The impact of federal student assistance on tuitions, institutional student aid and alumni giving during 1978 to 1981 was studied with 388 colleges and universities. Private colleges with increasing enrollments were more likely to hold tuitions down than were those with decreasing enrollment. Increased federal fund revenues in total were not associated with increases in tuition; however, federal fund increases per student were associated with tuition increases. For public colleges, increased federal funds were associated with slightly increased tuitions. For both private and public colleges, increased federal funding was associated with increased institutionally funded student aid and with higher administrative and instructional costs. There was little effect of federal funding on alumni giving, with the exception that increases to Guaranteed Student Loans were associated with decreased alumni giving at private colleges and with slightly diminished restricted gifts at public colleges. It is suggested that increased federal grant as opposed to loan support will allow institutions to shift some funds from scholarships to meet inflationary cost increases in instruction and administration. Information on the research methodology and regression results is appended. (SW)
THE IMPACT OF FEDERAL STUDENT FINANCIAL ASSISTANCE ON TUITIONS, INSTITUTIONAL STUDENT AID AND ALUMNI GIVING

Nathan Dickmeyer
Monterey Institute of International Studies

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Produced for the National Commission on Student Financial Assistance under order number T2319232 under authority of P.L. 96-374.
EXECUTIVE SUMMARY

The National Commission on Student Financial Assistance has received a mandate from the Congress to investigate the federal role in financing student higher education pursuits. The following study relates changes in administrative policy making and alumni gift-giving behavior to the changes in federal funding levels. The Congress implemented student aid programs under a set of assumptions about institutional tuition and aid policies. These assumptions include a belief that institutions should not be the primary beneficiary of increased federal aid: tuition should not be increased or aid decreased to gobble up increased federal aid. This point was specifically expressed by Senator Javits of New York in an address to the American Council on Education annual meeting, March 1979. This research speculates on actual institutional and alumni behavior based on statistical observations.

Using financial statistics drawn from a random, stratified sample of 388 institutions of higher education, we examined relationships between the change in federal support of student financial aid and tuition pricing, institutional funding of student aid and alumni giving over the period 1973 to 1981. The observations differ somewhat between public and private institutions. For private institutions:

1. Tuition prices changed with changes in costs per student, enrollment (negatively) and federal student financial aid support (weakly).
The increase in costs associated with increased federal funding showed up as both higher institutional support services and instructional costs.

Increased federal funding had no effect on charitable giving with the important exception that increases to Guaranteed Student Loans decreased alumni giving.

Although institutionally funded student financial assistance varied most strongly with enrollment and tuition, increased federal funding was associated with increased institutionally funded student aid.

For public institutions:

- Increased federal funds were associated with slightly increased tuitions.

- Increased federal funding was associated with higher costs (both in institutional support services and instruction) per student.

- Higher institutional support services costs were associated with an increase in campus-based aid recipients in upper income (over $24,000) categories, but higher enrollments kept institutional support services and instructional costs per student down.

- Increases in enrollment were associated with lower institutionally funded student aid expenditure budgets and such expenditures per student. Increased availability of federal funds was associated with more institutionally funded student aid.

- Increases in guaranteed student loans were associated with slightly diminished restricted gifts.
Institutions did not respond as a body to the increased amount of federal funds available by raising tuitions and lowering support of institutional aid. There was insufficient statistical evidence to support an hypothesis that the rate of growth of tuition at most institutions was caused by or even related to the rate of growth of various combinations of Guaranteed Student Loans (GSLs), campus-based programs and Pell grants. It cannot be denied, however, that during the period studied, federal funds to students increased as did institutional charges to students.

Although federal funds in general did not affect total charitable giving to institutions, the increase in the GSL program was associated with a small decline in the growth of alumni giving. Institutions should be aware that as the debt level of graduates increases, the willingness and ability of alumni to contribute decreases.
METHOD

This study seeks to increase national understanding of the policy-making behavior of higher education administrators and of benefactors to higher education. Statistical correlations, however, can provide only very limited insights into behavior. Did administrators raise tuitions and lower institutional support for students in response to increased federal funding of student assistance? A correlation between the two areas would indicate that administrators could be responding to increased federal funds. The correlation might also mean that both trends were responding to some other phenomenon, like a decrease in students.

