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Factors Influencing the Size of Student Debt

By *Tabira K. Hira*
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Brinkman

The overall purpose of this study is to analyze the influence of selected sociodemographic variables and students' knowledge about their educational loans on the amount of total debt. The specific objectives were to: (1) ascertain students' perception of knowledge about their student loans, as well as their actual knowledge about various aspects of their student loans including: when they first borrowed, interest rate, grace period, when payment will begin, amount of monthly payment, and their overall self-reported level of knowledge; and (2) ascertain the relationship between students' sociodemographic characteristics and level of knowledge on total debt.

Loans are the largest single source (almost 50%) of student financial aid (Lewis and Merisotis, 1987). In addition, the average loan per borrower has more than doubled since 1970-71 to an estimated \$925 for the National Direct Student Loan (NDSL) and \$2,381 for the GSL in 1986-87 (Hansen, 1986). To finance their college education, an increasing number of students are relying more heavily on loans, as opposed to grants and work. Unpublished data from the financial aid office at Iowa State University show that of the total number of aid recipients, 57% received all or a portion of their aid in loan funds during the 1986-87 academic year (Lephart, 1988).

The data in Table 1 are representative of the sum of all NDSL/Perkins, GSLs (Stafford, PLUS, SLS), and other loans divided by total federal, state, and institutional aid. The increase seen in the 1980s directly reflects the Reagan administration's emphasis on increased student loans rather than grants (Davidson, 1986).

In Iowa during the 1984-85 school year, loans made up 42% of financial aid (Iowa College Aid Commission [ICAC], 1986); at Iowa State University in 1986-87 loans comprised 62.5% of the aid (Holland, 1987). Research conducted by the Texas Guaranteed Student Loan Corporation (TGSLC) shows that the growing reliance on loans is related to a lack of available funds for grants and college work-study (1988).

Literature suggests that students lack knowledge about various aspects of their student loans (Evangelauf, 1987; Holland and Healy, 1989; Marchese, 1986; McCormick, 1987; Popik et al., 1986). To reduce this problem, Congress included a provision in the Higher Education Reauthorization Act of 1986 which requires institutions that certify loans to counsel guaranteed student loan (GSL) borrowers prior to their departure from the institution (Guthrie, 1986).

With one-third to one-half of all undergraduates leaving school in debt, concern also has been raised about the effect of mounting debt burdens. At this point, however, most of this concern is based on impressionistic and anecdotal evidence (Hansen, 1986). Data and studies on the impact of student borrowing are few, fragmentary, and often out-of-date and/or contradictory. Hansen (1986) suggests that there is

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TABLE 1
Loans as a Percent of Total Student Financial Aid at the National Level

Academic Year	Percent of Total Aid as Loans
1963-64	20.8
1970-71	28.9
1975-76	16.9
1977-78	21.6
1979-80	32.3
1980-81	40.9
1981-82	44.2
1982-83	44.9
1983-84	48.0
1984-85	50.0
1985-86	48.9
1986-87	49.4

Note. Data for 1963-64 through 1979-80 are from Gillespie and Carlson (1983). Data for 1980-81 through 1986-87 are from Lewis and Merisotis (1987).

a pressing need for better data and research on student borrowing to distinguish valid from invalid concerns about high borrowing levels. However, before the impact of debt burdens can be assessed, information is needed that describes the background of students who are borrowing, their level of knowledge about their loans, and their total debt burden. Once this baseline is available, the impact of student debt on college graduates can be more fully assessed. The objective of this study is to provide some of the much needed empirical baseline information.

Trends in Educational Borrowing

The total amount of money borrowed has risen dramatically with nearly \$9.1 billion borrowed nationally in 1986-87. The GSL programs now comprise the largest single source of aid (Lewis and Merisotis, 1987). Table 2 shows the increase in dollars borrowed nationally and for Iowa State University (ISU). The changes seen in the Table 2 data reflect years of legislative impact tracing back to the passage of the Middle Income Student Assistance Act of 1978. That act removed the income ceiling for interest subsidy benefits, thereby increasing the number of eligible borrowers (Lee, 1985). The next large jump in GSL borrowing (1980-81) can be attributed partially to increased loan limits that were established by the Education Amendments of 1980. The drop in GSLs in 1982-83 is tied to the comprehensive Omnibus Budget Reconciliation Act of 1981 (also called the Postsecondary Student Assistance Amendment Act of 1981) which limited the number of borrowers by establishing a "needs test" for students from families with adjusted incomes of over \$30,000 per year (NASFAA, 1987). Lee (1985) suggests, however, that the relatively small size of the decrease indicates that more lower-income borrowers were taking out loans.

