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ABSTRACT

Who gets student financial aid and how much is given is the focus of this second volume of a two-volume study on program management procedure in the Basic Grant and Campus Based assistance programs. Section I provides general supporting information for the study. It begins by sketching the background and context of the subject of student aid, including the history of its development, a review of the extant literature, and a discussion of the role of the student in the financial aid delivery system. Section II provides the empirical results of this study. The section begins with a macro-level view of distribution of financial aid funds and then moves on to a discussion of two aspects of distributive equity-vertical mobility and the impact of financial aid on the rates of participation in higher education. The final chapter focuses on the relationship between equitable outcomes and institutional discretionary management practices. Appendices include major project deliverables and the current financial aid programs administered by the U.S. Office of Education. Exhibits and tables offer statistical support throughout the report. (LC)

Applied Management Sciences

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STUDY OF PROGRAM MANAGEMENT PROCEDURES IN THE CAMPUS BASED AND BASIC GRANT PROGRAMS (G-129) FINAL REPORT

VOLUME II: WHO GETS FINANCIAL ASSISTANCE, HOW MUCH, AND WHY?

May 1980

DEPARTMENT OF EDUCATION
Office of Program Evaluation
Room B-110, Trans Point Building
Washington, D.C. 20202

ACKNOWLEDGEMENTS

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The project staff would especially like to express it gratitude to Dr. Alexander Ratnofsky and Dr. Salvatore Corallo who have served as Project Officers on this study. Throughout the course of this study the project staff has utilized the services of an Advisory Panel consisting of: Ms. Goldie Claiborne, Director of Financial Aid for Howard University; Dr. Dale Hyerstay, Director of Financial Aid for the University of Vermont; Mr. Merle Lange, Director of Financial Aid for Glendale (Arizona) Community College; Ms. Joyce Dunegan of the National Association of Student Financial Aid Administrators; Dr. James Hearn and Dr. Shannon James of the American College Testing Program; Mr. Joel Packer, Assistant Director of Governmental Relations for the National Association of State Universities and Land-Grant Colleges; Dr. Barry Chiswick of the Department of Economics at the University of Chicago at Chicago Circle; Dr. Teh-wei Hu of the Department of Economics at Pennsylvania State University; and Dr. Dallas Merrell, President of Merrell Associates, a management consulting firm. Their expertise, opinions, and judgement have provided additional perspectives to this study.

Finally, all of the persons connected with the inception design, and implementation of this project remain indebted to the financial aid officers and staffs at the 172 postsecondary institutions which were visited as part of the data collection efforts. Without the cooperation of these personnel this study could never have come to a successful conclusion.

NOTE TO THE READER

This report has been produced in three separate and distinct volumes. Volume I contains material related to the institutional management of student financial aid; Volume II focuses on the effect of the various aid programs on postsecondary students; the final volume is a Summary which highlights the most significant aspects of the study's findings. In lieu of a single abstract, the preface to each of the sections of Volumes I and II provides an overview of the material discussed therein - (Volume I contains five sections; Volume II contains two sections). For a summary of the findings of both volumes, the reader is, of course, referred to the Summary volume which was prepared for this purpose.

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INTRODUCTION

CONTENTS OF THIS VOLUME

This report is divided into two main sections. Section I provides general supporting information; Section II provides the empirical results of this study. Section I begins by sketching the background and context of the subject of student aid, including the history of its development, a review of the extant literature, and a discussion of the role of the student in the financial aid delivery system. Section II begins with a macro-level view of the distribution of financial aid funds and then moves on to a discussion of two aspects of distributive equity--vertical mobility and the impact of financial aid on the rates of participation in higher education. The final chapter focuses on the relationship between equitable outcomes and institutional discretionary management practices.

STUDY BACKGROUND

This study is the third and final phase of the U.S. Office of Education's (USOE)[1/] assessment of the impact of Federal financial aid programs on postsecondary students, institutions, and state governments. Formally titled "Study of the Impact of Student Financial Aid Programs" (SISFAP), the components completed prior to this study include:

1/ In May 1980 the United States Office of Education (USOE) was reconstituted as the Department of Education (ED). In order to avoid confusion, and to remain consistent with documents previously produced under this contract, all appropriate passages in this report will refer to USOE.

- the design of a research strategy to assess the impact of financial aid (SISFAP I);
- the study of the impact of Federal and state financial aid programs and policies on the choice process of postsecondary bound students (SISFAP II, Study A);
- the study of the way in which labor market conditions (and perceptions thereof) interact with educational costs and financial aid to influence access to postsecondary education (SISFAP II, Study B);
- the examination of the impact of financial aid on student persistence in postsecondary education (SISFAP II, Study C); and
- the relationship between Federal and state student aid programs (SISFAP II, Study D).

This remaining component (SISFAP III) was intended to evaluate the effectiveness and efficiency of procedures employed by the Federal government and by participating institutions of postsecondary education to operate and manage the Campus Based and Basic Educational Opportunity Grant (BEOG) assistance programs. The BEOG program, currently funded at $2.56 billion, is the mainstay of U.S. student aid. It is centrally administered by the U.S. Office of Education and provides the eligible postsecondary student with an entitlement to financial assistance which can be used at any of thousands of approved postsecondary institutions. The amount of the entitlement is based upon the student's need (as derived from a uniformly applied formula), while actual awards are calculated using the cost of education at the school the student has chosen to attend. The Campus Based programs, on the other hand, are administered locally by the staff of eligible institutions. They include the Supplemental Educational Opportunity Grant (SEOG); National Direct Student Loans (NDSL); and College Work-Study (CWS).

THE IMPETUS FOR THE STUDY

Evaluations of the Federal student aid programs, from program appropriations to the distribution of funds, have been mostly piecemeal in nature. While specific components of this complex system have been examined at several levels of sophistication and detail, there has been, prior to the SISFAP project, no unified, comprehensive analysis of the

Federal government's involvement in the provision of funds for post-secondary students. The need for such an in-depth, broad-scope study, however, did not long go unnoticed. In 1974, the National Task Force on Student Aid Problems (otherwise known as the Keppel Task Force) was formed to examine a complex system that had become "...increasingly... troublesome to the general public...."[2/] Its charge was to examine the delivery system for student aid while ignoring the broader issues of an appropriate social policy for the financing of postsecondary education. While the Task Force addressed many of the issues included in this study, its recommendations were derived in a deliberative fashion from the expertise of the various panel members. As stated in its Final Report, its role was to "integrate and implement the results of many existing efforts into the broader form of a total delivery system and then to achieve the support and backing of the associations and individuals who can bring them into being."[3/] In a significant sense, the problems identified by the Task Force and its recommendations formed the basis for the formal evaluative effort represented by the SISFAP studies.

RESEARCH OBJECTIVES

The Office of Education's interest in examining these programs and their procedures is threefold: to evaluate the equity of the distribution of Federal financial assistance funds among students with similar characteristics; to identify the aid practices and procedures that best meet the objectives of the Federal programs; and to provide the data needed to develop a behavioral model of the flow of U.S. student aid dollars. Specifically, the study was designed to examine:

- the relationships between program funding levels and program objectives;
- the factors influencing the decisions of institutions to participate in the programs;
- the impact of application and aid distribution procedures on both institutions and students;

[2/] Francis Keppel, National Task Force on Student Aid Problems: Final Report (Washington, D.C.: U.S. Office of Education), p. 1.

[3/] Ibid., p. 5.

- the factors affecting the ability of postsecondary institutions to implement the programs in accordance with the needs of students and the regulations and guidelines issued by USOE;
- the factors affecting the participation of students in these programs, including counseling, consumer information, application processes, need determination, and aid packaging;
- the burdens and benefits of program oversight procedures (e.g., monitoring and validation) for both institutions and the Federal government; and
- the impact of these programs on postsecondary institutions, particularly with regard to cost, changes in educational quality, and changes in student body composition.

While this report, and the companion volume on institutional practices, address most of these areas, no attempt has been made here to duplicate the material covered in reports previously issued during this project. A listing of all such documents is provided in Appendix A.

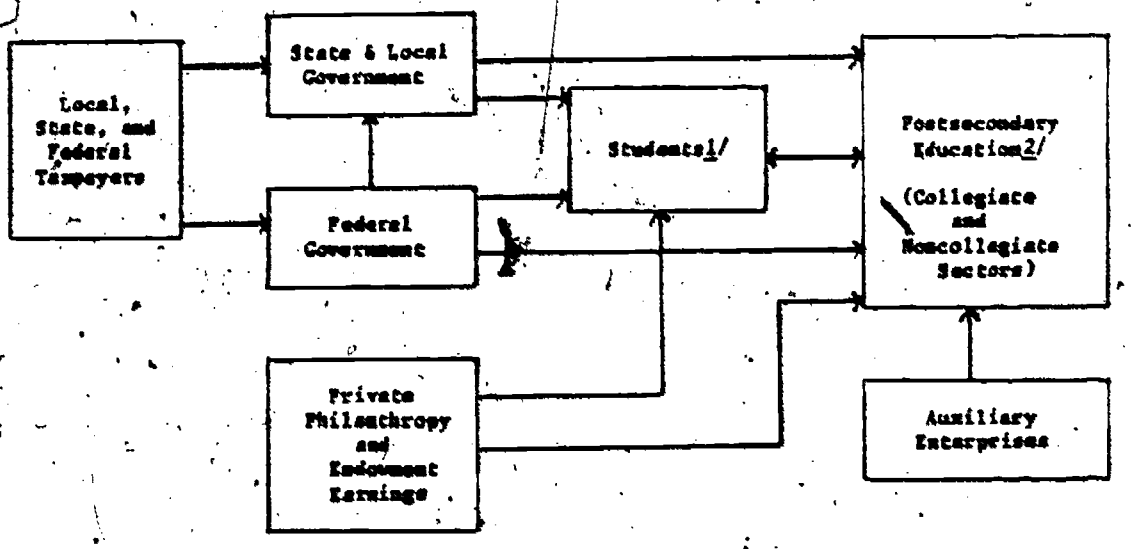
THE SCOPE OF FEDERAL SUPPORT TO POSTSECONDARY EDUCATION

The postsecondary education sector represents a significant portion of this nation's economy. According to the National Center for Education Statistics, as of autumn 1978, there were about 12.6 million students enrolled in more than 5,000 institutions of advanced learning. Of these, 11.4 million were enrolled in 3,046 traditional colleges, and the remainder in proprietary schools. While slightly less than half of the colleges (1,455) were publicly controlled, this component enrolled almost 80 percent of all college students.

With regard to the financing of postsecondary education (see Exhibit 1.1), the National Center estimates that for fiscal year 1977 the revenues to all of postsecondary education totalled $43.4 billions, 34 percent of which came from state and local support, 21 percent from tuition and fees, and 17 percent from the Federal government. This is further illustrated below in Exhibit 1.2.

This massive influx of public monies into the postsecondary education sector has grown at an incredible rate since 1965, particularly in the area of Federal support (see Table 1.1). During this 15-year period, the Federal funding of postsecondary education has increased from

EXHIBIT 1.1: SOURCES OF FUNDS FOR POSTSECONDARY EDUCATION



1/ Aid to Students

A. Grants and scholarships
   1. Aid distributed directly to students based on
      a. Need
      b. Ability
      c. Special purposes
      d. Income
   2. Aid distributed through institutions based on
      a. Need
      b. Ability
      c. Special purposes
      d. Income

B. Loans (subsidized portion)
   1. Direct loans
   2. Guaranteed loans
   3. Institutional loans
   4. Tuition deferrals

C. Tax deductions for families or students

2/ Aid to Institutions

A. General institutional aid
   1. Tuition and fee payments
   2. Budget appropriations
   3. Lump sum grants
   4. Various types of capitation grants
   5. Grants based on other units of workload or output
   6. Employment subsidies
   7. Unrestricted gifts
   8. Unrestricted earnings

B. Categorical aid (current)
   1. Program support
   2. Project grants and contracts
   3. Service contracts
   4. Restricted gifts
   5. Restricted earnings

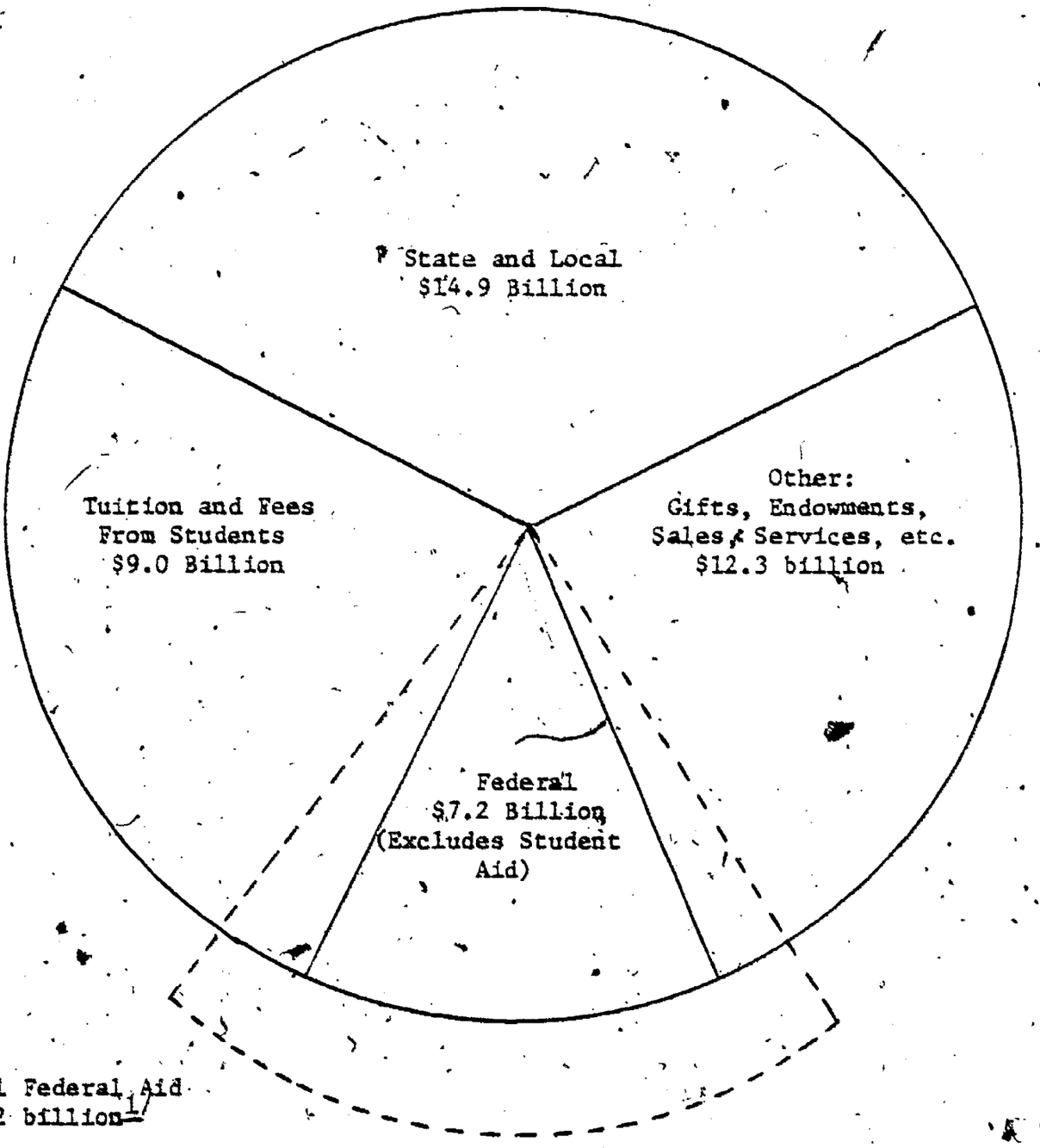
C. Construction aid
   1. Project grants
   2. Direct and indirect interest subsidies
   3. Gifts
   4. User charges

D. Tax benefits
   1. Tax exemptions for institutions
   2. Tax credits for donors
   3. Tax deductions for donors

E. Other institutional aid
   1. In-kind gifts
   2. Use of property, facilities, or equipment
   3. Cooperative services

Source: National Commission on the Financing of Postsecondary Education, A Framework for Analyzing Postsecondary Education Financing Policies, May 1974.

EXHIBIT 1.2: FINANCING POSTSECONDARY EDUCATION: WHERE DOES THE MONEY COME FROM?



TOTAL = $43.4 Billion

Public = $29.3 Billion
Private = $14.2 Billion

Source: National Center for Education Statistics, Financial Statistics of Institutions of Higher Education, 1976-77. Table 123.

1/ Includes: Student Aid, Institutional Support, Program Funding and Research, excluding Social Security--Data from the Office of Management and Budget, Special Analysis, 1978.

TABLE 1.1: PERCENTAGE INCREASE IN FEDERAL SUPPORT TO POSTSECONDARY EDUCATION 1965-1979

	Total Percent Change 1965-1979	Average Annual Percent Increase[1/]
Research Support	234	9
Institutional Support	222	9
Aid to Students	3,830	30

Source: OMB, 1971-1979, Special Analyses, Budget of the United States.

1/A compounded rate of increase, i.e. $V_2 = V_1(1 + r)^n$.

approximately $2 billion to a staggering $13 billion--a total increase of 550 percent, or an average annual increase of about 13 percent. The most dramatic rise, as shown below, has occurred in the area of direct student assistance.

In 1965, it is estimated that the Federal government provided about $200 million in student assistance; however, by 1979 total Federal outlays for students (inclusive of all programs, e.g., Office of Education, Social Security, Department of Defense, etc.) approached $8 billion. Even more telling is the fact that, in 1964, Federal assistance helped meet about two percent of total postsecondary student costs; by 1979, it is estimated that the Federal contribution had grown to about 15 percent of the total. Clearly, the Federal government is rapidly approaching the status of a major partner in the provision of higher education to America's youth.

CURRENT TOPICS OF THE DEBATE ON STUDENT FINANCIAL ASSISTANCE

The first years of the 1980s will be especially crucial in charting the future course of Federal involvement, the role of the institution, and the perception of the student's place in the aid process. Therefore, the decision to authorize a study of this magnitude, scope, and cost on the topic of student financial aid was made with full awareness that its

final product would, among other things, provide a valuable reference for those engaged in considering the current issues of debate on student financial assistance. These are briefly discussed below.

Congressional Reauthorization

The most active forum for the airing of views on the realm of Federal involvement in student aid is the current drafting of the Reauthorization of the Higher Education Act of 1965 by Congress. At the time of this writing, the House of Representatives has passed its own version of a reauthorization bill, while the appropriate Senate Committees are preparing to begin a mark-up of its own reauthorization proposal.

The scope of the debate on reauthorization has been virtually limitless. In addition to determining the levels at which the Basic Grant and Campus Based programs are to be funded for the coming years, Congress will be examining other aspects of the financial aid process. Below, are some examples of the issues which have been set before the Senate and House as they consider Title IV legislation:

- refinement of the BEOG and Campus Based need analysis formulas (e.g., asset protection allowances, definition of independent student status);
- financial aid funding for less than half-time students;
- expansion of aid programs directed to assist graduate students;
- restructuring of the Federally sponsored student loan programs (e.g., establishment of a national loan bank, consolidation of the NDSL and Guaranteed Student Loan (GSL) programs);
- elimination of the payment of subminimum wage to some College Work-Study recipients; and
- revision of the formula by which USOE allocates Campus Based funds to participating institutions.

Student-Consumer Issues

The student-institution relationship has acquired new significance in the last decade as society attempts to implement, through massive federal funding programs, the American dream of open access and free choice in postsecondary education for all citizens. In such a context, institutions of higher education, logically and ethically, should deal

in a fair and businesslike manner both with students who enroll and with those who seek information about the educational service offered.[4]

The above is a rather concise codification of the issues which form the basis for the student-consumer movement in the area of student financial aid. Although students are the most commonly identified "consumers" of student financial aid, the term is also broad enough to include family members (e.g., parents, spouse) who are contributing to the support of postsecondary students. Student consumerism also covers issues which are not necessarily relevant to this discussion of financial aid, including employment prospects of graduates, for example. Elaine H. El-Khawas, in an article entitled "Effective Response to Consumerism," outlines the basic areas of student-consumer concern which can be applied to a number of aspects of postsecondary education. These are:

1) protection from abuse, fraud, or misrepresentation;
2) better understanding of available options and institutions;
3) commitment to develop standards of "fair practice" in procedural aspects of the student-institutional relationship; and
4) "assurances about adequate program quality."[5]

Ms. El-Khawas views the rise of student consumerism as a very positive step towards an overall improvement of postsecondary education. She points out that in order to respond to the needs of consumers, an effective tripartite relationship will have to be established, with government, institutions, and students working in a cooperative manner. All parties, Ms. El-Khawas contends, must be prepared to reevaluate their present positions and practices:

> In its call for increased responsiveness to the needs of students in the procedural aspects of their relationships with postsecondary institutions, consumerism represents a general

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[4] Joan Stark, ed., The Many Faces of Student Consumerism (Lexington, Mass.: Lexington Books, 1977), p. 11.

[5] Elaine H. El-Khawas, "Effective Responses to Consumerism," in Stark, ibid., p. 125.

challenge to review existing practices and, as necessary, to develop new procedures to meet changing student needs.[6/]

The development of the Consumer Information Requirements represents the initial Federal response to this organized call for greater consumer awareness. In the years to come, those advocating student-consumer concerns hope to expand the consumer guidelines to cover a broad range of student financial aid practices, including the awarding of aid, determining need, and assigning College Work-Study jobs.

Uniformity of Practice

The initiation of a system of Campus Based student aid programs was prompted by a belief among members of Congress and USOE that there are a variety of local factors which could, and should, influence the awarding of student financial assistance funds. However, one has only to examine the complexities involved in administering the Basic Grant Program to get a feel for the impossibility of centrally administering the awarding of upwards of $5 billion in student aid funds.

By building in so much discretion on the institutional level, USOE has created a system which contains some degree of uncertainty. In response to the existing structure of these programs, institutions will necessarily develop practices which are unique to their own circumstances. The concern of USOE is not so much the uniqueness of the practices, but rather that the outcomes they produce (the awarding of aid to students) will not be consistent with the broader program goals. From the Federal viewpoint, schools must use their Campus Based aid allotments to increase the potential for access and retention among students with the greatest relative need. At this moment, USOE is considering whether its traditional reliance on the provision of guidance to financial aid offices on proper practices is enough to ensure the achievement of these desired outcomes. The alternative is to promulgate regulations creating a more uniform model of practice for all facets of the aid awarding

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6/ El-Khawas, ibid., p. 124.

process (see Volume I, Section 3, for greater detail), thus leaving the campuses with an administrative rather than a policy-oriented role in the aid delivery system. Many of the subsequent chapters in this report will address the existence of variant practices among institutions. Whether the existence of such variance is a healthy sign that the system is responsive to local considerations or symptomatic of a violation of the programs' legislative intent is the fulcrum of current debate on this matter.

Prevention of Institutional Fraud

As a corollary to the above discussion, consider that USOE must undertake an ongoing effort to ensure that the funds which it allocates are expended in accordance with the law. By opting for a more decentralized method of aiding students, USOE has, in fact, increased the potential for the abuse of public monies. In a recent effort to impose external controls on the uses which schools make of Federal aid funds, USOE has developed a sophisticated set of application and reporting requirements which provide it with descriptions of who received Federal student aid and in what amounts. Additionally, "program review audits," which are conducted at the institution by USOE personnel, are designed to provide the Federal government with more detailed records of the specific practices of selected aid offices. All of these methods of tracking institutional compliance are considered in detail in Volume I, Chapter 11, of this report. Suffice it to say at this point that USOE must attempt to walk a very narrow line in this matter between properly protecting public monies and not burdening institutions with an inordinate amount of paperwork.

RESEARCH APPROACH AND METHODOLOGY

Due to the complex nature and large scope of this research project, it was divided into three stages. Stage I included the description and evaluation of those operational and managerial procedures which could be analyzed using existing data sources or interviews with USOE staff, and the development of a detailed research design for a national survey of

postsecondary institutions and students. In Stage II, this design was implemented using a nationally representative sample of 172 postsecondary institutions and over 20,000 randomly selected students. Stage III of the project, which was separately funded and recently completed, was to assess the impact of the Middle Income Student Assistance Act (MISAA) on the distribution of student financial aid. The assessment was based on a quasi-experimental research design, carried out through a longitudinal follow-up of the same schools visited during the Stage II survey.

While a detailed discussion of the research design can be found elsewhere,[7/] the sampling strategy for this study can be easily summarized. First, a listing of schools, eligible to participate in either the Basic Grant or any of the Campus Based programs, was compiled using available USOE data files. Next, the institutions were stratified, or grouped, into one of 32 separate categories defined by the following variables;

- control: public, private, and proprietary;
- level: University/4-year, and 2-year or less;
- participation (for proprietary schools only): BEOG only, and Campus Based schools;
- type of Program (for proprietary shools only): cosmetology, business, trade/technical, and other;
- state effort in financial aid, defined in terms of the number of need-based programs offered: five or more programs, two to four programs, and one or fewer programs;
- selectivity, defined in terms of the school's average SAT/ACT score for all entering freshmen: schools with averages above the median, and those below; and
- size: 1,000 students or less, and over 1,000 students.

The nonprofit (public and private) 4-year schools were then ordered within each group on the basis of their average tuition and fees so as to ensure adequate representation of this important variable. Finally, two types of schools were deleted from this population listing prior to the

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7/ Applied Management Sciences, Technical Report No. 1: Sample Design, Student Survey Yield and Bias, November 1979.

selection of the sample: those which were hospital-based (958 schools); and those which had been included in a study being conducted by DHEW's Bureau of Student Financial Assistance (about 150 schools). The former were excluded since they were atypical of the universe of schools in terms of their structure and the types of aid offered, and were not of particular policy interest. The latter were dropped to avoid the potential for overburdening certain respondents.

Once these strata had been formed, the sample of 150 institutions originally desired was allocated to each group in proportion to the number in the population falling in each stratum, except that the initial division between profit-making and nonprofit schools was adjusted in the direction of the nonprofit institutions. This was necessary because although the profit-making schools account for about 40 percent of the schools, they account for only a small proportion of the students. At this point, the Office of Management and Budget (OMB) requested that the sample of 4-year public institutions be increased by 25 schools. These extra schools were also allocated proportionally to each of the public institution strata, thereby increasing the total sample to 175 postsecondary institutions. The actual selection of the sample of schools to participate in the survey was conducted randomly within each of the 32 groups, using the sampling proportion described above.

Within each of the selected schools, a random sample of students was selected by the individual local site Coordinators using detailed procedures developed by Applied Management Sciences. Basically, the schools were requested to: 1) compute a sampling ratio by dividing the total enrollment by the required sample size; 2) obtain a listing of all undergraduate students registered at least half time (i.e., eligible for Federal student aid); 3) stratify them by class level if at least a 2-year school; and 4) use the sampling ratio to systematically select a random sample of students. In most cases, these procedures required only minimal adjustments to fit individual situations. A small number of

schools (approximately eight institutions) were unable to stratify their students by class prior to selection. This was due mainly to the combination of a lack of data processing capability and an enrollment size too large to be handled manually. In these cases, the selection was made by the schools randomly without prior stratification.

The practical work of responding to the objectives of this project can be summarized as including:

- the review of literature and of expert views on issues of aid administration;
- the codification and analysis of basic data on the past operations of the Federal programs--particularly the authorization and utilization of Federal funds;
- a computer-based simulation analysis of the Basic Grant program;
- the detailed, on-site investigation of financial aid practices in each of the 172 colleges and other postsecondary schools; this work, carried out in early 1979, included—
  - obtaining extensive statistical and other data on local aid offices, their work, and their problems;
  - interviews with a number of campus officials directly concerned with student aid, including school presidents and deans, business officers, and extended talks with aid personnel;
  - surveys of a random sample of all undergraduate students enrolled at each school in the study, to obtain matched data on aid recipients and nonrecipients; and
  - extracts from the school records of the sampled undergraduate aid recipients, to obtain detailed data on individual needs, counseling, and aid awards;
- a less detailed mailed survey of an additional 1,100 schools, to obtain key data for more complex and precise analyses of institutional administrative procedures.

Collection of data and preparation for analysis are still underway for the last component listed above (the mailed institutional survey), and will be treated in a separate report to be prepared by the summer of 1980. The Stage III assessment of MISAA impact has been partially completed, and the results were reported to USOE during early April 1980.

This project has taken place, as previously noted, during a major Congressional debate over future policies and funding for these programs. Part of the function of this study, then, has also been to serve as a source of information for those deliberating about issues concerning student aid. The data generated for this project have a longer-range value as well. Student financial aid is an emergent profession, the newcomer among administrative roles in higher education. The scope of activities, the professional practices, and other major elements of the field are not well codified. State, regional, and national associations of financial aid officers, and others interested in this aspect of postsecondary education are beginning to deal with this need to develop the profession. Scattered articles and monographs reflect a general suspicion that practices are widely variable, that some aid operations are inadequately supported, and that, in general, students do not get similar treatment when they approach different institutions. This project provides the first unified data base for the examination of these and related issues. It makes available a coordinated set of information on schools, aid offices, and students. It is the first attempt to assess, on a national scale, the performance of this critical part of the higher education system.

SECTION I

BACKGROUND

PREFACE

This part of the report contains primarily background information dealing with: the history of Federal assistance to postsecondary students; a review of the extant literature on topics related to the issues addressed in this volume; and a description of the student's role in the financial aid delivery system. To the extent that these items have a bearing on the results presented in Section II, they have been provided as an aid to the reader. For those not wishing to spend time on such a discussion, we suggest proceeding directly to Section II.

2

BACKGROUND

> The real dilemma of American higher education is that we want so many to go to college but must charge them so much to do so. The history of the development and change in student financial aid in institutions of American higher education is the history of 300 years of struggling with this problem.
>
> Rexford G. Moon, Jr.[1]

INTRODUCTION

In the five years since this was written, little has changed. Congress, facing the difficult task of reauthorizing the Higher Education Act, is being bombarded with proposals on ways to modify the manner in which students are now being supported--centralize the distribution of Campus Based aid; change the treatment of independent students; create separate student and parent educational loan programs; distribute aid on the basis of income tax returns--and the list goes on. The struggle, it appears, has not yet been won.

While some of the propositions now before Congress are directed toward relatively simple procedural changes, others challenge the broad goals of Federal postsecondary education policy--the provision of equal opportunity. The decisions to be made are complex, and their impacts are both large and pervasive. At stake are over $5 billion in public monies per year and the futures of many postsecondary students and institutions.

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[1] Rexford G. Moon, Jr., "History of Institutional Financial Aid in the United States," Perspectives on Financial Aid (New York, N.Y.: College Entrance Examination Board, 1975), p. 1.

A BRIEF HISTORICAL PERSPECTIVE

The Origins of Federal Support: An Emphasis on Institutional Support

Support and control of higher education has, from the earliest days of this nation, been established as the primary responsibility of the states. This basic assumption of the separation of authority has, until recent times, defined the Federal role as being mainly that of supplementing the efforts of the states. At the Constitutional Convention of 1787, several proposals were advanced to empower the Federal government to establish institutions of higher education; all, however, were rejected.[2/]

This commitment to the separation of authority, however, should not belie the long-established American tradition of respect for education. "Given the dominant American ethos of 'democratic capitalism' and 'rugged individualism,' higher education has had a value insofar as it has helped each Horatio Alger get ahead in the economic and social system."[3/] America has not had a class society in the European sense, and deeply rooted in the operating norms of the national policy is the belief that upward mobility can be achieved through hard work and advanced education. The attainment of universal higher education as a utilitarian goal, however, has developed over a long period of time.

Its roots can be traced to the middle of the 19th century and the presidency of Andrew Johnson. Embracing libertarian Jeffersonian philosophy, "Americans under Johnsonianism chose to put their house in order..."[4/] as part of the period of post-Civil War reconstruction. The most notable step was the creation of a "Department of Education" on March 2, 1867, ending a long debate over the need to establish a place

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[2/] George N. Rainsford, Congress and Higher Education in the Nineteenth Century (Knoxville, Tennessee: 1972, University of Tennesse Press, 1975), p. 17.

[3/] L.E. Gladieux, and Thomas R. Wolanin, Congress and the Colleges (Lexington, Massachusetts: Lexington Books, 1975), p. 4.

[4/] Frederick Rudolph, The American College and University (New York, N.Y.: Vintage Books, 1965), p. 203.

for education in the Nation's Capitol.[5/] Despite the symbolic importance of recognition to education, it was the original Morrill Land Grant Act of 1862 (and the subsequent Morrill Act of 1890), however, that provided what would eventually become the ultimate bases for mass participation in higher education by legitimizing the role of the Federal government to ensure educational opportunity to classes of citizens previously excluded from such benefits.

The original 1862 Morrill legislation granted each state 30,000 acres of land for each Senator and Representative it had in Congress. The land was to be used to establish one or more instituitions of higher education for the purposes of teaching subjects related to agriculture and the mechanical arts (see 12 Stat. 503, July 2, 1862). While of great symbolic importance, it was the second Morrill Act of 1890 that began the actual flow of Federal dollars for the direct support of institutions of higher education. Under this later Act, Congress established an annual, graduated program of financial assistance. In both cases, however, the focus of Federal support was the institution and not the individual student. The latter would not arise until the mid-20th century.

The Beginnings of Federal Assistance to Student: The Early Focus on Self-Help

Direct Federal payments to students, unlike Federal grants to institutions of higher education, are of rather recent origin in the United States (see Exhibit 2.1). The first private endowment gift in American higher education was given to Harvard College in the 17th century for the establishment of scholarships and, until very recently, most Federal student aid was similarly restricted to institutional funds. In fact, support other than "college money" played little role in this nation's student aid resources until the early part of the 20th century. Faced with the devastating effects of World War I and economic

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5/Richard Lykes, Higher Education and the U.S. Office of Education (1867 - 1953) (Washington, D.C.: 1975), U.S. Office of Education, p. 3.

EXHIBIT 2.1: SIGNIFICANT DATES IN THE FEDERAL SUPPORT OF HIGHER EDUCATION

I. The Era of Institutional Support

1785	Northwest Ordinance
1787	Contract with the Ohio Company reserving two townships of land for the support of a university
1802	Establishment of U.S. Military Academy at West Point
1845	Establishment of U.S. Naval Academy at Annapolis
1862	Passage of the Morrill Act
1867	Creation of the first Department of Education
1874	Award of nautical training grants-first evidence of the principle of Federal "matching grants"
1879	First Federal grants to Howard University
1887	Hatch Act establishing a system of agricultural experiment stations
1890	Passage of the Second Morrill Act
1914	Passage of the Smith-Lever Act for agriculture and home economics extension
1919	First Surplus Property Disposal made to educational institutions
1920	First establishment of ROTC units on college campuses

II. The Early Programs of Direct Student "Self-Help" Support

1935	Creation of the National Youth Administration
1937	Public Health Service Fellowships inaugurated

III. Continued Student Support - The Advent of Nonreturnable Support

1944	Passage of the Serviceman's Readjustment Act
1946	Establishment of the "Fulbright Program"
1952	First National Science Foundation Fellowship awarded
1958	Passage of the National Defense Education Act
1961	Passage of Fulbright-Hayes Act

IV. The Current Programs - The Goal of Educational Opportunity

1964	The Economic Opportunity Act
1965	The Higher Education Act
1972	The Education Amendments of 1972
1976	The Education Amendments of 1976
1978	The Middle Income Student Assistance Act (MISAA)
1979	Creation of the Education Department
1980	Reauthorization of Higher Education Act

depression, direct student support grew out of a commitment to mitigate the impact of these events on America's youth.

The advent of the Depression in the 1930s, with a quarter of the labor force out of work, found vast numbers of students leaving schools and colleges because their parents could no longer support them. As a means of stemming this tide of the unemployed, the Federal Emergency Relief Administration began a program very much like today's College Work-Study program, to provide part-time jobs on campus to assist these young people to continue their education. Begun in 1933, this emergency effort continued until 1943, under the direction of the National Youth Administration. Overall, it has been estimated that over 600,000 students participated in the program between 1935 and 1943.

All nonprofit institutions were eligible to participate, and each institution was given a student employment quota based on a percentage of regular enrollment. Payments were made directly to students but institutions were responsible for providing jobs and for selecting eligible participants on the basis of financial need. This emphasis on need as an eligibility criterion, while admittedly a response to a broader social problem, established the precedent for the student assistance programs that were to come a quarter of a century later.

The second program of direct Federal payments to students, the student war loans, started during World War II, and was designed to encourage students pursuing degrees in medicine, science, or engineering to complete their education before going to work. Between 1943 and 1944, approximately $3 million was loaned to about 11,000 students. While modest in nature, this program continued the early emphasis on self-help support but shifted the focus from current earnings (jobs) to future earnings (loans).

The next step in the history of Federal support was the Serviceman's Readjustment Act of 1944 commonly known as the "G.I. Bill of Rights." Building on the precedent established in the Morrill Act, the G.I. Bill authorized the most extensive program of aid to students by providing educational benefits for tens of thousands of veterans. The G.I. Bill

included tuition and living allowances paid by the Veterans Administration, and as Kaufman suggests:

> This legislation was based upon the assumption that educational opportunity was the right of the citizen and that this country had need for a highly educated population. Another assumption was that education would lead to behaviors that could only increase the wellbeing of the individual and the general growth and development of the nation.6/

The impetus for this program was a concern about what the nation should do to assist the returning veterans to reenter the postwar economy. Having interrupted or delayed their education, the veterans were seen as being entitled to some form of compensation. The G.I. Bill not only provided such compensation but also reduced the negative economic impact of a sudden addition of millions of workers to an already stressed labor market.

The G.I. Bill of Rights is notable for two reasons: it represents the first truly large-scale Federal commitment to the direct support of postsecondary students; and it was the first program to provide such support in the form of nonreturnable aid. The emphasis of the G.I. Bill, however, was not on financial need but rather on aiding those who had earned the right to receive public support. The objective of ensuring broad educational opportunity had not yet reached the level of Federal policy.

The National Defense Education Act

By the late 1950s, Federal commitments to higher education were still modest. In addition to the GI Bill, the most extensive programs were in the area of research support under the newly established National Science Foundation. However, the launching of the first man-made satellite by the Soviet Union in 1958, ushered in the era of increasing Federal involvement in higher education. The policy of state primacy was, at least for the moment, put aside in the race to compete with the Soviet Union. "Since Sputnik was a product of Soviet scientific manpower and research, the United States would meet the challenge by doing better in

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6/Martin L. Kaufman, "Federal Aid to Education: 1867-1971", Journal of Education, 1972 (154:3), p. 29.

these areas."[7] The hope of improved scientific education led in 1958 to the passage of the National Defense Education Act (NDEA) which made available low-interest, long-term loans to needy students whose academic abilities and choice of curriculum qualified them for such assistance. While the Act did not include the provision of nonreturnable aid (this was a point of deep controversy during the legislative debates), its passage was a landmark in Federal higher education policy. Although it was initially proposed as a temporary measure, it has become, as the National Direct Student Loan (NDSL) program, a permanent part of what is today a far broader effort to assist students.

The Higher Education Acts of 1965 and 1972: The Commitment to Educational Opportunity

As the NDEA grew out of the need to counter a perceived threat to national security, the programs of the 1960s also evolved from feelings of national need. Unlike the earlier case, however, the need here was clearly internal. Following the landslide victory of Lyndon Johnson in 1964, the Administration launched the "Great Society's War on Poverty" with the passage of both the Economic Opportunity Act and the Civil Rights Act. The former supplied job opportunities to low-income students through the College Work-Study Program. The following year, 1965, was dominated by historic legislation: Medicare; the Voting Rights Act; the Elementary and Secondary Act (ESEA); and, in the wake of ESEA, the Higher Education Act of 1965 (HEA-65).

Although the importance of HEA-65 was initially obscured by the education community's focus on ESEA, its passage clearly established a new social commitment to the advancement of equal educational opportunity through increased support for higher education. The "...benefits of postsecondary education..." are to be made avaliable to all "...qualified

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[7] Gladieux and Wolanin (1976), p. 9.

students who, for the lack of financial means, would be unable to obtain such benefits without..."[8] the availability of external assistance. As an outgrowth of the war on poverty and discrimination, public attention was finally focused, the financial obstacles to higher education, and public monies were targeted to people who required help in overcoming this barrier.

The nation's commitment to equal opportunity was not an invention of the ferment of the 1960s, but was, rather, the natural result of a philosophical perspective that has run through years of American higher education. The land-grant college movement, the GI Bill, and the postwar enrollment boom all worked to achieve greater access to the benefits of continued education. "But in the 1960s, the concept and the ideal of equal educational opportunity took on new dimensions, a new urgency, and a central place in public policymaking for higher education. At the opening of the 1970s it was perceived as a major part of the nation's unfinished business."[9]

What is most striking about the Higher Education Act is its establishment of a "moral imperative" to correct earlier wrongs. The climate of the time was dominated by a new consciousness—the nation became committed to resolving many of its long-standing social ills, particularly the breaking of the "poverty cycle." Such introspection affected every sector of the society, including the higher education community. Campuses everywhere were forced to examine their records for failures to extend the educational opportunities to ethnic minorities and the economically disadvantaged.

The result was a significant departure from the traditional determinants of access to scholastic benefits. No longer was eligibility to be based solely on merit. With the exception of a vague provision that "evidence of academic or creative promise" be demonstrated,

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[8]Higher Education Act of 1965, Part A, Subpart 2, Section 413A(a).

[9]Gladieux and Wolanin, p. 15.

eligibility was to be based, above all, on economic need. Whereas education had previously been called upon to meet the national needs for trained manpower and to expand research, it was now being asked to be the "great equalizer" of America's citizens.

While quantitative evidence has not been strong in the ability of education to ameliorate the effects of poverty, Jencks has indicated that:

> ...educational attainment is by far the most powerful measurable determinant of occupational status.... While we should be wary of assuming that access to higher education has a decisive causal effect on a man's chances of upward or downward mobility, it seems fairly likely that it does have some effect.[10/]

Similarly, Schultz contends that the provision of expanded educational opportunities has "...been a major factor during recent decades in changing the distribution of personal income."[11/] James Coleman, examining the broad issues of educational opportunity, has pointed out that the responsibility for such opportunity has evolved in this country from the passive role of providing free public education resources to be used by the family to an active responsibility for creating equality of educational achievement.[12/] Jencks, in a related context analyzing the effects of higher education on social mobility, concludes that:

> There are, after all, only two ways to make men equal: we can reduce the privilege of the elite or we can increase the privilege of the nonelite.... The only practical way to move towards equality, then, is to help those at the lower levels of society.[13/]

[10/] Christopher Jencks, "Social Stratification and Higher Education," Harvard Educational Review, 1968, Vol. 78, pp. 227-316.

[11/] Theodore W. Schultz, "Resources for Higher Education: An Economist's View," Journal of Political Economy, May/June 1969, Vol. 76, p. 3.

[12/] James Coleman, "The Concept of Equality of Educational Opportunity," Harvard Educational Review, 1968, Vol. 38, pp. 7-22.

[13/] Jencks, ibid., p. 316.

Clearly, this has been the intent of the Federal student assistance programs which have evolved since the passage of the Higher Education Act of 1965 (HEA-65).

This landmark law (HEA-65) included five major components:

- the establishment of the first program of Federal scholarships for college undergraduates, the "Educational Opportunity Grants" program, which provided grants to students "of exceptional financial need;"
- the transfer of the recently created College Work-Study (CWS) program to the U.S. Office of Education (USOE) where the government provided 80 percent of the cost of part-time jobs for students (preference was given to students from low-income families);
- renewal of the National Defense Student Loan Program;[14/]
- the establishment of the Guaranteed Student Loan (GSL) program to increase the availability of private capital for student loans (for the students whose families had adjusted incomes of less than $15,000, an interest subsidy was also provided while the student was in school); and
- categorical funding for buildings and equipment such as assistance for college libraries and aid to developing institutions.

The first three programs were "need based" as distinguished from veterans' benefits, or from institutional scholarships given for talent or academic achievement alone. The GSL program was included in order to provide support primarily to middle-income families and as a means to diffuse the growing support for the use of income tax credits to aid postsecondary students. The GSL component also established the first consumer protection legislation for Federal support to higher education which was to be later formalized in the Education Amendments of 1976.

With the exception of GSL, the student aid programs established under HEA-65 used a "Campus Based" administrative structure. College and university administrators were given broad authority to ascertain which

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14/ In 1972 the Educational Opportunity Grants program was modified and renamed the Supplemental Educational Opportunity Grants program (SEOG). National Defense Student Loans were renamed National Direct Student Loans (NDSL).

students needed aid and to decide how much Federal aid each student should receive. While this approach relieved USOE of most of the staffing and management burdens involved in carrying out the new commitment to equal opportunity in higher education, it soon gave rise to serious problems. As Gladieux and Wolanin write:

> The conviction grew among the HEW planners that the delivery system for federal student aid was haphazard and inconsistent. The system seemed to fail...to provide students with adequate knowledge of the amount of aid they could count on; too many contingencies were involved. Above all, the system seemed to violate an important principle: that students with the same financial need should be treated equally.[15/]

Also during this period, many institutions saw costs rising faster than their revenues, leading to what Cheit referred to as a "new depression in higher education."[16/] The drive for equality of opportunity placed new burdens upon higher education institutions to adapt themselves to a new and different group of students. Compounding the problem were the growing financial crises facing many colleges, campus unrest, and a new wave of student consumerism. If any single word can sum up the period of the early 1960s to the early 1970s it would be "reform."

In need of increased revenues, institutions turned to the Federal government for ways to ease the burden. While a large part of the academic community, and many in Congress, favored keeping tuitions low

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15/ Lawrence E. Gladieux, and Thomas R. Wolanin, Congress and the Colleges (Lexington, Massachusetts: Lexington Books, 1976), p. 62.

16/ Earl Cheit, The New Depression in Higher Education (New York, N.Y.: McGraw Hill, 1971).

and persuading the Federal government to give institutions more money, a different approach prevailed.[17] Reports of the Carnegie Commission and the Committee for Economic Development recommended that tuitions at public institutions be gradually raised, provided adequate aid for low- and middle-income students was made available. In principle, this would capture some of the tuition subsidies received by high-income students and redistribute those funds to support low-income students, and to increase institutions' revenues. After much debate, Congress passed the Education Amendments of 1972 (EA-72) which resulted in direct student aid rather than increased institutional assistance. By so doing, the Federal government abandoned its previous emphasis on "categorical" programs and sought to advance the concept of equal educational opportunity. The Federal government became a separate actor in the delivery of postsecondary education and established, at least for the time being, direct financial aid to students as the primary method of support to higher education.

The debate over Federal student aid policy during the passage of EA-72 was, and continues to be, centered on proposals for direct aid to students (and/or their families) and aid to institutions. The differences are significant since they touch upon serious issues of Federalism—how the burden of paying for higher education should be shared and how control should be distributed.

On the side of "who pays," the concern has been related to the effects of what is often called "the cost spiral." It has been contended that by making the student the dominant beneficiary of aid, the Federal government would be creating an upward pressure on college tuitions that would require continually increasing amounts of Federal aid to help students cope with the inflationary spiral. On the other hand, direct aid to institutions often cited as the way to relieve the pressure of increasing costs; would have the Federal government, in effect, underwriting the nation's higher education institutions.

17/ Howard R. Bowen, Financing Higher Education: The Current State of the Debate, American Association of Colleges, 1974.

The selected strategies also substantially affect the extant power relationships. If more funds are channeled to students, their choices and preferences would influence educational decision-making. Alternatively, a strategy of direct institutional support would put the college administration in the proverbial "driver's seat." Greater support for state programs would similarly shift the control to the state legislatures. Related to the argument of control are the issues of diversity and quality in higher education. An argument for direct student aid has the greater likelihood of making institutions more responsive to market pressures. Supporters of institutional support counter that the only way to insure diversity and quality is to guarantee the survival of the greatest number of institutions (public as well as private).

While renewing the other Campus Based programs, EA-72 founded the State Student Incentive Grant program (SSIG) to expand the role of states in providing educational opportunity, and also created a new program of Basic Educational Opportunity Grants (BEOG). The BEOG program differs from the Campus Based programs of student aid in that USOE, with Congressional approval, determines the criteria and calculations to be used in assessing applicants' ability to pay for education. A single formula is applied uniformly throughout the nation and, unlike Campus Based aid, BEOGs are "portable." Once a student has established his/her eligibility for a BEOG, he/she can claim the grant for use at any eligible postsecondary institution in the country. In so doing, however, the Federal government created a dual system of student aid administration--one for BEOG and a second for the Campus Based programs.

The result of these actions has been the creation of a system that is "...frustrating, unreasonable, intimidating and mysterious. Many public officials and administrators perceive it as unjustifiably complex, inconsistent, inequitable. These conditions persist in spite of the efforts of elected officials, administrators in government and education,

and student groups.[18] Since 1972, both government and institutional officials have made frequent attempts to reduce this confusion, complexity, and inconsistency in student aid. Most notably, in 1974 the National Task Force on Student Aid Problems (the "Keppel Task Force") made an effort to deal with the apparent variation in governmental and institutional practices. Francis Keppel chaired the group of representatives from the College Entrance Examination Board, American College Testing Program, private foundations, educational institutions, state student aid programs, and USOE. Participants limited their attention to matters of administration and coordination and did not attempt to deal with problems of social policy and program design. They sought to identify steps that could be taken voluntarily by individuals and organizations directly involved, rather than by the imposition of Federal control. The final report of the Keppel Task Force included recommendations regarding standardization of need analysis, application forms, timing and coordination of decisions, packaging, personnel and training, and student appeals procedures.[19]

In spite of these recurrent efforts to simplify and systematize student aid, the diversity in practices still exists. As concluded by Applied Management Sciences in our Site Visit Report:

> The schools are not always likely to fit a predetermined model of a well-run financial aid operation, either in the level of effort and resources they commit to this function or in the basic knowledge they may have of principles of financial aid operations.... We can report major variations from school to school in size, salary levels, and degrees of experience of financial aid personnel; in the level of sophistication of aid packaging philosophies; in the rigor and objectivity of needs analysis systems. The range of variation in level of practice would appear to be astonishingly large. Some institutions have highly refined, rationalized, explicit,

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18/ Harlan Cooper, Diversity in College and University Administration of Federal Student Financial Aid, Doctoral Dissertation, Stanford University, 1979, p. 13.

19/ Francis Keppel, National Task Force on Student Aid Problems. Final Report (Washington, D.C.: U.S. Office of Education), 1975.

well-supported systems for distributing aid to students efficiently and fairly. Others appear to have no organized system of distribution whatever...20/

If a single word could be used to categorize our preliminary findings, it would be diversity. Preconceived assumptions of a systematic pattern of aid distribution do not appear to match reality, at least on the basis of our early analysis of the data. This is not to say that diversity is, in and of itself, a necessarily negative finding. On the contrary, one would expect differences to exist among schools, particularly since the Campus Based programs were designed to best meet the needs of individual aid applicants. However, the differences observed from one school to the next were not confined to matters of professional approach (such as packaging philosophies for assembling aid for particular kinds of students) or of discretionary practice (such as the choice to emphasize or de-emphasize various Campus Based programs). Such factors were expected to vary (and in fact they did). What was not expected was the extent of these variations; the equally striking variance in the aid officers' budgetary and administrative support, working conditions, and kinds of student aid resources that were available; and, most importantly, the absence, in some cases, of any systematic procedures for dealing with all these matters.