When a regression analysis is performed on two measurable phenomena like the change in federal GSL support and the change in tuition price, and the analysis shows a significant, positive relationship, we learn something about these two phenomena. We learn that institutions with only a little GSL growth are likely to have only a little tuition growth. Institutions with a sizable GSL increase are likely to show a sizable tuition growth. If the growth of tuition and GSLs was similar for the higher education industry as a whole, but there was no relationship between the amounts of growth at individual institutions, then the regression analysis would show insignificance.

Therefore, regression analysis allows us to sort out those phenomena that are related on a campus-by-campus basis from those that are just related national trends.

National trends like a poor economy or decreased jobs do not serve well as explanations of relationships found with regression. Significant regression relationships require institution-by-institution explanations. These
explanations, for example, might focus on institutional decisions made in the face of one trend which affect the other.

Some interpretation of the statistics will be possible because the author is an administrator in charge of student aid policies and has visited over 60 college and university campuses in the last four years to do research on higher education finance and policy making (see the references section). In addition, the author has worked with over 300 administrators in workshops on the management of student aid. In each of these experiences, other administrators have helped shape the author's understanding of the administration of student financial aid and the response to changes in federal funding levels.

Analysis was begun by gathering available data from Higher Education and General Information Survey (HEGIS) tapes and the Fiscal Applications/Fiscal Operations tapes of the campus-based programs. Federal financial assistance levels to students on an institution-by-institution basis were integrated with information on tuition prices, instructional and administrative costs, gift-giving trends, and institutionally funded student aid levels. Although most data were available from HEGIS and the campus-based tapes, alumni giving levels were only available from the Council for Financial Aid to Education (CFAE). In addition, a separate survey (see appendix two) was necessary to find the amount of Guaranteed Student Loan support used by students at each institution in the sample. Although most data were available starting with the fiscal year ending 1975, expenditures for campus-based programs were unavailable before the fiscal year ending in 1978. The fiscal year ending 1981 provides the most recent, complete set of data to conclude the series.

Percentage increases were examined as averages and were compared for each piece of information. Generalized linear regression provided a means of

-5-
comparing the relationships between changes in the levels of federal support and tuition prices, institutionally funded ("institutionally funded aid" excludes the campus-based programs funded by the federal government and includes only scholarships funded with the institution's own unrestricted revenues) student financial aid and alumni giving.

Appendix one provides more details on the sample size, data, surveys, indexing and statistical methods.
The numbers in brackets identify the relevant regression results to be found in table two at the end of this report.

Private Institutions

Tuition prices changed with changes in costs per student, enrollment (negatively) and federal student financial aid support (weakly).

Institutions with increasing enrollments were more likely to hold tuitions down than institutions with decreasing enrollments [13]. Tuitions were raised in response to budget imbalances [2]. A shortfall of revenues caused by a smaller than anticipated growth in enrollments can be offset by increasing the tuition price higher than anticipated in the following year. Increased costs per student (usually associated with enrollment declines) are also associated with increases in tuition [11]. Administrators then raised tuitions in order to balance budgets [2].

Proxies for federal funds include combinations: 1) campus-based program funds including SEOG, NDSL and CWS funds; 2) restricted student aid expenditures; and 3) federal restricted grants and contracts income. See the methods appendix for a discussion of the limitations of these proxies.

Increased federal funds revenues in total were not associated with increases in tuition. Federal funds increases per student were associated with increases in tuition price [2]. This may be the result of a statistical
artifact and not conscious behavior on the part of college administrators, however. Enrollment has already been shown to affect tuition price [13]. All the variations caused by changes in enrollment get built into the federal funding numbers when those numbers are reduced to "per student" levels. This increases the possibility of finding an association between the two variables. Nonetheless, a small portion of the increases in tuition price can be "explained" by increases in federal funds per student [2].

The increase in costs associated with increased federal funding showed up as both higher administrative and instructional costs.

