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ABSTRACT

This report analyzes data from the National Postsecondary Student Aid Study for 1992-93 and 1995-96. The study found that students have turned increasingly to borrowing to cope with rising education costs. The percentage of postsecondary students who borrowed to complete a bachelor's or lower degree increased from 41 percent in 1992-93 to 52 percent in 1995-96 and the average amount of debt per graduating senior who had borrowed rose from $10,100 to about $13,300. The percentage of graduates with $20,000 or more of student debt grew from 9 percent to 19 percent during the period. Students attending 4-year public institutions showed the largest increase in the number of borrowers. Higher borrowing levels were especially pronounced at professional schools, where average debt among borrowers climbed from $45,000 in 1992-93 to nearly $60,000 in 1995-96. Additionally, more than two-thirds of full-time undergraduate students held jobs during 1995-96, working an average of 23 hours a week while enrolled. Tables, graphs, and narrative present the detailed data supporting these conclusions. Four appendices present: a description of the study's scope and methodology, additional data concerning postsecondary education debt and work during periods of enrollment, analyses of undergraduate work and borrowing patterns, and additional information on variation in average cumulative borrowing and work patterns among undergraduates. (DB)

United States General Accounting Office

GAO

Report to the Honorable
Carol Moseley-Braun, U.S. Senate



bruary 1998

# HIGHER EDUCATION

# Students Have Increased Borrowing and Working to Help Pay Higher Tuitions




HEHS-98-63

GAO

**United States**
**General Accounting Office**
**Washington, D.C. 20548**

**Health, Education, and**
**Human Services Division**

B-278947

February 18, 1998

The Honorable Carol Moseley-Braun
United States Senate

Dear Senator Moseley-Braun:

In August 1996 we reported that tuition increases at 4-year public colleges had outstripped increases in household income,[1] and parents and others were questioning how students and their families would find the money to pay for school. We reported, for example, that tuition increased 234 percent from school year 1980-81 through 1994-95, in contrast to median household income, which rose 82 percent during this period. Recent sharp increases in the annual volume of new federal student loans suggest that the cumulative amounts of student debt may be rising as well. In response to this concern, you asked us to answer the following questions:

- What changes have occurred in recent years in the percentage of undergraduate and graduate/professional students who borrow and in the cumulative amount of their borrowing?[2]
- What changes have occurred in the percentage of undergraduate and graduate/professional students who work and the number of hours they work?
- How do undergraduate borrowing and work patterns differ by type of school, year in school, dependency status, family income, and race/ethnicity?
- What information is available concerning the amounts of education debt parents incur?

Our review was based in large part on our analysis of data collected by the Department of Education as part of the National Postsecondary Student Aid Study (NPSAS).[3] We focused our analysis primarily on two academic or

[1]See Higher Education: Tuition Increasing Faster Than Household Income and Public Colleges' Costs (GAO/HEHS-96-154, Aug. 15, 1996).

[2]We identify "professional" students as those seeking professional degrees at, for example, law schools or medical schools, excluding students who have already received their first professional degree.

[3]NPSAS is a Department of Education survey done periodically of a nationally representative sample of all students in postsecondary education institutions, and it includes questions about how students and their families pay for this education.

student years: 1992-93 and 1995-96.[4] We focused on 1995-96 because it was the most recent year for which data were available. We chose 1992-93 for a comparison because it (1) predated the most recent round of increases in maximum limits on the amounts of loans available through the government's major student loan programs, and (2) like 1995-96, was a year in which the Department identified students who had graduated from their academic programs. The use of these survey data allowed us to estimate averages for the student population as a whole, as well as narrow the comparison to groups that had completed their educational programs. Appendix I describes our methodology in further detail. Appendix II provides additional data, including confidence intervals, for the estimates presented.

## Results in Brief

Over the past several years, students have turned increasingly to borrowing to cope with rising education costs. At the undergraduate level, the percentage of postsecondary students who had borrowed by the time they completed their programs (received a bachelor's degree, associate degree, or award or certificate) increased from 41 percent in 1992-93 to 52 percent in 1995-96, and the average amount of debt per student increased from about $7,800 to about $9,700 in constant 1995-96 dollars.[5] For graduating seniors (recipients of bachelor's degrees) and who had borrowed, the average rose from about $10,100 to about $13,300. And the portion of these graduates with $20,000 or more of student debt grew from 9 percent to 19 percent during the period.

Students attending 4-year public institutions showed the largest increase in the number of borrowers. Sixty percent of seniors graduating from these schools in 1995-96 borrowed at some point in their program, up from 42 percent in 1992-93 and about even with the percentage of borrowers at private 4-year schools. Students at 2-year public institutions borrowed least often and in lesser amounts. At the graduate and professional levels, the picture is somewhat mixed, but in general the percentage of borrowers and the level of debt increased. Higher borrowing levels were especially pronounced at professional schools, where average debt among borrowers

[4]The Department's NPSAS for 1992-93 covered students enrolled at any time during school terms that began between May 1, 1992, and April 30, 1993. Similarly, the 1995-96 NPSAS survey covered students enrolled during school terms that began between May 1, 1995, and April 30, 1996.

[5]These are estimates of cumulative borrowing (not just federal student loans) by undergraduate students who completed programs (including associate degree, award, and certificate programs) during 1995-96. Unless otherwise noted, all dollar figures shown in this report are expressed in constant 1995-96 dollars.

completing their programs climbed from about $45,000 in 1992-93 to nearly $60,000 in 1995-96.

More full-time undergraduates worked while attending school in 1995-96 than in 1992-93. More than two-thirds of full-time undergraduate students held jobs during 1995-96, working an average of 23 hours a week while enrolled. At graduate and professional schools, the percentage of full-time students who worked changed little over the same period. About two-thirds of master's and doctoral students worked, usually in part-time jobs directly related to their field of study. At professional schools, less than half worked while enrolled.

Some variations in borrowing and work patterns can also be seen on the basis of the cost of attendance, dependency status,[6] family income, and gender. However, most characteristics are not very strong predictors of how much undergraduates were likely to borrow or work.

Little information is available about amounts of debt parents accumulate in order to pay for their children's postsecondary education. The information we reviewed—which is also used by others within the education community—was obtained from NPSAS, the University of Michigan, and the Federal Reserve Board. In general, household debt for education (primary, secondary, or postsecondary) remains a small share of household debt.

## Background

The 1985 through 1995 period saw an increase in both the number of college students and the proportion of the college-aged population in colleges, universities, training schools, and other postsecondary institutions. In 1995, more than 34 percent of all 18- to 24-year-old U.S. residents were attending postsecondary schools, compared with slightly less than 28 percent in 1985. Many who attend also plan to stay longer: Two-thirds of college freshmen now intend to go beyond a baccalaureate degree, compared with about half in 1980. In part, this interest in postsecondary education likely reflects students' recognition that such education is associated with higher incomes later in life. Bureau of the Census statistics indicate that, on average, households headed by persons

[6]The Higher Education Act of 1965, as amended, identifies students as independent if any of the following apply: The student (1) is 24 years of age or older, (2) is married, (3) is a graduate or professional student, (4) has legal dependents other than a spouse, (5) is an orphan or ward of the court, (6) is a veteran, or (7) is determined and documented by his or her financial aid administrator to be independent because of other unusual circumstances. If none of these apply, the student is classified as dependent.

with bachelor's degrees have average incomes nearly 70 percent higher than households headed by persons with no more than high school diplomas. Households with a member that has a professional degree have incomes that average about three times those of households in which members' highest certificate is a high school diploma.

As the number of students has increased, so has the size of the government's student loan programs. By the end of fiscal year 1996, the estimated outstanding amount of loans provided by the Department of Education's two largest loan programs,[7] the principal sources of loans for postsecondary education, had reached $112 billion, up from $91 billion a year earlier and from $65 billion in 1990, in constant 1995-96 dollars. The Higher Education Amendments of 1992 increased the maximum amount that students could borrow. For example, the limit for graduate and professional students rose from $74,750 to $138,500 (in current dollars, including both graduate and undergraduate loans).