Table 3 shows the national trends in number of borrowers and average loans, while Table 4 gives the data for ISU.

TABLE 2
Loans to Students in Current Dollars (millions)

Year	National			Iowa State University ^a	
	NDSL	GSLs		NDSL	Stafford ^b
		(Stafford, PLUS/SLS)	Other		
1963-64	114	-	-	NA	-
1970-71	240	1,015	42	NA	NA
1975-76	460	1,267	45	NA	NA
1976-77 ^c	NA	NA	NA	1.70	2.38
1977-78	615	1,737	42	1.84	3.44
1979-80	646	3,926	42	2.23	12.14
1980-81	694	6,203	61	1.83	21.75
1981-82	580	7,223	88	2.02	26.31
1982-83	597	6,694	157	1.90	18.87
1983-84	682	7,578	219	1.50	22.13
1984-85	677	8,608	244	2.15	23.50
1985-86 ^d	703	8,839	248	1.96	23.79
1986-87 ^d	829	9,099	210	2.25	25.85
1987-88	NA	NA	NA	2.83	27.22

Note. Data for 1963-64 through 1979-80 are from Gillespie and Carlson (1983). Data for 1980-81 through 1986-87 are from Lewis and Merisotis (1987). ISU data are from Lephart (1988).

^aInformation on other loans at ISU not available.

^bDoes not include PLUS/SLS.

^cNational data were not reported to 1976-77.

^dNational data are estimated while ISU data are actual.

NA = Not available.

TABLE 3
National Number of Borrowers and Average Loans

Year	Borrowers (in thousands)			Average Loan (in dollars)		
	NDSL	Stafford	PLUS/SLS	NDSL	Stafford	PLUS/SLS
1963-64	217	-	-	478	-	-
1970-71	452	1,017	-	532	998	-
1975-76	690	922	-	667	1,374	-
1977-78	795	1,014	-	773	1,713	-
1979-80	953	1,940	-	677	2,204	-
1980-81	816	2,904	1	853	2,135	2,500
1981-82	684	3,135	29	848	2,280	2,565
1982-83	675	2,942	80	884	2,208	2,456
1983-84	719	3,147	122	949	2,307	2,610
1984-85	697	3,546	177	971	2,297	2,633
1985-86	701	3,536	193	1,003	2,335	2,664
1986-87 ^a	896	3,499	281	925	2,381	2,735

Note. Data for 1963-64 through 1979-80 are from Gillespie and Carlson (1983). Data for 1980-81 through 1986-87 are from Lewis and Merisotis (1987).

With the increase in GSL borrowing limits established by the Higher Education Amendments of 1986, one would expect a substantial increase in borrowing in 1987-88. However, while the average GSL amount continued to increase in 1987-88 at ISU, it was accompanied by a decline in the number of borrowers. This decline is also attributed to the effects of the Higher Education Amendments Act of 1986, which,

TABLE 4
Iowa State University Borrowers and Average Loans^a

Year	# of Borrowers		Average Loan (in dollars)	
	NDSL	GSL	NDSL	GSL
1976-77	2,899	1,742	586	1,367
1977-78	3,032	2,300	606	1,493
1979-80	3,268	6,725	683	1,804
1980-81	2,681	10,138	682	2,146
1981-82	2,670	11,746	758	2,240
1982-83	2,625	8,653	724	2,181
1983-84	1,993	9,369	754	2,362
1984-85	2,713	9,772	793	2,405
1985-86	2,066	9,917	951	2,399
1986-87	1,823	10,596	1,233	2,440
1987-88	2,311	9,686	1,226	2,810

Note. Data are from Lephart (1988).