The availability of federal funds appeared to have allowed institutions to spend more [3,5]. The association was not strong, however, with a 10 percent increase in federal funding associated with a less than 1 percent increase in institutional support services spending which includes the president's office, business office, general institutional services and development office [3]. A 10 percent increase in federal funding produced less than a 0.2 percent increase in instructional spending [5]. The strongest statistical associations were with the previous year's increase in federal funds. This indicates an administrative budgeting response to the availability of federal funds.

A possible chain of events, given the usual knowledge by tuition and budget decision makers of federal funding levels (many institutions did not know how much Guaranteed Student Loan support their students were receiving), is that increases to federal programs made students less resistant to tuition
increases. Recruiting and retention may have also been made easier by increases to federal aid, although no strong statistical evidence between enrollment change and federal funding was found. Feeling the pressure of increased costs and a desire to improve the quality of instruction, more funds were budgeted, and tuition was increased.

Increases to federal funds did not fully offset overall cost increases. Where enrollment increases did occur, these extra tuitions were also used to offset costs. In addition, HEGIS and CFAE data show that gift giving increased during the period under study, supporting the increased level of expenditures (see the table of growth indexes in appendix one).

Increased federal funding had no effect on giving with the important exception that increases to Guaranteed Student Loans decreased alumni giving.

Changes in the levels of support in campus-based, GSL, BEOG and other programs whose expenditures were registered in the "restricted scholarships and fellowships" HEGIS categories were compared to changes in giving levels by alumni, nonalumni and all givers combined. With one exception, no relationships were found between changes in giving levels and changes in federal funding or financial aid recipients. The one exception was between alumni giving and the value of Guaranteed Student Loan support [12]. A 10 percent increase in the growth of GSL support received by students at an institution was associated with a 3 percent decline in the growth of alumni support. Because this analysis required the merger of so many data bases
(HEGIS, CFAE and the author's survey), the sample size (55 institutions) for this analysis was especially small. Each data base had its missing items and these accumulated to a large number of missing items in this one analysis. In addition, the significance level for this association of .0836 was just barely within our range of acceptance.

Nonetheless, the relationship makes sense and stands out because it appears to be the only one in the area of gift giving and federal funds. As students graduate with higher levels of debt, their willingness and ability to contribute to their institutions declines. Institutions may pay for the blessings of the GSL program with decreased alumni support in the future.
Although institutionally funded student financial assistance varied most strongly with enrollment and tuition, increased federal funding was associated with increased institutionally funded student aid.

Once again, we are bothered by the problem of a statistical artifact introduced by the examination of both institutionally funded student aid and federal support on a per student basis [7]. Apparent relationships occur simply because the changing levels of enrollments tended to drive both numbers in the same direction, even though they may have been varying separately. In fact, there is no relationship between changes in total federal funding to an institution and its total budget for institutionally funded student aid.

The total budget for institutionally funded student aid responds most strongly to changes in enrollment levels and tuition levels [8,9] [6]. More students and higher tuitions demand higher budgets for institutionally funded student aid. This is especially true because federal programs are less responsive to changes in tuition prices than institutional programs. BEOGs have maximum grant levels. GSLs are usually taken out at their maximum. Campus-based programs are funded at levels similar to previous years despite changes in need. Gaps in student financial aid packages (differences between costs and support including calculated parental and student support) introduced by higher tuitions are most often narrowed by increases in the institutionally funded portion of students' aid packages [6].

There was a relationship between federal funding per student and institutional funding per student and the relationship was positive [7]. In other words, the more federal aid that was available on a per student basis, the more the institution needed to bring in of its own funds. Most of the
campus-based programs are matching programs. In addition, there was some tendency to "balance" packages that were heavy with GSL's with institutional grants. The result was that federal funding increases, especially to the GSL, NDSL and CWS programs, required higher levels of institutionally funded student aid to balance the loans and to match the NDSL and CWS funds.

If overall cost changes on a per student basis are taken into consideration, however, the relationship between federal support per student and institutional support per student becomes statistically insignificant (and predominantly negative). Thus, the likelihood that administrators responded to federal aid levels in making decisions about institutionally funded student aid is low. The most likely scenario remains: increasing costs drive up tuition levels [2], which drives up the need for institutionally funded student aid [6]; a small increase in federal funds can be induced by the increases in tuition [2], but the correlation between the events is small.
Public Institutions

Increased federal funds were associated with slightly increased tuitions.

