INTERSTATE DISTRIBUTION OF STUDENT FINANCIAL AID FUNDS

by

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It is a basic goal of student aid policy in this country to equalize opportunity for everyone to attend some form of postsecondary education. Federal and state governments have joined with institutions in this effort over the last twenty years. The basic goal is to make college accessible to poor people. Prior to 1957, there was very little federal presence in the the affairs of postsecondary education with the massive exception of the Veterans Benefits Program. The federal presence grew in response to a number of problems.

In 1957, it was the fear of Russian superiority in space that drove Congress to pass the first Office of Education student aid legislation. In the '60s, the drive for civil rights spawned a number of programs aimed at helping to get poor and minority students enrolled in college. The crowning effort was the Basic Educational Opportunity Grant Program authorized in 1972. The development of these programs has affected higher education in a number of ways -- from the nature of the student body to the educational goals of the institutions.

The states have worked in a number of different ways to help improve educational opportunity. The expansion of low-tuition community colleges and public four-year schools in the states was one of the highlights of the '50s and '60s. In the '70s, the states began to develop state student aid programs at a rapid rate. These changes had a profound effect on the nature of higher education in this country, opening the doors to anyone who could benefit from this experience.

The current peribd of slow growth promises more reliance on student financial aid as the central mechanism to assure educational opportunity. There is not the increasing demand for class space to warrant the development of many new

low tuition institutions. Given this assumption, it is necessary to investigate the availability of educational opportunity to decide how student aid programs should be modified to assure continued educational opportunity in this country.

It is the premise of this paper that as the nation has invested increasing amounts of money in reaching the goals of student access to postsecondary education and student choice of institutions, close attention has not been given to the geographical distribution of these funds. The result is that it may be much more difficult for students, or potential students, to finance their education in one state compared to another. It is the purpose of this paper to describe the distribution of student financial aid funds at the state level and to identify some of the variables that are associated with the allocations of funds from the different programs. In order to do this, it is necessary to define a reasonable measure of educational opportunity.

The basic goal of federal student aid policy has been to equalize financial opportunity to attend some form of postsecondary education. There are many possible ways to measure this equity. The procedure investigated in this paper is net price, or the loan-work burden a student faces when considering a school of a given cost. More formally, it is the cost of attendance minus the expected family contribution and the grant aid from all sources. Family contribution decreases as income increases and grants increase as income decreases. The effect is to provide, up to some maximum cost of attendance, an equalizing of the amount of the educational cost the student will have to finance through his own resources, i.e., work or loans. The less the total cost of the education, the less the student will need to finance himself.

The importance of this concept is that it provides a measure of the combined effect of student aid programs. It also provides a measure of how fairly the student aid is distributed relative to cost of education and income of students. Currently, there is no way to assess the equity of the distribution of aid.

States have been chosen as an important descriptive unit because they play a significant role in providing financing for postsecondary education which has a major impact on the degree to which student access and choice can be realized. States are spending in excess of $23 billion in general support of higher education in the country. That compares to an estimated $13 billion from all federal sources combined (Congressional Budget Office, 1977). In order to understand the impact of federal student financial aid programs, it is necessary to understand the state role. The two efforts intereact to provide an ultimate price to the student which in operational terms is the definition of educational opportunity. It is not enough to describe the effect of federal programs in isolation from other factors that influence price to the student. Reporting the national averages for students served by the federal programs overlooks the problems faced by students in different parts of the country caused by imperfect distribution of student aid dollars relative to the need of students.

Several sections follow in this paper. The first reviews the work done on measures of educational opportunity and analyzes the shortcomings of these approaches. The second section reviews the distribution of student aid dollars to states from all sources. It is clear that there are a number of disparities in the distribution. The third section describes the current programs supplying financial aid to students. The fourth section is a series of policy recommendations that would help improve the distribution of student aid dollars to states.

MEASURES OF EDUCATIONAL OPPORTUNITY

Public policy in achieving student access and choice has been hampered by a clear workable definition of the terms. The most widely accepted definition of student access was presented by the National Commission on Financing Postsecondary Education (1973). "Each individual should be able to enroll in some form of postsecondary education appropriate to that person's needs, capability, and motivation." A closely allied concept is student choice which the Commission defined as follows. "Each individual should have a reasonable choice among those institutions of postsecondary education that have accepted him or her for admission." Both these goals depend in part on reducing the cost barriers that have traditionally kept low income students from attending schools of their choice. There is little argument with these general goals, but there are differences to be taken with their operationalism of these concepts. They suggest that student access is measured by the extent to which the student population and the college age population are similar with respect to:

- income
- racial composition
- ethnic group
- sex
- family residence

Student choice, according to the National Commission, is measured by:

- the extent to which persons from all income groups are enrolled in institutions with high, medium and low student charges
- the distribution of low income students among the various institutional types.

Participation rates are not a measure of educational opportunity. They are measures of people's response to a number of educational and non-educational

opportunities that exist. There are factors such as labor market conditions, cultural preference and availability of institutions that modify college going rates in different states. Differences in participation rates by income level, region or race should not necessarily be taken as evidence that student aid programs and public tuition policy are providing different levels of educational opportunity. The National Commission definition is also explicitly tied to traditional college going age groups. That measure is no longer appropriate now that over 30 percent of the college undergraduate population is over 25 years of age.

There is a very mixed picture of enrollment trends in the last few years. The number of people going to colleges has increased but the proportion of the age group going to school has decreased. The ratio of college graduates to the 22-year-old population has risen from 17.3 per 100 in 1961-62 to 23.4 in 1975-76 (National Center for Educational Statistics, 1977). NCES reports that the enrollment rates of Blacks have risen across the country -- parity has nearly been reached. There is still a wide disparity in the participation rates in college by income categories. The difference between the highest (over $30,000) and lowest income groups (0-$3,000) is over 30 percentage points. Low-income students are more likely to attend a vocational, technical or two-year institution while the higher-income student is more likely to be enrolled in a four-year academic institution (Office of Planning and Budget Evaluation, 1977). The retention rate is much higher for high-income students than low-income.

According to the census bureau, the percent of high school graduates enrolled in college was 33.7 percent in 1967 and 33.1 percent in 1976, a slight decrease overall. When the civilian noninstitutional population was broken down by income, the percent with numbers enrolled full-time in college were:

TABLE 1

	1976	1975	1974	1973	1972	1971	1970	1967
Under $5,000	17.5	17.2	14.6	14.7	16.3	16.2	15.3	13.1
$5,00 - 9,999	24.4	26.6	23.1	22.8	25.5	26.4	26.3	26.2
$10,000 - 14,999	33.0	33.4	31.2	32.4	34.6	34.7	37.2	37.9
$15,000 and over	49.8	50.2	46.6	48.6	50.1	51.4	53.2	53.9
Median income of families with members enrolled full-time in college	$18,009	$17,335	$18,188	$18,606	$17,440	$17,008	$16,706	$16,620

Table from Current Population Reports Series, No. 66, U.S. Department of Commerce, Bureau of the Census, Characteristics of American Children and Youth: 1976, p. 21.

It is difficult to interpret these numbers. Basically, it is clear that the income group under $5,000 is the only income category that has enjoyed an increase in participation rates. It is equally clear that relative to other income groups, they are still under-represented. At the same time, the median income of college attendees has increased, implying that there is an overall increase in incomes, especially at the upper end of the income scale.

These data present a mixed picture. There is no indisputable evidence that public student aid policy has made a great deal of difference in the aggregate attendance rates in college. There have been major economic and social changes that could be used just as well to account for the differences. These include the changes in draft law, a major recession, changes in employment rates and shifts in attitudes toward minority rights and opportunities.

A number of variables have been identified by researchers as factors in the decision to attend college. There seems to be agreement that the following social and personal variables all play an important role (Fife, 1975).

- parental encouragement to go to college
- measures of aptitude and academic performance
- parents educational level and number of books in the home
- type of high school curriculum taken
- family income
- academic motivation and plans to attend college while in high school
- attendance of peers

The factors vary and the amount of influence ascribed to each one varies, depending on the nature of the research approach and definition of the variables used in the individual studies. There appears to be agreement that while financial factors play a role in the decision to attend college, it is not the critical variable. Jones W. Trent and Leland L. Medsker report that "In the final analysis it was not lack of finances that appeared to be primarily related to failure to attend college, but lack of interest" (1968, p. 259). Robert H. Berls reports a similar conclusion. "Objective factors such as lack of money do not seem to be of overwhelming importance, and the factors of inadequate academic background and lack of interest combined exceed lack of finances as a reason..." (Berls, 1969, p. 154).

These studies were done with traditional students. Studies of students over 25 years of age report that they respond differently to educational opportunity than traditional students. John Bishop and Jane Van Dyke carried out a sophisticated national study using 1970 census data and report that the most important factors in attendance of adults is low-tuition and the existence of a two-year school within commuting distance. Availability of a four-year school had almost no impact on attendance. This may be explained by differences in cost of attendance and admission standards between the two types of schools, but the fact remains that 73 percent of the adults in the sample attended a two-year public school. Leo A. Munday, using different techniques and a different set of students which he labels "nontraditional students," reports similar results (1976). It may be that for adults and

other nontraditional students, attendance is contingent upon the availability of a low cost, two-year school within commuting distance.

Bishop and Van Dyke also identified personal characteristics of older students that are related to attendance. The older a person, the less likely they are to attend school. The presence of children, especially young children, also reduces the likelihood of attendance. Government and technical employees are more likely to attend than other employee categories. Finally, the availability of veterans' benefits results in greater probability of attendance.

The older student is likely to be a part-time student. It is not clear from the study how many part-time students are aided by federal or state programs of student financial aid. The increasing proportion of independent students under 25 makes it difficult to decide what proportion of student aid is going to adults. The fact that availability of veterans' benefits triples the likelihood of attendance indicates that student aid could be of major importance in the college attendance decision for adults. John Bishop and Jane Van Dyke do not address the student aid question directly, but they point out that in terms of tuition, adults are twice as sensitive to changes in price as traditional students.