The Federal aid programs and their institutional administrative structure are vulnerable to critics who seek to replace: a perceived situation of unbridled discretion with increased government regulation; institutional administration for government administration; BEOG for Campus Based programs; or direct government transfers for income tax "expenditures." Each new proposal for change has seemingly attempted to move toward increased centralization in terms of both policy-setting and program administration. In fact, adoption of a tax credit approach, like

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20/Applied Management Sciences, Inc., Study of Program Management Procedures in the Campus-Based and Basic Grant Programs: Site Visit Report, June 1979.

that recently considered by the Congress, would have shifted the administration of student aid from USOE and postsecondary institutions to the Internal Revenue Service.

The Post-1972 Period

In the period since the passage of the Education Amendments of 1972, the financial aid community has worked towards the refinement of the existing system. The Campus Based and Basic Grant programs were reaffirmed by the Congress through the passage of the Education Amendments of 1976. Rather than electing to restructure the aid programs, Congress bolstered them with the addition of new funding. As part of this legislation, the maximum BEOG award was raised from $1400 to $1600. Additionally, the amendments included the Student Consumer Information Requirements. These requirements recognized the rights of students to have access to detailed, accurate information on all Federally sponsored student aid programs; expanding on a theme first included in the GSL provisions of the Education Amendments of 1972.[21] Student Consumer Information Requirements are detailed in Volume I, Chapter 11, of this report.

The continued commitment of the Federal government to expand the existing aid programs is further evidenced by the passage of the Middle Income Student Assistance Act (MISAA) in 1978. At the behest of President Carter, the Congress allocated significantly more funds to each of the Federal aid programs and made changes in need analysis formulas in order to extend eligibility for student aid to personnel from middle class circumstances. MISAA also raised the maximum BEOG award to $1800 and lifted all income criteria from the regulation governing Guaranteed Student Loans.[22]

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[21] The Student Consumer Information Requirement also mandated that institution provide enrollees and prospective students with a wide range of information on education and career-related topics.

[22] A thorough discussion of MISAA and its effect on students is contained in "The Study of the Impact of the Middle Income Student Assistance Act" which was conducted by Applied Management Sciences as a follow-up to this study.

The latest legislative step was the creation of the Department of Education in 1979. Although it may not directly affect the current state of student aid, the Department (ED, as it will be known), scheduled to open its doors in May of 1980, shifts the location of postsecondary programs within the Executive Branch. The Secretary of Education and the Assistant Secretary for Postsecondary Education will have major roles in shaping the future of student financial assistance.

POLICY GOALS

The passage of the 1972 Education Act, as discussed above, created a basic charter for Federal higher education policy; one that has had enduring significance over the ensuing eight years. As Gladieux and Wolanin point out, "...the policy themes were largely unarticulated during passage of the law and are only implicit in it. Others were voiced again and again but only in catch phrases...."[23/] They identify eight distinct, albeit interrelated, themes: equal opportunity; student sovereignty; the division of Federal/state roles; Federal/state partnership; broadening the educational mainstream; reform and innovation; information and accountability; and continuity. Some of these aims are complementary while others are clearly at odds. They reflect the very nature of higher education legislation, i.e., a collection of values and objectives that do not reflect a coordinated or coherent philosophy.

Equal Opportunity

Above all, the goal of equal opportunity dominates both the law and the legislative history. The principal objective is the removal of financial barriers which might otherwise deter an individual from the pursuit of education or training beyond high school. As Fife points out, this goal has three objectives:

- to provide students access to a postsecondary education;
- to allow students reasonable choice, i.e., freedom to select the particular source of this education; and

23/Gladiuex and Wolanin, pp. 223-224.

- to permit retention or persistence, i.e., to enable the student to pursue this education to its conclusion.[24]

These are all distributive issues in that they deal with the ways in which the benefits of student aid are meted out to individuals.

For an individual to achieve equal educational opportunity, there must first be available the access (defined as the student's participation in some form of postsecondary education) to an institution of higher education. As stated by the Carnegie Commission:

> We favor, on the other hand, universal access for those who want to enter institutions of higher education, are able to make reasonable progress after enrollment, and can benefit from attendance.[25]

Furthermore, the role of student financial aid programs should be to eliminate the financial barriers that prevent the attainment of this universal access.[26] As commonly interpreted, this means that all students should have an "equal chance" to advance their education, regardless of their individual intelligence or motivation.

Student access to postsecondary education is influenced by Federal policies in several ways. Policies that either increase a student's anticipated future income stream (e.g., affirmative action impact or employment opportunities for members of minority groups) or decrease the costs associated with college attendance (e.g., grants-in-aid, fellowships) favorably affect the expected rate of return. Federal BEOG,

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[24] Jonathan D. Fife, Applying the Goals of Student Financial Aid (Washington, D.C.: American Association for Higher Education, 1975), p. 1.

[25] Carnegie Commission on Higher Education, Quality and Equality: Revised Recommendations. New Levels of Federal Responsibility for Higher Education (New York, N.Y.: McGraw Hill Company, 1970).

[26] The National Commission on Financing Postsecondary Education, Financing Postsecondary Education in the United States (Washington, D.C., 1973), p. 53.

SEOG, and the State Student Incentive Grant (SSIG) programs are one strategy for encouraging further education for those with limited resources.

The grant programs, of which BEOG is by far the largest, attempt to meet this objective by equalizing the financial barriers faced by potential students across family wealth levels. Toward this end, expected family contributions from assets and income are calculated, a level of student self-help is assumed, and grants are given to offset differences in family aid to the student among participants. Thus, Basic Grants may be seen as an attempt to equalize total nonreturnable aid (including expected parental contribution) that students receive at similarly priced institutions. The remaining price (cost of education minus nonreturnable aid) that students face for their postsecondary education is assumed to be made up by students' loan and work.

A second way in which Federal programs may encourage increased postsecondary participation is to neutralize imperfections in capital and employment markets by making "self-help" a readily available option for the student. The GSL and NDSL programs are designed to provide a more adequate capital market for students who otherwise would be unduly penalized. Work-study programs, by providing educationally related on-campus employment, are also an important part of this strategy.

Third, insofar as go/no-go decisions are based on student perceptions, improved information, advisement, and counseling contribute to better informed judgments. Talent Search and Upward Bound programs are examples of this Federal strategy. Other programs that assist in recruitment, provide career and occupational counseling, or provide supportive services (remediation, veterans' counselors), add to the information flow or help to instill confidence in students to advance their education. Thus, there are a variety of ways in which Federal programs impinge on the access decision and help to reduce barriers to further education.

The second component, choice, is dependent upon the issues of access, i.e., before a student can choose a particular school or educational program, he/she must have access to alternatives. As Pesqueire has noted:

> Equal opportunity really is a two-faceted concept. That is to say, first, we should speak of access to an equity in postsecondary education in terms of rates and patterns of enrollment. Secondly, we should speak of access to and equity in types or levels of institutions. There are two dimensions vis-a-vis equality of educational opportunity in higher education - choice as well as access.27/

Implicit in the goal of choice is the belief that a student's motivation in selecting a particular institution should be based primarily on nonfinancial considerations. In addition, as Fife states:

> Promotion of choice also recognizes that by allowing freer movement between institutions of various costs, greater competition will be encouraged. It is hypothesized that by increasing the dynamics of the market-place, institutions will be forced to become more sensitive to the student's educational needs. Students, on the other hand, should be expected to select institutions that will provide them with the most education for their money. This will stimulate the less efficient institutions to reexamine their organization and strive to become more efficient to compete with other institutions.28/

The resulting diversity and competition among institutions can be thought of, then, as a secondary goal of student aid.

College choice--that is, broadening the feasible set of options from which a student selects an institution to attend--is also affected by Federal programs. Grant-in-aid programs, such as BEOG, which base assistance levels on the cost of college attended, help to raise the perceived rate of return for high tuition options. If students are to be enabled to select an institution that best fits their educational needs, then reducing differences in cost that are unrelated to educational

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27/R.E. Pesqueire, "Equal Opportunity in Higher Education: Choice as Well as Access," College Board Review, No. 97 (Fall 1975), p. 33.

28/Fife, ibid., p. 33.

program or quality provides a greater measure of equality of opportunity to the student with limited means. Improved information and differential assistance levels (based on tuition charges) are strategies that broaden the range of choice for potential students among public and independent institutions, and between community college vocational programs and proprietary schools.

The final area, persistence, is related to the student's ability to complete his/her educational objectives. Strategies affecting persistence are analogous to access strategies; completion of a course of study can be considered to be a continuous series of go/no-go decisions based on reevaluations of added costs and benefits. In today's world, where dropping-out or stopping-out are more common, the concept of persistence must be extended over the period of adult life. Late entrance, or reentrance, is becoming more common, and Federal programs are significant insofar as they may penalize, or be especially designed to assist, the older out-of-phase student.

The rates of return to investment in higher education are not linear with respect to the number of years completed. In fact, as Olson, White, and Shefrin point out, "college should be taken as a package or not at all due to the large, positive effect of the fourth year of college (a possible 'sheepskin effect')."[29/] Yet, as is known, the dropout rates for college students are extremely high. Using National Longitudinal Study data as source, of those in the high school class of 1972 who entered community colleges in the fall of 1972, only 63 percent continued in 1973. Similarly, for those who attended a 4-year college in 1972, only 68 percent continued in 1974.

A major assumption underlying student aid programs is that many needy students require financial assistance in order to remain in school.

29/ Lawrence Olson, Halbert White, and H.M. Shefrin, "Optimal Investment in Schooling When Incomes Are Risky," Journal of Political Economy, Volume 87, No. 3, 1979.

This hypothesis is supported by the recent findings of Maxwell who concludes that, controlling for parental income, type of institution attended, race and educational cost, "...aid always increases persistence...aid is particularly effective for low income students who pay low or high tuition...."[30/]

Therefore, the third goal that must be met for the achievement of equal educational opportunity is that of retention. As long as they are qualified and motivated, students should be afforded the opportunity to pursue their education to its completion. While this may seem obvious, it has been often overlooked. Most student aid programs have sought to maximize the breadth of the distribution of aid funds and have not provided sufficient emphasis on continuing support for ongoing students.[31/]

Student Sovereignty

As a corollary to the goal of equal opportunity, the law adhered to the concept of student sovereignty in the market for postsecondary education, i.e., the choices of students, and not institutions, are given first priority in Federal support to higher education. While arguments were advanced for institutional support as a means of ensuring the survival of private schools in particular, the legislation has clearly articulated a desire to place the power of choice in the hands of needy students. The integrity of the nation's institutions, while an important goal, was seen to be secondary to responsiveness to student needs.

The Provision of Federal-State Roles

The 1972 Education Act clearly reaffirmed the long-standing boundary between state and Federal authority. Proposals to underwrite the entire higher education system were rejected in favor of filling specific gaps

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30/ James Maxwell, "Effect of Financial Aid on Persistence in College," Paper presented at the Annual Meeting of the American Education Research Association, 1980, p. 10.

31/ National Task Force, 1975, ibid.

in the existing patterns of distribution. To the extent that equality of opportunity was not being afforded to certain types of students, the Federal role would be to address such inequities. The states would retain primary responsibility for the provision of educational services.

Federal-State Partnership

While on the one hand articulating support for state primacy, the 1972 Education Act also sought to encourage forms of Federal-state partnership. Specifically, it created the State Student Incentive Grant Program (SSIG) which established a Federal-state matching arrangement to increase funding of state-administered scholarships for needy students, the intent being to enlist the aid of the states in the drive to achieve the goal of equal educational opportunity.

Broadening the Educational Mainstream

The Act gave recognition to nontraditional students and institutions. While more remains to be done in this area, the extention of support to vocational programs and to students who attend less than full time resulted in the Federal adoption of a broader view of postsecondary education and one that was far more realistic considering the trend towards lifetime learning and the growing emphasis on occupational training.

Reform and Innovation

In addition to broadening the realm of higher education, the 1972 Act also established mechanisms which, albeit indirectly, would work to encourage change in the educational establishment. As Gladieux and Wolanin suggest, the intent was that "...students, 'voting with their feet,' will carry Federal funds into the schools they decide to attend. Moreover, the adoption of the concept of postsecondary education gave federal recognition to a broader range of options—a bigger marketplace—within which student choices could be exercised, thus helping to assure that the basic dynamic of the market, competition, would work more effectively."[32/]

32/Gladieux and Wolanin, p. 227.

3

LITERATURE REVIEW

THE CURRENT STUDY IN RELATION TO PRIOR RESEARCH: THE DEVELOPMENT OF A RESEARCH MODEL

The Weaknesses of Prior Research

This section deals with a review of prior studies of the financial aid system in order to place our current research effort in proper perspective. The focus here is primarily on those studies which have emphasized student outcomes; the literature on institutional practices can be found in Volume I. We begin here by suggesting the general weaknesses of prior studies and the ways in which the current effort is intended to overcome and to compensate for these weaknesses. This starting point is of considerable importance since knowledge in any substantive area ought to be cumulative, and prior research should have a major impact on the substance and method of later research.

The philosophy and history which lie behind financial aid (as described in previous chapters) have always had a major impact on the resulting research. Largely funded by Federal or state governments, or postsecondary institutions themselves, such research has typically described the general goals of financial aid, chosen one or two of these goals as a central focus, and tried to assess whether or not the financial aid system achieved those goals. While the list of studies and questions that have been addressed in this manner is long. It would include at least the following considerations:

Who wants aid (at a macro level of demand)?

Kohn, et al. (1972),[1] Campbell and Siegel (1967), Hight (1970), Hoenack (1967), Hoenak, et al. (1973), Radner and Miller (1970, 1975), Corrazini, et al. (1972), Spies (1973), Jackson and Weathersby (1975), Carrol, et al. (1977), Barnes, et al. (1972, 1975), Feldman and Hoenack (1969).

In what form do students want it?

Brugel, et al. (1977), Leslie (1976), Tombough (1972).

Who receives financial aid?

ACE Policy Briefs (Aug. 1974), Penn and Vegil (1976), Stewart (1975), Branson (1970), Schlekat (1968), Nelson (1974, 1976), Wagner and Tabler (1972), Lee, et al (1975), Atelsek and Gomberg (1977).

Who fails to repay the returnable portion and why?

Walton (1968), Stover (1971), Bergen, Bergen and Miller (1972), Stephens (1977), Stockham and Hesseldenz (1979)

How does aid affect access?

Sewell and Shah (1968), Cohig and Nam (1974), Tillery and Kildegaard (1973), Berdie and Hood (1966), Folger, Astin and Boyer (1970), Fife and Leslie (1976), Fenske and Boyd (1971), Fields and LeMay (1973), Penn and Vegil (1976), Peng, et al. (1972), Fenske, Boyd and Maxey (1979), Crawford (1966), Trent (1977).

How does aid affect academic achievement and persistence?

Baber and Caple (1970), Wenc (1977), Fields and LeMay (1973), Bergen, Upham and Bergen (1970), Parker and Clark (1956), Holmes (1964), Astin (1975)

How does aid affect choice?

Fife (1975a, 1975b), Tillery, et al. (1966), Knoell (1970), Tuckman and Ford (1972), Fife and Leslie (1976), Fenske, Boyd and Maxey (1979), Astin (1979)

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[1] All references can be found in the bibliography provided at the end of this chapter.

What will happen if the structure of aid is changed?

> Froomkin (1978), Corwin and Knepper (1977), Carrol, et al. (1977), Barnes, et al. (1972, 1975), McNulty (1973), Kirkwood and Mundell (1975), Leslie (Oct. 1976), Congressional Budget Office (1977, 1978), Rice (1977), Carlson (1975).

Though the list is impressive, there are at least four areas in which the research conducted to date has been inadequate.

1) From a substantive point of view, not enough thinking has gone into an examination of the goals of financial aid. Here the issue is not the setting of the goals, because the philosophical and moral questions of what goals the financial aid system should try to accomplish are beyond the scope of empirical research; rather, the issue is one of how to measure whether or not the goals have been achieved once they have been set. Furthermore, once the level of goal achievement has been determined, we should endeavor to measure the efficiency or inefficiency with which it was accomplished. The studies listed above under the headings of access, persistence, and choice have generally shown that financial aid is successful in meeting its objectives. Yet, the measures of success utilized by these studies are very rudimentary. They have little sensitivity to different levels of success and there is little analysis of the efficiency of the financial aid system (i.e., the delivery of financial aid at the lowest administrative cost). To date, what has been lacking is an analysis of the overall delivery system, its quantifiable objectives, and alternative means available for reaching its objectives.

2) A second weakness of prior research, similar to the first, is that it has failed to explore the offshoots, spinoffs, and unintended consequences of financial aid. When one takes the stated goals of a program as the starting point and focuses solely on those goals, one may fail to see a host of effects which the program has that are tangentially related to the basic purpose. For some programs, these unintended and tangential outcomes can come to represent a very important part of the program, often of equal consequence with the intended outcomes. Financial aid would seem to fit this case.

The intent of Federal aid is to achieve greater access to postsecondary education, to increase the real choices open to students, to reduce attrition, to create greater diversity in higher education, to improve grades, etc. All of this is supposed to occur solely on the basis of the behaviors and choices of the student. The postsecondary institution is to be completely passive in the entire process, applying only objective formulae to decide how the aid will be distributed. However, considering the sums of money at stake, the pressures of the current educational marketplace, and the potent tool which financial aid places in the hands of the institutions, they may find it difficult to remain passive. The institutions have a great deal of discretion in administering aid. In a number of areas such as recruiting, dissemination of information, and counseling, it seems that some institutions pursue the goals of the institution even though they differ from the goals of the aid program. Prior research has taken such a narrow view of financial aid--i.e., has focused so much on the specifically stated goals of the program--that it has failed to come to grips with these aspects of the real world of financial aid.

3) The third weakness of prior research is one of methodological approach. As shown below in Exhibit 3.1, prior studies have largely been of two types. The most numerous microanalytic studies have been conducted with quantitative methods using individual students as the unit of analysis (cell 1 in Exhibit 3.1). These studies involve a sample of students (representative of an institution, a group of institutions, or a state) whose decisions to attend postsecondary education are analyzed. The data are either direct questions about choice (subjective) or implicit indicators of choice (objective). The purpose of these studies is usually to discover how important financial aid was in affecting the choices that were made. The second most numerous set of studies are qualitative studies of institutions (cell 4 in Exhibit 3.1). Here the data base is often anecdotal or experiential and the object is to describe how the financial aid system works. The other types of approaches that would be possible within this typology, that is,

qualitative studies of individuals (cell 2) and quantitative studies of institutions (cell 4), have been largely neglected in the existing literature. Although we have found a few of each type, neither of these combinations has been pursued as a serious research strategy, and this constitutes a major weakness in existing knowledge about financial aid. Over the course of this research project, our experience has convinced us that without having each approach to financial aid fully developed, we run the risk of having a distorted view of the system. In other words, each approach is specially suited to explicate some aspect of the overall system and, therefore, each methodology should be developed so that we have a balanced view of the system.

EXHIBIT 3.1: TYPES OF STUDIES OF FINANCIAL AID

Unit of Analysis	Methodological Approach: Quantitative	Methodological Approach: Qualitative
Person Level	Cell 1 Human Capital Psychological (The Current Study)	Cell 2 Case Studies of Students
Institution Level	Cell 3 (The Current Study)	Cell 4 Case Studies of Financial Aid Offices

4) These considerations about methodology lead directly to the fourth weakness of prior research. Since quantitative and comparative institutional studies have been so few and far between, very little information and knowledge about institutional practices have been generated and no clear picture of institutional practices has been drawn. Furthermore, and as a direct consequence of this, no large-scale effort has been made to examine the impact of institutional practices on the outcomes of the financial aid system. For example, while numerous

studies have shown that the amount of financial aid is an important factor in determining access, few studies have asked whether institutional packaging procedures, or dissemination of information, or any of the other management aspects of the financial aid system at the institution level have any impact either on the amount of aid offered or on access to education. Moreover, it should be noted that in order to address such issues, one must combine both institution-level and individual-level data. That is, the outcomes of the financial aid system are awards and choices at the individual level. They are the dependent variables to be explained. One needs a representative sample of students in order to measure these outcomes and, in order to measure institutional characteristics as variables affecting the outcome, one also needs a representative sample of institutions tied directly to the representative sample of students.

The General Approach of this Study: A Comparison to Prior Research

The current study tries to replicate the positive aspects of prior research, but its primary concern is to address each of these aforementioned weaknesses. Throughout subsequent chapters the specific methodological responses to these problems will be outlined. There are two general points in the approach of this study which are basic to all.

(1) At the most fundamental level, the data generated by this study are adequate to address two concepts of equity. The first concept of equity deals with the role of financial aid in the structure of higher education. The justification for financial aid, cited in numerous commission reports, legislative debates, and in the law itself, is to create greater access to higher education, more freedom of choice in higher education, and a better rate of completion of higher education. Financial aid is supposed to do this by removing the financial barriers that block access, reduce choice, and create attrition rates.

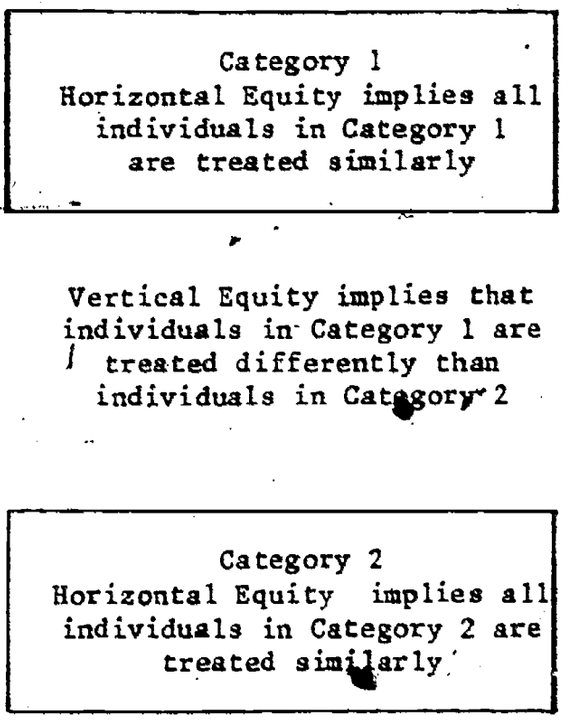
The current study addresses one aspect of this type of equity with a type of data that has not been available before. That is, the issue of educational choice has been examined here by analyzing the differences

and similarities between aid recipients and nonrecipients at the same schools. After controlling for relevant factors such as income and dependency status, any remaining differences between these two groups can reasonably be attributed to financial aid. While prior studies have addressed this point by comparing aid recipients to some hypothesized norm (usually a norm of all students in the state), the significant advance that this study represents is in having a far more credible norm. Following the comparison procedure outlined above, nonrecipients from the same schools are a better basis on which to infer differences in behavior that result from the award of financial aid. Thus, the first aspect of equity which this study addresses, educational choice, may be called "vertical or welfare equity," i.e., the goal is to enable individuals with different characteristics (especially different levels of economic resources) to receive differential treatment in order to have their chances to enter, choose, and complete higher education equalized by financial aid.

The second aspect of equity which this study addresses involves the operation of the financial aid system itself. Specifically, how does it decide who gets aid and how is aid distributed to the intended recipients? What factors determine who gets what type of aid and how much? To address these questions, we make comparisons between aid recipients and nonrecipients who are matched on certain key characteristics (especially family wealth and income) to see if similar students receive similar treatment in similar circumstances. We characterize this type of equity as the equity of aid distribution. It may be considered "horizontal or administrative equity." It reflects the goal that we expect individuals with similar characteristics (especially income and dependency status) at similarly priced institutions to be treated in similar ways. The conceptualization and measurement of horizontal equity in the financial aid system is an original area of investigation opened by this project.

It is important to grasp these two concepts of equity clearly. Vertical equity suggests that differential treatment should balance out

differences among individuals. To put it another way, differential treatment is justified if it seeks to overcome original differences. Horizontal equity suggests that similar individuals should be treated in similar fashion. While there is a sharp contrast between the two concepts of equity, they are not contradictory. It is entirely possible to have vertical equity between categories of individuals while having horizontal equity within categories:



Of course, as suggested above, the decision about which type of equity for which a system should strive is a moral and philosophical question that lies beyond the scope of research. Our job here is rather to examine what the system actually produces (not what it should produce) and why. To the extent possible, we have tried to avoid prescriptions leaving such decisions to the policymakers.

(2) In addition to having better measures of the traditional equity concepts of choice and distribution, this study utilizes a wide range of specific measures for each concept. In addition to measures of the amount and type of aid, we have examined various mixes of aid and the different packages received by different types of students. Furthermore,

in order to explain these differential outcomes, we have included a range of institutional level data not available heretofore. In fact, this study embodies the first nationwide, quantitative institution-level study (thus, it is the first nationwide study to fall into cell 3 in Exhibit 3.1), and it is the first nationwide study to combine person-level and institution-level data (cells 1 and 3). In addition, a prior report (the Site Visit Report) embodies aspects of cells 2 and 4 of Exhibit 3.1.

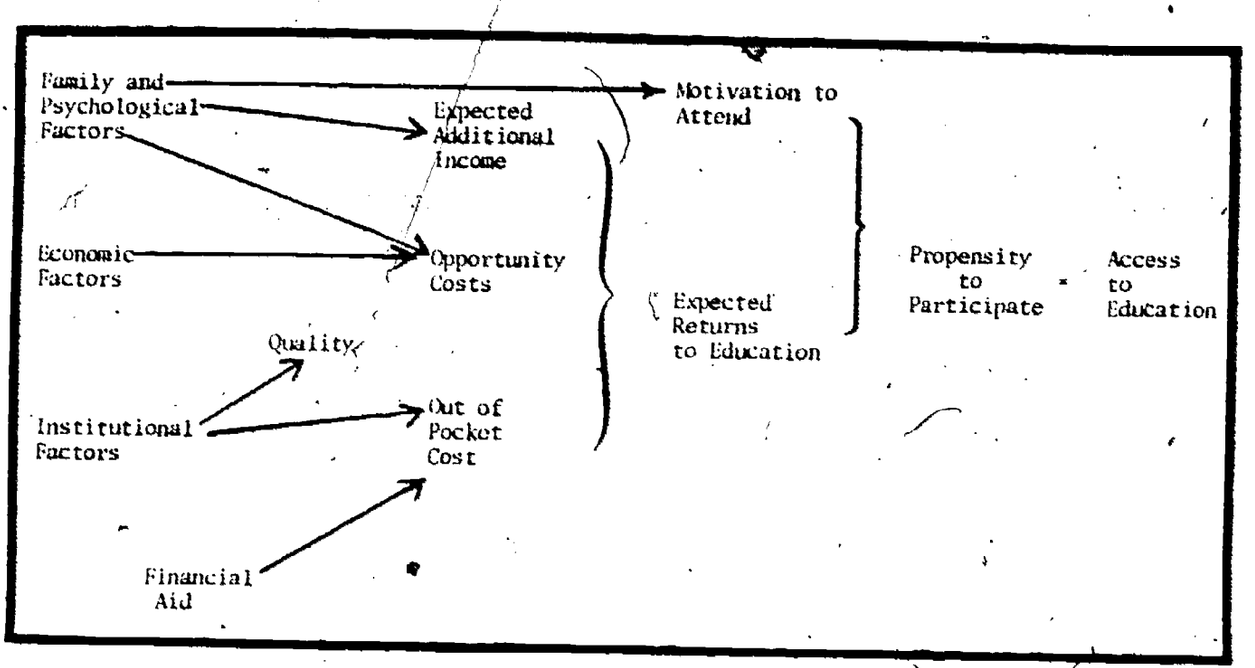
Individual Level Studies: Toward a Comprehensive Model of Financial Aid

The studies which have been previously classified as falling into the general approach which tests a financial aid goal (or key element underlying that goal) have also generally fallen into cell 1 of our typology. That is, when we ask the questions, "Who wants aid?", "In what form?" . . . etc., we do so with the individual in mind. Furthermore, it has become traditional to divide this group of studies between those that stress economic factors and those that stress noneconomic factors. The former usually involve considerations of costs, ability to pay, and expected returns, while the latter usually involve social psychological variables such as the attitudes of the student and significant others, the student's environment, and his or her academic abilities.

For earlier studies at least, one does tend to find a specialization in which the research focused on one or the other set of factors. However, recently this specialization has begun to break down and the distinction is probably no longer very useful. Most of the studies we would consider noneconomic in thrust still include some key economic variables--income, socioeconomic status, or educational cost. On the other hand, those studies which we would consider economic in thrust have incorporated noneconomic factors such as student ability or prior academic experience. A distinction between studies based on objective versus subjective data would probably be more useful, though even here the lines have begun to blur. In fact, the present research effort combines all of these types of data.

This project sought an approach which synthesized prior studies, rather than divided them. It has been our belief that the field of research in financial aid, and higher education in general, has been moving toward such a synthesis. Thus, the goal of this section is to describe a comprehensive model of financial aid which seems to exist, at least implicitly, in prior research. Such a model allows us to understand the broad consequences of financial aid and, more importantly, to understand its precise role in higher education in general. Financial aid is only one of many factors affecting individual participation in, or the aggregate demand for, higher education. To put this in a common frame of reference for evaluation research, programs ought to be assessed in terms of what they are specifically legislated and realistically can be expected to do. The importance of this frame of reference can be appreciated with respect to Exhibit 3.2, in which we identify three

EXHIBIT 3.2: AN OVERVIEW OF FACTORS AFFECTING THE PROPENSITY TO PARTICIPATE IN HIGHER EDUCATION



sets of factors, in addition to financial aid, which determine propensity to participate in postsecondary education. It is by altering these propensities at the individual level that access to education, which is the most fundamental goal of financial aid, is affected. Financial aid operates primarily on only one of the factors affecting propensity to participate--the cost of education (by lowering the effective price of education). There is a great deal, however, that it does not affect directly, including the returns to education and other motivations (e.g., preferences and tastes). We need to understand the relationship of financial aid to these other factors and we ought to evaluate its impact independent of their effects.

Economic Factors

The role of economic factors in research on financial aid has been greatly affected by a series of early studies into the determinants of the demand for higher education. Employing the "human capital" approach, this series of studies sought to ascertain the price responsiveness of financial aid to the demand for higher education. The purchase of an additional increment of education was viewed as a basically economic act, in which the cost of that increment was weighed by the student against the benefits it would yield. As Campbell and Siegel (1967:482) put it:

> The investment approach to the theory of educational demand asserts that an individual will purchase a college education if the present value of the expected stream of benefits resulting from education exceeds the cost of the education.

The relevance of this approach to the study of financial aid was compelling from two points of view. From an aggregate point of view, it is important for policymakers to have some idea of the nature of demand for education, since the demand for education is an important determinant of the demand for financial aid. Thus, it becomes an important determinant of the total required program appropriations. From an individual point of view, it is important to know how responsive individuals are to changes in the costs of education. If financial aid is to achieve its goal of increasing access to education, it would have

to be of the type and amount that would influence choice. As Jackson and Weathersby (1975:624) argue:

> With limited public resources, public policymakers are understandably concerned about the relative effectiveness of different financing strategies to influence individuals' decisions whether and which institutions to attend. To estimate the relative effectiveness of different financing strategies public policymakers need to know how individuals respond to the various financing instruments that are available.

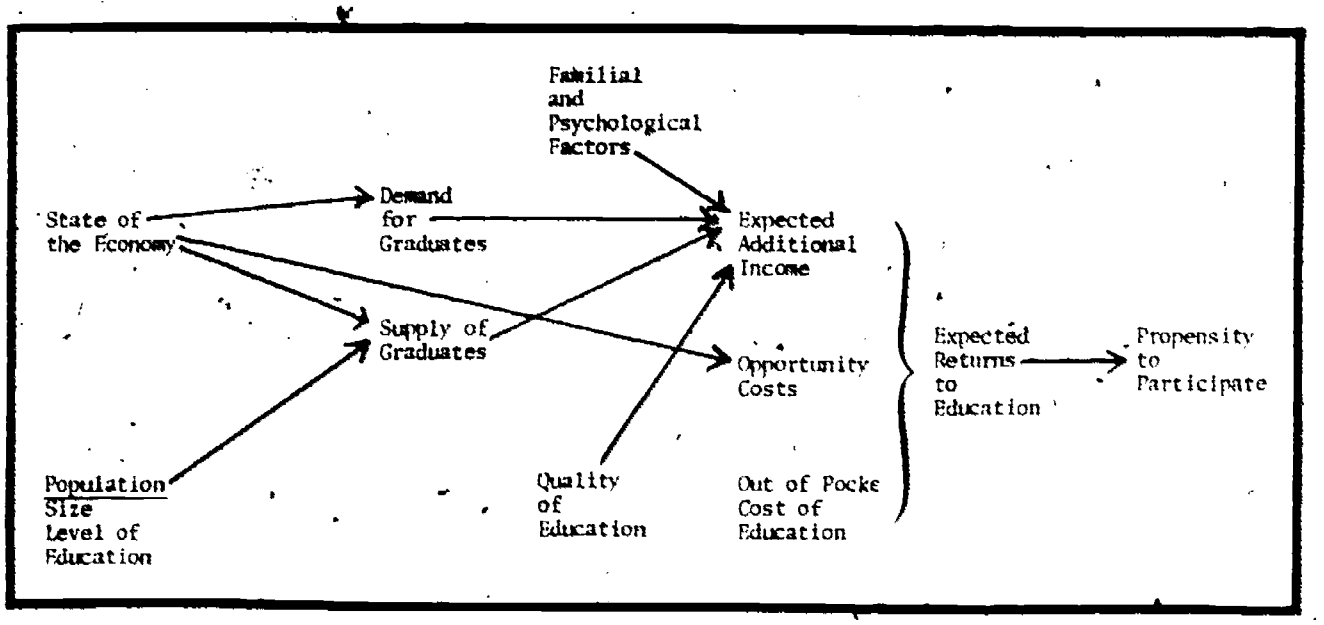
Defining a precise economic model of the demand for higher education has, however, proved to be a rather complex task. It was not clear exactly what parameter was being sought. Some, such as Campbell and Siegel (1967), Galper and Dunn (1969), Miller (1971), Hoenack (1967), Hoenack, et al. (1973), Hight (1970), Corrazzini (1972), and Spies (1973), sought a parameter which was essentially an elasticity--the price elasticity or price-responsiveness. Others, such as Radner and Miller (1970, 1975), Miller (1971), Kohn, et al. (1972), Barnes et al. (1972, 1975), and Carroll, et al. (1977), used more of an option space approach in which the price responsiveness was not fixed but "might vary with the other options available even if their relative cost is constant" (Jackson and Weathersby (1975:636).

The differences in the literature, however, go beyond the question of how to estimate parameters; the choice of appropriate variables and their measurement have also not been agreed upon. Only two of the studies cited above, the two earliest (Campbell and Siegel, 1967; Hoeneck, 1967), included only economic factors (cost and household income). Subsequent studies began to incorporate other factors--school type and student's ability, in particular. It should be noted, though, that these studies do agree on the direction of the effects. By and large, these studies suggest that cost is a significant variable with a negative effect on demand for education. The magnitude of the effect seems to fall in the range of -.5 to -1.5 percentage point change in enrollment per $100 cost increase (assuming an income of $12,000 per year and a college cost of $2,000 per year (Jackson and Weathersby, 1975:643-647). Furthermore, the magnitude of the price responsiveness increases as income decreases.

That is, lower income individuals are more affected by price changes. These are the expected relationships and they fit with the logic of using need-based financial aid to improve access, choice, and retention.

The set of economic factors embodied in these studies falls far short of adequate to test the complex theoretical argument underlying them. A simplified rendition of that argument is presented in Exhibit 3.3. The basic logic is that returns to education will be dependent, to a considerable extent, on expected additional income, which in turn is determined, to a considerable degree, by the market for graduates. That market, in turn, is a function of the state of the economy and the population. Within the context of studies of financial aid, no real effort has been made to look at the expected income aspect, and only two studies made even an attempt at estimating opportunity costs (by including variables for the wage rate and rate of unemployment in the high school student's district). The studies within the human capital approach which provide a more adequate examination of the theory have not directly addressed the issue of financial aid and do not seem to have entered into the debate over financial aid. Thus, though the primary focus in these studies on out-of-pocket costs renders them quite relevant from the point of view of financial aid, it also limits their explanatory power with respect to the broader issues of the human capital approach.

EXHIBIT 3.3: AN ECONOMIC MODEL OF PROPENSITY TO PARTICIPATE IN HIGHER EDUCATION



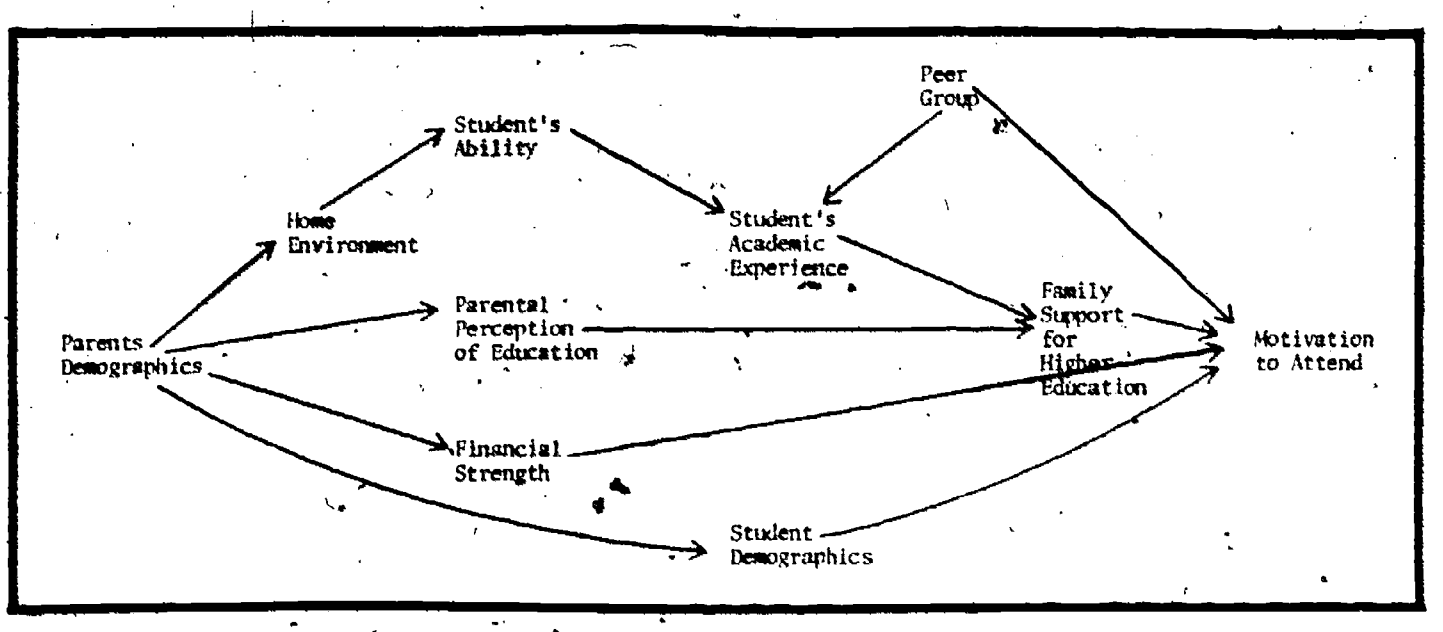
Nevertheless, from the point of view of the present study, these economic studies establish a very important point. Cost is an important factor in determining individual participation in higher education, and financial aid would seem to be a logical approach to changing participation. Moreover, the theoretical model helps to locate and to define the scope of questions addressed in the current study. To put this matter most directly, we will not deal with the conditions in the market which affect either expected additional income or opportunity costs. Since the study is a cross-sectional approach (i.e., interviewing a sample of students at one point in time), there is no temporal variation in market conditions. Of course, we recognize that individual students may face different market conditions at a point in time (i.e., there is cross-sectional variations), and that their expected additional income and/or opportunity costs may vary. However, these individual differences should be accounted for by the inclusion of the familial, psychological, and institutional factors included in the model. Individual variation in expected return, etc., should be accounted for by these individual characteristics. In short, market condition effects on expected returns to education are not a variable in our study. As with previous studies, the concept of expected returns to education drops out of our discussion altogether. We fall back to the familial and psychological factors (including income), the cost factor, and other institutional factors as our explanatory variables.

Familial and Psychological Factors

The familial and psychological factors that affect decisions about participation in higher education have long been a topic of study in most of the sociological literature. With the exception of family income, an important economic factor, the elements in the familial and psychological realm deal with the preferences, predispositions, and attitudes of the individual. For the economists, these go under the heading of preferences and tastes but, regardless of the label, a series of studies has shown that they are important factors influencing career choices. The underlying model is presented in Exhibit 3.4. The basic idea, here, is that patterns of socialization, especially role models and the

expectations of significant others (parents and peers in particular), establish predispositions toward continued education. In the broader sociological literature, these predispositions are an important aspect of models of social mobility and socioeconomic life cycle (Blau and Duncan, 1967). In these models, a number of personal variables contribute to mobility and career choice, with educational choices playing a crucial role. The importance of socialization, peers, and parental expectations has been well documented for all students (Kerchoff and Huff, 1974; Picou and Carter, 1976), and for specific subsets of students (Elder, 1970; Edwards, 1976; Gorson, Haller, and Sewell, 1972; Gordon, 1972; Allen, 1978). However, there are considerable differences in the way these factors operate within different groups (Picou, 1973; Alexander and Eckland, 1975; Porter, 1974; Portes and Wilson, 1976; Kerchoff and Campbell, 1970) and generalization must be used with considerable caution.

EXHIBIT 3.4: A MODEL OF FAMILIAL AND PSYCHOLOGICAL FACTORS AFFECTING MOTIVATION TO ATTEND HIGHER EDUCATION



Other demographic and background characteristics, such as age, sex, and student ability have also proven to be important determinants of the propensity to participate in higher education (Birdie and Hood, 1966; Folger, Astin and Boyer, 1970; Cohig and Nam 1974; Wilson, 1979; Crain and Mahard, 1978). In addition, the family's socioeconomic status, measured in a number of different ways, has consistently proven to be an important factor (Sewell and Shah, 1968; Cohig and Nam, 1974; Tillery and Kildegaard 1973; Folger, Astin and Boyer 1970).

While these are fundamental areas of agreement, an analysis of the details of familial and psychological factors is at least as divided and chaotic as that of economic factors. Not only are there differences among studies in the variables that are included, but the operationalization of common variables differs among them as well. Exhibit 3.5 contains a list of the variables and some of the different ways that they have been measured. The starred items are variables which have been included in the current study.

As with the economic factors, prior research helps to define the nature of the current research effort. We have not entered into the realm of attitudes and preferences, as such, and we have not obtained any measures of family background. We have measured the objective factors which are generally considered to be the causes and/or consequences of those attitudes and preferences. As with economic factors, we would have liked to have had a comprehensive coverage of all variables, but since this was not possible (due to the constraints imposed by the Federal research clearance process), we believe that the chosen variables capture the bulk of the variation relevant for a study of financial aid. If a comparison between the starred items in Exhibit 3.5 and the model in Exhibit 3.4 is made, it will be seen that we have captured, in considerable detail, two of the main lines of influence on motivation to attend (family financial strength and student demographics) and we have picked up two aspects of the third line (student's ability and academic experience.)

EXHIBIT 3.5: TYPICAL FAMILIAL AND PSYCHOLOGICAL VARIABLES USED IN PRIOR RESEARCH STUDIES

Student Demographics

- Sex[1/]
- Age[1/]
- Race[1/]
- Marital status[1/]

Student Academic Experience

- College
  - Major[1/]
  - Enrollment status
    - Completion[1/]
  - Work/history[1/]
- High school
  - Type
  - Curriculum

Student Motivation

- Motivation
- Knowledge
- Educational Plans
- Familiarity with aid[1/]

Student Ability

- High School GPA[1/]
- SAT/ACT SCORES[1/]
- Rank in High School[1/]
- College GPA[1/]

Parental Demographics

- Father's education
- Father's occupation
- Mother's education
- Mother's occupation

Family Support

- Encouragement
- Perception of education
- Attitude toward sacrificing for college education
- Home environment
- Parents at home

Household Financial Strength

- Social Economic Status Scale (Duncan)
- Income
  - Parents' income[1/]
  - Parents' income and assets[1/]
  - Student's income[1/]
  - Student's income and assets[1/]
- Debts
  - Number in college[1/]
  - Number at home[1/]
  - Number siblings married

Peer Group

- Support (No. in college)[1/]

[1/] Indicates the variable has been included in this study.

Institutional Factors

Within the context of the economic and familial/psychological studies, a third set of factors quickly arises. This set of factors would not form the basis for an independent model, but it is, nonetheless, a distinct set and one that is of considerable importance. These are institutional factors affecting the propensity to participate and they have entered consistently into all of the studies mentioned above.

By and large, there are three general concerns in the realm of institutional factors. The first and most obvious way in which institutions exhibit variation that might affect the propensity to participate in higher education is in their costs. There are vast differences in educational cost and these differences affect the expected returns to education (see the discussion of economic factors). A second important way in which institutions vary is in their academic quality. The ways in which academic quality are conceptualized in the literature and behave in actual analyses, suggest that quality affects the expected returns to education by affecting the expected additional income (Kohn, et al., 1972; Radner and Miller, 1970, 1975; Spies, 1973; Carrol et al., 1977; Barnes, et al., 1972, 1975). The third way in which institutional variation affects propensity to participate is in terms of the quality of life (Kohn, et al., 1972; Fife, 1975a, 1975b; Carrol et al., 1977). It seems that the potential pleasurable aspects of a college education enter into the consideration of which institution to attend. We might categorize this as an aspect of preferences and tastes and include it with the psychological factors, but it can equally be interpreted as operating through the economic factors. It can be argued that the pleasurable aspect of higher education, compared to the alternative of working, alters the opportunity costs in favor of pursuing an education. The enjoyment to be forsaken by not attending college makes the alternative considerably less attractive.

These are the three basic areas in which variation among institutions seems to affect the propensity to participate. A fourth factor, however, also comes into play. The location of the institution is often measured

for one of two reasons (Kohn, et al. 1972; Corrazzini, et al. 1972; Astin, 1979). First, the location of the institution is a major determinant of cost, both tuition costs (in-state, out-of-state), and other expenses (commuting and/or living away from home). However, the total impact of location seems to go well beyond out-of-pocket cost. There would seem to be an independent effect associated with having institutions of higher education available and close to home (Knoell, 1970; Tuckerman and Ford, 1972; Tinto, 1973). Here the argument could follow the lines of the above discussion of quality of life at the institution. Location close to an institution lowers the costs of receiving education. To put it in other words, if one has to travel a great distance for an education, it becomes a more costly alternative.

As with any statement of general propensities, for any specific individual the arguments may not be relevant or correct but, in the aggregate, they do seem to hold. The research results to date suggest these relationships. Indeed, the research results suggest one final note of considerable importance. In order for the institutional factors to actually play a part in determining the propensity to participate, it would seem that students would have to be aware of the difference among institutions. In this regard the evidence is quite mixed (Bower and Pugh, 1975; Boyd and Fenske, 1975; Fife, 1975b), but there does seem to be enough awareness on the part of the students so that the connection between institutional differences and altered behaviors appears in the literature.

Having established the conceptual justifications for the inclusion of institutional factors, we turn to the operationalization of those factors and, once again, we find that diversity rather than agreement reigns supreme (see Exhibit 3.6). One of the most obvious points of difference is on how to categorize the types of institutions. Schemes may vary from the most rudimentary--public/private--to the most complex--such as the one presented in Exhibit 3.6. In all of these schemes there is an implicit evaluative statement being made which is roughly as follows:

> Four-year institutions are somehow more desirable than 2-year institutions, which are more desirable than noncollegiate institutions, and within each of these categories privates are somehow more desirable than publics.

EXHIBIT 3.6: TYPICAL INSTITUTIONAL VARIABLES USED IN PRIOR RESEARCH STUDIES

Type of Institution

- Private University
- Private Upper 4-year
- Private Lower 4-year
- Private 2-year

- Public University
- Public Upper 4-year
- Public Lower 4-year
- Public 2-year

- Noncollegiate

Cost

- Tuition
- Room and Board
- Other Expenses

Academic Quality

- Average Student SAT
- Expenditures/Student
- Breadth of Offering
- Number of Schools in its Category
- Research Reputation
- Intellectual Environment
- General Reputation
- Selectivity
- Prestige

Quality of Life

- Coeducation
- Dormitory Space
- Friendly Environment
- Political Life
- Religious Emphasis
- Size

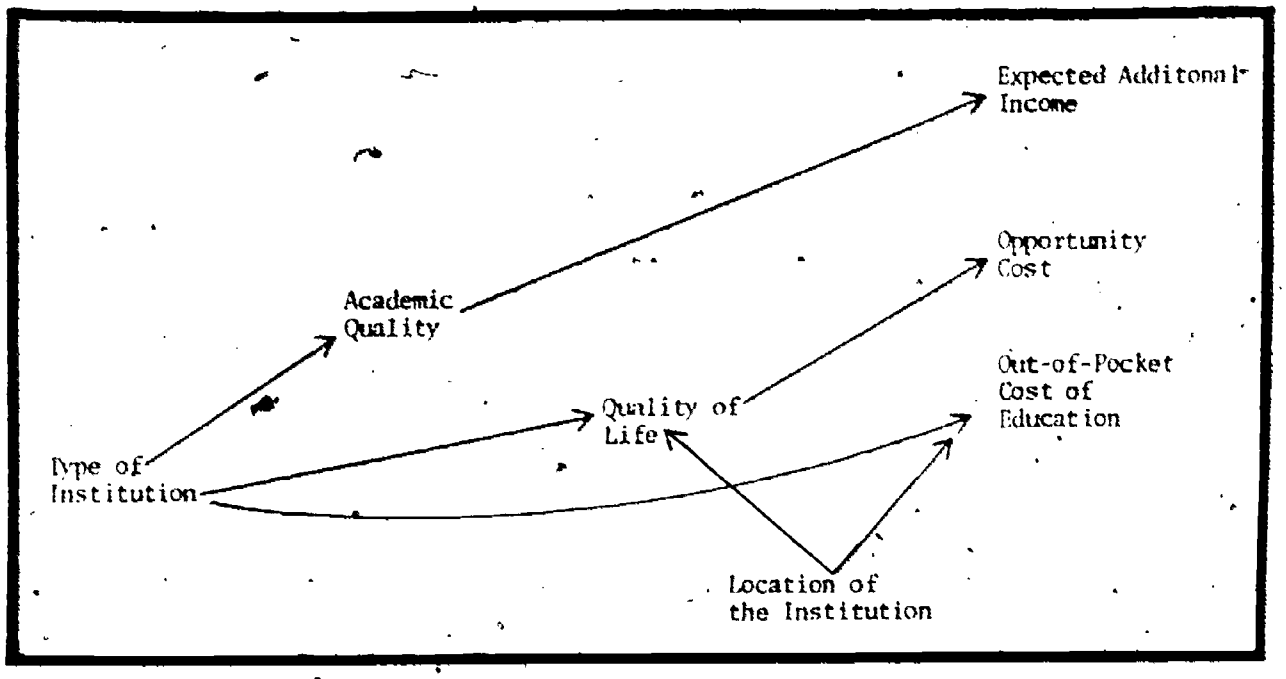
Location

- Distance from Home
- In-State/Out-State
- Wage Rate in Area
- Unemployment Rate in Area
- Proprietary

There is probably a basic empirical reality underlying this evaluative assumption. This can be appreciated with respect to both the cost of education and a academic quality. On average, both cost and quality follow the general lines of the evaluative assumption. That is, 4-year privates tend to be both more costly and of higher quality, at least measured in terms of the quality variables used in prior studies (as in Exhibit 3.6). Quality and cost tend to decline as we move through public 4-year, then 2-year schools, etc. While this generalization captures an empirical reality, it is important to recognize that it also embodies a good deal of evaluative judgment and that it is a generalization which overlooks many individual cases that do not follow the rule.

