments generally peaked in the late 1970s and have dropped through 1990-91, which is the most recent published data. From state governments, revenues peaked in 1979-80 at 58.9 percent of public institutions' revenues, and have since dropped to 54.0 percent by 1990-91. From the federal government revenues peaked in 1977-78 at 20.2 percent and have since dropped to 13.8 percent. From local governments revenues peaked in 1975-76 at 6.9 percent of the total and were 5.0 percent in 1990-91.

Tuition revenues have increased as government support has decreased. From 15.9 percent in 1979-80, tuition revenues have increased to 21.5 percent by 1990-91. Similarly, private gifts have increased from 2.8 percent in 1975-76 to 5.2 percent by 1990-91.

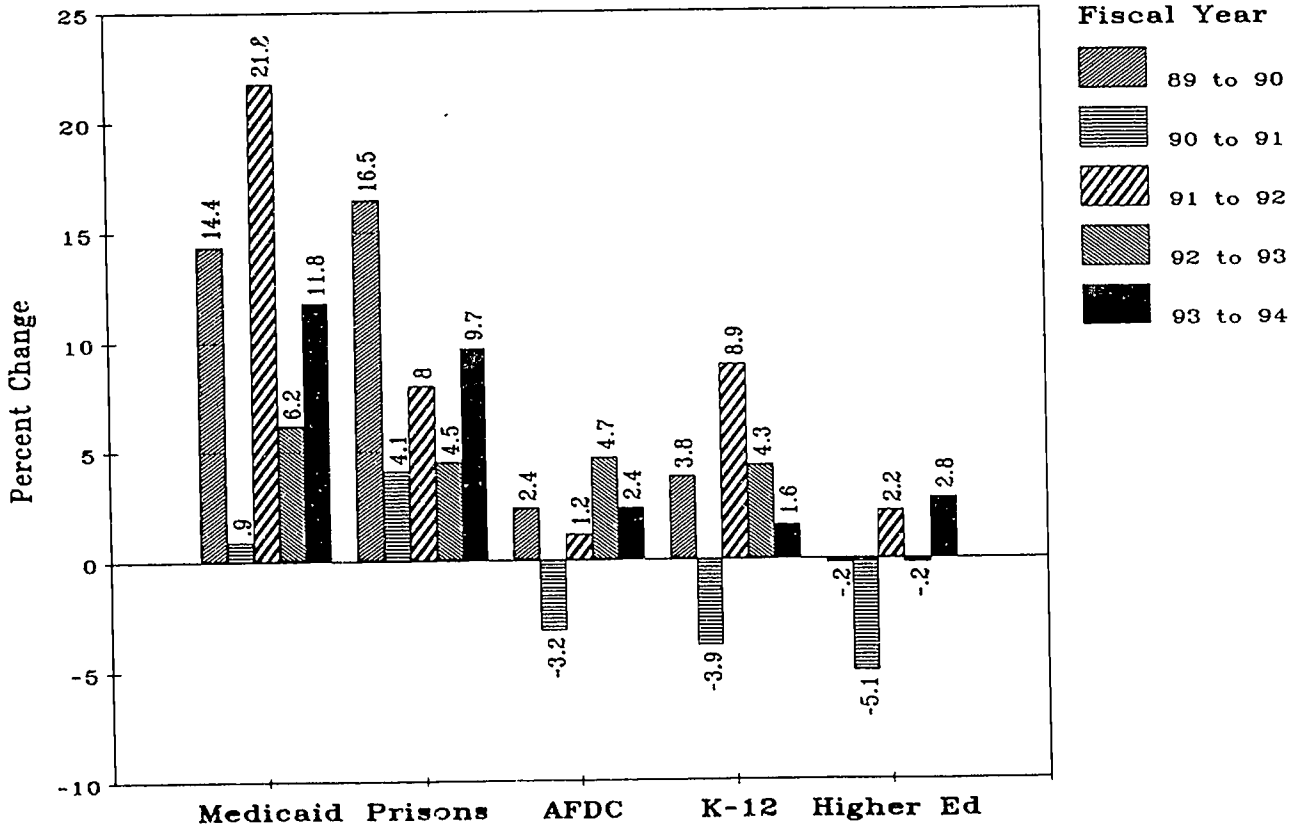
Current Fund Revenues of Public Institutions of Higher Education (Excluding Sales and Services, and Other Sources) 1975-76 to 1990-91							
Year	Current Fund Revenues (000,000)	Tuition and Fees	Federal	State	Local	Gifts	Endow
1975-76	$21,654.957	16.1%	18.5%	55.2%	6.9%	2.8%	0.4%
1977-78	$25,152.898	16.5	20.2	57.4	6.5	3.1	0.5
1979-80	$30,513.692	15.9	16.6	58.9	4.7	3.2	0.6
1980-81	$33,724.058	16.5	16.4	58.3	4.8	3.3	0.6
1981-82	$36,443.332	17.5	14.7	58.7	4.8	3.5	0.7
1982-83	$38,827.649	18.8	13.8	58.1	4.8	3.9	0.7
1983-84	$41,290.999	19.4	13.6	57.6	4.7	3.9	0.8
1984-85	$46,290.073	18.7	13.6	58.3	4.7	4.0	0.7
1985-86	$50,346.362	18.7	13.6	58.0	4.6	4.2	0.8
1986-87	$53,044.284	19.2	13.6	57.4	4.8	4.3	0.7
1987-88	$56,947.251	19.6	13.5	57.0	4.8	4.4	0.6
1988-89	$62,080.843	20.0	13.6	56.1	4.9	4.7	0.7
1989-90	$67,138.674	20.6	13.7	55.2	4.9	5.0	0.7
1990-91	$70,975.485	21.5	13.8	54.0	5.0	5.2	0.6

National Conference of State Legislatures

The fifth data source used to illustrate the decline in social resource allocation to higher education is the annual survey of state legislative appropriations compiled by the fiscal affairs staff of the National Conference of State Legislatures. Although this is a relatively short time-series and does not include information on tuition charges, the NCSL data help illustrate which competing demands for state tax resources are displacing higher education's historic priority in state budgeting and finance.