Moving to the state level, there are several factors associated with overall attendance rates. In 1971, the Carnegie Commission published The Capitol and the Campus. In that report they found that statewide enrollment rates in postsecondary education were associated with high school retention rates, state expenditures on higher education and open access policies.

The Education Commission of the States worked with a task force on student financial assistance at the same time (1971). In the report, it was pointed out that states differ significantly in the proportion of resident low income families, ranging from Connecticut with 18.2 percent to Mississippi with 52.7 percent. They found a direct relationship between this poverty measure and the proportion of 18- to 21-year-olds enrolled in college. The states with low-income populations tend to have a lower proportion of students enrolled. This research was done based on the Fiscal Year 1969 appropriations, when the Office of Education distributed $364 million in student financial aid.

The 1970 census revealed wide interstate differences in enrollment rates. The differences are related to differences in per capita income and in the racial composition of the populations of states. There is a low enrollment rate in the Southeast which accounts for much of this difference. They are also closely related to high school graduation rates. The Carnegie Council concluded that a major part of the effort to equalize opportunities to enroll in colleges and universities must be directed toward improvements in secondary education that will increase the holding power of high schools (1975).

The list of variables that influence participation rates needs to be expanded to include the following state level characteristics:

- availability of two-year public colleges within commuting distance
- graduation rates from high school in the state
- racial composition of the state population
- proportion of low income residents in the state
- per capita income.

Most of these results were based on 1970 census information and there is some chance that things have improved since then. In 1975, NCES made a student migration study. The following table presents the state residents

TABLE 2

STATE ENROLLMENT RATIOS

	1975 State Population Estimate	State Residents Enrolled in Colleges Anywhere	Ratio
Alabama	3,614,000	126,566	3.50
Alaska	404,634	12,805	3.16
Arizona	2,224,000	102,756	4.62
Arkansas	2,116,000	56,622	2.68
California	21,133,000	1,245,247	5.89
Colorado	2,534,000	100,662	3.97
Connecticut	3,095,000	133,489	4.31
Delaware	579,000	22,076	3.81
Washington, D.C.	716,000	26,391	3.68
Florida	8,346,000	271,048	3.25
Georgia	4,926,000	133,481	2.71
Hawaii	865,000	40,031	4.63
Idaho	821,000	30,026	3.66
Illinois	11,145,000	462,044	4.15
Indiana	5,311,000	155,578	2.93
Iowa	2,870,000	101,597	3.54
Kansas	2,267,000	91,822	2.05
Kentucky	3,396,000	95,683	2.82
Louisiana	3,791,000	115,673	3.05
Maine	1,059,000	28,492	2.69
Maryland	4,145,400	161,696	3.90
Massachusetts	5,828,000	253,053	4.34
Michigan	9,157,000	378,105	4.13
Minnesota	3,926,000	163,646	4.17
Mississippi	2,346,000	85,632	3.65
Missouri	4,763,000	169,550	3.56
Montana	748,000	26,060	3.48
Nebraska	1,542,000	58,128	3.77
Nevada	592,000	26,406	4.46
New Hampshire	818,000	25,593	3.13
New Jersey	7,316,000	290,890	3.98
New Mexico	1,147,000	41,924	3.65
New York	18,246,580	803,203	4.40
North Carolina	5,451,000	197,014	3.61
North Dakota	635,000	26,918	4.24
Ohio	10,729,000	362,273	3.38
Oklahoma	2,712,000	110,719	4.08
Oregon	2,288,000	109,815	4.80
Pennsylvania	11,829,000	368,437	3.11
Rhode Island	927,000	32,263	3.48
South Carolina	2,818,000	108,008	3.83
South Dakota	583,000	26,125	4.48
Tennessee	4,188,000	146,131	3.49
Texas	12,237,000	511,539	4.18
Utah	1,206,000	77,863	6.46
Vermont	471,000	23,269	4.94
Virginia	4,967,000	145,648	2.93
Washington	3,547,000	185,786	5.24
West Virginia	1,803,000	58,876	3.27
Wisconsin	4,606,000	202,342	4.39
Wyoming	374,000	13,285	3.55

enrolled in college anywhere as a proportion to the state population in 1975. Their percentage ranges from a low of 2.68 percent in Arkansas to a high of 6.46 percent in Utah. In general, the low enrollment rates are in the South while the high ratios tend to be in the West.

There is a relationship between the proportion of the states' population enrolled in college and the amount per $1,000 income spent on postsecondary education (r= .392). This suggests two possibilities. First, the strong commitment to education is reflected in both a high propensity to attend college and a public willingness to spend on education. The second is that the provision of accessible low-cost public institutions increases attendance rates. I hasten to add that there is no relationship between the proportion of students enrolled in independent colleges in a state and the overall proportion of population enrolled in any college. It is not the presence of private colleges, but the absence of two-year schools that might explain the enrollment differences.

There is a slight negative relationship between the proportion of a state population enrolled in college and the net cost of education as a ratio of per capita income (r= -.146). This is an estimate to measure the effort it takes to pay for education before student aid is distributed in the state. Another measure of the same phenomena is the relationship of the net unmet need of students attending college; that is, need after aid is distributed, and the proportion of the population attending college. Again, the relationship is in the expected direction (r= -.102), but not large.

It appears, using aggregate data, that there is not a strong relationship between the proportion of the state population attending college and

financial effort or cost of attending. The data used for this analysis are explained in a later section of the paper (see Pages 23 and 26). Suffice it to say that the measures of unmet need are rough estimates and open to improvement.

A final factor influencing attendance is the labor market. The labor market influences enrollment in two ways. First, the prospects of immediate employment increases the income foregone if the student enrolls in college. For example, in Alaska, the chance to work on the pipeline is suspected to have resulted in a dip in enrollment of Alaskan student. Second, the expectation of future income flows resulting from an investment in education influences enrollment behavior to a degree.

The impact of labor market factors has been most striking in recent times for Blacks (Freeman, 1974). Opportunity for employment as a black teenager is relatively poor, while recent black college graduates have reached economic parity with whites. Black enrollments are increasing and shifting from teaching and related service jobs to such fields as business, engineering and accounting. Both of these developments appear to reflect economically rational responses to market incentives and opportunities.

The impact of labor market variables on enrollment are long term. There are definitely short term shifts between fields, depending on demand in those fields, but the effects on enrollment in general are not as clear (Gordon, 1974).

This review points out that participation rates are not necessarily a function of the net price available to the student, but price is one factor among many. The research indicates that participation in postsecondary education could be increased by investing effort in high school preparatory

and counseling programs, expanding two-year colleges into new areas, and counseling with parents. If participation rates are used as a way to measure the impact of price of education to the student, grave errors could be made in comparing different regions of the country.

Given these complexities, federal and state policy might be better served by addressing the question of educational opportunity instead of access and choice. Educational opportunity is not measured by participation rates, but by the availability of institutions at a price that is deemed possible for the various income groups to pay. Net price can be adjusted with tuition and student grants.

The strength of this approach is that it is a quick and easily understood way to determine how institutional, state and federal policy are interacting to provide educational opportunity to students in different parts of the country. The approach would allow each of the three partners to evaluate their contribution to providing educational opportunity and thus make it easier to determine what policy changes or modifications should be made at each of the three levels.

The definition of equality of educational opportunity may be viewed in terms of net price available to students. Net price is defined as college cost minus the sum of the expected family contribution and grants [Net Price= Cost of Attendance - (Family Contribution + Student Grants)]. In this scheme the student's self-help is defined in terms of work and loans necessary to make attendance possible. Equality of opportunity exists when the net price for a given cost option is the same for all students in the same income category. As the cost goes up, the net price to the student increases, but

students from similar income groups continue to share the same price. The Office of Education reports that there is a remarkable consistency across income classes in the actual net prices paid by first-time, full-time post-secondary students for all institutional cost levels (Office of Planning and Budget Evaluation, 1977, p. 36). John Haines of the Office of Planning and Budget Evaluation has articulated the net price concept as an important device for providing the federal government a picture of what the outcomes of the diverse student aid programs are.

There are several problems with this approach which implies that some care should be taken in developing the concept. First, the net price can only be estimated for those who attend college. There is no way to decide what the net price is for those who do not attend college but might if the cost were less. Second, if net price becomes an official measure used to distribute federal student aid funds, there would be an incentive for states to raise public tuitions in order to capture federal aid dollars. Third, there are data weaknesses. There are infrequent instances where reliable family income data is collected from both aided and nonaided students attending college in a state. Currently, the information is available only on a piecemeal basis. Given these caveats, the approach shows promise. There is some possibility that when this measure of educational opportunity is used, compared to participation rates, very different outcomes could be expected. Some examples might make these differences clearer.

Suppose that 0-$6,000 family income groups were compared between two states. State A has a 15 percent participation rate of the group with a net price of $0 in a $2,500-cost school. State B has a 20 percent participation rate in the same income and cost category with a net price to the

student of $200. If participation rates were the criterion, there would be a tendency to put more money into student aid programs in State A. If net price were the measure to be used, State B would receive more funds. It is not probable that either of these measures would be used as an official guide to disbursing funds but they might provide a subtle pressure to shift allocations. For example, much of the current debate about middle-income students and student aid is based on a dip in participation rates of these students over the last several years as indicated in Table I of this paper. The argument is that the students who are outside the eligibility boundries for student aid do not attend because of the price. The evidence is that the real price of college has declined relative to the ability by middle-income parents to pay for college. The decline in participation rates would appear to be due to factors other than cost of education.

Summary

Within the current arrangement, the available price to the student is only one factor among many that is associated with the decision to attend college or not. Factors outside of direct policy manipulation seem to be more important. Comparing states, it appears that there is little relationship between income and college attendance. The evidence suggests that the continued reliance on participation as an indicator of the success of student aid programs in providing access might be misleading.