We have now completed the model of institutional factors which is prevalent in the literature. This model is summarized in Exhibit 3.7. In this study, we have included at least one measure of each of the factors while we have examined cost at great length.

EXHIBIT 3.7: A MODEL OF INSTITUTIONAL FACTORS AND THEIR RELATIONSHIP TO STUDENT BEHAVIOR

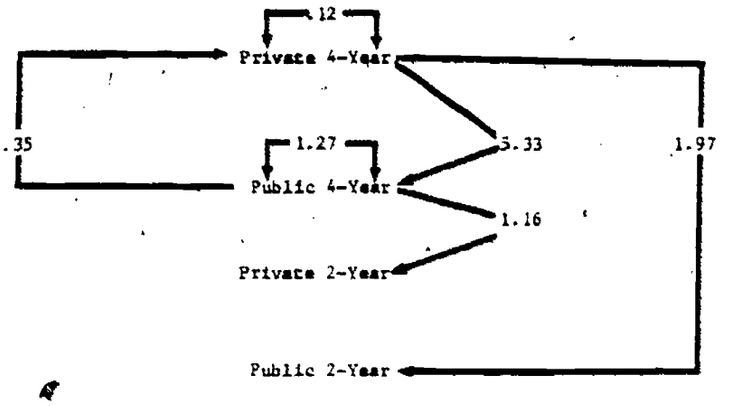


Financial Aid

The specific characteristics of the financial aid delivery system itself which have entered into the analysis of participation in higher education have been very restricted, even when the financial aid system itself has been the primary subject of the work. At best, the amount of aid and the percent of expenditure it covers have not been entered into any one study. Taken together, the available studies cover five characteristics of the aid system, as can be seen from Exhibit 3.6. One aspect worthy of consideration in these studies is the way the outcomes are conceptualized.

Generally, there have been one of two approaches taken. In the subjective approach, students are asked what they would have done if they had not received aid. A reasonably large percentage of respondents have typically said that either they would not have gone to postsecondary school, or they would have gone to a different school. This has been taken as an indication that financial aid has had an impact on both access and choice. When the choice question is followed up by asking where the student would go in the absence of aid, the responses tend to affirm the implicit evaluative judgment embodied in the categorization of schools. The typical results are depicted in Exhibit 3.8: about 7.5 percent (1.97 + 5.33 + 1.16) of the students said they would change in a

EXHIBIT 3.8: PERCENTAGE OF GRANT RECIPIENTS WHO SAID THEY WOULD CHANGE SCHOOLS IF THEY HAD NOT RECEIVED AID



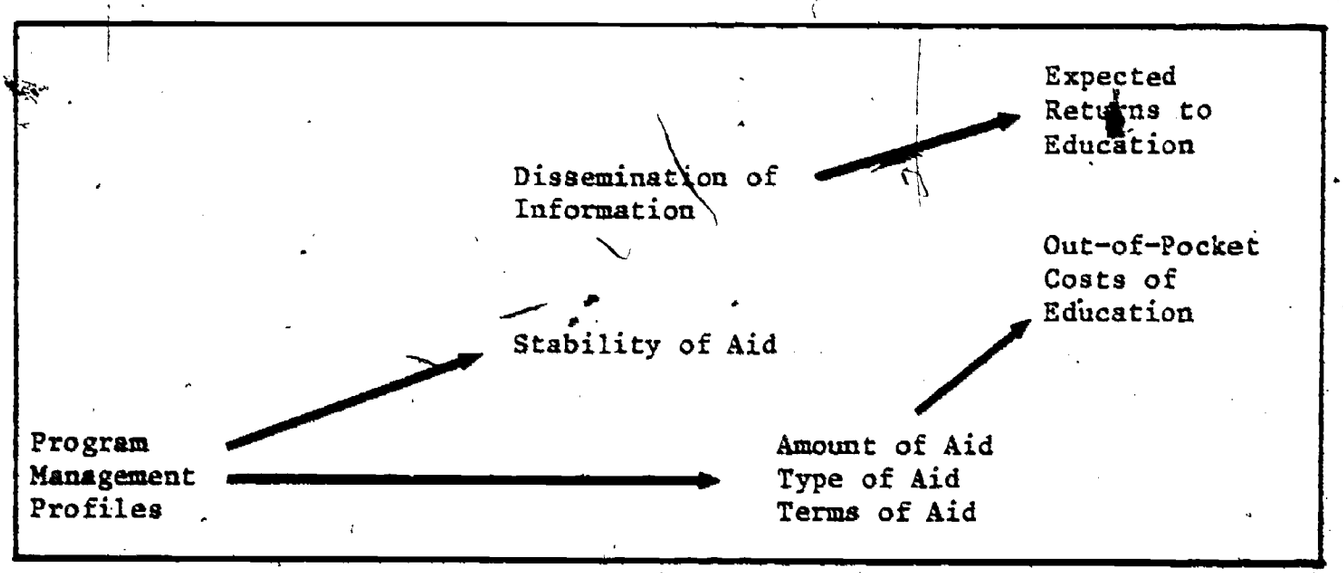
Source: Fenske, et al., 1979, p. 153.

"downward" direction; another 1.4 percent (0.12 + 1.27) said they would change within categories; only .35 percent said they would change in an "upward" direction.

The second approach to measuring outcomes is to take some objective criteria and infer a difference which is attributable to the aid system. Thus, after controlling for income, one can compare the percentage of recipients who attend college (or a particular type of college) with the percentage of nonrecipients who do so. If more recipients attend college, the inference is made that aid accounts for the difference. In fact, the comparisons have often been less precise than that, resting on a comparison between a sample of recipients and some hypothesized norm.

Despite the exploratory nature of these studies, it should be noted that they have consistently produced results which are in the expected direction. The amount and availability of aid have been positively correlated with access, choice, retention, etc. Furthermore, the studies do suggest a basic underlying model of behavior. If we can interpret the specific variables to stand for general aspects of the aid system, we would argue, then, that at least five characteristics of aid are of importance in affecting the propensity to participate in higher education. These five characteristics are: the amount, the type, the terms, the stability of aid, and the dissemination of information about aid. In the research literature, the stability of aid (i.e., certainty of its continuation over time) and the dissemination of information seem to be more directly related to expected returns--precisely to knowledge of expected returns--than to anything else. The argument is simply that without good information about alternatives and a set of expectations about aid in the future, one cannot calculate the cost of education and, hence, one cannot make a rational choice about whether or not the expected returns justify participating in higher education. In Exhibit 3.9, this model is outlined. The role of program management characteristics is left unspecified since the quantitative studies reviewed up to this point have not begun to address this area. The next section will define the current study's approach to management characteristics.

EXHIBIT 3.9: FINANCIAL AID FACTORS IN PROPENSITY TO PARTICIPATE IN HIGHER EDUCATION



Before we move on to that level, however, let us summarize the quantitative studies which have been reviewed. If we put all the separate models together, we would arrive at a very complex model indeed (see Exhibit 3.10). Such a model is probably beyond proper specification under the best of circumstances. Considering the nature of the data that have been gathered for the purposes of this study, though, and the choices that have been made about the variables to be included, we have here a much simplified model to be used in this analysis (see Exhibit 3.11). Despite the simplifications, this model is adequate to the task in terms of including major variables, and it is a good deal more comprehensive than any model which has been included in any prior single study.[2/]

[2/] In forming the model for this study we have included the concept of ability to pay as a derivative of family financial strength and educational cost.

EXHIBIT 3.10: A COMPREHENSIVE MODEL OF THE PROPENSITY TO PARTICIPATE IN HIGHER EDUCATION

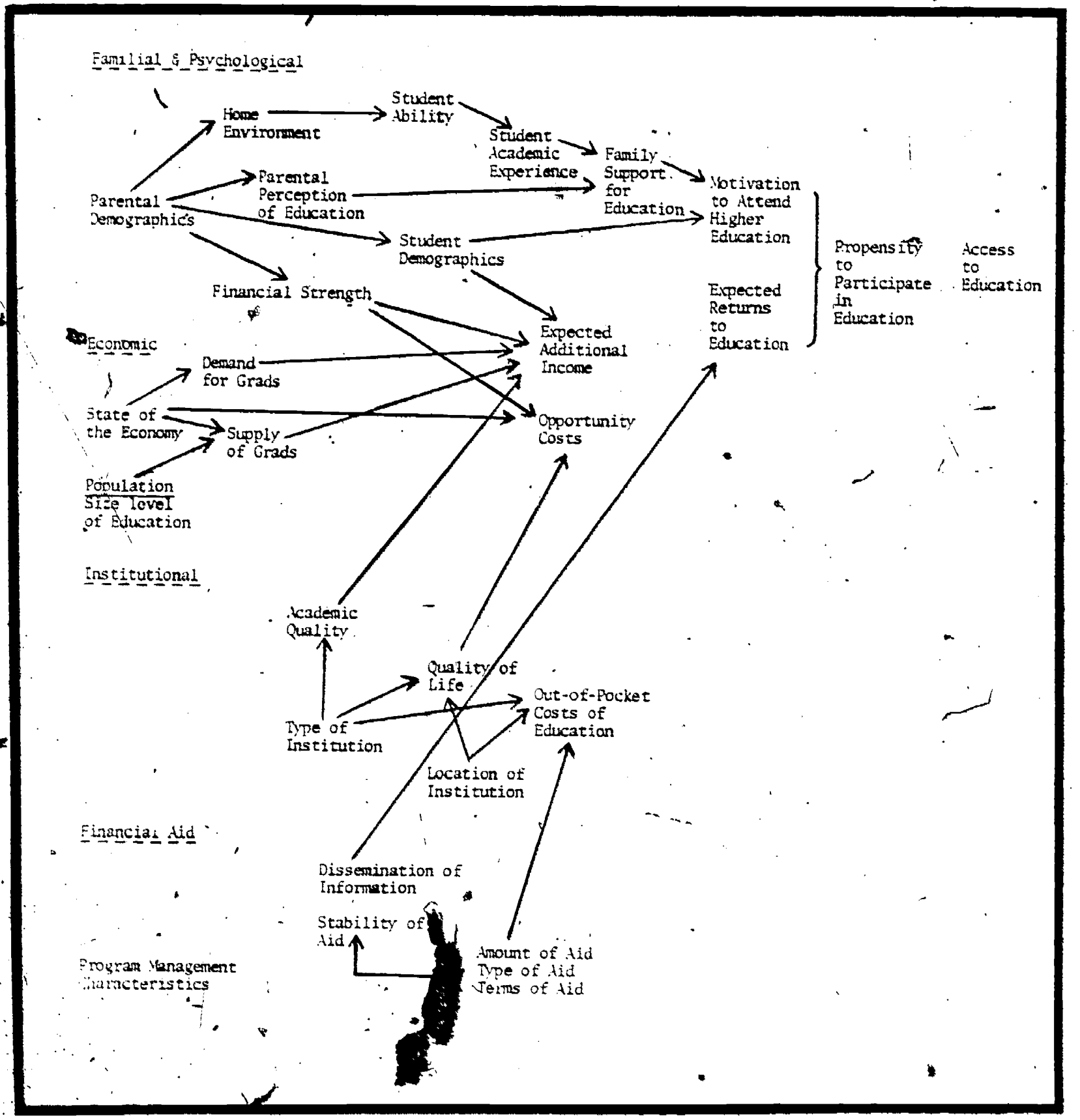
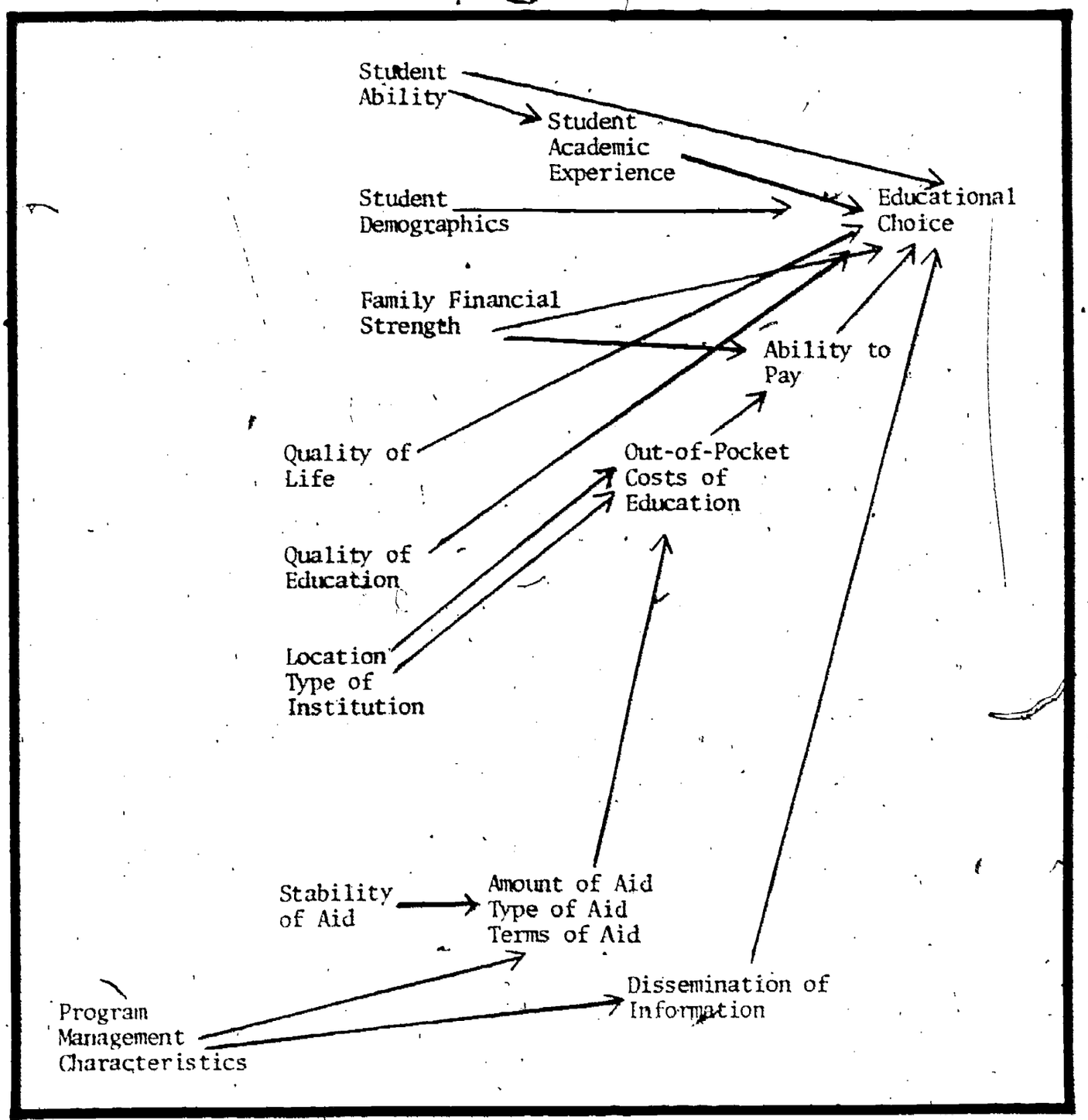


EXHIBIT 3.11: THE WORKING MODEL TO TEST THE IMPACT OF AID ON EQUITY OF EDUCATIONAL CHOICE



Moreover, this model serves not only for the study of equity of educational choice, but also for the study of equity of aid distribution as well. As depicted in Exhibit 3.12, the familial, economic, and institutional variables become the classification variables for determining similarity of circumstances. The type, amount, and terms of aid become the outcome measures which, under conditions of full horizontal equity, should be equal for students in similar circumstances. Other program characteristics, especially management practices, become the variables which should explain any deviations from equity. It is these characteristics which policy would change in order to achieve horizontal equity. Thus, the comprehensive model forms a basis not only for an evaluation of the equity of educational choice, it is indispensable to the study of the equity of aid distribution.

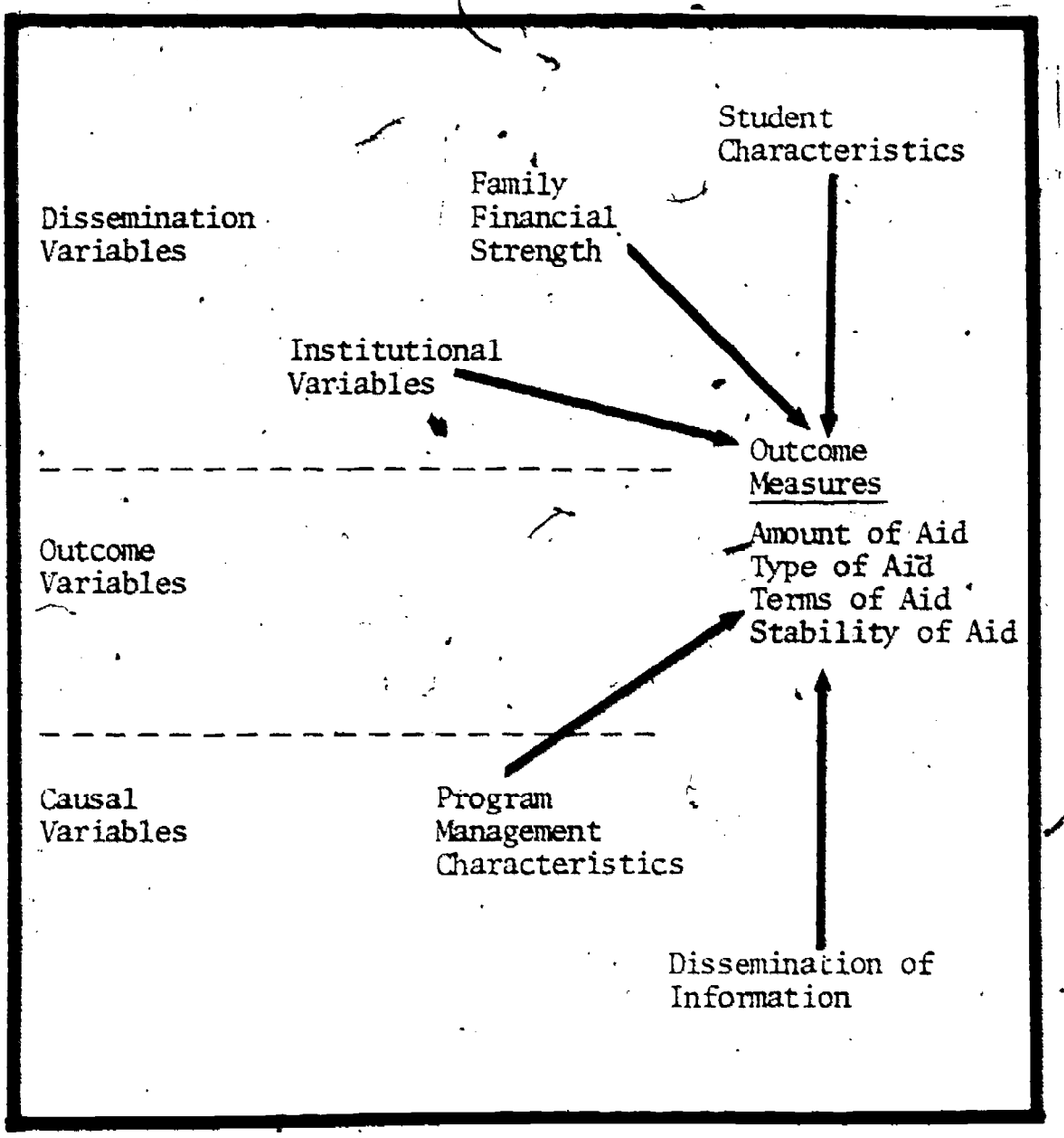
Management Practices

Institutions are the line administrators of Federal programs. They have responsibility for basic decisions about how students will be treated and communicated with, and about what types of students will get different kinds of aid. In "packaging," for example, an institution may establish a policy of giving grants to all eligible students and adding loans to the grants for the most needy. Another institution may operate under the exact opposite policy, giving loans to all eligible students (a self-help floor) and adding grants in cases of greatest need. These, and many other approaches were found during the course of our current student aid study. Institutions also make distributional judgments about individual cases. Some students have unusual circumstances which do not clearly fall under existing policies, and student aid directors must also decide how to handle ambiguous situations.

Institutions perform three major kinds of tasks under the Federal programs:

(1) Program participation--they decide whether to participate; participants forecast the aggregate aid needed by their students, make application to USOE, and receive and disburse funds.

EXHIBIT 3.12: THE WORKING MODEL TO TEST EQUITY OF AID DISTRIBUTION



(2) Need analysis—they obtain applications from students, determine which applicants are eligible for aid, calculate how much aid each applicant needs, and make individual adjustments for unusual needs.

(3) Packaging—they decide what amount of aid applicants will receive from each source of aid available, including grants, jobs, and loans, and they coordinate this Federal aid with state and institutional aid.

In addition, institutions perform many other kinds of tasks, such as disseminating information about financial aid, helping to arrange jobs and loans, maintaining records of student eligibility and fund disbursements, collecting loan payments, and producing program reports.[3/]

One of the early findings of this study, however, was that institutional practices are best characterized by diversity. This is not necessarily a negative finding but, as Cooper noted in his study of financial aid in California:

> Federal student aid administration cannot be—and should not be—strictly uniform. A diversity of practices is essential because general public purposes and specific program purposes are multi-faceted, and the conditions of implementation vary among students and institutions. The difference between desirable diversity and undesirable fragmentation in administration is that desirable practices are effective, fairly predictable, and equitable. Desirable diversity among policy decisions exhibits purpose: it is not random or haphazard. Undesirable, fragmented practices are inconsistent, not readily justified by reference to standards or a rationale, and difficult or impossible to evaluate empirically.[4/]

3/William D. Van Dusen and John J. O'Hearne, A Design for a Model College Financial Aid Office (New York, N.Y.: College Entrance Examination Board, 1973).

4/Harlan Cooper, "Diversity in College and University Administration of Federal Student Financial Aid, Doctoral Dissertation, Stanford University, March 1979, p. 17.

This suggests two prime objectives with regard to institutional practices—effectiveness and justice. The first would, ideally, require that the system for implementing Federal policy be free of impediments. That is, once a policy was selected, the institutional practice would be such that it could be carried out uniformly, and in an unambiguous manner. In addition, any effective administrative process would have to be just, i.e., all decisions must be predictable and the reasons for them understood.[5/] The second facet is that persons in like circumstances should be treated the same,[6/], i.e., there should be equality of outcomes. Distributive justice, then, requires that if people are to be treated differently, the variation must be related to the purpose of the distribution (e.g., need) and not to some other irrelevant condition (e.g., race).

Evidence of the effect of institutional policies, scant as it is, seems to indicate that these conditions are not being met. We have already mentioned Applied Management Sciences' early findings regarding diversity in practices which were also supported by Cooper's results for California. However, others have provided indications that point toward the same conclusions. Rice and Gladieux, in a report for the College Entrance Examination Board,[7/] noted that of the estimated 1,141 accredited 2-year colleges, 23 percent were not in the SEOG program, and 40 percent did not seek NDSL monies. Consequently, many students eligible for aid by law were unable to obtain benefits. Their

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5/ Henry J. Friendly, The Federal Administrative Agencies: The Need for Better Definition of Standards (Cambridge, Massachusetts: Harvard University Press, 1962).

6/ Emmette S. Redford, Democracy in the Administrative State (New York, N.Y.: Oxford University Press, 1969).

7/ Louis Rice and Larry Gladieux. Title IV of the Higher Education Act: A Technical Analysis (Washington, D.C.: College Entrance Examination Board, 1974).

institutions simply did not offer all the programs. Van Dusen and Cavanaugh[8] made a study of institutional adjustments to College Scholarship Service's (CSS) need analysis. They found a range of 12.1 percent to 87.5 percent of the active cases changed among nine University of California and California State University and College campuses. The average rate was 56.8 percent. Finally, a 1977 report by Smith and Henderson[9] indicates that most first-time student aid recipients across the country get only one form of aid rather than a package.

While such differences in student expectations exist among institutions due to diversity in management, Federal policies which address these operating systems are few. Although the number of Federal regulations have increased in recent years, the effect on changing institutional behaviors has been minimal. They continue to exercise discretion in critical areas of policy leading to significant inequities in the distribution and impact of Federal funds.

The number of examples of institutional discretion and Federal policy are numerous--consumer information, needs analysis, packaging, counseling, etc. For the purposes of discussion, let us look at the packaging of aid--the process of combining various sources of assistance to meet the student's need (where need is defined as the difference between educational costs and available family resources). On this topic, Federal regulations remain almost totally silent. Aid directors are prohibited only from using Federal funds to exceed any student's need. (20 USC 1088f; 45 CFR 176.14(b).) However, the packaging process is complicated by conditions attached to aid under different programs. For example, BEOG grants (under 1978-79 regulations) are limited to

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8/ William D. Van Dusen and William J. Cavanaugh, "Goin' Through Changes: A Study of Institutional Adjustments to Central Need Analysis." Journal of Student Financial Aid (February 1977): 25-33.

9/ Pat Smith and Cathy Henderson, Federal Student Aid: Who Receives It and How Is It Packaged? (Washington, D.C.: American Council on Education, 1977).

one-half cost or $1,600, whichever is less. SEOGs are limited to one-half the total amount of aid in each package. Federal CWS funds require a 20 percent match from the institution or employer. Once their need is met, students' CWS earnings may not cause their total aid to exceed their need by more than $200. Students must quit CWS jobs rather than continue working and earning too much.

Furthermore, students may have financial aid from other sources like state aid, and this in turn may add to packaging complexity. The state may determine a need figure different from Federal need figures, and yet both state and Federal governments expect aid going to students to be coordinated.

Suggestions about the program characteristics and management practices that affect the operation of the financial aid system can be gathered from two sources. These two sources fall, respectively, in cells 3 and cell 4 of the typology previously presented in Exhibit 3.1. The first is a series of studies into management practices (National Task Force, 1975; Lee et al, 1975; Cooper, 1979). The great drawback of these studies is that they have been carried out without any effort to measure program outcomes. Thus, the program characteristics and management practices which have been inspected are important only with respect to some preconceived notion of how the program should work (rather than with respect to a measure of how it actually does work). The second source is a group of studies which can, at best, be described as "testimonials." These are statements, occasionally gathered in a systematic fashion, by financial aid officers and students about the way the system actually works (CSS Student Advisory Committee, 1976; Packer, 1980; Penn and Vejil, 1976; Martin, 1976; Von Klein et al., 1976; Wilcox, 1973-1974; Jones, 1974; Scott, 1978; Johns and Warren, 1977; Clark et al. 1977; Clark, 1977; Stewart, 1975; Stamatakos, 1972; Ryan, 1966-67; CEEB, 1976; Burnett, 1975; Nelson, et al. 1978; Southern Association of Student Financial Aid Administrators, 1977). These are impressionistic accounts which tend to reflect the concerns of a particular audience and provide little or no empirical evidence. They provide scant clues as to how

typical any of the behaviors described really are. As such, they are not particularly helpful in generating counsel for the overall management of federal aid, which must necessarily stress common practices and outcomes. The methodological and substantive contribution of the current study is to link systematic data about program characteristice to systematic data about actual outcomes, to produce a more accurate picture of the actual behaviors of the system as a whole.

Regardless of the shortcomings of these two groups of studies, they are a rich source of hypotheses about what affects the performance and equity of the financial aid system. Since these are the opinions of both the consumers and those who make the system go, these data are quite relevant. In fact, since this is a study of the equity and efficiency of the system, and since the measurement of equity is a student-level variable, it might be best to start with the student point of view. The issues about which students complain suggest a lack of equity and/or inefficiency in the system and fall into seven categories: information, forms, counseling, financial aid office structure and procedures, aid packaging, need analysis, and independent status determination (CSS Student Advisory Committee, 1976, Packer, 1980). Within these areas one can identify about 40 specific issues (see Exhibit 13.3). Interestingly, the financial aid officers seem to agree on many of these points: the characteristics of the financial aid system about which the students complain are also the characteristics that cause the financial aid officers a good deal of concern. The aid officers have some concerns which do not enter into the consideration of the students but, by and large, there has been a lively, though indirect, dialogue on most of the issues.

This agreement on the points that need to be addressed would seem to be partly a result of the National Task Force Report (the Keppel Commission) which seems to have focused everyone's attention on specific areas, and partly a result of the underlying justification for the Federal student aid program itself. In order for the system to achieve its goals, or so the student argument goes, students must have good

information, proper counseling, forms which are not a barrier, access to aid officers, etc. From the perspective of the aid officer, in order for the system to accomplish its goals, need analysis must be clarified, aid packaging philosophies must be better articulated, staff levels and training must be upgraded, etc. Unfortunately, most of the analytic studies of management practices have not addressed these issues at all. Instead, they have looked at specific practices with a view toward estimating and evaluating errors and/or deviations with respect to legislated policy and regulations (e.g., validation procedures, checks on academic progress, budgeting decisions. etc.). These errors and deviations are presumed to represent departures from equity. In contrast, it has been the central task of this study to create measures of equity and see how they correlate with actual specific program characteristics and management practices, regardless of whether or not the program characteristics and management practices are deviations from the letter of the regulations.

CONCLUSION

This brief review of the literature has served two purposes. We have identified weaknesses in prior research, and we presented the general approach which was taken in the current research effort to overcome those weaknesses. We have also identified a large number of variables that need to be included in any future study which analyzes the impact of program characteristics and management practices on the equity and efficiency of the Campus Based and Basic Grant financial aid programs. The specification of each of these variables and the evaluation of equity and efficiency in the aid system will be discussed in Chapter 6 of this report.

EXHIBIT 3.13: THE INSTITUTION-LEVEL MANAGEMENT ASPECTS OF THE FINANCIAL AID SYSTEM ABOUT WHICH THE STUDENTS COMPLAIN AND FINANCIAL AID OFFICERS WORRY

I. Information
   - A. Range of programs available
   - B. Continuity of aid
   - C. Planning of aid
     1. alternate amounts at types of institutions
   - D. Dissemination in general

II. Forms
   - A. Multiplicity
   - B. Difficulty

III. Counseling
   - A. Rights and responsibilities
   - B. Options
   - C. Loan counseling
   - D. Lack of peer counseling
   - E. Money management

IV. Financial Aid Offices
   - A. Staffing
   - B. Training
   - C. Salaries
   - D. Record keeping
   - E. Packaging
     1. Changing through college career
     2. Enticements
        - a. Amounts
        - b. Bait and switch
   - *F. Administrative expenses[1/]

V. Aid Packages
   - A. Grants
     1. Alternative amounts at different institutions
     2. Real choices
   - B. Loans
     1. Multiple
     2. Grace period
     3. Notice of loan-burden change
     4. Repayment schedule
   - C. Work
     1. On-campus search and preference
     2. Off-campus search by FAO
     3. Careful job description
     4. Skill match

[1/] Starred items were raised by only Financial Aid Officers in the literature reviewed.

EXHIBIT 3.13: THE INSTITUTION-LEVEL MANAGEMENT ASPECTS OF THE FINANCIAL AID SYSTEM ABOUT WHICH THE STUDENTS COMPLAIN AND FINANCIAL AID OFFICERS WORRY (Continued)

VI. Need Analysis

- A. Budgets
  1. Inflation
  2. Reality basis
  3. Program differences
- B. Presumed savings
- C. Automatic subtraction of work
- D. Varying real parental contribution

VII. Independency

- A. Conditions
- B. Documentation requirements

VIII. Date of Notification

*IX. Relationship Between the Financial Aid Office and Other University Offices, Especially the Admissions Office[1]

*X. Computerization and Size[1]

[1]Starred items were raised by only Financial Aid Officers in the literature reviewed.

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4

THE ROLE OF THE STUDENT IN THE FINANCIAL AID SYSTEM

INTRODUCTION

The literature available on student financial aid is, by and large, written from the perspective of either the institutional administrator or the Federal buresaucracy. Surprisingly little has been done from the student's point of view even though, as mentioned in Chapter 2, the legislative intent has clearly been on the side of student sovereignty. While this introductory discussion is not intended to fill this gap, it is hoped that it will provide the reader with a better understanding of the student's role in the financial aid process. For a discussion of the institution's role, see Volume I, Chapters 3 and 4, of this report.

THE PARTIES INVOLVED

The delivery of financial aid is a rather complex process involving a number of interrelated parties. As described by The National Association of Student Financial Aid Administrators (NASFAA), the seven primary parties are:

1. The Student, and his/her family, who initiate an application for student aid and are responsible for completing various forms to determine the student's program eligibility;
2. The High School Guidance Counselor, who provides general financial aid information and information on how to apply for admission and/or financial aid at various institutions;
3. The Centralized Need Analysis Services, which are responsible for processing student need analysis reports and disseminating this information to institutions, state, and Federal agencies;

4. The Federal Government, which is responsible for legislation, appropriations, and overseeing the administration of the student aid programs, as well as operating the Basic Educational Opportunity Grant (BEOG) program;

5. The State Agencies, which provide funds in the form of grant, work, and loan programs to qualified students in their state;

6. The Commercial Lending Institutions, which provide guaranteed student loans to eligible students; and

7. The Institutions of Postsecondary Education, which have the primary responsibility for coordinating and administering all Title IV programs, as well as other Federal, state, institutional, and private aid sources.[1]

THE STEPS IN THE DELIVERY SYSTEM

For the student, the process of obtaining financial aid begins with the acquisition of information both about the availability of various academic programs at postsecondary institutions and his/her options with regard to financial assistance. Clearly, the key to an effective aid delivery system is, therefore, the conveyance of accurate and timely information to students in order to permit them to make an informed decision about their future educational plans. As observed by the Keppel Task Force, "One of the greatest contributing factors to student confusion about student aid is the lack of good information...."[2] The sources of this information are quite varied and include family and peers, state agencies, high school guidance counselors, educational institutions, private organizations, and various youth-serving agencies (e.g., Comprehensive Education and Training Act (CETA), Upward Bound, etc.).

Next, the prospective student will contact one or more institutions he/she plans to attend in order to obtain admission and/or financial aid information. The student then completes the required application forms and forwards them to the selected institution(s) for consideration. If

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[1] National Association of Student Financial Aid Administrators, Fundamental Financial Aid: Self-Learning Guide (Washington, D.C.: January 1980), pp. IV-3, IV-4.

[2] Keppel Task Force Final Report, p. 54.

state assistance is also desired, the student will likely be required to submit a separate application to the appropriate state student assistance agency. In those states which offer decentralized assistance programs, the application may be sent directly to the institution to which the student has applied.[3/]

To be considered for Federal financial aid, the student can apply through one or both of two possible routes.

1) Centralized need analysis service: depending upon the institution's choice of need analysis system, the student and his/her family will complete an extensive application form consisting of all the information required to determine their eligibility for one of the three Campus Based programs--Supplemental Educational Opportunities Grant (SEOG), National Direct Student Loan (NDSL), and College Work-Study (CWS). In addition, if the selected system is part of the recently created Multiple Data Entry System (MDES), the necessary data elements will be forwarded, at the student's discretion, to the BEOG processor for consideration for a Basic Grant award. After processing, the service returns a copy of a need analysis report to the institution(s) designated by the student. Any inconsistencies in the data supplied in the application will be noted and provided to the institution for later follow-up.

2) U.S. Office of Education's Basic Grant application processor: if the student chooses to apply for a Basic Grant, he/she may either submit a separate BEOG application (similar to the need analysis service form) or, if available, apply through the above-mentioned MDE system. The processor will then prepare and send to the student a Student Eligibility Report (SER) which documents his/her eligibility for a Basic Grant. The student must then bring the SER to the institution he/she plans to attend for the calculation and disbursement of the actual award.

After the student has accepted an offer of admission to attend a specific institution and is found to be eligible for a Basic Grant, he/she presents the financial aid office with the SER. The financial aid officer then combines this information, along with the results of the need analysis service and the state assistance agency's computations, to develop an aid "package" to meet the student's need for financial assistance. According to NASFAA, this process entails the review of the following items:

3/ Several states (e.g., Pennsylvania) require only the submission of one common form from which pertinent data are abstracted.

1. The student's academic status, i.e., "Has the student been admitted to an eligible program?" If currently enrolled, "Is the student maintaining satisfactory progress?" "Has the student completed a bachelor's degree?"

2. The student's eligibility for specific aid programs, i.e., "Is the student a citizen or permanent resident?" "Is the student enrolled at least half-time?" "Is the student in default on a loan made, insured, or guaranteed for attendance at that institution?" "Does the student owe a refund on grants previously received for attendance at that institution?" "Is the student eligible for funds after taking into consideration the statutory annual and aggregate limits of program funds?"

3. The student's documented financial need. The aid administrator reviews each of the need analysis documents to verify the accuracy of the data and to make any needed adjustments when circumstances so warrant. As part of the verification process, many institutions require some or all of their applicants to submit copies of income tax returns or documentation of nontaxable income sources. In addition to this voluntary data verification, the Federal government has recently initiated formal validation procedures which must be performed by the institution for those students who have been selected by the government for its validation. (These requirements will be discussed later in this chapter.)

   As part of determining the student's financial need, the institution must determine the cost of education (budget), by taking into consideration the required tuition and fees, books and supplies (costs may vary due to academic program), room and board, transportation costs, and other reasonable miscellaneous personal expenses.

4. The development of the student aid package. After completing the above procedures, the institution must determine the dollar amounts which the student will receive from each of the programs for which he/she is eligible. Normally, the final aid package consists of a combination of grant, loan, and work dollars.

5. Preparing an award letter. After all of the above steps are completed, the institution prepares an award letter which is sent to the student. This letter notifies the student of the terms and conditions of each of the aid programs, as well as the amount of aid he/she can expect to receive from each source. In those cases where the student's financial need cannot be met from available resources, the student is provided information which may suggest altefnative sources of funding.[4/]

[4/] NASFAA, Ibid., pp. IV-6, IV-7.

Upon receiving the award letter the student will, if he/she has sought financial aid from more than one institution, compare the available options and select the choice which best meets his/her individual need. The offer of financial aid, while an integral part of this decision process, is not the sole determinant of the final choice for many students. It involves a careful balancing of the available alternatives, considering the various academic offerings and campus attributes as well as the cost.

After the student has selected an institution, he/she is required to sign and return the award letter to indicate its acceptance and to complete and have notarized the Affidavit of Educational Purpose. If the student's financial need is totally met by the aid package, then there is generally nothing further to be done. What is frequently the case for some students, however, is that their needs will exceed the resources made available to them or they have to replace some or all of the expected family contribution. These students, therefore, must explore additional sources of aid.

One such option is the Guaranteed Student Loan (GSL) program available through commercial lenders or, if the school is an authorized lender, through the school the student will attend. The lending institution or state agency determines the student's eligibility for the loan, and submits the GSL application to the Federal processing center for endorsement. The Federal processing center then returns the GSL application to the lending institution or state agency, which in turn prepares the promissory note and a check for the student.

Once the student has enrolled and begun his/her selected course of study, major functions of the institution's financial aid office will be of concern:

1) the disbursement process - involves the ways in which the student actually receives the monies he/she has been awarded. While this varies by program and by institution, the basic operations are:

   a) grant/scholarship aid—paid either directly to the student or credited to his/her account;

b) loans--student must sign a promissory note and attend a pre-loan counseling session before funds are disbursed as above;

c) work aid--student meets the requirements of the job to which he/she is assigned and is paid at least monthly either by check or by a credit to his/her account.

2) counseling - the student's need for information does not end with enrollment--his/her needs for assistance continue throughout his/her educational career;

3) maintaining records - the school is required to maintain accurate and up-to-date records on each aid recipient and to ensure their confidentialty;

4) monitoring - in order to ensure that funds are being used correctly, the institutions are required to monitor the student's progress in school. Once a student has graduated or withdrawn from school, any loans he/she may have acquired enter into the collection phase;

5) collections - following the student's departure from the school at which a loan was made, it is his/her responsibility to see that the loan is paid back. This requires staying in contact with the institution as well as setting up an acceptable repayment plan.

Lastly, much of this process is an ongoing affair throughout the student's education as each student must annually renew his/her application for aid. Changes in the scope of aid programs or in the student's circumstances may greatly alter the student's eligibility status during his/her postsecondary career.

SECTION II
EMPIRICAL RESULTS

PREFACE

Presented in this section of the report are the quantitative results of this research project. These data focus upon four aspects of student outcomes: the general patterns of the distribution of Federal student financial aid dollars; an assessment of the extent to which conditions of distributive equity are met; the impact of student financial aid on participation in postsecondary education; and lastly, the relationships between institutional discretionary practices and equitable student outcomes.

5

THE SCOPE OF THE FEDERAL STUDENT ASSISTANCE PROGRAMS

INTRODUCTION

Before examining the distributive equity issues raised in the preceding section, it is important first to gain a sense of the extent to which the Federal student assistance programs have pervaded the higher education sector. The focus here, then, is upon identifying the major flows of funds both to students and to institutions.

The starting point of this examination must be the distribution of aid as affected by the income level and dependency status of students. Federal student aid programs are specifically designed to assist the economically disadvantaged members of the student population. There should, therefore, be a positive correlation between the economic barriers faced by students and the levels of Federal support which they receive. On the other hand, the relationship between financial aid and other student characteristics--gender, race, age, locale--should be neutral. That is, the system ought to be "blind" to noneconomic differences among applicants for aid. By examining the distribution of aid along these dimensions, then, one can potentially reveal any inherent biases within the financial aid system which may emerge as unintended consequences.

There is an additional need to examine the manner in which financial aid dollars are distributed among institutions. A significant portion of the assistance which students receive is turned over directly to institutions in the form of tuition, fees, and on-campus room and board

charges. Thus, many institutions can, and do, derive a substantial portion of their incomes from student aid sources. The data which details this distribution may, in fact, reveal patterns of indirect subsidies to particular types of institutions.

As a final methodological note, the data presented here are generally referred to as "marginal distributions." While we realize that variables such as race and income are not independent, at this time we do not attempt to examine such interactions. This is the subject of the chapters which follow.

OVERALL PROGRAM PARTICIPATION: 1978-79

Patterns of Aid Distribution to Undergraduate Students

As Table 5.1 demonstrates, financial aid in 1978-79 (the year before the implementation of the Middle Income Student Assistance Act) was available to students across a broad spectrum of income levels but, as one would expect, it was found to be most heavily concentrated at the lower end of this range. Of all undergraduate students, regardless of income or of the choice of institution, almost half (43%) received some form of aid either from Federal, state, or private sources during the 1978-79 academic year. This involvement is, of course, related to the student's ability to pay and institutional cost. Therefore, both the generally higher-cost institutions (i.e., 4-year private and proprietary) and most economically deprived students (i.e., incomes less than $12,000) are the most likely to receive some form of assistance.

With regard to the student assistance programs funded by the U.S. Office of Education, Table 5.2 underscores the fact that Federal funds form the foundation of all student assistance. Of all students receiving some form of financial assistance, 84 percent were awarded some form of Federal aid.[1/] Again, the pattern of variation, vis-a-vis income and educational cost previously noted, is found to hold for the Federal programs.

1/This is calculated from Tables 5.1 and 5.2, i.e., 43 percent received some form of financial aid and 84 percent of these (i.e., 36 percent) received Federal aid.

TABLE 5.1: PERCENTAGE OF UNDERGRADUATE STUDENTS RECEIVING ANY FORM OF FINANCIAL AID, BY DEPENDENCY STATUS, TOTAL FAMILY INCOME, AND LEVEL AND CONTROL OF INSTITUTION: ACADEMIC YEAR 1978-79 1/

	ALL SCHOOLS	Institutional Level and Control				
		4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
ALL STUDENTS	43	43	57	31	47	65
Dependents						
$0-$5,999	80	84	90	65	74	94
$6,000-$11,999	74	73	76	77	58	71
$12,000-$17,999	57	59	78	28	55	72
$18,000-$24,999	42	37	66	23	43	54
$25,000-$29,999	33	28	58	12	39	51
$30,000 or more	17	11	28	11	25	19
Independents	40	45	57	30	51	67

Source: Student Survey.

1/ Total taxable and nontaxable income.

TABLE 5.2: PERCENTAGE OF UNDERGRADUATE STUDENTS RECEIVING ANY FORM OF U.S. OFFICE OF EDUCATION FUNDED FINANCIAL AID, BY DEPENDENCY STATUS, TOTAL FAMILY INCOME, AND LEVEL AND CONTROL OF INSTITUTION: ACADEMIC YEAR 1978-79

	ALL SCHOOLS	Institutional Level and Control				
		4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
ALL STUDENTS	36	36	45	26	37	63
Dependents						
$0-$5,999	76	81	85	60	70	92
$6,000-$11,999	67	65	70	70	55	66
$12,000-$17,999	47	49	69	21	43	66
$18,000-$24,999	27	21	47	10	31	51
$25,000-$29,999	21	18	40	3	16	44
$30,000 or more	8	5	16	1	11	14
Independents	37	42	47	28	43	66

Source: Student Survey.

It can be seen in Table 5.3 that the Basic Grant, which is an entitlement based upon a rigid need analysis formula, is clearly directed toward the neediest students. In fact, 79 percent of all dependent students with incomes less than $6,000 were BEOG recipients. For independent students, about one-third participate in the BEOG program. In terms of variations across type and control of institution attended (Table 5.4), a number of interesting relationships can be noted. First, the highest participation (slightly over 50%) is found in the proprietary schools, with the remaining traditional institutions exhibiting an approximately equal rate--a bit above one-fourth. This is probably due to the greater dependence and emphasis placed upon this source of financial aid in the proprietary sector. Second, where one would expect to find a similar concentration of needy students,--in the 2-year public sector, the lowest rate of participation in BEOG is found instead. In this case, the observed outcome is probably due to an interaction between the low cost of these institutions, the BEOG $200 minimum, and the BEOG half-cost limitation.

Turning to the SEOG program, it can be seen in Table 5.3 that the highest rates of participation, as expected, are found among lower-income students. The concentration is most dense in 4-year private schools and proprietary schools, presumably due to the high costs associated with these institutions which allows a higher proportion of students to qualify under the "exceptional need" provision of the SEOG program.

The College Work-Study Program (CWS), on the other hand, does not have quite the impact on students at proprietary schools due largely to the restrictions against employment in a profit-making setting. Students at 2-year institutions, both private and public, receive CWS awards in the greatest proportion, while students at 4-year institutions receive CWS awards in a slightly lower proportion than the mean for all students.

The most widely available form of financial assistance in 1978-79 was the BEOG with 29 percent of all undergraduate students receiving this form of assistance. This is followed by state grants (15%), National Direct Student Loans (12%), College Work-Study (11%), and Supplemental

Educational Opportunity Grants (9%). The way in which this participation varies by family income level and type of institution attended is displayed in Tables 5.3 and 5.4.

TABLE 5.3: PERCENTAGE OF ALL POSTSECONDARY UNDERGRADUATE STUDENTS RECEIVING PARTICULAR FORMS OF FINANCIAL ASSISTANCE, BY TOTAL FAMILY INCOME AND DEPENDENCY STATUS: ACADEMIC YEAR 1978-79

	ALL STUDENTS	Total Family Income and Dependency Status						
		Dependents						All Independents
		$0-$5,999	$ 6,000-$11,999	$12,000-$17,999	$18,000-$24,999	$25,000-$29,999	$30,000- or More	
BEOG	29	79	62	33	10	5	1	32
SEOG	9	21	16	11	4	2	0	10
NDSL	12	19	22	21	13	6	2	11
CWS	11	25	23	17	10	6	3	9
State	15	31	30	26	17	11	5	9

Source: Student Survey.

TABLE 5.4: PERCENTAGE OF ALL POSTSECONDARY UNDERGRADUATE STUDENTS RECEIVING PARTICULAR FORMS OF FINANCIAL ASSISTANCE BY LEVEL AND CONTROL OF INSTITUTION: ACADEMIC YEAR 1978-79

	ALL SCHOOLS	Institutional Level and Control				
		4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
BEOG	29	29	27	26	28	53
SEOG	9	9	13	5	5	14
NDSL	12	13	4	23	7	20
CWS	11	10	8	22	16	2
State	15	16	7	27	12	10

Source: Student Survey.

Table 5.3 also shows clearly that the vast majority of state financial assistance is directed at students with the greatest need. However, for some reason, independent students seem to be excluded from receiving state grants in many cases. A possible reason for this is the use of various local definitions of "independent" status. This results in some students, who are considered to be independent for Federal purposes, having their state aid eligibility judged on their parents' income, as if they were dependent.[2/]

Table 5.5 (A through E) illustrates the distribution of Federal student aid funds by income level and dependency status. Before examining them, however, it should be noted that the data in these tables were obtained from student financial aid records. In attempting to collect this information, site visit personnel encountered some student aid files which were incomplete, disorganized, or some combination of the two. Therefore, those students whose family income level or dependency status could not be determined from their files are included under the heading "unknown."

Beginning with the Basic Grant program, Table 5.5A shows the results of an aid program which adheres to a strict method of determining student eligibility, i.e., BEOG dollars are clearly targeted toward those in the three lowest income categories. In fact, 50 percent of BEOG dollars are awarded to dependent students with family incomes below $12,000, a group which comprises about 14 percent of all undergraduate students. Independent students, however, receive nearly one-third of the funds, but this is less than their representation in the total population. With regard to average BEOG awards, a curious dip is shown for those dependent students from families earning between $18,000-$24,999. The $532 average BEOG award for these students is at least $170 lower than the average award in any other income category. This table also reveals that although Basic Grants are awarded mostly to students from lower-income

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2/ New York State, for example, requires students to be 23 years of age before they can be considered to be independent.

TABLE 5.5: ESTIMATED PERCENTAGE DISTRIBUTION OF FEDERAL STUDENT FINANCIAL ASSISTANCE PROGRAMS FOR UNDERGRADUATE STUDENTS BY FAMILY INCOME AND DEPENDENCY STATUS: ACADEMIC YEAR 1978-79

	Total Recipients (Percentage)	Total Awards (Percentage)	Average Award (Dollars)	PERCENTAGE ALL STUDENTS
A. BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM				
ALL STUDENTS	100.0	100.0		
Dependents				
$0-$5,999	20.2	23.6	1089	5.5
$6,000-$11,999	24.6	26.2	996	8.4
$12,000-$17,999	14.1	10.7	702	11.7
$18,000-$24,999	3.7	2.1	532	13.5
$25,000-$29,999	0.4	0.3	704	6.0
$30,000 or more	0.1	0.1	739	16.4
Independents	31.3	31.2	927	38.4
Unknown[1/]	5.6	5.7		
B. SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT PROGRAM				
ALL STUDENTS	100.0	100.0		
Dependents				
$0-$5,999	16.9	15.9	596	5.5
$6,000-$11,999	20.5	19.1	592	8.4
$12,000-$17,999	17.6	17.5	628	11.7
$18,000-$24,999	9.6	9.8	650	13.5
$25,000-$29,999	1.9	1.9	635	6.0
$30,000 or more	0.7	0.6	560	16.4
Independents	29.9	32.7	693	38.4
Unknown[1/]	2.9	2.5		

Source: Student financial aid records.

