ABSTRACT
               Current financial assistance files at three public
colleges/universities were examined to determine whether there is
discrimination of women in the award of financial aid. Attention was
directed to several specific assistance programs: Basic Educational
Opportunity Grant Awards, National Direct Student loans, Guaranteed
Student Loans, Supplemental Educational Opportunity Grant awards,
work-study loans, and state aid awards. The three institutions
differed in several respects: one was a major graduate and research
institution in the West with a diverse student body, one was a large
community college system in the East with a large ethnic minority
population, and the other was a smaller commuter campus. Study
variables included sex, marital status, age, dependent/independent
status, ethnic status, number of dependents, income, and parental
financial contribution. Findings indicate that there is a fairly
equal distribution of aid by type and amount between males and
females. It is suggested that a slight favoring of females in average
awards may be due to their being the majority of single heads of
households and are therefore more needy. A brief literature review,
references, and small-print statistical tables of the findings are
included. (SW)

national advisory council on women's educational programs

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Student Financial Assistance Distribution

A Study of Patterns at Three Institutions of Higher Education

August, 1980

STUDENT FINANCIAL ASSISTANCE DISTRIBUTION

A Study of Patterns

At Three Institutions of Higher Education

August, 1980

by

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A REPORT OF THE NATIONAL ADVISORY COUNCIL ON WOMEN'S EDUCATIONAL PROGRAMS

FEB 2 1981

PREFACE

The National Advisory Council on Women's Educational Programs (NACWEP)
was established by Congress in the Women Educational Equity Act of 1974
with seventeen members appointed by the President and confirmed by the
Senate, along with three ex officio members. The mandate of the Council
is to advise the Secretary of Education and report to the Congress con-
cerning needs and methods for achieving educational equity for women
and girls in the United States.

In 1977 the Council published a report entitled Efforts Toward Sex Fairness
in the Use of Education Division Funds which addressed, among other subjects,
equity in the distribution of student financial assistance. Based on
inadequate available data, largely from the Office of Education, the report
found a strong possibility that women received smaller and, in some cases,
proportionately fewer awards than men. Few of those data reflected the
effects of legislative and regulatory attempts made after 1975 to ensure
sex fairness in aid distribution. In the absence of the comprehensive
analysis by the Education Department which the Council had recommended,
NACWEP itself commissioned another small study, this time based on primary
data -- current financial assistance files at several demographically
distinct campuses.

This report is the result of that undertaking. It is published at a time
when the Congress is reconsidering its student aid programs, and provides
the hopeful message that existing laws and regulations seem to be working
equitably. Because it shows that women tend to be more dependent than
men on Federal aid, however, it highlights the fact that reduced support
for those programs will have a disproportionately negative effect on women.

The report is unusual for the Council: it suggests areas for further
research, but makes no policy recommendations. In large measure this
is due to the fact that the system is working, a finding the Council is
extremely pleased to publish.

A STUDY OF STUDENT FINANCIAL ASSISTANCE DISTRIBUTION
PATTERNS AT THREE INSTITUTIONS OF HIGHER EDUCATION

FINDINGS

This study provides a description of the significant predictors of student aid recipients with special attention to sex and ethnic status.

Conclusions of this study indicate that there is a fairly equal distribution of aid by type and amount between males and females. There is a slight favoring of females in average awards, probably because they comprise the majority of single heads of households and are therefore more "needy".

If Federal and state programs are intended to provide equal access and choice, they seem to be meeting those goals among enrolled students.

INTRODUCTION

Participation in post-secondary education has traditionally been one of the major mechanisms for achieving equality of opportunity and social mobility in the United States. There has been a great variety of research on access since the 1960's. The Carnegie Commission, in its report A Chance to Learn, examined barriers to admissions, and concluded that such factors as low family income, ethnic grouping, geographic location, age, quality of early schooling and sex constitute formidable handicaps for many Americans.

It is evident from a review of the more recent literature, however, that participation by women in higher education is in a period of transition.

Enrollment patterns indicate that participation by women continues to increase, at least slightly, at all four degree levels. The National Center for Education Statistics (Brown, 1979), reports that in 1971 the total number of bachelor's degrees awarded in the United States was 846,110 of which 43.4 percent were awarded to women. In 1977, the total was 928,256 and the percentage had risen to 46.2.

Brown also reports that in 1971, 231,486 master's degrees were awarded, of which 40.1 percent were awarded to women. By 1977, of the 318,241 degrees awarded, that percentage increase to 47.1. The per year increase was slight, but incremental.

Brown showed the same trend for doctoral degrees. The year-by-year data showed that the women's percentage representation increased from 1971-77, but still they account for only one-fourth of all doctoral degrees awarded. At the bachelor's and master's degree levels, they account for almost one-half.

It was also Brown's finding that at both the bachelor's and master's degree levels, women tended to show the greatest increase in percentage representation

in those fields in which they have had small representation. Their repre-
sentation in traditionally female fields, such as h   nomics, letters,
etc., remained virtually unchanged.

At the doctoral degree level, he found that a similar trend was evident.
Women's gains were greatest in the traditionally non-female fields. Women
continued to increase their percentage representation in all eight of the
first professional fields (medicine, law, etc.) in which trends could be
measured, but are still a distinct minority in all fields. The two fields
of law and medicine together accounted for 85 percent of all first professional
degrees awarded to women with 71.4 percent of all professional degrees being
awarded to men.

One set of issues at the postsecondary level centers on the provision of
public financial support to those who would be otherwise unable to participate
in postsecondary education.

Most of the data on the distribution of financial assistance were collected
prior to the legislation in 1976 and 1977, which prohibited discrimination
in aid programs, and almost none reflect the impact of the Middle Income
Student Assistance Act of 1978. These changes in statutes, as well as attending
changes in regulations, have had a significant impact in terms of both dollars
available and the demography of populations served by Federal aid programs.

The largest and still the fastest growing mode of Federal expenditure for
higher education is assistance to individuals. According to Finn (1978),
these expenditures account for $6 billion of the $7 billion added to the
Federal higher education budget for the period 1968-77. The Office of
Education has estimated that approximately $5 billion will be spent in 1980-81
to aid some six million students in the Title IV (Higher Education Act) programs
alone. Congressional Budget Office estimates that for   l expendi-
ture approached $8.5 billion in student aid, and that   utional,
and private student aid programs provided approximately   on more.

The idea that poverty or need justifies Federal help for college students
was strengthened with the civil rights and antipoverty activities of the
1960's. Presidents and Congress have since pursued a student aid strategy
of giving priority to programs that help needy people go to college. The
addition of the Middle Income Student Assistance Act of 1978 to this traditional
strategy, however, expanded assistance to less impoverished students. This
legislation was largely a response to the r   ure of the eligibility
determination for need-based assistance   a serious problem
for the middle-income student.

The large and growing Federal involvement in financial assistance to college
students bespeaks an increasing national interest in the ability of individuals
to obtain the benefits of higher education. Higher education is expensive,
and if people wishing to avail themselves of it had to pay the full costs,
many would not be able to attend at all.

Two opposing doctrines are reflected in current Federal financial aid programs.
One is that higher education is, like elementary and secondary education,
a public good through which the country ac ue   nefits, the costs of which
should be financed by the public.

The second is that students, as the direct beneficiaries of education, should pay for it themselves.

These two opposing doctrines are mediated by an assessment of the student's (and his or her family's) ability to pay for the costs of education. Depending on demonstrable need, various expenses may be underwritten by institutional subsidies, and direct Federal aid is available to help with other costs such as room, board, transportation, and books.