Participation rates may be helpful as a relative measure of success but it is not possible to determine what absolute level of participation is optimal. Predicted changes in participation rates related to changes in price may help planners estimate the income that would flow from various pricing

strategies or the number of students that might attend under different prices might also be helpful for short term planning. The comparison of participation rates across geographic boundries to help guide pricing of postsecondary education is not helpful. An alternative is to assess the net price paid by students of various income groups for similar costs of education. This measure of educational opportunity will be helpful at all three levels of decision making.

DISTRIBUTION OF STUDENT AID TO STATES

There is no study which breaks down the available net price available to students by income group and cost of education. There are two factors that make this difficult. First, there is no reliable data available that can be broken down by state and institutional cost on the income of students attending school in the country. Second, the description of who received what student aid is not available on a coherent basis. These two problems make it impossible, at least in the short run, to do anything but estimate the variance. Most of the preliminary research in the field has concerned itself with state-level aggregation of unmet need and statewide award of aid. There are wide extremes reported in the availability of aid in different states.

The 1971 ECS report noted a marked variation in the distribution of federal student aid funds. The total United States Office of Education state allotments varied from a low of $9.29 per undergraduate in Alaska to $41.80 in Vermont. The authors concluded that there was only a marginal relationship between levels of poverty and the distribution of student financial aid at the state level. They suggested that states distribute the federal aid dollars to institutions instead of using the regional panels.

In 1973, the Southern Regional Education Board (SREB) reviewed the net price of college opportunities in the 14 southern regional states (Davis, 1973). They estimated the unmet need of enrolled students in the institutional sectors of each state. An estimation of unmet need was derived by taking the cost of attendance minus the expected parental contribution from the College Scholarship Service's calculation plus the student aid distributed in the states, [Cost - (Parental Contribution + Student Aid) = Net Unmet Need]. The remainder was declared "sacrifice" or net unmet need. Jerry Davis found the sacrifice was unevenly distributed among the 14 states.

In 1975, the author completed a study on the distribution of student aid based on 1972-73 school year information (John Lee, et al., 1975). The procedure followed was similar to the Davis study, except that it was done for all the states. At that time, it was estimated that 43 percent of the student financial need was met by need-based noncategorical student aid. There was a great deal of variance around that average. The following states had students with at least 55 percent of all financial need met: Indiana, Iowa, Kentucky, Mississippi, North Dakota, West Virginia and Wyoming. On the other extreme, the following states had less than 33 percent of the gross student need met: Alaska, California, District of Columbia, Massachusetts, New Hampshire, South Carolina and Utah. It was again confirmed that needy students have widely differing opportunities to receive aid, depending on the state in which they attend college.

The Carnegie Commission published The States and Higher Education in which they reviewed the roles of state, federal and private sources in the support of higher education (1976). They point out that the three levels have

different interests. States concentrate heavily on support of institutions; the federal government on student assistance; and research projects and private sources on student subsistence and support of institutions.

State and private support tend to be enrollment driven while federal support tends to be problem driven. They point out the returning veterans, sputnik and civil rights all provided impetus to federal efforts in postsecondary education. Because federal effort is problem driven, it tends to be more volatile than the other two. They expect the total public share to continue at 45 percent federal/55 percent state and local. They do not address the question of the variability in support between states and the variation in the proportion of support from federal, state and private sources.

In 1975, Carnegie published The Federal Role in Postsecondary Education which spoke more directly to the interstate equity question. The report is critical of the state allocation formulas in Supplemental Educational Opportunity Grant (SEOG), College Work Study (CWS) and National Direct Student Loans (NDSL).. They believe that the formulas should be modified so that each institution receives the same share of its panel documented funding of these three programs. They do not suggest how much change in award levels this would mean or how it might be put into place.

There is general agreement on the point that the federal government and states should share responsibility for financing postsecondary education with private sources. There has been very little work done documenting the interstate differences in the shares from the three sources, nor has there been much work on the specific question of the distribution of student aid dollars other than to suggest that the state allocation

formulas for the three institutionally based programs should be modified or done away with.

There are several explanations for this lack of information on the distribution of student opportunity among states. First, federal student aid programs were designed to aid students. There was consideration of the impact on institutions but little concern for the state level questions. Second, states were not an education lobby in the early years of program development. It has been in the '70s that the states have begun to emerge as an organized group in the student aid field. Now that all the states have a program, they should become an even stronger force in the development of student financial aid programs. Third, there is no agreed upon definition of what constitutes a good distribution to states. There are many factors that could be considered in the distribution. These include enrollment, average income in the state, cost of attendance, state effort to finance postsecondary education, institutional mix, high school graduates and importation/exportation of students. Fourth, there is a lack of coherent management information that allows the distribution of federal dollars to be tracked to states.

States differ on nearly every variable that might be important in the distribution of student financial aid. Several of those variables will be described in this section. These include average cost of attendance, financial aid available through the federal and state student aid programs, average unmet need in the state, the average per capita income in the state and the proportion of enrollment under $12,000.

The purpose of this section is to make the differences between states explicit and to determine what the implications of these differences are for the provision of equal opportunity for students. In the following sections, some possible reasons for the difference in distribution of federal student aid dollars will be presented.

Most of the data in this section was provided by Daryl Carlson from a study funded by the Office of Planning and Budget Evaluation, U.S. Office of Education. The data is in unedited and unreleased form. Care should be taken in interpreting these data. The analysis that should be done is to compare the net cost of attendance [Cost of Attendance - (Parental Contribution + Grants)] for income groups for each of several gross cost of attendance levels. (Gross cost is merely the tuition and fees plus the student's cost of living.) If done on a state-by-state basis, several things could be ascertained. First, if low-income students (family income under $12,000) are facing the same net cost for similar institutional costs in different states. Second, the availability of student spaces at the various cost levels. There may be a problem in supply, not demand in some states. Third, an analysis of which agency of government foots the bill for the net cost could be made. It would be differing proportions of local, state, private and federal dollars. The baseline would be the estimated cost of education in that sector.

The data is not available to do this analysis on a state-by-state basis at this time. Two alternate measures can be used in an attempt to estimate the rough magnitude of difference that exists on an aggregate basis.

The first is the average cost of attendance. This measure is as follows: [Cost of Education - (Grants + Loans + Work Study)]. This is a somewhat different measure than net price which is the expected self-help from the student after parents have contributed and grants have been awarded. Average price differences would indicate the possibility of differences in net price also.

The second measure of educational opportunity to be used is aggregate unmet need. The steps in calculating aggregate unmet need for each state are presented in Appendix A. The measure gives an estimate of the level of sacrifice necessary to send a student to school. It includes a measure of family income interpreted as expected family contribution and the cost of attendance.

There are several criticisms that have been leveled at both these measures of educational opportunity. The basic problem is that the information has necessarily been dealt with on an aggregate form which hides what may be important relationships. In both cases, it might be that low income students enroll with the help of large student aid packages which reduce both the average net price and the unmet need. It is assumed, however, that if major differences are found in the aggregate measures, there is probably cause to believe that further breakdowns of the data by income and sector would also reveal important differences. It is necessary -- if, and when, the data is developed -- to describe the attendance rates by income-level and institutional cost for each state and then compare each segment across the states.

Net price and unmet need do represent different measures of state conditions. Net price can be thought of as the potential cost of the education to students considering enrollment. The unmet need can be thought of as the sacrifice of students attending college in the state.

Unmet need has several problems that constrain its usefulness. First, the expected family contribution is a rationing device, not an empirically derived system. People could contribute more or less to education than the equation indicates due to the whole host of mitigating circumstances. Second, the unmet need calculation is dependent on the income estimates for students attending institutions of different cost. There is no single source of estimated income that captures all enrolled students. (The system used in the current calculation has been included as Appendix A.) Third, unmet need describes the sacrifice of those currently attending college. There is no way to estimate the need of those who did not attend college due to financial constraint.

Cost of Attendance

The first table in this section, Table 3, has the average cost of attendance in each state. This was derived by weighting each institution's budget for full-time resident students by the full-time resident enrollment. For states and institutional sectors with no student budget data, the national average level was substituted. This gives the average cost of a state resident attending school in the state as a full-time undergraduate. The cost attendance figure is followed by a figure of total student aid per full-time equivalent. This represents the average sum of all grants, work and loans available in the state based on 1975-76 distributions of federal and state dollars (BEOG, SEOG, NDSL, GSL, CWS and

state grants). These aids are given to both in-state and out-of-state students. The next column is the amount of the total award package available as a grant. The last column is the average cost of attendance, which is merely the cost of attendance minus the state and federal student aid per FTE.

The highest average cost of attendance for a state, $3,676, is in Massachusetts. (Washington, D.C. has a cost of $3,886.) Mississippi reports the lowest cost of attendance at $1,885. A difference of $1,791 from the cost of attendance in Massachusetts. These extremes bracket a national average cost of attendance figure of $2,636.

The average amount of student aid available in 1975-76 on a FTE basis was $394. The range went from $1,159 in Maine to $128 per student in Utah. The range spans $1,031. The size of the award that is available in the form of grants varies from a high of $529 in Maine (New York has the second highest grant size at $261) to a low of $38 in Hawaii. As BEOGs have begun to provide a larger share of the student financial aid package, these figures have changed. However, since there is no state breakdown of BEOG awards for current years, it is not feasible to determine the changes in grants at the state level.

On the average, out-of-pocket price of attendance is reduced by student aid by $294, with $127 of that in grants. The difference in cost between Massachusetts and Mississippi was reduced to $1,706, a decrease of $85 from the differences before aid was distributed. The distribution of student aid has not acted to reduce the variance in the price available to students in the various states.