[1/] Students of unknown dependency status and/or income level.

TABLE 5.5: ESTIMATED PERCENTAGE DISTRIBUTION OF FEDERAL STUDENT FINANCIAL ASSISTANCE PROGRAMS FOR UNDERGRADUATE STUDENTS BY FAMILY INCOME AND DEPENDENCY STATUS: ACADEMIC YEAR 1978-79 (continued)

	Total Recipients (Percentage)	Total Awards (Percentage)	Average Award (Dollars)	PERCENTAGE OF ALL STUDENTS
C. NATIONAL DIRECT STUDENT LOAN PROGRAM				
ALL STUDENTS	100.0	100.0		
Dependents				
$0-$5,999	10.4	9.3	722	5.5
$6,000-$11,999	16.5	14.4	704	8.4
$12,000-$17,999	18.9	16.9	724	11.7
$18,000-$24,999	15.9	16.9	834	13.5
$25,000-$29,000	3.9	4.1	820	6.0
$30,000 or more	2.0	2.0	746	16.4
Independents	26.4	30.2	951	38.4
Unknown[1/]	6.0	6.7		
D. COLLEGE WORK-STUDY PROGRAM				
ALL STUDENTS	100.0	100.0		
Dependents				
$0-$5,999	16.3	16.3	848	5.5
$6,000-$11,999	18.0	17.5	822	8.4
$12,000-$17,999	16.9	15.6	780	11.7
$18,000-$24,999	13.2	12.3	791	13.5
$25,000-$29,999	3.8	2.9	652	6.0
$30,000 or more	1.9	1.6	696	16.4
Independents	22.7	27.3	1018	38.4
Unknown[1/]	7.2	6.5		

Source: Student financial aid records.

[1/] Students of unknown dependency status and/or income level.

TABLE 5.5: ESTIMATED PERCENTAGE DISTRIBUTION OF FEDERAL STUDENT FINANCIAL ASSISTANCE PROGRAMS FOR UNDERGRADUATE STUDENTS BY FAMILY INCOME AND DEPENDENCY STATUS: ACADEMIC YEAR 1978-79 (continued)

	Total Recipients (Percentage)	Total Awards (Percentage)	Average Award (Dollars)	PERCENTAGE OF ALL STUDENTS
E. UNDUPLICATED COUNT-FOUR FEDERAL PROGRAM				
ALL STUDENTS	100.0	100.0		
Dependents				
$0-$5,999	16.8	18.4	1587	5.5
$6,000-$11,999	20.6	21.4	1498	8.4
$12,000-$17,999	14.7	13.8	1347	11.7
$18,000-$24,999	9.1	7.8	1244	13.5
$25,000-$29,999	2.3	1.7	1089	6.0
$30,000 or more	1.1	0.8	1005	16.4
Independents	28.7	30.3	1526	38.4
Unknown 1/	6.7	5.8		

Source: Student financial aid records.

1/ Students of unknown dependency status and/or income level.

households, the need analysis formula is flexible enough to take into account factors aside from income (e.g., family size and assets) in calculating the eligibility of students from certain upper-income households.

The way in which SEOG funds are distributed (Table 5.5B) indicates that the program has been able to reach out to students across a wider spectrum of income levels than the BEOG program. While the majority of SEOG dollars are funneled to students from families with incomes under $18,000, almost 10 percent of SEOG funds are allotted to students from families whose incomes range between $18,000 and $24,999. Again, even though independent students claim approximately one-third of the available funds, they are still underrepresented. The average SEOG award

is relatively consistent except that the average for independent students is significantly higher. This may indicate that aid officers are using their SEOG funds to assist those students with higher-than-average costs of education (i.e., academic year budget). In general, institutions appear to be attempting to spread their SEOG money around to the widest number of students.

The self-help components of the Campus Based aid programs, National Direct Student Loans and the College Work-Study Program, show slightly different distribution patterns from the SEOG and Basic Grant programs. To begin with, the distribution of NDSL funds (Table 5.5C) exhibits a pattern which most closely approximates the distribution of all students. The majority of the funds are awarded to students from families with incomes below $24,999, with independent students again receiving a disproportionate one-third share of the awards. Significantly, a smaller proportion of the neediest students ($0-$5,999 family income) receive NDSL loans than their counterparts in the next three highest income brackets. The average NDSL award for dependent students ranges from $704 to $834, with the highest averages being noted for students from families with the highest incomes. This suggests that financial aid officers might be awarding NDSL funds in accordance with their perception of students' ability to repay. Independent students, however, face the greatest NDSL burden, averaging $951 per recipient.

The distribution of dollars in the College Work-Study Program is spread quite evenly among the lowest four income categories of dependent students. As Table 5.5D indicates, almost two-thirds of CWS awards are distributed to dependent students from families whose incomes are below $24,999. The average awards for these students generally increase inversely to the income level of the student's family. As with the NDSL awards, eligible independent students are, on average, forced to bear more hours of employment throughout the academic year than their dependent counterparts.

Finally, Table 5.5E provides the unduplicated distribution of Federal student assistance, i.e., the actual number of Federal aid recipients

regardless of whether they received aid from one or more sources. The patterns which have been noted above are reemphasized here. In line with the need-based awarding of these funds, the average total of Federal assistance which students receive decreases inversely to the level of family income, with students from families with incomes below $12,000 receiving the greatest proportion (42.3%) of Federal aid. Independent students receive a relatively high average student aid award; but as previous data have shown, a larger portion of these awards are comprised of self-help support.

Patterns of Aid Distribution to Institutions

Although the Federal student aid programs are designed primarily to provide students with additional financial resources, Table 5.6 (A through E) indicates that these programs also indirectly provide funds to the institutions these students attend.

In examining the first table (i.e., Table 5.6A), one can clearly see that the distribution of BEOG recipients is closely in line with the overall distribution of postsecondary students. What is interesting here, however, are the differences between the distributions of BEOG recipients and BEOG dollars that is the result of both differences in cost of attendance and the so-called half-cost limitation. For example, the percentage of awards funneled to the generally low-cost 2-year public schools is lower than the percentage of recipients (25.6% vs. 29.2%) at these institutions; at the higher-cost private 4-year and proprietary schools, the trend is reversed (17.7% vs. 20.8%, and 8.8% vs. 10.1%). The drop in available funds at 2-year public schools may also reflect the number of part-time students who attend these schools and receive reduced BEOG awards due to their less-than-full-time status.

Turning now to Table 5.6B, it is apparent that the nature of the SEOG program, and the regulations which govern individual SEOG awards, do much to determine the distribution of SEOG funds. Supplemental Educational Opportunity Grants are intended for students who can demonstrate

TABLE 5.6: ESTIMATED PERCENTAGE DISTRIBUTION OF FEDERAL STUDENT FINANCIAL ASSISTANCE PROGRAMS FOR UNDERGRADUATE STUDENTS, BY LEVEL AND CONTROL OF INSTITUTION: ACADEMIC YEAR 1978-79

	Total Recipients (Percentage)	Total Awards (Percentage)	Average Award (Dollars)	PERCENTAGE OF ALL STUDENTS[1]
A. BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM				
ALL SCHOOLS	100.0	100.0		100.00
PUBLIC:				
4-Year	42.2	41.0	902	38.9
2-Year	29.2	25.6	814	30.7
PRIVATE:				
4-Year	17.7	20.8	1091	18.1
2-Year	2.1	2.5	1117	1.1
PROPRIETARY	8.8	10.1	1072	11.0
B. SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT PROGRAM				
ALL SCHOOLS	100.0	100.0		100.0
PUBLIC:				
4-Year	38.4	38.2	631	38.9
2-Year	17.4	16.2	590	30.7
PRIVATE:				
4-Year	29.1	30.4	665	18.1
2-Year	2.3	1.6	432	1.1
PROPRIETARY	12.8	13.6	674	11.0

Source: Student financial aid records.

[1] Data obtained from National Center for Education Statistics, Full Enrollment in Higher Education, 1977.

TABLE 5.6: ESTIMATED PERCENTAGE DISTRIBUTION OF FEDERAL STUDENT FINANCIAL ASSISTANCE PROGRAMS FOR UNDERGRADUATE STUDENTS, BY LEVEL AND CONTROL OF INSTITUTION: ACADEMIC YEAR 1978-79 (continued)

	Total Recipients (Percentage)	Total Awards (Percentage)	Average Award (Dollars)	PERCENTAGE OF ALL STUDENTS[1/]
C. NATIONAL DIRECT STUDENT LOAN PROGRAM				
ALL SCHOOLS	100.0	100.0		100.00
PUBLIC:				
4-Year	43.3	39.6	744	38.9
2-Year	9.2	7.7	684	30.7
PRIVATE:				
4-Year	36.1	39.0	878	18.1
2-Year	1.5	1.5	678	1.1
PROPRIETARY	9.9	12.2	1008	11.0
D. COLLEGE WORK-STUDY PROGRAM				
ALL SCHOOLS	100.0	100.0		100.0
PUBLIC:				
4-Year	35.5	37.2	885	38.9
2-Year	23.7	26.2	934	30.7
PRIVATE:				
4-Year	36.4	32.8	761	18.1
2-Year	4.1	3.4	700	1.1
PROPRIETARY	0.3	0.4	1166	11.0

Source: Student financial aid records.

1/ Data obtained from National Center for Education Statistics, Full Enrollment in Higher Education, 1977.

TABLE 5.6: ESTIMATED PERCENTAGE DISTRIBUTION OF FEDERAL STUDENT FINANCIAL ASSISTANCE PROGRAMS FOR UNDERGRADUATE STUDENTS, BY LEVEL AND CONTROL OF INSTITUTION: ACADEMIC YEAR 1978-79 (continued)

	Total Recipients (Percentage)	Total Awards (Percentage)	Average Award (Dollars)	PERCENTAGE OF ALL STUDENTS[1/]
E. UNDUPLICATED COUNT-FOUR FEDERAL PROGRAMS				
ALL SCHOOLS	100.0	100.0		100.00
PUBLIC:				
4-Year	41.0	40.1	1409	38.9
2-Year	25.4	20.9	1189	30.7
PRIVATE:				
4-Year	23.4	27.4	1694	18.1
2-Year	2.4	2.3	1392	1.1
PROPRIETARY	7.8	9.3	1709	11.0

Source: Student financial aid records.

1/Data obtained from National Center for Education Statistics, Full Enrollment in Higher Education, 1977.

"exceptional need" which, as defined in the regulations, is dependent upon the amount of other aid the student is receiving, i.e., SEOG cannot exceed the total of all other financial assistance. One would, therefore, expect the distribution of SEOG recipients and awards to reflect both the distribution of financially needy students (e.g., family wealth and/or educational cost) and the relative differences in an institution's ability to "match" SEOG awards. As shown in the data, approximately two-thirds of both the recipients and the awards are concentrated in the 4-year institutions. Since 4-year schools are more likely to participate in the Campus Based programs, and thus have the resources to meet this matching requirement, this skewness is not surprising. In addition, the high cost of attending 4-year private schools contributes to the

relatively high level of SEOG awards at these schools. As a final note, the extraordinarily low average of SEOG awards at 2-year private schools should be reviewed with some skepticism. This is largely a result of the small number of these cases from which data were gathered.

The distribution of recipients of National Direct Student Loans is primarily a function of the administrative ability of institutions which students attend. That is, due to the high work burden which the NDSL program imposes on participating institutions, not all schools can, or wish to, devote the resources which must necessarily accompany their participation. Accordingly, Table 5.6C clearly indicates that the vast majority of NDSL dollars and recipients are located at the 4-year institutions. Interestingly, those proprietary schools which distribute NDSL loans do so at a significantly higher amount than all other schools ($1,008 per recipient). This is likely due to their high cost and their limited ability to offer other kinds of student assistance. Four-year private schools also award higher amounts of loans than other schools ($878) which, again, shows the influence of high-cost schools on students' loan burdens.

The other half of the self-help component of the Campus Based programs, the College Work-Study Program, is utilized by institutions in varying degrees. Nearly all (95.6%) of the total pool of CWS recipients are found in 4- and 2-year public schools and the 4-year private schools. These schools have found it to their advantage to request as much CWS funding as they can from USOE since, for many institutions, CWS workers provide a ready resource of subsidized labor which can be used to support a wide variety of campus programs and activities. The limited number of CWS eligible employment opportunities at proprietary schools[3/] results in a low rate of participation in the CWS program. The average work-study award at public schools appears to be higher than those at private schools despite their generally lower cost of

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3/ Students receiving CWS monies cannot be employed with profit-making organizations.

attendance. This may result in students at public schools having a much greater proportion of their needs met through work-study commitments than from deferred earnings (i.e., loans).

Table 5.6E summarizes the unduplicated distribution of Basic Grant and Campus Based student aid by type and level of institution. Although the table presents no new information (when viewed in context with Table 5.6 (A through D)), it does illustrate some of the basic results of the Federally financed student aid programs. The most evident result is that privately controlled institutions (including proprietary schools) receive a higher proportion of the total of Federal student aid dollars than do publicly supported schools, when viewed in terms of the overall distribution of all Federal aid recipients. At 4-year and 2-year public institutions the percentage of total awards is less than the percentage of total recipients, while at 4-year private and proprietary schools this trend is reversed; 2-year private schools show virtually no difference between the percentages. Examining the average awards per recipient reveals that the Federal government is subsidizing students at proprietary schools at a higher rate than at any other type of institution.

PERCENTAGE OF FEDERAL AID RECIPIENTS WHO RECEIVE OTHER FORMS OF AID

While the previous section examined the distribution of Federal aid dollars and recipients, this discussion focuses on the ways in which the various Federal aid programs interact both with each other and with other forms of direct student support. As such, the percentage of Federal aid recipients who also received other forms of aid is examined according to the following combinations: the percentage of BEOG recipients who received aid from other sources, and likewise, the percentage of SEOG, NDSL, and CWS recipients who received aid from other sources.

BEOG Recipients

From an examination of the aid distribution across institutions in Table 5.7, several consistent trends can be detected. These trends are summarized below according to grant, loan, and work outcomes.

4. Grants

A. SEOG: The percentage of BEOG recipients who were awarded SEOG money is greater in private schools than in public schools. At both the 2- and 4-year levels, private schools have a greater percentage of BEOG students with SEOG awards than their public counterparts. Indeed, the highest percentage (46) is for independent BEOG students in proprietary schools followed by the 4-year privates. This is due to the generally higher cost of these schools as compared to public institutions.

B. State grants: As with the SEOG, the percentage of BEOG students with state grants is higher in private schools at both levels than in public schools. The percentage is

TABLE 5.7: THE PERCENTAGE OF BEOG RECIPIENTS WHO RECEIVE OTHER TYPES OF AID: ACADEMIC YEAR 1978-79

	Institutional Level and Control				
	4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
	A. Dependent Students				
SEOG	22.0	34.2	14.3	24.9	28.1
NDSL	29.0	49.9	8.6	23.6	32.7
CWS	21.7	48.3	32.2	51.1	1.8
GSL	4.3	11.7	0.8	24.4	18.2
State Grants	32.9	41.2	10.4	39.0	8.5
Institutional Grants	10.0	21.5	0.6	17.9	1.3
Other Loans	0.8	2.6	0.5	3.0	3.8
BEOG Only	31.5	11.6	51.0	8.1	34.6
	B. Independent Students				
SEOG	20.9	35.4	13.7	16.0	46.0
NDSL	37.4	39.0	11.6	17.4	51.0
CWS	31.3	37.2	18.9	26.6	0.4
GSL	4.6	12.6	3.4	10.3	9.6
State Grants	24.4	29.1	10.1	24.3	2.3
Institutional Grants	7.9	13.8	0.3	2.7	0.1
Other Loans	0.8	3.8	1.2	3.3	2.2
BEOG Only	31.5	17.0	58.6	33.9	25.8

Source: Student financial aid records.

relatively low, however, in both the proprietary and 2-year public schools (less than 10%). This can be explained, in part, by the existence of several state grant programs which provide financial incentives to students attending private schools (e.g., Indiana's "Freedom of Choice" Program and the Georgia Tuition Incentive Grant).

C. Institutional grants: Consistent with the above findings, the percentage of BEOG students with institutional awards is greater in private schools than in public and proprietary institutions. Institutional grants in 2-year public and proprietary schools are practically nonexistent while private institutions are able to draw upon their endowments and higher tuitions as sources of institutional financial aid dollars.

2. Loans

A. NDSL: The percentage of BEOG students who received NDSL is greater in private schools than in public schools. At both the 2- and 4-year levels, private schools have a larger percentage of NDSL recipients than their public counterparts. Proprietary schools also have a very high percentage of NDSL awards to students, exceeded only by 4-year private institutions.

B. GSL: Practically speaking, the percentage of BEOG students with GSL loans is almost nonexistent among the public schools. This may, however, be due to our inability to collect accurate GSL data from students' financial aid records. From the available information, though, it can be seen that the percentage is far greater in private and in proprietary schools. Institutions which do not participate in the Campus Based programs (which include a large number of proprietary schools) would tend to have larger numbers of students seeking GSLs as the only means available to meet educational costs. The high proportion of BEOG recipients, who are also GSL recipients in private schools, indicates that the available programs are unable to meet the full cost of education at these high-cost institutions.

C. Other Loans: As with the above loan outcomes, the percentage is greater in private and proprietary schools than in public schools. Although the relative differences are consistent with the above results, on an absolute level, the percentage of students with other loans is low. For all institution types, the percentage is less than five percent.

3. Work

A. CWS: At both the 2- and 4-year levels, the higher-cost private schools have a greater percentage of BEOG students with CWS jobs than their public counterparts. Aid in terms

of CWS is, however, practically nonexistent for students in proprietary schools due to the restrictions on employing CWS students at profit-making organizations.

SEOG Recipients

An examination of Table 5.8 reveals several consistent trends in the distribution of aid to SEOG recipients. These patterns are summarized below, again according to grants, loans, and work.

1. Grants

   A. BEOG: The majority of students (ranging from 62% to 89%) who were recipients of SEOG were also recipients of BEOG, due likely to the SEOG matching requirement. Although there are no major differences across institutions, there is a tendency for the public schools to have a slightly

TABLE 5.8: THE PERCENTAGE OF SEOG RECIPIENTS WHO RECEIVE OTHER TYPES OF FINANCIAL AID: ACADEMIC YEAR 1978-79

	Institutional Level and Control				
	4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
A. Dependent Students					
BEOG	77.2	64.8	88.6	62.0	78.0
NDSL	55.9	71.0	43.8	33.0	72.3
CWS	37.8	63.6	36.2	63.9	5.9
GSL	3.4	12.8	0.0	37.1	7.9
State Grants	32.1	34.5	11.1	39.8	6.6
Institutional Grants	8.1	27.8	0.0	19.1	3.1
Other Loans	0.7	2.6	1.4	0.0	7.7
B. Independent Students					
BEOG	78.2	81.4	67.5	69.2	85.9
NDSL	64.7	56.9	53.5	38.8	78.4
CWS	54.9	60.5	35.2	45.4	0.7
GSL	6.5	20.1	0.2	0.0	6.0
State Grants	28.6	20.8	16.8	17.1	3.3
Institutional Grants	12.1	14.0	1.0	7.3	0.5
Other Loans	2.2	6.6	0.0	0.0	0.1

Source: Student financial aid records.

greater percentage of SEOG students with BEOG grants than their private counterparts.

Again, this may be a result of the latter group's greater access to other sources of aid.

B. State grants: The percentage of SEOG students with state grants is consistently lower in 2-year public and proprietary schools than in 4-year schools or 2-year private schools. In every institution type except 2-year public schools, dependent students who are SEOG recipients are more likely to receive a state grant than independent SEOG students.

C. Institutional grants: There is a great deal of variation across institutions in the percentage of SEOG students with institutional grants. As expected, private schools, at both levels, tend to award a greater number of grants to SEOG students than their public counterparts. Again, this is a result of their increased access to financial resources. Within private schools, dependent SEOG recipients are more likely to receive institutional grants than independent SEOG recipients. Finally, institutional grants for SEOG recipients in the 2-year public and proprietary schools are relatively uncommon (ranging from 0% to 8%).

2. Loans

A. NDSL: The percentage of SEOG students with NDSLs is relatively greater in the 4-year and proprietary schools than in the 2-year schools. The majority of SEOG students in proprietary (72% to 78%) and 4-year schools (56% to 71%) are recipients of NDSL, whereas in the 2-year schools the percentage of recipients varies from 33 to 54, indicating that financial aid offices at the 4-year and proprietary schools may be attempting to strike a balance between the awarding of grants and self-help.

B. GSL: Across institutions, there is a wide range in the percentage of SEOG students with a GSL. Private schools at both the 2- and 4-year levels have a greater percentage of SEOG students with GSLs than their public counterparts. The percentage among public and proprietary schools is relatively low, ranging only from 0 percent to 8 percent.

C. Other Loans: The percentage of SEOG students with other loans is basically low across all institutions (0% to 8%). On a relative basis, however, 4-year private and proprietary schools have a higher percentage of students with other loans than the other institutions.

3. Work

A. CWS: The percentage of SEOG students engaged in CWS programs is higher in private schools than in their public

counterparts or in proprietary schools. Within proprietary institutions there are only a very small number of students who worked through CWS (less than 6%) due to the requirement that CWS funds be used in nonprofit jobs. The percentages in private schools range from 38 to 64, whereas in public schools the percentages range from 35 to 55. This also illustrates a mixing between grants and self-help aid.

NDSL Recipients

The percentage of NDSL recipients who received other sources of aid is presented in Table 5.9. As with the above two analyses, an examination of findings is presented by grants, loans, and work:

1. Grants

   A. BEOG: The percentage of NDSL recipients who also receive BEOG is consistently high across institution types. In every institution type, the percentage is over 50. The highest is in the proprietary (79%) and public schools (67% to 70%). At both the 2- and 4-year levels, public schools tend to have a greater percentage of NDSL/BEOG recipients than the private schools.

   B. SEOG: The percentage of NDSL students with SEOG awards is rather low (32% to 41%) in every institution except in 2-year public (60%) and proprietary schools (64%).

   C. State grants: Although the percentage across institutions is rather low, there are some distinctive differences. At both the 2- and 4-year levels, NDSL students in private schools are more likely to have state grants than NDSL students in public schools. The percentage in private schools ranges from 21 to 39, whereas the range in public schools is from 10 to 31. Proprietary school NDSL recipients are the lowest (0% to 2%). It would seem, therefore, that students who are assigned NDSLs as their prime source of aid may be the "least" needy students at a given school and may not have qualified for other need-based aid such as state grants.

   D. Institutional grants: The percentage of NDSL students with institutional grants is consistent with the results on state grants. In general, the percentage is rather low across all institution types.

TABLE 5.9: THE PERCENTAGE OF UNDERGRADUATE NDSL RECIPIENTS WHO RECEIVE OTHER TYPES OF FINANCIAL AID: ACADEMIC YEAR 1978-79

	Institutional Level and Control				
	4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
A. Dependent Students					
BEOG	61.2	48.3	78.7	57.6	79.3
SEOG	33.6	36.2	64.7	32.4	63.3
CWS	26.2	52.2	25.2	44.6	2.4
GSL	5.0	16.1	0.3	7.9	3.7
State Grants	30.9	38.7	9.5	29.0	2.0
Institutional Grants	17.7	27.2	0.3	21.9	1.7
Other Loans	0.2	1.4	0.0	3.5	6.2
NDSL Only	11.7	8.6	3.9	12.9	4.3
B. Independent Students					
BEOG	73.7	65.1	60.9	62.6	79.5
SEOG	34.0	41.3	56.9	32.3	65.5
CWS	43.2	46.3	27.1	32.0	0.7
GSL	3.0	17.9	0.8	0.0	1.2
State Grants	27.1	24.1	11.1	20.6	0.2
Institutional Grants	12.2	24.8	0.0	20.4	0.4
Other Loans	1.4	5.4	0.0	26.8	0.1
NDSL Only	7.9	2.0	6.4	0.0	9.1

Source: Student financial aid records.

2. Loans

   A. GSL: The percentage of NDSL recipients who were also GSL borrowers is very low across institutions. The percentage is less than 8 percent in every institution type except the high-cost 4-year private schools (17%). This represents a significant number of students who are assuming a dual loan burden.

   B. Other loans: As with the results on GSL, the percentage of NDSL students with other loans is very small in every institution except for independent students in 2-year private schools (27%), possibly due to the unavailability of other aid sources. The percentage in the remaining schools is less than six percent.

3. Work

   A. CWS: The percentage of NDSL students engaged in CWS programs range from 1 to 52 percent across institutions. The lowest percentage occurs in proprietary schools (1% to 2%), whereas the remaining NDSL students vary from 25 to 52 percent. At both levels, private schools have a greater percentage of students engaged in CWS than their public counterparts. This may reveal that a number of institutions are trying to split students' self-help between loans and work.

CWS Recipients

Table 5.10 displays the percentage of CWS recipients who received other sources of aid. As in the above descriptions in this section, the results are summarized below:

1. Grants

   A. BEOG: The majority of CWS recipients are also recipients of BEOG. The percentage across institutions ranges from 55 to 85. Public and proprietary schools tend to have a larger percentage of CWS students with BEOG money than do CWS recipients in private schools.

   B. SEOG: The percentage of CWS recipients who are also SEOG recipients is rather consistent across institutions except in the proprietary schools. This deviation among proprietary students is, however, a result of the very small number of such students in the sample.

   C. State grants: Although the percentage of CWS students with state grants is consistently low (0% to 33%), there are distinct differences across the institutions. Four-year

TABLE 5.10: THE PERCENTAGE OF UNDERGRADUATE CWS RECIPIENTS WHO RECEIVE OTHER TYPES OF FINANCIAL AID: ACADEMIC YEAR 1978-79

	Institutional Level and Control				
	4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
A. Dependent Students					
BEOG	69.9	54.5	85.2	55.0	73.3
SEOG	34.7	37.9	15.5	27.6	86.0
NDSL	39.9	60.8	7.3	19.6	40.1
GSL	6.4	17.4	0.5	45.5	14.6
State Grants	31.4	33.2	9.8	32.4	8.8
Institutional Grants	15.0	32.0	0.0	25.0	5.7
Other Loans	0.5	3.2	0.4	1.2	0.0
CWS Only	4.9	3.6	12.1	4.9	0.0
B. Independent Students					
BEOG	76.1	73.9	76.9	83.2	83.0
SEOG	35.7	52.2	29.1	32.9	68.6
NDSL	53.4	55.1	21.1	27.8	78.5
GSL	5.5	21.5	0.6	9.2	0.0
State Grants	25.3	18.9	11.9	24.1	0.0
Institutional Grants	11.6	20.8	0.6	11.5	0.0
Other Loans	1.6	6.6	0.0	3.5	0.0
CWS Only	5.8	0.6	4.1	5.9	5.5

Source: Student financial aid records.

schools and 2-year private institutions have a relatively higher percentage of CWS students with state grants than 2-year public or proprietary schools.

D. Institutional grants: CWS students in private schools at both the 2- and 4-year levels are more likely to be recipients of an institutional grant than CWS students in public schools. The percentages in private schools range

from 12 to 32, whereas the range in public schools is 0 to 15. Institutional grants are also rare in proprietary schools (0% to 6%). This finding is consistent with previous results which seem to indicate that private schools have greater financial resources; thus, they provide more institutional grants.

2. Loans

   A. NDSL: There is a great deal of variation across institutions in the percentage of CWS students with a NDSL. The percentages range from 7 to 79. At both the 2- and 4-year levels, private schools have a greater percentage of students with a NDSL than their public counterparts. Across institutions, the highest percentage occurs in proprietary and 4-year schools, while the lowest is in 2-year schools (7% to 28%).

   B. GSL: Only a small percentage of CWS students obtain GSLs. The percentages ranges from 0 percent to 45 percent. CWS students in private and proprietary schools are more likely to receive GSLs than corresponding students in public schools due mainly to their higher educational costs.

   C. Other Loans: The percentage of students with other loans is extremely low across institution types. Indeed, in 2-year public and proprietary schools there are no CWS students with other loans. At both the 2- and 4-year levels, the private school students tend to utilize other loans more than public school students.

DISTRIBUTION OF FEDERAL FINANCIAL AID BY GENDER, ETHNICITY, AGE, ABILITY, AND YEAR IN SCHOOL

Through the other sections of this chapter, we have attempted to describe the general patterns of Federal aid distribution using two of the most commonly used variables--family income and institution type. In this section, the distribution is further examined using factors such as gender, race, and age. In accordance with the equal protection provisions of United States law, these factors should not influence the types or amounts of aid which students receive.

Table 5.11 (A through E) outlines the percentage distribution of students receiving Basic Grant and/or Campus Based aid according to gender, ethnicity, age, year in school, and region. Also included is an "unduplicated count" of students receiving any of these four forms of

TABLE 5.11: THE DISTRIBUTION OF FEDERAL STUDENT AID FUNDS TO UNDERGRADUATE STUDENTS BY ETHNICITY, AGE, YEAR IN SCHOOL, AND REGION: ACADEMIC YEAR 1978-79

STUDENT CHARACTERISTICS	Basic Educational Opportunity Grant		Supplemental Educational Opportunity Grant		National Direct Student Loan		College Work Study		Unduplicated Count		Overall Postsecondary Student Distribution
	Percent	Average Award	Percent	Average Award	Percent	Average Award	Percent	Average Award	Percent	Average Award	Percent
A - GENDER											
Male	39.6	914	42.7	620	47.8	837	42.8	812	42.5	1447	44.3
Female	60.4	939	57.3	647	52.2	790	57.2	871	57.5	1492	55.7
TOTAL 1/	100.0		100.0		100.0		100.0		100.0		100.0
B - ETHNICITY											
American Indian or Alaskan Native	2.8	1029	2.4	680	1.0	762	2.3	827	2.5	1532	2.7
Asian or Pacific Islander	3.2	874	4.4	663	3.7	851	2.3	993	3.1	1600	2.9
Black (Not Hispanic)	34.0	1006	34.7	630	30.1	776	35.3	880	29.8	1776	26.6
Hispanic	16.8	858	10.7	667	5.5	756	6.6	1000	14.2	1215	12.5
White (Not Hispanic)	43.3	902	47.9	655	59.7	846	53.6	839	50.5	1473	55.3
TOTAL*	100.0		100.0		100.0		100.0		100.0		100.0

Source: U.S. Bureau of the Census.

1/ Not all percentage columns will total 100% due to rounding.

TABLE 5.11: THE DISTRIBUTION OF FEDERAL STUDENT AID FUNDS TO UNDERGRADUATE STUDENTS BY ETHNICITY, AGE, YEAR IN SCHOOL, AND REGION: ACADEMIC YEAR 1978-79 (Continued)

STUDENT CHARACTERISTICS	Basic Educational Opportunity Grant		Supplemental Educational Opportunity Grant		National Direct Student Loan		College Work Study		Unduplicated Count		Overall Postsecondary Student Distribution
	Percent	Average Award	Percent	Average Award	Percent	Average Award	Percent	Average Award	Percent	Average Award	Percent
C - AGE											
Under 19	1.3	881	1.2	434	0.9	606	0.9	860	1.2	1272	1.1
19 - 20	36.2	927	43.7	618	41.2	748	44.0	766	38.0	1469	38.5
21 - 22	29.2	944	26.8	597	29.3	831	31.6	859	29.5	1482	30.5
23 - 24	10.4	929	10.3	726	11.8	864	9.5	928	10.9	1496	10.9
25 - 34	17.2	926	14.6	710	13.9	933	10.7	1017	15.6	1513	14.6
35 - 44	4.0	915	2.6	631	2.2	773	2.5	1171	3.4	1443	3.1
Over 44	1.7	887	0.8	639	0.7	810	0.8	1064	1.4	1237	1.3
TOTAL1/	100.0		100.0		100.0		100.0		100.0		100.0
D - YEAR IN SCHOOL											
Freshman/1st Yr. Voc Tech	44.0	914	49.2	626	39.5	794	37.7	769	42.6	1431	42.1
Sophomore/2nd Yr. Voc Tech	28.4	920	24.7	625	24.7	767	30.2	880	27.8	1448	27.1
Junior	15.2	966	15.3	643	18.2	815	17.2	895	15.8	1569	15.3
Senior	11.5	960	9.6	668	16.3	918	13.5	884	12.6	1591	13.3
Other	0.8	957	1.2	706	1.3	904	1.5	1192	1.2	1572	1.2
TOTAL1/	100.0		100.0		100.0		100.0		100.0		100.0
E - REGION											
West	26.7	887	35.7	667	29.0	876	22.4	976	26.2	1573	26.4
Southeast	24.2	943	17.7	560	13.6	738	26.0	909	21.6	1478	19.1
Northeast2/	28.6	949	26.6	652	27.4	882	29.1	762	30.3	1388	29.0
Central	20.5	941	20.0	622	29.9	719	22.6	750	21.9	1452	25.5
TOTAL1/	100.0		100.0		100.0		100.0		100.0		100.0

Source: U.S. Bureau of the Census.

1/ Not all percentage columns will total 100% due to rounding.

2/ Includes Puerto Rico.

Federal assistance. Additionally, the estimated distribution of all postsecondary students (recipients as well as nonrecipients) is provided for purposes of comparison.

Gender

In accordance with the requirements of Title IX, financial aid cannot be distributed on the basis of gender. Both males and females must be guaranteed equal access to available financial aid monies. The data provided in Table 5.11A, at first glance, would seem not to support such perceptions. There is a significantly higher proportion of funds given to women BEOG recipients as compared both to their representation in the total population of postsecondary students and to the proportion of funds given to men recipients. Similarly, women were observed to account for a greater proportion of the awards under the three Campus Based programs as well as when examined as an unduplicated total of all Federal support. But here, the relative distribution of awards approximates more closely the overall gender distribution of all postsecondary students. Finally, with the exception of NDSL, the average aid awards to women were found to be greater than those for men. Sharon H. Bob, an Education Policy Fellow in the U.S. Office of Education, however, summarizes the existing view of the condition of women students in a paper entitled, "Women and Financing Higher Education." She claims that women are <u>not</u> receiving their fair share of financial aid dollars due mainly to institutional discriminatory practice:

> ...evidence that disparities continue to exist in the choices available to women in higher education lead to the belief that awarding of financial aids may continue to be discriminatory by virtue of overt or covert institutional practices and procedures.5/

5/Sharon H. Bob, "Women and Financing Higher Education," Paper presented at the Research Conference on Educational Environment and the Undergraduate Woman, 1979, p. 3.

She presents a number of pieces of evidence to support the premise that the actual needs of women students are not now being properly assessed.

These results, however, cannot be interpreted as necessarily indicative of differential treatment of men and women, particularly with regard to average awards. Other factors, such as differences in costs of the selected education, can be more important in determining actual aid awards. As will be discussed in more detail in Chapter 6, the only differences which can be considered to be unfair are those between students in like circumstances, i.e., facing equal financial barriers to postsecondary education. This being the case, a further comparison was made of average BEOG, SEOG, NDSL, and CWS awards to men and women controlling for educational cost and family wealth.[6/]

Under this more exacting test, none of the differences between men and women in average awards were found to be statistically significant except for NDSL ($p \leq 0.01$). In this case, men in circumstances similar to women were found to have an average NDSL award (adjusted for the effects of all other variables) of $127 over and above that of women ($764 vs. $637). Therefore, contrary to Ms. Bob's hypothesis, women not only are equal to men in their treatment under the Federal financial aid program but, in fact, appear to be less burdened with loans than their male counterparts.

Ethnicity

As with gender, ethnicity, in and of itself, should not be a determinant in the awarding of Federal student aid funds. However, the programs must be responsive to the relationship between economic

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6/ The procedure used was analysis of covariance which is described in more detail in Chapter 8. Gender and ethnicity were entered as main effects, and interactions, educational cost, and family contribution were entered as covariates. All data were derived from student financial aid records.

circumstance and race which exists in the United States. That the Basic Grant and Campus Based programs have shown such a responsiveness is evident in Table 5.11B. Exclusive of Native Americans and Asians (for which insufficient observations were obtained), nonwhite students received a proportionately higher share of the Federal aid awards than their representation in the total postsecondary student population. However, as in the case of gender, any further comparisons must be made exclusive of other possible influences in order to judge if differential treatment has occurred.

As before, a comparison was made (using analysis of covariance) between the average awards made to minority (i.e., nonwhite) and majority students. Unlike the previous case, however, the differences were found to be significant in every case ($p < .05$) except for the awards made under the College Work-Study program. Minority students received an average BEOG award (adjusting for the effect of the other variables) $253 above that for similar majority students ($1,182 vs. $929), an average of $77 more under SEOG ($691 vs. $614), and an average of $85 less under NDSL ($646 vs. $731). The average CWS awards were not, as mentioned, significantly different. Minority students, therefore, receive greater Federal grant support and lower NDSL loans, than their majority counterparts. The two groups, though, exhibit an aggregate equal access to Work-Study employment.

Age

In recent years, the expansion of higher educational opportunities has opened the routes of access to postsecondary education to a wider spectrum of age groups. A full 81 percent of postsecondary undergraduate students (enrolled at least half time) still can be categorized as of "traditional" college age (here defined as under 25). Those in the over-25 category (19%) are presumed to be, in many cases, "returning" students—those who had interrupted their educational careers and have chosen to go back to school. These "nontraditional" students, to use the colloquialism, are more likely to be self-supporting (independent) and, for a number of reasons (i.e., additional dependents), may have special

financial needs. As a general note, the limited amount of data available on students in the youngest (under 19) and oldest (over 44) age categories makes it difficult to draw any definitive conclusions on the treatment of these groupings.

The distribution of Basic Grant awards across age groups (Table 5.11C) is consistent with the overall distribution of students. The only real variance is that students above 25 years of age collect a slightly higher proportion of BEOGs than their overall representation distribution (22.9% vs. 19%). The distribution of SEOG funds reflects the split in SEOG awards between "first year" and "continuing year" allocations; students under 20 years of age are receiving a disproportionately larger share of SEOG funds. The additional financial needs of older students are evidenced by the higher average award amounts for these students.

The allocation of self-help dollars shows little in the way of a recognizable pattern when examined in terms of recipient age. Students aged 19-20 are, for some reason, receiving the highest proportion of both CWS and NDSL awards, although their average awards are relatively low. Generally, the work burden imposed on students in all age groups is larger than the loan counterpart. This is especially evident in the over-25 age categories.

Despite the noted variance in the distribution of individual program awards, the composite picture of age distribution is remarkably well ordered. Not only are the average total award levels relatively even, but also the distribution of recipients virtually matches the overall age breakdown of the entire student population.

Year in School

The differences in the aid distribution patterns according to class level of the student are examined in Table 5.11D. For each of the various types of Federal aid, the distribution of recipients is close to that of the overall distribution of students by year in school. This pattern is broken most noticeably by the SEOG program. A greater proportion of freshman students receive SEOG awards due to its "first

year" vs. "continuing year" format. On the whole, upper-class students seem to receive larger average aid awards than their freshman and sophomore counterparts, which correlates well with the findings on distribution by age of the student.

Region

Taken as a single factor, geographic region should have the least effect on the awarding of aid. There are so many other factors which operate totally independent of regional breakdowns (e.g., cost, type of institution, etc.) that it becomes almost impossible to cite regionalism as the cause of a given effect. Rather than analyzing regional distribution of aid in depth, it may be just as useful to present Table 5.11E without explanation.

6

DISTRIBUTIVE EQUITY AND STUDENT FINANCIAL AID: A FIRST LOOK

". . . the way the system is set up now, the rich can pay, the 'poor' get paid for and the middle class struggle to get what he can from wherever he can."

A Student at an Eastern Four-Year Public University

INTRODUCTION: MEASURING DISTRIBUTIVE EQUITY

The feelings of inequity expressed by this student, while an outgrowth of a not uncommon sense of frustration, indicate the importance of the way student aid funds are now distributed, particularly to those most directly affected by the rules which determine who will, and who will not, receive specific types of assistance. While indications of possible areas of such inequity were presented in the preceding chapter, the intent of this and the following chapters will be to explore these concerns in more depth.

The primary purpose of the Office of Education's (USOE) student assistance programs is to remove the financial barriers that might otherwise keep qualified students from receiving some form of postsecondary education. The legislation, however, has been particularly vague on exactly who the "qualified" recipients should be. Typical phrases for defining aid eligibility in Title IV of the Higher Education Act include the following criteria: "exceptional need," "...for lack of financial means, would be unable to obtain such benefits," "substantial financial need," "students from low income families," and "students in

need." Any examination, then, of distributive patterns must first establish a baseline definition of equity, i.e., "Whom are the various programs intended to serve?", "How ought the funds be distributed?", "How do we determine that an inequitable situation exists?"

What, at first blush, would appear to be a rather straightforward task, is in reality greatly value-laden. That is, since the legislation fails to articulate a clear statement of what is a legitimate distribution of resources, we are, as researchers, compelled to establish both a definition of equity and an appropriate method for its measurement. Any analysis of distributive equity cannot be carried out without making value judgments and, as Berne[1/] has ably demonstrated, the evaluative choices made by the analyst do make a difference in terms of the conclusions that are ultimately reached.

As a start, then, a good working definition of an equitable distribution is one in which equals are treated equally and unequals are treated unequally. In other words, under this conception of equity we would expect individuals to be treated differently if, and only if, they are meaningfully different in a way that has been deemed unjust. As Rawls has observed "...the institutions of society favor certain starting places over others. These are especially deep inequalities. Not only are they pervasive, but they affect men's initial chances in life; yet they cannot possibly be justified by an appeal to the notions of merit or desert. It is these inequalities...to which the principles of social justice must in the first instance apply."[2/] Therefore, to the extent that individuals have different expectations of life determined, in part,

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1/Robert Berne, "Alternative Equity and Equality Measures: Does the Measure Make a Difference?", in Selected Papers in School Finance: 1978 (Washington, D.C.: U.S. Department of Health, Education and Welfare, 1978).

2/John Rawls, A Theory of Justice (Cambridge, Massachusetts: Harvard University Press, 1971), p. 7.

by the political system as well as by economic and social circumstances, it has become public policy to provide all citizens with an "equal opportunity" to the benefits of society.

To operationalize such a theory of equal opportunity, with regard to the distribution of student financial aid resources, entails three interrelated steps: 1) the determination of an appropriate measure of inequality among individuals, i.e., the specification of what are illegitimate differences between individuals and how they should be evaluated; 2) the definition of how differently unequals should be treated; and 3) the assessment of the degree to which the observed treatment fits the desired pattern.

Before moving on to a discussion of each of these items, however, two other points should be raised in conjunction with this definition of equity. First, this definition does not specify the appropriate unit of analysis. Is it the individual student, the family, taxpayer, school, etc.? For the analysis that is to follow, the perspective which will be adopted here is that of the student. Despite the inherent tax effects or the significant societal benefits associated with higher education, it is the student who is the most directly affected by the financial aid system. Such a view of "student sovereignty" is clearly a value judgment, but one which, as discussed in Chapter 2, most closely fits the normative goals expressed in the legislation.

Second, the analysis and discussion which follow these introductory remarks contain an implicit assumption that it is appropriate to examine distributive equity in isolation. That is, by focusing primarily on the financial aspects of higher education we have ignored the many other important facets of the student's educational experience, such as family and peer interactions, academic inputs, etc. However, such a multi-dimensional assessment, as discussed in Chapter 3, is well beyond the context of this study. More importantly, this limitation does not seriously affect the validity of the results presented here as the equity of aid distribution should be independent of other such influences.

Measuring Inequality

Despite the lack of explicit guidance provided by the legislation, there are two interpretations of program intent which can be safely stated. First, the programs are for students from deprived economic circumstances (i.e., low family wealth levels) who want to pursue some sort of postsecondary education. Therefore, one would expect the distribution of resources to be directed primarily at these students. Second, the student assistance programs should help meet "financial need," commonly defined as the difference between the full cost of obtaining an education (i.e., tuition and fees, room and board, living expenses, etc.) and the student's ability to pay. As ability to pay decreases, or cost increases, ceteris paribus the financial need should rise.

Combining these two interpretations, we arrive at what was called in Chapter 3 vertical inequity. That is, low-income students, having fewer discretionary resources, face a greater financial barrier to the pursuit of higher education than do their wealthier counterparts. Consequently, the most appropriate measures of inequity are the financial barriers faced by students at different levels of wealth and educational cost. Moreover, by distributing financial aid inversely to the family's ability to pay, the student assistance programs can equalize available student resources necessary to overcome the principal barrier to access to postsecondary education--inadequate financial resources. Finally, if these conditions of equality obtain for all levels of educational cost, not only will equality of access be achieved but equality of choice as well. In this latter situation, students choosing more expensive institutions of higher education (defined in terms of tuition and fees) face an inherently greater financial barrier, but under conditions of equity (what we have previously called horizontal equity) the barriers will not differ significantly between students with higher and lower abilities to pay.

One measure which will be adopted in the subsequent analysis, then, is the student's "net price" or loan/work burden[3/] defined as the cost of education (the student's total budget) minus the sum of his/her available resources and all nonreturnable grant aid. A difficulty which arises in student financial aid, however, is related to the determination of the amount of resources that a student or his/her family have available to meet educational costs (i.e., the expected parental contribution). Referred to as "need analysis" (see Volume I, Chapter 7, for a detailed discussion), the existing formula-based Uniform Methodology provides a means for rank ordering students according to a set of specific criteria: income, assets, family size, and expenses. The basic principles behind the approach now used are that some portion of the family's discretionary income and available assets should be used to finance the child's education and that students should contribute a relatively larger portion of their own resources than should be expected from parents. However, these principles, the criteria used, and the computational formula are all derived from what has normatively been established as an equitable distributive outcome. The methodology is structured so as to produce an outcome that has, by the political process of compromise, been decided upon as "fair". There is no inherent right or wrong in the current system or in the proposed alternatives—it is only the reflection of the pulls and tugs of competing interests and objectives.

The results which are produced, therefore, have not been universally accepted. Arguments over whether to use the most accurate preceding year's data or the more relevant current year's data and the treatment of self-supporting students, for example, have been quite divisive and not yet resolved to everyone's agreement. The implication for the task at hand, then, is that while we will be using the currently accepted assessment of the family's ability to pay (i.e., the family's expected contribution) in our analyses, all of the results should be tempered by

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3/This definition will, in a later section, be slightly modified.

the realization that this figure represents the calculation of the family's "fair share" of the educational costs. To the extent that the accepted methodology may be unrealistic, the results would be altered if a different approach had been adopted by Congress. At best, the expected contribution provides a common basis for comparing families in broadly different circumstances.

Returning to our discussion of how to measure inequality, the Basic Educational Opportunity Grant (BEOG) program, by far the largest Federal student aid program, attempts to equalize the financial barriers faced by potential students across family wealth levels through the provision of nonreturnable aid (grants). Toward this end, the family's expected contribution from assets and income is calculated and grants are given to offset differences among aid applicants in available family resources. The BEOG, therefore, can be viewed as an attempt to equalize, across family wealth levels, total nonreturnable aid (including expected parental contributions) that students receive at similarly priced institutions. The remaining "price" (cost of education minus non-returnable aid) that students face for their education is assumed to be made up from employment or loans. Thus, one measure of equity in the distribution of financial aid resources is the variance (or rather the lack of it) in loan/work burdens across different types of students at similarly priced institutions.

A second measure of inequity can also be derived from the previously stated interpretations of the enabling legislation. That is, the purpose of the student assistance programs are "...to assist in making available the benefits of postsecondary education...." We can, therefore, deduce that another goal of the programs is to affect the attend/not-attend and persist/drop-out decisions of students, i.e., to enhance educational opportunity. As Fife[4/] and others have shown, this goal has three components:

- to provide students with access to a postsecondary education;

4/ Jonathan D. Fife, Applying the Goals of Student Financial Aid (Washington, D.C.: American Association for Higher Education, 1975), p. 1.

- to allow students reasonable choice, i.e., freedom to select the particular source of this education; and
- to permit retention or persistence, i.e., to enable the student to pursue this education to its conclusion.

In effect, the argument is that there are "natural" (i.e., in the absence of financial aid) rates of participation of particular types of students in postsecondary education which are socially unacceptable; the purpose of financial aid is, then, to raise these to a level of acceptability.

Measures of rates of participation, however, are not simply measures of the distribution of educational opportunity. Rather, they represent an assessment of individual responses to a complex set of education and noneducation variables (see Chapter 3). Differences in participation rates by student or family characteristics (such as income, ethnicity, etc.) cannot, by themselves, be taken as evidence of a lack of opportunity for access, choice, or persistence. It is a complex issue and, as a result, will be examined separately in the following chapter.

The Equitable Treatment of Unequals

The second issue contained in our definition of an equitable situation is the degree to which unequals are to be treated differently. As discussed above, the Federal assistance programs are designed to allow students to overcome financial barriers. Inherent in this purpose is the concep that students have an unequal ability to pay for postsecondary education and, more importantly, that they require unequal levels of assistance. In other words, the financial assistance programs, in order to be equitable, must work to achieve equality among individuals who are basically different. However, as also previously discussed, in order to operationalize this requirement involves the imposition of value judgments—"What characteristics are relevant for the determination of unequals?", "What is the relationships desired between these characteristics and the measures of equity such as loan/work burden and participation rate?" Conversely, when we observe a pattern of resource distribution, how do we judge if equity has been achieved?

With regard to the student assistance programs, we can borrow a term from the debate over local school finance[5/] to define a condition of equality--"fiscal neutrality." Simply stated, "unjust" differences among students are related to wealth-related disparities, i.e., differences in the ability to pay for postsecondary education. It is assumed that individuals have an equal "right" to higher education but are prevented from achieving such equality due to differences in resources available to finance their education. This is the "financial barrier" referred to in the legislation.

With this as our working definition, then, it should be clear that the only differences in treatment that should be deemed legitimate are related to the financial aspects of the situation--the student's ability to pay and the cost of the desired education. Any other differences in treatment (e.g., by ethnicity, talent, gender, etc.) under the Federal "need-based" assistance programs, would be considered unacceptable.

Implications for Analysis

The preceding discussion can be summarized into two key points. First, financial aid resources should be distributed solely on the basis of economic conditions, i.e., an equitable funding pattern is one that equalizes students' ability to purchase higher education across levels of family wealth and institutional cost. Second, these conditions of equity can be measured in two ways: 1) the variance of loan/work burdens (or net price) across different types of students at similarly priced institutions; and 2) the variance in participation rates across different types of students at similar institutions. Two situations of equity are therefore differentiated: vertical equity implies that students are unequal on some relevant characteristic (family wealth) and therefore require different treatment; horizontal equity requires that students in similar circumstances (family wealth and cost of education) should be

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5/For example, see the landmark Serrano vs. Priest decision by the California Supreme Court. 5 Cal. 3d, 584, 487 Pac. 2d 1241 (1971).

treated equally. For example, we would expect a low wealth student to receive more aid than a high wealth student but we would also expect all equally low wealth students at similarly priced institutions to be treated alike. Conversely, students of similar wealth at differently priced institutions would be expected to receive different treatment.