Of all the measures used for federal funding levels, only one, GSL value plus campus-based program awards, showed a significant relationship between tuition and federal support [14]. The significance was also just within our level of acceptance at .0639. The finding that increased federal funds were associated with slightly increased tuitions thus becomes somewhat suspect. The relationship shows that a 10 percent increase in federal funds availability from 1978 to 1980 resulted in a less than 1 percent increase in tuition price from 1978 to 1981 (using the in-state tuition level as a guide).

Given the highly political nature of the process of setting in-state tuition, it is a wonder any relationship was found at all. Unlike private tuitions, public tuitions do not correlate with inflationary cost increases or enrollment shifts. If anything, increased federal funding may be said to decrease the pressure to hold tuitions down (always strong at public institutions) somewhat.
Increased federal funding was associated with higher costs (both administrative and instructional) per student.

Once again we must be suspicious of relationships between variables where each one has been divided by enrollment to get a per student figure. This is especially true because a slight negative relationship was found between total federal support growth and total institutional support services expenditure changes [16] as opposed to per student cost changes. Also the relationship becomes negative and insignificant when overall cost changes per student are controlled in the regression equation.

On a per student basis, federal support did increase as costs increased [24, 25]. The causality is unclear, however. Total increases in federal support may have caused legislatures to decrease overall institutional support slightly, forcing a decline in costs.

Higher institutional support services costs were associated with an increase in campus-based aid recipients in upper income (over $24,000) categories, but higher enrollments kept institutional support services and instructional costs per student down.

This was not an anticipated result [15] because institutional support services do not include financial aid office support. We do know that increases in enrollments lower costs per student [22] and that decreases in enrollments raise costs per student [22]. The expansion of campus-based aid programs to higher income students seems to have put some pressure on administrative costs perhaps by increasing the number of students in the
financial aid system and the range of necessary policies for administering that system. The relationship may simply be fortuitous, because no strong behavioral explanation comes to mind.

Increases in enrollment were associated with lower institutionally funded student aid expenditure budgets and such expenditures per student. Increased availability of federal funds was associated with more institutionally funded student aid.

In the report Institutionally Funded Student Financial Aid by Dickmeyer, Wessels and Coldren (1981) the majority of institutionally funded student aid provided by public colleges and universities was found to be in the form of work study. A large portion of institutionally funded work study is necessary to match federal CWS funds. Thus, we would expect that increases in federal funding would force increases in institutionally funded student assistance to match the federal funds. This appears to be true [18, 20].

Unlike private tuitions, changes in public tuitions were not associated with changes in institutionally funded student assistance. Public institutions do budget less as enrollments increase [21], indicating perhaps a strong use of institutional aid for recruiting purposes. Successful enrollment drives require less institutionally funded aid.

The availability of funds from local and state governments also may have been a factor in increasing institutionally budgeted aid to students. Increases in overall expenditures per student appear to lead to higher institutionally funded student aid budgets [26].
Increases in Guaranteed Student Loans were associated with slightly diminished restricted gifts.

Data on alumni giving at public institutions was sparse making it necessary to examine the relationship between federal funds and total restricted gift levels. Public institutions also rely on restricted gifts to a much smaller extent than private institutions. Nonetheless, the same relationship between GSL levels and alumni giving appears to be true [23].

No other indicator of federal financial aid variation correlated with changes in restricted gift levels. Only the growth in GSL levels appeared to have an impact. Thus, even the lower levels of alumni giving expected at public institutions was affected by the loan burdens of graduates.
CONCLUSIONS

Institutions benefited from the increased availability of federal support to students. Over the period studied, institutions faced cost increases not far different than those faced by the economy as a whole. Some of these costs were passed on to the states, some to benefactors, and some to tuition payers. The tuition payers were better able to pay the higher tuitions because of the increased availability of federal student assistance.

Institutions did not benefit by reducing their own commitment to institutionally funded student aid. They may have been able to reduce their commitments to certain students, but the increased matching responsibilities of CWS and NDSSL and the need to balance packages with heavy GSL loan components offset any possible gains.