In the aid profession, "need" is the amount that remains after the sum that the student (and his or her family) can contribute is subtracted from the total cost of attendance. This basically simple idea has become enormously complex, since those dispensing the aid want a uniform and equitable basis for assessing the need of different students. Thus, "needs analysis system" has been designed to estimate the potential contribution of a family towards the cost of higher education.

The needs analysis system operates on a set of assumptions about household income and budget. Some are objective, such as size of household and the number attending postsecondary education. Others are subjective, and concern personal standards of living and spending priorities.

A second independent variable in the scheme is the cost of education at a particular institution. Factoring in these variables, a student (and his or her family) might show need in meeting the costs at a high tuition private institution, whereas the same family would be expected to pay all costs at a low tuition community college.

Because the price differences result as much from an uncoordinated assortment of public and private subsidies as from true differences in cost and quality of the educational products being offered, they make for warped marketplace in which two institutions offering much the same education charge widely differing prices for it. The situation does not enhance equality of opportunity, nor does it foster educationally motivated choices on the part of the student. Although many factors enter into the selection of colleges by students, the cost of attendance is not inconsequential.[1]

Studies have given a great deal of attention to the issue confronting students of how to meet costs of postsecondary education. Attention has been focused on public versus private costs, racial and ethnic groups, and part-time attendance; however, not much research has examined whether funds to meet college costs are distributed differently on the basis of sex.

Despite the dearth of sex related data, the task of determining who is benefiting from the major financial aid programs is essential. Perhaps one reason only limited research has been conducted in this area is that most policies regarding the distribution of aid are not based on sex, and financial aid programs are specifically prohibited by law from being distributed

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[1] See Michael S. McPherson, "The Demand for Higher Education", in David W. Breneman and Chester E. Finn, Jr., eds., Public Policy and Private Higher Education. (Brookings Institution, 1978).

differently based on gender. Another reason may be lack of interest on the part of institutions and the Office of Education. The reporting requirements for the four major programs of financial aid no longer include data on distribution by sex.

Because a major aim of financial assistance is to provide access or educational equity, it is useful to look at what data are available on distribution patterns. Although statisticians did not anticipate the interest that would exist for these data 5-10 years ago, making them less complete than is desirable, they are nonetheless revealing.

MAJOR RESEARCH ON AID DISTRIBUTION

Westervelt (1975) identifies five major sets of institutional factors that tend to exclude women from education beyond high school: (1) admission practices, (2) financial aid practices, (3) institutional regulations, (4) differences in curriculum planning and student services, and (5) faculty and staff attitudes.

In financial aid practices, she cites the institutional practices most responsible for denying women equal access to financial aid: (1) making scholarships, fellowships, and loans more available to men than to women; (2) restricting financial aid to full-time students only; (3) withholding financial aid from women who are married, pregnant, or mothers; (4) failing to provide ...... variety of deferred payment plans; (5) failing to provid fin .u ror child care and other expenses; (6) limiting employment opport. for women students; and (7) imposing different cost bases or charges for male and female students, or for part-time and full-time students.

A study by Kayden (1970) showed that women received 43 .ercent of the National Defense Student Loans, a proporti which pprox ated eir representation in the undergraduate population. Women received 49.9 percent of the work-study money, 36.4 percent of guaranteed loans, 40.2 percent of Equal Opportunity Grants, and 20.0 percent of NDEA fellowship money. Kayden's impression from interviewing student and admissions people in various regions was that women were consciously discriminated against in grant and loan decisions and were therefore unable to attend school because they did not have the necessary financial support.

In a national survey of 3,363 college sophomores in 1969-70, Haven and Horch (1972) found that the average award to men was $1 001 but only $789 to women in spite of the absence of significant difference in socioeconomic and income levels between the two groups. The average institutionally administered scholarship or grant was $671 for men and $515 for women. Student employment awarded as part of institutional financial aid packages paid an average of $712 to men and only $401 to women. Loans were the aid that women were apt to receive in larger amounts: the average college loan to women was $491 and $303 to men. Although comparable proportions of men and women were in debt for college, the mean debt for women exceeded that for men in all types of institutions.

Studies conducted during the middle of the 1970's begin to reveal a somewhat different picture of distribution by sex.

Atelsek and Gomberg (1977) found that, in estimates of recipients for 1976-77, about 54 percent of all aid recipients were women. In the 600 institutions sampled, they also found that the proportion varied by institutional setting, ranging from 64 percent at public 2 year colleges, to a low of 41 percent at private universities. Women's proportional enrollment was 47 percent nationally. They constituted the majority (51 percent) at private two year colleges only, and were underrepresented (41 percent) at private universities.

The sex distribution in this study varied among the five Federal assistance programs they surveyed. They found the proportion of women was smallest for the two loan programs (46 percent for Guaranteed Student Loan and 50 percent for National Direct Student Loan), and highest for the Basic Educational Opportunity Grant and College Work-Study (55 percent for each).

The information reported in their study indicated that women were represented in proportions close to or exceeding their enrollment. The authors did not, however, break down the average amount of assistance to women and men under each of the 5 programs.

Caplan (1980) conducted a follow-up sampling of 40,525 students surveyed by the Cooperati   ational Research Program (CIRP) and a 50 percent random sample of   ents enrolled in 44 proprietary institutions.

Her findings indicate some change from studies conducted in the earlier part of the decade. She found that the highest percentage of students receiving any type of assistance were from the middle income families, where the income ranged from $8,000 to $20,000.

There has been speculation in the financial aid community that, with the Middle Income Student Assistance Act providing Federal grants to students from families earning up to $25,000, and the opening of federal loan programs to all families regardless of income, an even smaller percentage of low income students will receive aid.

As Caplan assesses the situation, "first-come, first-served" principles will keep the students who are last minute decision makers from some sources of aid, while complex application forms and involved procedures will deter others. Lower income families often have fewer skills to understand and cope with bureaucratic procedures. 2/

Conclusions from her study, however, indicate that there is a fairly equitable distribution of aid between males and females; the handicaps are shared equally.

In his research of factors influencing student persistence, Astin (1976) analyzes several factors to determine whether the type and amount of aid and the conditions of its administration have any effect on a student's chance of completing college. The evidence he presents indicates that the source and amount of financial aid can be important factors. He found, for example, that availability of scholarships and grants are

2/ Caplan, Linda G., "Differences in Types and Amounts of Financial Aid by Institution Category and Sex", The Journal of Student Financial Aid. Vol. 10, No. 2, May 1980, pp. 12.

associated with small increases in student persistence rates. These beneficial effects are confined largely to women from low-income families and to men from middle income families. The amount of grant support, however, appeared to be a major factor in student persistence, particularly among black students.

In the loan category, Astin found that reliance on loans is associated with decreased persistence among men in all income groups. Among women, the effects were highly variable depending on the amount of the loan support and the income level of the woman's parents. Reliance on loans was associated with increased persistence among black students attending white colleges.

Participation in the Federal Work-Study Program seemed to enhance student persistence, particularly among women and blacks. Work-Study had its most consistent impact among students from middle income families. 3/

Astin's tentative results underscore the need for research to examine not only various packages, but also possible interactions of these packages with the student's race and sex with income.

RESEARCH HYPOTHESIS

This study was designed to test whether there is any discernable discrimination based on sex or gender-related sub-group membership in the awarding of financial assistance to students.