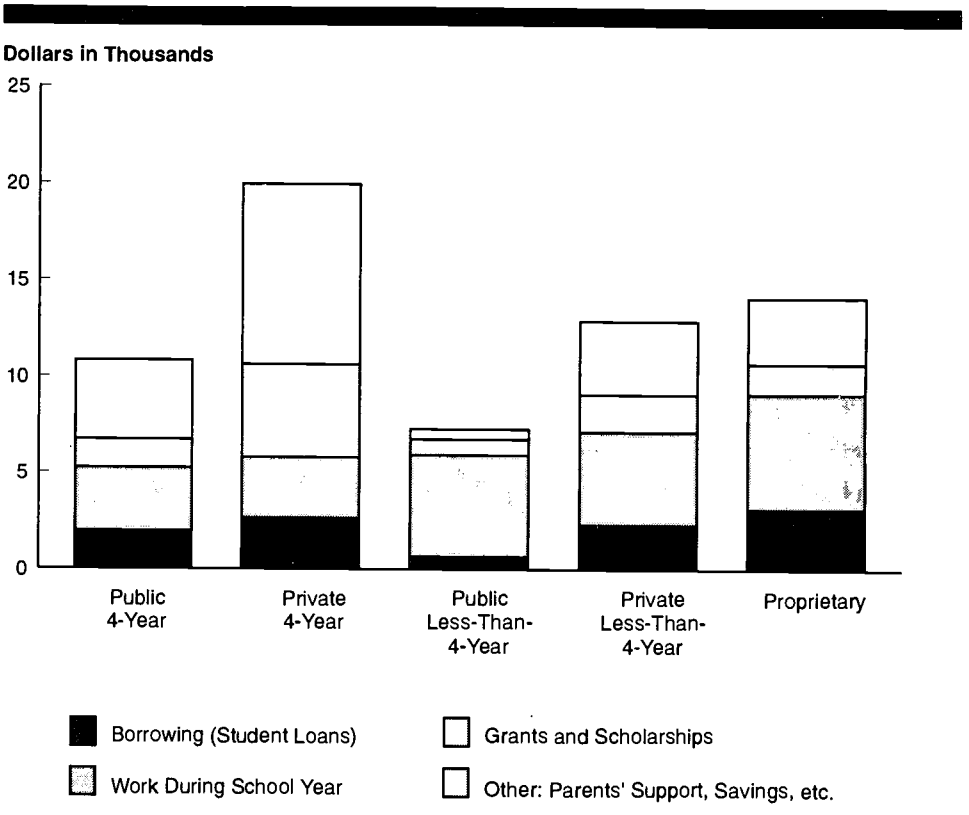
Borrowing and working both play significant roles in how students pay for their education. Figure 1 shows how an "average" full-time student met the cost of his or her education at various types of postsecondary institutions in school year 1995-96.[8] Together, borrowing and working constituted more than half of the amount of funds students needed to pay their cost of attendance at all types of schools, except private 4-year schools.[9]

[7]These are the William D. Ford Federal Direct Loan Program (FDLP) and the Federal Family Education Loan Program (FFELP). Under FDLP, students obtain loans from schools, which use federal funds to make them. Under FFELP, students obtain loans from private lenders, such as banks, with the Department of Education ensuring that lenders will receive payment if students default.

[8]We estimated average costs for all undergraduate students, whether or not they borrowed or worked while enrolled.

[9]"Cost of attendance" includes tuition, required fees, room, board, transportation, books, and supplies.

**Figure 1: Role of Borrowing and Working in Paying Cost of Attendance for an "Average" Full-Time Undergraduate for a School Year, by Type of School, 1995-96**




Note: The height of each stacked bar represents the estimated average budgeted cost of attending each type of school full time for a full academic year. Costs vary by school and by students' dependency and residence status (whether they live with their parents, for example). Although many students at proprietary schools (for-profit, vocational schools) and public and private less-than-4-year schools were enrolled in programs less than a school year in length, for comparison, we show the estimated cost as if all students were attending a proprietary school for a full school year (8 to 9 months). The estimates are based on data from NPSAS.

While this "average" view is instructive as a way to see the general role of student borrowing and working patterns, it does not show the wide range of methods students use to finance college. Some students do not borrow or work at all, while others earn more than enough to cover the cost of attending college. To provide a more complete picture, our report focuses on those students who borrow and those who work, showing the annual and cumulative amounts of their borrowing and the number of hours worked per week while they were enrolled.

## More Students Are Borrowing in Generally Larger Amounts

The proportion of students who borrowed to finance the cost of postsecondary education increased between school years 1992-93 and 1995-96, and the amounts they borrowed increased, after taking inflation into account. In general, this was true for both undergraduates and graduate and professional students.

### Borrowing Trends for Undergraduates

An increasing percentage of undergraduates in all types of programs turned to borrowing to finance part of their education. To provide as complete a picture as possible of how students used borrowing during their entire period of enrollment, we focused our analysis on undergraduates who had completed their 2-year, 4-year, or other programs in 1992-93 and 1995-96.[10] In 1992-93, 41 percent of undergraduates who completed their programs had borrowed in 1 or more years. By 1995-96, this number had risen to 52 percent. The percentage varied, however, by type of degree or certificate, with the greatest increase in the group receiving bachelor's degrees (see table 1).

**Table 1: A Greater Portion of Undergraduates Are Borrowing in All Types of Programs, With Students Seeking Bachelor's Degrees Borrowing More, School Years 1992-93 and 1995-96**

| | Percentage of recipients borrowing in 1 or more years | | Average total principal borrowed[a] | |
|---|---|---|---|---|
| Degree/award received | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| Certificate or award | 39 | 53 | $5,171 | $5,597 |
| Associate degree | 34 | 42 | 5,580 | 5,059 |
| Bachelor's degree | 46 | 60 | 10,080 | 13,269 |

[a]Dollars are adjusted for inflation to 1995-96 values.

The average amount borrowed by undergraduates completing their program (excluding those who had not borrowed) rose from about $7,800 to about $9,700 over the 1992-93 to 1995-96 period, after adjusting for inflation. The amounts borrowed by those receiving bachelor's degrees in 1995-96 were the highest. Among bachelor's degree recipients, the portion of students who had borrowed $20,000 or more for the 1992-93 through 1995-96 time period rose from about 9 percent to about 19 percent of graduating seniors who had borrowed; see table 2. (See tables II.2, II.3, and II.4 for supporting data, including confidence intervals (degree of precision) for the estimates.)

[10]Graduates of proprietary schools generally receive certificates or awards; graduates of public less-than-4-year schools generally receive associate degrees, and graduates of 4-year schools generally receive bachelor's degrees.

**Table 2: Many More Graduating Seniors Accumulated $20,000 or More of Debt, School Years 1992-93 and 1995-96**

| | Estimated percentage of graduating seniors who had borrowed $20,000 or more | |
|---|---|---|
| **Type of school** | **1992-93** | **1995-96** |
| Public 4-year | 6 | 16 |
| Private 4-year | 15 | 25 |
| **Total[a]** | **9** | **19** |

[a]Totals include graduating seniors at proprietary institutions.

The most substantial increases in the number of graduating students who borrowed occurred at public schools. At 4-year public schools, the percentage of graduating seniors who borrowed in 1 or more years rose from 42 percent in 1992-93 to 60 percent in 1995-96 (see table 3.) This increase eliminated the earlier difference between public and private 4-year schools in the percentage of students borrowing in 1 or more years—public school students "caught up" to private school students in terms of the percentage of the group that borrowed. Students at private schools, however, still borrowed larger amounts during both school years. Students graduating from public schools offering less than 4-year degrees also borrowed in substantially higher numbers, although the average amount borrowed changed little after taking inflation into account.

**Table 3: Greatest Percentage Increase in Borrowers Has Come at Public Schools, While Dollar Amounts Are Still Greatest at 4-Year Private Schools, School Years 1992-93 and 1995-96**

| | Percentage of program completers borrowing in 1 or more years | | Average total principal borrowed[a] | |
|---|---|---|---|---|
| **Type of school** | **1992-93** | **1995-96** | **1992-93** | **1995-96** |
| Public 4-year | 42 | 60 | $8,536 | $11,554 |
| Private 4-year | 50 | 58 | 12,016 | 15,559 |
| Public less-than-4-year | 28 | 38 | 4,959 | 4,009 |
| Private less-than-4-year | 53 | 53 | 5,848 | 8,129 |
| Proprietary | 63 | 73 | 6,318 | 6,718 |

[a]Dollars are adjusted for inflation to 1995-96 values.

## Borrowing Trends for Students in Graduate and Professional Schools

In the aggregate, borrowing by graduate and professional students also increased. In 1992-93, about 55 percent of graduate and professional students who completed their degrees had borrowed in 1 or more years, and those who had borrowed had a cumulative debt (for graduate,

professional, and undergraduate education) averaging $16,990.[11] By 1995-96, about 62 percent of this group borrowed, and their cumulative debt averaged $24,340.

Students in professional programs were the most likely to borrow and had the highest levels of debt. For 1995-96, students completing professional programs had an average debt of $59,909, and the percentage of students who borrowed more than $50,000 had increased from 34 percent to 60 percent.[12] (See table 4.)

**Table 4: Most Students in Graduate and Professional Programs Borrow, With Increased Debt Concentrated Mainly Among Students Receiving Professional Degrees, School Years 1992-93 and 1995-96**

| | Percentage of recipients borrowing in 1 or more years | | Average total principal borrowed[a] | | Percentage of borrowers with principal of $50,000 or more | |
|---|---|---|---|---|---|---|
| Type of program | 1992-93 | 1995-96 | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| Master's | 55 | 63 | $12,870 | $19,245 | 2 | 7 |
| Doctoral | 56 | 59 | 22,973 | 18,045 | 8 | 9 |
| Professional | 79 | 73 | 45,100 | 59,909 | 34 | 60 |

[a]Dollars are adjusted for inflation to 1995-96 values.

## Postsecondary Students Typically Worked While Enrolled

Changes in students' employment have been less pronounced than changes in borrowing. Compared with 1992-93, the percentage of full-time undergraduate students who worked while attending school rose slightly, while the percentage of graduate and professional students who worked generally declined. Among those who worked, the average number of hours remained relatively steady.