TABLE 3

NET COST OF ATTENDANCE

State	Resident Average Cost of Attendance (Full-Time Undergraduates)	State and Federal Student Aid Per FTE	Grants Per FTE	Resident Student Average Cost of Attendance
Alabama	$2,247	$ 291	$102	$1,956
Alaska	2,752	303	91	2,449
Arizona	2,105	204	53	1,901
Arkansas	2,100	296	102	1,804
California	2,644	654	251	1,990
Colorado	2,410	439	128	1,971
Connecticut	3,238	609	97	2,629
Delaware	2,453	227	67	2,226
District of Columbia	3,986	226	53	3,760
Florida	2,167	284	76	1,883
Georgia	2,536	268	85	2,268
Hawaii	2,353	184	38	2,169
Idaho	2,298	191	55	2,107
Illinois	3,146	726	261	2,420
Indiana	2,959	463	166	2,496
Iowa	2,723	452	173	2,271
Kansas	2,465	315	107	2,150
Kentucky	2,223	331	110	1,892
Louisiana	2,093	285	111	1,808
Maine	3,042	1,159	529	1,883
Maryland	2,908	361	94	2,547
Massachusetts	3,676	420	108	3,256
Michigan	2,630	263	123	2,367
Minnesota	2,887	543	178	2,344
Mississippi	1,885	335	147	1,550
Missouri	2,591	286	84	2,350
Montana	2,242	366	74	1,876
Nebraska	2,446	306	73	2,140
Nevada	2,233	314	70	1,919
New Hampshire	3,423	376	78	3,047
New Jersey	2,967	559	176	2,408
New Mexico	2,466	877	225	1,589
New York	2,896	622	261	2,274
North Carolina	2,335	216	90	2,119
North Dakota	1,979	572	137	1,407
Ohio	3,004	319	125	2,685
Oklahoma	2,088	239	88	1,849
Oregon	3,050	342	104	2,708
Pennsylvania	3,305	665	256	2,640
Rhode Island	3,498	400	95	3,098
South Carolina	2,421	261	156	2,160
South Dakota	2,486	602	137	1,884
Tennessee	2,416	256	86	2,160
Texas	2,482	313	98	2,169
Utah	2,261	128	44	2,133
Vermont	3,579	663	260	2,916
Virginia	2,608	225	64	2,383
Washington	2,647	274	93	2,373
West Virginia	2,400	317	103	2,083
Wisconsin	2,544	467	180	2,077
Wyoming	2,127	278	69	1,849
Average	$2,635.69	$ 393.57	$127	$2,248.21
Standard Deviation	$ 474.09	$ 196.27	$ 32.25	$ 441.19

Even if the table does not do much toward helping us understand why the differences should exist, it raises several questions. In terms of the distribution of student aid, why does Utah get so little per student while Maine gets so much? Other states with small per student share are Hawaii ($184), Idaho ($191), Arizona ($204), North Carolina ($216) and Virginia ($225). On the high end of the spectrum with Maine is New Mexico ($877), Illinois ($726), Pennsylvania ($665); Vermont ($663) and California ($654). These two groups of states are also different in the proportion of the award that is in grants. The high award states have an average of 37.2 percent of the awards in grants, above the average for the nation, while the low award states have 30.0 percent in grants, below the national average. A possible explanation of the differences is that four of the six high-award states have developed comprehensive state grant programs that account for their relatively high proportion of grant awards.

The figures suggest that the availability of aid is unevenly distributed among the states and the type of aid that is available differs widely. Maine students have the price of attendance reduced through student aid on the average of 38 percent, while the students in Utah can expect a reduction of only 5.6 percent. The national average reduction is 14.9 percent.

It is not possible at this time to explain why the distribution is so uneven. There are several possible explanations. First, there is the possibility that student financial need is not reflected in the net price figures. Variation in the income of attendees could result in changed need. That possibility is investigated in the next table.

Second, the sophistication of aid officers in applying for aid varies in different regions of the country resulting in greater or lesser possibility of awards. Third, there might be cultural biases against aid as a form of welfare or federal interference in local affairs. Fourth, federal policy may bias the distribution of aid. These must remain as speculation at the current time.

Unmet Need

Cost of attendance introduces only one aspect of student financial need. If incomes are high in a state and the tuition is high, it may be less of a hardship to attend than in a state where tuition and income are low. An alternative measure to net price is "unmet need." Unmet need is a derived number that captures both parental contribution to education and cost of education. The difference between cost and ability to pay in simple terms, is the unmet need. As the cost of attendance increases and family income (and thus expected family contribution) decreases, unmet need increases. Most federal student financial aid is designed to reduce the level of unmet need for low-income student. It is possible for a high income family to have a high rate of unmet need, due to high cost of attendance, but not be eligible for any federal subsidies.

The data in Table 4 is derived from Daryl Carlson's work. (The calculations for unmet need in each state are presented in Appendix A.) The first column is the average unmet need of resident full-time undergraduate students. The second column indicates the percentage of the state residents attending college in a state with a family income below $12,000. The $12,000 and under range was picked because it represents a population that is generally

TABLE 4

THREE VARIABLES DESCRIBING STATE NEED FOR STUDENT AID

STATE	Average Unmet Need	Proportion Enrollment Under $12,000 (Resident Interstate Student)	1975 Personal Per Capita Income[a]
Alabama	$1,131	69 Percent	$4,557
Alaska	1,208	48	8,815
Arizona	565	45	5,329
Arkansas	1,198	68	4,383
California	799	39	6,555
Colorado	574	35	5,839
Connecticut	819	35	6,854
Delaware	562	30	6,799
District of Columbia	1,582	53	7,751
Florida	389	37	5,517
Georgia	742	45	4,969
Hawaii	867	44	6,658
Idaho	617	46	4,980
Illinois	895	30	6,750
Indiana	874	37	5,587
Iowa	779	41	5,899
Kansas	767	48	5,968
Kentucky	734	46	4,668
Louisiana	722	42	4,729
Maine	761	38	4,785
Maryland	901	34	6,474
Massachusetts	1,102	37	6,159
Michigan	763	36	6,240
Minnesota	1,095	48	5,784
Mississippi	1,233	66	4,041
Missouri	686	37	5,387
Montana	666	45	5,434
Nebraska	801	48	6,175
Nevada	643	43	6,524
New Hampshire	813	37	5,210
New Jersey	878	36	6,629
New Mexico	942	42	4,482
New York	887	40	6,564
North Carolina	839	66	4,801
North Dakota	577	56	5,855
Ohio	814	31	5,883
Oklahoma	560	46	4,996
Oregon	875	43	5,610
Pennsylvania	1,106	40	5,874
Rhode Island	1,030	55	5,917
South Carolina	713	32	4,521
South Dakota	1,140	69	4,980
Tennessee	631	37	4,766
Texas	745	40	5,387
Utah	583	No Data	4,819
Vermont	961	36	4,925
Virginia	641	27	5,671
Washington	658	25	6,226
West Virginia	752	45	4,815
Wisconsin	870	48	5,627
Wyoming	536	51	6,435
Average	$ 828	44.34 Percent	$5,675

a) From 1977 Education Commission of the States Profiles.

eligible for need based student aid programs. There is, as one would expect, a positive relationship between the average unmet need figure and the proportion under $12,000 because the income of enrolled students is one factor used in estimating unmet need. The final column lists the average per capita income of the state. This figure provides a rough indication of the general wealth in the state.

The unmet need number is the most important information for analytical purposes. The proportion of the enrolled population with income under $12,000 and the 1975 per capita income levels are contextual information that allows the general personal wealth levels of the state to be estimated. States with a low per capita income (less than $4,500 per year) are Alabama, Arkansas, Mississippi and New Mexico. High income states (over $6,500) are Alaska, District of Columbia, Hawaii, Illinois, New Jersey and New York. The two noncontiguous states and the District of Columbia are special problem cases. They have high unmet need and high per capita income. Because most student aid programs rule out students with high incomes, even if they have high need, students in these three areas do not seem to be well served by current federal programs.

The average enrollment of students with an income under $12,000 is 44 percent. It ranges from a high of 88 percent in Arkansas and 86 percent in Mississippi to a low of 25 percent in Washington and 27 percent in Virginia. There is a negative correlation of -.344 between the proportion of the enrollment under $12,000 and the average per capita income in the state. This means that the percentage of students enrolled under $12,000 increases as the per capita income decreases.

The unmet need figure varies widely from a low of $289 in Florida to a high of $1,233 in Mississippi (District of Columbia is $1,582) with a national average of $828. The range is $844, a significant sum when it is remembered that the average cost of attendance in the nation is $2,636 Unmet need represents the sacrifice that is necessary for a student to attend school. The unmet need is reduced by the availability of student financial aid. Grants provide a reduction in unmet need while loans and work opportunities provide an easing of the immediate burden.

Understanding the limitations on these numbers, it is still possible to develop a general sense of the differences that exist between states and how the distribution of federal student aid affects those differences. One suggested criteria for distribution of federal student aid is that each state should have the unmet need reduced by the same proportion as the national average -- $828, as indicated in Table 4. That means that student aid fills roughly 48 percent of the unmet need in the nation.