With this preliminary discussion as background, the remainder of this chapter and Chapter 7 will attempt to examine the issues raised here, as well as some others of importance to policymakers, in order to address the third aspect of our definition of equity, viz., the extent to which the observed distribution of benefits matches the articulated desirable pattern. The sequence of this assessment will be as follows:

1) aid packaging--how the various sources of assistance are combined to overcome financial barriers;
2) aid as an equalizer of student self-help burdens;
3) the effect of "legitimate" factors on aid distribution; and
4) the effect of financial aid on postsecondary education participation.

The first three are covered in this chapter, while the last item is the subject of Chapter 7.

AID PACKAGING: THE INTERRELATIONSHIPS AMONG VARIOUS SOURCES OF DIRECT STUDENT SUPPORT

The student's loan/work burden, as a measure of distributive equity, is the product of a complex set of decisions commonly referred to as "packaging."[6/] It is the point at which the institutional student aid administrator "...pulls all of the resources together into a package based on the goal of maximizing educational opportunities for the largest number of students...to maximize access, choice and retention and to

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6/For a detailed explanation of the process, see Volume I of this report.

redress inequities caused by the multiplicity of aid resources..."[7/] As their means permit, parents and students are expected to bear the costs of postsecondary education. This "family contribution," consisting of the student's available resources, plus those of his/her parent(s) if the student is dependent, is expected to be the primary source of funds to meet these costs. Any remaining need, the financial barrier, represents those educational costs that are to be met by the financial aid package.

From the student's perspective, however, the amount of financial need is often less important than the types of resources that are applied to meet the full cost of his/her education. While arguments have been made as to the benefits of student self-help,[8/] "...the fact remains that students much prefer non-self-help to self-help if given the choice..."[9/] This is, of course, not particularly surprising; the avoidance of the burden of loans and/or work is an expected form of rational behavior. The problem arises because nonreturnable aid (e.g., grants and scholarships) is simply not (nor has Congress intended it to be) available in sufficient quantities to meet every student's financial need. Therefore, the way in which the various sources of aid are put together can be a major determinant of any positive or negative effects of the loan/work burden faced by individual students. Moreover, to the extent that students differ both in their financial needs and in their ability to bear such burdens, the process of student aid packaging can be a significant cause of any resulting inequity in the distribution of student aid.

For the purposes of this analysis, the student can be seen as buying education by using two general types of resources: 1) "nonreturnable" funds such as the parents' or spouse's contribution, entitlements (e.g.,

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7/Francis Keppel, National Task Force on Student Aid Problems, Final Report (Washington, D.C.: U.S. Office of Education, 1975), pp. 68-69.

8/A.W. Astin, Preventing Students From Dropping Out, (San Francisco, California: Jossey - Bass 1975).

9/Keppel, ibid., p. 69.

BEOG), and other scholarships or noninstitutional (e.g., state) grants; and 2) self-help derived either from past earnings (i.e., savings and/or assets), present earnings (i.e., work) or as lien on future earnings (i.e., loans). Student preferences for particular forms of self-help will obviously vary according to a wide range of factors, such as their adverseness to debt, the availability of employment, and the value they place on their nonclassroom time. However, as Astin[10/] has hypothesized, work-study programs tend to increase a student's chances of completing his/her education while loans (particularly for men during the freshman year) have a negative effect on persistence. Moreover, there has been, and continues to be, a heated public debate over the potential effects of loans. Proponents favor their relatively low cost, arguing that under conditions of resource scarcity, limited sources of aid can be made available to more students if an emphasis is placed on loan programs. Critics, on the other hand, object to the burdening of students (many of whom will fail to complete their education) with long-term debts. While not wishing to enter into this argument, we also do not adhere to the proposition of the National Task Force on Student Aid Problems that "...the various forms of self-help be considered as similar to each other."[11/]

Conditions of scarce resources are a modern-day reality and necessarily impose a loan-burden on some students; how this burden is distributed among various types of students is our prime measure of inequity but its composition also cannot be ignored. Students who receive all loans versus students that receives all work are being treated differently in a rather significant way.

10/A.W. Astin, ibid.

11/Keppel, ibid., p. 69.

How Do Aid Packages Vary By Aid Applicant Characteristics and Type of Institution?

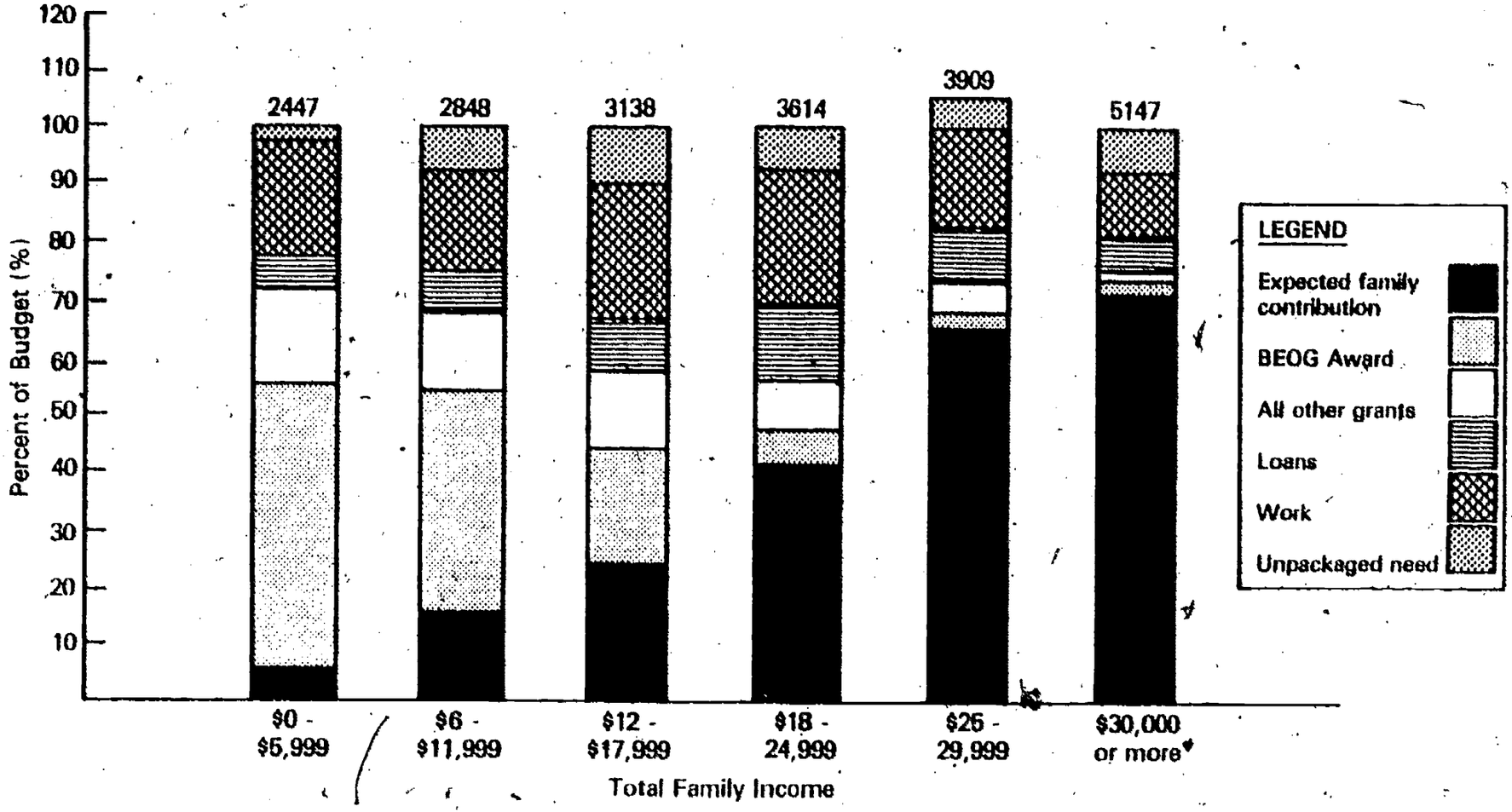
The first items to be addressed, then, are the manner in which aid packages are constructed, a determination of where variations occur, and an assessment of the equity of such aid coordination. To this end, Exhibits 6.1 through 6.10 present, in the aggregate, a visual display of the relative importance of six major sources of aid by institution type, student dependency status, and family income level:

1. family contribution (which includes such entitlements as Social Security and Veterans' benefits);
2. the Basic Educational Opportunity Grant (BEOG) award;
3. other grant awards, including the Supplemental Educational Opportunity Grant (SEOG), state grants, institutional grants, and other private grants or scholarships;
4. loans, which include the National Direct Student Loan (NDSL), as well as other private loans;
5. work, which includes College Work-Study (CWS), summer employment, and institutional work programs; and
6. unpackaged need, i.e., the dotted line between the student's total cost of education, as estimated by the institution and his/her total available resources, known to the financial aid officer, including Guaranteed Student Loans (GSL) and any packaged academic year earnings.12/

Each of the histograms provides four key pieces of information: first, the average budget (presented above each bar graph) for each income category; second, the percentage of the budget accounted for by each categorical source; third, the relative importance of the various individual aid sources; and fourth, where it occurs, the percentage of unpackaged need represented by the dotted area at the top of each bar graph.

12/Academic year earnings and GSLs were included under unpackaged need because these data were not available from financial aid records in all institutions. To have included these resources under work and loans respectively would, therefore, have distorted the results.

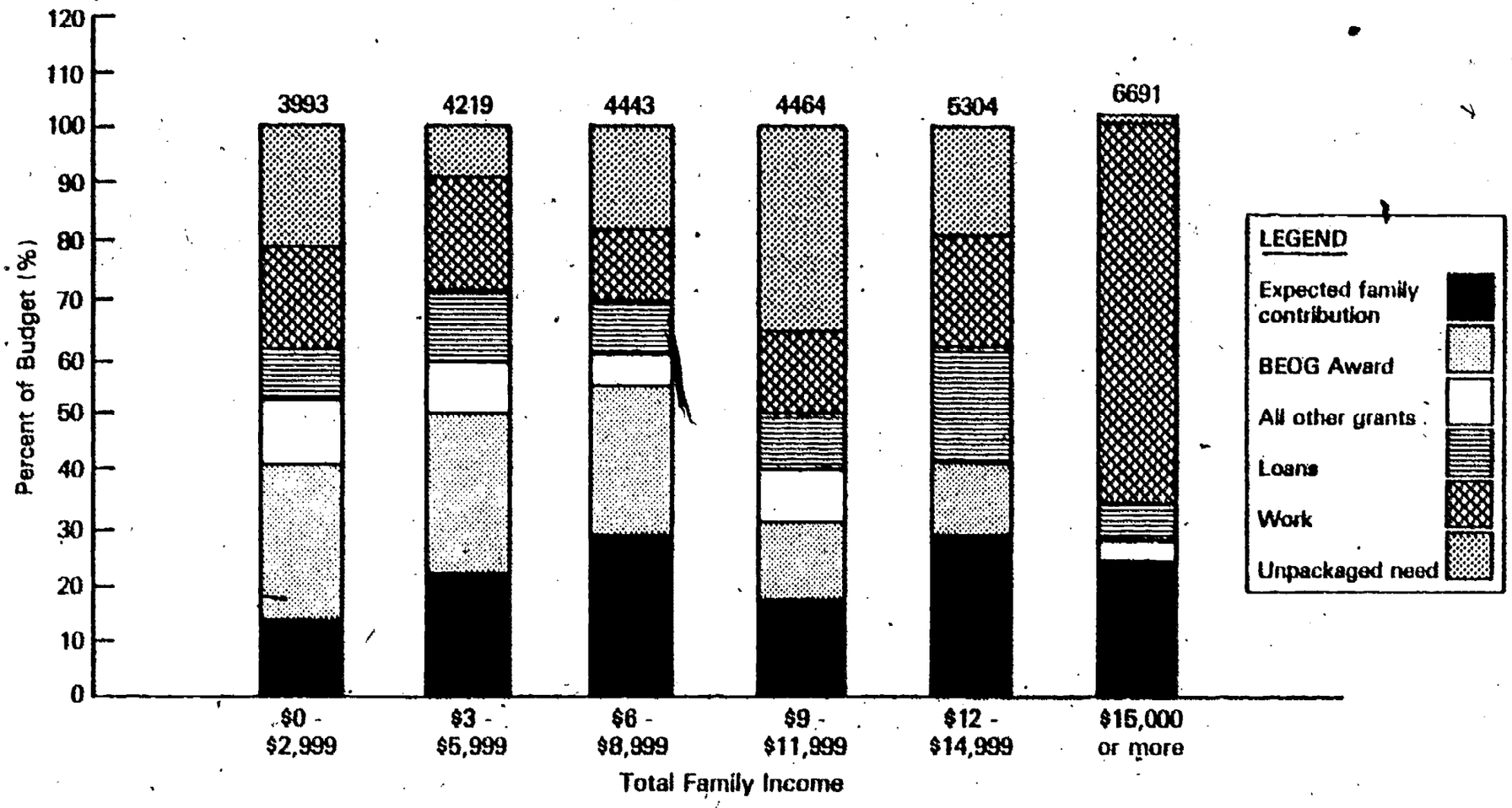
EXHIBIT 6.1: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE, DEPENDENT RECIPIENTS IN FOUR-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79[1]



Source: Student financial aid records.

[1]/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

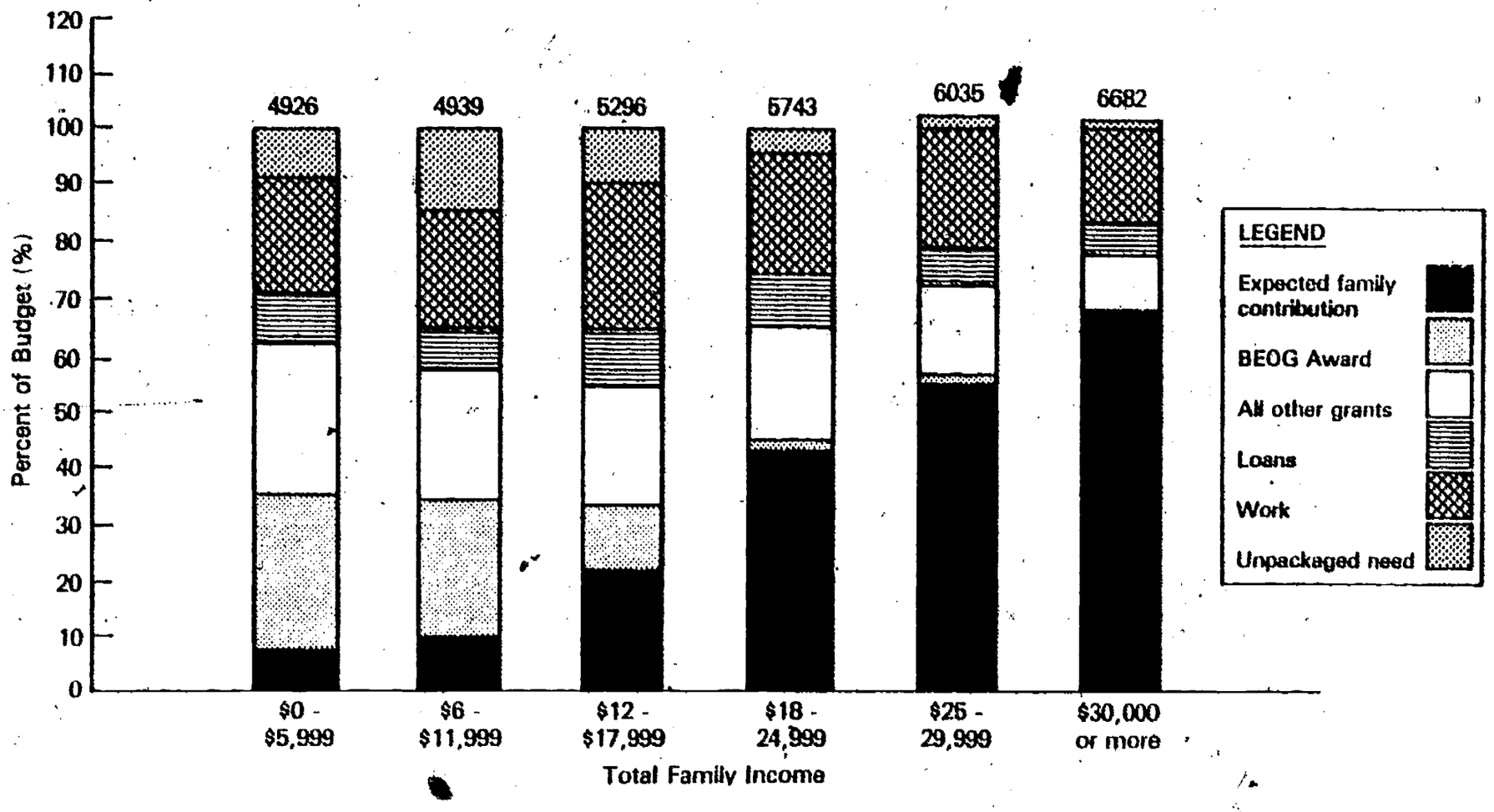
EXHIBIT 6.2: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE INDEPENDENT RECIPIENTS IN FOUR-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

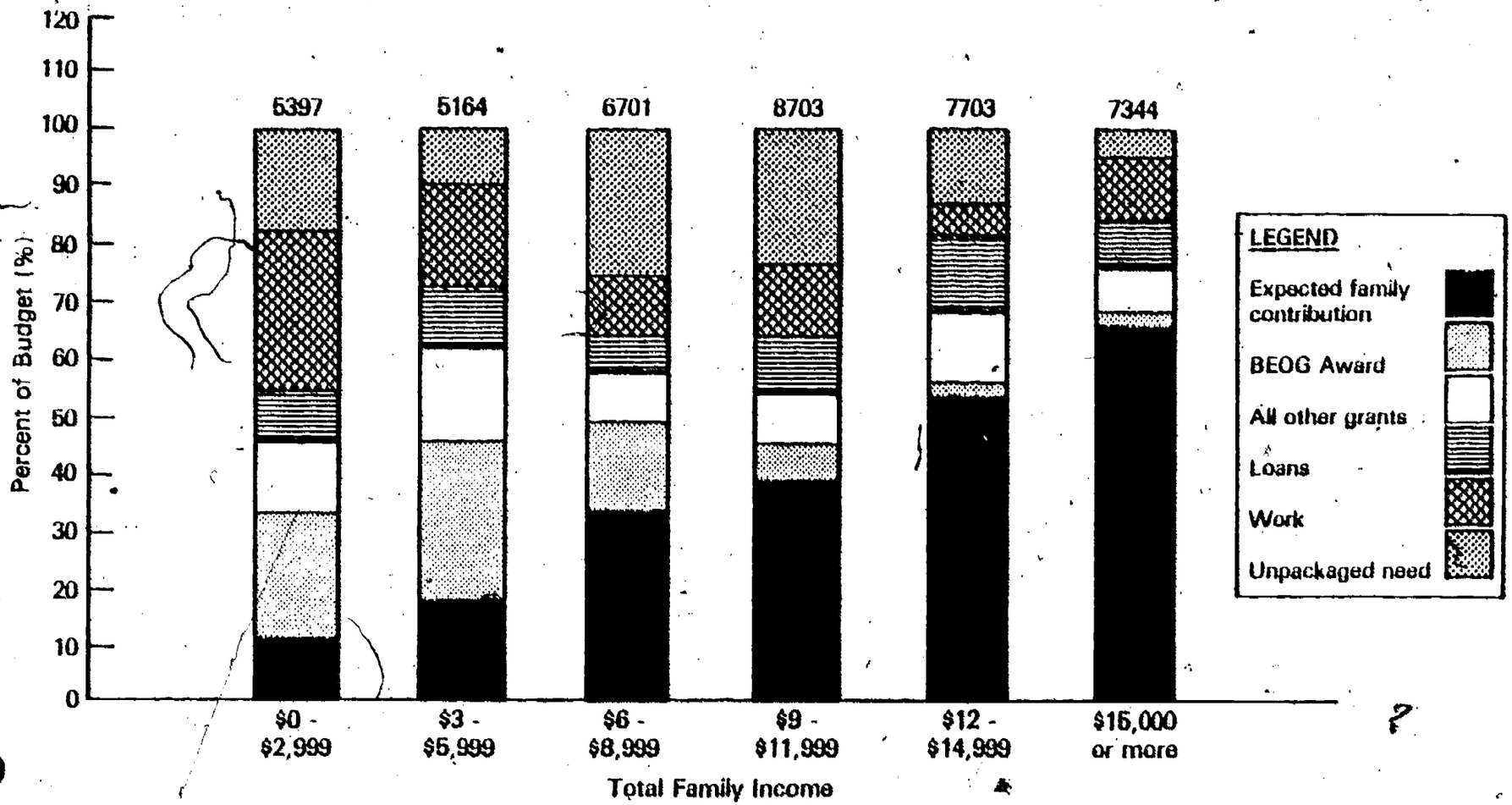
EXHIBIT 6.3: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE DEPENDENT RECIPIENTS IN FOUR-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

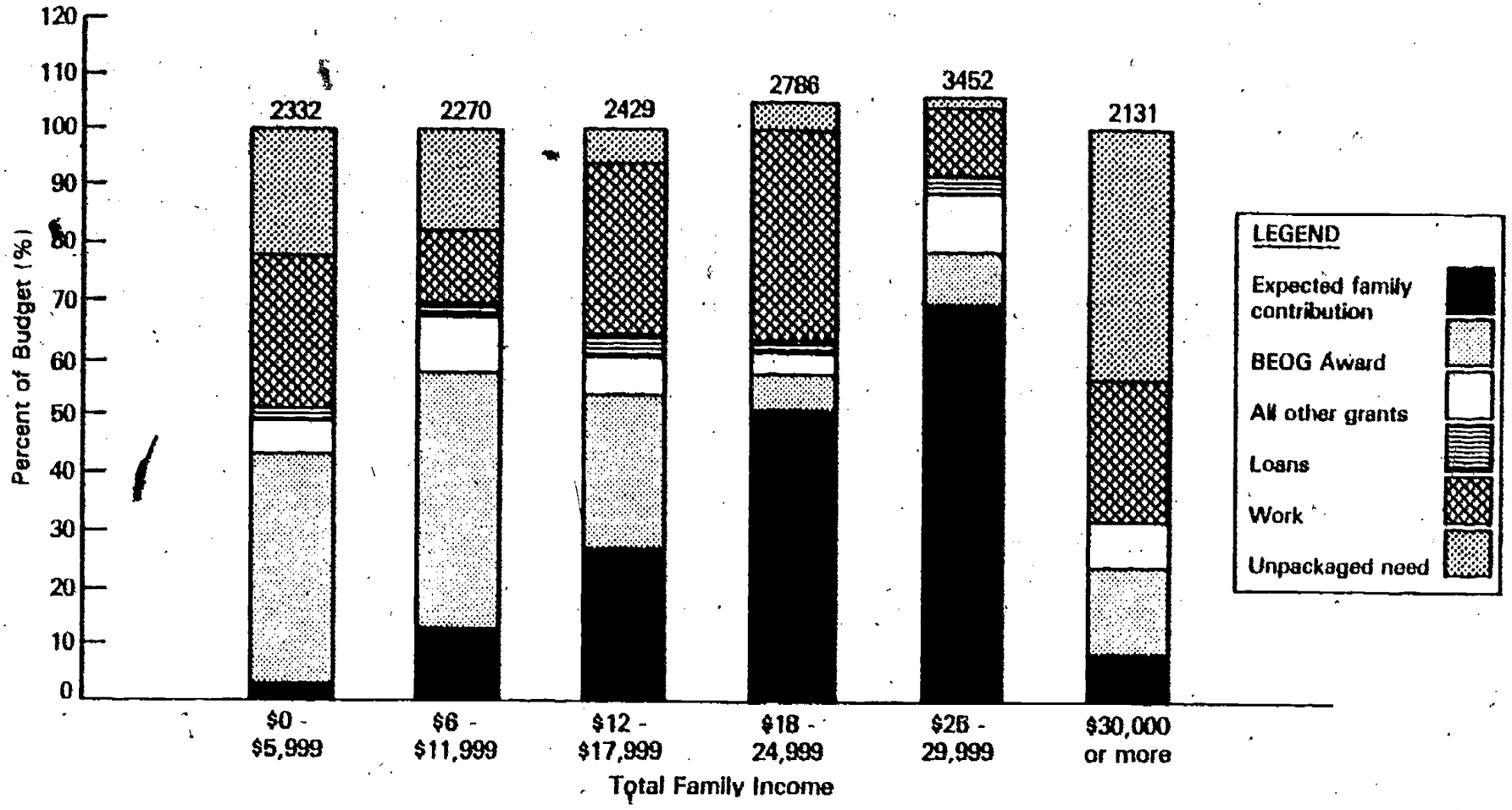
EXHIBIT 6.4: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE INDEPENDENT RECIPIENTS IN FOUR-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

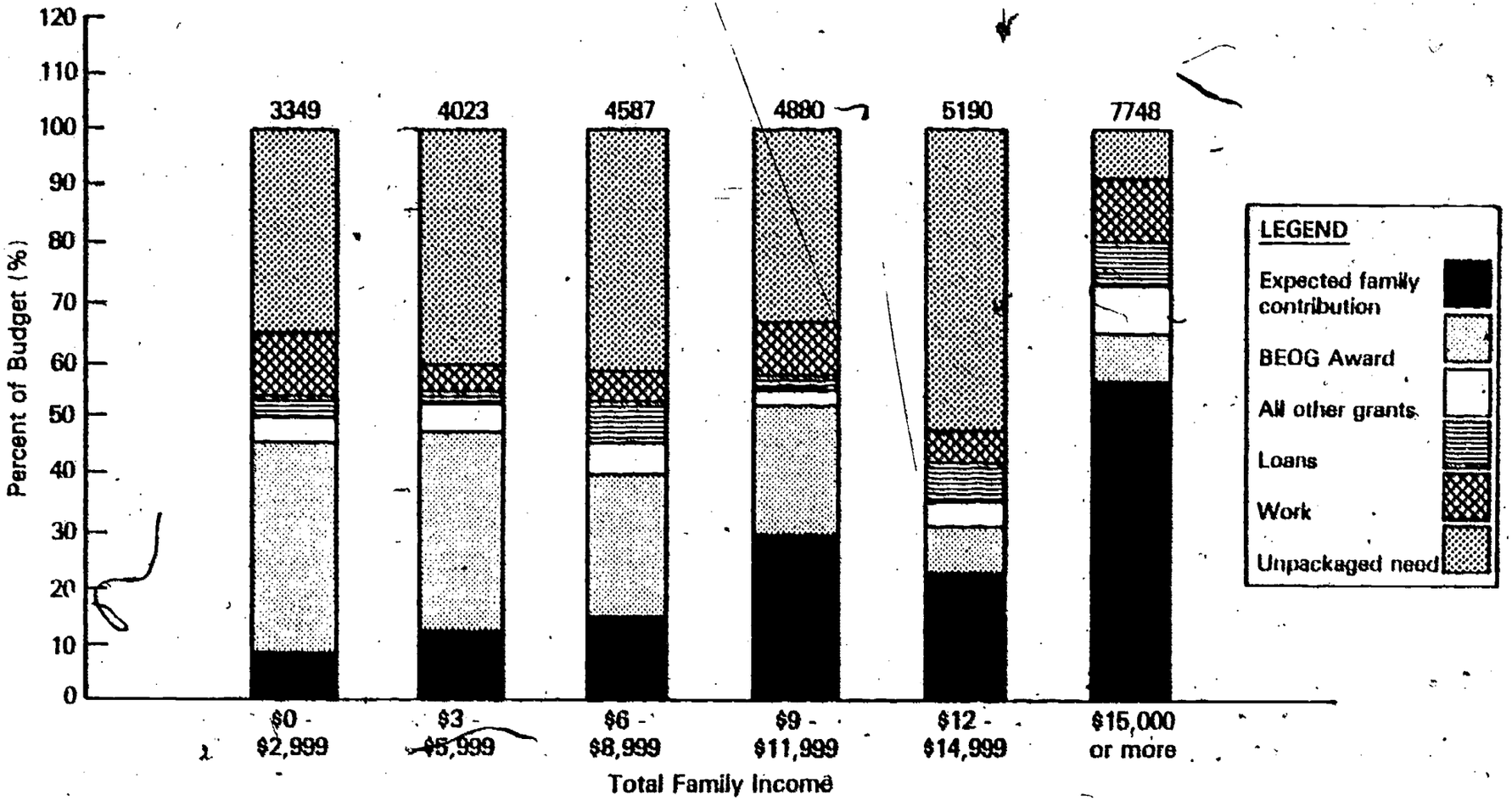
EXHIBIT 6.5: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE DEPENDENT RECIPIENTS IN TWO-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

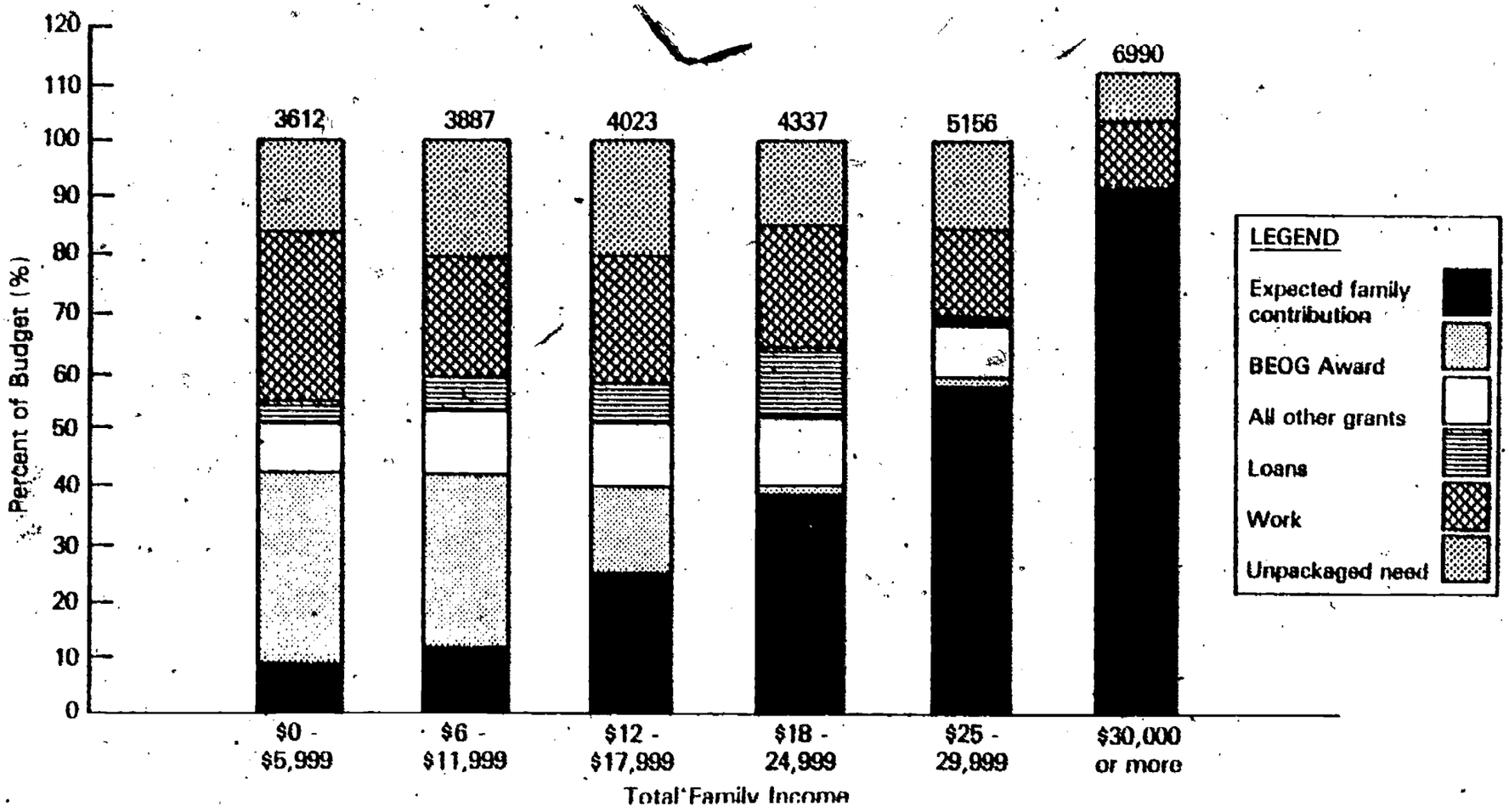
EXHIBIT 6.6: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE INDEPENDENT RECIPIENTS IN TWO-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

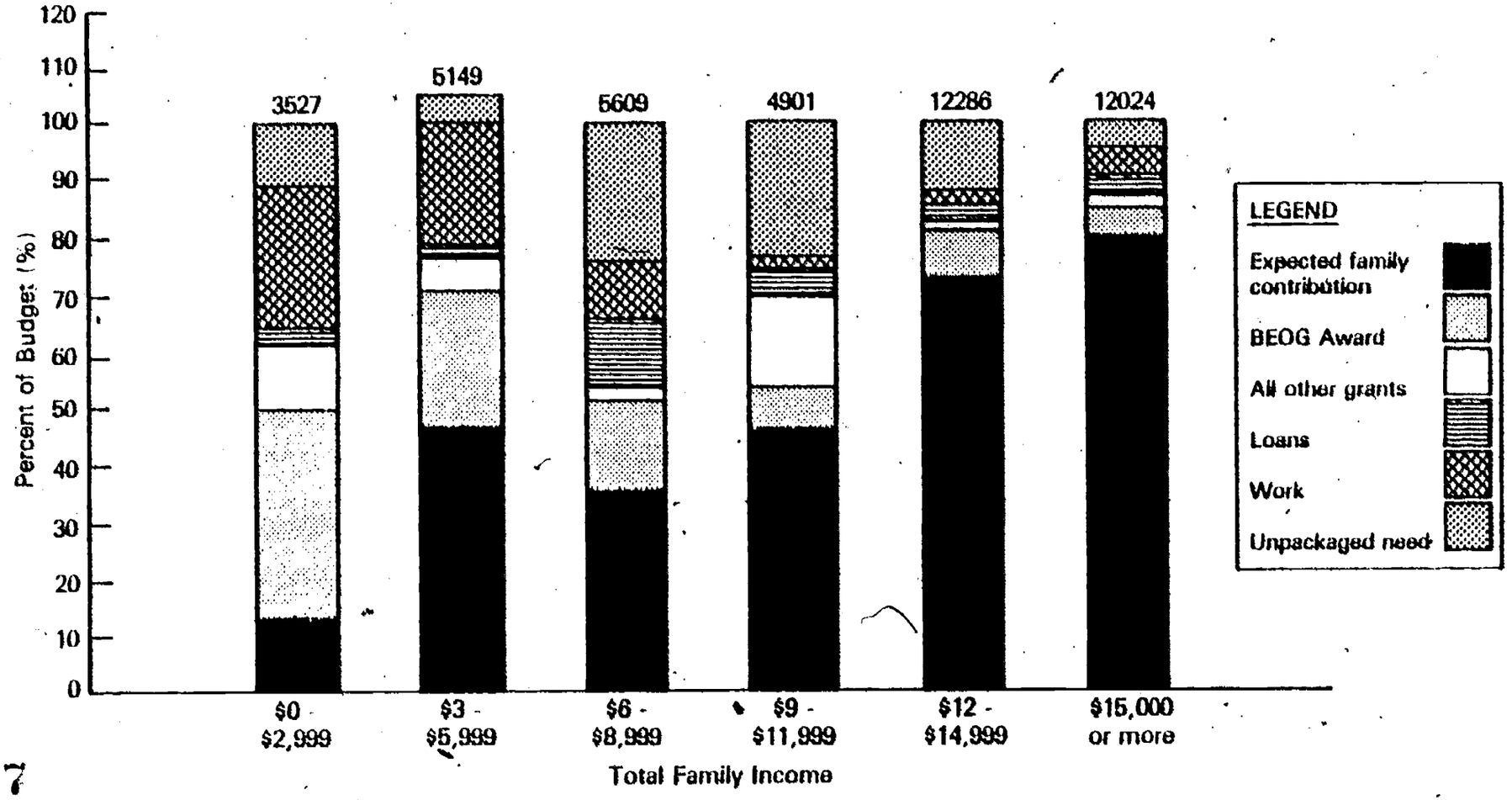
EXHIBIT 6.7: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE DEPENDENT RECIPIENTS IN TWO-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

[1/]Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

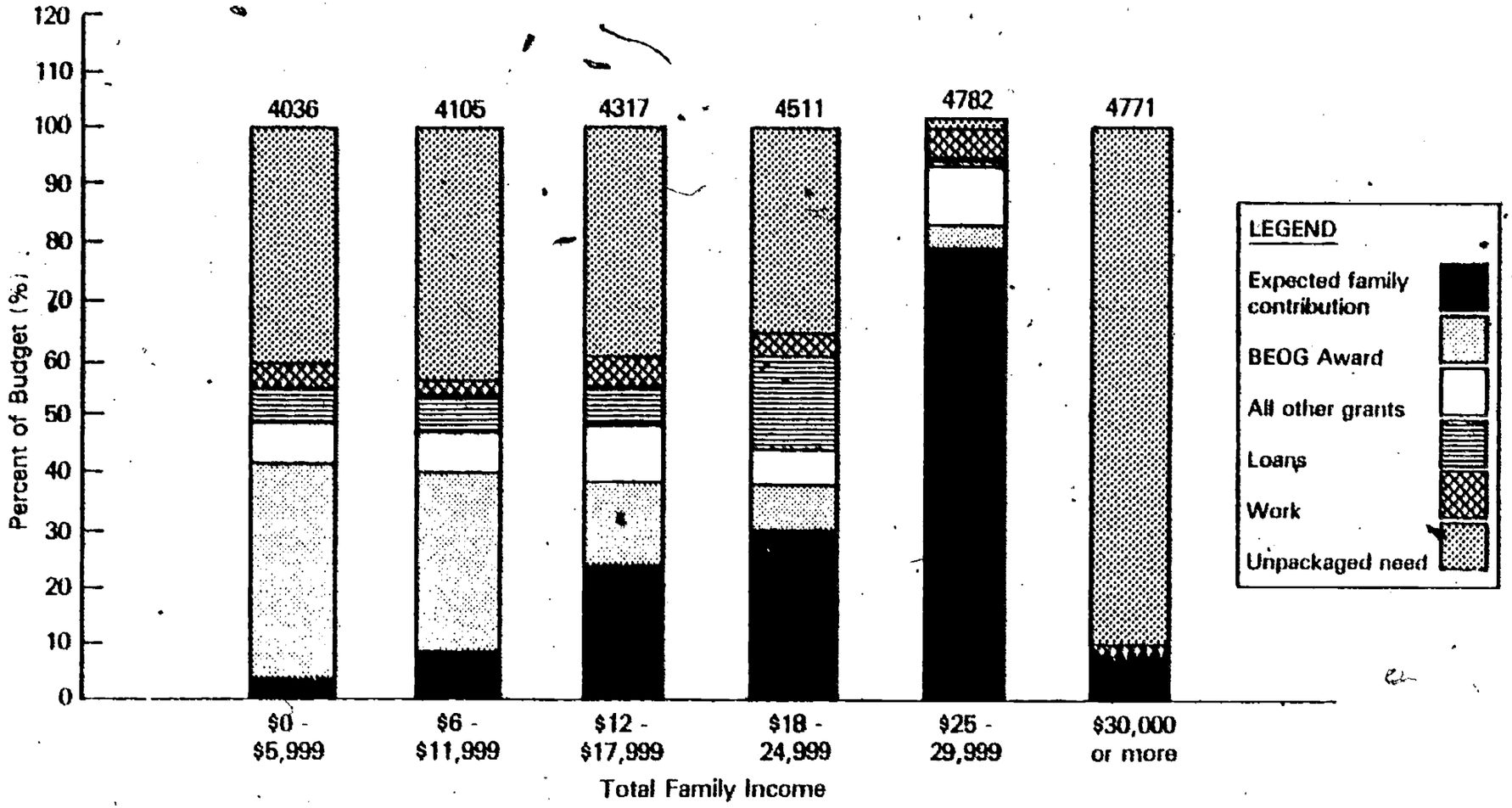
EXHIBIT 6.8: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE INDEPENDENT RECIPIENTS IN TWO-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

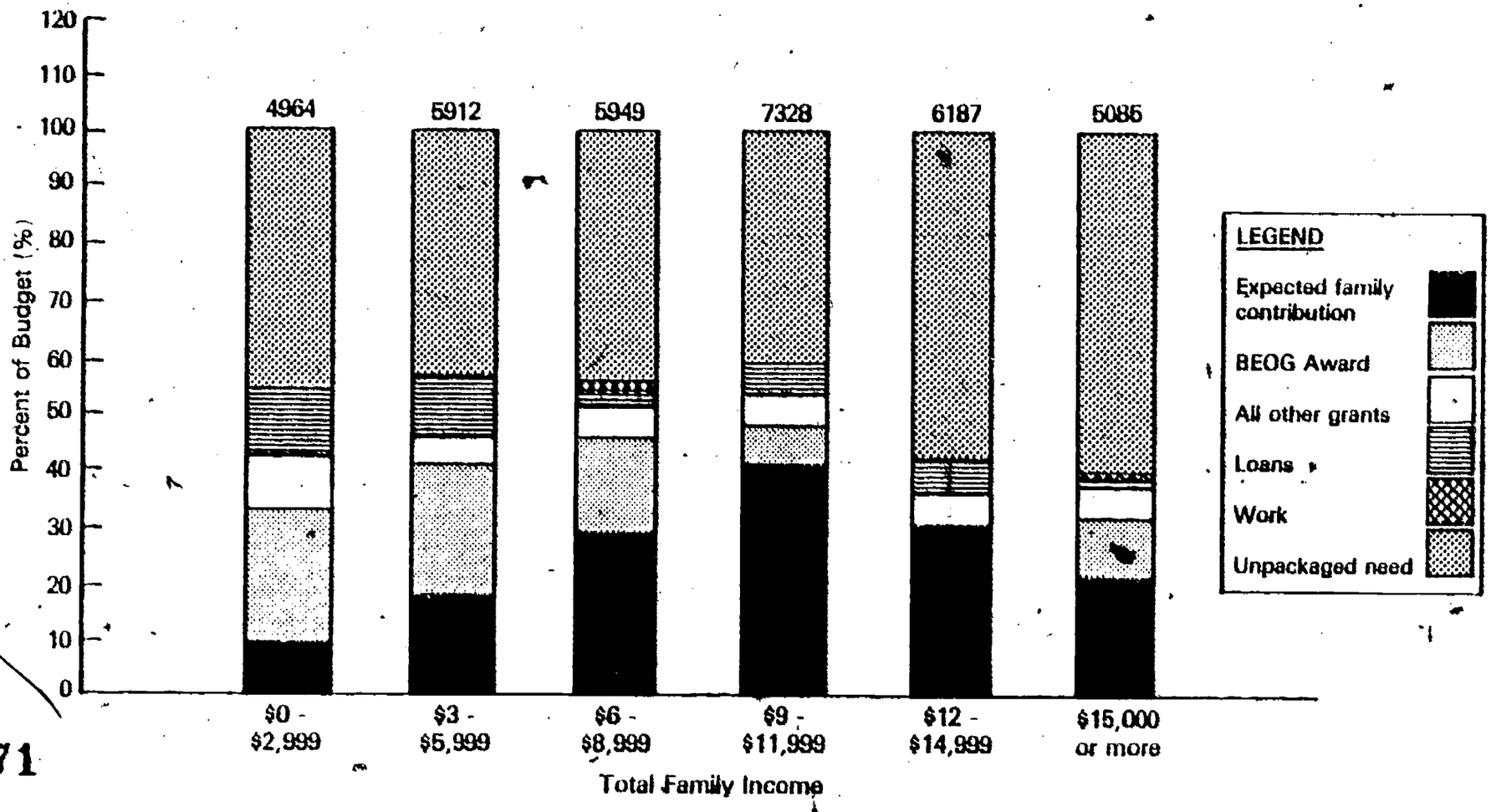
EXHIBIT 6.9: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE DEPENDENT RECIPIENTS IN PROPRIETARY SCHOOLS: ACADEMIC YEAR 1978-79



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

EXHIBIT 6.10: PERCENTAGE OF AVERAGE BUDGET ACCOUNTED FOR BY VARIOUS SOURCES OF FINANCIAL AID FOR UNDERGRADUATE INDEPENDENT RECIPIENTS IN PROPRIETARY SCHOOLS: ACADEMIC YEAR 1978-79[1/]



Source: Student financial aid records.

1/Adjusted for different bases, i.e., the numbers of students, within an income category, receiving grant aid is different than that receiving loan support.

As expected, these four items are not constant across institution-types or income categories. In general, the following trends emerge:

1. There is a distinct positive relationship between the average budget (i.e., total cost of education) and income category. Whether the student is dependent or independent, those with higher family incomes tend to have higher educational budgets. This finding would seem to be the result of two possible causes —higher income students are either more likely to choose the more costly "away from home" living arrangements and/or these students attend more expensive (i.e., total of tuition and fees) schools. Upon further analysis of the relationship between living expenses and educational cost, however, the data were found to support the latter hypothesis. That is, higher income students tend to enroll in more expensive schools; thus, their budgets are higher due to the effect of increased direct educational costs, not their choice of living arrangements.

2. As with the budget, both dependent and independent students exhibit an expected positive relationship between the percentage of cost met by family contribution and income level. Conversely, there is a negative relationship between the percentage of cost met by financial aid and income level. Higher income level students tend to meet a higher percentage of their educational cost through family contributions than lower income students; financial aid, while available across a broad range of the family income spectrum, is mainly directed toward those at the lower end. Across institutions, the results consistently indicate that for private school students a higher proportion of family contribution is expected than for students in public or proprietary schools. This is related to the previously made point that higher income students tend to attend higher cost (generally private) schools.

3. There is an expected negative relationship between income level and the proportion of the budget met by BEOG. By targeting BEOG funds toward financial need, the program has achieved an outcome whereby students with lower incomes (regardless of their dependency status) tend to receive a higher BEOG percentage than upper income students. Across institutions, however, there is a substantial amount of variability in the percentage of the budget accounted for by BEOG. At both the 2- and 4-year levels, public school students have a higher percentage of their cost of education met by BEOG than do private school students due, by and large, to the differences in educational costs. That is, in the lower cost public institutions, the student's BEOG award "buys" a greater portion of his/her education than in the higher cost private schools.

4. As with the BEOG, there is generally a negative relationship between the percentage of cost met by grants and income level; i.e., as income increases, there is a tendency for grant percentage to decrease. Conversely, as income increases the

proportion of education cost which must be met either through greater family support or loans and/or work also increases. It should be noted that the grant percentage consists primarily of SEOG dollars in proprietary and 2-year public schools, whereas in private and 4-year public schools it consists primarily of state and institutional grants. Across institution types, the total grant percentage is consistently larger in private and 4-year public schools than in the remaining types of institutions. This finding probably reflects the greater availability of financial resources in private and 4-year public schools.

5. The loan component is almost exclusively comprised of NDSLs. Rarely do students receive loans from another source. In general, there is no discernible pattern in the loan percentage across income levels for students in private and 2-year public schools. However, there is a slight positive trend between loan percentage and income for students in proprietary and 4-year public schools. Again, the difference across institutions probably reflects basic differences in educational cost. Students in 2-year public schools do not need as much aid from loans, due to the lower costs of attending such schools. The larger loan percentage among proprietary school students is also due to their inability to obtain other aid, such as CWS. Due to the CWS regulations, it is extremely difficult for students in proprietary schools to receive a CWS job; thus, they have to rely more upon loans than the students in other institutions.

6. The percentage of the budget accounted for by work is relatively consistent across student income categories with the work percentage for lower income students being similar to that of middle and upper income students. The results are also stable across types of institutions except for proprietary schools. The work percentage for proprietary school students is extremely low relative to students in other institutions. Again, the low percentage of budget met by work among proprietary school students is due to their difficulty in obtaining CWS jobs.

7. The percentage of unpackaged need is indicated by the dotted area in each bar graph. For some institution type/family income combinations, there is no unpackaged need. In fact, the various combinations of sources for some students are larger than their budgets, particularly those with incomes over $25,000. Although there appears to be no unpackaged need for these groups of students, it should be noted that the contribution of each source is based on the mean and that the standard deviations are relatively large; thus, within each of these groups, there is extensive variation. Furthermore, students are allowed to borrow under GSL to offset the required family contribution. Therefore, the aid package recorded by the institution can exceed the difference between educational cost and the expected contribution.

> On the average, the percentage of unmet need is greater for the independent students than the dependent students. The findings across institution types consistently indicate that students in proprietary schools have a higher percentage of unmet need than students in the other institutions. This finding, in conjunction with the earlier findings on loan-work burdens, would appear to indicate that proprietary students have the largest unmet need due to the fact that relatively little of their educational cost is met by packaged loans or work (i.e., non-NDSL or CWS).

These results both confirm several obvious expectations and also run counter to others. First, there is an expected positive relationship between income and family contribution; as the student's ability to pay increases, so does the expectation that he/she bears primary responsibility for the cost of his/her education. Second, as also anticipated, there is a negative relationship between family income and the level of the Basic Grant award and total grants in general. When combined, however, with the average expected family contribution to form the total level of nonreturnable support available to the student, an interesting pattern can be observed. Although grant aid appears to be quite effective in compensating those most disadvantaged by moving toward equalizing the wide disparty in the family's ability to purchase higher education, the effect is not consistent across income levels. What is observed instead is what we have chosen to call the middle income dip. That is, the relationship between income and the proportion of the budget met through nonreturnable support forms an inverted bell curve; the proportion is higher at the extremes of the income distribution and is generally lowest in the middle income ranges. For such students, their income provides too little in the way of discretionary resources and yet is often too high to qualify them to receive the needed grant support. This situation is exactly what led, in 1978, to the passage of the Middle Income Student Assistance Act (MISAA). Ostensibly, the additional resources targeted for these middle-income students will correct this inequity and, in so doing, will result in what we would judge to be an equitable outcome--an approximately equal proportion of the budget met through nonreturnable aid across all income levels (vertical equity).

The two findings which were unexpected were the variations in cost of education across income categories and the distribution of loan/work burdens and unmet need. The first item, that higher income students tend to purchase higher cost education than lower income students, is in retrospect not too surprising. As Astin has noted, "...within the very high income group, parental income is positively related to attending a selective, expensive private college located away from home."[13/] Not surprisingly, students with greater innate financial resources, even with the availability of various aid programs, have a clear advantage when it comes to choice of educational institutions. The second area, the distribution of loan/work burdens and unmet need, is a more complex finding and will be explored in more detail in the following two sections.