### Work Trends for Undergraduates

Most full-time undergraduate students worked during the school year in both 1992-93 and 1995-96. The percentage of full-time students who worked rose in all three program categories—certificate or award,

[11]Except where otherwise indicated we analyzed (1) debt for all students who had completed their programs and (2) work patterns for all full-time, full-year students, whether or not they completed their program during NPSAS' survey year.

[12]Cumulative debt for graduate and professional students includes undergraduate loans. Because of heavy borrowing by some students in professional programs, median values would be more representative of the typical amount borrowed; however, data were not available for us to develop these estimates.

associate degree, and bachelor's degree.[13] Overall, during 1995-96 more than two-thirds of full-time undergraduates worked while enrolled. On average, undergraduates worked 23 hours per week; however, this varied considerably by program, with students in associate and certificate or award programs working the most. The average number of hours worked per week did not change appreciably from 1992-93, although it rose somewhat among students completing associate degree programs. (See table 5.)

**Table 5: A Greater Proportion of Undergraduates in All Types of Programs Worked, With Hours Worked Remaining Steady, School Years 1992-93 and 1995-96**

| | Percentage of full-time students who worked while enrolled | | Average number of hours worked per week | |
|---|---|---|---|---|
| **Program completed** | **1992-93** | **1995-96** | **1992-93** | **1995-96** |
| Certificate or award | 56 | 71 | 28 | 26 |
| Associate degree | 72 | 76 | 25 | 27 |
| Bachelor's degree | 61 | 72 | 20 | 21 |

At 4-year and proprietary schools, the percentage of full-time, full-year undergraduates who worked during the 1995-96 school year was substantially higher than the percentage who worked in 1992-93. (See table 6.) Average hours worked per week did not change significantly. (See tables II.6, II.7, and II.8.)

**Table 6: A Greater Proportion of Undergraduates Attending All Types of Schools Worked, With Hours Worked Little Changed, School Years 1992-93 and 1995-96**

| | Percentage of full-time undergraduates who worked while enrolled | | Average number of hours worked per week | |
|---|---|---|---|---|
| **Type of school** | **1992-93** | **1995-96** | **1992-93** | **1995-96** |
| Public 4-year | 62 | 71 | 21 | 22 |
| Private 4-year | 60 | 73 | 18 | 19 |
| Public less-than-4-year | 71 | 77 | 25 | 27 |
| Private less-than-4-year | 63 | 67 | 24 | 26 |
| Proprietary | 55 | 70 | 30 | 30 |

## Work Trends for Graduate and Professional Students

Students in master's and doctoral programs in school year 1995-96 were more likely to work, and to work more hours per week, than were students in professional programs. Working students in professional

[13]Although student employment levels rose from 1992-93 to 1995-96, NPSAS data we reviewed from 1989-90 showed employment levels closer to the 1995-96 rates, suggesting that the percentage of students who work may be affected by factors other than the price of education, such as job availability. For example, during 1992-93, the national unemployment rate was about 30 percent higher than in 1995-96.

programs averaged about 20 hours of work a week, while those in master's and doctoral programs averaged about 25 to 30 hours per week. Many of these students held jobs in their field of study, such as teaching or research assistance. About 80 percent of full-time doctoral students who worked while enrolled said they held positions directly related to their studies, compared with about 63 percent of students in master's programs and about two-thirds of students in professional programs. However, even though more students in master's and professional programs worked in off-campus jobs than did doctoral students, most of them still regarded their jobs as closely related to their field of study. (See table 7.)

**Table 7: Graduate Students More Likely to Work and Work More Hours per Week Than Students in Professional Programs, School Years 1992-93 and 1995-96**

| | Percentage of full-time students working during the school year | | Average number of hours worked per week | |
|---|---|---|---|---|
| | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| Master's | 72 | 69 | 24 | 26 |
| Doctoral | 64 | 68 | 25 | 29 |
| Professional | 48 | 43 | 18 | 20 |

## Work and Borrowing Patterns Varied Considerably for Some Groups

To gain a better understanding of student work and borrowing patterns during school year 1995-96, we analyzed amounts borrowed and hours worked by several factors, including type of school, cost of attendance, year in school, dependency status, gender, family income, race/ethnicity, cost of attendance, and expected family contribution. We focused this analysis on undergraduate students because the data for graduate and professional students did not produce statistically meaningful results when divided into many of the categories and subcategories we analyzed. (See app. III for further details on our analyses.)

### Variations in Borrowing

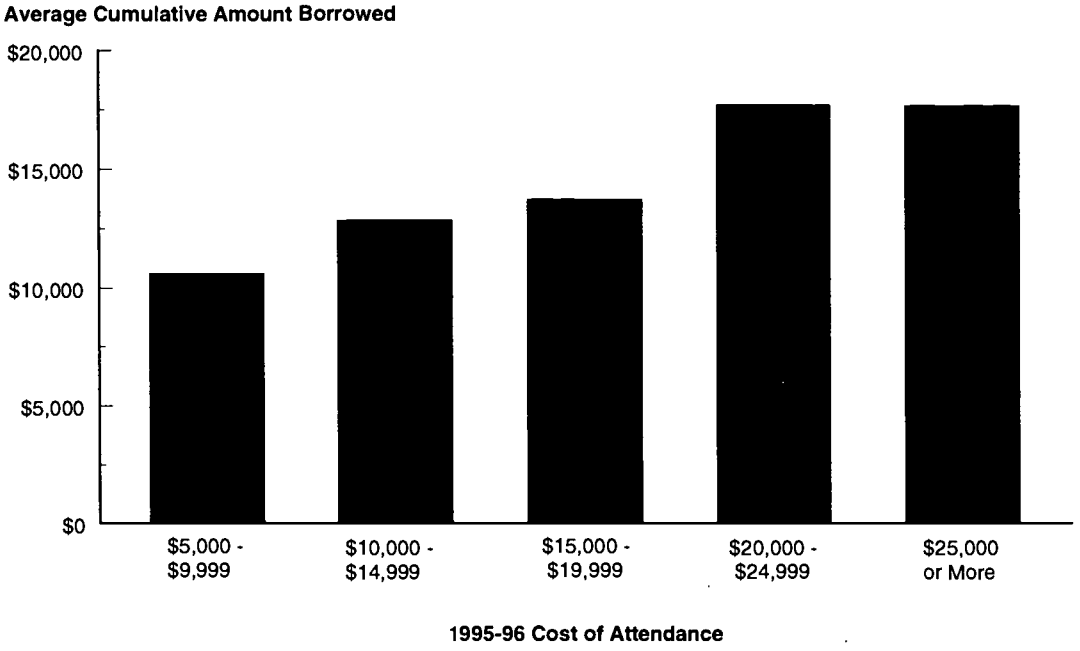
To help identify the relationships between the various factors selected for analysis, we conducted a series of regression analyses. Regression analysis is a statistical technique that can analyze many factors at the same time and estimate their relationship to a given outcome. In this case, our analyses were directed at determining what factors, if any, help predict the amount of money that students borrowed.

Our results indicated that none of the factors we examined are strong predictors of the amount of student borrowing. Not surprisingly, the most influential factor that emerged from our analyses was the cost of the

school attended. However, this factor accounted for only about 11 percent of the difference in the amounts of borrowing that occurred, after controlling for other factors. Several factors that helped account for smaller portions of the variation in amounts borrowed were the student's class level (freshmen, sophomore, junior, or senior), the amount of grant aid received, and whether the student was independent. Other factors included in the analysis (type of school, race/ethnicity, adjusted gross family income percentile, expected family contribution, and hours worked per week while enrolled) accounted for little, if any, variation. Together, all of the factors we examined accounted for about 31 percent of the variation in the amounts borrowed.

The relationship we saw in the regression analysis between the cost of the school attended and the amounts borrowed is also apparent in comparing graduating seniors' average cost of attendance for 1995-96 and the average cumulative amount of their borrowing. As shown in figure 2, seniors whose annual school costs were $20,000 or more borrowed an average cumulative amount of about $18,000. In contrast, the comparable amount borrowed was about $11,000 for those whose annual school costs were between $5,000 and $9,999.

**Figure 2: Variation in the Average Cumulative Amount That 1995-96 Graduating Seniors Borrowed, by Cost of Attendance**




Appendix IV has additional data on variations in the average cumulative amounts borrowed by undergraduates and variations in the proportion who borrowed in 1 or more years as undergraduates. For example, appendix IV shows variations in these factors by student year in school, by race/ethnicity, and by parental income.

## Variations in Work Patterns

As with borrowing, we conducted a regression analysis to determine which factors, if any, would be strong predictors of how much students will work. We used the same list of factors as we did for borrowing, but in this case, different factors emerged as important.

Dependency status and type of school accounted for little of the variation in hours worked (3.1 percent and 2.5 percent, respectively). Of students who worked, those who worked more hours tended to be the independent students. On average full-time, full-year independent students who were employed while enrolled worked about 28 hours per week, compared with

an average of about 21 hours for their dependent counterparts. (See table II.10 for further details.)

Other factors included in our regression analysis each accounted for less than 1 percent of the variation in hours worked. (For additional data on variation in work patterns, see apps. III and IV.)