Research conducted prior to 1974 found that women were not receiving assistance dollars in proportion to their enrollment, and they were underrepresented as recipients under the two Federal loan programs -- National Direct Student Loans and Guaranteed Student Loans. These studies identified several factors that were hypothesized to have limited the participation of women. The research did not, generally, collect or analyze the award amount to individual recipients.

The research hypothesis for this study is that while women may be receiving total dollars nearly in proportion to their enrollment percentages, they may still be underrepresented in individual programs.

METHODS

Three diverse institutions of higher education (campuses A, B, and C) were chosen to test the hypothesis. Factors governing the choice of institutions were: (1) that they have an accessible central computing capacity to facilitate access to a large core of data by one program; and (2) that to some extent, different areas of the country and type of institutions be represented.

3/ Astin, Alexander W., Preventing Students From Dropping Out, Jossey and Bass Publishers, San Francisco, 1976.

Campus A is major university in the West. The institution is a graduate
and research institution as well as having a traditional bachelor's
degree program. Headcount for fall 1978 was 21,318 with 17,439 under-
graduates. Of the undergraduates, 55 percent were men and 45 percent
were women. Total ethnic headcount was 1,513. Of the total headcount,
2.3 percent Black, .5 percent American Native, 2.3 percent Asian and
3.6 percent Hispanic.

Campus B is a smaller, suburban commuter campus. Undergraduate headcount
for fall 1978 was 3,222, with toal headcount being 4,390. Men comprised
50 percent of the population and 50 percent of undergraduates.

Campus C is a large, suburban community college system near a major
metropolitan area on the East coast. The system serves a local area
as well as two nearby states. It has a large ethnic minority population.

All three institutions tested were public.

In order to examine this situation, data files were set up that contained
variables on every financial aid recipient. The only variation was that
data for Campus A was 1979-80 and for Campus B and C it was 1978-79.

The data elements selected for testing were: sex, marital status, age,
dependent/independent status, ethnic status, number of dependents, income,
parent contribution, work-study awards, Basic Educational Opportunity
Grant Awards, National Direct Student Loans, State Aid, Guaranteed Student
Loans and Supplemental Educational Opportunity Grant Awards.

PROCEDURE

The intitial task of this analysis was to examine the various variables
for "behavior" to assure that none of our tolerance values were contained
in the data base.

For Campus C, there was no problem with any of the variables from the
standpoint of unreadable data. The variables dealing with the fiscal
condition of the students naturally had a lot of zero values since there
is a great deal of heterogeneity in the source of income and the fiscal
condition of the students/families. In order to get an idea of the total
amount of assistance the students were getting, three additional variables
were computed as follows:

1. TOTGNT: Total available income to the student which
   included GI Benefits.
2. TOTGNT 2: Total actual grant or aid money exluding GI
   Benefits.
3. FINCOND: The financial condition of the student based
   on family income, help, etc.

STATISTICAL ANALYSIS

To fully assess the relationships among the large number of variables,
the analysis of ariance and regression techniques were used to determine

the degree and significance of any differences among the various groups.
The initial task was to remove the inherent effect of personal financial
condition on the amount of financial aid that a person was to receive.
This was successfully accomplished by executing a three way factorial
design analysis of variance with the single covariate of financial con-
dition. (Printout available) This technique removed the inherent bias
of personal income from the equation. The results showed that income
was, as might be assumed, a highly significant factor in determining
the amount of aid a person receives.

The other three factors of sex, ethnic origin and residency also turned
out to be statistically significant at the 0.032, 0.001 and 0.007 levels
respectively.

The mean value of total aid for the various groups are as follows: (five
missing values)

Total	Population	(1421)	$ 826.92
	Males	(543)	778.80
	Females	(770)	866.69
	Amer. Native	(7)	1084.43
	Blacks	(310)	922.18
	Asians	(143)	1130.27
	Hispanics	(92)	901.76
	Caucasian	(816)	729.87
	Other	(53)	781.51
	County	(1234)	802.63
	State	(54)	894.02
	Non-Resident	(133)	1025.07

In addition to the analysis of variance, a number of regression equations
were completed to determine if the variables available to us could be
used to predict the amount and type of aid. Where using TOTGNT 2 as the
dependent variable and financial condition, ethnic background, sex, residency,
birth-year, and marital status as the predictors, the results obtained
in the analysis of variance were essentially replicated.

The correlation for financial condition was a negative 0.195 which commend-
ably reflects that the aid programs are definitely helping those people
who need it most. The correlation of ethnic origin was a negative 0.1544
which indicates that the non-Caucasian students are receiving more financial
assistance.

The variable sex was entered into the equation next and very weakly indicates
(0.058) that women are receiving slightly more assistance. Even though
the multiple (correlation) for the entire equation (See Table 1) is
statistically significant at 0.25, it is of little practical significance
as a predictor since only 6 percent of the variance is successfully accounted
for.

In addition to the above regression equation, separate equations were computed on various permutations of the variables TOTGNT and TOTGNT 2 with results similar to the one cited above. Financial condition was in all cases the strongest moderator with ethnic origin and other demographic variables as statistically significant but weak predictors. (Printout available).

To determine if all types of aid were in fact distributed to similar people, we also ran regression equation on state aid which produced parental contribution as the most significant predictor. (See summary Table II).

Again, the multiple (correlation) was only 0.25 which is statistically significant but only accounts for 6 percent of the variance; all types of aid are likely to be distributed to similar people.

Guaranteed Student Loan aid yielded similar results with dependency status as the strongest predictor with a multiple of only 0.16 and approximately 3 percent of the variance accounted for. (See Table III).

State Student Incentive Grant (SSIG) was predictable in that the equation yielded a multiple of 0.41 with residency and ethnic background as the most powerful predictors (0.39 and -0.21 respectively). The correlation with residency was anticipated because SSIG can be awarded only to residents. Additionally, it has a need threshold which requires that it be given only to the neediest students (predominantly the minority students). (See Table IV).

Federal Work-Study was almost totally a function of family income with ethnic background entering a weak second at -0.09. (See Table V).

Other aid was again a function of family income in terms of parental contribution which accounted for most of the equation variance (0.11). It should be noted that although the correlation is relatively weak and there is a large percentage of zero values (1320 out of 1426), the correlation is positive, which indicates that those with lower parental income are getting more aid. (See Table VI). .

BEOG-SEOG (Basic Educational Opportunity Grant and Supplemental Educational Opportunity Grant) was the most significant predictor of GI Benefits (-0.14) and ethnic origin (-0.12) with a multiple of 0.22. (See Table VII).

National Direct Student Loans were mostly a function of income (-0.20) and other fiscal variables. (See Table VIII) with a multiple of 0.26.

A complete breakdown of who receives how much (mean values) aid is given in the table below in the form of the created variable TOTGNT 2 which includes only direct aid, grants, etc. (no missing values). (On Table IX note that males are missing 5 in the Anova; this accounts for the difference in the means.)

The accompanying analysis of variance by sex again results in a signficant F value (5.3231 p 0.02) with 648 males averaging $762.57 and 778 females averaging $843.27. With the standard deviation for the entire population at $658.64, there is obviously a great deal of overlap. This limits predictability on the basis of sex in the above regression equations.

In order to determine the distribution of aid by amount, the variable TOTGNT 2 was truncated into 500 dollar segments and cross-tabbed against both sex and then ethnic origin by sex. (The results are given in Tables X -XVI).

SUMMARY OF FINDINGS: CAMPUS C

The overall aid system for Campus C appears to be serving the needs of the students and the intent of the various programs.