The Distribution of Loan Work Burdens

The student's loan-work burden (i.e., the portion of his/her cost of education met by loans and/or work, excluding unpackaged aid) is, as discussed previously, our key measure of the equity of the aid distribution. This criterion will be modified in the next section, but for now, the way such burdens are distributed will be used to assess the equity of the student aid disbursement system. This particular discussion will address two aspects of this distribution--the proportion of undergraduate aid applicants with loan-work burdens of 30 percent or less; the proportion without such burdens (a zero percent burden), and the degree of variability in loan-work burdens (i.e., the consistency with which such burdens are assigned to similar students in like circumstances).

To begin this discussion, Table 6.1 presents the percentage of undergraduate aid applicants with loan-work burdens of 30 percent or less, and Table 6.2 displays the percentage with loan-work burdens of 0 percent (the latter are those who are, in effect, getting a "free ride" through the receipt of grant support). From these data, one can clearly

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13/A.W. Austin, The Impact of Student Financial Aid Programs on Student Choice, Final Report to the U.S. Office of Education, 1978, p. 83.

TABLE 6.1: PERCENTAGE OF UNDERGRADUATE AID APPLICANTS WITH LOAN-WORK BURDENS OF 30 PERCENT OR LESS, BY INSTITUTION LEVEL AND CONTROL AND TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	ALL APPLICANTS	Institutional Level and Control				
		4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
Dependents						
$0-$5,999	60	65	56	51	40	76
$6,000-$11,999	58	61	46	64	41	66
$12,000-$17,999	44	42	42	47	33	65
$18,000-$24,999	41	40	44	45	34	37
$25,000-$29,999	52	47	55	84	28	37
$30,000 or more	55	54	33	*	62	66
Independents						
$0-$2,999	57	48	42	68	42	66
$3,000-$5,999	64	55	46	74	57	68
$6,000-$8,999	62	61	65	60	50	80
$9,000-$11,999	58	52	37	63	*	*
$12,000-$14,999	51	30	*	*	*	*
$15,000 or more	61	14	72	*	*	*

Source: Student financial aid records.

*Insufficient observations

TABLE 6.2: PERCENTAGE OF UNDERGRADUATE AID APPLICANTS WITH LOAN-WORK BURDENS OF ZERO PERCENT, BY INSTITUTION LEVEL AND CONTROL AND TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	ALL APPLICANTS	Institutional Level and Control				
		4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
Dependents						
$0-$5,999	33	44	9	31	9	37
$6,000-$11,999	28	34	9	37	5	34
$12,000-$17,999	12	13	2	25	3	30
$18,000-$24,999	5	5	3	21	0	4
$25,000-$29,999	4	7	0	30	3	*
$30,000 or more	2	8	0	*	*	0
Independents						
$0-$2,999	30	23	12	48	21	24
$3,000-$5,999	39	28	18	58	14	29
$6,000-$8,999	43	41	34	43	22	63
$9,000-$11,999	33	39	5	36	*	*
$12,000-$14,999	23	22	*	*	*	*
$15,000 or more	13	8	14	*	*	*

Source: Student financial aid records.

*Insufficient observations

observe that overall the majority of aid applicants have loan-work burdens of 30 percent or less. For dependent students, 52 percent have loan-work burdens of 30 percent or less and for the independent students, 60 percent have such loan-work burdens. Although on an average, aid applicants do not seem to be overburdened with loans and work, there is wide variation in the percentage of individuals with such loan-work burdens across both types of institutions and family income levels.

A further inspection of Table 6.1 clearly reveals that certain types of institutions tend to have a smaller percentage of students with loan-work burdens of 30 percent or less than other institutions. For example, 2-year private schools consistently have a smaller percentage of dependent students with a loan-work burden of 30 percent or less across income levels than all other types of institutions; thus, relative to the other institutions, dependent aid applicants in 2-year private schools are assuming larger loan-work burdens than their counterparts in other schools. Across types of institutions, the following additional conclusions can be made from Table 6.1.

1. Dependent aid applicants:
   - A. Proprietary school students tend to have, on the average, the lowest percentage loan-work burdens—in that 65 percent of the students have loan-work burdens of 30 percent or less. This low loan-work burden among proprietary students is misleading. As will be discussed in the next section, they also have the highest level of unmet need.
   - B. At both the 2- and 4-year levels, public school aid applicants tend to receive lower loan-work burdens (i.e., they have a higher percentage in this category) than private school aid applicants due primarily to their lower cost of education.
2. Independent aid applicants:
   - A. Proprietary and 2-year public school aid applicants tend to assume lower loan-work burdens than those in other types of institutions. However, as noted above, this is misleading.
   - B. As with dependent aid applicants, there is a slight tendency for those in public schools to receive lower loan-work burdens than aid applicants in private schools.

This finding supports the expectation that as school costs increase, it is more likely a student will finance his/her education through a combination of loans and work.

In addition to the above institutional differences, there is also a fair degree of variability in loan-work burdens across income levels. In general, the middle income dependent aid applicant ($12,000-$24,999) category and the lower income independent aid applicant ($0-$8,999) category tend to have generally a smaller percentage of students with loan-work burdens of 30 percent or less than those in the other income brackets. While this, in part, is related to the previously discussed relationships between family income, nonreturnable aid and unmet need, it also depicts the "middle-income squeeze" addressed in recent legislation. These students, while not wealthy enough to pay the lion's share of their educational costs nor poor enough to receive a large grant award, are forced to bear a comparatively large burden in loans and work.

Turning to Table 6.2, it is surprising to see the large percentage of aid applicants who finance their educations completely through nonreturnable funds. Among the dependent aid applicants, 19 percent have no loan-work burden while among the independent aid applicants, 34 percent lack such a burden. Moreover, as with the loan-work burden of 30 percent or less, public and proprietary schools tend to have a larger percentage of aid applicants with all nonreturnable support than private schools. This finding confirms and supports the earlier results which indicate that as educational costs escalate, aid applicants are likely to receive aid from multiple sources. In other words, in the more expensive schools (private), only a small percentage of aid applicants can attend without receiving aid from loans or work, whereas in the less expensive schools (public), grants and family contribution are sufficient to defray all of a student's educational costs.

The preceding discussion of loan-work burdens, however, is just one part of the issue, i.e., the way self-help support is distributed to various sectors of the population of aid applicants. Of greater importance from the perspective of equity is the consistency with which such treatment is applied. This is displayed below in Table 6.3.

TABLE 6.3: THE COEFFICIENT OF VARIATION OF THE PERCENT LOAN-WORK BURDEN, BY LEVEL AND CONTROL OF INSTITUTION AND TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	ALL SCHOOLS	Institutional Level and Control				
		4-Year Public	4-Year Private	2-Year Public	2-Year Private	Proprietary
ALL STUDENTS	0.85	0.82	0.65	1.13	0.58	0.99
Dependents						
$0-$5,999	0.96	1.09	0.71	0.89	0.53	1.22
$6,000-$11,999	0.88	0.96	0.58	1.04	0.58	1.05
$12,000-$17,999	0.64	0.64	0.51	0.77	0.50	0.88
$18,000-$24,999	0.58	0.58	0.58	0.70	0.40	0.51
$25,000-$29,999	0.63	0.62	0.58	1.02	0.54	0.54
$30,000 or more	0.67	0.78	0.60	*	*	0.38
Independents	1.08	0.90	0.85	1.35	0.82	1.04

Source: Student financial aid records.

*Insufficient observations

The coefficient of variation is simply a measure of the variability relative to the mean for the group:

$$C.V. = \frac{\text{STANDARD DEVIATION}}{\text{MEAN}}$$

It provides a standardized comparison between dissimilar distributions. With this in mind, an inspection of Table 6.3 provides some interesting results. While the variations tend to be generally in the medium to high range (this is, of course, a subjective interpretation), there is a wide disparity in the consistency of treatment. With regard to institutional differences, the private nonprofit schools exhibit much less variation than the publics and proprietaries. Relative to the student's income

level, the distributions are approximately bell-shaped--the treatment of those dependent students in the middle-income ranges is more consistent than those in the lower and upper brackets, or the independent students.

While these are rough relationships, they do appear to hold rather consistently throughout the table. As a result, it seems that the variation in treatment, vis-a-vis loan-work burden, is dependent upon a complex relationship among a number of different factors: the institution's access to nonreturnable aid; the homogeneity of the need of the student body; and obviously, the financial situation of the individual student. These relationships will be explored later in this report; however, for the time being, we offer the following as a reasonable set of hypotheses:

1. private institutions, by virtue of their generally greater resources (e.g., higher tuition revenues, greater Federal support, endowments, etc.), are better able to provide nonreturnable aid to students in need than the publics or the proprietaries;
2. the privates also face a more homogeneous and less needy population than do their counterparts (see the following section), and are therefore better able to fully support students--they do not have to spread their available resources over a large number of needy students; and
3. since income does not necessarily reflect ability to pay, the variation in need for financial support is likely to be more variable for those at the extremes of the income distribution.

With regard to the last point, a family income of $40,000 does not necessarily imply ineligibility for financial aid, due to all the possible offsets which can be allowed, e.g., family size, uninsured losses, number of children in postsecondary education. Similarly, a family income of $15,000 does not necessarily ensure eligibility. For these reasons, the following section, dealing with "net price," will substitute family contribution for total family income.

Net Price - The Student's Actual Cost

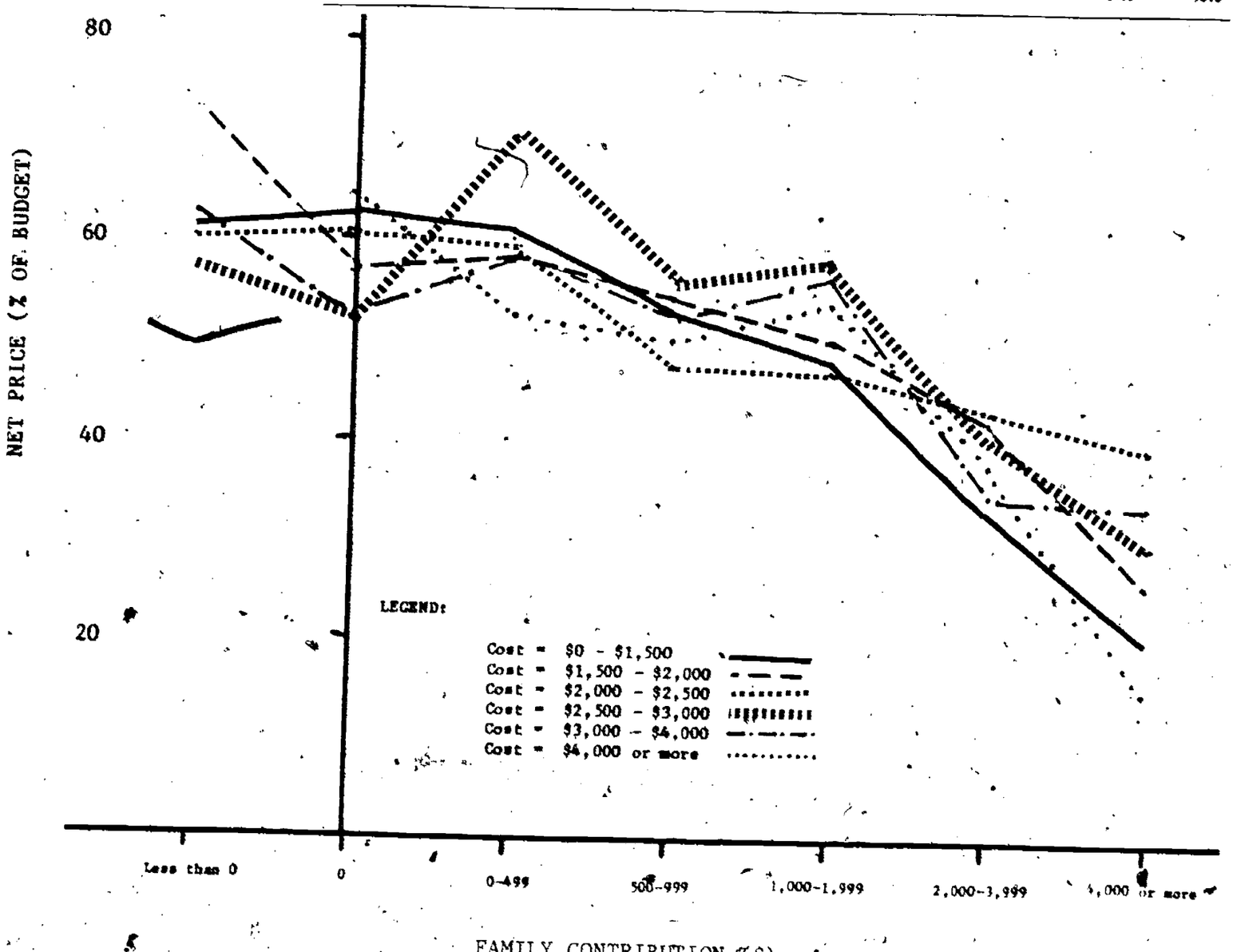
In the simple bar graphs presented earlier, it appeared that, controlling for type of institution, the portion of educational cost met from nonreturnable aid (i.e., family contribution and grants) for dependent students with family incomes under $25,000 (and independent students with incomes under $12,000) was, in a gross sense, equalized among students with different abilities to pay. What was found to be significant, though, was the composition of the remaining shortfall.

While reported work was seen to be reasonably stable across income categories, as were loans (except in the case of the 4-year publics), unmet need was generally concentrated in the lower income categories. Such unmet need leaves the student with a number of possible options--increased family contribution above the level expected in the aid package, additional loans (usually GSLs which, since they are typically not packaged by aid officers and are often not recorded in the student's financial aid file, were, therefore, not always picked up during our data collection), unreported academic year earnings, or a standard of living less than that assumed by the institutional budget. Regardless of the choice made, each of these courses of action imposes an additional burden upon the students, particularly those facing the greatest financial barrier, over and above that of the loans and work they must already bear. The combination of loans, work, and unpackaged need, therefore, must be considered the real "net price" which the individual student pays for his/her education.

To further explore this issue, Exhibits 6.11 and 6.12 provide the average net prices (expressed as a percent of total budget) faced by both dependent and independent students controlling both for cost of education and level of family contribution. The latter variable is a better measure of family wealth than total income. The resulting curves can be viewed as being composed of three segments: 1) students with family contributions less than zero (i.e., not only can the family not support the student but also, additional funds are needed to maintain a reasonable standard of living) who pay the greatest net price and account

EXHIBIT 6.11: RELATIONSHIP BETWEEN EXPECTED FAMILY CONTRIBUTION, EDUCATIONAL COST AND NET PRICE FOR UNDERGRADUATE DEPENDENT STUDENTS: ACADEMIC YEAR 1978-79

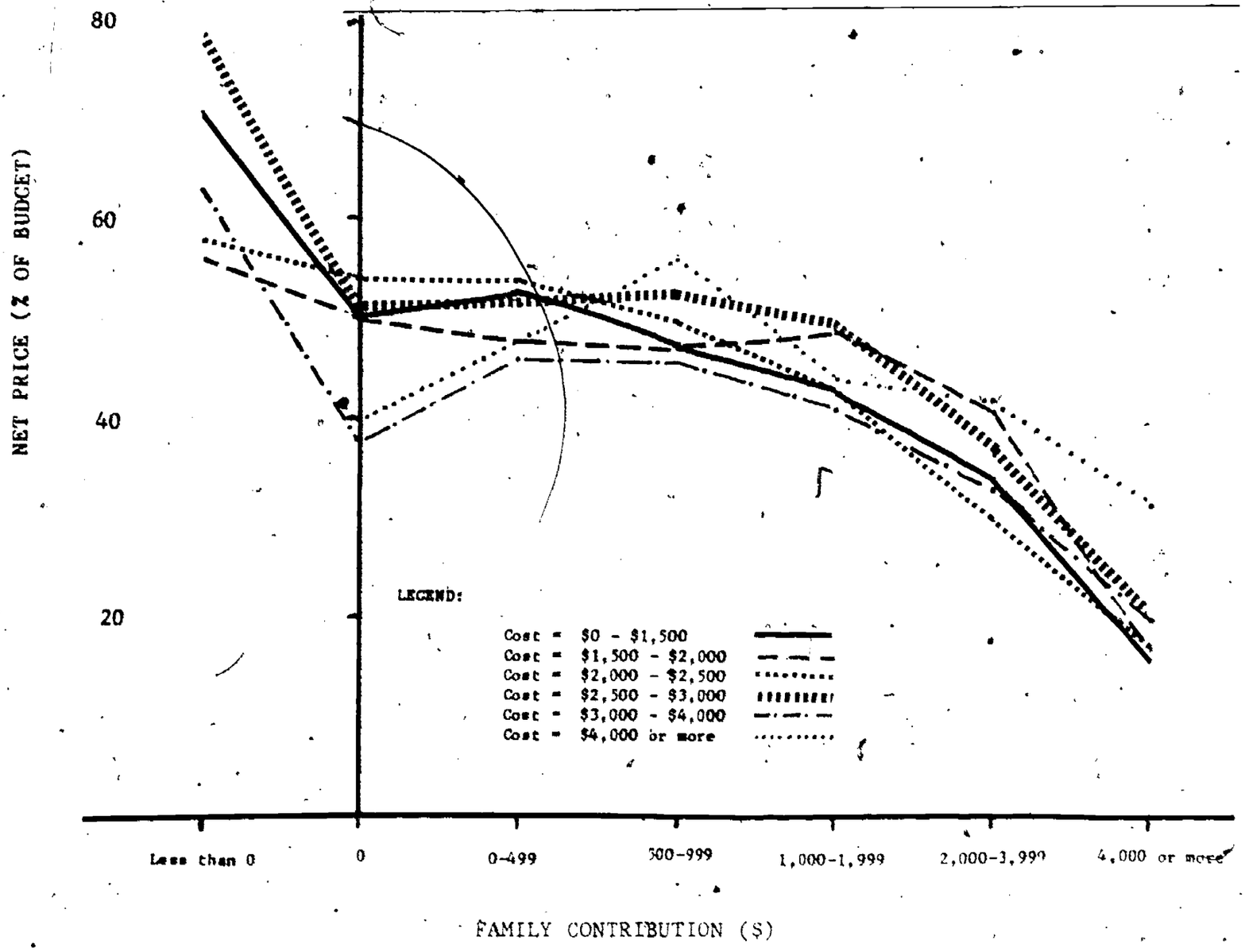
Education Cost ($)	Family Contribution ($)							
	Under $0	$0	$0-499	$500-999	$1,000-1,999	$2,000-3,999	$4,000+	Total
$0-1,500	60.7	62.4	61.3	52.9	47.9	33.1	20.1	55.9
$1,501-2,000	72.9	57.5	58.4	53.7	50.3	41.9	25.5	53.6
$2,001-2,500	64.2	64.5	59.0	47.6	47.8	43.3	39.5	55.4
$2,501-3,000	56.5	51.9	70.2	55.5	57.1	40.3	29.7	48.8
$3,001-4,000	62.0	51.7	57.3	53.4	56.9	34.8	34.6	50.2
$4,000+	—	64.7	52.6	50.2	54.4	36.9	14.5	50.0



Source: Student financial aid records.

EXHIBIT 6.12: -RELATIONSHIP BETWEEN EXPECTED FAMILY CONTRIBUTION, EDUCATIONAL COST AND NET PRICE FOR UNDERGRADUATE INDEPENDENT STUDENTS: ACADEMIC YEAR 1978-79

	Family Contribution ($)							
Education Cost ($)	Under $0	$0	$0-499	$500-999	$1,000-1,999	$2,000-3,999	$4,000+	otal
$0-1,500	70.8	50.3	53.5	47.0	43.2	33.8	16.2	48.3
$1,501-2,000	55.8	49.7	48.3	47.4	48.6	40.9	27.0	47.8
$2,001-2,500	57.8	54.5	53.8	50.0	43.3	30.3	17.5	45.6
$2,501-3,000	78.6	51.3	52.4	50.4	51.4	37.8	21.8	45.9
$3,001-4,000	63.0	37.8	45.7	43.7	41.1	33.4	20.1	39.3
$4,000+	—	39.3	48.3	56.2	44.3	41.6	31.8	43.4



Source. Student financial aid records.

for approximately three percent of the students; 2) those with contributions over $2,000 who pay the smallest price and account for 16 percent of the students; and 3) those with contributions in the $0-$1,999 (accounting for the remaining 81 percent of the students) who are effectively equalized with respect to the price which the student must pay. The obvious questions are "Why are the net prices greater in the lower income categories?" and "Is this an equitable situation?"

With regard to the first question, it appears that the gap is often the result of an intentional institutional policy. Faced with limited resources, schools are generally unable to meet the entire need of all their eligible applicants. Consequently, financial aid officers typically adopt packaging rules designed to standardize treatment of individual students (see the discussion in Volume I of this report). For example, they may choose to establish a dollar ceiling on the aid award, or they may choose to package aid up to a fixed percent of need (e.g., 80 percent), or a number of other possible strategies. Under the first example, those with the greatest need (e.g., the least wealthy students) are likely to bear the greatest net price; under the second example, the burden will be distributed more evenly across varying levels of family wealth. As Milner has so aptly observed:

> The major reasons for this situation are a series of institutional dilemmas and constraints. For example, students who want and deserve aid always exceed available funds. Consequently, a financial-aid officer can help several middle-class students with modest but genuine needs for the same amount of money that he can help one lower-class student who will need a large amount of aid.[14/]

The observed distributional pattern is, therefore, likely the result of institutional responses to a very real problem--resource scarcity.

Under optimal conditions, our definition of equity would demand that students be equalized across categories of family wealth and institutional cost. What institutions are facing, however, is something less

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14/ Murray Milner, The Illusion of Equality (Washington, D.C.: Jossey Bass, 1972), p. 66.

than optimal, thereby leading to second-best solutions. But are these less than optimal solutions equitable? This leads us to our second question.

If we accept the premise that the unequal treatment of unequals is equitable, then perfect equity would be a state of complete equality among students facing similar circumstances (i.e., cost of education) with different abilities to pay. In terms of our preceding examples, this would imply that the variance in net price should be at a minimum. For any actions beyond the point of complete equality, only the same treatment would be accepted as equitable since we would now be dealing with equals. That is, to be equitable, any shortfall in available resources must be distributed equally among the eligible recipients. The difficulty for the institutional aid officer lies in the choice of a just definition of equality. Should all students be given an equal dollar share of the shortfall or should the distribution take into account the "decreasing marginal utility of income" and give the largest share to those at the higher end of the income spectrum? These are difficult normative questions and are not answerable from the empirical results of this study. At best, we point out the problem and leave it to the policymakers to reach a decision.

What we can examine, though, is the consistency of treatment as measured by the variation in net prices between and among similar students (i.e., abilities to pay) in like circumstances (i.e., cost of education). This is presented in Table 6.4, again using the coefficient of variation as the index of equality.

The pattern observed here, while similar to those displayed in Table 6.3, is far more pronounced. First, as the cost of education increases, the variation in percentage net prices decreases; presumably, this is due to the previously mentioned greater access to nonreturnable aid resources in the high-cost institutions and the greater likelihood of a zero net-price at some very low-cost schools. Second, if one were to plot the data provided in Table 6.4, one would observe a pattern like that shown in Exhibits 6.11 and 6.12, only reversed. That is, while those at the lowest end of the family wealth spectrum pay, on the

average, the highest percentage net price, the relative variation in net prices for this group is the minimum for the entire population. Similarly, the middle groups remain reasonably constant, and increase in variability at the upper end of the distribution.

Putting these two observations together with those just discussed, we can conclude that:

- the percentage net prices that students pay are, by and large, equal except for those at the extremes of the family wealth distribution;
- the differential treatment of those at the extremes is probably the result of institutional aid packaging practices;
- the variation in percentage net prices is related to the cost of the education at the selected institution--similar students can reasonably be expected to be treated more alike in high-cost institutions than in low-cost schools; and
- controlling for the cost of the selected educational institution, the treatment of the neediest students is generally far more consistent than those from the least needy families.

These relationships will be elaborated upon in Chapter 8.

TABLE 6.4: THE COEFFICIENT OF VARIATION OF NET PRICE, BY COST OF EDUCATION AND EXPECTED FAMILY CONTRIBUTION: ACADEMIC YEAR 1978-79

Expected Family Contribution[1]	Cost of Education					
	$0-1,499	$1,500-$1,999	$2,000-$2,499	$2,500-$2,999	$3,000-$3,999	$4,000 or more
ALL FAMILIES	0.97	0.71	0.72	0.59	0.61	0.42
Less than $0	0.57	0.75	0.21	0.32	0.33	--
$0	1.09	0.69	0.66	0.61	0.77	0.42
$1-$499	0.76	0.57	0.52	0.48	0.54	0.35
$500-$999	0.79	0.57	0.53	0.47	0.49	0.31
$1,000-$1,999	0.81	0.57	0.58	0.38	0.52	0.40
$2,000-$3,999	0.87	0.95	0.63	0.58	0.68	0.36
$4,000 or more	1.19	1.16	1.37	1.15	0.80	0.60

Source: Student financial aid records.

[1]/Full-time tuition and fees.

FINANCIAL AID: WHAT INFLUENCES WHO GETS IT

As we have defined it, a situation of equitable aid distribution is one in which equals are treated the same and unequals are treated differently. Putting it another way, students in similar circumstances should be treated equally while students in different circumstances ought to be treated differently. This view of equity which we have posited, therefore, implies a dichotomy of possible determinants of aid distribution: those which are legitimate bases for unequal treatment such as family wealth, dependency, and cost of education; and those which are illegitimate such as ethnicity, gender, and ability.

Regression Analysis

Based on this conception of distributive equity, the legitimate factors should be the only valid determinants of the distribution of financial aid funds. That is, they should account for a significant amount of the variation in the amount of financial aid awarded to students; the variation attributable to such factors is legitimate, whereas any residual variation may represent inequitable distribution and/or errors of measurement. In essence, the expectation is that there are no differences in the amount of financial aid received by students when initial differences on the legitimate factors are controlled for. Factors which are considered legitimate variables upon which the distribution of financial aid should be made include the following: family wealth (measured here by the student's BEOG eligibility index for the Basic Grant model and the expected parental contribution for the three Campus Based aid models), the "price" of the desired education (measured by the total of tuition and fees), dependency status, and enrollment status (full-time versus part-time). According to the above hypothesis, if all students are alike on these variables, then the disbursement of financial aid to them should be approximately the same.

Although it was not possible to exercise true experimental control (i.e., to match students on these variables) in a large-scale sample survey of this type, it is possible to exercise ex post statistical

control through the use of either analysis of covariance procedures or multiple regression techniques. While both techniques permit an examination of the basic hypothesis, multiple regression analysis also enables one to identify possible extraneous or mediating variables upon which financial aid may depend. Multiple regression analysis is a "... method of analyzing the collective and separate contributions of two or more independent variables, X, to the variation of a dependent variable, Y".[15/] Analogous to analysis of covariance procedures, multiple regression analysis adjusts, explains and partitions the variance of a continuous dependent variable into a regression sum-of-squares (between group) and residual sums of squares (within group).

In an attempt to test the previously stated hypothesis and to examine potential extraneous variables, a series of multiple regression analyses were conducted within each institution type (e.g., 4-year public, 4-year private, etc.). The dependent measures included the dollar amount awarded to aid applicants in 1978-79 from the following programs: Basic Educational Opportunity Grant (BEOG), Supplemental Educational Opportunity Grant (SEOG), National Direct Student Loan (NDSL), and College Work-Study (CWS). Thus, within each institution type, five multiple regression analyses were conducted; one for each dependent variable. The independent variables, included as sets, were:

1. measure of wealth (student eligibility index or expected parental contribution) educational costs (total tuition and fees), dependency status, and enrollment status;
2. gender, ethnicity, high school grade-point average, and class level (freshman, sophomore, etc.);
3. selectivity index of the institution in which the student is enrolled and size of the institution

The first set contains those variables which have been postulated as legitimate factors in the allocation of financial aid. The second and

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15/ F.N. Kerlinger and E.J. Pedhazur, Multiple Regression in Behavioral Research (New York, N.Y.: Holt, Rinehart and Winston, 1973).

third set represent possible extraneous variables which may be exerting an influence in the distribution of financial aid; however, the sets focus on different levels of variation. While the second set focuses exclusively upon student characteristics, the third focuses exclusively upon institutional characteristics; thus, an examination of these three sets of predictors permits the estimation of the effect of legitimate factors and extraneous factors both at the student and institutional levels. According to our definition of distributive equity, most of the variation should be accounted for by the first set alone, and the incremental value of the second and third set would be expected to be minimal. The independent and dependent variables used are listed in Table 6.5.

In conducting the actual analysis, the independent variables were entered as sets in a hierarchical fashion consistent with the above discussion of distributive equity. The first set of variables (legitimate factors) were forced into the regression analysis in three successive steps. First, the variables were entered as "main effects" (i.e., their contribution to variation in the outcome taken independent of any possible correlation); second, the two continuous variables (student eligibility index or expected parents' contribution and cost) were entered as polynomial terms (squared terms) to account for the nonlinearity of the main effects (i.e., the relationship between need and level of support is best represented by a series of incremental steps rather than a single straight line); and third, all combinations of two-way interactions among the main effect variables were entered. The amount of variance explained by the variables in these three initial steps, therefore, represents the legitimate variation in outcomes. In the fourth step of the analysis, the set of student variables was entered to examine whether any of these variables accounted for, or reduced, the

TABLE 6.5: INDEPENDENT AND DEPENDENT VARIABLES EMPLOYED IN THE MULTIPLE REGRESSION ANALYSIS: ACADEMIC YEAR 1978-79

Dependent Variables	Independent Variables		
	Legitimate	Extraneous	
	First Set	Second Set	Third Set
BEOG $	Student Eligibility Index	Gender	Selectivity
SEOG $	Educational Cost	Ethnicity	Size
NDSL $	Dependency Status	Class Level	
CWS $	Enrollment Status	Ability	

Source: Student financial aid records.

residual (unexplained variance). Finally, the two institutional variables were entered to determine if these variables accounted for any additional variance.16/

The results of the analyses, within each institution type, are presented in Tables 6.6 through 6.10, and are discussed below. In general, the results of the analyses confirm the hypothesis on only one of the five outcome measures, BEOG dollar awards. The legitimate factors account for between 54 percent and 97 percent of the variance in BEOG awards while controlling for the type of institution attended. This finding demonstrates that the variables which were postulated as legitimate factors are indeed the primary determining factors in BEOG awards. To reiterate, these factors include the family's wealth, educational cost, dependency status, and enrollment status. Not only do these variables have a statistically significant ($p < .01$) impact on the outcome measure, but the inclusion of the additional variables fails to contribute significantly to the incremental value of the R^2.

16/ Selectivity was not employed as a predictor in the proprietary schools since there was no such measure available for schools of this type.

TABLE 6.6: RESULTS OF MULTIPLE REGRESSION ANALYSES (R^2) IN 4-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79

Step Entry	Dependent Variables			
	BEOG$	SEOG$	NDSL$	CWS$
First - Main Effects	.15	.08	.08	.09
Second - Polynomial Terms	.53	.13	.08	.09
Third - Interaction Terms	.54	.15	.12	.10
Fourth - Other Student Variables	.55	.16	.12	.10
Fifth - Other Institution Variables	.56	.20	.14	.13
Number of Students	526	158	276	262

Source: Student financial aid records.

TABLE 6.7: RESULTS OF MULTIPLE REGRESSION ANALYSES (R^2) IN 4-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79

Step Entry	Dependent Variables			
	BEOG$	SEOG$	NDSL$	CWS$
First - Main Effects	.75	.04	.15	.03
Second - Polynomial Terms	.77	.04	.15	.04
Third - Interaction Terms	.77	.06	.18	.05
Fourth - Other Student Variables	.78	.07	.18	.09
Fifth - Other Institution Variables	.78	.07	.23	.10
Number of Students	389	208	402	383

Source: Student financial aid records.

TABLE 6.8: RESULTS OF MULTIPLE REGRESSION ANALYSES (R^2) IN 2-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79

Step Entry	Dependent Variables			
	BEOG$	SEOG$	NDSL$	CWS$
First - Main Effects	.64	.14	.33	.17
Second - Polynomial Terms	.65	*	*	.19
Third - Interaction Terms	.70	*	*	.30
Fourth - Other Student Variables	.71	*	*	*
Fifth - Other Institution Variables	.72	*	*	*
Number of Students	182	32	23	81

Source: Student financial aid records.

*The ratio of the number of predictor variables to the number of cases was such that the regression results would be spuriously inflated.

TABLE 6.9: RESULTS OF MULTIPLE REGRESSION ANALYSES (R^2) IN 2-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79

Step Entry	Dependent Variables			
	BEOG$	SEOG$	NDSL$	CWS$
First - Main Effects	.97	.14	.05	.08
Second - Polynomial Terms	.97	.39	.07	.23
Third - Interaction Terms	.97	.42	*	.28
Fourth - Other Student Variables	.97	*	*	.33
Fifth - Other Institution Variables	.97	*	*	.50
Number of Students	115	54	75	92

Source: Student financial aid records.

*The ratio of the number of predictor variables to the numbers of cases was such that the regression results would be spuriously inflated.

TABLE 6.10: RESULTS OF MULTIPLE REGRESSION ANALYSES (R^2) IN PROPRIETARY SCHOOLS: ACADEMIC YEAR 1978-79

Step Entry	Dependent Variables			
	BEOG$	SEOG$	NDSL$	CWS$
First -- Main Effects	.03	.02	.13	*
Second - Polynomial Terms	.83	.09	.25	*
Third - Interaction Terms	.83	.16	*	*
Fourth - Other Student Variables	.83	*	*	*
Fifth - Other Institution Variables	.83	*	*	*
Number of Students	129	38	32	

Source: Student financial aid records.

*The ratio of the number of predictor variables to the numbers of cases was such that the regression results would be spuriously inflated.

The results of the analyses on the remaining dependent variables (i.e., SEOG through CWS), however, indicates that although the legitimate factors are accounting for a statistically significant relationship across most variables, the size of the relationship is relatively small (cell entries range from 5 percent to 30 percent). Moreover, the inclusion of the second and third sets of variables, in most cases, adds relatively more to the variance than the inclusion of these same variables in the analysis of BEOG awards. Since the criteria which are utilized in the allocation of financial aid are more discretionary for the Campus Based programs (i.e., SEOG, NDSL, and CWS), it is not surprising to discover that the hypothesized legitimate factors are not as important, compared to BEOG, in explaining how money is distributed in these programs. Therefore, this preliminary analysis seems to indicate that institutional behaviors are a greater determinant of the Campus Based aid awards than what we have called legitimate factors. A more detailed analysis of this area is the subject of Chapter 8 of this report.

Across institutions there is an expected moderately strong, negative correlation between the student's financial disadvantage (as measured by the eligibility index) and BEOG awards (-.31 to -.98). That is, as one would expect, students who have less need for external support (those with higher student eligibility ratings) tend to receive less BEOG dollars than students with a greater need for support. In terms of cost, there is a similarly expected positive relationship between the price paid for education and BEOG awards, which reveals that students in more expensive schools receive more BEOG money than their peers in less expensive schools. What provides a rather interesting result, however, is the effect of including the polynomial term (SEI^2) in the second step. The observed nonlinearity of the relationship indicates that there is an increasing trend for students with the greatest financial need for grants to receive the largest BEOG awards. While this may seem, on the surface, to be rather obvious, the data indicate that the relationship between the need for support and the level of BEOG support one receives is, to borrow an economic term, more elastic at the lower end. To put it another way, the effect of a decrease of one point in the SEI at the lower end of the scale causes a greater increase in the dollar value of the BEOG award than does a similar change at the upper end of the SEI scale. As such, the effect of the current BEOG disbursement process is to target a relatively greater share of the BEOG funds to those most economically disadvantaged. This finding supports the intent of the BEOG program and also the results presented in Chapter 5.

Discriminant Analysis

The results of the preceding multiple regression analyses convincingly demonstrate that the hypothesized legitimate factors are the crucial variables in the disbursement of BEOG money. However, the results on the other program outcomes indicated that these same factors are not as important in the disbursement of non-BEOG funds due to the greater degree of institutional discretionary power allowed.

To further explore the latter result, a series of discriminant analyses were conducted to determine which factors best differentiated between those aid applicants who received assistance from one of the three Campus Based programs from those applicants who were not recipients. In other words, the analyses attempted to identify the variables which maximally differentiate recipients from nonrecipients in the Campus Based aid programs. A more extensive analysis of this issue is the subject of Chapter 8 of this report (actual institutional behavioral measures are used). The results of this analysis do provide at least some indication of the variables which are important, or predictive, of receiving such financial aid.

As with the multiple regression analyses, the results of the discriminant analyses are presented by institution type. The dependent variable in each case consists of a dichotomous variable: recipient versus nonrecipient of a specific type of aid. The independent variables, as before, include the following: expected family contribution, price of education (tuition and fees), cost, dependency status, enrollment status, gender, ethnicity, class level, high school grade-point average (academic ability), selectivity index of school, size of school, and various interactions between these variables.

The results of the discriminant analyses across institution types are presented in Tables 6.11 through 6.15. In general, although the discriminant analyses are statistically significant on each outcome (due mainly to the size of the data base), the results indicate that the discriminating variables in each equation are not explaining much of the differences between recipients and nonrecipients. The lack of practical significance of the discriminant function equations can be seen by examining the canonical correlation which expresses the degree of relationship between the discriminant function and the group of membership (recipient versus nonrecipient). Analogous to R^2 in regression analysis, the square of the canonical correlation indicates the proportion of variance in the discriminant function explained by

TABLE 6.11: RESULTS OF DISCRIMINANT ANALYSIS BETWEEN UNDERGRADUATE RECIPIENTS AND NONRECIPIENTS OF SEOG, NDSL, AND CWS IN 4-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79

Independent Variables	Standardized Discriminant Function Coeffieients[1]	Canonical Correlation[2]	Wilks' Lambda[3]
SEOG			
Family Contribution	1.23	.24	.94
Race	- .52		
Dependency	- .87		
Family Contribution x Cost	- .40		
Size	- .37		
NDSL			
Selectivity	.89	.19	.96
Family Contribution x Race	.45		
Enrollment	- .34		
CWS			
Size	- .60	.17	.96
Family Contribution	-1.20		
Dependency	- .41		
Family Contribution x Cost	.73		

Source: Student financial aid records.

[1] The weights for the linear combination of variables which maximally discriminates recipients from nonrecipients.

[2] The canonical correlation coefficient expresses the relationship among the variables in the discriminant equation and the variable representing group membership (recipients versus nonrecipients). Analogous to R^2, the canonical correlation squared is the proportion of variance in the discriminant equation explained by the group membership variable.

[3] Wilks' Lambda is an inverse measure of the discriminating power in the discriminant equation. As lambda goes up, the discriminatory power of the model goes down.

TABLE 6.12: RESULTS OF DISCRIMINANT ANALYSIS BETWEEN UNDERGRADUATE RECIPIENTS AND NONRECIPIENTS OF SEOG, NDSL, AND CWS IN 4-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79

Independent Variables	Standardized Discriminant Function Coefficients	Canonical Correlation	Wilks' Lambda
SEOG			
Cost	1.99	.37	.86
Family Contribution	1.67		
Selectivity	1.56		
Cost x Selectivity	-3.07		
Family Contribution x Dependency	-1.06		
NDSL			
Family Contribution	1.19	.31	.90
Ability	1.13		
Cost x Ability	-1.13		
Family Contribution x Cost	.49		
Cost	- .28		
CWS			
Cost	1.72	.38	.85
Cost x Ability	-1.22		
Ability	.81		
Family Contribution x Cost	- .75		
Selectivity	- .68		
Size	- .38		

Source: Student financial aid records.

TABLE 6.13: RESULTS OF DISCRIMINANT ANALYSIS BETWEEN UNDERGRADUATE RECIPIENTS AND NONRECIPIENTS OF SEOG, NDSL, AND CWS IN 2-YEAR PUBLIC SCHOOLS: ACADEMIC YEAR 1978-79

Independent Variables	Standardized Discriminant Function Coefficients	Canonical Correlation	Wilks' Lambda
SEOG			
Cost x Selectivity	14.83	.36	.86
Cost	-14.18		
Size	- .67		
Family Contribution x Cost	.54		
NDSL			
Selectivity	1.15	.27	.92
Cost x Selectivity	- .64		
CWS			
Dependency	- .67	.30	.90
Ability	- .47		
Enrollment	- .39		
Cost	.39		

Source: Student financial aid records.

TABLE 6.14: RESULTS OF DISCRIMINANT ANALYSIS BETWEEN UNDERGRADUATE RECIPIENTS AND NONRECIPIENTS OF SEOG, NDSL, AND CWS IN 2-YEAR PRIVATE SCHOOLS: ACADEMIC YEAR 1978-79

Independent Variables	Standardized Discriminant Function Coefficients	Canonical Correlation	Wilks' Lambda
SEOG			
Cost x Selectivity	14.83	.36	.86
Cost	-14.18		
Size	-.67		
Family Contribution x Cost	-.53		
NDSL			
Size	.89	.32	.89
Class	-.51		
CWS			
Selectivity	.85		
Family Contribution x Dependency	.57		

Source: Student financial aid records.

TABLE 6.15: RESULTS OF DISCRIMINANT ANALYSIS BETWEEN UNDERGRADUATE RECIPIENTS AND NONRECIPIENTS OF SEOG, NDSL, AND CWS IN PROPRIETARY SCHOOLS: ACADEMIC YEAR 1978-79

Independent Variables	Standardized Discriminant Function Coefficients	Canonical Correlation	Wilks' Lambda
SEOG			
Class Level	.777	.19	.96
Cost x Race	.643		
NDSL and CWS			
(Insufficient observations)			

Source: Student financial aid records.

the proportion of variance in the discriminant function explained by group membership. Across the five institution types,[17] the proportion of variance explained by the discriminating variables ranges from 2 percent to 14 percent. Consequently, it is rather obvious that these variables, while statistically significant, are not capable of sufficiently explaining how these program funds are allocated to students. Other factors are likely to be better determinants of a student's access to Campus Based funds than those normally considered to be important.

[17] Due to the extremely low canonical correlations, the results of the individual analyses within each institution type should be viewed very cautiously. Indeed, when the discriminant function equation attempts to classify students into a recipient and nonrecipient group, the classification results in a large percentage of misclassifications (approximately 40 percent across all analyses). Consequently, an in-depth treatment and discussion of the discriminating variables is not warranted.

Apparently, such global measures as school size and selectivity are not precise and sensitive enough to isolate the critical factors involved in the disbursement of financial aid of these three programs. As previously noted, the awarding of aid from these sources is left largely to the discretion of the financial aid officer. Thus, to adequately explain the packaging and awarding of these sources of aid, it is imperative that specific program management practices be linked to the selected outcome measures. The identification and examination of specific packaging activities and procedures should provide a better understanding of the variables and practices deemed important in the awarding of discretionary aid. Chapter 8 attempts not only to identify and link the specific management procedures to the outcomes but also to identify and describe the procedures which maximize the equitable distribution of such aid.

7

VERTICAL EQUITY: THE IMPACT OF FINANCIAL AID ON RATES OF PARTICIPATION IN HIGHER EDUCATION

INTRODUCTION

The equity of the distribution of student financial aid funds is examined in this chapter as a problem in increasing the rate of participation in higher education for various categories of students. As previously discussed, one of the central objectives of student financial aid is to "increase student access to some form of postsecondary education."[1/] This aspect of the financial aid system is a segment of what we have chosen to call vertical equity. That is, it is the intent of financial aid to affect the behavior of different types of students so as to raise their propensity to participate in higher education. Implicit in such a goal, however, is the assumption that there exist "natural" rates of participation which, in the absence of economic assistance, are in some way socially unacceptable.

President Nixon, in his first higher education message to Congress (March 19, 1970), summed up the government's commitment to improved access to postsecondary education:

> No qualified student who wants to go to college should be barred by lack of money. That has long been a great American goal; I propose that we achieve it now. Something is basically unequal about opportunity for higher education when a young person whose

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1/ Francis Keppel, National Task Force on Student Aid Problems: Final Report (Washington, D.C.: U.S. Office of Education, 1975), p. 7.

> family earns more than $15,000 a year is nine times more likely to attend college than a young person whose family earns less than $3,000. Something is basically wrong with federal policy toward higher education when it has failed to correct this inequity.

This goal of equality of opportunity represents an attempt to correct certain existing patterns of social mobility, i.e., helping poor students to overcome their financial barriers to postsecondary education. Federal policy seeks to improve the opportunities of the poor for higher education and, in turn, to affect the underlying problem of social inequality through the delivery of financial assistance.

As was shown in Chapter 3, however, the chain of causation linking college admission and financial aid policies with inequality of opportunity is long and complex. Taken by itself, any one of the links involves fairly strong relationships (for example, the relation between educational attainment and occupational status). But taken as a whole, inputs on one end of the chain have only modest effects at the other. While student aid may have a significant effect on equalizing opportunities for college education, its effect on equalizing occupational attainment will be considerably weaker, and the effect on equalizing income and wealth, weaker yet. As Milner has so well stated:

> ...attempting to affect the structure of economic inequality through student aid at the college level is analogous to trying to move a heavy rock situated some distance away by pushing on it with a series of short sticks tied together to form a long rod. Although each stick may be quite strong, and two sticks tied end to end may provide a sturdy pole, a long series of such sticks is an ineffectual tool.[2/]

Financial aid is not, then, likely to significantly mediate social inequality. Money is not the only barrier to higher education faced by low-income students--other factors, such as academic preparation, ability, and motivation seem to be much more important.

2/Murray Milner, The Illusion of Equality (Washington, D.C.: Jossey Bass, 1972), p. 45.

MEASURING EQUITABLE RATES OF PARTICIPATION: METHODOLOGICAL CONSIDERATIONS

With these caveats aside, the problems posed by an attempt to assess the equity of the rates of participaton in higher education are many: we must decide which student characteristics should legitimately affect the way in which aid is distributed and which types of institutions are of concern; we must decide what are "acceptable" rates of participation in higher education; and we must select a methodology for measuring the impact of aid on such participation.

With regard to the first question, we have argued previously that financial aid is intended to reduce an existing inequality in the rates of participation by equalizing the financial barriers that confront individuals of different income levels. Moreover, any observed differences in the impact of financial aid must be associated with financial differences in order to be deemed legitimate. One key determinant of such a financial barrier is the level of wealth of the family; or rather, the family's ability to pay for the student's education. We should, then, expect the student's family income to be a key characteristic across which rates of participation should be equalized. A true measure of ability to pay (such as expected family contribution) would be preferable; however, our data do not permit us to calculate such a figure for nonaided students. Therefore, family income will serve here as a proxy for this more exact measure.

With respect to relevant institutional characteristics, our stress on the "financial" aspect of student aid implies we would expect it to have its greatest impact across categories of educational cost (here defined as full-time undergraduate tuition and fees). That is, for students with the same ability to pay, the benefits of financial aid should increase positively with educational cost. Combining these two factors, then, financial aid should have the greatest impact on participation for the most economically deprived students in the highest cost institutions. This is not to imply that it is the intent of Federal policy to move poor students into expensive institutions, but rather that the point of congruence between high cost and low wealth provides the clearest test

for the impact of financial aid. As Astin and Bayer[3] have noted, a critical issue related to student access is the ability to attend an affluent and prestigious institution: not only does such an institution offer the student a rich learning experience, but also may provide "fringe benefits" insofar as it facilitates his or her entry into graduate or professional school and into a high status occupation.

The next question to be addressed is the specification of an acceptable rate of participation in postsecondary education. For clarity in discussion, we shall use one example--students with different levels of income participating at institutions with different levels of cost. However, the general methodology will be the same for any other comparisons. According to the argument made in Chapter 6, the logic of the financial aid program is as follows:

> Students with low levels of family wealth face financial barriers to higher education and therefore participate at unacceptable rates. Financial aid is offered to them to reduce the barriers and raise their rates of attendance.

In evaluating the impact of financial aid on access to higher education, therefore, we are concerned with "shifts" in the pre-existing rates of participation. Ideally, we would like to compare the behavior of individuals before they received aid to their behavior after they receive aid. Any observed shift would then be attributable to the intervention of student aid. Unfortunately, we do not have such longitudinal data. At best, we can compare, at similarly priced institutions, individuals who receive aid with those individuals at the same level of income who do not receive aid. If they are matched on income and educational costs, the assumption is that nonrecipients ought to provide a good indication of individual behavior in the absence of aid.

The key issue underlying this comparison, however, is whether or not the recipients and nonrecipients who report the same income actually are matched in terms of family wealth, or rather, on their ability to pay.

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[3] H.S. Astin and A.E. Bayer, "Sex Discrimination in Academe," Educational Review, Vol. 53, Spring 1972, pp. 101-118.

In terms of the data from this study, the question is how well family income is correlated with our measure of wealth--the expected family contribution. While not perfect, it was found empirically that these two variables do correlate at a level of 0.62 which we believe provides an acceptable basis of comparison between recipients and nonrecipients using the single income variable.

Having determined that there is a basis for comparison, the next question becomes "What constitutes an unacceptable rate for a particular type of school?" In essence, we need to define the barriers to be overcome by financial aid and to determine the types of institutions in which aid is supposed to increase the rate of participation for the target population. Needless to say, such an exercise can be politically charged and strongly value-laden; it entails the definition of what ought to be the result of financial aid. Therefore, in an effort to avoid imposing our values on the data, we have adopted a strategy that takes an empirical approach to the definition of barriers and norms and to the measurement of shifts in participation.[4/] Accordingly, we will define the barrier to be overcome as the point at which the rate of participation in postsecondary education of recipients exceeds that of nonrecipients. That is, when we compare the distribution of recipients to that of nonrecipients, we discover a point at which the recipient participation consistently exceeds the nonrecipient participation. Above this point, the receipt of financial aid makes a difference, i.e., students with equal abilities to pay are separated across this barrier--those above it are more likely to be recipients while those below it are more likely to be nonrecipients.

Examine, for example, the results for independent students presented in Table 7.1. Of all recipients with incomes between $3,000 and $5,999, 38 percent attend schools which cost between $0 and $500 (educational cost defined as full-time tuition and fees), 21 percent attend schools which cost between $501 and $1,000. etc. In contrast, 61 percent of

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4/For an excellent example of the use of such an empirical approach to the development of "equity norms," see Lester C. Thurow, The Zero-Sum Society (New York, N.Y.: Basic Books, Inc., 1980), pp. 200-202.

TABLE 7.1: PERCENTAGE OF PARTICIPATION FOR UNDERGRADUATE INDEPENDENT STUDENTS AT VARIOUS LEVELS OF EDUCATIONAL COST, BY LEVEL OF TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	Total Family Income							
	Less than $3,000		$3,000 - 5,999		$6,000 - 8,999		$9,000 +	
	R[1]	NR[2]	R	NR	R	NR	R	NR
$0 - 500	35	61	38	61	43	55	35	55
$501 - 1,000	19	17	21	23	22	23	16	23
$1,001 - 1,500	12	07	14	06	06	05	08	04
$1,501 - 2,000	17	08	11	05	11	07	15	11
$2,000 +	17	07	16	05	18	10	26	07

Source: Student Survey.