## Little Information Available on Parental Debt for Children's Education

In contrast with the substantial amount of information about students' own borrowing experiences, little information is available about the amounts that parents borrow to pay for their children's postsecondary education. In general, studies that provide data on parents' education debt were dated or limited in scope, and they often failed to differentiate between postsecondary education debt and other types of education debt. We found three studies that come closest to describing the debt parents incur for their children's postsecondary education. Of these, the Department of Education's work contained the most useful information.

### Information From the Department of Education

The best available data are in the Department of Education's NPSAS, which we used as the basis for information on student borrowing and work patterns. As part of this survey, which is conducted periodically, the Department collected some information through telephone interviews with samples of parents.

However, changes in NPSAS questions included in its 1995-96 survey did not provide similar data that allowed for comparisons with earlier survey results. The most recent NPSAS (1995-96) included parents' responses related only to certain groups of undergraduates, such as dependent students who did not receive financial aid or those whose schools' files did not include parents' adjusted gross income. Since such a sample of parents would not be representative of parents of all undergraduates, estimates based on responses from that year's survey are not included here.

The 1992-93 NPSAS provided a more wide-ranging sampling of parents selected to represent a group of graduating seniors. Parents of between 8 and 11 percent of seniors under 24 years of age who graduated in 1992-93 reported borrowing to help finance their child's education during 1992-93. The average amount parents borrowed for these seniors for 1992-93 was between $10,734 and $14,553. Sources of borrowing included home equity loans, home equity lines of credit, signature loans, state- or

school-sponsored parent loans, loans against life insurance policies and retirement funds, commercial loans, and federal PLUS loans.[14]

Parents have borrowed a rapidly increasing amount of loan funds through the Department of Education's PLUS program. Parents of about 5 percent of dependent undergraduate students participated in this program during 1995-96, about the same portion as in 1992-93. Among dependent students who graduated as seniors in 1995-96, about 10 percent had parents who had used the program during 1 or more years of their child's postsecondary schooling. The average cumulative amount they borrowed was about $9,748. NPSAS results indicate that the average was about $9,022 for parents of students at public 4-year schools and $10,673 for those at private 4-year schools.

Amounts of PLUS borrowing have also risen in recent years, reflecting the influence of higher loan limits. According to the Department, the average amount of these loans increased by about 55 percent (from $3,588 to $5,556 in constant 1995-96 dollars) over the 1992-93 to 1995-96 period. In the Higher Education Amendment of 1992, limits on the amount of PLUS loans were lifted. Currently, eligible parents may borrow, regardless of financial need, up to their student's cost of attendance, less the amount of other financial aid received.

## Other Survey Data

Other survey data suggest that education has been an important use of funds obtained from home equity loans. Excluding first mortgages, U.S. home equity debt totaled about $255 billion in 1993, $110 billion of which was in home equity lines of credit and $145 billion in traditional home equity loans.[15,16] According to a school year 1993-94 survey by the University of Michigan, among borrowers using home equity lines of credit, about 21 percent indicated that some or all of these loan funds were used for education, up from 18 percent in 1988.[17] Among borrowers using traditional equity loans, about 7 percent indicated that some or all of the funds were used for education, up from 5 percent in 1988.[18] The survey did not indicate what portion of these funds went for children's

[14]Federal PLUS loans are also referred to as federal Parent Loans for Undergraduate Students.

[15]These are Federal Reserve Board estimates.

[16]Unlike other dollar amounts in this report, these numbers from the Federal Reserve Board have not been adjusted for inflation.

[17]The confidence intervals for these estimates are 15 to 27 percent and 11 to 25 percent, respectively.

[18]The confidence intervals for these figures are 2 to 12 percent and 1 to 9 percent, respectively.

postsecondary education and how much may have been used for other educational uses, such as private elementary or secondary schools.

The Federal Reserve Board's surveys of U.S. households indicate that education debt was about 1.9 percent of U.S. household debt in 1989 and about 2.5 percent in 1992 and 1995. However, the surveys are not designed to capture parents' debt for their children's postsecondary education. The survey does not make a distinction between debt for postsecondary education and debt for elementary and secondary education, nor does it distinguish between debt owed by parents for a child's education and debt owed by parents for their own education.

## Agency Comments

The Department of Education reviewed a draft of this report and had no formal comments, although it provided several technical suggestions that we incorporated as appropriate.

We are sending copies of this report to the Secretary of Education, appropriate congressional committees, and other interested parties.

Please call me at (202) 512-7014 if you or your staff have any questions regarding this report. Major contributors included Joseph J. Eglin, Jr., Assistant Director; Charles M. Novak; Benjamin P. Pfeiffer; and Dianne L. Whitman-Miner.

Sincerely yours,

Carlotta C. Joyner
Director, Education
and Employment Issues

# Contents

# Tables

## Figures

## Abbreviations

| | |
|---|---|
| FDLP | William D. Ford Federal Direct Loan Program |
| FFELP | Federal Family Education Loan Program |
| NPSAS | National Postsecondary Student Aid Study |
| PLUS | Parent Loans for Undergraduate Students |

# Scope and Methodology

To analyze working and borrowing patterns among postsecondary students, we reviewed literature and data from the Department of Education and other sources, such as various professional associations. The data we analyzed included the Department of Education's periodic National Postsecondary Student Aid Study (NPSAS), the Federal Reserve Board's Survey of Consumer Finances, Claritas Inc.'s (a private research firm) survey on use of credit cards, and the University of Michigan's National Survey of Home Equity Loans. In connection with this effort, we also interviewed Department of Education officials and staff of professional associations and the Federal Reserve Board.

The Department's NPSAS addresses how students and their families pay for postsecondary education and involves nationally representative samples of all students in postsecondary institutions. In 1995-96, for example, the Department selected a sample of over 950 institutions and about 50,000 students. The researchers gathered data about students from schools' institutional records and the Department's records (including financial aid applications and the National Student Loan Data System). They also gathered information by telephoning a subsample of about 27,000 undergraduates and about 4,000 graduate and professional students.

## Data Used for Assessing Undergraduates' Borrowing and Work Patterns

We focused our analysis on the average amounts of borrowing and average cumulative debt reported in the NPSAS for school years 1992-93 and 1995-96.[19] Unless otherwise indicated, the term "debt" in this report refers to the cumulative total of the principal amounts borrowed by students for undergraduate education (borrowing for all the costs of attendance, including room and board). The data on the amount of students' cumulative debt were self-reported and, according to the Department's NPSAS project officer, the extent to which it includes credit card debt is unknown. The portion of college students with credit cards rose from about one-half to about two-thirds from 1990 to 1996, according to a study by Claritas Inc. The estimated aggregate average balance grew from about $900 in 1990 to about $2,250 in the third quarter of 1997. (These amounts have not been adjusted for inflation, and Claritas Inc. did not provide confidence intervals for these numbers.)

[19]The median amount borrowed (the amount at which half of the borrowers had larger amounts and half had lower amounts) may differ from the average amount borrowed by group. Because they are less susceptible to being skewed by students who borrow at the highest levels, median amounts borrowed is preferable to averages. However, it was not feasible for us to develop estimates of median values because the Department has not published median amounts borrowed and the data analysis system it provides does not provide functions for the computation of medians.

Average annual amounts of borrowing came from NPSAS analysis of school records for over 50,000 undergraduate students and Department of Education records for students with federal student loans. Data on cumulative debt came from telephone surveys of about 27,000 respondents to NPSAS telephone surveys. About 1,500 of these were graduating seniors. The 1989-90 NPSAS survey did not identify students who completed their degree program in that year, so we limited our analysis of those data to a comparison of 1992-93 and 1995-96 survey results.[20] We did use the 1989-90 survey as a point of comparison for the overall portion of undergraduates who worked while enrolled.

Similarly, we focused our analysis of undergraduate students' work patterns on students included in NPSAS' 1992-93 and 1995-96 surveys who enrolled as undergraduates for their first term during the May 1 through April 30 time period, and attended full-time for a full year (9 months).[21,22]

To assess the number of hours worked by undergraduate students while enrolled, we used NPSAS for 1992-93 and 1995-96. These data came from a computer-aided telephone interview.

To assess parents' borrowing for their child's postsecondary education, we used parent responses to NPSAS' 1992-93 survey, Federal Reserve Board data from its Survey of Consumer Finances for 1995, and the University of Michigan's National Survey of Home Equity Loans.

[20]Estimates for 1992-93 were not strictly comparable with those for 1995-96, because the researchers assumed that the amount a student borrowed from parents, relatives, or friends was $0 if the sampled student was not interviewed. For 1995-96, we weighted the estimates to include only sampled students who were interviewed. Comparable weights were not available for 1992-93.

[21]Although NPSAS' 1995-96 survey broadened the definition of full-year students to include those who were enrolled for 8 months, we retained the 9-month definition in order to provide data that are consistent with data from prior surveys.

[22]To evaluate employment trends, we used a somewhat different group than we had used to evaluate borrowing. Instead of focusing on students who graduated in 1992-93 or 1995-96 (so that we could analyze their borrowing history over several years), we based this analysis on all students who attended school full time during 1992-93 or 1995-96. To maintain our focus on full-time students, we excluded those students who attended only part time or who did not attend for the full school year. Our estimates are for students employed at some point during the year.