If this standard were applied to the unmet need in each of the states, the distribution would be as seen in Table 5. The negative numbers indicate that the actual award was less than the expected award. There are seven states with an actual award of at least $200 more than the expected award. The following tables (Tables 6 and 7) present those states with the state's share of the award subtracted from the total. Of those seven, only four are above the $200 level after the state award share is subtracted. They are the states of California, Maine, New Mexico and North Dakota. California, Maine and New Mexico have a larger than average grant component, while North Dakota is right in the average grant

TABLE 5

EXPECTED STUDENT AID AWARD

State	Actual Award	Expected Award	DIFFERENCE
Alabama	$ 291	$543	- $252
Alaska	303	580	- 277
Arizona	204	271	- 67
Arkansas	296	575	- 279
California	654	384	270
Colorado	439	275	164
Connecticut	609	393	216
Delaware	227	270	- 43
D.C.	226	759	- 533
Florida	284	187	97
Georgia	268	356	- 88
Hawaii	184	867	- 683
Idaho	191	296	- 105
Illinois	726	430	296
Indiana	463	420	43
Iowa	452	374	78
Kansas	315	368	- 53
Kentucky	331	352	- 21
Louisiana	285	347	- 62
Maine	1,159	365	794
Maryland	361	432	- 71
Massachusetts	420	529	- 109
Michigan	263	366	- 103
Minnesota	543	526	17
Mississippi	335	592	- 257
Missouri	286	329	- 43
Montana	366	320	46
Nebraska	306	384	- 78
Nevada	314	309	5
New Hampshire	376	390	14
New Jersey	559	421	138
New Mexico	877	452	425
New York	622	426	196
North Carolina	216	401	- 185
North Dakota	572	277	295
Ohio	319	392	- 73
Oklahoma	239	278	- 39
Oregon	342	468	- 126
Pennsylvania	665	531	134
Rhode Island	400	494	- 94
South Carolina	261	342	- 84
South Dakota	602	647	- 55
Tennessee	256	303	- 47
Texas	313	358	- 43
Utah	128	280	- 152
Vermont	663	461	202
Virginia	225	308	- 83
Washington	274	316	- 42
West Virginia	317	361	- 44
Wisconsin	457	418	49
Wyoming	278	305	- 27

TABLE 6

STATES WITH AT LEAST $200 MORE AID THAN PREDICTED PER FTE

State	Excess Award	State Award	Total Federal
California	$270	$ 46	$224
Connecticut	216	35	181
Illinois	296	170	126
Maine	794	16	778
New Mexico	425	0	425
North Dakota	295	9	286
Vermont	202	116	86

There are six states that receive at least $200 less than expected award levels as shown in Table 6. It is worth noting that all the states in this category have very modest state grant programs. All of these have more than average enrollment from the under $12,000 category and are split between high and low income states.

TABLE 7

STATES WITH AT LEAST $200 LESS AID PER FTE THAN PREDICTED

State	Amount Under Expected Award	State Award	Total Federal
Alabama	-$252	$4	-$252
Alaska	- 277	0	- 277
Arkansas	- 279	4	- 279
District of Columbia	- 533	0	- 433
Hawaii	- 683	2	- 683
Mississippi	- 257	4	- 257

size for the nation. New Mexico is the only low-income state on the list. With the exception of North Dakota they all have less enrollment under $12,000 than the average. The high-award states can be characterized as relatively wealthy states that are not serving an outsize share of low-income students.

Alaska, District of Columbia and Hawaii, as indicated earlier, all pose special problems. The high cost of living in Hawaii and Alaska drives the unmet need figure higher for students in these states than students in similar situations in mainland areas. Most student aid programs give preference to low-income students as opposed to students with high unmet need. Therefore, they get very little student aid. The District of Columbia is a problem because most students attend private schools at high-cost which drives the average up. It's really not a state and to a large degree draws students from surrounding states.

It is important to note that these low-award states have very modest state grant programs. More state provided student financial aid could help close the need gap. It is also assumed that the increases in the BEOG program will provide a great deal of aid to students in at least three of the states -- Alabama, Arkansas and Mississippi -- which enroll many low-income students and the BEOG award schedule is partial to low-income applicants.

All of the states, with the exception of Mississippi, have a lower than average grant package. Mississippi is $20 higher than the national average. At the extremes, it appears that federal student aid has done little to rectify the differences in educational opportunity among the states.

The current national distribution of student aid is not predictable by the cost of attendance or the level of unmet need present in the state.

There is strong evidence that, at the extremes, the wealthier states are receiving a larger share of student aid than the low-income states, Alaska, Hawaii and the District of Columbia are exceptions.

Two conclusions are suggested: Special consideration be given to residents in Hawaii and Alaska in calculating their family contribution; and, states with minimal state student aid programs develop greater effort in that area.

The next section is a description of current student aid programs and how they are distributed. The federal government provides over 80 percent of all the student aid money in the country. It is, therefore, important to understand the ways in which the money is distributed in the several programs.

According to the Congressional Budget Office (CBO) (1977), the federal government has three goals in postsecondary education: (1) equality of opportunity for low-income students; (2) ease of financial burdens for families supporting children in college; and (3) to help keep institutions financially alive and productive. To reach these goals, the federal government provides $7.9 billion to students, $4.8 billion to institutions and $1.7 billion in tax subsidies for a total of $14.4 billion. CBO estimates that 51.2 percent of the total helps provide equality of opportunity, 33.2 percent helps provide institutional capacities and 15.5 percent eases the financial burden.

This paper has been limited to discussion of funds providing equality of opportunity and easing the financial burden. Specifically, these are the

six federal Office of Education programs of student financial aid plus the state student grant programs. The majority of federal student financial aid that is provided by the Veterans Administration and Social Security is left out.

The Office of Education provides 90 percent of all its postsecondary education money to students and the remaining 10 percent to institutions. The total for student assistance was $2.5 billion in 1975-76, the year of the data used in this paper. This includes all the loan volume in the Guaranteed Student Loan Programs (GSLP) but not the money being recirculated in the National Direct Student Loan Program (NDSLP). The expected availability of student financial aid in these programs by 1978-79 is estimated to be $4.3 billion (based on CBO estimates), even more if current efforts to liberalize federal awards are successful. The rapid growth of the student aid programs makes it difficult to provide an up-to-date base for analysis, especially on a state level, because the data lags by about two years. Table 8 represents the dollars appropriated for the five major federal student aid programs in 1975-76.

The federal State Student Incentive Grant Program (SSIGP) deserves some extra explanation. The program was developed as an inducement to help involve the states in at least a minimal student grant program. The states are funding $746 million in grants this year, with $645 million in grants last year and $510 million in 1975-76. This includes a federal share of $60 million in this year, $44 million in 1976-77 and a $20 million share in the 1975-76 school year. SSIG comprises less than eight percent of all the state need based grants. The dollars are unevenly divided

TABLE 8

AVAILABILITY OF FUNDS FROM FEDERAL STUDENT AID PROGRAMS

1975-76[a]

National Direct Student Loan Program[b] (NDSL)	$ 327,424,000
Federally Insured Student Loan Program[c] (FISL)	1,248,000,000
College Work Study (CWS)	420,000,000
Supplemental Educational Opportunity Grant (SEOG)	240,300,000
Basic Educational Opportunity Grant (BEOG)	356,537,000
TOTAL	$2,542,261,000

[a]SSIG is included as part of the state based programs.

[b]This includes only new federal dollars going to NDSL. It is estimated that there is roughly $200 million more recirculated by institutions.

[c]Data from Daryl Carlson, 1977.

Source: Based on data from USOE Fact Book, 1976.

among states with New York, Pennsylvania, Illinois, New Jersey and California providing nearly two-thirds of all awards. The basic SSIG allotment to a state is based on enrollment in the states. If a state cannot match its allotment, the funds are realloted to the remaining states on the basis of the same formula. This program is unique in that it is the only federal program that calls states into direct partnership with the federal government.

In the field of student aid, there is not a clear federal policy toward states. The programs were developed at different times on the basis of changing student and institutional needs. The BEOG is aimed directly at students; the SEOG, NDSL and CWS programs are coordinated at the regional level with funding directly to institutions. A state allocation formula is built into each of the three programs as the only state involvement. The history of the GSL program indicates the federal government's ambivalence toward states. States developed the basic model of guaranteed loans which was used to develop the federal program. The original federal legislation governing GSL programs made it less expensive for states to depend on the federal guarantee system than on a state system until 1976. At that point, federal legislation provided strong inducement for states to set up guarantee agencies in lieu of the federal programs. Some observers perceive this, along with the growth of the SSIG program, as a step closer to a federal recognition of a state-federal-institutional partnership in student aid that has existed in the past.

The 1979-80 higher education amendments will provide an opportunity for Congress to develop a clearer posture toward the state's role in student aid. In the time between now and then, there needs to be a thorough review

of what policy makers on all three levels perceive their roles to be in providing student financial aid. Specifically, it will be a time to review the success of state guarantee loan agencies, change the allocation formulas used to distribute to states the tripartite programs' funds (CWS, NDSL, SEOG), strengthen the SSIG program and review the impact of BEOG.

In two of the programs, the GSL program and the BEOG program, funds are distributed directly to students. The availability of GSL varies widely among states. The cooperation of lending agencies seems to be more important in the distribution of these dollars than federal policy. States with the least GSL funds per student, in rank order, in 1974 were: South Carolina North Carolina, Utah, Wyoming, Idaho, Arkansas and Georgia. These states also enroll more low-income students than the national average. States providing the most GSL funds per student were Illinois, Pennsylvania, New York, Colorado and North Dakota. These states have fewer low income students enrolled than the national average. The availability of loans is not associated with any characteristics of need or cost of education in the state.

It is still too early to assess the full impact of BEOG at the state level. It is not possible to analyze the state level distribution of these funds since 1975-76 because the data is not available. In that year, $375 million was appropriated for the program. Currently, over $1.7 billion is available through the BEOG program. What little information there is on the basic grant program indicates that it is highly correlated with the proportion of low-income enrollment in the state. Until better information is available, that remains a safe assumption.

The three institutionally based programs -- funds from College Work Study (CWS), Supplemental Educational Opportunity Grant (SEOG) and NDSL -- are all distributed to states on the basis of enrollment and then divided among the institutions on the basis of documented student need. Each of the three programs has a slightly different state allocation formula. In all these programs, there is a 10 percent Commissioner's set-aside which can be used with administrative discretion. The Commissioner's set-aside is used to provide extra awards to states with the greatest levels of unmet student need after the initial funds have been allocated. The 10 percent set-aside is distributed in such a way as to bring the high-need states up to a common minimum level of unmet student need.

There has been criticism of the state allocation formulas on the general basis that the allocation of money based on enrollment (with the exception of CWS) does not insure that the neediest students will be served across the country. The second criticism is that the 10 percent Commissioner set-aside can be manipulated by states that overstate the student needs at the institutional level. The allocation formulas are open to legislative change in the next review of the higher education amendments. There are suggestions for changes in these programs in the next section of this paper.

POLICY OPTIONS

The distribution of student aid dollars appears to be unsatisfactory when compared to the unmet need in the state. There are several ways in which this unequal distribution might be explained.