1. Family income variables have, in every case, been the deciding moderator of the amount of aid received.
2. Aid seems to be more available to non-Caucasian ethnic groups.
3. Women seem to be favored slightly in the number and amount of aid being given, with minorities of both sexes receiving the largest amounts. The fact that women receive more aid is explained by the fact that more of them are single heads of households with minor dependents.

Predicting the amount of aid a given person will need with the above data will result in very large errors due to the weak predictability (low multiple) of the various derived equations. However, the formula for determining need and aid is quite completely controlled by regulation and it seems to be working.

The data could, however, be successfully used to estimate total amount of aid that will be required to support various combinations of student sub-group populations. For example, if an usually large number of minority or women students are matriculated, it is certain that more student aid will be required from the various sources discussed above as moderated by total available student income.

SUMMARY OF FINDINGS: CAMPUS B ·

Campus B data supported the results of Campus C. Sex became statistically significant at the 0.532 level.

The mean value of total aid for various groups are as follows:

Total Population	(807)	$1,435.99
Males	(466)	1,323.18
Females	(341)	1,590.15
Married	(52)	1,634.27
Single	(755)	1,422.33

```
Married
Females        ( 20)      2,139.00
Single
Females        (321)      1,555.95
Married Males  ( 32)      1,318.81
Single Males   (434)      1,323.50
```

Person R Correlation for Financial Condition was a negative 0.018 which reflects that aid is going to the people with the highest need.

The correlation for ethnic origin was 0.017 which indicates no discrimination among ethnic groups at Campus B.

The variable sex was correlated to aid distribution at 0.077 which, when analyzed with the multiple of 0.38, shows that <u>sex is slightly significant 38 percent of the time</u> with <u>females receiving slightly more aid.</u>

All the aid was used in the multiple regression for Campus B. In Federal Work-Study, marital status was the most significant predictor. The multiple was 0.29 which is statistically significant. This was also true for State Work-Study.

For Basic Educational Opportunity Grant, parental contribution was the most important predictor with sex as the next most important predictor and a correlation of 0.22, <u>indicating that females receive slightly more awards</u>.

In the National Direct Student Loan program, again parental contribution was the most important predictor and sex was 0.34 on multiple regression.

State aid was entered next in the regression with marital status as the first predictor which yielded a multiple r of 0.39. Dependency status was the second as most significant predictors.

Guaranteed Student Loans did not produce any outstanding statistics; none were usable in prediction.

Supplemental Educational Opportunity Grant was evaluated and dependency status was the most important predictor. Sex had a multiple regression of 0.27, and a single regression of -0.08 which is a somewhat significant predictor.

In the breakdown, using TOTGNT 2, which includes only direct aid and loans, sex resulted in significant F values of 12.3113 p .00000. Males received an average of $1,056.51 and females received $1,530.94. The mean for both sexes was $1,309.00.

SUMMARY OF FINDINGS: CAMPUS A

In the case of Campus A, a random sample of 2,000 cases was used. The sample is statistically useful and correct; the total population was 9,800 cases.

Dependent status was the most significant predictor of Federal Work-Study (0.4 at the -0.014), as well as State Work-Study (at .25, -0.117 level of significance). This slightly favored females.

For the Basic Educational Opportunity Grant, the most significant predictor was dependent status with sex at a surprising .53 multiple regression at the 0.0006 level of significance. This showed equity. National Direct Student Loan and State Aid tested out the same as Basic Grants.

Guaranteed Student Loan had as its most significant predictor the variable dependent status, but sex showed a multiple at 0.12 and -0.008.

In the breakdown for Campus A, there were 1,090 females and 897 males with 13 missing cases. The females received an average of $965.78 with males receiving $944.46, which demonstrates that females are receiving slightly higher awards.

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* M U L T I P L E   R E G R E S S I O N *

DEPENDENT VARIABLE.. TOTGNT2 TOTAL ACTUAL GRANT MONEY EXCLUDING GI PA

SUMMARY TABLE

STEP	VARIABLE ENTERED	REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	FINCOND		56.43641	.000	.19551	.03822	.03822	-.19551	56.43641	.000
2	ETH		28.63952	.000	.23927	.05725	.01903	-.15445	43.08721	.000
3	SEX		3.73017	.054	.24430	.05973	.00247	.05846	30.02347	.000
4	RESIDENC		4.09904	.043	.24886	.06243	.00271	.04703	23.58918	.000
5	HHYR		.76365	.382	.25067	.06294	.00051	.03568	19.02043	.000
6	MAR		.08330	.773	.25098	.06299	.00006	.00968	15.85441	.000

* M U L T I P L E   R E G R E S S I O N *

DEPENDENT VARIABLE.. TOTGNT2 TOTAL ACTUAL GRANT MONEY EXCLUDING GI PA

MEAN RESPONSE   808.12447   STD. DEV.   658.79238

VARIABLE(S) ENTERED ON STEP NUMBER   1.. INCOME   INCOME

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F	SIGNIFICANCE
MULTIPLE R	.19551						
R SQUARE	.03822	REGRESSION	1.	23573397.40488	23573397.40488	56.43456	.000
ADJUSTED R SQUARE	.03755	RESIDUAL	1420.	593151115.56348	417712.05321		
STD DEVIATION	646.30647	COEFF OF VARIABILITY	80.0 PCT				

-------------- VARIABLES IN THE EQUATION --------------   ----------- VARIABLES NOT IN THE EQUATION ------------

VARIABLE	B	STD ERROR B	F SIGNIFICANCE	BETA ELASTICITY	VARIABLE	PARTIAL	TOLERANCE	F SIGNIFICANCE
INCOME	-.49574380E-02	.65991000E-03	56.434564 .000	-.1955084 -.09563	SEX	.05374	.99906	4.1098645 .043
(CONSTANT)	885.40148	19.989164	1961.9648 0		HHYR	.05035	.97628	3.6056651 .058
					MAR	-.01486	.98475	.31355285 .576
					ETH	-.14196	.99357	29.185905 .000
					RESIDENC	.09996	.99907	14.327494 .000
					PARCONT	-.05851	.36659	4.8749185 .027
					DEPSTAT	-.02264	.83643	.72739670 .394
					SIBCONT	.03455	.60710	1.6962881 .193
					GIHPUS	-.09095	.99836	11.836044 .001

* M U L T I P L E   R E G R E S S I O N *

DEPENDENT VARIABLE.. TOTGNT2 TOTAL ACTUAL GRANT MONEY EXCLUDING GI PA

VARIABLE(S) ENTERED ON STEP NUMBER   2.. ETH   ETHNI

TABLE I

FILE NONAME (CREATION DATE = 80/07/13.)

* M U L T I P L E   R E G R E S S I O N *

DEPENDENT VARIABLE.. STATEAID STATE AID

S U M M A R Y   T A B L E

STEP	VARIABLE ENTERED	REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	PARCNT		38.70229	.000	.16289	.02653	.02653	=.16289	38.70229	.000
2	RESIDENC		25.41373	.000	.20895	.04366	.01713	=.13193	32.39071	.000
3	ETH		13.25001	.000	.22916	.05251	.00885	=.05308	26.19689	.000
4	SEX		11.84390	.001	.24570	.06037	.00785	.12641	22.75890	.000
5	MAR		2.48573	.115	.24903	.06201	.00165	=.00841	18.72335	.000
6	INCOME		2.91054	.088	.25286	.06394	.00193	=.15834	16.10894	.000
7	STDCONT		2.85798	.091	.25657	.06583	.00189	=.02112	14.23407	.000
8	BKYR		.94136	.332	.25778	.06645	.00062	=.00759	12.57197	.000
9	G1BENS		.28762	.592	.25815	.06664	.00019	.01896	11.20141	.000
10	DEPSTAT		.02762	.868	.25818	.06666	.00002	=.06369	10.07708	.000

TABLE II

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ILE   NONAME   (CREATION DATE = 80/07/13.)