## Data Used for Assessing Graduate and Professional Borrowing and Work Patterns

Our analysis of graduate and professional students included those in NPSAS who were enrolled in a postbaccalaureate program that began between May 1 and April 30 in the 1992-93 or 1995-96 NPSAS years.[23] Data on hours worked while enrolled came from NPSAS telephone interviews with about 4,000 students. We limited our analysis of hours worked and earnings to those who were enrolled full time for a full year (9 months). Data on cumulative borrowing came from NPSAS telephone interviews of about 2,800 graduate students and about 1,200 professional students.

Because we were unable to identify students who were in the last year of their graduate or professional degree program in school year 1989-90 or who completed their degree during that year, we limited our analysis of graduate and professional degree students' cumulative debt to 1992-93 and 1995-96.

## Statistical Tests

Analysts use various statistical techniques to help evaluate the relative strength of relationships that can be found in sets of data. To calculate confidence intervals for survey results, we used standard errors provided by the Department and a 95-percent confidence interval.[24] Similarly, we tested for the statistical significance of differences between groups using t-tests and a $p = 0.05$ criterion.

To further assess statistical relationships between variables discussed in this report, we performed two linear regression analyses with the following dependent variables: (1) the amount undergraduates borrowed for 1995-96 and (2) the average hours full-time, full-year undergraduates worked per week while enrolled during 1995-96.

## Constant Dollar Calculations

To indicate the extent to which borrowing and debt have changed at a rate faster or slower than changes in consumer prices, we analyzed levels of cumulative borrowing in constant 1995-96 dollars. To calculate constant

[23]Students identified as "professional" were first professional students in programs leading toward degrees in chiropractic therapy, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

[24]The Federal Reserve Board did not publish confidence intervals for its estimates, but indicated that they are "subject to a fairly wide margin of error."

1995-96 dollars we used the Bureau of Labor Statistics' Consumer Price Index for all urban consumers.[25]

We conducted our work from April to December 1997 in accordance with generally accepted government auditing standards. Because the Department uses several methods to check and review NPSAS data and these data are widely relied upon in the education community, we did not validate the reliability of the data derived from the sources indicated.

[25]While we are aware that the Consumer Price Index has limitations, we chose to use it to adjust for inflation because we concluded that it was the best available index for this purpose. See, for example, Consumer Price Index: More Frequent Updating of Market Basket Expenditure Weights Is Needed (GAO/GGD/OCE-98-2, Oct. 9, 1997).

# Additional Data Concerning Postsecondary Education Debt and Work During Periods of Enrollment

The tables in this appendix contain additional details regarding the information presented in the letter portion of this report. The tables present category-by-category estimates for various aspects of student debt and work, along with confidence intervals for each. The estimated averages shown are based on analysis of the results from a sample of students. The confidence intervals are the ranges in which the averages are likely to fall for the entire population of postsecondary students within the category indicated.

The table notes indicate whether differences in the estimated averages for various sample groups are statistically significant. We identified differences as statistically significant when our statistical tests showed less than a 5-percent chance that the differences between groups occurred purely by chance.

**Table II.1: Role of Borrowing and Working in Paying Costs for the "Average" Full-Time Student, by Type of School, 1995-96**

| Type of school | Estimated average Amount | Confidence interval |
|---|---|---|
| **Average cost of attendance[a]** | | |
| Public 4-year | $10,883 | $10,559 - $11,108 |
| Private 4-year | 19,946[b] | 19,175 - 20,716 |
| Public less-than-4-year | 7,275[b] | 6,901 - 7,650 |
| Private less-than-4-year | 12,912[b] | 12,150 - 13,675 |
| Proprietary | 14,112[b] | 13,383 - 14,481 |
| **Average amount borrowed for 1995-96[c,d]** | | |
| Public 4-year | 1,944 | 1,818 - 2,070 |
| Private 4-year | 2,660[b] | 2,477 - 2,843 |
| Public less-than-4-year | 639[b] | 487 - 791 |
| Private less-than-4-year | 2,329 | 1,362 - 3,296 |
| Proprietary | 3,128[b] | 2,688 - 3,568 |
| **Average amount earned while enrolled[c]** | | |
| Public 4-year | 3,282 | 3,010 - 3,553 |
| Private 4-year | 3,145 | 2,719 - 3,572 |
| Public less-than-4-year | 5,313[b] | 4,087 - 6,539 |
| Private less-than-4-year | 4,806 | 3,205 - 6,408 |
| Proprietary | 6,006[b] | 3,847 - 8,165 |
| **Average total amount of grants and scholarships received[c]** | | |
| Public 4-year | 1,492 | 1,371 - 1,612 |
| Private 4-year | 4,823[b] | 4,414 - 5,232 |
| Public less-than-4-year | 803[b] | 672 - 933 |
| Private less-than-4-year | 1,972 | 1,453 - 2,491 |
| Proprietary | 1,572 | 1,361 - 1,784 |

Note: These data are for full-time, full-year undergraduates only. We classified postsecondary institutions as follows: (1) public 4-year institutions that offer a baccalaureate degree or more advanced program; (2) private, not-for-profit 4-year institutions that offer a baccalaureate degree or more advanced program; (3) public less-than-4-year institutions that only offer programs below the baccalaureate level; (4) private less-than-4-year institutions that only offer programs below the baccalaureate level; and (5) proprietary (for-profit) institutions.

[a]The cost of attendance includes tuition, fees, room, board, books, supplies, transportation, and other necessary living costs identified in the school's budget.

[b]The estimated value differs to a statistically significant extent from the estimated value for public 4-year schools.

[c]These averages were calculated including "0" for undergraduates who did not borrow, did not work while enrolled, or did not receive grants.

[d]The amount of loans indicated excludes loans from parents, friends, and relatives.

**Table II.2: Undergraduate Degree or Credential Recipients Who Borrowed in 1 or More Years, School Years 1992-93 and 1995-96**

| Degree or other credential received | Estimated percentage of recipients who borrowed | | Estimated average cumulative amount borrowed (constant 1995-96 dollars) | |
|---|---|---|---|---|
| | Percentage | Confidence interval | Amount | Confidence interval |
| **1992-93** | | | | |
| Certificate or award | 39.5 | 35.1 - 43.9 | $5,171 | $4,758 - $5,584 |
| Associate degree | 34.5[a] | 30.6 - 38.4 | $5,580 | 4,876 - 6,284 |
| Bachelor's degree[b] | 46.3[a] | 44.6 - 47.9 | 10,080[a] | 9,762 –10,398 |
| Average | 41.1 | 39.3 - 42.9 | 7,834[a] | 7,489 - 8,178 |
| **1995-96** | | | | |
| Certificate of award | 52.7[c] | 41.5 - 63.8 | 5,597 | 4,420 - 6,774 |
| Associate degree | 42.0 | 34.4 - 49.6 | 5,059 | 4,243 - 5,875 |
| Bachelor's degree[b] | 60.1[c] | 56.4 - 63.9 | 13,269[a,c] | 12,364 - 14,173 |
| Average | 52.4[c] | 48.7 - 56.0 | 9,701[a,c] | 9,013 - 12,587 |

[a]This estimated value differs to a statistically significant extent from the estimated value for certificate or award recipients.

[b]For bachelor's degree recipients we used figures for students identified as graduating seniors.

[c]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table II.3: Percentage of Graduates of 4-Year Schools Who Borrowed $20,000 or More, School Years 1992-93 and 1995-96**

| Type of school | Percentage of graduates borrowing in 1 or more years a total of $20,000 or more | |
|---|---|---|
| | Percentage | Confidence interval |
| **1992-93** | | |
| Public 4-year | 5.6 | 4.7 - 6.5 |
| Private 4-year | 15.2[a] | 13.0 - 17.3 |
| **Total** | **9.1[a]** | **8.1** - 10.2 |
| **1995-96** | | |
| Public 4-year | 15.6[b] | 11.5 –19.7 |
| Private 4-year | 25.0[a,b] | 19.5 - 30.4 |
| **Total** | **19.0[b]** | **15.7 - 22.2** |