1. Federal policy is biased in favor of certain states and against others.
2. Institutions within the state do not manage aid programs in a way that insures the appropriate award level for students attending in the state.
3. There may be cultural biases against utilizing student aid in some regions.
4. Private capital for the GSL program may not be equally available across the country.

In varying degrees, it is possible that all four of the reasons may be correct -- depending on which aid program is observed. Each of the programs are distributed to students in a different manner. It is important to understand some of the specific factors that influence distribution of funds to the states. These individual program rules are reviewed in this section.

Guaranteed Student Loan Program (GSL)

There is no state allocation formula in the GSL program. The success of the program in a state depends on the cooperation of lenders. The high-volume loan states tend to have their own guarantee agency. As more states develop a guarantee agency, there is the opportunity to work more closely with lenders to increase the loan volume. Other changes in the program should increase the attractiveness of the program to lenders. This includes the existence of the Student Loan Marketing Association (Sallie May), a secondary loan market, and more liberal interest rates to lenders. Every effort should be made to inform lenders of the improvements in the program, especially in those states with a low volume.

Basic Education Opportunity Grants (BEOG)

There are state differences in the distribution of BEOG dollars. Low income states tend to have a larger share of basic grant recipients than high income states. Given the aims of the program, this is a predictable outcome. The BEOG program could be changed to aid different income-groups or award students differently in high- and low-cost institutions. Any of these changes would alter the distribution of BEOG dollars among states. Beyond helping to improve the management of the BEOG program, it is not clear that there should be a concern with the state level distribution of BEOG dollars. It is necessary, of course, that states help insure that the maximum BEOG are received in the state. Most states now require a BEOG application with a state grant application. This should become even more widespread as the common application form is used.

There is one exception to the state allocation of basic grants that transcends the BEOG program. Students attending school in Hawaii and Alaska seem to receive a smaller share of federal funds because of the inflated cost of living in those states. The needs analysis system used to determine family contribution should take this problem into account. It would appear that the financial need of students in these states are being underestimated.

Tripartite Programs: National Direct Student Loan (NDSL), Supplemental Education Opportunity Grants (SEOG), College Work-Study (CWS)

There are four programs that have a state allocation formula to distribute money to the states -- the NDSL, SEOG, CWS and the State Student Incentive Grant (SSIG) programs. The SSIG program will be discussed in the next section. These formulas, presented in the last section of the paper, have

been criticzed as a factor that distorts the distribution of aid to needy students. In order to understand how these formulas might distort the distribution of aid to states, it is helpful to review the operation of the formulas in a more specific manner.

All three programs use a slightly different factor in the distribution of funds to states. However, 90 percent of the funds in each program are distributed as follows:

(1) CWS allocates money to states on the basis of three factors:

(a) full-time degree credit and non-degree credit enrollment including proprieties;

(b) the total estimated number of high school graduates;

(c) the number of related children under 18 in families with annual incomes of less than $3,000 in 1969.

(2) The SEOG funds are allocated on the basis of the states' shares of full-time and Full-time Equivalent (FTE) enrollment in higher education.

(3) The NDSL funds are distributed on the basis of the number of full-time and FTE enrollment in higher education and adjusted full-time enrollment in proprietary schools.

The remaining 10 percent of the money in each program is allocated among the states according to criteria established by the Commissioner of Education with the provision that all states will receive at least the level of their allotment in 1972. (This only influences the NDSL program.) The program regulations outline a procedure by which the Commissioner distributes the remaining money to the states incurring the lowest percentage of the regional panel's suggested funding levels. This establishes a uniform minimum fundable state percentage of documented student need.

The panel review of student need has been put in abeyance this year. Each institution will qualify for a 10 percent increase over last year's award which, basically, freezes the current distribution in place. There will probably be some modification of the panel process in the near future. It is important to anticipate the implications for states if the current procedure is dropped.

In order to get an overview of the issues that are involved, the 10 states at the extreme ends of the unmet need spectrum are used. In the last chapter, it was stated that California, Maine, New Mexico and North Dakota were awarded more aid than expected and Alabama, Alaska, Arkansas, the District of Columbia, Hawaii and Mississippi received less award than expected. The following tables describe the distribution of the three programs to the states at both extremes of the continuum.

Table 9 shows the allotment of SEOG funds to the 10 states. The first column is the level of initial allotment. The second column is the amount of the Commissioner's reallotment. The third column is the proportion of the panel-approved need level met by the initial year SEOG allotment. (The continuing year allotment is parceled out to the states on the same percentage for each state.)

The difference to note in the table is the greater percentage increase gained by the high-award states through the Commissioner's reallotment compared to the low-award states. It is also worth noting that Arkansas, a low-award state, has the largest proportion of documented need met by SEOG initial awards.

Table 10, which provides the same comparisons for the CWS programs, is even more striking in the advantage given to the high award states.

TABLE 9

ALLOTMENT OF SEOG FUNDS

State	Initial Allotment	Commissioner's Reallotment	Percent of Increase	Percent of State Share of Need Met
California	$26,834,626	-	0	29.12
Maine	3,207,005	$1,275,807	39.75	26.99
New Mexico	1,970,948	243,058	12.33	26.99
North Dakota	1,477,004	334,551	21.12	26.99
Alabama	3,546,644	-	0	30.42
Alaska	1,898,125	59,449	3.13	26.99
Arkansas	2,144,382	-	0	76.69
District of Columbia	1,708,468	12,572	.74	26.99
Hawaii	827,145	-	0	57.36
Mississippi	2,679,836	92,153	3.4	26.99

Source: "Procedures for Determining Allocations of Supplemented Educational Opportunity Grants Program Funds for the Use During the 1976-77 Award Period." Program Support Branch, Division of Student Financial Aid. June 1976.

TABLE 10

DISTRIBUTION OF COLLEGE WORK STUDY FUNDS

State	Initial Allotment	Commissioner's Reallotment	Percent of Increase	Percent of State Share of Need Met
California	$33,679,372	$1,097,908	3.26	46.87
Maine	1,539,771	3,283,406	213.9	46.87
New Mexico	2,583,249	1,042,636	40.38	46.87
North Dakota	1,214,645	874,722	72.08	46.87
Alabama	7,722,101	-	-	48.26
Alaska	537,462	-	-	56.54
Arkansas	3,967,807	-	-	75.47
District of Columbia	1,728,057	726,809	42.07	46.87
Hawaii	1,327,051	-	-	69.91
Mississippi	6,200,577	-	-	63.66

Source: "Procedures for Determining Allocations of College Work-Study Program Funds for Use During the 1976-77 Award Period." Program Support Branch, Division of Student Financial Aid. June 1976.

These results support the concept that the institutional ability to persuade the student aid panels of their student's need is not randomly distributed among states. The states that were determined to be high award states all received the minimum percentage of their panel approved need while the low award states, with the exception of the District of Columbia, received more than the minimum award with no reallotment funds.

Table 11 provides the allotment for the NDSL program. It is apparent from the table that two of the low award states returned NDSL funds. Of the low-award states, only Alaska showed the minimum proportion of panel-approved need met.

There is at least a warning in this data about the implications inherent in altogether removing the state allocation formulas from the tripartite distribution. The indications of these results are that states that show an overall high award level tend to do better on the reallotment process than states with low awards. That means that the institutions in the state did a better job of documenting student need than institutions in low-award states. The current reconsideration of the panel process opens the door to developing new allotment formulas for distributing tripartite funds incorporating an external measure of statewide need with a much smaller Commissioner's reallotment.

State Student Incentive Grant Program (SSIG)

The SSIG program also has an enrollment based allotment formula with an opportunity for reallotment to the remaining states of funds from states that can't use funds. In Table 7, it was noted that the states with awards under expectations also tended to have very small state student grant programs. Incentives should be built into the SSIG program to help states with small programs commit more state funds to student aid programs. There have been

TABLE 11

DISTRIBUTION OF NDSL FUNDS

State	Initial Allotment	Commissioner's Reallotment	Percent of Increase	Percent of State Share of Need Met
California	$33,901,016	$ 356,519	1.05	46.94
Maine	3,871,667	53,534	1.38	40.30
New Mexico	2,956,510	40,880	1.38	40.30
North Dakota	1,675,959	23,173	1.38	40.30
Alabama	4,612,804	43,171	.94	49.83
Alaska	424,191	5,866	1.38	40.30
Arkansas	2,457,919	-89,204*	-3.63	100.
District of Columbia	2,167,676	29,009	1.34	41.08
Hawaii	1,294,157	-414,296*	-32.01	100.
Mississippi	3,292,103	20,022	.61	60.37

*Returned alloted funds.

Source: "Procedures for Determining Allocations for New Federal Capital Contributions in the National Direct Student Loan Program for Fiscal Year 1976." Program Support Branch, Division of Student Support and Special Programs. June 1975.

several ways suggested to do this. The first is to have a moving base year instead of a fixed base year. Under current legislation, a state can receive federal matching money for all funds committed to student aid above those committed two years before the SSIG program was started in the states. States with large programs of state aid have increased the state share much more rapidly than SSIG funds have been increased. This means that in the future, they can soak up large increases in SSIG federal share without increasing their effort. If a moving base year were used, say two years prior to the current year, it would necessitate continued effort on the state's part to match increased federal dollars. A state could not continue to collect federal dollars on increases several years in the past.

The other suggestion is that a measure of state effort to finance post-secondary education be built into the SSIG formula. This would allow states with lower income levels to match more dollars or allow them to allot fewer state dollars to receive the same number of federal dollars. Any scheme that measures effort would also have the effect of shifting SSIG funds toward states with large publicly funded systems. That may not be a desired policy goal because it would provide a smaller share for states with an extensive independent sector.

The final suggestion is to include a measure of poverty into the SSIG program allocation formula so states with more low-income students could qualify for a larger share of federal funds.

Conclusion

There is an important need for the student aid policy community to develop a measure of equity allowing the multiplicity of student aid programs

to be distributed with some semblance of order. The rough analysis provided in this paper indicates that, by any measure, there are grave discrepancies in the distribution of aid.