[1]R = Recipients

[2]NR = Nonrecipients

nonrecipients with incomes in the same range attend schools which cost between $0 - $500, and 23 percent attend schools which cost $501 to $1,000. In both of these categories of educational costs, the rate of participation for nonrecipients with incomes between $3,000 and $5,999 is greater than for receipients with the same incomes. However, for all categories of higher educational cost, the rate of participation for recipients is significantly higher than nonrecipients. It would seem, then, that for independent students, aid is associated with a higher rate of participation at schools with costs of $1,000 or more. If we look across all of the income categories in Table 7.1, we observe that the location of the barrier is quite consistent for independent students, occurring at $1,000. Thus, in our example for independent students, we

would assume that the target category of school at which aid is intended to increase rates of participation is the high cost schools; with high cost defined as $1,000 for independent students.

Before moving on to the final methodological question, it should be noted that none of these statements should be taken as implying causality. Whether aid actually causes the observed higher rate of participation, or whether those who go to more expensive schools happen to be more likely to receive aid because the schools are more expensive, cannot be determined by our data. We have only observed a correlation. This correlation between aid and participation at higher cost schools is, however, consistent with our expectations and the logic of the aid program. Therefore, for the purposes of this analysis we will attribute the difference in participation rates to the presence of aid, and we shall proceed to measure its impact in these terms.

The final methodological point to be addressed is how to measure the impact of financial aid on participation. That is, having defined the barrier, we next wish to examine the relationship between income, financial aid, and rates of participation at the target category of institutions (i.e., high cost schools). How this is done, however, is problematic. Precise measures of inequality, as Allison[5/] has ably demonstrated, abound in the literature, and each involves different theoretical and normative assumptions. Moreover, the "...choice can make a difference."[6/] While the reader can obtain a review of this debate elsewhere (the Allison article provides a good start), it should be kept in mind that the results obtained are related to the approach selected. For the purpose of this analysis, we have chosen to use a measure of vertical equity based on relative aggregate differences. This method is best suited to the nature of the data in this study and, being conducive

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5/ Paul D. Allison, "Measures of Inequality," American Sociological Review, Vol. 43, 1978, pp. 865-880.

6/ Allison, ibid., p. 865.

to graphical presentation, is very easily conveyed to a wide audience. For heuristic purposes, this framework is presented in Exhibit 7.1 using hypothetical data. Three different aspects of the impact of aid that can be examined are illustrated.

The first aspect is the shift in the "natural" rate of participation, i.e., "By how many percentage points does aid increase participation?" (Exhibit 7.1a.) Since we have argued that students in similar circumstances (e.g., income and educational cost) are comparable, and that nonrecipients that are similar to aid recipients provide an indication of behavior in the absence of aid, this aspect entails the calculation of the area between the recipient and nonrecipient curves. Ideally, this would involve calculating the difference between two integrals. However, considering the type of data we have available, we shall simply sum the discrete differences between participants and nonparticipants in each income category and take the average. Furthermore, we can express this average difference as a percentage of the average recipient participation rate to discern how much of the total recipient participation in high cost schools is accounted for by aid. Mathematically we can represent this as follow:

$$\text{Participation shift} = \sum_{k=1}^{i} X_{Ri} - X_{NRi} \qquad (7.1)$$

$$\text{Impact of Aid Percent of Total Participation} = \frac{\text{Participation Shift}}{\text{Total Participation}} = \frac{\sum_{k=1}^{i} X_{Ri} - X_{NRi}}{\sum_{k=1} X_{Ri}} \qquad (7.2)$$

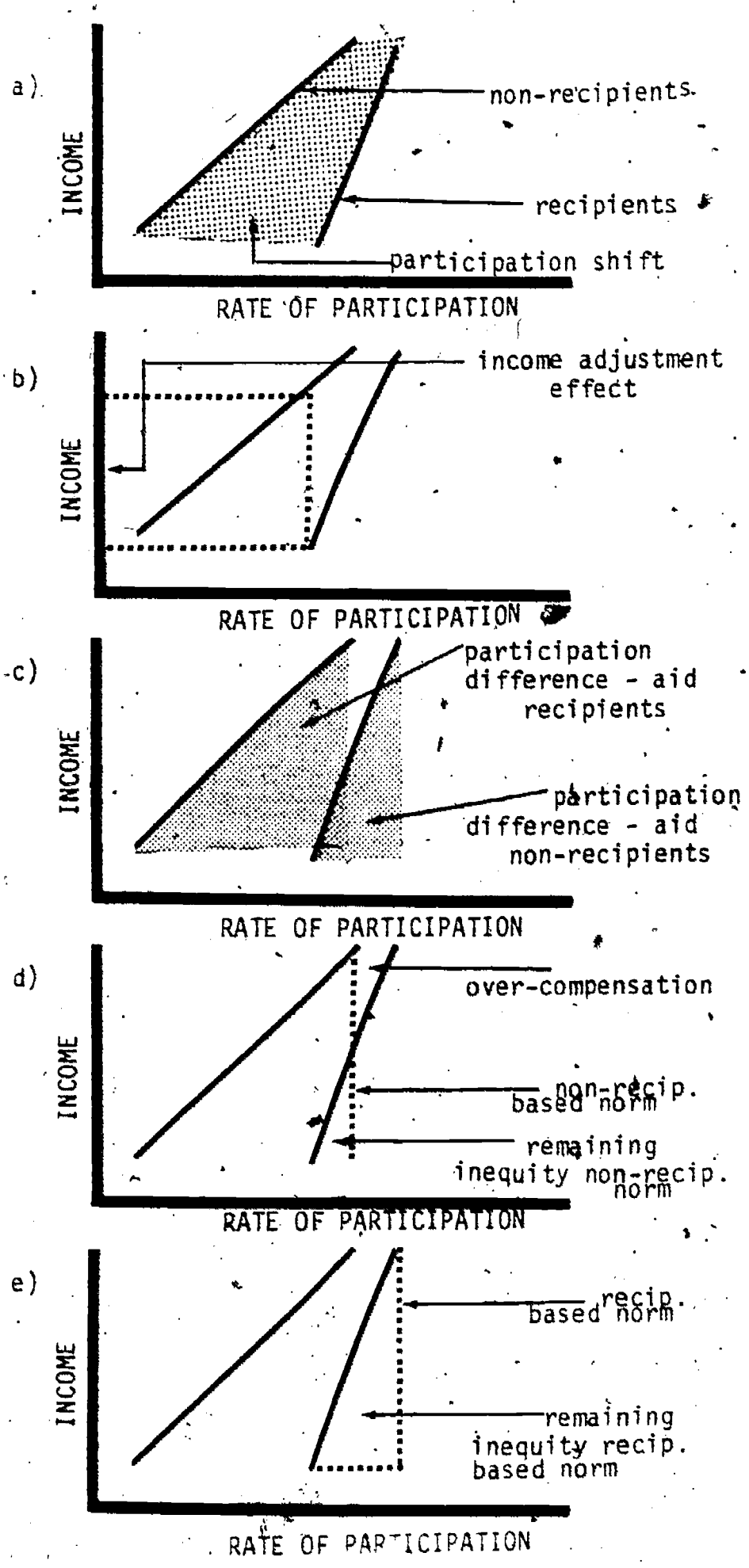
where: i = categories of student characteristics;

X_R = rate of participation of recipients in the target category of schools; and

X_{NR} = rate of participation of nonrecipients in the target category of schools.

Another way to conceptualize this shift is to ask--"In the presence of financial aid, how do the categories or students that face the greatest financial barrier behave?" For example, we might observe that dependent

EXHIBIT 7.1: CONCEPTUALIZING THE MEASUREMENT OF THE IMPACT OF FINANCIAL AID ON RATES OF PARTICIPATION



students with incomes under $6,000, who receive aid, have rates of participation equal to nonrecipients with incomes of over $18,000. The interpretation would be that the addition of financial aid has allowed the student with an income of under $6,000 to behave like one with an income of over $18,000. Such a change will be referred to as an income adjustment effect, allowing one category to behave like a wealthier category (Exhibit 7.1b).

The second aspect of the impact of aid on the rate of participation which we can examine deals with differences in rates of participation within the categories of recipient or nonrecipient (Exhibit 7.1c). That is, "Do high-income individuals participate more than low-income individuals, and what impact does aid have on this difference?" We would expect that the difference between the rate of participation for high- and low-income aid recipients would be less than the difference between the rate of participation for high- and low-income nonretipients. Putting it another way, we would expect financial aid to narrow the difference in behavior between high and low income students. Essentially, we can compare the slopes of the two distributions and determine if aid works to reduce the slopes. Again, for the reasons indicated above, we shall use the sum of the discrete differences, rather than a true slope to compute this measure. That is, we will identify the highest rate of participation among recipients and sum the difference of every other category from that maximum. We shall also do the same for nonrecipients and take the ratio of the two. This measure of the impact of aid on participation differences can, therefore, be represented mathematically as follows:

$$\text{Participation Difference}_{\text{Recipients}} = \sum_{k=1}^{i-1} X_{R(max)} - X_{R(other)} \qquad (7.3)$$

$$\text{Participation Difference}_{\text{for Nonrecipients}} = \sum_{k=1}^{i-1} X_{NR(max)} - X_{NR(other)} \qquad (7.4)$$

$$\text{Impact of Aid on Participation Difference} = \frac{\sum_{k=1}^{i-1} X_{R\,(max)} - X_{R\,(other)}}{\sum_{k=1}^{i-1} X_{NR\,(max)} - X_{NR\,(other)}} \quad (7.5)$$

It should be stressed here that a result of "0" for the ratio would be the "best" outcome implying a state of equality; similarly, a result of "1" would mean that aid had no impact on participation differences.

To this point, we have made a concerted effort to construct measures which are, to the extent possible, value-free. That is, we have measured only the actual impact of aid using empirical comparisons. The third aspect of the impact of aid (i.e., the remaining potential inequity that can be eliminated), however, must be tied to a normative assertion. The difficulty which arises here is the determination of what the "acceptable" rate of participation should be. What is the norm against which the observed behavior should be evaluated? Two possibilities come to mind. The first would be the maximum rate of participation of nonrecipients. Here the argument would be that the role of aid in changing rates of behavior ought to be to "equalize" the participation at the level of the "best" nonrecipient rate. This rate must certainly be "acceptable." In fact, we might go further and argue that the norm ought to be the typical student who falls right at the point of aid cut-off. The inference is that the normative level of behavior is the actual level of behavior which is observed for those individuals who possess the minimum level of income which disqualifies them for assistance. This seems to be the only logical assumption that one can make, for when a policymaker declares that aid will be given to individuals up to a certain point, the implication is that individuals just beyond that point must be exhibiting an acceptable rate of behavior. They have been officially declared not to need assistance to alter their current rate of behavior; this is, of course, the classic idea of a "means test."

The closest approximation to such a norm for financial aid seems to be the dependent, nonrecipient in the highest income category. However, in the case where some category of recipients participate at a higher rate than all catagories of nonrecipients, this presents an anomaly. Here we may have an "overcompensation" (see Exhibit 7.1d) where more students are receiving aid than is necessary to achieve the target rate of participation. In one sense, this excess rate could be considered an inefficiency in the targetting of the financial aid system. The second possibility for a norm would be to use the highest rate of participation observed among aid recipients as the norm (see Exhibit 7.1e). The objective here would be to raise participation to that maximum.

Where applicable in the analysis, we shall calculate all three of these effects, nonrecipient based remaining inequity, overcompensation, and recipient based remaining inequity. Each of these will be represented as a percentage of the total shift in participation that would have been necessary to achieve perfect equality. The following mathematical formulas represent these three measures:

$$\text{Nonrecipient Based Remaining Inequity} = \sum_{k=1}^{i} \frac{X_{NR\,(max)} - X_{R_i}}{i\,(X_{NR_{max}})} \quad \text{where } X_{R_i} \leq X_{NR\,(max)} \tag{7.6}$$

$$\text{Overcompensation} = \sum_{k=1}^{i} \frac{X_{NR\,(max)} - X_{R_i}}{i\,(X_{NR_{max}})} \quad \text{where } X_{R_i} \geq X_{NR\,(max)} \tag{7.7}$$

$$\text{Recipient Based Remaining Inequity} = \sum_{k=1}^{i} \frac{X_{R\,(max)} - X_{R_i}}{i\,(X_{R_{max}})} \tag{7.8}$$

The remainder of this chapter presents the results of these analyses using the data produced by this study.

The Effect of Financial Aid on Access to Particular Types of Institutions: A First Look

In the previous section we used the example of independent students to define the concept of barriers and target categories of schools. It was shown, empirically, that aid seemed to shift the participation of independent students into schools which cost more than $1,000. This, then, was used to establish a "barrier," and we defined the category of schools with costs greater than $1,000 as the category at which aid appears to be aimed for independent students. The results presented in Table 7.2 indicate that the barrier is not quite as clearly demarked for dependent students. The sharpest division for these students is at $1,500. From our general knowledge about the difference between dependent and independent students, a "barrier" of $1,500 for dependent students, compared to $1,000 for independent students, seems reasonable. Independent students have, on the average, a lower level of income and fewer discretionary resources. The cutting point of what they can afford to spend on education should be lower. Furthermore, the evidence cited in the economic studies has clearly shown that the lower the income, the greater the sensitivity to price (see Chapter 3).

Once we move beyond educational cost, we find that the barriers become less clear. This is to be expected, since aid is fundamentally financial in nature and is intended to overcome cost barriers. Insofar as any school characteristics are related to cost, the barrier approach works. When the characteristics are not related to cost, the relationship does not hold; thus, for independent students by institution level and type of control, we find the barrier lies between 2- and 4-year public institutions and all others (see Table 7.3). On the average, the public institutions are the least expensive schools (even including the proprietary sector), so that this follows the analysis of where the barrier was for educational cost. For dependent students, the barrier seems to be at the 4-year private level (see Table 7.4), but the line of

TABLE 7.2: PERCENTAGE OF PARTICIPATION FOR UNDERGRADUATE DEPENDENT STUDENTS AT VARIOUS LEVELS OF EDUCATIONAL COST, BY LEVEL OF TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	Total Family Income									
	Less Than $6,000		$6,000-8,999		$ 9,000-11,999		$12,000-17,999		$18,000+	
	R[1]	NR[2]	R	NR	R	NR	R	NR	R	NR
$0 - 500	34	43	30	39	21	37	14	33	5	20
$501 - 1,000	18	24	20	29	25	34	21	33	17	30
$1,001 - 1,500	7	7	7	7	6	6	3	6	7	3
$1,501 - 2,000	18	5	15	8	11	7	10	6	8	5
$2,000+	22	22	27	18	36	15	52	22	68	40

Source: Student Survey.

[1]R = Recipients

[2]NR = Nonrecipients

demarcation is not exact. Generally, the 4-year private institutions tend to have the highest cost; however, there are a number of other breaks that can also be considered. Several of the individual comparisons suggest that the target category should be all 4-year institutions (public or private). Other comparisons suggest that the target should be private education (2- or 4-year). Therefore, since the norm is not clear, we shall examine the impact of aid on rates of participation of various types of students in using all three categories: 1) 4-year private education, 2) all 4-year education; and 3) all private education. Since the empirical barrier approach is ambiguous on these categories and the argument is so often made that one or another of these categories is the actual target of aid, each category will be investigated.

TABLE 7.3: PERCENTAGE OF PARTICIPATION FOR UNDERGRADUATE INDEPENDENT STUDENTS AT VARIOUS LEVELS AND CONTROLS OF SCHOOLS, BY LEVEL OF TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	Total Family Income							
	Less than $3,000		$3,000 - 5,999		$6,000 - 8,999		$9,000 +	
	R[1]	NR[2]	R	NR	R	NR	R	NR
4-Year Public	28	24	27	35	28	30	28	34
4-Year Private	22	13	16	7	13	10	32	15
2-Year Public	25	46	31	47	31	45	20	40
2-Year Private	4	2	3	1	7	2	3	1
Proprietary	21	15	23	10	21	13	17	10

Source: Student Survey.

1/R = Recipient

2/NR = Nonrecipient

TABLE 7.4: PERCENTAGE OF PARTICIPATION FOR UNDERGRADUATE DEPENDENT STUDENTS AT VARIOUS LEVELS AND CONTROL OF INSTITUTIONS, BY LEVEL OF TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79

	Total Family Income									
	Less Than $6,000		$6,000-8,999		$ 9,000-11,999		$12,000-17,999		$18,000+	
	R[1]	NR[2]	R	NR	R	NR	R	NR	R	NR
4-Year Public	31	33	35	15	36	46	30	50	20	42
4-Year Private	30	15	32	7	42	19	36	24	70	42
2-Year Public	5	10	7	2	8	5	9	5	6	3
2-Year Private	20	27	15	6	8	18	10	15	2	9
Proprietary	13	15	11	3	6	8	5	6	2	6

Source: Student Survey.

1/R = Recipient

2/NR = Nonrecipient

For other categorizations of institutions, no empirical barriers can be detected. Arguments have been made for and against large size, but no clear distinction has appeared. For region, it does appear that aid has some minor effect in shifting students among geographic sectors; however, as with size, there is no a priori category to choose as the target. For selectivity, on the other hand, we do have some a priori arguments to test (see previous statement by Astin). We will, therefore, examine the impact of aid on rates of participation in nonselective schools only, and in moderately selective and very selective schools taken together. Thus, with the exception of selectivity, all other categories will be dropped from further analysis.

The analysis of the impact of aid on the rates of participation of various types of students at high-cost institutions is presented in Exhibits 7.2 to 7.5. At the outset, it should be stressed that the results which are observed for variables other than student income require further scrutiny. Insofar as income has been chosen as the primary explanatory variable, any effects we attribute to other characteristics (e.g., ethnicity) might arise from a correlation with income.

To recapitulate, the distributions of both independent and dependent students provide a clear picture of the impact of aid on participation in higher education. In each case, there is a marked increase in rate of participation in high-cost schools at every income level. For independent students, the rates of participation for recipients are almost twice as high as those for nonrecipients. For dependent students, the shift is not as great but is still significant. One way to interpret these figures would be to point out that recipients with income less than $6,000 attend at a rate roughly equal to that of nonrecipients with an income of over $15,000. This is the income adjustment effect. If the object of aid is to equalize rates of behavior across levels of income, aid has certainly had an impact. For independent students, the rate of participation for every category of recipient exceeds the highest category among nonrecipients.

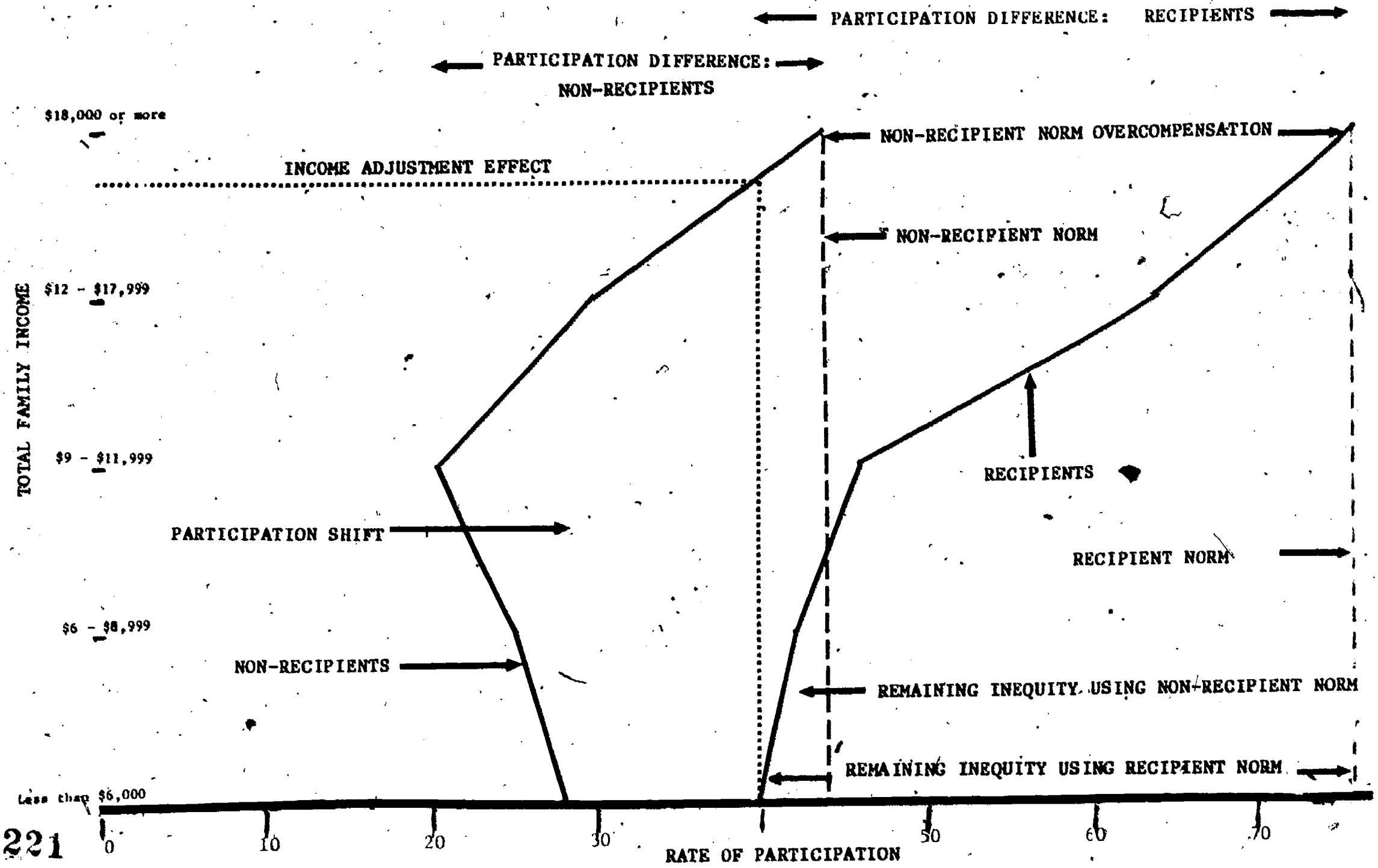
From the point of view of participation differences (i.e., the differences between recipients at differing income levels) aid does not seem to have had a positive impact. That is, for both dependent and independent students, there is a larger spread among recipients than among nonrecipients. This apparent negative outcome will be examined in more detail below. Finally, with respect to remaining inequity, we observe that the recipient norm suggests a great deal of remaining inequity for both recipients and nonrecipients. However, with respect to the nonrecipient norm, there is a good deal less inequity and some overcompensation. The results are, therefore, unclear.

The other characteristics, displayed in Exhibits 7.4 and 7.5, show clearly that there has been a shift, though it is by no means as large as the one observed across income categories. Needless to say, to proceed with the analysis in graphic terms would be quite cumbersome; therefore, we next examine the summary tabular results (see Table 7.5).

The Effect of Financial Aid on Access: A Closer Look at Participation Shifts and Differences

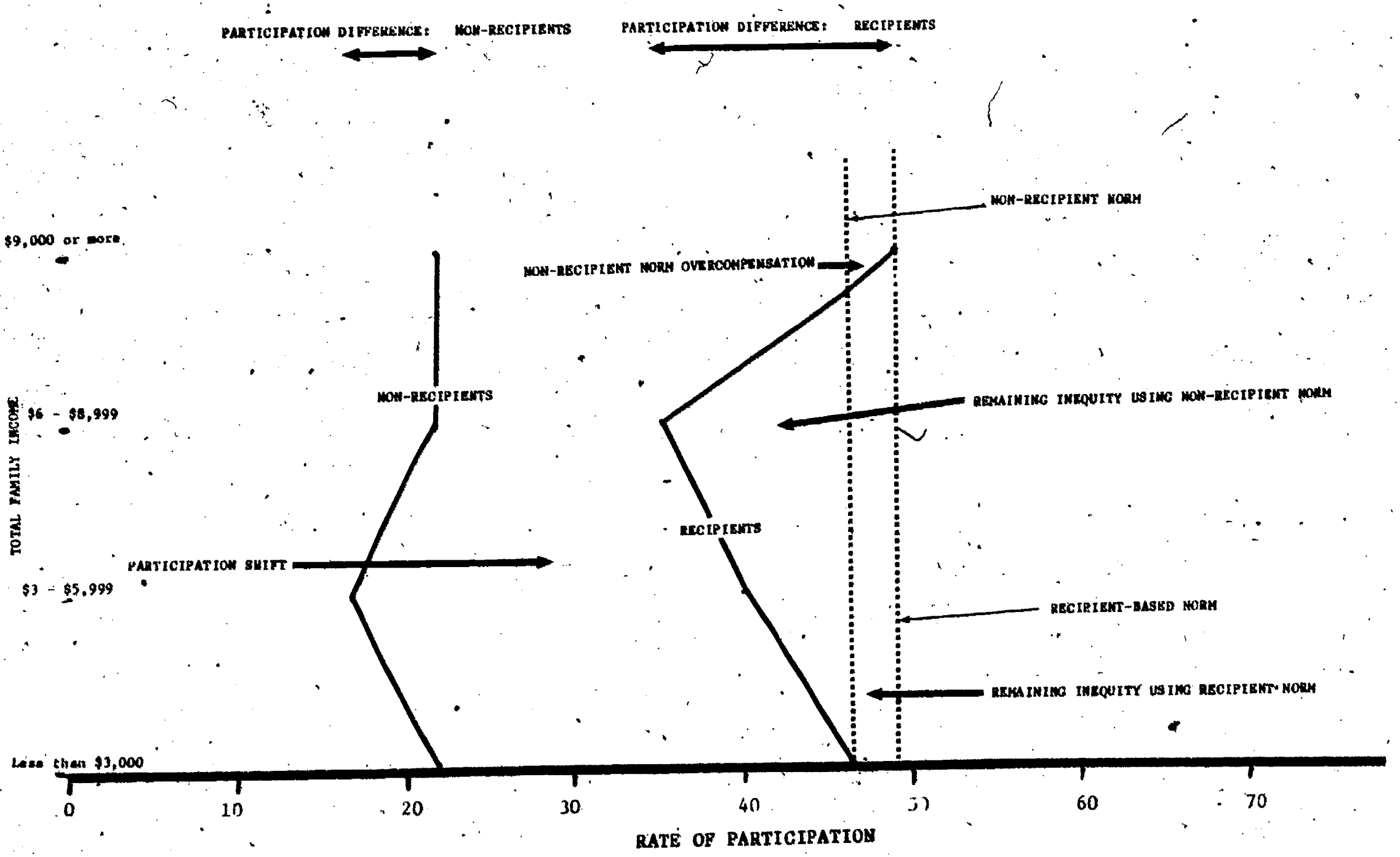
As shown above, aid has the largest impact in shifting rates of participation for both dependent and independent students when examined across the income characteristic. When financial factors are considered in isolation (i.e., ignoring the confounding effects of characteristics such as ethnicity), aid accounts for 47 percent of all recipient attendance for independent students (Table 7.5, column 3, row 6). For independent students, across other characteristics, aid accounts for between 43 and 46 percent (column 3, rows 7-10) of attendance at high-cost schools. For dependent students, aid across income categories accounts for 41 percent of attendance (column 3, row 1), but it accounts for less than 30 percent of the attendance across other categories of students (column 3, rows 2-5).

EXHIBIT 7.2: RATE OF PARTICIPATION AT HIGH COST SCHOOLS FOR UNDERGRADUATE DEPENDENT STUDENTS BY TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79



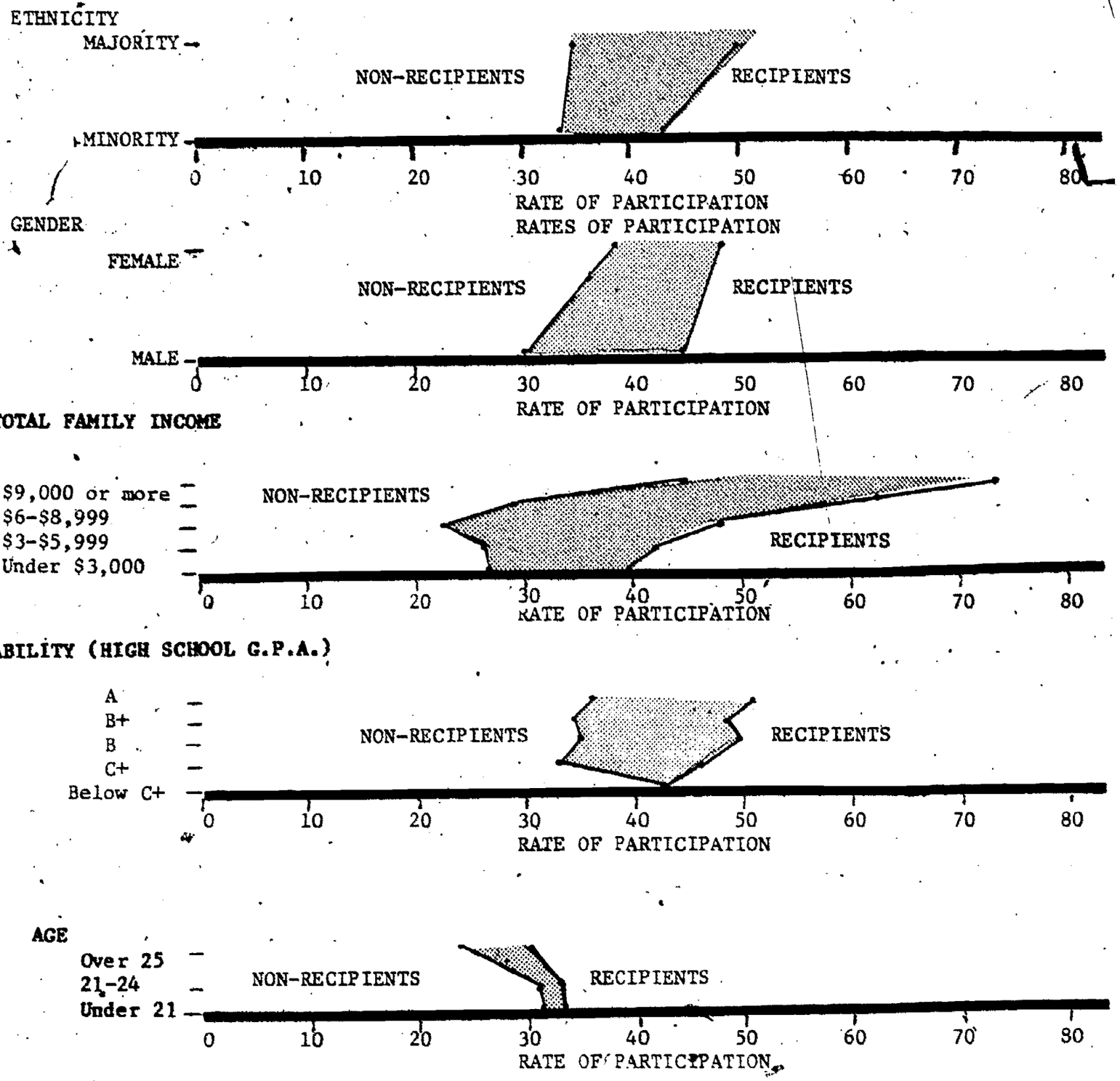
Source: Student financial aid records.

EXHIBIT 7.3: RATE OF PARTICIPATION AT HIGH COST SCHOOLS FOR UNDERGRADUATE INDEPENDENT STUDENTS BY TOTAL FAMILY INCOME: ACADEMIC YEAR 1978-79



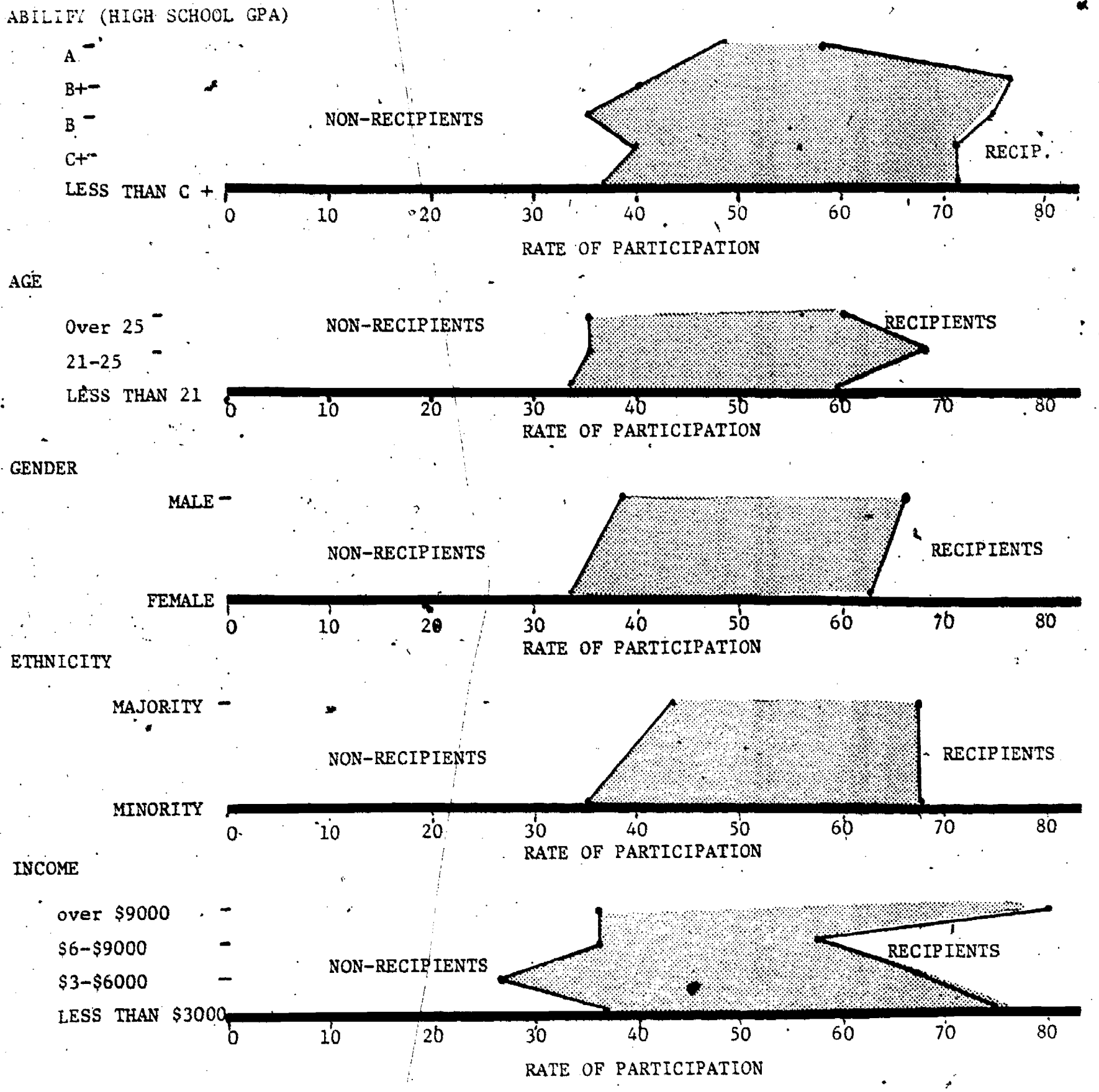
Source: Student financial aid records.

EXHIBIT 7.4: THE RATE OF PARTICIPATION OF VARIOUS CATEGORIES OF UNDERGRADUATE DEPENDENT STUDENTS AT HIGH COST INSTITUTIONS: ACADEMIC YEAR 1978-79



Source: Student financial aid records.

EXHIBIT 7.5: THE RATE OF PARTICIPATION OF VARIOUS CATEGORIES OF UNDERGRADUATE INDEPENDENT STUDENTS AT HIGH COST INSTITUTIONS: ACADEMIC YEAR 1978-79



Source: Student financial aid records.

This finding suggests a fundamentally economic process underlying the effect of aid on participation. Independent students with lower incomes and less discretionary income are most sensitive to educational cost and financial aid. In fact, if we examine the impact of aid across income categories for independent students at schools which cost more than $1,500, the impact of aid rises to 54 percent. (Not shown in Table 7.5.) Moreover, this sensitivity to price is less variable for independent than dependent students.

While the impact of aid measured by participation shift is clearly in the expected direction toward greater participation, the impact of aid on participation differences runs counter to our expectations. That is, one would expect that financial aid would work to equalize the behavior of recipients with different incomes. Similarly, in the absence of financial aid, one would expect the disparity between high- and low-income students to be greater than the difference between similar aid recipients. In 5 of 10 cases, however, the change is in the wrong direction. For dependent students there is a 40 percent greater average difference (column 6, row 1) between categories for recipients than there is for nonrecipients. The increase (column 6, row 3) is even greater across race categories (900%); though here it should be noted that the absolute numbers are quite small. Similarly, across income and age for independents, there are large relative increases in differences also based on small absolute numbers.

With regard to this last point, since this impact measure for noneconomic variables (e.g., ethnicity) diverges so strikingly from the income figures, we cannot interpret them simply as a result of income operating as a suppressor variable. Furthermore, since we have already observed that aid has a large positive impact on rates of participation (far larger, it should be pointed out, than the negative impact on participation differences), the increase in participation differences can be interpreted as follows: In most cases aid seems to release, and/or augment, certain underlying propensities to attend, which results in

TABLE 7.5: THE IMPACT OF FINANCIAL AID ON RATES OF PARTICIPATION AT HIGH COST POSTSECONDARY INSTITUTIONS: ADACEMIC YEAR 1978-79

Student Characteristics	Participation Shift			Participation Difference			Recipient Based Norm		Nonrecipient Based Norm				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dependent Students (Cost $1500)													
Family Income	22	63	41	26	19	1.4	74	35	4	45	10	16	32
Ethnicity	12	47	26	9	1	9.0	51	18	3	45	7	6	13
Gender	5	47	27	4	9	0.4	49	8	0	45	0	8	6
Age	13	44	30	8	7	1.1	49	16	10	45	22	3	6
Ability	7	49	14	5	5	1.0	53	9	3	45	7	6	13
Independent Students (Cost $1000)													
Family Income	20	43	47	6	2	3.0	49	12	7	45	16	3	6
Ethnicity	18	41	44	0	5	0	41	0	4	45	8	0	0
Gender	18	39	46	1	2	0.5	40	3	6	45	13	0	0
Age	17	37	46	4	1	4.0	41	10	7	45	16	0	0
Ability	18	42	43	4	5	0.8	46	9	4	45	9	1	2

Source: Student Survey.

7.23

Notes to Table 7.5

Participation Shift

(1) The average difference between recipient rate of participation in high cost schools and nonrecipient participation in high-cost schools. Equation 7.1 divided by "i" (the sum of all recipients and nonrecipients).

(2) The average rate of recipient participation in high-cost schools. Same as (1) but for recipients only.

(3) The percent of total recipient participation accounted for by aid (Equation 7.2).

Participation Difference

(4) The average difference, between the maximum recipient rate of participation and all other recipient rates of participation. Equation 7.3 divided by "i" (the sum of all recipients and nonrecipients).

(5) The average difference between the maximum nonrecipient rate of participation and all other nonrecipient rates of participation. Equation 7.4 divided by "i" (the sum of all recipients and nonrecipients).

(6) The net impact of aid on participation differences (Equation 7.5).

Recipient Based Norm

(7) Maximum recipient rate of participation.

(8) Recipient based remaining inequity (Equation 7.8).

Nonrecipient Based Norm

(9) The average shortfall in rate of participation of those categories of recipients whose rate is less than the nonrecipient norm.

(10) Nonrecipient norm which is defined as the rate of participation of the highest income category of dependent nonrecipient students.

(11) Remaining inequity nonrecipient norm which is the average shortfall (9) as a percentage of the norm (10) (Equation 7.6).

(12) The average increment by which those categories of recipients, which are larger than the nonrecipient norm, exceed the norm.

(13) Overcompensation, which is the average excess participation of recipients as a percentage of the nonrecipient norm (Equation 7.7 or (12)/(10)).

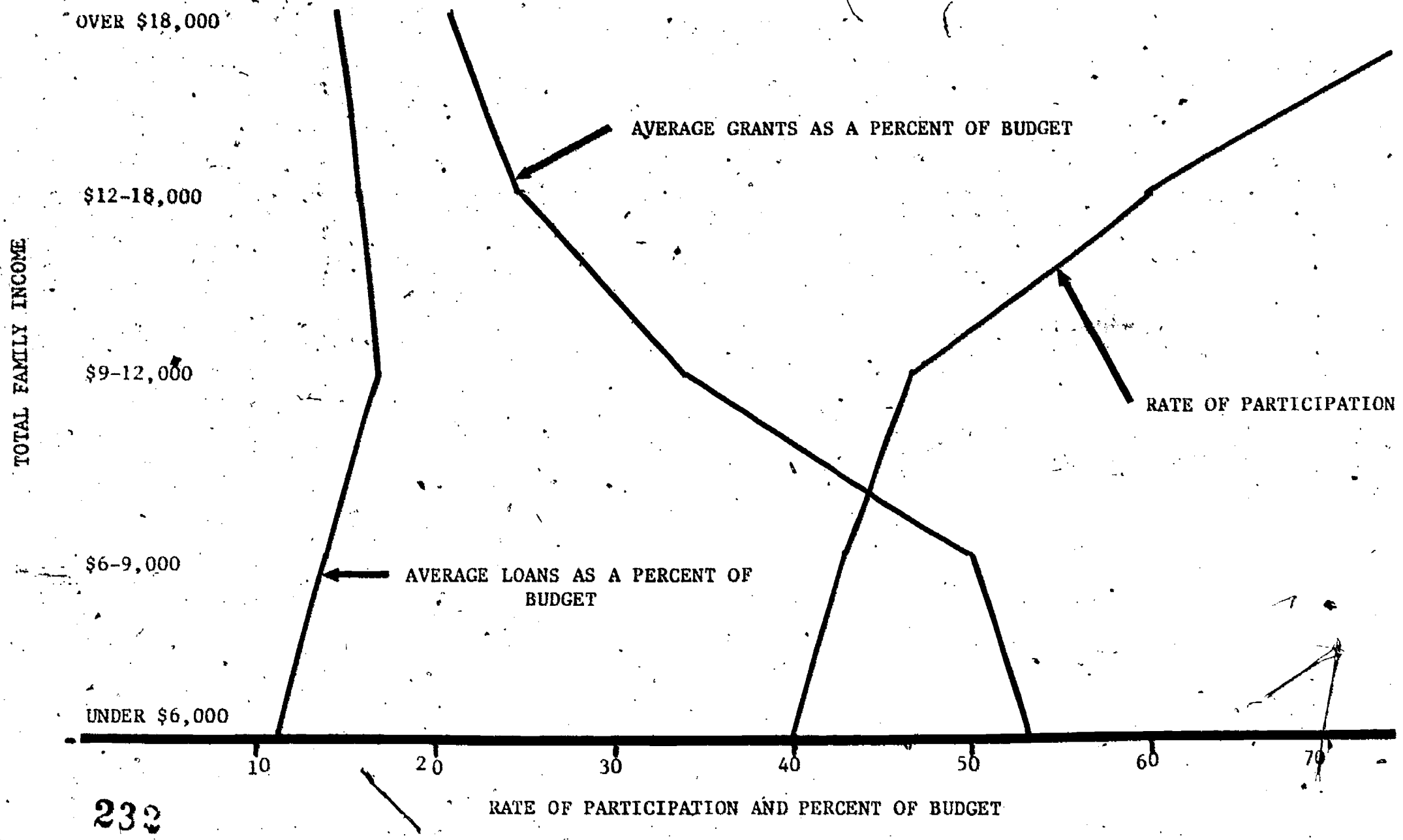
increasing participation differences in the presence of aid. Or, to put it another way, we might say that the current distribution of aid, which includes a progressive scaling of the amount of aid in favor of those categories in deficit, is not sufficient to dampen or override the differences in propensity to participate. Here, it is important to stress the fact that aid is scaled to try to reduce these differences. In Exhibit 7.6, we have plotted the rate of participation of dependent recipients in high-cost schools and the percent of the total educational cost which they receive in the form of loans and grants. It can be seen that grants are distributed in a sharply progressive fashion, to favor low-income students, yet the higher-income students still have a much higher rate of participation. This is what we mean by suggesting that the current scaling is unable to compensate for the underlying propensity to pursue a postsecondary education--while at the same time being quite successful in increasing participation.

One result of these findings might be a recommendation that aid should be redirected away from certain categories of students, or that there ought to be a more progressive distribution of aid toward the categories in deficit. However, here one must take into account whether or not the category has passed the relevant norm. It is certainly arguable whether one ought to reduce the rate of participation of any group which falls below the nonrecipient norm in order to reduce differences among recipients. Thus, we turn to the final analysis, that of remaining inequity.

The Issue of Remaining Inequity.

For dependent students, those in the highest income category dominate the equity analysis in two ways. For the recipient norm, there remains a great shortfall in total needed assistance. On the other hand, when the nonrecipient norm is applied, a great deal of "overcompensation" is found stemming mainly from the fact that a number of student categories exceed the norm. In this latter case, one could argue that the resources directed toward the upper income groups should be redirected toward lower

EXHIBIT 7.6: RATE OF PARTICIPATION AND VARIOUS FORMS OF AID AS A PERCENTAGE OF TOTAL BUDGET FOR UNDERGRADUATE DEPENDENT STUDENTS: ACADEMIC YEAR 1978-79



Source: Student financial aid records.

income groups. The loss in rate of participation at the top would be offset by gain at the bottom. To put this in other terms, the reduction in participation differences could be accomplished without an increase in remaining inequity.

For independent students, we cannot put forth a similar case. Here, remaining inequity is between two and three times greater than overcompensation, and overcompensation is quite small, so that retargeting aid would have to be very precise in order to reduce both overcompensation (and participation differences) without increasing remaining inequity.

Across the other student characteristics (see Tables 7.6 and 7.7), the remaining inequity is smaller than across the income categories for both dependent and independent students. As above, where this is the case, we suggest that income is the key variable, i.e., the observed differences are related to disparities in income which are correlated with the other student characteristics. Therefore, targeting any redistribution toward income should work to reduce any negative effects observed in the correlated variables.

CONCLUSION

Although much of this chapter has been devoted to a methodological discussion of our approach to the rather difficult analysis of the impact of financial aid on participation in higher education using cross-sectional data, the results do provide some important conclusions. First, for both dependent and independent students, financial aid clearly increases an individual's chances of gaining entry into high-cost postsecondary schools. There is a marked increase in the rate of participation at every income level; for independent students the rates of participation for recipients are almost twice as high as those for nonrecipients; while for dependent students, the shift is less marked but still significant. One way to interpret these figures is to observe that recipients with incomes less than $6,000 attend at a rate roughly equal

to that of nonrecipients with incomes of over $15,000. This is what we have called the income adjustment effect. If the object of aid is to attempt to equalize rates of behavior across levels of income, financial aid has certainly had an impact.

Secondly, while the impact of aid measured by participation shift is clearly in the expected direction toward greater participation, the impact of aid on participation differences (i.e., the slope of effect) was found to run counter to our expectations. That is, where we expected that financial aid would work to equalize the behavior of recipients with different incomes, the data appear to indicate that the targeting of financial aid to economic disadvantages is not sufficient to offset the innate income-related differences in the propensity to pursue postsecondary education.

The significance of participation differences or other noneconomic characteristics (for both students and institutions) was found to be generally related to the variable's relationship to the economic factors (e.g., ethnicity, type of institution). This being the case, the targeting of the aid distribution toward the financial circumstances of the family would appear to work to reduce any negative effects that might be observed in the correlated variables.

TABLE 7.6: THE IMPACT OF FINANCIAL AID ON RATES OF PARTICIPATION FOR VARIOUS CATEGORIES OF UNDERGRADUATE STUDENTS BY INSTITUTION LEVEL AND CONTROL: ACADEMIC YEAR 1978-79

Student Characteristics	Participation Shift			Participation Difference			Recipient Based Norm		Nonrecipient Based Norm				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4-Year Private Schools													
Independent Students													
Income	10	21	48	15	8	1.9	32	47	24	42	57	0	0
Race	13	40	33	4	1	4.0	22	18	22	42	52	0	0
Gender	8	22	36	13	3	4.3	27	48	22	42	52	0	0
Age	9	19	47	5	4	1.3	22	23	23	42	55	0	0
Ability	4	32	13	10	20	0.5	40	25	8	42	18	0	0
Dependent Students													
Income	20	42	49	35	31	1.1	70	50	11	42	26	5	12
Race	20	45	44	12	7	1.7	51	24	2	42	5	5	12
Gender	8	39	21	20	7	2.9	49	41	7	42	17	4	10
Age	5	34	15	13	11	1.2	44	30	15	42	36	2	4
Ability	11	32	34	8	12	0.7	38	21	10	42	24	0	0
4-Year Education													
Independent													
Income	9	46	20	19	10	1.9	60	32	36	84	43	0	0
Race	19	50	18	4	8	0.5	54	7	34	84	40	0	0
Gender	11	55	20	21	12	1.8	65	32	30	84	36	0	0
Age	11	51	22	12	13	0.9	59	20	33	84	39	0	0
Ability	7	55	13	18	23	0.8	70	26	29	84	35	0	0
Dependent													
Income	17	73	23	23	31	0.7	91	25	9	84	11	2	2
Race	19	72	26	12	24	0.5	78	15	12	84	14	0	0
Gender	11	78	14	18	3	6.0	87	21	8	84	10	2	2
Age	5	69	7	19	12	1.6	82	23	21	84	25	0	0
Ability	5	69	7	16	17	0.9	82	20	14	84	17	0	0

Source: Student Survey.

NOTE: See definitions on Table 7.5.

TABLE 7.6: THE IMPACT OF FINANCIAL AID ON RATES OF PARTICIPATION FOR VARIOUS CATEGORIES OF UNDERGRADUATE STUDENTS BY INSTITUTION LEVEL AND CONTROL: ACADEMIC YEAR 1978-79 (Continued)

Student Characteristics	Participation Shift			Participation Difference			Recipient Based Norm		Nonrecipient Based Norm				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Private Education													
Independent													
Income	13	25	52	14	4	3.5	36	39	20	45	44	0	0
Race	6	23	26	8	1	8.0	27	30	22	45	49	0	0
Gender	11	25	44	15	4	3.8	31	48	21	45	47	0	0
Age	11	23	48	4	4	1.0	26	15	22	45	49	0	0
Ability	17	55	31	10	7	1.3	63	16	0	45	0	10	22
Dependent													
Income	22	49	45	34	23	1.5	76	45	2	45	4	7	16
Race	23	50	46	16	4	0.4	58	14	2	45	4	7	16
Gender	7	44	16	21	8	2.6	54	39	5	45	11	6	13
Age	8	40	20	7	6	1.2	47	15	5	45	11	1	2
Ability	22	54	41	12	9	1.3	53	23	3	45	7	2	4

Source: Student Survey.

Note: See definition on Table 7.5.