[a]This estimated value differs to a statistically significant extent from the estimated value for those attending public 4-year schools.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table II.4: Undergraduate Program Completers Who Borrowed and Average Amount Borrowed, School Years 1992-93 and 1995-96**

| | Percentage of program completers who borrowed | | Average total principal borrowed (constant 1995-96 dollars) | |
|---|---|---|---|---|
| Type of school | Percent | Confidence interval | Amount | Confidence interval |
| **1992-93** | | | | |
| Public 4-year | 42.4 | 40.5 - 44.2 | $8,536 | $8,205 - $8,868 |
| Private 4-year | 50.0[a] | 47.1 - 52.8 | 12,016[a] | 11,350 - 12,683 |
| Public less-than-4-year | 27.7[a] | 24.7 - 30.8 | 4,959[a] | 4,267 - 5,651 |
| Private less-than-4-year | 52.7 | 42.1 - 63.2 | 5,848[a] | 3,643 - 8,053 |
| Proprietary | 62.6[a] | 56.5 - 68.8 | 6,318[a] | 5,665 - 6,972 |
| **1995-96** | | | | |
| Public 4-year | 60.2[b] | 55.8 - 64.6 | 11,554[b] | 10,521 - 12,587 |
| Private 4-year | 57.6[b] | 52.6 - 62.5 | 15,559[a,b] | 14,450 - 16,669 |
| Public less-than-4-year | 38.4[a,b] | 30.8 - 46.1 | 4,009[a] | 3,176 - 4,842 |
| Private less-than-4-year | 53.3 | 34.3 - 72.2 | 8,129[a] | 6,869 - 9,338 |
| Proprietary | 71.6[a] | 63.4 - 81.7 | 6,718[a] | 5,781 - 7,655 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for students at public 4-year schools.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table II.5: Students in Graduate and Professional Programs Who Borrowed, Amount Borrowed, and Percentage With $50,000 or More Debt, School Years 1992-93 and 1995-96**

| | Estimated percentage of recipients who borrowed in 1 or more years | | Estimated average amount of cumulative borrowing for undergraduate, graduate, or professional education (constant 1995-96 dollars) | | Estimated percentage of recipient borrowers borrowing a total of $50,000 or more for postsecondary education | |
|---|---|---|---|---|---|---|
| Degree received | Percent[a] | Confidence interval | Amount[b] | Confidence interval | Percent | Confidence interval |
| **1992-93** | | | | | | |
| Master's | 54.6 | 51.5 - 57.7 | $12,870 | $11,806 –$13,934 | 1.9 | 0.7 - 3.0 |
| Doctoral | 55.5 | 47.6 - 63.4 | 22,973[c] | 18,516 - 27,431 | 8.3[c] | 5.5 - 11.2 |
| Professional | 79.0[c] | 73.7 - 84.2 | 45,100[c] | 40,191 - 50,009 | 34.1[c] | 28.9 - 39.4 |
| **1995-96** | | | | | | |
| Master's | 62.6 | 54.2 - 71.0 | 19,245[d] | 14,685 - 23,806 | 6.9[d] | 2.6 - 11.2 |
| Doctoral | 59.2 | 38.5 - 79.8 | 18,045 | 11,605 - 24,485 | 9.2 | 0 - 19.3 |
| Professional | 73.3[c] | 63.8 - 82.8 | 59,909[c,d] | 52,072 - 67,746 | 60.2[c,d] | 49.7 - 70.6 |

[a]Numbers are estimated averages for recipients who borrowed either for undergraduate education, for graduate or professional education, or both, whether or not any loans were still owed when they completed their graduate or professional programs.

[b]Numbers are estimates of the average cumulative amounts of loans for undergraduate, graduate, and professional education.

[c]This estimate differs to a statistically significant extent from the estimate for master's degree recipients.

[d]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table II.6: Portion of Full-Time, Full-Year Undergraduates Who Worked and Average Hours Worked per Week, School Years 1992-93 and 1995-96**

| | Estimated percentage of full-time, full-year undergraduates who worked while enrolled | | Estimated average number of hours worked per week | |
|---|---|---|---|---|
| Program | Percent | Confidence interval | Hours | Confidence interval |
| **1992-93** | | | | |
| Certificate or award | 56.0 | 51.7 - 60.4 | 27.9 | 26.6 - 29.2 |
| Associate degree | 72.1[a] | 68.8 - 75.3 | 24.8[a] | 23.9 - 25.8 |
| Bachelor's degree | 61.5[a] | 60.2 - 62.8 | 20.3[a] | 19.9 - 20.7 |
| **1995-96** | | | | |
| Certificate or award | 71.3[b] | 66.9 - 75.8 | 26.0 | 24.0 - 28.0 |
| Associate degree | 75.6[a] | 70.9 - 80.3 | 26.5[b] | 25.3 - 27.8 |
| Bachelor's degree | 71.7[b] | 70.0 - 73.4 | 20.8[a] | 20.2 - 21.4 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for students in certificate or award programs.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table II.7: Percentage of Full-Time, Full-Year Undergraduates Who Worked While Enrolled and Average Hours Worked per Week, School Years 1992-93 and 1995-96**

| | Estimated percentage of undergraduates who worked while enrolled[a] | | Estimated average number of hours worked per week | |
|---|---|---|---|---|
| Type of school | Percent | Confidence interval | Hours | Confidence interval |
| **1992-93** | | | | |
| Public 4-year | 62.1 | 60.6 - 63.6 | 21.1 | 20.7 - 21.6 |
| Private 4-year | 60.1 | 58.0 - 62.1 | 18.5[b] | 17.5 - 19.4 |
| Public less-than-4-year | 71.3[b] | 67.9 - 74.7 | 25.3[b] | 24.3 - 26.3 |
| Private less-than-4-year | 62.9 | 51.2 - 74.6 | 24.0[b] | 21.2 - 26.8 |
| Proprietary | 55.5[b] | 50.3 - 60.6 | 30.0[b] | 28.6 - 31.4 |
| **1995-96** | | | | |
| Public 4-year | 70.8[c] | 68.6 - 73.0 | 21.6 | 20.9 - 22.2 |
| Private 4-year | 72.8[c] | 70.5 - 75.2 | 18.8[b] | 17.8 - 19.8 |
| Public less-than-4-year | 76.6 | 71.9 - 81.4 | 26.8[b] | 22.4 - 23.7 |
| Private less-than-4-year | 66.6 | 58.7 - 74.5 | 26.4[b] | 22.9 - 29.9 |
| Proprietary | 70.2[c] | 65.3 - 75.1 | 29.9[b] | 27.9 - 32.0 |

[a]Numbers include students who worked for only a portion of the time they were enrolled during the year. On average, full-time, full-year students who worked while enrolled during 1995-96 worked about 8 months.

[b]This estimated value differs to a statistically significant extent from the corresponding estimated value for public 4-year undergraduates.

[c]This estimated value differs to a statistically significant extent from that for 1992-93.

**Table II.8: Percentage of Full-Time Graduate and Professional Students Working While Enrolled and Average Hours Worked per Week, School Years 1992-93 and 1995-96**

| | Estimated percentage | | Estimated average hours worked per week | |
|---|---|---|---|---|
| Degree program | Percent | Confidence interval | Hours | Confidence interval |
| **1992-93** | | | | |
| Master's | 71.7 | 67.9 - 75.5 | 24.5 | 23.3 - 25.7 |
| Doctoral | 63.4[a] | 58.0 - 68.9 | 24.9 | 22.9 - 27.0 |
| Professional | 47.6[a] | 41.8 - 53.4 | 18.4[a] | 16.7 - 20.1 |
| **1995-96[b]** | | | | |
| Master's | 69.0 | 61.5 - 76.6 | 25.9 | 23.3 - 28.4 |
| Doctoral | 67.5 | 54.5 - 80.6 | 29.2 | 24.2 - 34.1 |
| Professional | 43.1[a] | 37.8 - 48.3 | 20.1[a] | 17.3 - 22.9 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for master's degree recipients.

[b]None of the estimated values for 1995-96 differed to a statistically significant extent from the estimated values for 1992-93.

**Table II.9: Variation in Average Cumulative Amount 1995-96 Graduating Seniors Borrowed, by Cost of Attendance**

| | Average cumulative amount borrowed for those who borrowed during 1 or more years | |
|---|---|---|
| 1995-96 cost of attendance[a] | Amount | Confidence interval |
| $5,000 - $9,999 | $10,579 | $9,274 - $11,885 |
| $10,000 - $14,999 | 12,821[b] | 11,024 - 14,617 |
| $15,000 - $19,999 | 13,714[b] | 12,138 - 15,289 |
| $20,000 - $24,999 | 17,673[b] | 14,928 - 20,417 |
| $25,000 or more | 17,663[b] | 14,490 - 20,836 |

[a]This is the institution's budgeted amount for the costs of attending the institution full-time for a school year, including tuition, fees, books, supplies, room, board, and transportation. Each institution identified separate amounts for students on the basis of dependency status and residence status (whether they live at home, for example).

[b]This estimate differs to a statistically significant extent from the estimate for schools with a cost of attendance between $5,000 and $9,999.

**Table II.10: Variation in the Average Number of Hours Worked per Week by Full-Time, Full-Year Undergraduates, by Dependency Status, School Year 1995-96**

| | Average hours worked per week while enrolled[a] | |
|---|---|---|
| **Dependency status** | **Hours** | **Confidence interval** |
| Dependent | 21.2 | 20.5 - 21.8 |
| Independent | 27.6 | 26.5 - 28.7 |

Note: The Higher Education Act of 1965, as amended, identifies students as independent if any of the following apply: the student (1) is 24 years of age or older, (2) is married, (3) is a graduate or professional student, (4) has legal dependents other than a spouse, (5) is an orphan or ward of the court, (6) is a veteran, or (7) is determined and documented by his or her financial aid administrator to be independent because of other unusual circumstances. If none of these apply, the student is classified as dependent.

[a]These numbers are 1995-96 averages for full-time, full-year undergraduates who worked at some time during their enrollment. The estimate for dependent students differs from the estimate for independent students to a statistically significant extent.