The measure that is suggested is that of net price. Net price is the amount the student pays to attend college after parental contribution and public grants have been received. Work and loans make up the self-help portion regardless of whether there is a public subsidy or not. The criteria that is suggested is that the net price be the same for students of similar income at institutions of the same price. The more expensive the institution, the greater the cost that the student would be required to bear.

There are a number of questions that need to be answered if this approach is to be used. What should be the federal-state-institutional shares used? What data system is necessary to keep track of the distribution of student aid? What distortions would such a system of monitoring introduce into the student aid programs? These questions are suggestive of the issues that should be addressed. If we are to make educational opportunity equally available across the nation, they need to be investigated.

APPENDIX A

OUTLINE OF THE NEED CALCULATIONS
Provided by Daryl Carlson

(1) The basic enrollment data for the analysis is for full-time-equivalent (FTE) undergraduates from the HEGIS Opening Fall Enrollment survey for Fall 1974.

(2) To determine the proportion of enrollment at institutions in each state by residents from other states and the proportion of each state's residents attending college in another state, the HEGIS Residence and Migration surveys for Fall 1968 and 1972 were used along with similar data from the CIRP annual surveys of entering freshmen from 1966 through 1974. The HEGIS data was used as the base with the CIRP data used only in states and institutional categories where the HEGIS data was not available. The FTE undergraduate enrollment for each state and institutional category is split into three components:

a) state residents enrolled at institutions within the same state (R-I-S)

b) state residents enrolled at out-of-state institutions (R-O-S)

c) out-of-state residents enrolled at institutions within the state (E-O-S)

(3) The enrollment income distribution data is from the annual CIRP surveys of entering freshmen. For some states and institutional categories, no data was available from the CIRP surveys as illustrated in Table 1. In terms of FTE undergraduate enrollment, the following percentages for each of the institutional categories represent the states with no CIRP data:

Public four-year	1.1%
Public two-year	12.5%
Private four-year	0.3%
Private two-year	21.9%
Average	4.6%

For the states and institutional sectors with missing data, the national average income distribution of enrollment for the particular institutional sector was used and therefore the level of need calculated for these states should be interpreted cautiously.

(4) The cost of attendance data is from the annual publication of College Costs by the College Scholarship Service. The total residents budget is used along with the out-of-state charges. For states and institutional sectors with no student budget data the national average level was substituted. Table 1 identifies those states and institutional categories with no student budget data. The cost of attendance data used in the need calculations are presented by state and institutional category in Table 2.

(5) The estimated parental contribution for each family income category was developed from summary data of the BEOG program. Table 3 shows the distribution of parental contribution levels for five family income categories. Using distributions such as these are much more realistic than simply using average parental contribution levels for each income category. Since the calculation of need is truncated at zero (no negative need) and the grant allocation formulas involve various truncations, the use of an average parental contribution is inaccurate as the results to follow show.

TABLE 1

UNAVAILABLE DATA BY STATE AND INSTITUTIONAL CATEGORY

State	Public Four		Public Two		Private Four		Private Two	
	Income	Budget	Income	Budget	Income	Budget	Income	Budget
ALABAMA								
ALASKA			X	X	X		X	
ARIZONA							X	X
ARKANSAS							X	
CALIFORNIA								
COLORADO							No enrollment	
CONNECTICUT			X				X	
DELAWARE			X	X	X	X	X	
DISTRICT OF COLUMBIA		X	X	X				X
FLORIDA								
GEORGIA			X					
HAWAII	X		X				No enrollment	
IDAHO			X		X			
ILLINOIS								
INDIANA			X					X
IOWA								
KANSAS								
KENTUCKY				X				
LOUISIANA				X			No enrollment	
MAINE							X	
MARYLAND							X	X
MASSACHUSETTS								
MICHIGAN								
MINNESOTA								
MISSISSIPPI								
MISSOURI								
MONTANA			X				No enrollment	
NEBRASKA							X	X
NEVADA		X		X	X	X	No enrollment	
NEW HAMPSHIRE			X					
NEW JERSEY				X			X	
NEW MEXICO							No enrollment	
NEW YORK								
NORTH CAROLINA								
NORTH DAKOTA			X		X		X	X
OHIO							X	
OKLAHOMA			X				X	
OREGON			X					
PENNSYLVANIA								
RHODE ISLAND			X	X			No enrollment	
SOUTH CAROLINA								
SOUTH DAKOTA			No enrollment				X	X
TENNESSEE			X					
TEXAS								
UTAH			X				X	X
VERMONT				X				
VIRGINIA							X	
WASHINGTON							No enrollment	
WEST VIRGINIA			X				X	
WISCONSIN								
WYOMING					No enrollment		No enrollment	

TABLE 2

COST OF ATTENDANCE BY STATE AND INSTITUTIONAL CATEGORY, FY 1974-75

STATE	Institutional Category	Total Resident Budget	Out-of-State Charges
ALABAMA	Public Four	$ 2251	$ 344
	Public Two	1833	188
	Private Four	3000	0
	Private Two	2780	0
	All Categories	2247	253
ALASKA	Public Four	3140	130
	Public Two	2040	936
	Private Four	4880	0
	Private Two	4410	0
	All Categories	2752	508
ARIZONA	Public Four	2000	890
	Public Two	2116	613
	Private Four	3317	0
	Private Two	3134	0
	All Categories	2105	736
ARKANSAS	Public Four	2100	530
	Public Two	1855	193
	Private Four	2660	0
	Private Two	1965	0
	All Categories	2100	405
CALIFORNIA	Public Four	2660	1298
	Public Two	2319	1033
	Private Four	4684	0
	Private Two	3310	0
	All Categories	2644	1023
COLORADO	Public Four	2353	1158
	Public Two	1500	702
	Private Four	4619	0
	All Categories	2410	958
CONNECTICUT	Public Four	2554	791
	Public Two	2119	1785
	Private Four	4807	0
	Private Two	3988	0
	All Categories	3238	768
DELAWARE	Public Four	2289	899
	Public Two	2040	936
	Private Four	3836	0
	Private Two	3573	0
	All Categories	2453	769

STATE	Institutional Category	Total Resident Budget	Out-of-State Charges
DISTRICT OF COLUMBIA	Public Four	$ 2379	$ 813
	Public Two	4515	0
	Private Four	3134	0
	All Categories	3986	199
FLORIDA	Public Four	2586	913
	Public Two	1038	988
	Private Four	4254	0
	Private Two	4200	0
	All Categories	2167	785
GEORGIA	Public Four	2371	670
	Public Two	1857	1645
	Private Four	3844	0
	Private Two	2318	0
	All Categories	2536	732
HAWAII	Public Four	2629	918
	Public Two	1757	1902
	Private Four	3294	0
	All Categories	2353	1216
IDAHO	Public Four	2	776
	Public Two	2180	560
	Private Four	3560	0
	Private Two	2200	210
	All Categories	2298	600
ILLINOIS	Public Four	2570	556
	Public Two	2925	1230
	Private Four	4426	0
	Private Two	3720	0
	All Categories	3146	642
INDIANA	Public Four	2530	851
	Public Two	3023	463
	Private Four	3886	0
	Private Two	3134	0
	All Categories	2959	573
IOWA	Public Four	2194	427
	Public Two	2232	36
	Private Four	3794	0
	Private Two	3041	0
	All Categories	2723	188
KANSAS	Public Four	2453	767
	Public Two	2059	396
	Private Four	3209	0
	Private Two	2738	0
	All Categories	2465	576

STATE	Institutional Category	Total Resident Budget	Out-of-State Charges
KENTUCKY	Public Four	$ 2065	$ 753
	Public Two	2040	936
	Private Four	3016	0
	Private Two	2582	0
	All Categories	2223	642
LOUISIANA	Public Four	1834	359
	Public Two	2040	936
	Private Four	3908	0
	All Categories	2093	358
MAINE	Public Four	2382	1030
	Public Two	1837	300
	Private Four	4607	0
	Private Two	3175	0
	All Categories	3042	639
MARYLAND	Public Four	2726	745
	Public Two	2567	9776
	Private Four	4702	0
	Private Two	3134	0
	All Categories	2908	3435
MASSACHUSETTS	Public Four	2374	449
	Public Two	2262	515
	Private Four	4858	0
	Private Two	4302	0
	All Categories	3676	215
MICHIGAN	Public Four	2575	952
	Public Two	2232	490
	Private Four	3743	0
	Private Two	3034	0
	All Categories	2630	662
MINNESOTA	Public Four	2688	774
	Public Two	2263	397
	Private Four	3777	0
	Private Two	3309	0
	All Categories	2887	515
MISSISSIPPI	Public Four	2106	449
	Public Two	1350	294
	Private Four	2804	0
	Private Two	1400	0
	All Categories	1885	347
MISSOURI	Public Four	2118	758
	Public Two	1770	450
	Private Four	4253	0
	Private Two	3113	0
	All Categories	2591	508

STATE	Institutional Category	Total Resident Budget	Out-of-State Charges
MONTANA	Public Four	$ 2224	$ 894
	Public Two	1574	344
	Private Four	2897	0
	All Categories	2242	778
NEBRASKA	Public Four	2233	809
	Public Two	1674	120
	Private Four	3273	0
	Private Two	3134	0
	All Categories	2446	544
NEVADA	Public Four	2379	813
	Public Two	2040	936
	Private Four	3836	0
	All Categories	2233	864
NEW HAMPSHIRE	Public Four	2581	1072
	Public Two	2097	541
	Private Four	4692	0
	Private Two	4026	0
	All Categories	3423	571
NEW JERSEY	Public Four	2887	415
	Public Two	2040	936
	Private Four	4217	0
	Private Two	3604	0
	All Categories	2967	453
NEW MEXICO	Public Four	2362	820
	Public Two	2055	468
	Private Four	3988	0
	All Categories	2466	719
NEW YORK	Public Four	1881	850
	Public Two	1987	822
	Private Four	4786	0
	Private Two	3862	0
	All Categories	2896	548
NORTH CAROLINA	Public Four	2044	1415
	Public Two	1717	1156
	Private Four	3696	0
	Private Two	2817	0
	All Categories	2335	977
NORTH DAKOTA	Public Four	1872	623
	Public Two	1980	232
	Private Four	3086	0
	Private Two	3134	0
	All Categories	1979	485