* M U L T I P L E   R E G R E S S I O N *

DEPENDENT VARIABLE..   GSL   GSL

S U M M A R Y   T A B L E

STEP	VARIABLE ENTERED	REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	DEPSTAT		20.93370	.000	.12053	.01453	.01453	-.12053	20.93370	.000
2	PARCONT		10.47693	.001	.14748	.02175	.00722	-.11009	15.77517	.000
3	SEX		3.78888	.052	.15607	.02436	.00261	.05632	11.80041	.000
4	STDCONT		2.83448	.093	.16219	.02631	.00195	.00059	9.57038	.000
5	MAR		1.18442	.277	.16468	.02712	.00081	.06352	7.99418	.000
6	RESIDENC		.92787	.337	.16659	.02775	.00063	.00793	6.73194	.000
7	GIBENS		.74442	.388	.16812	.02826	.00051	-.01112	5.87554	.000
8	INCOME		.62485	.429	.16939	.02869	.00043	-.10625	5.21784	.000
9	HRYR		.08937	.765	.16957	.02876	.00006	-.06464	4.64502	.000
10	ETH		.03052	.861	.16964	.02878	.00002	-.01292	4.18070	.000

* *

TABLE III

FILE   NONAME   (CREATION DATE = 80/07/13.)

80/07/13.   13.57.33.   PAGE 34

* M U L T I P L E   R E G R E S S I O N *

DEPENDENT VARIABLE..   SSIG   SSIG

S U M M A R Y   T A B L E

STEP	VARIABLE ENTERED REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	RESIDENC	270.10809	.000	.39977	.15982	.15982	.39977	270.10809	.000
2	ETH	10.40900	.001	.40735	.16594	.00612	-.21673	141.15342	.000
3	PARCUNT	2.18042	.140	.40902	.16722	.00128	-.03979	94.90737	.000
4	DEPSTAT	2.13124	.145	.41045	.16847	.00125	.07769	71.77009	.000
5	GIBFNS	1.08448	.297	.41122	.16911	.00064	-.01873	57.63735	.000
6	SEX	.54418	.461	.41161	.16942	.00032	.01011	48.10436	.000
7	INCOME	.32054	.571	.41184	.16961	.00019	-.02218	41.26002	.000
8	BRYR	.03149	.859	.41186	.16963	.00002	.06249	36.08172	.000
9	MAR	.01000	.920	.41187	.16964	.00001	-.04448	32.05128	.000

80/07/17

CPU TIME REQUIRED..   30.6150 SECONDS

26

TABLE IV

27

FILE   NONAME   (CREATION DATE = 80/07/13.)

*   M U L T I P L E   R E G R E S S I O N   *

DEPENDENT VARIABLE.. WSFED   WORKSTUDY FEDERAL

S U M M A R Y   T A B L E

STEP	VARIABLE ENTERED	REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	INCOME		41.48207	.000	.17237	.02971	.02971	-.17237	43.48207	.000
2	ETH		8.93544	.003	.18916	.03578	.00607	-.09148	26.33051	.000
3	STDCONT		2.78213	.096	.19409	.03767	.00189	-.14036	18.50310	.000
4	RESIDENC		2.00482	.157	.19756	.03903	.00136	-.00865	14.36836	.000
5	PARCONT		1.42475	.232	.20000	.04000	.00097	-.15968	11.80013	.000
6	BRYR		.71143	.399	.20120	.04048	.00048	.01999	9.95001	.000
7	DEPSTAT		.66447	.415	.20232	.04093	.00045	-.05452	8.62147	.000
8	SEX		.57411	.449	.20328	.04132	.00039	-.02465	7.61328	.000
9	MAR		.49660	.481	.20411	.04166	.00034	-.01548	6.82013	.000
10	GIBENS		.37304	.541	.20473	.04191	.00025	-.01780	6.17278	.000

TABLE V

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MONT TEST

FILE   NONAME (CREATION DATE = 80/07/13.)

80/07/13,   13.06.38.   PAGE   24

************************ M U L T I P L E   R E G R E S S I O N ************************

DEPENDENT VARIABLE..   OTHER   OTHER AID

S U M M A R Y   T A B L E

STEP	VARIABLE ENTERED REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	PARCONT	19.37423	.000	.11603	.01346	.01346	.11603	19.37823	.000
2	RESIDENC	13.79425	.000	.15154	.02296	.00950	.04623	16.67556	.000
3	STOCONT	3.08310	.079	.15838	.02508	.00212	.09778	12.16106	.000
4	SEX	1.82330	.177	.16228	.02634	.00125	.03918	9.58192	.000
5	GIDENS	1.50454	.220	.16544	.02737	.00103	-.02724	7.96915	.000
6	ETH	.21363	.644	.16588	.02752	.00015	-.03285	6.67284	.000
7	DEPSTAT	.12335	.726	.16614	.02760	.00008	.01842	5.73320	.000
8	INCOME	.34364	.558	.16685	.02784	.00024	.11197	5.05761	.000
9	BRYR	.11305	.717	.16708	.02792	.00008	.00963	4.50540	.000
10	MAR	.03556	.850	.16715	.02794	.00002	-.01436	4.05564	.000

TABLE VI

31

ONT TEST   80/07/13,   13,06,38,   PAGE   33

ILE   NONAME   (CREATION DATE = 80/07/13,)

* * * * * * * * * * * * * * * * * * * MULTIPLE REGRESSION *

EPENDENT VARIABLE,,   HEDGEHOG   HEDGEHOG GRANTS

S U M M A R Y   T A B L E

TEP	VARIABLE ENTERED REMOVED	F TO ENTER OR REMOVE	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE CHANGE	SIMPLE R	OVERALL F	SIGNIFICANCE
1	GIRENS	31.91613	.000	.14826	.02198	.02198	-.14826	31.91613	.000
2	FTH	14.75490	.000	.19685	.03875	.01677	-.12847	24.60248	.000
3	BRYR	10.74208	.001	.21443	.04598	.00723	.11123	22.77992	.000
4	INCOMA	4.470R3	.036	.22124	.04895	.00297	-.04451	18.23137	.000
5	MAR	.62170	.431	.22218	.04936	.00042	-.06715	14.70554	.000
6	PRSIDENC	.22289	.637	.22251	.04951	.00015	.06279	12.28504	.000
7	SEX	.14649	.702	.22274	.04961	.00010	.00285	10.54464	.000
8	DEPSTAT	.12410	.725	.22292	.04969	.00008	.04777	9.23636	.000

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TABLE VII

33

FILE   NONAME   (CREATION DATE = 80/07/13.)