The lack of a relationship between enrollment changes and federal funding of student aid on an institution-by-institution basis indicates that although much of the increased costs of education was supported by the increases in federal student aid, insufficient financial burden was removed from students and their families to induce many more new people into the market. Likewise, declines in federal support at certain institutions were not associated with declines in enrollments. The period under study, however, was one where the GSL program dominated the growth in federal aid. This program was not aimed at drawing new types of students into higher education, but rather it was aimed at supporting existing students.

The increased costs at institutions were associated both with increases in instructional costs per student and with increases in institutional support.
services costs per student. Thus, institutions did not use the funds made available by federal program increases for exclusively administrative or instructional quality purposes. Both sides of the institution benefited.

Institutions must plan on lower levels of alumni support as the debt burden of graduates increases with the increases to the GSL program. Short-run support may be partially paid for by long-run support declines.
POLICY OPTIONS

Who will pay for the increasing costs of education if federal support does not keep up with inflation? States have been unable to maintain support. Loan burdens reduce alumni ability to support institutions. Lowering instructional costs to shift funds from instruction to student aid to support higher tuitions can mean reduced contact between faculty and students.

The results of this study indicate that increased federal grant as opposed to loan support will allow institutions to shift some funds from scholarships to meet inflationary cost increases in instruction and administration. This will protect academic quality.

Increased federal grant as opposed to loan support to students may also allow alumni to contribute to their institutions with more generosity.
The sample of institutions was selected to allow balanced representation by region, type and control. Colleges under 500 in enrollment were not represented because they provide only a tiny fraction of the student population and because their data is notoriously unreliable. Proprietary institutions were not included in the sample also because of the lack of data.

There were 207 public institutions in the sample and 181 private institutions. Of these, only a portion responded to the various surveys used in the analysis. Only 188 public institutions and 168 private institutions provided data on campus-based programs. Of the total sample, 131 private and 176 public institutions responded to the survey of GSL amounts used by students in each of the years from 1975 to 1981 conducted by the author. Unfortunately, of those responding only 151 private and 114 public institutions could provide GSL data for the most recent year. Telephone calls to nonrespondents indicated that the majority did not respond because of the lack of availability of the data. They simply did not keep track of the total amount of GSLs received by their students.

In addition, slightly over 100 private institutions responded to the Council for Aid to Education survey on giving. The greatest failure of data collection came because BEOG levels by institutions simply were not available from government sources as anticipated. The data is collected on an institution-by-institution basis (unlike GSL data), but no tapes of the data...
were available or readable for a sufficient number of years to assist in the analysis. Approximations based on HEGIS surveys were substituted as described later in the paragraphs on the three approximations to federal scholarship aid.

Although the Guaranteed Student Loan (GSL) program is not a direct assistance program, it does result in indirect benefit to students through reduced interest rates and in-school interest subsidies. For the purposes of this analysis we converted the loans to a value benefit. All references to the impact of the GSL loan program above are based on the figures derived after the loans have been converted to a direct benefit.

To measure the financial "relief" provided by GSLs, we converted GSL dollar loaned amounts to the dollar "advantage" the GSLs provided over consumer loans. To do this we assumed that the GSLs provided an average of three years of free interest (compared to consumer loans), and then 10 years of loans at 7 percent instead of the consumer loan rate at the year of origination. Note that because all data precede the 1981-82 school year, we do not have to worry about origination fees or 9 percent loans.
The yearly dollar "advantage" over a consumer loan was then discounted by inflation according to the year the advantage would have been received (inflation past 1982 was assumed to be 6 percent). The result is a conversion rate that changes the total loan amount into an equivalent grant (a grant to offset, say, the cost of a consumer loan). The conversion rates are as follows:

Conversion Rates: Loan to Grant Value

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Rate</td>
<td>59%</td>
<td>61%</td>
<td>71%</td>
<td>87%</td>
</tr>
</tbody>
</table>

The NDSL loan program funds and the CMS work program funds were used at their face value. The NDSL program is more favorable than the GSL for borrowers making conversion rates for NDSL near 100 percent. In addition, the campus-based levels of funding are better known to administrators, thus making these numbers most important to tuition and institutional aid funding decisions.