^aInformation not available for PLUS/SLS.

while easing loan limits, tightened eligibility requirements. Effective October 17, 1986, all students are required to demonstrate financial need via a federally approved method (currently Congressional Methodology) in order to receive a GSL. Since most loans for the 1986-87 school year were already processed under the previous regulations, the effect was not fully seen until the 1987-88 school year.

Students' Loan Knowledge: Current Research

Compared to the literature about student loans, very little has been written about college students' knowledge of their own student loans. Barberini (1986) suggests that educational loan programs must be based on informed student borrowers; others suggest that students lack knowledge about loans and need more or better information (Myhre, 1979; Evangelauf, 1987; Holland and Healy, 1989; Marchese, 1986; McCormick, 1987; Popik et al., 1986). As McCormick (1987, p. 35) suggests in discussing ideas for reducing the default rate, "improved student consumer information" is needed. Dennis (1983) concluded that students should be counseled at the time the loan is made to make them aware that they have a legal and moral obligation to repay the money.

Marchese (1986) points to a need to provide students with better information, due to their expanding reliance on loans. Kramer and Van Dusen (1986) suggest that emphasis should be placed on counseling student borrowers about the risks of debt burden, to assure that they are making informed decisions. Kramer and Van Dusen also imply that not all borrowers are currently well informed about student loans.

Popik et al. (1986) found that many students did not read information regarding their GSL and that they maintained a *laissez faire* attitude about borrowing. Thus, Popik et al. advocate for an elective course dealing with financial principles which would include a session on managing educational debt. A related study on money management knowledge of college students was conducted by Danes and Hira

(1987). While this particular study did not examine student knowledge specifically in the area of student loans, it did support the need for more education in specific money management areas.

Procedures

Data for this study were collected via a 27-item survey (see Appendix) given to ISU students at each exit interview for the spring 1988 graduating class. Of the 2,690 students receiving degrees, 1,090 (41%) had borrowed through the GSL program and 1,000 of these GSL borrowers (92%) attended group interviews. Eleven different group exit interview sessions were conducted with attendance ranging from 50 to 200 students at each session. Of the 1,000 students who attended group interview sessions, 920 students completed the survey (84% of those who had borrowed through GSL). However, since it was necessary to verify information for certain knowledge variables, 91 surveys with missing or unverifiable data were eliminated from the sample, resulting in a sample size of 829, reducing the percentage from 84 to 76.

The Variables

The variables selected for this study included student's age, sex, marital status, ethnic background, area of major, degree sought, residency status, housing location, grade point average (GPA), employment status, GSL history, monthly payments, expected salary, student loan knowledge, and total educational debt.

Three questions used to describe the GSL borrowers' loan history included: when the student first borrowed, the GSL interest rate, and the length of the grace period. Students who began borrowing prior to 1981 were coded 1 and borrowed at 7%; those who began borrowing from 1981 through September 1983 were coded 2 and borrowed at 9%; and those who first borrowed after September 1983 were coded 3 and borrowed at 8%. The information provided by each student was verified from student records in the Student Financial Aid Office at Iowa State University or by calling the loan guarantee agency, Iowa College Aid Commission. The verified information was used for this variable. Because all three of the GSL history questions are a function of the same underlying concept, only "first borrowed" was used in the correlation analysis.

Students were asked if they knew approximately how much their total monthly loan repayments would be. If they answered yes, then they were asked to report the approximate amount. This represents the students' reported amount of their monthly loan payment. The expected salary variable was based on what students reported they expected their annual starting salary to be.

Multiple indicators were used to measure students' knowledge about their loans including knowledge of when they first borrowed, interest rate, grace period, the date of first payment, and amount of monthly payment. Answers to the knowledge questions were compared with the information in their files in the Student Financial Aid Office or by calling the loan guarantee agency's servicer, USA Funds. Each of these four ordinal variables was coded 0 if the student reported that he or she did not know the information, 1 if the student answered incorrectly, and 2 if the student answered correctly. Students who knew their

approximate monthly payment were coded 1; those who did not know were coded 2. Students were also asked to rate themselves on their knowledge level about their loans. The responses were coded 1 through 5, with one being the lowest level of knowledge and five being the highest.