For the last five years states have assigned higher budget priorities to Medicaid (health care for poor) and to corrections than to other areas of state governmental responsibilities. During this five year period of NCSL appropriations survey data, higher education's losses in FY1990, FY1991 and FY1993 exceeded its gains in FY1992 and FY1994.

Annual Changes in Major Expenditure Categories from State General Funds FY1990 to FY1994



Meta-Analysis of Findings

These analyses all paint a similar picture of the shifting responsibilities for financing higher education from taxpayers at all levels of government to students and their families. The differences are matters of timing and degree. The similarities and differences in the stories told by the NIPA, Chambers, Census and HEGIS data bases of reduction in social resources committed to higher education are summarized in the following table:

Summary of Analyses of Reduction in Government Support of Higher Education

Government Level/ Data Base	Maximum Effort		Most Recent Effort		Most Recent/ Maximum
	Measure	Year	Measure	Year	
Federal					
NIPA	0.95% of fed expenditures	CY1981	0.70% of fed expenditures	CY1992	73.7%
HEGIS	20.2% of public inst revenue	FY1978	13.8% of public inst revenue	FY1991	68.3%
State					
NIPA*	8.15% of govt expenditures	CY1982	6.58% of govt expenditures	CY1992	80.7%
Chambers	11.22% of tax funds approp	FY1979	7.96% of tax funds approp	FY1994	70.9%
Census	17.91% of tax revenue	FY1968	13.27% of tax revenue	FY1992	74.1%
HEGIS	58.9% of public inst revenue	FY1980	54.0% of public inst revenue	FY1991	91.7%
Local					
HEGIS	6.9% of public inst revenue	FY1976	5.0% of public inst revenue	FY1991	72.5%

* NIPA combines state and local governments.

All of the preceding analyses that show the proportion of higher education costs provided by individuals through tuition charges show this share larger in the most recent available year than at any prior period of the data series. This finding holds in the NIPA, Census and HEGIS data bases as summarized in the following table:

Summary of Analyses of Increase in Individual Support of Higher Education					
	1980 Effort		Most Recent Effort		Most Recent/1980 Effort
Data Base	Measure	Year	Measure	Year	
NIPA	0.94% of personal exp	CY1980	1.23% of personal exp	CY1992	130.9%
Census	24.42% of pub inst exp	FY1980	35.9% of pub inst exp	FY1992	147.0%
HEGIS	15.9% of pub inst rev	FY1980	21.5% of pub inst rev	FY1991	135.2%

B. College Affordability

As the financial responsibilities for paying for higher education are shifted from federal, state and local governments to individuals, the logical question for those concerned about opportunity for higher education is: Who can afford to pay these higher costs? Obviously a student from a family earning $15,000 per year is less able to pay for higher education than is another student from a family earning $75,000 per year. In this section we review the question of college affordability from the perspective of the student and his or her family and their resources as used in need-based student financial aid analysis.

Need Analysis

The formula used to determine need for financial aid to pay college attendance costs is as follows:

Costs of college attendance:

Tuition and fees

Books and supplies

Room and board

	Transportation
	Personal and medical care
Less	Expected family contribution:
	Parents income and assets
	Student assets
Equals	Financial need:
	Grants and scholarships
	Education loans
	Earnings from employment

This formula--specified for the individual for a campus and living arrangements--is the basis for determining all need-based student financial aid including grants, education loans and college work-study.

College Attendance Costs

The college attendance costs typically faced by college students during the current academic year are summarized in the following table. These are national averages, based on adjusted data reported by The College Board, for nine-months of study on a full-time course load. Details have been omitted to save space. Nine months of full-time study may cost a student anywhere from $5372 at a public 2-year college as a commuter living at home, to $22,104 at a private university living on campus.

College Budgets, 1993-94		
Institutional type/control	Living arrangement	College budget
Public:		
2-year	Commuter	$5372
4-year	Commuter	$6763
	Campus resident	$8419
University	Commuter	$7109
	Campus resident	$9230
Private:		
2-year	Commuter	$10,190
	Campus resident	$12,142
4-year	Commuter	$14,432
	Campus resident	$16,883
University	Commuter	$18,128
	Campus resident	$22,104

Expected Family Contribution

The expected family contribution for 1993-94 is calculated under the Federal Methodology implemented for 1993-94 by the Higher Education Amendments of 1992. This formula differs from federal need-analysis formulas used in prior years by the removal of home and farm equity from the parental contribution, the elimination of a minimum self-expectation from students and other changes.

The results vary by individual and family circumstances. However, for illustration purposes the following table summarizes what parents are expected to contribute (EPC) from their incomes (AGI) under the assumptions of family size of four with one in college. An addition for students is determined by savings and other factors, but this often adds only one or two thousand dollars to the parental contribution from income at any income level.