# Analyses of Undergraduate Work and Borrowing Patterns

Although our work focused primarily on the extent to which borrowing and working by undergraduates varied by each of several factors (type of school and year in school, for example), we sought more information about the extent to which these factors were predictive. To do this, we performed a series of regression analyses.[26] Each analysis indicates what portion of variance in the working or borrowing variable examined was accounted for by each factor after taking the other factors into account.

In tables III.1 and III.2, the portion of the variance accounted for is the change in the portion of variance accounted for ($R^2$ expressed as a percentage) after adding each variable to the model after including (controlling for) all the other variables listed.

"Total accounted for" is the percentage of variance accounted for including all variables listed. This is the coefficient of determination, a statistic that indicates how well a statistical model fits the data. If there is no linear relationship between dependent and independent variables, $R^2$ equals 0; if there is a perfect statistical relationship, $R^2$ equals 1 (100 percent).

The regression coefficients (B) shown in each table indicate the extent to which a change in each independent variable is associated with a change in the dependent variable. For example, in table III.1, the regression coefficient for graduating seniors is $1,632.75. This indicates that after taking into account the relationships between all the variables listed, graduating seniors borrowed an average of about $110.67 less than freshmen in their first year of postsecondary education (the reference category).

The standardized regression coefficients (beta) shown in each table are statistics that are standardized to allow comparison when the independent variables are measured in different units. They help analysts compare the extent to which variables help predict variation in the dependent variable, such as the amount borrowed. The unit of measure for beta weights is a standard deviation in the dependent variable. (Standard deviations are

[26]The Department of Education's National Postsecondary Student Aid Study, from which we obtained our data, is based on a survey of students. As survey respondents are divided into various categories (such as the number of students in professional programs by family income), the number of students sampled who have these characteristics may be too small to allow reliable estimates. For students in graduate and professional programs, the confidence intervals for such estimates became so great that we judged them not meaningful enough to analyze in the manner we analyzed undergraduate students. To analyze amounts borrowed for the 1995-96 school year, we limited our analysis to those undergraduates who had borrowed. To analyze the average number of hours worked per week, we limited our analysis to those full-time, full-year undergraduates who worked while enrolled during some portion of the school year.

measures of the extent to which, for example, the amounts students borrowed typically differed from the average amount borrowed.) A beta weight is an estimate of the number of standard deviations more a student is expected to borrow for a one standard deviation increase in an independent variable (see table III.1).

The significance test (probability based on the t-statistic) in each table indicates, for the addition of each variable in the model, the probability that the statistical relationship between each independent variable and the variation in the dependent variable not accounted for by other variables is due to random factors.

In the analysis of the statistical relationship between each dependent variable and each categorical variable, such as year in school, we identified a reference category. The tables provide regression statistics that indicate the extent to which nonreference groups compare statistically with the reference group. In both tables, reference groups are white non-Hispanic, dependent, men, first-time beginning freshmen, and attending public 4-year schools.

**Table III.1: Regression Results for the Amount of Annual Borrowing by Undergraduates for School Year 1995-96**

| Variable | Portion of variance accounted for[a] | Regression coefficient (B) | Standardized regression coefficient (beta) | Probability based on the t statistic[b] |
|---|---|---|---|---|
| **Type of school (portion of variance accounted for = 0.18%)** | | | | |
| Public 2-year | | $ -110.67 | -0.02 | 0.2078 |
| Public less-than-2-year | | 346.57 | 0.01 | 0.6299 |
| Private 4-year | | -186.32 | -0.04 | 0.0196 |
| Private 2-year | | 185.81 | 0.01 | 0.3390 |
| Private less-than-4-year | | -760.94 | -0.01 | 0.6039 |
| Proprietary 4-year | | 362.37 | 0.02 | 0.1471 |
| Proprietary 2-year | | 35.43 | 0.00 | 0.7839 |
| Proprietary less-than-2-year | | 82.37 | 0.01 | 0.5144 |
| **Class level (portion of variance accounted for = 6.46%)** | | | | |
| Freshmen—not beginning postsecondary education for the first time | | 307.33 | 0.05 | 0.0004 |
| Sophomore | | 682.81 | 0.12 | < 0.0001 |
| Junior | | 1,562.51 | 0.26 | < 0.0001 |
| Senior, 4th year | | 1,697.56 | 0.21 | < 0.0001 |
| Senior, 5th + year | | 1,878.90 | 0.07 | < 0.0001 |

(continued)

| Variable | Portion of variance accounted for[a] | Regression coefficient (B) | Standardized regression coefficient (beta) | Probability based on the t statistic[b] |
|---|---|---|---|---|
| Graduating senior | | 1,632.75 | 0.22 | < 0.0001 |
| Other | | 631.38 | 0.04 | 0.0005 |
| **Racial/ethnic group (portion of variance accounted for = 0.24%)** | | | | |
| Black, non-Hispanic | | -196.02 | -0.03 | 0.0100 |
| Hispanic | | -301.85 | -0.04 | 0.0013 |
| Asian/Pacific Islander | | -244.82 | -0.02 | 0.0457 |
| American Indian/Alaskan Native | | -481.29 | -0.02 | 0.1016 |
| Other/unknown | | -132.93 | 0.00 | 0.6749 |
| **Other portion of variances accounted for** | | | | |
| Gender—women | 0.02% | -61.57 | -0.01 | 0.2442 |
| Cost of attendance | 10.14% | 0.19 | 0.51 | < 0.0001 |
| Adjusted gross family income percentile | 0.03% | -2.28 | -0.03 | 0.1109 |
| Expected family contribution | 0.53% | -0.04 | -0.10 | < 0.0001 |
| Grants received for 1995-96 | 2.21% | -0.14 | -0.22 | < 0.0001 |
| Hours worked per week while enrolled | 0.07% | -4.21 | -0.03 | 0.0189 |
| Independent student | 1.64% | 778.00 | 0.17 | < 0.0001 |
| **Total accounted for** | **30.85%[c]** | **N/A** | **N/A** | **N/A** |
| **Total unaccounted for** | **69.15%** | **N/A** | **N/A** | **N/A** |

Note: N/A = not applicable.

[a]Change in $R^2$ from the addition of each variable or group of variables after including (controlling for) the other variables listed.

[b]These numbers reflect an adjustment for design effect.

[c]Adjusted $R^2$ was 0.3068, with 11,171 degrees of freedom.

**Table III.2: Regression Results for the Number of Hours Worked per Week by Full-Time, Full-Year Undergraduates Who Worked While Enrolled**

| Variable | Portion of variance accounted for[a] | Regression coefficient (B) | Standardized regression coefficient (beta) | Probability based on the t statistic |
|---|---|---|---|---|
| **Type of school (portion of variance accounted for = 2.55%)** | | | | |
| Public 2-year | | $3.52 | 0.13 | < 0.0001 |
| Public less-than-2-year | | 2.98 | 0.03 | 0.0833 |
| Private 4-year | | 1.09 | 0.04 | 0.0997 |
| Private 2-year | | 2.70 | 0.02 | 0.1404 |
| Private less-than-4-year | | 13.79 | 0.04 | 0.0312 |
| Proprietary 4-year | | 14.55 | 0.12 | < 0.0001 |
| Proprietary 2-year | | 6.46 | 0.07 | < 0.0001 |
| Proprietary less-than-2-year | | 4.37 | 0.05 | 0.0074 |
| **Class level (portion of variance accounted for = 0.65%)** | | | | |
| Freshmen - not beginning postsecondary education for the first time | | 1.97 | 0.06 | 0.0017 |
| Sophomore | | 2.06 | 0.07 | 0.0002 |
| Junior | | 2.21 | 0.07 | 0.0004 |
| Senior, 4th year | | 1.32 | 0.03 | 0.1029 |
| Senior, 5th + year | | 0.74 | 0.00 | 0.8098 |
| Graduating senior | | 0.57 | 0.01 | 0.4683 |
| Other | | 3.03 | 0.04 | 0.0196 |
| **Racial/ethnic group (portion of variance accounted for = 0.51%)** | | | | |
| Black, non-Hispanic | | 1.51 | 0.04 | 0.0214 |
| Hispanic | | 1.46 | 0.04 | 0.0353 |
| Asian/Pacific Islander | | –2.19 | –0.04 | 0.0083 |
| American Indian/Alaskan Native | | –0.78 | –0.01 | 0.7374 |
| Other/unknown | | –2.40 | –0.02 | 0.3502 |
| **Other portion of variances accounted for** | | | | |
| Gender—women | 0.84% | –2.13 | –0.09 | < 0.0001 |
| Cost of attendance | 0.71% | 0.00 | –0.14 | < 0.0001 |
| Adjusted gross family income percentile | 0.33% | 0.04 | 0.09 | 0.0004 |
| Expected family contribution | 0.08% | 0.00 | –0.04 | 0.0858 |
| Grants received for 1995-96 | 0.35% | 0.00 | –0.08 | 0.0003 |
| Borrowing for 1995-96 | 0.01% | 0.00 | –0.01 | 0.6187 |
| Independent student | 3.08% | 6.12 | 0.23 | < 0.0001 |
| **Total accounted for** | **17.07%[c]** | **N/A** | **N/A** | **N/A** |
| **Total unaccounted for** | **82.93%** | **N/A** | **N/A** | **N/A** |

(Table notes on next page)

Note: N/A = not applicable.