A composite variable, a knowledge index, was created by adding all individual knowledge variables. A reliability test for this index was performed using the SPSS^x subprogram RELIABILITY (SPSS Inc., 1986). While the items do have face validity, reliability testing was used to assess the degree to which the items in the index were measuring the same underlying concept. The criteria established were that: (1) the alpha levels of the index should be greater than 0.50, and (2) there should be more than a 0.01 increase in the alpha level in order to omit an item from the index. The standardized item alpha was 0.5697 for the index when all knowledge variables were added. When the "knowledge of first borrowed" variable was omitted from the index, the standardized item alpha for the adjusted index increased to 0.6601. Thus, the adjusted index was used in further statistical analysis.

Students were asked to report their debt on each of the following loans: GSL, NDSL/Perkins, PLUS, SLS/ALAS, HEAL, HPL, or other. All of these loans were added to get a continuous variable which represents the total educational debt.

Analysis of Variance (ANOVA) was used to determine relationships between sociodemographic characteristics, student knowledge scores, and total debt. Raw scores for most of the continuous variables were used for ANOVA; however, marital status and housing were recoded as dichotomous variables. Marital status was coded 1 for never married and 2 for married, separated, divorced, or widowed; housing was coded 1 for residence halls and 2 for other.

Results

Sociodemographic Characteristics of the Student Loan Borrowers

The average Iowa State loan borrower was a single 24 year old, Caucasian, undergraduate. The majority of these students were Iowa residents and worked while going to school. Slightly over half lived off-campus and were males. They represented all seven major areas in the university and had an average GPA of 2.97. The average anticipated monthly loan payment was \$123, and the expected average annual starting salary was \$23,695. The average total education debt for the student loan borrower was \$8,476. The majority of this debt was borrowed under the GSL program, with an average total GSL debt of \$7,874.

As seen in Table 5, approximately 90% correctly reported when they first borrowed. A majority (77%) also knew correct information concerning their grace period. On the other hand, slightly over half (63%) knew the correct interest rate and even fewer (58%) knew when repayment would begin. When asked if they knew approximately how much their monthly payments would be, only 30% answered, "yes." Thus, it can be concluded that knowledge of monthly payments is the primary area where students lack knowledge.

Table 6 reports information of students' perception of their knowledge about student loans. Only 38.9% considered themselves fairly

knowledgeable or very knowledgeable. A majority (60%) felt they had some or little knowledge about their student loans. When results presented in Tables 5 and 6 are compared, it appears that more students knew actual facts about their student loans than they gave themselves credit for.

Table 7 shows the distribution of knowledge scores using the knowledge index as a composite variable. The mean of 6.8 and median of 7.0 suggest that most students are somewhat knowledgeable. Compared to results in Table 6, once again it confirms the finding that students may know more about their loans than they think they do.

TABLE 5
Student Knowledge about the Guaranteed Student Loan
N = 829

Category	Correct		Incorrect		Did Not Know		Total	
	N	%	N	%	N	%	N	%
When first borrowed	733	89.8	83	10.2			816	100.0
Interest rate	521	63.1	99	12.0	206	24.9	826	100.0
Grace period	634	76.6	34	4.1	160	19.3	828	100.0
When repayment begins	474	57.8	125	15.2	221	27.0	820	100.0

TABLE 6
Student Perception of His or Her Level of Student Loan Knowledge
N = 829

Category	Frequency	Percentage
Know Nothing	11	1.3
Know Very Little	106	12.8
Know Some	387	46.9
Fairly Knowledgeable	278	33.7
Very Knowledgeable	43	5.2
Total	825	100.0

TABLE 7
Knowledge Index

Knowledge Scores	Frequency	Percentage
1-2	60	7.5
3-4	86	10.8
5-6	152	19.0
7-8	277	34.6
9-10	225	28.1
Total	800	100.0

Mean = 6.8
Median = 7.0

The student's educational loan debt is reported in Table 8. As expected, the most widely used educational loan program was the Stafford Loan (n = 764). The mean GSL was \$7,874, with the median being \$8,000. The average total debt was slightly higher, with the mean equal to \$8,476 and the median equal to \$8,200. The average total debt of this sample was slightly higher than the \$7,761 average debt reported by Holland and Healy (1989) for fall 1987 graduates. This difference may show the beginnings of what people have predicted to be the result of the Reauthorization Act of 1986, that is, increased borrowing.