Three approximations to overall federal funding levels were used in the analysis. First was the sum of campus based funding and GSL value (as converted). The limitation of this approximation is that it neglects BEOG funds. Second, the sum of the GSL values and total federal restricted grants and contracts was used. This figure is more likely to contain BEOG's than the first, but it is contaminated by federal research and direct federal grants to institutions in larger and in Title III institutions. Third, the sum of GSL values and restricted scholarships and fellowships was used. This figure
neglects the NDSL and CWS amounts while including some gifts made by private individuals restricted to scholarships.

The three figures behaved similarly in the analysis, although occasionally one would correlate when the others did not. Our assumption was that the lack of correlation was often caused by the addition of extraneous figures in the approximation. Also, because we were examining changes in funding levels, the enormous increases in the GSL program tended to be the main driving force of most of the relationships discovered. The missing values and extraneous figures would tend to make only small alterations in the overall approximations to the federal funding growth rates thus calculated because of GSL growth.

Tuition levels, administrative expenditures, instructional expenditures, restricted federal grants and contracts, institutionally funded student aid, restricted scholarships and fellowships, total expenditures (educational and general only), and enrollments (as full-time equivalents) were derived from Higher Education General Information Surveys (HEGIS). Administrative expenditures include only institutional support levels and do not include student services expenditures or plant maintenance expenditures.

Campus-based federal student aid expenditures were derived from the annual application for federal campus-based funds sent in by each institution. In addition, this survey provided statistics on the unduplicated number of campus-based recipients by income level.

The Council for Financial Aid to Education annually collects data on contributions to colleges and universities by type of gift (restricted to certain purposes and unrestricted) and by type of donor (alumni, etc.). Their data were used for total giving and alumni giving for private colleges only. No gift data was available for 1981.
All figures were converted to growth indexes. That is the final figure in the series (usually from 1980 or 1981) was divided by the initial figure (from 1978) and multiplied by 100. Averages for some of these indexes are shown below:
Average Growth Indexes

<table>
<thead>
<tr>
<th></th>
<th>Private</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>134</td>
<td>122</td>
</tr>
<tr>
<td>Enrollment</td>
<td>107</td>
<td>109</td>
</tr>
<tr>
<td>GSL value</td>
<td>595</td>
<td>1202</td>
</tr>
<tr>
<td>GSL plus restricted scholarships</td>
<td>403</td>
<td>2476</td>
</tr>
<tr>
<td>Campus-based programs</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>GSL plus campus-based</td>
<td>221</td>
<td>243</td>
</tr>
<tr>
<td>GSL plus federal grants</td>
<td>577</td>
<td>688</td>
</tr>
<tr>
<td>Instructional costs</td>
<td>137</td>
<td>135</td>
</tr>
<tr>
<td>Administrative costs</td>
<td>151</td>
<td>143</td>
</tr>
<tr>
<td>Total costs</td>
<td>137</td>
<td>133</td>
</tr>
<tr>
<td>Institutionally funded aid</td>
<td>166</td>
<td>554</td>
</tr>
<tr>
<td>Total giving</td>
<td>160</td>
<td>---</td>
</tr>
<tr>
<td>Alumni giving</td>
<td>168</td>
<td>---</td>
</tr>
</tbody>
</table>

All indexes are for 1973 to 1981 except total gifts and alumni giving, which are 1978 to 1980 and campus-based indexes which are 1979 to 1981.
Regression analysis was run between all indexes separately for public and private colleges. To help indicate causality, some indexes were recalculated for 1978 to 1980 to see if previous funding, cost or enrollment changes affected 1981 tuition and institutional aid decisions.

If the scatter around the regression line indicated that the relationship between two indexes had a 10 percent or more chance of being fortuitous, then the relationship was deemed statistically improbable and was ignored in the analysis.
This survey on GSLs and total aid recipients was sent to all sample institutions.

NATIONAL COMMISSION ON STUDENT FINANCIAL ASSISTANCE

GSL Survey

Please give the Guaranteed Student Loan (GSL) data for as many years as you have it. Use "U" if you had no GSL recipients. Use N/A (not available) if you do not have information. Use estimates if necessary.