Expected Parental Contributions under Federal Methodology 1993-94

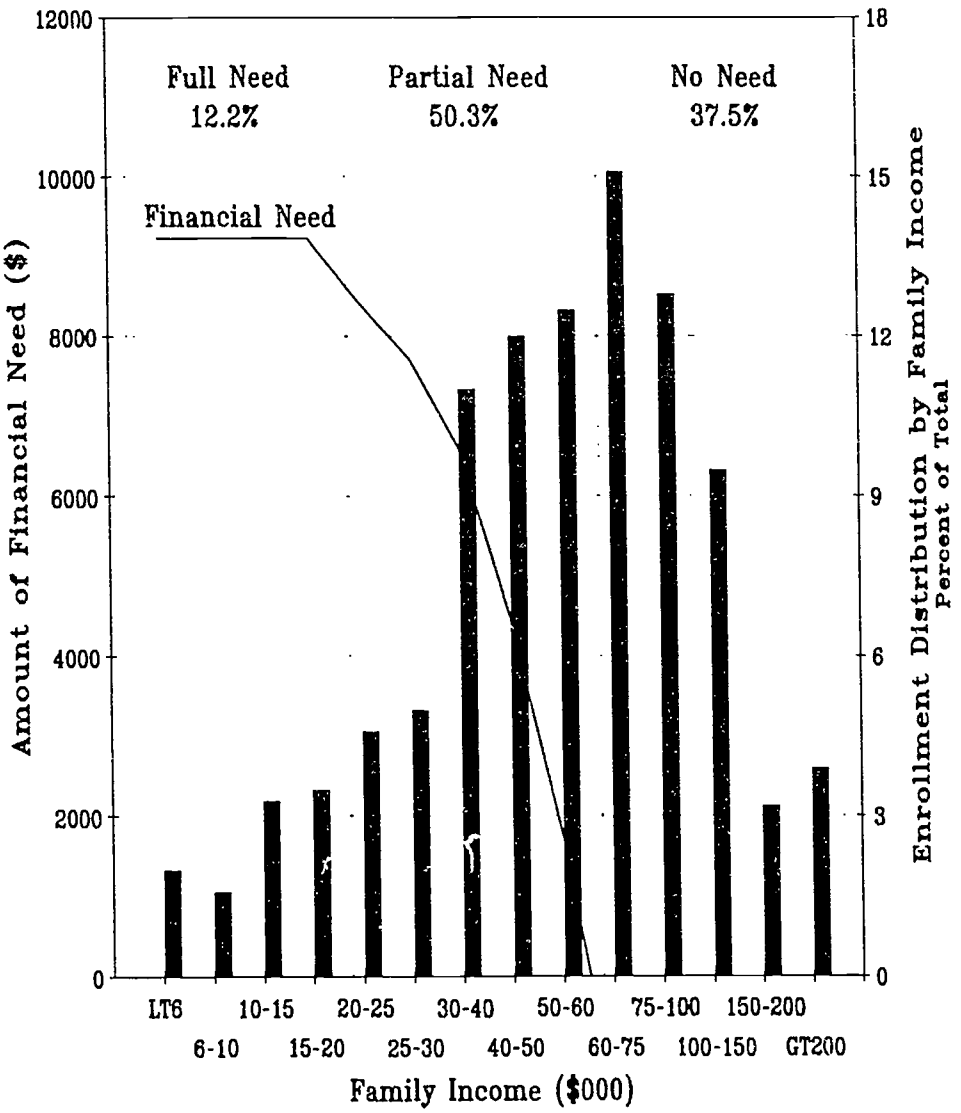
AGI	EPC
$0	$0
$5000	$0
$10,000	$0
$15,000	$0
$20,000	$0
$25,000	$481
$30,000	$1189
$35,000	$1897
$40,000	$2680
$45,000	$3655
$50,000	$4850
$55,000	$6067
$60,000	$7405
$65,000	$8757
$70,000	$10,110
$75,000	$11,462
$80,000	$12,815
$85,000	$14,167
$90,000	$15,519
$95,000	$16,872
$100,000	$18,224
$110,000	$20,812
$120,000	$23,376
$150,000	$31,202
$200,000	$44,362

Financial Need and Enrollment Distribution by Family Income

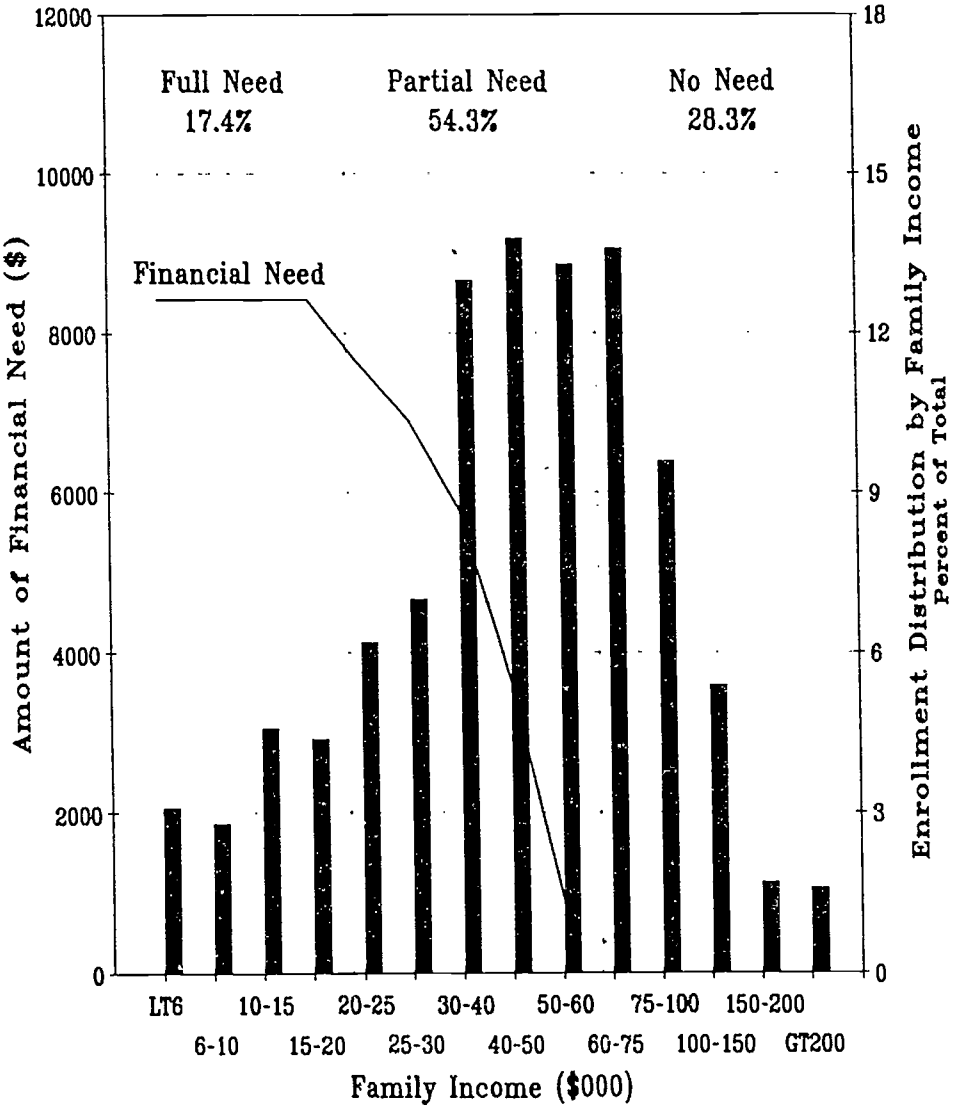
The difference between the college attendance costs and the expected family contribution is need. We have plotted financial need (as a line) by family income by institutional type and control on the following six charts, along with the distribution of freshmen enrollments by family income (as bars) and institutional type and control.