Correlation of Sociodemographic Variables with Knowledge Variables

"Very little has been written about college students' knowledge of their own student loans."

Using the Pearson Product Moment Correlation Method, several correlation analyses were conducted. Sociodemographic characteristics were used as independent variables and seven different knowledge variables (first borrowed, interest rate, grace period, date of first payment, size of monthly payments, knowledge index, and self-reported knowledge). Significant sociodemographic variables related to all knowledge variables are discussed below. Results of correlation analysis are presented in Table 9.

The correlation between "knowledge of first borrowed" and borrower's sex, GPA, and "first borrowed," was positive. This means that male students with higher GPAs, who borrowed recently (after 1983), were more likely to have knowledge of "first borrowed." On the other hand, correlation between "knowledge of first borrowed" and borrower's employment status and monthly payments was negative. Employed students and those who had smaller monthly payments were more likely to have correct information about when "first borrowed."

"Knowledge of interest rate" was significantly but negatively related to a student's sex, residency, and "first borrowed." Female students who lived in residence halls, and those who had borrowed before 1983 were less knowledgeable about interest rates. However, the correlation between "knowledge of interest rate" and monthly payments was significant but positive. Those students who were married or had been married, who qualified for in-state tuition, and had larger monthly payments were more knowledgeable about interest rates.

None of the sociodemographic variables were significantly related to "knowledge of grace period." Only one variable, residency, was significantly but negatively correlated to "knowledge of month when payment begins." These results indicate that students who paid in-state tuition (as compared to those who paid out-of-state tuition) were more likely to know the month when their loan payment was scheduled to begin.

"Self reported knowledge" variable was significantly but negatively related to three sociodemographic characteristics: sex, residency, and first borrowed. This indicates that females, in-state students, and those who borrowed after 1983 were more likely to report that they were knowledgeable about their student loans. Two variables, age and marital status, were significantly and positively related to "self-reported

TABLE 8
Student's Educational Loan Debt

Category (in dollars)	Frequency	Percentage
Stafford Loans		
\$600-2,499	51	6.7
2,500-4,999	133	17.4
5,000-7,499	137	17.9
7,500-9,999	173	22.7
10,000-12,499	170	22.2
12,500-14,999	87	11.4
15,000-20,000	<u>13</u>	<u>1.7</u>
Total	764	100.0
Mean = 7,874		
Median = 8,000		
National Direct Student Loan/Perkins		
\$200-1,999	145	66.2
2,000-3,999	46	21.0
4,000-5,999	22	10.0
6,000-7,999	3	1.4
8,000-10,000	<u>3</u>	<u>1.4</u>
Total	219	100.0
Mean = 1,880		
Median = 1,300		
University Long Term Loan		
\$500	1	20.0
1,000	2	40.0
1,200	1	20.0
1,600	<u>1</u>	<u>20.0</u>
Total	5	100.0
Mean = 1,060		
Median = 1,000		
PLUS Loan Program		
\$600-2,499	4	30.8
2,500-4,999	8	61.5
5,000-7,499	0	0.0
7,500-9,000	<u>1</u>	<u>7.7</u>
Total	13	100.0
Mean = 3,246		
Median = 3,000		
Supplemental Loan for Students (SLS)		
\$960-999	1	16.7
1,000-1,1999	1	16.7
2,000-2,999	2	33.3
3,000-3,960	<u>2</u>	<u>33.3</u>
Total	6	100.0
Mean = 2,420		
Median = 2,550		
Other education debt		
\$200-1,999	12	38.7
2,000-3,999	12	38.7
4,000-5,999	3	9.7
6,000-8,000	<u>4</u>	<u>12.9</u>
Total	31	100.0
Mean = 2,795		
Median = 2,000		

TABLE 8, continued
Student's Educational Loan Debt

Category (in dollars)	Frequency	Percentage
Total educational debt		
\$750-4,999	166	21.4
5,000-9,999	302	39.0
10,000-14,999	253	32.6
15,000-22,500	54	7.0
Total	775	100.0
Mean = 8,476		
Median = 8,200		
Mode = 10,000 (n = 64)		

knowledge." Older students, and those who were married or had been married, were more likely to report they were knowledgeable about their student loans.