STATE	Institutional Category	Total Resident Budget	Out-of-State Charges
OHIO	Public Four	$ 2767	$ 920
	Public Two	2237	855
	Private Four	4062	0
	Private Two	3722	0
	All Categories	3004	671
OKLAHOMA	Public Four	1981	642
	Public Two	1789	277
	Private Four	2933	0
	Private Two	2625	0
	All Categories	2088	461
OREGON	Public Four	2596	1615
	Public Two	3420	626
	Private Four	3686	0
	Private Two	2760	0
	All Categories	3050	1030
PENNSYLVANIA	Public Four	2720	886
	Public Two	2450	1241
	Private Four	4333	0
	Private Two	3636	0
	All Categories	3305	598
RHODE ISLAND	Public Four	2552	835
	Public Two	2040	936
	Private Four	4446	0
	All Categories	3498	405
SOUTH CAROLINA	Public Four	2286	640
	Public Two	1786	791
	Private Four	3511	0
	Private Two	2438	0
	All Categories	2421	519
SOUTH DAKOTA	Public Four	2151	709
	Public Two	3479	0
	Private Two	3134	0
	All Categories	2486	527
TENNESSEE	Public Four	2067	763
	Public Two	1771	479
	Private Four	3496	0
	Private Two	2377	0
	All Categories	2416	508
TEXAS	Public Four	2339	1118
	Public Two	2179	484
	Private Four	3684	0
	Private Two	2502	0
	All Categories	2482	755

STATE	Institutional Category	Total Resident Budget	Out-of-State Charges
UTAH	Public Four	$ 2342	$ 484
	Public Two	2118	536
	Private Four	2150	0
	Private Two	3134	0
	All Categories	2261	308
VERMONT	Public Four	2949	1601
	Public Two	2040	936
	Private Four	4271	0
	Private Two	5200	0
	All Categories	3579	814
VIRGINIA	Public Four	2353	581
	Public Two	2244	4109
	Private Four	3757	0
	Private Two	2965	0
	All Categories	2608	1054
WASHINGTON	Public Four	2507	945
	Public Two	2447	582
	Private Four	3927	0
	All Categories	2647	658
WEST VIRGINIA	Public Four	2215	820
	Public Two	2200	700
	Private Four	3387	0
	Private Two	2184	90
	All Categories	2400	664
WISCONSIN	Public Four	2483	1253
	Public Two	1936	365
	Private Four	3976	0
	Private Two	2767	0
	All Categories	2544	840
WYOMING	Public Four	2300	950
	Public Two	1881	411
	All Categories	2127	727

TABLE 3

DISTRIBUTION OF PARENTAL CONTRIBUTION LEVELS
FOR FAMILY INCOME CATEGORIES

Category (thousands)	Parental Contribution Level									
	0	1-300	301-600	601-900	901-1200	1201-1500	1501-1800	1801-2100	2101 +	Average
$ 0-6	75	2	1	0	0	2	0	20	0	$ 425
6-9	24	11	12	12	6	5	4	2	24	1,356
9-12	9	11	12	13	9	7	5	2	32	1,759
12-20	0	1	2	7	9	10	11	10	50	2,669
20 +	0	0	0	0	0	0	1	1	98	3,956

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(6) Estimated parental contribution varies by the asset value of the family and by family size in addition to family income. Since average family asset values and family size varies across the states, crude adjustments were constructed as shown in Table 4. These adjustments were applied to the contribution distributions shown in Table 3 to yield the average estimated parental contribution for each state by family income categories shown in Table 5. Although the averages are shown in Table 5, the actual distributions by contribution level (with the appropriate asset and family size adjustments) are used in the need and grant evaluation calculations.

(7) Estimated financial need for each state, institutional category, and family income category was calculated in the following way for state residents attending in-state:

$$NEED_i = CA - PC_i \quad \text{if } CA \geq PC_i$$

$$= 0 \quad \text{if } CA \leq PC_i$$

Where $NEED_i$ = the estimated financial need for an individual in the i^{th} parental contribution bracket,

CA = the cost of attendance,

PC_i = the estimated parental contribution for an individual in the i^{th} bracket.

Average need for each income category, institutional sector, and state is calculated as:

$$\text{Average need} = \sum_{i=1}^{9} NEED_i \cdot P_i$$

where P_i = the proportion of enrollment is the i^{th} parental contribution bracket.

TABLE 4

PARENTAL CONTRIBUTION ADJUSTMENTS FOR ASSET VALUE AND FAMILY SIZE BY STATE

STATE	Amount Subtracted from Base Parental Contribution	
	Family Size	Asset Value
Alabama	84	55
Alaska	264	65
Arizona	34	15
Arkansas	-102	80
California	-102	-35
Colorado	-42	-10
Connecticut	-26	-140
Delaware	26	-50
District of Columbia	0	10
Florida	-230	-90
Georgia	34	105
Hawaii	323	-20
Idaho	0	0
Illinois	-26	-120
Indiana	-26	20
Iowa	-68	-50
Kansas	-153	-50
Kentucky	-34	35
Louisiana	187	50
Maine	-8	-30
Maryland	0	10
Massachusetts	17	-15
Michigan	76	35

STATE	Amount Subtracted from Base Parental Contribution	
	Family Size	Asset Value
Minnesota	76	-15
Mississippi	196	50
Missouri	-119	25
Montana	17	-85
Nebraska	-68	-85
Nevada	-110	30
New Hampshire	-26	-5
New Jersey	-26	-60
New Mexico	221	35
New York	-68	-40
North Carolina	-17	35
North Dakota	102	-105
Ohio	0	-15
Oklahoma	-212	40
Oregon	-170	-120
Pennsylvania	-51	30
Rhode Island	-60	45
South Carolina	144	45
South Dakota	51	5
Tennessee	-76	-40
Texas	0	-10
Utah	230	80
Vermont	51	45
Virginia	-26	15
Washington	-119	35
West Virginia	-76	-20
Wyoming	-42	-45

TABLE 5

ESTIMATED PARENTAL CONTRIBUTION BY INCOME CATEGORY AND STATE FOR FY 1975-76

State	Family Income Category (thousands) $0-6	$6-9	$9-12	$12-20	$20+	Average
Alabama	336	1267	1670	2580	3867	1649
Alaska	96	1027	1430	2340	3627	1922
Arizona	376	1307	1710	2620	3907	2635
Arkansas	447	1378	1781	2691	3978	1410
California	562	1493	1896	2806	4093	2603
Colorado	477	1408	1811	2721	4008	2763
Connecticut	591	1522	1925	2835	4122	2895
Delaware	449	1380	1783	2693	3980	2827
District of Columbia	415	1346	1749	2659	3946	2594
Florida	745	1676	2079	2989	4276	2935
Georgia	286	1217	1620	2530	3817	2533
Hawaii	122	1053	1456	2366	3653	2057
Idaho	425	1356	1759	2669	3956	2819
Illinois	571	1502	1905	2815	4102	2828
Indiana	431	1362	1765	2675	3962	2634
Iowa	543	1474	1877	2787	4074	2686
Kansas	628	1559	1962	2872	4159	2520
Kentucky	424	1355	1758	2668	3955	2400
Louisiana	188	1119	1522	2432	3719	2157
Maine	463	1394	1797	2707	3994	2795
Maryland	415	1346	1749	2659	3946	2629
Massachusetts	423	1354	1757	2667	3954	2761
Michigan	314	1245	1648	2558	3845	2545
Minnesota	364	1295	1698	2608	3895	2250
Mississippi	179	1110	1513	2423	3710	829
Missouri	519	1450	1853	2763	4050	2646
Montana	493	1424	1827	2737	4024	2547
Nebraska	578	1509	1912	2822	4109	2453
Nevada	505	1436	1839	2749	4036	2513
New Hampshire	456	1387	1790	2700	3987	2987

ESTIMATED PARENTAL CONTRIBUTION BY INCOME CATEGORY AND STATE FOR FY 1975-76

State	Family Income Category (thousands)					
	$0-6	$6-9	$9-12	$12-20	$20+	Average
New Jersey	511	1442	1845	2755	4042	2634
New Mexico	169	1100	1503	2413	3700	2121
New York	533	1464	1867	2777	4064	2604
North Carolina	407	1338	1741	2651	3938	2193
North Dakota	428	1359	1762	2672	3959	2376
Ohio	440	1371	1774	2684	3971	2746
Oklahoma	597	1528	1931	2841	4128	2494
Oregon	715	1646	2049	2959	4246	2827
Pennsylvania	446	1377	1780	2690	3977	2561
Rhode Island	440	1371	1774	2684	3971	2377
South Carolina	236	1167	1570	2480	3767	2423
South Dakota	369	1300	1703	2613	3900	1917
Tennessee	461	1392	1795	2705	3992	2667
Texas	435	1366	1769	2679	3966	2506
Utah	115	1046	1449	2359	3646	2619
Vermont	329	1260	1663	2573	3860	2942
Virginia	436	1367	1770	2680	3967	2857
Washington	509	1440	1843	2753	4040	2791
West Virginia	416	1347	1750	2660	3947	2478
Wisconsin	369	1300	1703	2613	3900	2289
Wyoming	512	1443	1846	2756	4043	2461

(8) Estimated financial need for each state, institutional sector, and family income category was calculated in the following way for state residents attending out-of-state:

$$NEED_i = CO + AOSC - PC_i$$

where CO = average resident budget at out-of-state institutions,

AOSC = average out-of-state charges for enrolling out-of-state.

(9) Estimated financial need for each state, institutional sector, and family income category was calculated in the following way for out-of-state residents attending in-state institutions.

$$NEED_i = CA + OSC - PC_i$$

where OSC = out-of-state charges by in-state institutions.

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