For example in the first chart for public universities: 12.2 percent of the enrolled

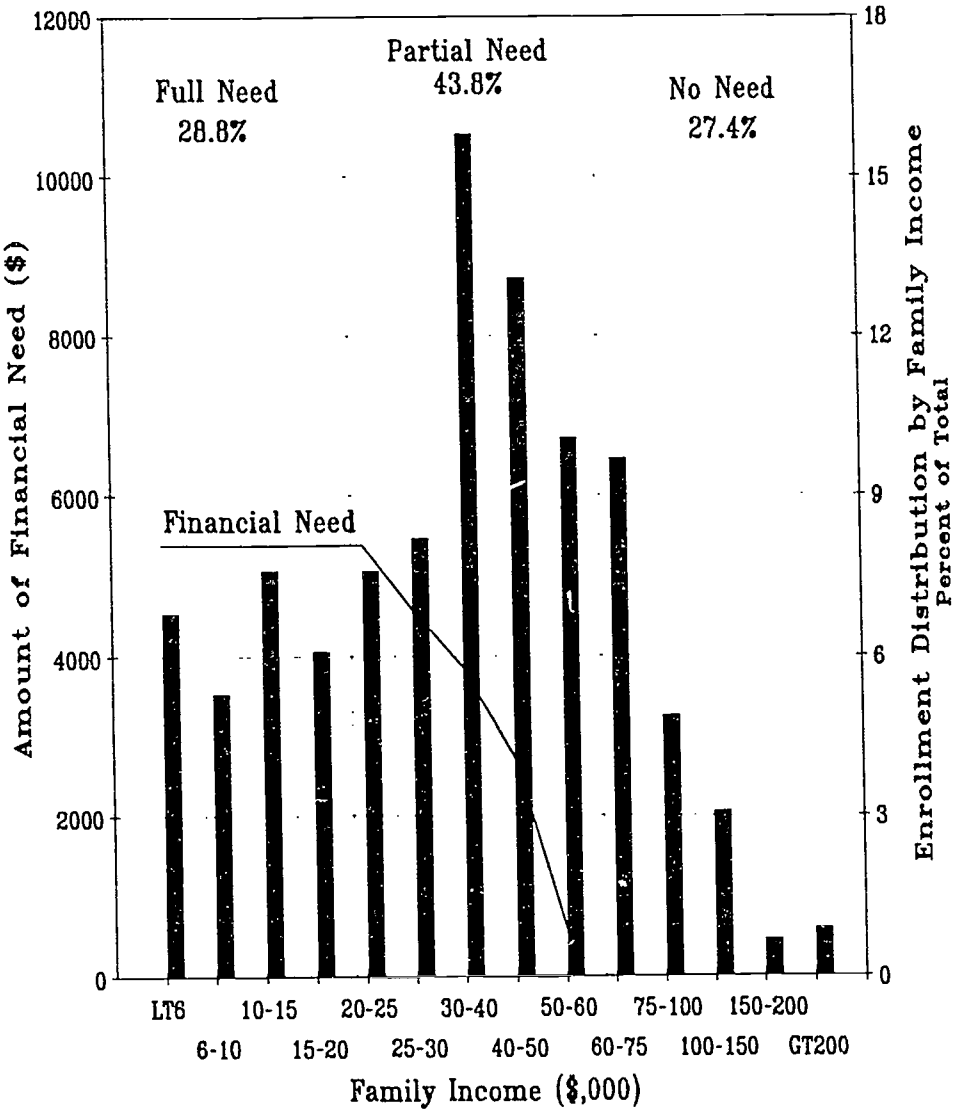
Distribution of Public University Freshmen and Their Financial Need by Family Income Levels 1993-94



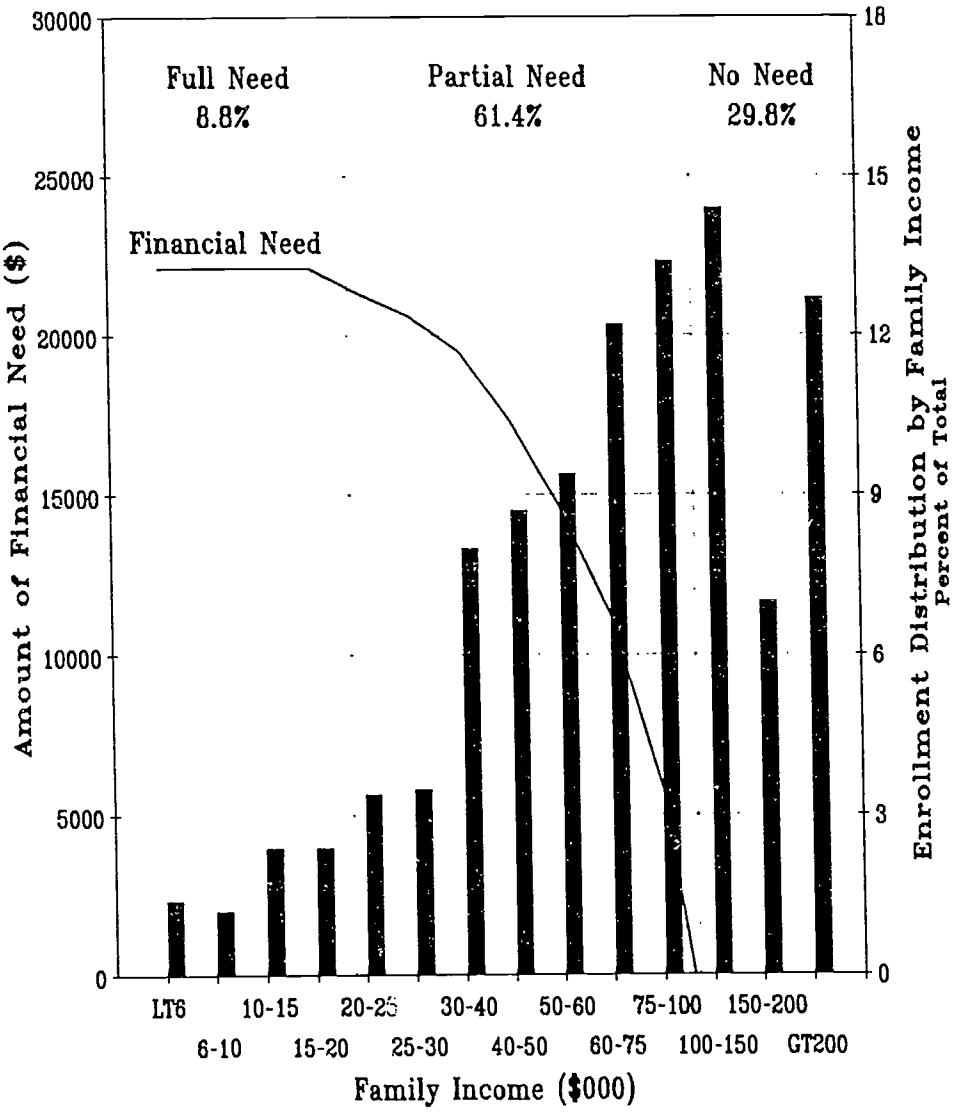
Distribution of Public 4-Year College Freshmen and Their Financial Need by Family Income Levels 1993-94