"Knowledge of amount of monthly payment" was significantly and positively related to age and marital status. Older and married or had been married students were more likely to know their monthly payments than those who were younger and had never been married. However, there was a significant but negative relationship between "knowledge of amount of monthly payment" and two sociodemographic variables, residency and when first borrowed. In-state students and those who borrowed before 1983 were more likely to know the amount of monthly payment than those who paid out-of-state tuitions and borrowed after 1983.

The "knowledge index" variable was significantly and positively related to three sociodemographic variables: marital status, employment status and monthly payments; indicating that students who were married or had been married, employed, and had higher monthly payments were more likely to exhibit a higher level of overall knowledge about their student loans. On the other hand, residency and first borrowed variables were significantly but negatively related to "knowledge index." Students who qualified for in-state tuition and who borrowed before 1983 were more likely to have higher overall knowledge about their student loans.

Relationship between Sociodemographic Characteristics and Knowledge of Total Debt

Table 10 presents the results of Analysis of Variance; "F" values for all independent variables are included in this table. The "F" value tests whether the independent variables have a statistically significant effect on the dependent variable. Relatively large "F" values represent strong evidence that the independent variables affect the dependent variable (Agresti and Agresti, 1979, p. 342-343). "P" denotes the attained significance level—the smaller the value, the more statistically significant is the relationship (Agresti and Agresti, 1979, p. 127). Continuous independent variables are called *covariates*, while the categorical independent variables are called *factors* or *main effects* (SPSS Inc., 1986, p. 451).

TABLE 9
Pearson Product-moment Correlations between Sociodemographic Variables and Knowledge Variables

Sociodemographic Variables	Knowledge Variables							Knowledge Index
	Knowledge of First Borrowed	Knowledge of Interest Rate	Knowledge of Grace Period	Knowledge of Month Payment Begins	Self-Reported Knowledge	Knowledge of Amount of Monthly Payment	Knowledge of Monthly Payment	
Age	-.054	.031	-.012	-.022	.129***	.107***	.051	
Sex	.081*	-.079*	-.015	.033	-.106***	-.032	-.065	
Marital Status	-.026	.078*	.010	-.009	.175***	.122***	.091**	
Ethnic Background	-.021	-.023	.005	-.007	-.007	.046	.006	
Residency	-.060	-.108**	-.055	-.098**	-.073*	-.097**	-.142***	
Housing	-.040	.005	-.004	-.026	.053	.059	.009	
GPA	.088*	.020	-.004	-.062	-.018	-.026	-.039	
Employment Status	-.072*	.028	.057	.065	.052	.060	.076*	
First Borrowed	.187***	-.091**	.021	.008	-.127***	-.099**	-.079*	
Monthly Payments	-.152*	.184**	.105	.105	.112	-.012	-.174**	
Expected Salary	-.074	.047	.020	-.008	.072	-.005	.050	

*p < .05.

**p < .01.

***p < .001.

TABLE 10
Analysis of Variance of Total Debt by Selected
Sociodemographic Variables and The Knowledge Index

Source of Variance	Sum of Squares	df	F
Covariates	840,233,100	4	13.63***
Age	146,081,262	1	9.48**
GPA	183,000,564	1	11.88***
Knowledge index	452,571,174	1	29.37***
Expected salary	25,012,971	1	1.62
Main effects	545,447,861	11	3.22***
Area of Major	260,193,141	6	2.81**
Sex	5,414,340	1	.35
Marital status	26,876,605	1	1.74
Residency	64,415,611	1	4.18*
Housing	64,753,125	1	4.20*
Employment status	80,338,635	1	5.21*
Explained	1,625,072,638	15	7.03***
Residual	9,354,324,947	607	
Total	10,979,397,584	622	

*R² = .15

*p < .05, **p < .01, ***p < .001.