Give an unduplicated count of students who received any form of aid, including GSL loans, Federal, State or Institutional financial aid. Estimate if necessary.

Fiscal Year Ending:


GSL Survey

Guaranteed Student Loans - Total Dollar Value of Loans received by students at your institution:

<table>
<thead>
<tr>
<th>Year</th>
<th>Loans</th>
</tr>
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<tbody>
<tr>
<td>1975</td>
<td>$</td>
</tr>
<tr>
<td>1976</td>
<td>$</td>
</tr>
<tr>
<td>1977</td>
<td>$</td>
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<tr>
<td>1978</td>
<td>$</td>
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<tr>
<td>1979</td>
<td>$</td>
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<tr>
<td>1980</td>
<td>$</td>
</tr>
<tr>
<td>1981</td>
<td>$</td>
</tr>
</tbody>
</table>

Total number of aid recipients (including those receiving GSL's only) at your institution:


Use "U" it you had no GSL recipients. Use N/A (not available) if you do not have information. Use estimates if necessary.

Please feel free to call me if you have any questions.

Matthew Dickmeyer (408) 372-4268 (home)
(408) 649-3111 Ext. 63 (office)
Dear President/Financial Aid Officer:

If your response to my initial request for information is in the mail, please feel free to toss this follow-up. If not, I hope you will find the time to respond. Accusations about the impact of financial aid on students and institutions are flying in Washington, and I would like to be able to make an informed comment on this.

I have been asked by the National Commission on Student Financial Assistance to investigate the relationship between Federal student aid availability and institutionally funded student aid and tuition prices. Most data for this study are readily available—except the amount received by students at individual institutions in Guaranteed Student Loan support.

Jay Stampen of the University of Wisconsin and Julianne Still Thrift of the National Institute of Independent Colleges and Universities have graciously consented to allow me to use their national sample of colleges for this study. The data will provide a major addition to the national research data held by both sectors.

I need your cooperation in filling out the enclosed survey of GSL levels and total aid recipients. This is the major piece of missing information needed to gauge the impact of changes in Federal support of student financial aid.

I urge you to fill the survey out as completely as possible. I realize that some of you may not have data all the way back to 1975, but, in a quick telephone check of some of you, I was surprised to find out how many kept such records. Apparently, many of you have tracked the growth in GSL volume to document the increased work load on your financial aid departments. Please provide as much data as you have.

Thank you for your cooperation. Please return the questionnaire by February 11. This will save me follow-up costs.

Very truly yours,

Dr. Nathan Dickmeyer
REFERENCES


### TABLE TWO

**SELECTED REGRESSION STATISTICS**

**PRIVATE INSTITUTIONS**

1) **Dependent variable:** Tuition growth 1978-81  
   **Independent variable:** Growth of unduplicated number of campus-based aid recipients 1979-81  
   **Significance (Pr>F):** .056 **Coefficient:** .0997 **Number:** 159

2) **Dependent variable:** Tuition growth 1978-81  
   **Independent variables:** 1) Growth of Educational and General Expenditures per FTE 1978-81  
   **Significance (Pr>F):** .0178 **Coefficient:** 1) .0116 **Number:** 89  
   2) .0167

3) **Dependent variable:** Institutional Support Services cost growth 1978-81  
   **Independent variable:** Growth of GSL value plus restricted scholarships 1978-81  
   **Significance (Pr>F):** .0675 **Coefficient:** .0396 **Number:** 89

4) **Dependent variable:** Growth of instructional cost per FTE 1978-81  
   **Independent variable:** Enrollment growth 1978-81  
   **Significance (Pr>F):** .0001 **Coefficient:** -.959 **Number:** 167

5) **Dependent variable:** Growth in instructional budget 1978-81  
   **Independent variable:** Growth of GSL value plus restricted scholarships 1978-81  
   **Significance (Pr>F):** .0169 **Coefficient:** .0186 **Number:** 89

6) **Dependent variable:** Growth in institutionally funded student aid per FTE 1978-81  
   **Independent variable:** Growth in tuition 1979-81  
   **Significance (Pr>F):** .0003 **Coefficient:** 2.37 **Number:** 156