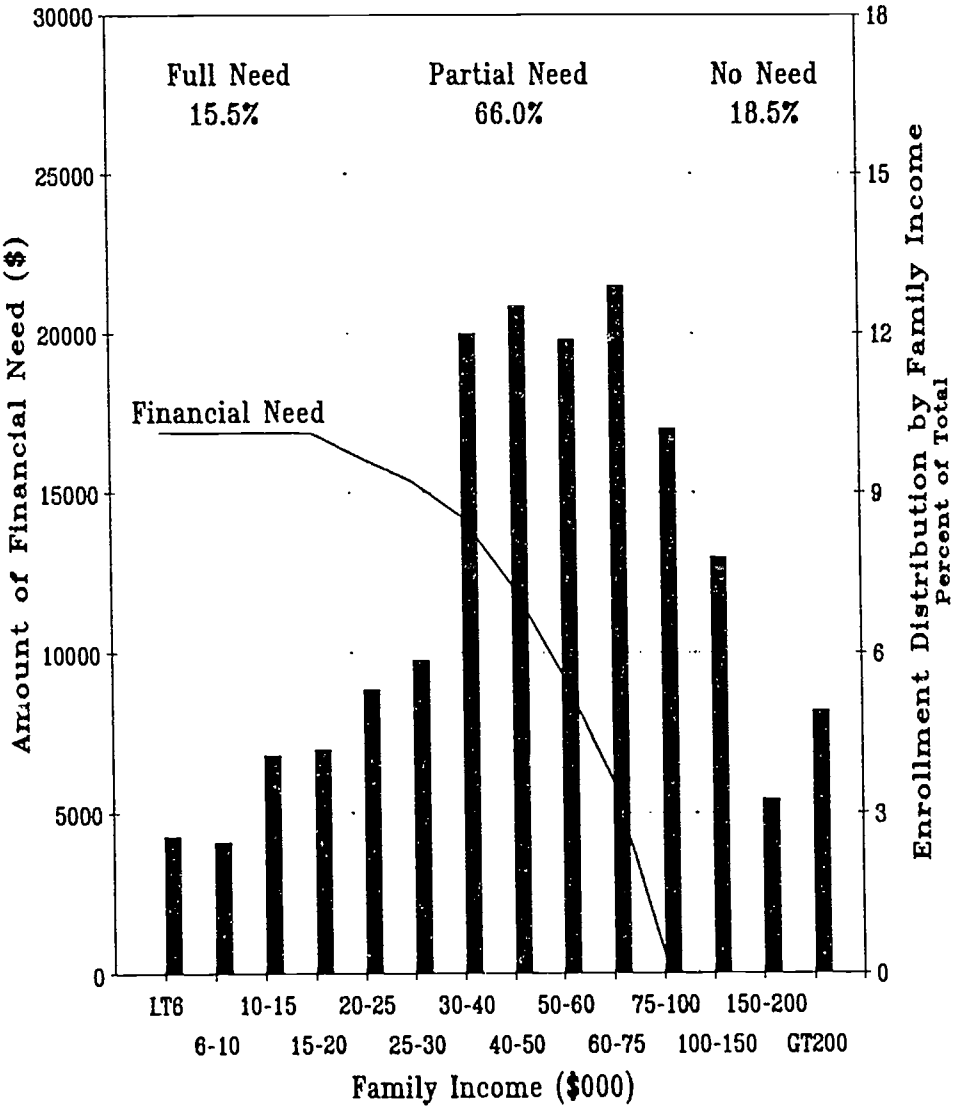
Distribution of Public 2-Year College Freshmen and Their Financial Need by Family Income Levels 1993-94