R² is the measure of association referred to as the coefficient of multiple determination. The larger the value the better the set of independent variables is collectively in predicting dependent variable. R² can range from 0 to 1 (Agresti and Agresti, 1979, p. 333).

df = degrees of freedom

As seen by the attained significance levels in Table 10, age, GPA, knowledge index, area of major, residency status, housing location, and employment status have significant relationships to the amount of total debt. These results correspond to the one-way analysis of variance and Pearson correlation analysis with one exception. The Pearson correlation resulted in a significant, positive relationship between expected salary and total debt. However, when area of major was included in the model for the analysis of variance, salary was no longer a significant predictor of total debt. These findings are slightly different from those of Holland and Healy (1989). They found that total debt was not significantly influenced by academic ability, age, or anticipated annual income.

The R² from the total debt analysis of variance was 0.15, indicating that the independent variables included in this model explained 15% of the variation in total debt in this study.

Conclusion and Implications

The results of the analysis of variance indicated that several sociodemographic characteristics such as age, area of major, residency status, housing location, employment status, GPA, and knowledge index were significant in explaining variations in total debt. Correlation results show that the knowledge index was significantly related to marital status, employment status, and residency status.

These findings may suggest that older students spent more years in school, therefore incurring more debt to complete their degrees. Nonresidents pay higher tuition and may have to borrow more to meet higher costs. It also appears that the lifestyle choice of living off-campus

and the Financial Aid Office guidelines which allow these students increased borrowing eligibility have caused them to incur more debt than those students living in residence halls. Students who worked may have had a higher need than their nonworking peers, and therefore had to work as well as borrow to meet expenses; or, they may have had additional employment expenses, which may have caused them to borrow more than those students who did not work. It is not clear why students with higher GPAs borrowed more. Those with higher scores on the knowledge index also had higher debt levels. These students were probably more knowledgeable about their loans because they had gone through the borrowing process more often, which increased their understanding of student loans.

“Financial aid administrators are faced with developing financial aid packaging policies that do not put a heavier debt burden on one particular group of students.”

This study has several limitations, the data were collected only from the state of Iowa, and only from Iowa State University. Hence, the generalizability of these results is limited. Furthermore, this study only explored the impact of student characteristics and did not include information on family income.

While an institution-specific bias is recognized as a possible limitation of this study, the results may still have important implications that apply to student loan borrowers nationally. Results of this study also have implications for school officials, lenders, guarantee agencies, federal policymakers, financial counselors, and researchers.

Financial aid administrators are faced with developing financial aid packaging policies that do not put a heavier debt burden on one particular group of students. However, there is a significant difference in debt burden between Iowa residents and nonresidents, and between students living in residence halls and those living off-campus. It may be that students living off-campus borrow more because of high cost of living, or because they are eligible to borrow more due to Financial Aid Office packaging policy.

Whether or not the lack of student loan knowledge influences the default rate, institutions, lenders, guarantee agencies, and the federal government all share in the responsibility for educating students about their student loans. This study provides empirical evidence that documents students' lack of knowledge. Additional information obtained from the survey shows that students are interested in learning more about their student loans. They see the Financial Aid Office and lenders as the primary sources of more information. Because students who borrow the least are least knowledgeable, it is recommended that students receive more in-depth loan counseling when they first borrow. This could be accomplished by financial aid administrators during freshman orientation, or through a seminar for first-time borrowers. Because of the complexity of the student loan programs, it is important that students receive written as well as verbal information.

The information is most effective when it contains information that is student specific, such as previous loans, total amount borrowed, interest rate, grace period, when repayment is expected to begin, and the amount of monthly payments if the student did not borrow any more money. This information should be provided to the student by either the lender or the guarantee agency each time the student borrows;

it is also what is expected to be provided during entrance interviews now required by educational institutions.

Since this study explained only 15% of the variation in total debt, more research is needed which would include other variables to further explain student debt and knowledge levels. Additional variables might include: family background, number of years in college, financial need, and the Financial Aid Office's packaging policy.