TABLE 7.7: THE IMPACT OF FINANCIAL AID ON RATES OF PARTICIPATION FOR VARIOUS CATEGORIES OF UNDERGRADUATE STUDENTS BY INSTITUTIONAL SELECTIVITY: ACADEMIC YEAR 1978-79

Student Characteristics	Participation Shift			Participation Difference			Recipient Based Norm		Nonrecipient Based Norm				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Very Selective Schools													
Independent													
Income	4	24	17	6	4	1.5	28	21	33	56	60	0	0
Race	3	22	9	19	13	1.5	31	61	35	56	63	0	0
Gender	9	37	24	5	7	0.7	42	6	19	56	34	0	0
Age	2	19	11	3	1	3.0	21	14	37	56	66	0	0
Ability	5	27	19	18	8	2.3	41	44	28	56	50	0	0
Dependent													
Income	4	38	11	15	22	0.7	50	30	18	56	32	0	0
Race	6	32	6	19	17	1.1	41	46	30	56	54	0	0
Gender	9	64	14	10	8	1.3	69	14	17	56	30	0	0
Age	6	33	18	10	16	0.6	39	26	23	56	41	0	0
Ability	9	35	26	26	17	1.2	51	39	21	56	37	0	0
Selective Schools													
Independent													
Income	13	47	28	8	10	0.8	53	15	34	81	42	0	0
Race	6	46	13	21	15	1.4	56	38	36	81	44	0	0
Gender	7	64	11	9	6	1.3	68	13	18	81	22	0	0
Age	9	47	19	9	3	3.0	49	40	34	81	42	0	0
Ability	6	52	12	14	8	1.8	65	22	29	81	36	0	0
Dependent													
Income	5	64	8	18	17	1.1	78	23	19	81	23	0	0
Race	7	55	13	33	27	1.2	71	46	27	81	33	0	0
Gender	8	37	22	10	11	0.9	42	24	19	81	23	0	0
Age	8	63	13	6	21	0.3	67	9	18	81	22	0	0
Ability	10	62	16	17	8	2.1	76	22	19	81	23	0	0

Source: Student Survey.

NOTE: See definitions on page 7.5.

8

THE RELATIONSHIP BETWEEN INSTITUTIONAL PACKAGING PRACTICE AND THE EQUITY OF AID DISTRIBUTION

> Existing packaging practices often produce inequitable results. Students with similar needs often receive different packages. A few institutions have gone so far as to burden students with large loans without first investigating their eligibility for Basic Grants.
>
> Reauthorization of the Higher Education Act, Hearings before the Subcommittee on Postsecondary Education, House of Representatives, Part 8, July 19, 1979, page 86.

INTRODUCTION

As noted in these recent legislative hearings, schools vary tremendously in the ways in which financial aid is packaged and disbursed to students. While some schools adhere to very structured guidelines and procedures in the packaging of financial aid, others utilize more of a student-specific approach in order to better meet the unique needs of their students. The analyses in this chapter are, therefore, an attempt to attribute differences in the granting of financial aid to variations in institutional award procedures.

METHODOLOGICAL CONSIDERATIONS

Such differences in the allocation of financial aid, however, are not determined exclusively by variations in management practices at the institutional level. There are also differences among students in their

need for financial aid and among characteristics of the various educational institutions; thus, differences in the awarding of financial aid are contingent upon variations at both the institution- and student-level. This type of analysis presents two methodological problems which will be the subject of the following discussion--the appropriate unit of analysis and the choice of an analytical approach.

To accurately examine the parameters which determine financial aid outcomes, it is necessary to link institutional-level variables (e.g., management practices and institutional characteristics) with student-level variables (e.g., the financial resources of the students). Whenever variables are linked from different sources, there is some concern about what is the proper unit of analysis. In this study, the choices are either the institution (n=172) or the student (n=17,262). Obviously, this large difference in sample sizes requires some decision as to the proper analytical unit, since the choice that is made will ultimately determine the number of degrees of freedom which will be used in the ensuing analysis.

To confirm the institution as the proper unit of analysis, an empirical analysis was undertaken. Several researchers (e.g., Raizen, 1974; and Darlington, 1978)[1/] have demonstrated how the variability in the data base can be examined to yield empirical evidence as to the proper unit of analysis. The rationale is that if there is more variability among students within schools than across schools, then the appropriate unit of analysis is the student. Conversely, if the variability is greater across schools than within schools, the institution should be the unit of analysis. Since students were nested

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[1/] S. Raizen, and S.B. Bobrow, Design For A National Evaluation of Social Competence In Head Start Children, Report for the Office of Child Development, Department of Health, Education, and Welfare, Rand Corporation, 1974; R.B. Darlington, "Methods, Issues, and Some Illustrative Findings in Analyzing the Data on the Consortium on Developmental Continuity," (Paper presented at American Educational Research Association, Toronto, 1978).

within institutions, the expectation was that the variability among schools was greater than that within schools. Using a one-way analysis of variance across schools on the dependent variables of interest (loan-work percentage, self-help percentage and net-price percentage), it was shown that this was in fact the case; thus, the empirical analysis supported the use of the institution as the proper unit of analysis.

The second issue deals with the choice of an appropriate analytical approach. Since schools vary both in terms of cost and the financial resources of the student body, a simple analysis of various financial aid outcomes without considering these pre-existing differences would be potentially misleading. That is, the variation in outcomes, such as the average loan-work percentage, fluctuates with changes in cost and the variability of the financial resources of the student body. Therefore, in order to attribute differences in financial aid outcomes to the actual management practices of the school, extraneous variables such as cost and family financial support must be controlled. Otherwise, the differences in outcomes may be attributable to these extraneous variables.

While it was not possible to experimentally control these variables, it is possible to exercise ex post statistical control through analysis of covariance procedures or hierarchical setwise regression procedures. The choice between the two procedures is completely arbitrary, since they both yield the same results. Cohen and Cohen (1975)[2/] have pointed out that analysis of covariance is merely an extension of multiple regression procedures, and have documented the correspondence of the two methods. Only when the assumption of homogeneity of regression lines[3/] is not

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[2/] J. Cohen and P. Cohen, Applied Multiple Regression/Correlation Analyses for the Behavioral Sciences (N. Y.: John Wiley and Sons, 1975).

[3/] This is an assumption of the analysis of covariance procedure. Simply stated, it requires that the relationship between the dependent variable and the covariates is not statistically different among the groups (i.e., packaging types).

satisfied does the choice of the method matter. When this assumption is not satisfied, analysis of covariance is not a valid procedure; thus, one must rely upon hierarchical setwise regression procedures and include the appropriate interaction terms. Since the assumption of homogeneity of regression lines was, in this case, statistically satisfied for each dependent variable, analysis of covariance procedures was employed.

Analysis of covariance is ideally suited for the questions addressed in this chapter for several reasons. First, it allows us to control for initial differences on the two covariates, cost and family contribution. It enables us to examine the outcome variables as if all institutions were alike on these measures. Second, the method permits the use of continuous and categorical variables within the same analysis. Third, the method allows us to test for significant differences across the levels of the categorical variable.

As previously discussed, the ultimate aim of this chapter is to attribute differences on financial aid variables to differences in institutional management procedures. Up to this point, however, the variables involved in such analyses have been only vaguely mentioned and described. In the next section, the variables which will be employed in the analyses are described in terms of their use in the analysis, how they are conceptualized, and at what level they are measured.

DESCRIPTION OF THE VARIABLES USED

The variables which will be used fall into three categories: covariates; independent variables; and dependent variables. The analysis of covariance procedure tests for differences on the dependent variable across the various levels of the independent variable, while statistically adjusting for differences on the covariates. Each of the types of variables is described below.

Covariates. The covariates which will be used for each institution are the cost of the school program (the total full-time undergraduate cost of tuition and fees) and the total expected family contributions for the population of all aid applicants. Cost was recorded from the

institutional questionnaire for each institution, whereas family contribution was aggregated from the student-level data. By using these two variables as covariates, the institutions were treated as if they all have the same values on these variables.

Independent Variable. The independent variable consists of one categorical variable which represents different packaging (management) typologies. These packaging typologies were created from a logical analysis of the data provided by financial aid officers about their management practices. Each packaging typology has a unique set of procedures and guidelines which differentiates it from the remaining types. It should be noted, however, that these packaging typologies are for the most part artificial constructs. They are not rigid treatments applied in the same manner across all schools claiming to use a given approach. In fact, many aid officers were at a loss to describe even at an elementary level how they awarded aid to students. Therefore, there is probably as much variation within practice as across practices and, more importantly, the same packaging approach may result in different outcomes across institutions.

A complete description of the set of characteristics which comprise each packaging type is given in Volume I, Chapter 9, of this report. The basic underlying themes of each packaging type are summarized below:

1. Nonreturnable Aid/Self-help Ratio: institutions seek to equalize the ratio of grants to self-help support for all students;
2. Fixed Grant: all students receive the same (fixed) level of nonreturnable grant aid--self-help is used to meet the remaining need (for those students for whom the grant award meets their total need, no self-help is given);
3. Fixed Self-help: this is the reverse of (2) with self-help and loans and/or work being the first source of aid packaged;
4. Fixed Work: this is like (3) but the only self-help used is work;
5. Fixed Loan: same as (4) but loans are used;
6. Floating Grants: all students receive some grant support but no fixed ceilings or floors are established--the approach reflects a greater degree of discretion than those above;

7. Grants Float or Are Zero: same as (5) but not all students receive some grant support;

8. Package Based on Scholastic Ability: the awarding of grant aid is prioritized on the basis of scholastic ability; and

9. No Established Rules: students are treated on an individual first-come, first-served basis.

Due to the extremely small number of schools in categories 2, 5, and 8, these categories were eliminated from further analysis. Also, categories 3 and 4 were combined into one group due to their similarity and the low number of cases in each group.

Dependent Variables. Each of the selected variables was expressed as the percentage of the student's budget for which it accounted; thus, loan-work percentage represents the percentage of the budget that is accounted for by the combined sources of loans and work. The variables are listed and described below:

1. loan-work percentage, the percentage accounted for by the combined sources of loans and work;

2. self-help percentage, the percentage accounted for by the combined sources of loan, work, and summer savings;

3. net-price percentage, the percentage accounted for by the combined sources of loans, work, summer savings, and any unpackaged shortfall between all resources and the student's total cost of education.

The three dependent variables are employed in the analysis in two different ways. In the first set of analyses, the mean on each variable is examined. An examination at this level indicates only whether there is a difference across the packaging types in the average value of each dependent variable. In the second set of analyses, the coefficient of variation (see Chapter 6) of each dependent variable is examined to determine if the average variability of the measures differs across packaging types. While both sets examine the same dependent variables, the analyses focus on different, but complimentary, aspects of the variables. The first set examines the variables in such a way as to determine if there are any differences among the average amounts, whereas the second set focuses on differences in variations.

As has been previously discussed, the unit of the analysis is the institution; consequently, student-level variables were aggregated to the institutional level. The aggregation of student level variables was not based on the total sample of students in the study, but only upon full-time dependent students who were receiving some form of financial aid. The restriction to include only the above sample was based on several factors. First, this subsample of the total sample represented by far the largest homogeneous group of students in the sample. Second, since independent students differ in so many ways from dependent students, the inclusion of independent students might have masked or contaminated the results of the analysis. Third, due to the extremely low number of independent students in some of the schools, an analysis strictly on independent students might have led to spurious or erroneous conclusions.

THE FIRST MODEL: PROCEDURES WHICH THE INSTITUTIONS CLAIM TO EMPLOY AS A PREDICTOR OF STUDENT OUTCOMES

An analysis of covariance on the means of the dependent variables indicates that there is very little difference in outcomes across the five packaging types. An inspection of Tables 8.1 through 8.3 reveals that only on net-price did the differences approach statistical significance ($p < .09$). After initial differences on costs and average family contribution are removed from the institutions, only minimal differences are accounted for by the packaging types. This amount is indicated by the unusually small sum-of-squares for packaging type and the associated F ratios.

TABLE 8.1: RESULTS OF ANALYSIS OF COVERIANCE ON MEAN LOAN-WORK PERCENTAGE: ACADEMIC YEAR 1978-79

Source of Variation	DF	F	Significance
Covariates	2	6.03	.003
Packaging Type	4	.40	.81
Residual	141		

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

TABLE 8.2: RESULTS OF ANALYSIS OF COVARIANCE ON MEAN SELF-HELP PERCENTAGE: ACADEMIC YEAR 1978-79

Source of Variation	DF	S	Significance
Covariates	2	9.33	.001
Packaging Type	4	.45	.78
Residual	141		

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

TABLE 8.3: RESULTS OF ANALYSIS OF COVARIANCE ON MEAN NET-PRICE PERCENTAGE: ACADEMIC YEAR 1978-79

Source of Variation	DF	F	Significance
Covariates	2	4.2	.02
Packaging Type	4	2.1	.09
Residual	141		

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

Table 8.4 presents the means of the variables after adjusting for initial differences on the covariates. The similarity of the means across the packaging types again reflects the lack of significant differences. Only on net-price, which approaches statistical significance, do the values appear to differ substantially. The results on net-price suggest that the set of features associated with the "Floating Grant" packaging approach may lead to the greatest average net-price. However, due to the nonsignificant F, we certainly cannot impute a causal relationship between this packaging type and average net-price percentage. The results should be viewed only as suggesting such a relationship.

TABLE 8.4: ADJUSTED MEANS ON THE DEPENDENT VARIABLES BY PACKAGING TYPE: ACADEMIC YEAR 1978-79

	Packaging Type				
	Non-Returnable Aid/Self Help Ratio	Fixed Self-Help	Floating Grants	Grants Float or are Zero	No Established Rules
Loan Work Percentage	31.67	29.78	30.97	29.79	27.62
Self-Help Percentage	29.3	27.90	26.07	27.06	26.50
Net-Price Percentage	48.04	49.86	53.93	46.11	48.59

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

The results for each of the dependent variables, expressed as coefficients of variation, are summarized in Tables 8.5 through 8.7. In general, the results of the analyses indicate that once initial differences on the covariates are removed, the differences on the dependent variables across the five packaging types are again not statistically significant. The significance of the F ratio for packaging type across the three dependent variables ranges from 0.56 to 0.64.

TABLE 8.5: RESULTS OF ANALYSIS OF COVARIANCE ON LOAN-WORK: ACADEMIC YEAR 1978-79

Source of Variation	DF	F	Significance
Covariates	2	11.9	.01
Packaging Type	4	.63	.64
Residual	132		

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

TABLE 8.6: RESULTS OF ANALYSIS OF COVARIANCE ON THE COEFFICIENT OF VARIATION OF TOTAL SELF-HELP: ACADEMIC YEAR 1978-79

Source of Variation	DF	F	Significance
Covariates	2	15.10	.01
Packaging Type	4	.68	.61
Residual	132		

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

TABLE 8.7: RESULTS OF ANALYSIS OF COVARIANCE ON THE COEFFICIENT OF VARIATION OF NET-PRICE: ACADEMIC YEAR 1978-79

Source of Variation	DF	F	Significance
Covariates	2	.38	.68
Packaging Type	4	.75	.56
Residual	132		

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

Although none of the F ratios approach the customarily accepted levels of statistical significance, a consistent pattern can be detected by examining the adjusted means of the dependent variables across the five packaging types. The adjusted means for each dependent variable are presented in Table 8.8. An inspection of the adjusted means reveals that across all three dependent variables, the "Floating Grant/Or Are Zero" approach has the highest coefficient of variation. This indicates that relative to the mean, the management practices associated with this typology result in the most variation on the outcomes, even after initial differences on the covariates are removed. To reiterate, though, as the nonsignificant F ratios indicate, there are no statistically significant differences across the five packaging types. Consequently, we can only suggest that the evidence seems to indicate that this packaging approach may lead to greater variation than the other packaging types.

The failure to find significant differences across the various packaging types may be due to the variability in specific practices within each of the constructs. Although each packaging type has a general underlying theme or set of features, there still remain many variations. It may also reflect the lack of correspondence between what financial aid officers claim to do and what they actually do. This potential problem is not unique to this study, but is inherent whenever one relies upon self-reported data.

In summary, it is difficult to draw definitive conclusions about the effect of the institution's packaging approach on student outcomes. Two possible causes come to mind: factors outside our selected model are more likely to be associated with variations in student outcomes; or, the difficulty in measuring packaging practice has resulted in greater variations within the identified approaches than between practices. At this point, we believe the latter to be the case. Financial aid packaging is a rather nebulous concept, which implies different things to different individuals. While we have attempted to impose a logical framework of packaging practice upon the schools, there are inherent

TABLE 8.8: ADJUSTED MEANS ON THE DEPENDENT VARIABLES BY PACKAGE TYPE: ACADEMIC YEAR 1978-79

	Packaging Type				
	Non Returnable Aid/Self Help Ratio	Fixed Self-Help	Floating Grants	Grants Float or are Zero	No Established Rules
Loan Work Percentage	99.9	104.1	100.1	114.3	86.2
Self-Help Percentage	87.1	96.3	88.0	105.9	83.1
Net-Price Percentage	60.9	53.5	57.9	69.7	56.2

Source: Aggregated Student Survey data merged with Institutional Site Visit Survey data.

problems in classifying institutions into typologies based on, self-reported data. Therefore, in the next section of this chapter we will attempt to further explore this area using packaging approaches empirically derived from data on student outcomes.

THE SECOND MODEL: THE EMPIRICAL APPROACH

In an attempt to group institutions on an empirical basis using student outcomes, a cluster analysis was employed. This technique is a statistical method which permits the identification of groups of observations (in this example, institutions) that are maximally similar (as measured on a specified set of attributes) within clusters and yet which are dissimilar from all other clusters. It is particularly appropriate when, as in this case, there is no a priori basis or theoretical information on which to make classification decisions.

The institutions were clustered using a set of five variables:

1. the average net-price percentage of the student body;
2. the coefficient of variation on net-price percentage;
3. the average family contribution of the student body;

4. the average calculated budget of the student body; and
5. the selectivity of each school.

This set of variables was selected for several reasons: first, it includes the important input variables used in the disbursement of financial aid (e.g., family contribution and budget); second, it provides a contextual description of institutions (e.g., selectivity, and average student wealth); and third, it provides a measure of financial aid outcomes (net-price percentage-average and coefficient of variation). Using this set of variables, the institutions were optimally classified into seven distinct clusters which are described in Table 8.9.

An inspection of the table reveals that there was a wide range of differences across the clustering variables. However, when examined for specific management practices (i.e., the data which were used to construct the packaging types examined above), no significant differences were found to exist. Thus, while we can empirically differentiate seven distinct groups of financial aid outcomes, we can detect no noticeable differences within the group in terms of their reported management practices. There are several possible explanations. First, it is likely that the questions posed to the financial aid officers failed to capture the complexity of the underlying construct. In fact, many financial aid officers found it extremely difficult to objectively define and categorize their method of operation. They simply were not used to thinking about their practices in such specific ways. A second explanation is related to the measurement of perceived versus actual behavior. How financial aid officers perceive their behavior may not actually reflect their true actions. To the extent that this is occurring, the data on outcomes will always be at variance with the reported treatments.

Despite the inability to link specific management practices to financial aid outcomes, it is possible to identify some distinctive differences on several salient characteristics across the seven clusters (Table 8.10). These are summarized on the next page.

TABLE 8.9: MEAN VALUE OF CLUSTERING VARIABLES BY INSTITUTIONAL GROUP: ACADEMIC YEAR 1978-79

	Clusters						
	1	2	3	4	5	6	7
ALL SCHOOLS	9	63	47	25	5	9	3
Net-Price	49	50	52	44	60	42	44
Net-Price Coefficient of Variation	391	195	228	189	266	199	146
Family Contribution	94	489	835	1785	1209	2219	3557
Selectivity	349	641	633	819	0	1068	552
Budget	1607	2941	4158	5231	6307	6709	5613

Source: Student financial aid records.

- Cluster 1 consists of rather large, inexpensive schools with relatively low applicants to FAO ratios. Seven of the nine schools are 2-year public, and two are 4-year public schools. The average family contribution of the students attending these schools is relatively low. Although the average net-price is relatively low, there is a great deal of deviation on this variable.
- Cluster 2 is comprised of very large but relatively inexpensive schools. The ratio of applicants to FAOs is higher due to the large number of students attending such schools. The majority of the schools are public institutions (76% at either the 2- or 4-year level). As with the first cluster, the family contribution of the students attending these schools is relatively low. However, it should be noted that the family contribution is over four times greater among Cluster 2 schools than Cluster 1 schools. In terms of average, net-price, and the coefficient of variation, these schools are in the middle range.
- Cluster 3 institutions are relatively large schools which tend to cost more than the previous clusters, but are considerably less expensive than the remaining clusters. The number of applicants to FAOs is toward the middle of the range. Most of the schools are either 4-year public or private (68%) schools with students whose family contribution is vastly higher than the previous clusters, but drastically lower than the remaining clusters. In terms of average net-price and the coefficient of variation, these schools fall in the middle of the range.

TABLE 8.10: MEAN VALUE OF RELATED INSTITUTIONAL CHARACTERISTICS BY CLUSTER: ACADEMIC YEAR 1978-79

Variables	Clusters						
	1	2	3	4	5	6	7
Total Undergraduate Enrollment Size	3535	5306	3537	982	239	1962	599
Average Undergraduate Cost of Tuition and Fees	148	772	1536	2645	2586	4281	2248
Size of Financial Aid Office (Average Number of Professional Staff)	5.6	7.9	8.1	3.7	2.0	5.5	3.2
Number of Aid Applicants Per Office Staff	192	249	247	262	143	257	200
Percent Institution Type							
4-Year Public	22	49	34	-	-	-	-
4-Year Private	-	5	34	83	20	100	33
2-Year Public	78	27	11	-	-	-	-
2-Year Private	-	3	4	17	-	-	33
Proprietary	-	16	17	-	80	-	33

Source: Institutional Site Visit Survey.

- Cluster 4 institutions are relatively small, expensive schools with a rather high ratio of applicants to financial aid officers. The schools are all private: 83 percent at the 4-year level and 17 percent at the 2-year level. The family contribution of the students is relatively large compared to the previous clusters. On the two outcomes, average net-price and coefficient of variation, the schools in this cluster are very low.
- Cluster 5 is comprised almost exclusively of small, expensive proprietary schools with very few financial aid officers. Although the family contribution in these schools is relatively high, this cluster is extremely high in terms of the two outcomes.

- Cluster 6 contains large, expensive schools with a relatively large number of applicants to financial aid officers. All of the nine schools are 4-year private schools with an extremely high level of family contribution. Although the average net-price is lowest among these schools, the coefficient of variation falls in the middle of the range.
- Cluster 7 is a very small cluster (N=3) of small, but relatively expensive schools. They have a low number of applicants per financial aid offices. The low number of applicants is probably a result of the very large level of family contribution in these schools. The students in these schools also have very low values on the two measures of net-price. Again, this is probably a direct result of the greater family financial support which tends to reduce the financial needs of the students.

While these clusters of institutions are significantly different on the variables employed in their construction, it is rather difficult to discern any pattern of relationship between the selected outcome measures (i.e., the average and variation of net-price) and the institutional data collected in this study. At best, there appears to be a very rough positive relationship between the outcomes and the proportion of private institutions in the cluster, the proportion of 4-year schools and the average enrollment size. As the institution cluster becomes comprised less of small 4-year private institutions, the average net-price and the coefficient of variation become larger. Similarly, there is a rather rough inverse relationship between the outcome measures and the average budget, the average family contribution and the size of the financial aid office (this is related to the previous positive relationship with size). In this case, higher budgets and a less needy student population are related to lower average net-prices and lower coefficients of variation. While only approximate, both of these conclusions support the results observed in the previous chapter regarding the effect of institutional access to financial aid resources and the homogeneity of the student aid applicant population upon the chosen outcome measures.

CONCLUSION

Although the intent of this chapter (i.e., to determine the impact of institutional practices upon student financial aid outcomes) has not proven particularly fruitful, we are hesitant to dismiss the existence of such effects simply on the basis of statistical criteria. Based upon the observations of our field staff and conversations with financial aid officers, it is our belief that there are discernible differences in operating practices and, moreover, that these differences are related to the way in which financial aid is distributed. Our failure to isolate such effects is a result of the problems inherent in measuring, for the first time, such a complex factor. At this point, while we can conclude that differences in treatment do exist, we must leave it to future research to ferret out the specific behavioral characteristics which are most closely associated with their occurrence.

APPENDICES

APPENDIX A

List of Other Reports Produced as Part of this Contract
By Applied Management Sciences, Inc.

APPENDIX A

MAJOR PROJECT DELIVERABLES

1) Stage I Final Report. Volume I: Federal Management Practices

2) Stage I Final Report. Volume II: Funding History and the Overall Achievement of Program Goals

3) Stage I Final Report. Volume III: Regional Office Procedures

4) Stage I Final Report. Volume IV: BEOG Simulation Study

5) Supporting Statement for the Request for OMB Clearance and Data Collection Instruments: Site Visit Study

6) Interviewer's Training Manual

7) Editor's Manual

8) Supporting Statement for the Request for OMB Clearance and Data Collection Instrument: Mail Survey of Institutions

9) Site Visit Report

10) Data Processing and File Documentation Report for the Student Survey

11) Sample Design, Yield, and Bias Report for the Student Survey

12) Yield Report for the Institutional Mail Survey

13) Data Processing and File Documentation Report for the Mail Survey of Institutions

14) Study of the Impact of the Middle Income Student Assistance Act (MISAA)

APPENDIX B

The Current Financial Aid Programs Administered by the U.S. Office of Education

APPENDIX B

THE CURRENT FINANCIAL AID PROGRAMS ADMINISTERED BY THE U.S. OFFICE OF EDUCATION

As discussed in Chapter 2, Congress has established within the U.S. Office of Education (USOE) a variety of student aid programs to remove the economic barriers to attendance at postsecondary institutions for persons from all classes of society who have the ability and desire to benefit from such education. To accomplish this objective, the Federal government offers three types of financial aid through five programs, all of which are based solely on the student's financial condition and are without regard to race, sex, his/her scholastic ability, desired course of study, etc. These programs of financial aid are divided into three types:

(1) Loans: funds which a student borrows and repays after graduation or termination; including,

   a) National Direct Student Loan (NDSL),
   b) Federal Insured Student Loan (FISL) or State Insured Student Loans (collectively known as the Guaranteed Student Loan program);

(2) Grants (or nonreturnable aid): funds which are gift assistance and need not be repaid; including,

   a) Basic Educational Opportunity Grant (BEOG),
   b) Supplemental Educational Opportunity Grant (SEOG); and

(3) Work: a program in which the student may earn a portion of his/her educational costs while attending school, namely, the College Work-Study (CWS) program.

Programs of Federal student financial aid vary as to the degree of direct responsibility the institutional aid administrator must assume. Those programs for which the institution has considerably more control and obligations--namely, the Supplemental Educational Opportunity Grant, the National Direct Student Loan, and the College Work-Study programs--have traditionally been called Campus Based or Institution Based to signify this greater involvement. They are different from the BEOG program under which students apply directly to the Office of Education

for an entitlement which can then be carried to any school of their choice. The amount of the grant is outside the control of the financial aid officer.

a. The Basic Educational Opportunity Grant Program (BEOG)[1/]

The BEOG program was authorized under Subpart 1 of Part A of Title IV of the Higher Education Act of 1965, as amended by the Education Amendments of 1972 and 1976. Its purpose is to provide eligible students with a "foundation of financial aid to help defray the costs of postsecondary education."[2/] It is an entitlement program by which a student has the legal right to receive a grant if all application and eligibility requirements have been fulfilled.

The Basic Educational Opportunity Grant program is the newest of the Federal student financial aid programs and is designed to provide a "floor" upon which other financial aid programs are built. Unlike the National Direct Student Loan, College Work-Study, and Supplemental Educational Opportunity Grant Programs, there is no institutional allocation process. Rather, the institution receives the total amount needed to fund all eligible students in attendance. Students may apply either by completing a USOE Basic Grant application, or by indicating on the ACT, CSS, State of Pennsylvania, or State of New Jersey student aid forms their desire to have the data forwarded to the central processor in Iowa City where a nationally uniform formula, approved annually by Congress, is utilized. The result of this analysis is not subject to any discretionary latitude on the part of the financial aid officer, who must merely apply the result to a Payment Schedule based upon the student's cost of attendance (as defined by BEOG), and his/her enrollment status (half, three-quarter or full-time) and finally adjust it if the program is less than eight months in length or crosses the award period (7/1 through 6/30). Funds are normally disbursed through the institution, but a school may elect to have USOE make payments directly to the student,

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1/ The material provided here has been extracted from the Financial Aid Tool Kit, developed by Ms. Alice Diamond for the National Association of Trade and Technical Schools.

2/ Basic Grant Handbook, 1977-78, p. 1-1.

(See below, the Alternate Disbursement System (ADS).) The following is a summary of the major program characteristics:

Type of Aid: Nonrepayable gift assistance applied for directly through the Federal government.

Minimum and Maximum: During academic year 1978-79, BEOG scheduled awards ranged from $200 to $1,600 (e.g., for the academic year 1979-80 the maximum BEOG award was raised to $1,800). The range may vary yearly depending upon Congressional approval of funds. The Basic Educational Opportunity Grant is awarded by award period (July 1 through June 30th), rather than by the student's academic program, as is the case in Campus Based programs. If a student's academic year crosses the government's award period, it is necessary to file two applications--one for the period covering the remainder in the first award period, and the next for the ensuing award period.

Cumulative Awards: Normally, a student may receive BEOG for no more than four academic years. The exception to this is in the case of courses which are designed to extend for five years, or where remedial coursework necessitates one additional year. If the student has been attending parttime, and thus receiving reduced benefits, his period of entitlement will be proportionately extended so as to allow a maximum of four (or five, if applicable) full "Scheduled Awards." The BEOG program monitors the number of periods of eligibility used by each student. Students who have less than a full year of eligibility remaining will have this noted on their Student Eligibility Reports (SER). The institution should check this information to assure that no awards are made to students whose eligibility has expired.

Institutional Eligibility: In order to participate in the BEOG program, an institution must be certified as eligible by the Division of Eligibility and Agency Evaluation in the U.S. Office of Education. If the institution elects to disburse funds directly to the student (as do most institutions), an "Agreement Covering Institutional Participation in Programs of Student Financial Assistance" must be signed before funds will be authorized. In contrast to the Campus Based programs, no time lag between determination of institutional eligibility and student participation is necessary. Students enrolled in institutions which become eligible during a given award period may receive their full entitlement for the year even if the eligibility determination and receipt of BEOG authorization are not received until late in the year.

Program Eligibility: Within an institution's course offerings, certain programs may be designated as eligible, whereas others may be declared ineligible. This relates to the length of the course and

whether a high school diploma or recognized equivalent is required of regular students. In addition to the program eligibility requirements outlined below for CWS, NDSL, and SEOG, to be eligible under BEOG, a program must lead to a degree or certificate in a recognized occupation.

Student Eligibility: Finally, student eligibility must be determined. In order to receive a BEOG, a student must:

1. be a U.S. citizen or national of the United States, or a resident of the United States for other than temporary purposes, as evidenced by an I-151 visa (permanent or resident alien card);

2. be enrolled in an eligible program in an eligible institution;

3. be enrolled at least half time (12 clock hours per week). Awards for students who are enrolled at least half time, but less than full time (24 clock hours), are proportionately reduced under this program;

4. be making satisfactory progress in his/her course of study;

5. not be in default on a loan obtained for attendance at the institution or owe a refund on a grant received at the institution;

6. be an undergraduate. If a student has received a bachelor's degree from another institution, he/she is ineligible to receive a BEOG despite the fact that the current level of training pursued is at the undergraduate level or that the previous institution was ineligible;

7. demonstrate financial need by means of the BEOG application.

Student Application Process: The student obtains either a BEOG application, the American College Testing application (Family Financial Statement--the FFS), the College Scholarship Service application (Financial Aid Form--the FAF), or if eligible to do so in the States of New Jersey or Pennsylvania, the appropriate state financial data collection forms. ACT, CSS, and the States of New Jersey and Pennsylvania have entered into contracts with the U.S. Office of Education to transmit the data received to the USOE processor for calculation. This system, called multiple data entry, is a boon to students and parents as it means that only a single form need be completed to determine eligibility to receive both Campus Based aid and/or BEOG.

After the application is completed, the student submits it either to the need analysis servicer being utilized (e.g., ACT or CSS), or to BEOG in Iowa City if the regular BEOG application has been used.

The processing center, based upon a formula approved by Congress, calculates the student's Eligibility Index and communicates this directly to the student's home via a Student Eligibility Report (SER).

The student submits his/her SER to the institution he/she plans to attend where the scheduled award is calculated based upon the BEOG cost allowances for the school, the student's Eligibility Index, and the Payment Schedule. Awards are further adjusted for less than full-time attendance and for academic periods less than nine months in length.

The institution requests from the DHEW Federal Financing Systems (DFAFS), via the Monthly Cash Request Form, an amount of cash sufficient to award first payments to those students starting classes during the month, as well as for subsequent disbursements for those students now qualifying for a subsequent payment.

The institution disburses the award to the student either by check or by credit to the student's account. In the latter case, a signed receipt or schedule of anticipated disbursements must be obtained from the student. The student must also sign an affidavit attesting to the fact that Federal aid dollars which he/she receives will be used for educational purposes.

Validation of USOE Selected Sample: In addition to the routine review which was always encouraged for financial aid officers with respect to a student sample selected by USOE, institutions will now be required to verify certain data elements before any disbursement of funds is made. This sample of 200,000 applicants will be selected primarily on the basis of criteria indicating a high probability of questionable data. A student so selected will have his/her SER "flagged" by an asterisk next to the eligibility index in the final award section. Additionally, the student will receive an accompanying letter and Validation Form with the SER. All subsequent application corrections made by the student during the year will also be flagged.

Award Disbursement: Payments must be made in equal amounts each semester, trimester, or quarter if the institution utilizes such academic units. If the school does not have such divisions, at least two disbursements must be made per year: once at the beginning and then again no earlier than the midpoint of the portion of the student's academic training falling in that award period.

The Alternate Disbursement System (ADS): The Alternate Disbursement System provides payments to eligible students enrolled at eligible institutions which do not wish to disburse payments directly to students.

Under the ADS system, a student completes Part A of a "second-stage" application (OE Form 304) and then submits it to the institution for certification. Copies of this completed form and the SER are then mailed back to the BEOG processor. After processing, a Treasury check for the first payment will be mailed, along with instructions for applying for subsequent payments (via the Form 304-1).

Application Deadlines: Applications for awards to cover the 1978-79 school year must have been received by the processor no later than March 15, 1979. This was also the deadline for receipt of Supplemental Forms. Corrections to previously processed applications must have been received by May 5. The exception to this is in cases selected for validation.

Institutional Reporting Requirements: Two types of institutional reports are required under the BEOG program:

A. The Progress Report

A report submitted three times a year (November 15, March 15, and July 15) which assesses current expenditures in order to determine if the institution's authorization should be raised or lowered.

B. The Student Validation Roster

An end-of-year report which reconciles fiscal accounts and gives a per-student reporting of expenditures.

b. The Supplemental Educational Opportunity Grant (SEOG) Program

The Supplemental Educational Opportunity Grant program (SEOG) is the current name for the Educational Opportunity Grant program which was authorized by Title IV, Part A, of the Higher Education Act of 1965 (P.L. 89-329), as amended.

The purpose of the SEOG program is to provide supplemental grants to assist qualified students who, for lack of financial means, would be unable to obtain the benefits of postsecondary education without such a grant.

Type of Aid: Nonrepayable gift assistance for the exceptionally needy student.

Minimum and Maximum: SEOGs range from $200 to $1,500 for an academic year. If the period for which the award is being made is less than 8 months or 900 clock hours, the applicable minimum and maximum are

proportionately reduced. For example, if a student is enrolled in a six-month course with 600 clock hours, the minimum SEOG that could be received would be $150, and the maximum would be $1,125.

Cumulative Awards: There is also a maximum cumulative SEOG award of $4,000. Thus, if a student has received SEOG at another school, the institution must correspond with the other institution to learn the exact amount of the previous award.

Institutional Eligibility: In order to participate in the SEOG program, an institution must be certified as eligible by the Division of Eligibility and Agency Evaluation of the U.S. Office of Education.

Program Eligibility: Within the school's course offerings, certain programs may be designated as eligible, whereas others may be declared ineligible. To be an eligible program under SEOG, a course must be 6 months and 600 clock hours in length and, if a proprietary school, must admit as regular students only persons with a high school diploma or recognized equivalency or, if a public or other nonprofit school, admit only students beyond the compulsory age of school attendance who can benefit from a postsecondary program.

Student Eligibility: Finally, student eligibility must be determined. In order to receive an SEOG, a student must:

1. be a U.S. citizen, a resident of the Trust Territories of the Pacific, or in the United States for other than temporary purposes, as evidenced by an I-151 visa (permanent or resident alien card);

2. be enrolled at least half time (12 clock hours per week). A clock hour is defined as a 50- to 60-minute class, lecture, recitation, faculty supervised laboratory, shop training, or internship;

3. be making satisfactory progress toward a degree or certificate and be in good standing according to institutional standards;

4. not be in default on a loan received for attendance at the institution or owe a refund on a grant received at the school;

5. be of "exceptional" financial need. Exceptional financial need is defined as having a family contribution of less than one-half of the total costs associated with attendance at the institution.

Example:

	tuition and fees	$2,000
	books and supplies	175
	personal expenses	450
	transportation	250
	room and board	1,600
a.		$4,475
b.	family contribution	$2,000

Result: Student is eligible since family contribution (b) is less than one-half student budget (a).

6. be unable to pursue the course of study were it not for the SEOG. Because of the vagueness of this regulation, USOE has counseled institutions to take a common-sense approach. It is not expected that a student would be required to borrow the maximum allowable or to work an unreasonable number of hours per week. Rather, it is expected that attempts will be made to provide some "self-help" (loan or work) in each student's package unless documentable justifications exist as to why this should not be done.

7. be an undergraduate--whereas the training at the institution is always considered to be undergraduate in nature, it must be remembered that no student who has already earned a bachelor's degree may receive an SEOG. Therefore, if a student has received a bachelor's degree at another institution, he may NOT receive an SEOG by virtue of the fact that he is once again an undergraduate. This is true whether or not the first school is an eligible institution.

Method of Application:

1. For the Institution: The institution applies for these funds annually, for all eligible students, by means of the Tripart Application. The Tripart is normally due in mid-October for funds beginning in July of the following year.

   In order to receive funds, an institution must be declared eligible by the USOE Division of Eligibility and Agency Evaluation by January 31st of the year in which it will be receiving funds. Requirements for eligibility include national accreditation by the relevant USOE recognized accrediting body, course entrance requirements of a high school diploma or recognized equivalency, completion of OE Form 1059, and the signing of HEW Form 441, civil rights compliance.

2. For the Student: The student applies directly through the institution for such funds. An analysis of the student's financial need and the submission of various other forms are required.

SEOG "Matching": In determining the amount of SEOG to be awarded, the aid officer must bear in mind that a student receiving SEOG must also receive an equal amount of some other source or combination of sources of eligible aid funds.

The following are eligible sources of SEOG "matching funds":

1. College Work-Study
2. National Direct Student Loan
3. Basic Educational Opportunity Grant
4. Federally Insured Loan--ONLY IF A SCHOOL IS A DIRECT LENDER
5. Institutional employment
6. Outside scholarships from a private organization
7. State scholarship grants
8. For other types of aid (i.e., grants not from a private organization or the state, and loan and work from any source) only if the institution selects the recipient and determines the amount of the award.

Award Disbursement: An SEOG must be disbursed at least twice during a student's academic year. If the institution utilizes quarters or semesters, it must disburse funds according to these divisions. If, on the other hand, it has no such academic terms, it is required to reserve at least half of the grant amount until the midpoint. No funds should be disbursed until the student actually starts classes. The SEOG may be disbursed 1) as a credit to the student's account, 2) by a check to the student which is then endorsed over to the institution for institutional charges, or 3) by a check to the student for living costs. If the award is disbursed as a credit to the student's account, a signed receipt by the student must evidence this disbursement.

In the SEOG program, a distinction is made between students who have previously received SEOG, and those for whom this is the first academic year of their award. The first-year award is called an initial year (IY) award, with subsequent awards deemed continuing year (CY) funds. In other words, a student should not receive CY

funds until a full academic year has been completed and a new application, evaluation of need, and other documents have been collected.

Transfer Between SEOG and CWS: An institution is permitted to transfer up to 10 percent of its highest allocation between these two programs.

Reporting Requirements: In addition to the annual application for funds (the Tripart Application), the institution must file a final fiscal report on program activities. This report is normally due August 15th for the year ending June 30th.

c. The College Work-Study Program

The College Work-Study (CWS) Program was authorized by Title IV, Part C, of the Higher Education Act of 1965 (P.L. 89-329); as amended. The purpose of the CWS program is to extend part-time employment opportunities to students who are in need of the earnings from such employment in order to pursue courses of study at institutions of higher education. By subsidizing the part-time employment of needy students, the program is intended to promote the equality of educational opportunity at the postsecondary level.

Under the College Work-Study program, funds are provided to eligible institutions to create job opportunities for their students who are in need of such earnings in order to attend a postsecondary school. In profit-making, private vocational schools, all employment must be work in the public interest for public or private nonprofit off-campus agencies. No on-campus employment is permissible at these institutions. It must also be noted that proprietary schools may not hire students in nonprofit organizations which are owned or controlled by the school, or by the corporation, association, partnership or individual which owns or controls the proprietary institution. The only exception to the prohibition against "on-campus" employment would be vocational schools which are incorporated as private, nonprofit institutions and are so recognized by the Internal Revenue Service. If the institution is incorporated as a nonprofit entity, it may employ students at the school.

The institution is responsible for all phases of program administration including selection of recipients, determination of the award, job development, job placement, supervision, and maintenance of records. Under the CWS program, the Federal share of compensation is limited to 80 percent of the gross earnings. The agency must contribute at least 20 percent plus the employer's share of applicable taxes.

Type of Aid: Federally subsidized work opportunities for needy students who elect to earn a portion of their educational expenses.

Minimum and Maximum: There is no minimum or maximum award, except that the student's need, as determined by an approved needs analysis system, may not be exceeded. Students may work up to 20 hours per week at wages set by the employer in cooperation with the school, but not less than the applicable Federal, state, or local minimum wage. Students may be paid subminimum wages if the employer is eligible for an exemption from the minimum wage statutes.

Generally, a student may not work more than an average of 20 hours per week while classes are in session, averaged over the entire enrollment period. As many as 40 hours per week may be worked during vacation periods or at other times when classes are not in session. However, an institution may permit a student to average more than 20 hours per week (but never more than 40 hours in a given week) if the institution determines that the student's need is so great that it cannot be met from the earnings of lower per-week hours. In this case documentation should be on file in the student's folder.

Institutional Eligibility: In order to participate in the CWS program, an institution must be certified as eligible by the Division of Eligibility and Agency Evaluation of the U.S. Office of Education.

Program Eligibility: Within the school's course offerings, certain programs may be designated as eligible, whereas others may be declared ineligible. To be an eligible program under CWS, a course must be six months and 600 clock hours in length and must admit as regular students only persons with a high school diploma or the recognized equivalency.

Student Eligibility: Finally, student eligibility must be determined. In order to receive College Work-Study, a student must:

1 be a U.S. citizen, a resident of the Trust Territories of the Pacific, or in the U.S. for other than temporary purposes, as evidenced by an I-151 visa (permanent or resident alien card).

2. be enrolled at least half time (a minimum of six credit hours for college students, or 12 clock hours per week for vocational students). A clock hour is defined as a 50- to 60-minute class, lecture, recitation, faculty-supervised laboratory, shop training, or internship. If the school is a 2-year institution with a summer break, the student may continue his CWS employment during this vacation period although he is not actually enrolled.

3. be making measurable progress towards a degree or certificate, and be in good standing according to institutional standards.

4. have financial need as determined by a recognized needs analysis system.

Method of Application:

1. For the Institution: The institution applies for these funds annually for all of its eligible students, by means of the Tripart Application. The Tripart is normally due in mid-October for funds beginning in July of the following year. In order to rceive funds, an institution must be declared eligible by the USOE Division of Eligibility and Agency Evaluation by January 31st of the year in which it will be receiving funds. Requirements for eligibility include national accreditation by the relevant USOE recognized accrediting body, course entrance requirements of a high school diploma or recognized equivalency, the completion of OE Form 1059, and the signing of HEW Form 441, civil rights compliance.

2. For the Student: The student applies directly through the institution for such funds. Analysis of the student's financial need and the submission of various other forms are required.

Award Disbursement: Federal regulations require that students must be paid at least monthly. However, most institutions find that biweekly disbursements are preferable in meeting students' needs. It is not acceptable to directly credit any of the Federal portion of the paycheck to a student's tuition account. Rather, if the student has outstanding institutional charges, the institution must ask the student to endorse all or a portion of the check.

The final concern is to assure that a student does not exceed his earnings. Cumulative ledger cards are used for this purpose, and a letter must be mailed to the student and supervisor when a student approaches his CWS award. Regardless of whether the agency or the school is officially the employer, the school retains the responsibility for seeing that meaningful work is being performed. Occasional visits to the job site will provide documentation of this.

Job Location and Development Program: The Higher Education Amendments of 1976 provided for a special program by which the institution could use a portion of its Work-Study authorization to help find part-time jobs for its students. The use of the funds are not to be limited to finding eligible Work-Study positions, but rather can be used as well for locating jobs in the private sector for needy or nonneedy students.

Summer College Work-Study: If the institution is a 2-year program with a summer break, students may be employed during that vacation as long as they have filed a statement saying they intend to reenroll in the fall. If, at any time after signing such a statement, evidence is found that a student does not intend to reenroll, he/she must be terminated from his job immediately.

Students working during a summer period in which they are not enrolled must save the majority of their earnings for the next academic year. Current regulations require that after required taxes are deducted, a student's additional expenses may not exceed $300 or 20 percent of gross wages, whichever is less. Rare, well-documented exceptions can be made to increase these "costs" incident to employment to $600 or 40 percent of gross wages, whichever is less.

Reporting Requirements: In addition to the annual application for funds (the Tripart), the institution must file a final fiscal report on program activities. This report is normally due August 15th for the year ending June 30th.

Transfer Between SEOG and CWS: An institution is permitted to transfer up to 10 percent of its highest allocation between these two programs.

d. National Direct Student Loan

The National Direct Student Loan program (NDSL) (previously known as the National Defense Student Loan program) was established under Title II of the National Defense Education Act (NDEA) of 1958 (P.L. 85-864), as amended. The Education Amendments of 1972 (P.L. 92-328) transferred the program from the NDEA to Part E of Title IV of the Higher Education Act of 1965. The purpose of NDSL is to provide a loan fund at institutions of higher education for the purpose of making long-term, low-interest loans to qualified students in need of financial assistance. To be eligible, the student must pursue study on at least a half-time basis.

Ninety percent of new capital is provided by the Federal government with the remaining 10 percent being contributed by the institution. As with the other Tripart programs, the full administration of the program, including loan collection, is the responsibility of the institution.

An important element of the NDSL program is its revolving nature. That is, as students repay loan obligations, these funds are redeposited in the account for use by future enrollees. The revolving nature of the fund also makes it possible for the institution to carry over funds across fiscal years as long as the Federal funds are drawn down and matched prior to June 30th of the year in which they are authorized.

Type of Aid: Long-term, low-interest loans are repaid at not less than $30 per month, beginning nine months after graduation or termination of at least half time study. Annual interest is three percent of the unpaid balance once payment begins.

Minimum and Maximum: There is no minimum loan. The maximum total loan for students who have not yet completed two academic years of postsecondary education is $2,500.

Institutional Eligibility: In order to participate in the NDSL program, an institution must be certified as eligible by the Division of Eligibility and Agency Evaluation of the U.S. Office of Education.

Program Eligibility: Within the school's course offerings, certain programs may be designated as eligible, whereas others may be declared ineligible. To be an eligible program under NDSL, a course must be 6 months and 600 clock hours in length and must, if a proprietary school, admit as regular students only persons with a high school diploma or recognized equivalency or, if a public or other nonprofit school, admit only students beyond the compulsory age of school attendance who can benefit from a postsecondary program.

Student Eligibility: Lastly, student eligibility must be determined. In order to receive an NDSL, a student must:

1. be a U.S. citizen, a resident of the Trust Territories of the Pacific or in the United States for other than temporary purposes, as evidenced by an I-151 visa (permanent or resident alien card).

2. be enrolled at least half time (12 hours per week). A clock hour is defined as a 50- to 60-minute class, lecture, recitation, faculty-supervised laboratory, shop training or internship.

3. be making satisfactory progress toward a degree or certificate and be in good standing according to institutional standards.

4. not be in default on a loan received (GSL or FISL) for attendance at that institution and not owe a refund on a Federal grant received at that school.

5. have financial need as determined by a recognized need analysis system.

6. indicate a willingness to repay the loan. Regulatory language now prohibits the making of a loan to any student who indicates an unwillingness to repay. Delinquency on a prior loan, or a past history of poor debt payment, may be taken as evidence of unwillingness to repay.

Method of Application

1. For the Institution: The institution applies for these funds annually, for all of its eligible students by means of the Tripart Application. The Tripart is normally due in mid-October for funds beginning in July of the following year.

   In order to receive funds, an institution must be declared eligible by the USOE Division of Eligibility and Agency Evaluation by January 31st of the year in which it will be receiving funds. Requirements for eligibility include national accreditation by the relevant USOE recognized accrediting body, course entrance requirements of a high school diploma or recognized equivalent, course length of at least 6 months and 600 clock hours, completion of OE Form 1059, and the signing of HEW Form 441, civil rights compliance. In addition, (1) the institution must match Federally received funds with a contribution equal to at least one-ninth of the Federal dollars; (2) the institution is responsible for collection of the loans; and (3) collected dollars are reloaned to other students (without the requirement of additional matching).

2. For the Student: The student applies directly through the institution for such funds. An analysis of the student's financial need, a promissory note as evidence of the indebtedness, and the submission of various other forms are required.

NDSL Billing and Collection: Unlike other forms of student assistance, the administration of NDSL is far from completed when the money is disbursed to the student. In fact, the institution's responsibilities have just begun at that juncture. National Direct Student Loans are made without security, to students who are generally unemployed, without assets, extremely mobile, and usually

without a tested credit rating. Thus, if the collection program is to be successful, institutions must often put forth efforts greater than those utilized in the collection of conventional loans. Good collection practice begins at the time the loan is made. It is now required by regulation that in addition to the "exit interview" necessary before a student leaves school, an entrance or initial interview must be held. This session, conducted by the financial aid officer at the time the first payment of the loan is disbursed, should at a minimum:

1. Enable the institution to gather vital information about the borrower. It has been found that if personal data such as credit card numbers, names of relatives, driver's license number, etc., are collected at this point in the aid process, the student will tend to give more accurate information than if asked for the same information at graduation when the purpose of such data collection is more evident.

2. Impress upon the student that this portion of his/her aid is a loan and must be repaid.

3. Allow the borrower to raise questions about procedures and terms of the NDSL. Care should be taken to inform the student both of his/her obligation and his/her privileges.

An exit interview must be conducted for each borrower before leaving school. By regulation, the institution must employ all means at its disposal to assure the student's attendance at such interviews. Like the entrance interview, the exit interview is both a give and take procedure. Information on the program will be provided by the aid officer, whereas the student will provide information useful should his account become delinquent. Topics to be reviewed include:

1. the grace period

2. terms of payment-repayment schedule

3. billing procedures (will it be from the institution or from a contracted billing service?)

4. interest, late charges

5. cancellation and deferment procedures

6. acceleration without penalty provision

7. notification of address change

A written record of the Exit Interview and a signed repayment schedule must be retained for program documentation purposes. At the school's discretion these interviews may be conducted on an individual or group basis.