● MULTIPLE REGRESSION ●

DEPENDENT VARIABLE.. NDSL   NDSL

SUMMARY TABLE

STEP	VARIABLE		F TO	SIGNIFICANCE	MULTIPLE R	R SQUARE	R SQUARE	SIMPLE R	OVERALL F	SIGNIFICANCE
	ENTERED	REMOVED	ENTER OR REMOVE				CHANGE			
1	INCOME		65.39918	.000	.20483	.04403	.04403	-.20983	65.39918	.000
2	STOCONT		35.94665	.000	.26009	.06765	.02362	-.01178	51.47766	.000
3	BRYR		2.66067	.102	.26345	.06941	.00176	-.06842	35.25271	.000
4	PARCONT		1.44628	.229	.26525	.07035	.00095	-.17780	26.80943	.000
5	DEPSTAT		1.74805	.186	.26740	.07150	.00115	-.16194	21.80947	.000
6	MAR		1.09751	.295	.26874	.07222	.00072	-.04893	18.35790	.000
7	SEX		.44506	.505	.26928	.07251	.00029	-.04106	15.79275	.000
8	RESIDENC		.32457	.569	.26968	.07273	.00021	-.00190	13.85263	.000
9	GIBENS		.17329	.677	.26989	.07284	.00011	.01780	12.32550	.000

● ●

TABLE VIII

34

35

FILE   NONAME   (CREATION DATE = 80/07/13.)

- - - - - - - - - - - - - - - - D E S C R I P T I O N   O F   S U B P O P U L A T I O N S - - - - - - - - - - - - - - - -

CRITERION VARIABLE   TOTGN72   TOTAL ACTUAL GRANT MONEY EXCLUDING GI PA
   BROKEN DOWN BY   SEX   SEX
                BY   ETH   ETHNIC
                BY   DEPSTAT DEPENDENT STATUS

VARIABLE	CODE	VALUE LABEL			STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			1150215.0000	806.6074	658.6434	433811.1628	(1426)
SEX	1.	MALE	494149.0000	762.5756	652.0646	425186.2354	(648)
ETH	1.	AMERICAN INDIAN	463.0000	463.0000	0	0	(1)
DEPSTAT	2.		463.0000	463.0000	0	0	(1)
ETH	2.	BLACK	136131.0000	958.6695	728.6137	530878.1805	(142)
DEPSTAT	1.		41585.0000	764.4491	736.7665	542085.4104	(57)
DEPSTAT	2.		91384.0000	1101.0120	701.7345	492431.3779	(83)
DEPSTAT	3.		1162.0000	561.0000	70.7107	5000.0000	(2)
ETH	3.	ASIAN	62596.0000	1043.2667	614.6411	377783.7743	(60)
DEPSTAT	1.		35128.0000	1097.7500	705.3219	497479.0323	(32)
DEPSTAT	2.		25695.0000	1027.8000	480.6498	231024.2500	(25)
DEPSTAT	3.		1773.0000	591.0000	551.4535	304101.0000	(3)
ETH	4.	HISPANIC	26634.0000	719.8379	562.4112	316306.3619	(37)
DEPSTAT	1.		12620.0000	742.3529	784.5428	615649.6176	(17)
DEPSTAT	2.		13483.0000	709.6316	283.0762	80132.1345	(19)
DEPSTAT	3.		531.0000	531.0000	0	0	(1)
ETH	5.	WHITE NON-HISPANIC	246546.0000	648.8053	599.7493	359694.1704	(380)
DEPSTAT	1.		127483.0000	643.8535	693.4367	480854.5216	(198)
DEPSTAT	2.		110761.0000	667.2349	477.9175	228405.1820	(166)
DEPSTAT	3.		8302.0000	518.8750	488.4961	238630.3833	(16)
ETH	6.	OTHER	21779.0000	777.8214	744.6290	554472.3003	(28)
DEPSTAT	1.		14170.0000	745.7895	814.6960	663779.5199	(19)
DEPSTAT	2.		6069.0000	867.0000	630.6785	397755.3333	(7)
DEPSTAT	3.		1540.0000	770.0000	749.5332	561800.0000	(2)
SEX	2.	FEMALE	656066.0000	843.2725	662.2584	438586.7674	(778)
ETH	1.	AMERICAN INDIAN	7128.0000	1188.0000	252.3466	63678.8000	(6)
DEPSTAT	1.		2281.0000	1140.5000	198.6970	39480.5000	(2)
DEPSTAT	2.		4847.0000	1211.7500	301.1892	90714.9167	(4)
ETH	2.	BLACK	141779.0000	843.9226	612.6571	375346.7545	(168)
DEPSTAT	1.		67959.0000	943.8750	709.7401	503731.0123	(72)
DEPSTAT	2.		72786.0000	808.7333	510.4161	260525.6697	(90)
DEPSTAT	3.		1034.0000	172.3333	197.2376	38902.6667	(6)
ETH	3.	ASIAN	99149.0000	1139.6437	702.2071	493094.0367	(87)
DEPSTAT	1.		63244.0000	1374.8696	798.7850	638057.4048	(46)

· ·

MONT TEST

FILE   NONAME   (CREATION DATE = 80/07/15.)

* * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
    TGT   TRUNCATED TOTAL GRANTS AVAILABLE TO STUD   BY SEX   SEX
CONTROLLING FOR..
    ETH   ETHNIC   VALUE   1. AMERICAN INDIAN
* PAGE 1 OF 1

		SEX		
COUNT				
ROW PCT	MALE	FEMALE	ROW	
COL PCT			TOTAL	
TOT PCT	1.	2.		

TGT		MALE	FEMALE	ROW TOTAL
LT 500	2.	1	0	1
		100.0	0	14.3
		100.0	0	
		14.3	0	
500-1000	3.	0	2	2
		0	100.0	28.6
		0	33.3	
		0	28.6	
1000-1500	4.	0	3	3
		0	100.0	42.9
		0	50.0	
		0	42.9	
1500-2000	5.	0	1	1
		0	100.0	14.3
		0	16.7	
		0	14.3	
COLUMN TOTAL		1	6	7
		14.3	85.7	100.0

RAW CHI SQUARE =   7.00000 WITH   1 DEGREES OF FREEDOM   SIGNIFICANCE =   .0719
CRAMER'S V = 1.00000
CONTINGENCY COEFFICIENT = .70711
LAMBDA (ASYMMETRIC) =   .25000 WITH TGT   DEPENDENT,   = 1.00000 WITH SEX   DEPENDENT,
LAMBDA (SYMMETRIC) =   .40000
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =   .32115 WITH TGT   DEPENDENT,   = 1.00000 WITH SEX   DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) =   .48616
KENDALL'S TAU B = .59409
KENDALL'S TAU C = .48980
GAMMA = 1.00000
SOMERS'S D (ASYMMETRIC) = 1.00000 WITH TGT   DEPENDENT,   = .35294 WITH SEX   DEPENDENT,
SOMERS'S D (SYMMETRIC) =   .52174
ETA =   .71005 WITH TGT   DEPENDENT,
ETA = 1.00000 WITH SEX   DEPENDENT,
PEARSON'S R =   .71005   SIGNIFICANCE = .0369

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TABLE X

FILE   NONAME   (CREATION DATE = 80/07/15.)