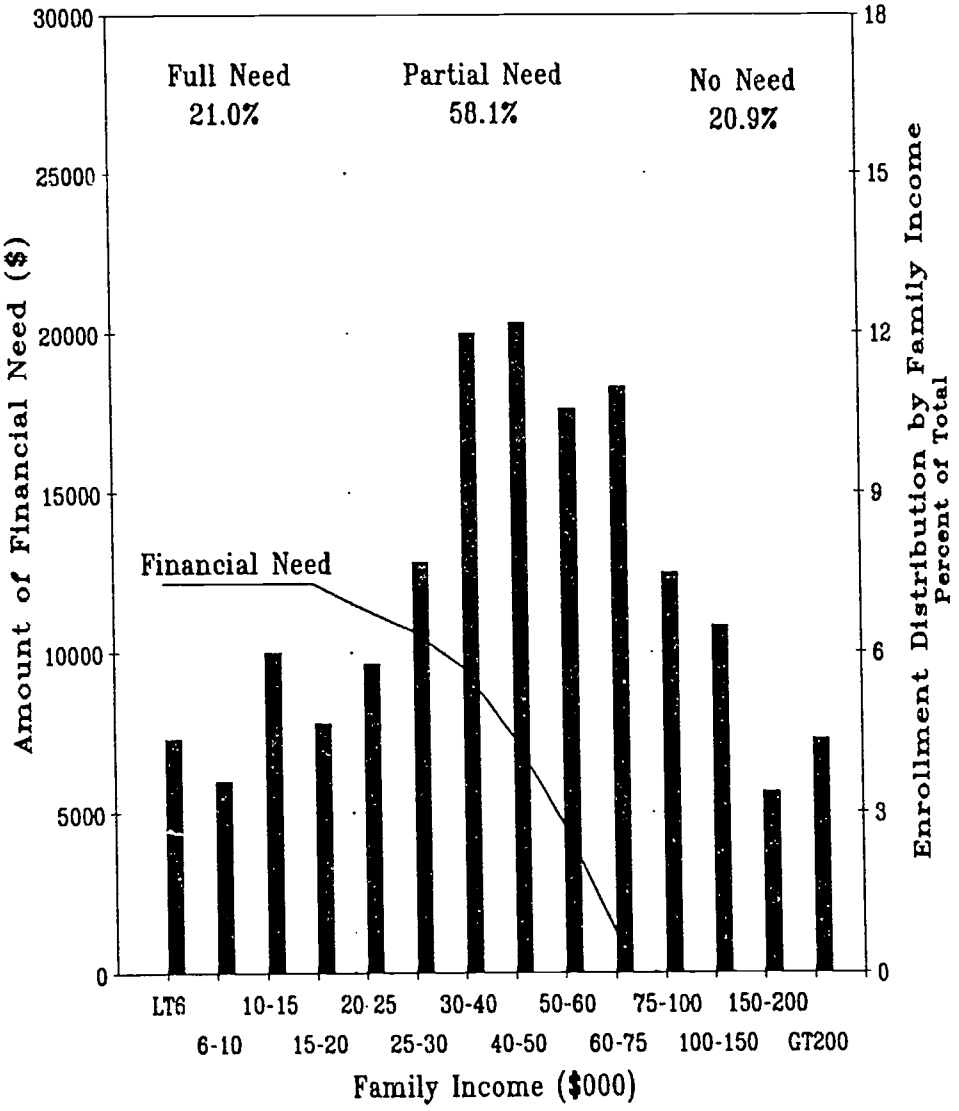
Distribution of Private University Freshmen and Their Financial Need by Family Income Levels 1993-94



Distribution of Private 4-Year College Freshmen and Their Financial Need by Family Income Levels 1993-94



Distribution of Private 2-Year College Freshmen and Their Financial Need by Family Income Levels 1993-94



freshmen come from families with incomes below about $22,000 per year, are unable to contribute toward the cost of their children's educations and thus need financial aid to finance the full college attendance cost of $9230. Another 50.3 percent of public university freshmen can contribute something from parental incomes--which range from $22,000 to about $67,000--toward the college budget, but need varying levels of financial aid to complete the financing of the college budget. The remaining 37.5 percent of public university freshmen come from families with incomes above $67,000 where the expected parental contribution exceeds the college budget and these students therefore are not financially needy.

Across institutional types and controls, public university freshmen are least likely to be financially needy and freshmen in private 4-year colleges are most likely to be needy. Public 2-year college freshmen are most likely to be able to contribute nothing toward the costs of their own community college educations.

C. Government Response

As governments have reduced the allocation of social resources for higher education and institutions have responded by increasing tuition charges to students to offset the loss of social resources, college has become less affordable to students and their families. This problem has been exacerbated by the growing inequality in the distribution of income among families: compared to twenty years ago there are now more students in poor families, more students in affluent families, and fewer students from middle income families. This problem has been made much worse by federal policy shifts and the federal budget deficit since most student financial aid has been provided by the federal government for about the last three decades.

> *The central conundrum of public policy is how to substantially broaden opportunities for postsecondary education and training for financially needy students at the same time that society has reduced substantially the share of available resources that it is willing to commit to higher education. This is a classic "between a rock and a hard place" dilemma. On the one hand young*

people who do not pursue postsecondary education face truly brutal treatment by a labor market that reserves its best jobs at highest pay for those with the most education. Young people who are not higher educated are likely to incur social costs later in life that will make inadequate social investments in their higher education seem trivial by comparison. In effect, the clumsy redistribution of responsibilities for financing higher education from society to individuals, and the growing affordability problem it creates, simply defers inevitable social costs to a future date.