7) **Dependent variable:** Growth in institutionally funded student aid per FTE 1978-81  
   **Independent variable:** Growth in GSL value plus restricted scholarships per FTE 1978-81  
   **Significance (Pr>F):** .0001 **Coefficient:** .256 **Number:** 85
<table>
<thead>
<tr>
<th></th>
<th>Dependent variable:</th>
<th>Growth in institutionally funded student aid per FTE 1978-81</th>
<th>Growth in enrollment 1978-80</th>
<th>Significance (Pr&gt;F):</th>
<th>.0114</th>
<th>Coefficient: -1.45</th>
<th>Number: 156</th>
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<td>8</td>
<td>Independent variable:</td>
<td>Growth in enrollment 1978-80</td>
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<td>Significance (Pr&gt;F):</td>
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<td>9</td>
<td>Dependent variable:</td>
<td>Growth in institutionally funded student aid</td>
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<td>Independent variable:</td>
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<td>Significance (Pr&gt;F):</td>
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<td>Independent variable:</td>
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<td>11</td>
<td>Dependent variable:</td>
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<td>Growth in enrollment 1978-81</td>
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<td>Dependent variable:</td>
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<td>Growth in enrollment 1978-80</td>
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<td>Significance (Pr&gt;F):</td>
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14) Dependent variable: Growth in tuition 1978-81
Independent variable: Growth in GSL value plus campus-based program awards 1979-81
Significance (Pr>F): .0639 Coefficient: .0668 Number: 117

15) Dependent variable: Growth in administrative expense 1978-81
Independent variable: Growth in unduplicated campus-based program recipients (dependent) with incomes over $24,000 1979-81
Significance (Pr>F): .0004 Coefficient: .045 Number: 158

16) Dependent variable: Growth in institutional support service expense 1978-81
Independent variable: Growth in GSL value plus federal grant and contract income 1978-81
Significance (Pr>F): .0754 Coefficient: -.00296 Number: 111

17) Dependent variable: Growth in instructional expense per FTE 1978-81
Independent variable: Growth in enrollment 1978-81
Significance (Pr>F): .0001 Coefficient: -.969 Number: 201

18) Dependent variable: Growth in institutionally funded student aid per FTE 1978-81
Independent variable: Growth in GSL value plus restricted scholarships 1978-81
Significance (Pr>F): .0001 Coefficient: .474 Number: 62

19) Dependent variable: Growth in institutionally funded student aid per FTE 1978-81
Independent variable: Growth in enrollment 1978-80
Significance (Pr>F): .0011 Coefficient: -65.79 Number: 103

20) Dependent variable: Growth in institutionally funded student aid 1978-81
Independent variable: Growth in GSL value plus restricted scholarships 1978-81
Significance (Pr>F): .0001 Coefficient: .496 Number: 62

21) Dependent variable: Growth in institutionally funded student aid 1978-81
Independent variable: Growth in enrollment 1978-80
Significance (Pr>F): .0043 Coefficient: -30.3 Number: 109
22) Dependent variable: Growth in educational and general expenditures per student 1978-81
Independent variable: Growth in enrollment 1978-81
Significance (Pr>F): .0001 Coefficient: -.951 Number: 201

23) Dependent variable: Growth in restricted gifts from private sources 1978-81
Independent variable: Growth in GSL value 1978-80
Significance (Pr>F): .0654 Coefficient: .533 Number: 31

24) Dependent variable: Growth in institutional support services expense per FTE 1978-81
Independent variable: Growth in GSL value plus campus-based programs per FTE 1979-81
Significance (Pr>F): .0633 Coefficient: .166 Number: 118

25) Dependent variable: Growth in instructional cost per FTE 1978-81
Independent variable: Growth in GSL value plus campus-based programs per FTE 1979-81
Significance (Pr>F): .0745 Coefficient: .122 Number: 118

26) Dependent variable: Growth in institutionally funded student aid per FTE 1976-81
Independent variable: Growth in educational and general expenditures per FTE 1973-81
Significance (Pr>F): .0001 Coefficient: 1.0056 Number: 368