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-C-R-O-S-S-T-A-B-U-L-A-T-I-O-N   OF +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     TGT   TRUNCATED TOTAL GRANTS AVAILABLE TO STUD   BY SEX   SEX
CONTROLLING FOR..
     ETH   ETHNIC   VALUE   2, BLACK
+-+ PAGE 1 OF 1

	SEX		
COUNT			
ROW PCT	MALE	FEMALE	ROW
COL PCT			TOTAL
TOT PCT	1.	2.	
TGT			
ZERO 1.	22	20	42
	52.4	47.6	13.5
	15.5	11.9	
	7.1	6.5	
LT 500 2.	16	33	49
	32.7	67.3	15.8
	11.3	19.6	
	5.2	10.6	
500-1000 3.	40	49	89
	44.9	55.1	28.7
	28.2	29.2	
	12.9	15.8	
1000-1500 4.	38	38	76
	50.0	50.0	24.5
	26.8	22.6	
	12.3	12.1	
1500-2000 5.	14	22	36
	38.9	61.1	11.6
	9.9	13.1	
	4.5	7.1	
2000-2500 6.	9	6	15
	60.0	40.0	4.8
	6.3	3.6	
	2.9	1.9	
2500-3000 7.	1	0	1
	100.0	0	.3
	.7	0	
	.3	0	
GT 3000 8.	2	0	2
	100.0	0	.6
	1.4	0	
	.6	0	
COLUMN	142	168	310
TOTAL	45.8	54.2	100.0

RAW CHI SQUARE =   10.17200 WITH   7 DEGREES OF FREEDOM. SIGNIFICANCE =   .1790

- -

CRAMER'S V = .18114
CONTINGENCY COEFFICIENT = .17824
LAMBDA (ASYMMETRIC) =   0 WITH TGT   DEPENDENT.   = .05634 WITH SEX   DEPENDENT.
LAMBDA (SYMMETRIC) = .02204
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .01074 WITH TGT   DEPENDENT.   = .02667 WITH SEX   DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = .01531
KENDALL'S TAU B = -.04476   SIGNIFICANCE = .1890
KENDALL'S TAU C = -.05636   SIGNIFICANCE = .1890
GAMMA = -.07081
SOMERS'S D (ASYMMETRIC) = -.05676 WITH TGT   DEPENDENT.   = -.03530 WITH SEX   DEPENDENT.
SOMERS'S D (SYMMETRIC) = -.04353
ETA =   .05997 WITH TGT   DEPENDENT.
ETA =   .18114 WITH SEX   DEPENDENT.
PEARSON'S R = -.05997   SIGNIFICANCE = .1463

- TABLE XI -

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* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F * * * * * * * * * * * * * * * * * *
      TGT        TRUNCATED TOTAL GRANTS AVAILABLE TO STUD    BY  SEX      SEX
CONTROLLING FOR..
      ETH        ETHNIC
                                                             VALUE     3.  ASIAN
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1
```

	SEX		
COUNT ROW PCT COL PCT TOT PCT	MALE 1.I	FEMALE 2.I	ROW TOTAL
TGT			
1. ZERO	3 50.0 5.0 2.0	3 50.0 3.4 2.0	6 4.1
2. GT-500	6 35.3 10.0 4.1	11 64.7 12.6 7.5	17 11.6
3. 500-1000	20 44.4 33.3 13.6	25 55.6 28.7 17.0	45 30.6
4. 1000-1500	14 36.8 23.3 9.5	24 63.2 27.6 16.3	38 25.9
5. 1500-2000	14 48.3 23.3 9.5	15 51.7 17.2 10.2	29 19.7
6. 2000-2500	3 33.3 5.0 2.0	6 66.7 6.9 4.1	9 6.1
7. 2500-3000	0 0 0 0	1 100.0 1.1 .7	1 .7
8. GT 3000	0 0 0 0	2 100.0 2.3 1.4	2 1.4
COLUMN TOTAL	60 40.8	87 59.2	147 100.0

RAW CHI SQUARE =   3.86336 WITH   7 DEGREES OF FREEDOM, SIGNIFICANCE =   .7954

NONT TEST

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CRAMER'S V =  .16212
CONTINGENCY COEFFICIENT =  .16003
LAMBDA (ASYMMETRIC) =          0 WITH TGT      DEPENDENT,           =         0 WITH SEX       DEPENDENT,
LAMBDA (SYMMETRIC) =        0,
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =   .01002 WITH TGT      DEPENDENT,     =   .02484 WITH SEX       DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) =   .01428
KENDALL'S TAU B =   .02425    SIGNIFICANCE =  .3720
KENDALL'S TAU C =   .02900    SIGNIFICANCE =  .3720
GAMMA =   .03945
SOMERS'S D (ASYMMETRIC) =   .03084 WITH TGT      DEPENDENT,       =   .01907 WITH SEX       DEPENDENT,
SOMERS'S D (SYMMETRIC) =   .02357
ETA =   .05262 WITH TGT      DEPENDENT,
ETA =   .16212 WITH SEX      DEPENDENT,
PEARSON'S R =   .05262    SIGNIFICANCE =  .2634
```

TABLE XII

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
     TGT   TRUNCATED TOTAL GRANTS AVAILABLE TO STUD   BY SEX   SEX
CONTROLLING FOR..
     ETH   ETHNIC   VALUE . . . . 4. HISPANIC
* PAGE 1 OF 1

		SEX		
COUNT I				
ROW PCT I	MALE	FEMALE	ROW	
COL PCT I			TOTAL	
TOT PCT I	1.I	2.I		
TGT				
1.	5	2	7	
ZERO	71.4	28.6	7.5	
	13.5	3.6		
	5.4	2.2		
2.	7	10	17	
LT 500	41.2	58.8	18.3	
	18.9	17.9		
	7.5	10.8		
3.	18	16	34	
500-1000	52.9	47.1	36.6	
	48.6	28.6		
	19.4	17.2		
4.	4	16	20	
1000-1500	20.0	80.0	21.5	
	10.8	28.6		
	4.3	17.2		
5.	1	11	12	
1500-2000	8.3	91.7	12.9	
	2.7	19.6		
	1.1	11.8		
6.	2	1	3	
2000-2500	66.7	33.3	3.2	
	5.4	1.8		
	2.2	1.1		
COLUMN	37	56	93	
TOTAL	39.8	60.2	100.0	

RAW CHI SQUARE =   14.52393 WITH   5 DEGREES OF FREEDOM. SIGNIFICANCE =   .0126
CRAMER"S V = .39519
CONTINGENCY COEFFICIENT = .36753
LAMBDA (ASYMMETRIC) =   0 WITH TGT   DEPENDENT.   = .16216 WITH SEX   DEPENDENT.
LAMBDA (SYMMETRIC) = .06250
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = .05405 WITH TGT   DEPENDENT.   = .12694 WITH SEX   DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = .07581
KENDALL"S TAU B = .24280   SIGNIFICANCE = .0049
KENDALL"S TAU C = .29368   SIGNIFICANCE = .0049
GAMMA = .39029
SOMERS"S D (ASYMMETRIC) = .30647 WITH TGT   DEPENDENT.   = .19237 WITH SEX   DEPENDENT.
SOMERS"S D (SYMMETRIC) = .23647

* *

MONT TEST   80/07/15.   14.30.05.   PAGE   9

ETA = .25096 WITH TGT   DEPENDENT.
ETA = .34519 WITH SEX   DEPENDENT.
PEARSON"S R = .25096   SIGNIFICANCE = .0076

* *

MONT TEST   80/07/15.   14.30.05.   PAGE   10

FILE   NONAME   (CREATION DATE = 80/07/15.)

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
     TGT   TRUNCATED TOTAL GRANTS AVAILABLE TO STUD   BY SEX   SEX
CONTROLLING FOR..
     ETH   ETHNIC   VALUE . . . . 5. WHITE NON-HISPANIC
* PAGE 1 OF 1

COUNT I   SEX

TABLE XIVI

FILE   NONAME   (CREATION DATE = 80/07/15.)