Federal Government

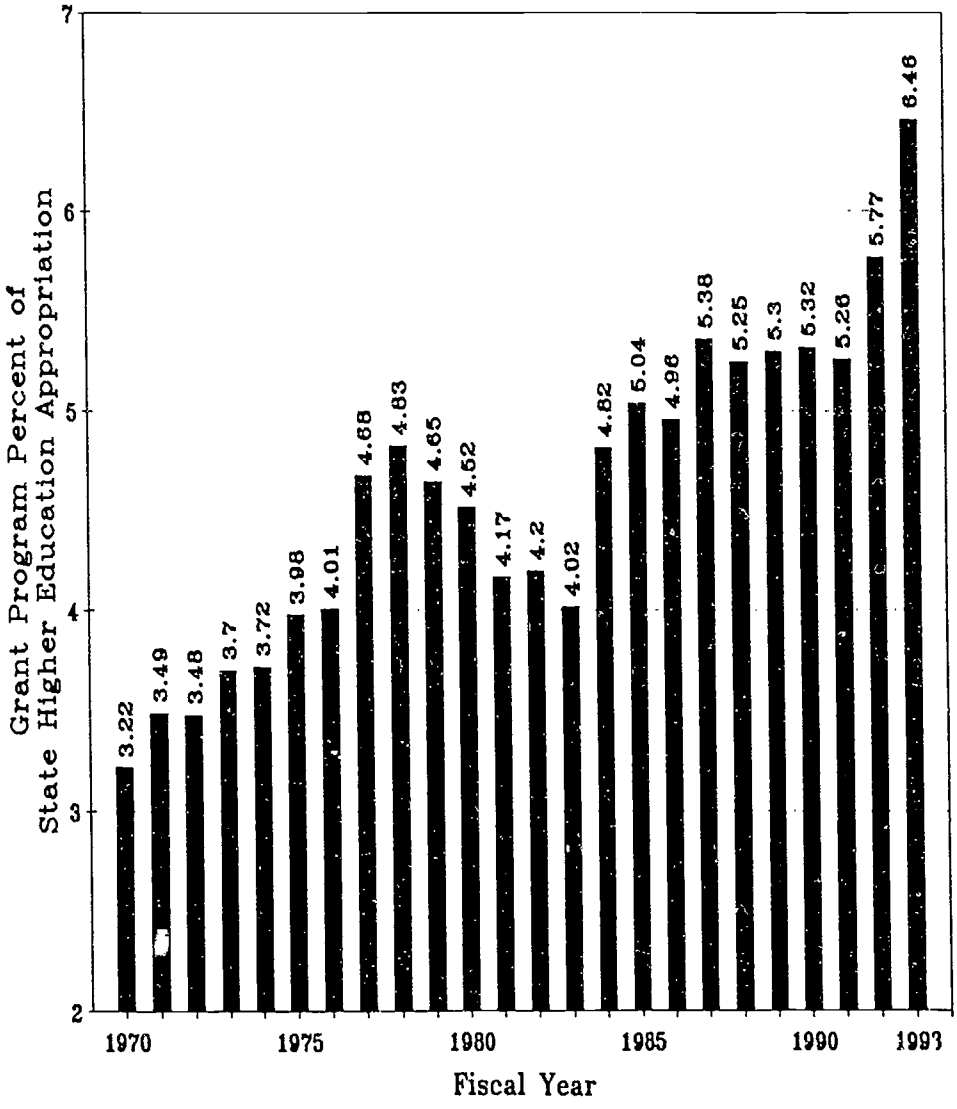
The federal student financial aid picture has deteriorated steadily since the late 1970s, with each new twist and turn in federal policy either missing the point (substituting direct lending for the state-based system that has evolved over the last twenty five years, creating a program of national service to help students pay college costs) or making the situation worse (neglecting the Pell Grant program, substituting loans for grants). Given the current federal budget deficit and constraints on spending that have been imposed, there is no federal remedy in sight.

State Government

States present a somewhat different, if highly uneven, picture. Here social resource budgets have been better balanced than at the federal level. And although Medicaid and corrections have been crowding higher education out of state budget priorities in recent years, states have shown an (uneven) interest in helping students with need by providing (sometimes substantial) state grants to help pay college attendance costs. Here we review the state picture because of the promise it holds for providing resources to broaden opportunity.

Although states have been reducing the share of social resources allocated to higher education, within that allocation the share allocated to institutions has been decreasing while the share allocated to direct grants to students has been increasing at least since 1970. Between 1970 and 1993, the share of state tax fund appropriations for higher education that went into direct grant assistance to students increased from 3.2 to 6.5 percent of the total. About 76

State Grant Program Appropriations as a
Proportion of State Appropriations for Higher Education
FY1970 to FY1993



41

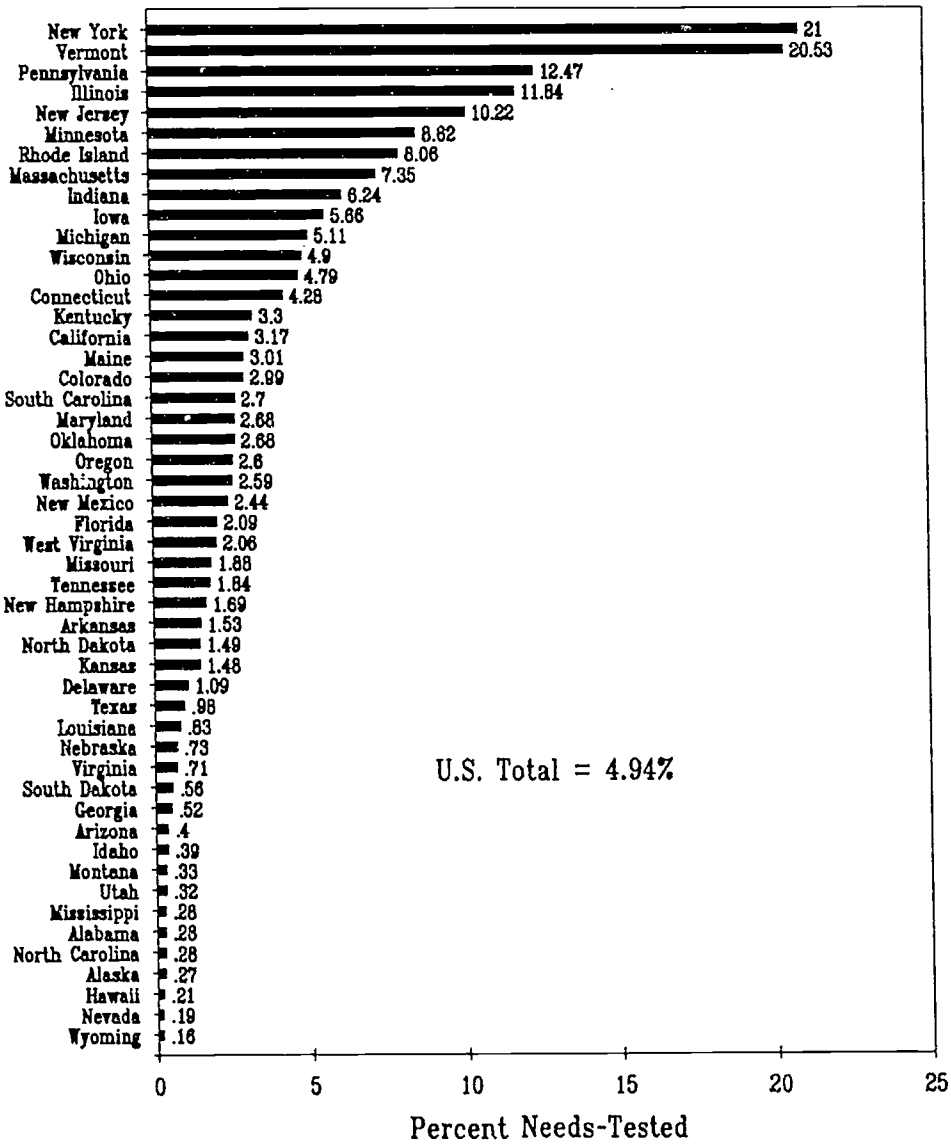
percent of these direct student grant dollars were needs-tested. (About 9 percent is not needs-tested, and the remaining 15 percent are special programs such as tuition waivers, veterans' programs, matching programs, etc.)