Another limitation of this study is that it did not include student borrowers who transferred or left school without graduating. Finally, more research is needed to establish whether the amount of debt with which students are leaving school is burdensome, and what appropriate debt levels are.

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APPENDIX
Guaranteed Student
Loan Survey

Please answer the following questions by circling the appropriate letter or by filling in the blank where appropriate.

1. What is your social security number? _____
2. What degree are you receiving?
 - a. bachelor's
 - b. master's
 - c. doctorate
3. In which college are you enrolled?
 - a. Agriculture
 - b. Business
 - c. Design
 - d. Education
 - e. Engineering
 - f. Family and Consumer Sciences
 - g. Science and Humanities
 - h. Veterinary Medicine
4. What is your age? _____
5. What is your sex?
 - a. male
 - b. female

6. What is your marital status?
 - a. single
 - b. married
 - c. divorced
 - d. separated
 - e. widowed
7. What is your ethnic background?
(optional)
 - a. Caucasian
 - b. Black
 - c. Hispanic
 - d. Asian American
 - e. Native American
 - f. other
8. What is your residency status for the purpose of paying tuition?
 - a. resident
 - b. non-resident
9. Where do you live?
 - a. in Ames
 - b. outside of Ames
10. Where do you reside this semester? (Select one)
 - a. parent's home
 - b. residence hall
 - c. Greek house
 - d. off-campus
 - e. USAC
 - f. other
11. What is your cumulative grade point average? _____
12. While you were in school, did you work during the academic year?
 - a. No . . . Skip to Question 14.
 - b. Yes . . . Go to Question 13.
13. Where did you work?
 - a. on-campus only
 - b. off-campus only
 - c. both on and off-campus
14. When did you first borrow a GSL?
 - a. prior to 1981
 - b. between January 1, 1981 and September, 1983
 - c. after September, 1983
15. Have you ever completely repaid a previous GSL?
 - a. no
 - b. yes
16. What is the interest rate on your most recent GSL?
 - a. 7%
 - b. 8%
 - c. 9%
 - d. don't know
17. How long is your grace period?
 - a. 6 months
 - b. 7 months

- c. 8 months
 - d. 9 months
 - e. don't know
18. When will your GSL repayment begin?
- a. June
 - b. July
 - c. August
 - d. September
 - e. October
 - f. November
 - g. December
 - h. January
 - i. February
 - j. March
 - k. April
 - l. May
 - m. don't know
19. What is your total debt from loans you took out to meet your educational expenses?
- | | |
|--------------|----------|
| GSL | \$ _____ |
| NDSL/Perkins | \$ _____ |
| ULTL | \$ _____ |
| PLUS | \$ _____ |
| SLS/ALAS | \$ _____ |
| HEAL | \$ _____ |
| HPL | \$ _____ |
| other | \$ _____ |
20. Do you know approximately how much your monthly student loan repayments will be?
- a. No . . . Skip to Question 22.
 - b. Yes . . . Go to Question 21.
21. How much will your monthly repayments be?
- \$ _____
22. What do you anticipate your annual starting salary to be?
- \$ _____
23. Which statement do you feel best describes your knowledge of your student loans?
- a. I know nothing.
 - b. I know very little.
 - c. I know some.
 - d. I'm fairly knowledgeable.
 - e. I'm very knowledgeable.
24. How interested would you have been in learning more about your student loans prior to this exit interview?
- a. not at all interested
 - b. not interested
 - c. somewhat interested
 - d. interested
 - e. very interested

25. Which method do you feel would be the best way to learn more about your student loans?
 - a. self-study of brochures
 - b. elective seminars
 - c. elective class for credit
 - d. required credit course
 - e. individual counseling
 - f. other _____
26. What source would you choose first to learn more about your loan repayments?
 - a. financial aid office
 - b. lender
 - c. Iowa College Aid Commission
 - d. friend
 - e. parent or relative
 - f. other
27. How important do you feel it is to be knowledgeable about your student loan?
 - a. very unimportant
 - b. somewhat unimportant
 - c. neutral
 - d. somewhat important
 - e. very important

Thanks for completing the survey! Please pass it to the front when you are finished.