- - - - - - - - - - - - - - - C R O S S T A B U L A T I O N   O F - - - - - - - - - - - - - - - - - -
  TGT   TRUNCATED TOTAL GRANTS AVAILABLE TO STUD   BY SEX   SEX
CONTROLLING FOR..   VALUE   5, WHITE NON-HISPANIC
  ETH   ETHNIC - PAGE 1 OF 1

	SEX		
COUNT ROW PCT COL PCT TOT PCT	MALE 1.	FEMALE 2.	ROW TOTAL
TGT			
1. ZERO	67 54.9 17.6 8.2	55 45.1 12.6 6.7	122 15.0
2. LT 500	103 48.4 27.1 12.6	110 51.6 25.2 13.5	213 26.1
3. 500-1000	122 45.0 32.1 15.0	149 55.0 34.2 18.3	271 33.2
4. 1000-1500	54 47.0 14.2 6.6	61 53.0 14.0 7.5	115 14.1
5. 1500-2000	20 35.7 5.3 2.5	36 64.3 8.3 4.4	56 6.9
6. 2000-2500	11 45.8 2.9 1.3	13 54.2 3.0 1.6	24 2.9
7. 2500-3000	0 0 0 0	7 100.0 1.6 .9	7 .9
8. GT-3000	3 37.5 .8 .4	5 62.5 1.1 .6	8 1.0
COLUMN TOTAL	380 46.6	436 53.4	816 100.0

RAW CHI SQUARE =   12.98260 WITH   7 DEGREES OF   'DOM. SIGNIFICANCE =   .0725

MONT TEST   80/07/15,   14,30.05,   PAGE   11

CRAMER'S V = .12614
CONTINGENCY COEFFICIENT = .12514
LAMBDA (ASYMMETRIC) =   0 WITH TGT   DEPENDENT,   = .03158 WITH SEX   DEPENDENT,
LAMBDA (SYMMETRIC) =   .01297
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =   .00503 WITH TGT   DEPENDENT,   = .01393 WITH SEX   DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) = .00822
KENDALL'S TAU B = .07835   SIGNIFICANCE = .0065
KENDALL'S TAU C = .09723   SIGNIFICANCE = .0065
GAMMA = .12613
SOMER'S D (ASYMMETRIC) = .09769 WITH TGT   DEPENDENT,   = .06284 WITH SEX   DEPENDENT,
SOMER'S D (SYMMETRIC) =   .07648
ETA = .09439 WITH TGT   DEPENDENT,
ETA = .12614 WITH SEX   DEPENDENT,
PEARSON'S R = .09439   SIGNIFICANCE = .0035

TABLE XIV

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* * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   TGT       TRUNCATED TOTAL GRANTS AVAILABLE TO STUD      BY SEX      SEX
CONTROLLING FOR..
   ETH       ETHNIC                                        VALUE         6,  OTHER
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE 1 OF 1
```

COUNT			
ROW PCT	MALE	FEMALE	ROW
COL PCT			TOTAL
TOT PCT	1.	2.	

TGT

		MALE	FEMALE	ROW TOTAL
ZERO	1.	7 / 100.0 / 25.0 / 13.2	0 / 0 / 0 / 0	7 / 13.2
LT-500	2.	4 / 30.8 / 14.3 / 7.5	9 / 69.2 / 36.0 / 17.0	13 / 24.5
500-1000	3.	5 / 31.3 / 17.9 / 9.4	11 / 68.8 / 44.0 / 20.8	16 / 30.2
1000-1500	4.	7 / 100.0 / 25.0 / 13.2	0 / 0 / 0 / 0	7 / 13.2
1500-2000	5.	4 / 50.0 / 14.3 / 7.5	4 / 50.0 / 16.0 / 7.5	8 / 15.1
2000-2500	6.	1 / 50.0 / 3.6 / 1.9	1 / 50.0 / 4.0 / 1.9	2 / 3.8
COLUMN TOTAL		28 / 52.8	25 / 47.2	53 / 100.0

```
RAW CHI SQUARE =    18.06113 WITH      5 DEGREES OF FREEDOM.  SIGNIFICANCE =    .0029
CRAMER'S V = .58376
CONTINGENCY COEFFICIENT = .50415
LAMBDA (ASYMMETRIC) =    .05405 WITH TGT      DEPENDENT.              =    .44000 WITH SEX       DEPENDENT.
LAMBDA (SYMMETRIC) =    .20968
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =    .13446 WITH TGT      DEPENDENT.              =    .33083 WITH SEX       DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =    .18950
KENDALL'S TAU B =    .01509    SIGNIFICANCE =    .4491
KENDALL'S TAU C =    .01994    SIGNIFICANCE =    .4491
GAMMA = .02365
SOMERS'S D (ASYMMETRIC) =    .02000 WITH TGT      DEPENDENT.              =    .01262 WITH SEX       DEPENDENT.
SOMERS'S D (SYMMETRIC) =    .01548
```

TABLE XV

FILE   NONAME (CREATION DATE = 80/07/15.)

* * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F *
  TGT   TRUNCATED TOTAL GRANTS AVAILABLE TO STUD   BY SEX   SEX
* PAGE 1 OF 1

		SEX		
COUNT ROW PCT COL PCT TOT-PCT		MALE 1.	FEMALE 2.	ROW TOTAL
TGT				
ZERO	1.	104 56.5 16.0 7.3	80 43.5 10.3 5.6	184 12.9
LT-500	2.	137 44.2 21.1 9.6	173 55.8 22.2 12.1	310 21.7
500-1000	3.	205 44.9 31.6 14.4	252 55.1 32.4 17.7	457 32.0
1000-1500	4.	117 45.2 18.1 8.2	142 54.8 18.3 10.0	259 18.2
1500-2000	5.	53 37.3 8.2 3.7	89 62.7 11.4 6.2	142 10.0
2000-2500	6.	4 -- 1.8	27 50.9 3.5 1.9	53 3.7
2500-3000	7.	1 11.1 .2 .1	8 88.9 1.0 .6	9 .6
GT 3000	8.	5 41.7 .8 .4	7 58.3 .9 .5	12 .8
COLUMN TOTAL		648 45.4	778 54.6	1426 100.0

RAW CHI SQUARE =   17.77773 WITH   7 DEGREES OF FREEDOM. SIGNIFICANCE =   .0130
CRAMER'S V =   .11166
CONTINGENCY COEFFICIENT =   .11097

* *

MONT TEST   80/07/15.   14.30.05.   PAGE   16

LAMBDA (ASYMMETRIC) =   0 WITH TGT   DEPENDENT.   = .03704 WITH SEX   DEPENDENT.
LAMBDA (SYMMETRIC) =   .01484.
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =   .00383 WITH TGT   DEPENDENT.   = .00941 WITH SEX   DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =   .00544
KENDALL'S TAU B =   .06050   SIGNIFICANCE =   .0051
KENDALL'S TAU C =   .07569   SIGNIFICANCE =   .0051
GAMMA =   .09658
SOMERS'S D (ASYMMETRIC) =   .07632 WITH TGT   DEPENDENT.   = .04796 WITH SEX   DEPENDENT.
SOMERS'S D (SYMMETRIC) =   .05891
ETA =   .07009 WITH TGT   DEPENDENT.
ETA =   .11166 WITH SEX   DEPENDENT.
PEARSON'S R =   .07009   SIGNIFICANCE =   .0041

* *

TABLE XVI   PAGE 17

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