The unevenness of state efforts to meet the financial needs of students in higher education is evident in the chart on needs-tested state appropriations for higher education. At one extreme, **New York** and **Vermont** provided over 20 percent of their annual state tax fund appropriations for higher education in the form of needs-tested grants to students. Other states with eight percent or more of their higher education appropriations allocated to needs-tested student grants include **Pennsylvania, Illinois, New Jersey, Minnesota** and **Rhode Island.** The states allocating four percent or more of their higher education appropriations as need-based grants to students are all located in New England, Middle Atlantic or upper Midwest regions of the country with significant private college enrollments and histories.

In addition to the $1.9 billion that states provided for need-based grants directly to students in 1992-93, another $0.4 billion was appropriated by states to institutions specifically for student financial aid purposes. These appropriations occur in 18 states, plus the District of Columbia and Puerto Rico. The major states following this practice and the amounts appropriated in millions were: **California** ($130.9), **New York** ($68.3), **Virginia** ($42.8), **North Carolina** ($36.5), **Colorado** ($35.0), **Iowa** ($27.8), **Connecticut** ($17.6), **Florida** ($16.8), and **Washington** ($13.9). These grants are all needs-tested only in California, Connecticut and Washington.

At the other extreme are the states that provide less than 0.5 percent of their annual state tax fund appropriations directly to students through needs-tested grants. These states are **Wyoming, Nevada, Hawaii, Alaska, North Carolina, Alabama, Mississippi, Utah, Montana, Idaho** and **Arizona**. Several of these states are either at or very close to the 50 percent match requirement to receive federal State Student Incentive Grant (SSIG) funds. These states, and the SSIG share of state grant funding are: **Wyoming** (50.0%), **Arizona** (50.0%), **Nevada** (49.0%),

Needs-Tested State Appropriations for Higher Education, 1992-93



District of Columbia (49.0%), **Mississippi** (48.9%), **Utah** (48.0%), **Montana** (47.4%), **Alabama** (46.3%), and **Hawaii** (40.8%). These states make the least effort to support the financial needs of their own students.

Conclusion

The conundrum facing public policy regarding educational opportunity is a straightforward one: How do you broaden postsecondary education and training opportunities for people when the share of social resources provided by government for this purpose is being reduced?

Over the last twenty years changes in the labor have clarified the relationship between postsecondary education and private welfare: those who are not educated have seen their situation deteriorate steadily and substantially, while those with postsecondary education have generally managed to at least maintain their living standards. There is no reason to believe that these trends will not continue for the foreseeable future.

Similarly, for at least the last fifteen years the share of social resources allocated through federal, state and local governments to higher education has been reduced. This retrenchment in social resource support has occurred in every state, under republicans and democrats, during economic expansion and recession and indeed may have been underway at the state level for as long as twenty-five years. There is no reason to believe that these trends will not continue for the foreseeable future.

Among the several consequences of these two trends are the following. First, higher education has become profoundly underfunded, with widespread and clear consequences for the capacity, quality and affordability of educational opportunity. Second, the burden of this serious underfunding is not borne equally across all population groups. Those most adversely affected include blacks, Hispanics, and students from the bottom three quartiles of the family income distribution, especially the lowest. Those least affected are whites, Asians and those from the top family income quartile. And finally, the failure of society to adequately invest in its human

resources today does not absolve society from its responsibility to itself: the failure today merely defers the responsibility to the future where society will face it again, in other ways.

References

Astin, A. W., Korn, W. S., and Riggs, E. R. American Council on Education and University of California, Los Angeles. Cooperative Institutional Research Program. *The American Freshman: National Norms For Fall 1993.* Los Angeles, CA: Higher Education Research Institute, December 1993.

Davis, J. S., Nastelli, D., and Redd, K. E. National Association of State Scholarship and Grant Programs. *NASSGP 24th Annual Survey Report, 1992-93 Academic Year. State Funded Scholarship/Grant Programs for Students to Attend Postsecondary Education Institutions.* Harrisburg, PA: Pennsylvania Higher Education Assistance Agency, March 1993. (Data for prior years from this source also.)

Eckl, C. L., Hayes, K. C., and Pérez. National Conference of State Legislatures. Fiscal Affairs Program. *State Budget Actions 1993.* Denver, CO: November 1993. (Data for prior years from this source also.)

Evangelauf, J. "States' Spending on Colleges Rises 19 Pct. in 2 Year, Nears $31-Billion for '86-86." *The Chronicle of Higher Education.* October 30, 1985. (Data for prior years from this source also.)

Evangelauf, J. "Tuition for 1993-94 Climbs Sharply, Doubling or Tripling Pace of Inflation." *The Chronicle of Higher Education.* September 29, 1993.

Hines, E. R., and Pruyne, G. Illinois State University. Center for Higher Education. *State Higher Education Appropriations 1993-94.* Denver, CO: State Higher Education Executive Officers, February 1994. (Data for prior years from this source also.)

New York State Higher Education Services Corporation. *ABLE-2: EFC, Pell Grant, and TAP Calculator, Version 5.0, Academic Year 1993-94.* Albany, NY: author, March 1993.

U. S. Department of Commerce. Bureau of Economic Analysis. *National Income and Product Accounts of the United States: Volume 1, 1929-58.* Washington, DC: U.S. Government Printing Office, February 1993.

U. S. Department of Commerce. Bureau of Economic Analysis. *National Income and Product Accounts of the United States: Volume 2, 1959-88.* Washington, DC: U.S. Government Printing Office, September 1992.

U. S. Department of Commerce. Bureau of the Census. *State Government Finances: 1992.* Washington, DC: U.S. Government Printing Office, October 1993. (Data for prior years from this source also.)

U. S. Department of Education. National Center for Education Statistics. *Digest of Education*

Statistics 1993. Washington, DC: U.S. Government Printing Office, October 1993. (Data for prior years from this source also.)