[a]Change in $R^2$ from the addition of each variable or group of variables after including (controlling for) the other variables listed.

[b]These numbers reflect an adjustment for design effect.

[c]Adjusted $R^2$ was 0.1681, with 8,682 degrees of freedom.

# Additional Information on Variation in Average Cumulative Borrowing and Work Patterns Among Undergraduates

We were also asked to analyze borrowing and work patterns in relation to four other factors: students' class level, students' dependency status, parental income, and students' race/ethnicity. This appendix contains our findings with respect to these factors and concludes with tables that provide additional information to supplement that shown in tables IV.1 through IV.5 and figure IV.1.

## Variation in Borrowing Patterns

### Class Level

Not surprisingly, students who had attended school for several years were more likely to have borrowed—and in greater amounts—than their counterparts who had not been in school as long. A greater portion of students borrowed at all undergraduate levels, and the amounts they borrowed increased to a statistically significant extent for everyone but freshmen (see table IV.1).

**Table IV.1: Percentage of Borrowers Was Up Among All Undergraduate Years, With Dollar Amounts Up in Each Year as Well, School Years 1992-93 and 1995-96**

| | Percentage of undergraduates borrowing in 1 or more years | | Average total principal borrowed[a] | |
|---|---|---|---|---|
| Class level | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| Freshman | 38 | 41 | $4,167 | $4,296 |
| Sophomore | 40 | 49 | 5,428 | 6,318 |
| Junior | 49 | 61 | 7,710 | 9,487 |
| Senior | 49 | 61 | 9,187 | 12,063 |

[a]Cumulative amount of borrowing for undergraduate education adjusted for inflation to 1995-96 values.

### Dependency Status and Parental Income

Students who were classified by the Department of Education's financial aid needs analysis process as dependent on their parents[27] were less apt to borrow than those who were classified as independent, but when they borrowed, they tended to borrow larger amounts. Among seniors graduating in 1995-96, 51 percent of those who were dependent on their

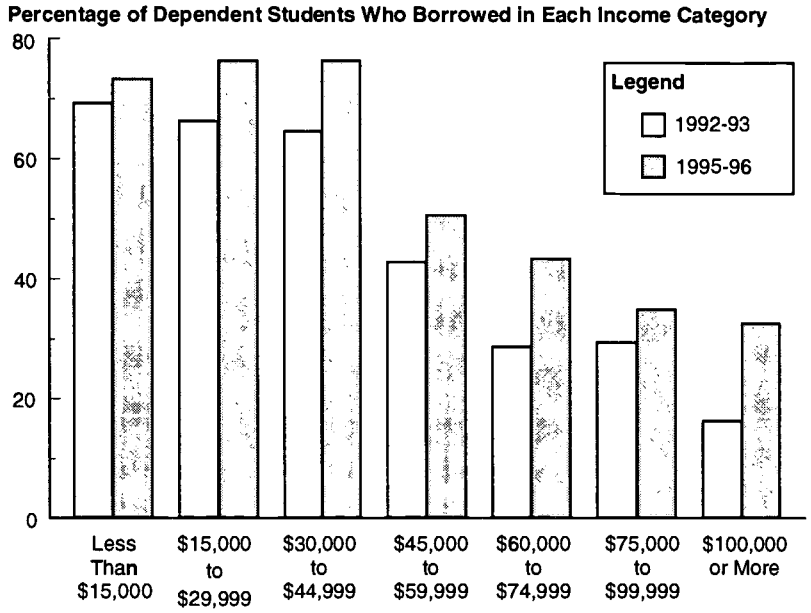
[27]In general, the Higher Education Act identifies postsecondary students as dependent unless they are (1) 24 years of age or older, (2) married, (3) a graduate or professional student, (4) someone with legal dependents other than a spouse, (5) an orphan or ward of the court, or (6) a veteran. If any of these conditions apply, the Department considers the student independent of his or her parents or guardians whether or not the parents/guardians provide support or contribute to the student's postsecondary education.

parents borrowed in 1 or more years, compared with 71 percent of independent students. On average, dependent students borrowed $13,754, compared with $12,842 for independent students.

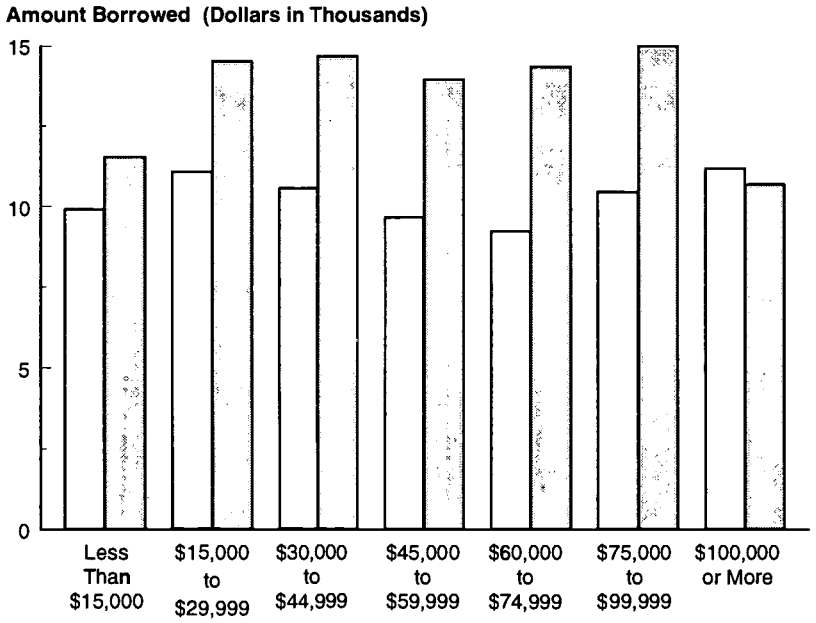
Comparing 1995-96 graduating dependent seniors with their counterparts in 1992-93, borrowing was up across all income levels. As figure IV.1 shows, borrowing tended to be most common among dependent students from families whose annual income is less than $45,000. However, the portion of dependent students who borrowed increased at all family income levels, and at the highest level ($100,000 and above), it nearly doubled from 16.3 percent to 32.6 percent. The increase in amounts borrowed was relatively uniform among all income groups except the lowest and highest.

**Figure IV.1: Undergraduate Borrowing Among Dependent Students, by Parental Income, School Years 1992-93 and 1995-96**

**A larger portion of dependent students borrowed at most levels of parental income . . .**




**. . . and amounts increased across nearly every income category**



## Race/Ethnicity

Analysis of cumulative borrowing by race and ethnicity showed that all four groups analyzed (white, not Hispanic; black, not Hispanic; Hispanic; and Asian/Pacific Islander) showed similar increases in the portion of students borrowing. Average cumulative amounts borrowed ranged from about $11,910 for Hispanics to about $16,531 for students with Asian and Pacific Islander backgrounds. Greater portions of black and Hispanic groups borrowed than whites. (See table IV.2.)

**Table IV.2: Percentage of Borrowers Was Up Among Most Racial/Ethnic Groups, School Years 1992-93 and 1995-96**

| Racial/ethnic group[a] | Percentage of graduating seniors who borrowed in 1 or more years | | Average total principal borrowed | |
|---|---|---|---|---|
| | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| White, non-Hispanic | 44.6 | 58.6 | $10,314 | $13,076 |
| Black, non-Hispanic | 61.0 | 75.7 | 9,489 | 14,246 |
| Hispanic | 56.5 | 72.8 | 8,146 | 11,910 |
| Asian/Pacific Islander | 38.1 | 53.3 | 9,613 | 16,531 |
| American Indian/Alaskan Native | 64.3 | [b] | 8,543 | [b] |

[a]These racial and ethnic categories are mutually exclusive. For example, in this table, "white" refers to persons who identified themselves as white and not Hispanic.

[b]Information is only available for 1992-93. Information was collected in 1995-96 that included American Indians/Alaskan Natives, but the data were insufficient for analysis.

# Variation in Work Patterns

## Class Level

Increases in the percentage of students working were reflected across all undergraduate years (see table IV.3). As in 1992-93, juniors and seniors enrolled full time in 1995-96 were more apt to work while enrolled, but on average worked slightly fewer hours than freshmen or sophomores.

**Table IV.3: Undergraduates at All Levels More Likely to Work, With Number of Hours Remaining Steady, School Years 1992-93 and 1995-96**

| | Percentage of full-time undergraduates working during the school year | | Average number of hours worked per week | |
|---|---|---|---|---|
| Class level | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| Freshman | 60 | 69 | 23 | 23 |
| Sophomore | 63 | 73 | 22 | 23 |
| Junior | 64 | 75 | 21 | 22 |
| Senior | 69 | 78 | 22 | 21 |

## Dependency Status and Parental Income

A higher percentage of both dependent and independent students worked in 1995-96 compared with 1992-93. For 1995-96, the percentage was higher for dependent students, but among those students who worked, independent students worked about 6 hours more per week. Among dependent undergraduates, students in all income groups were more apt to work while enrolled in 1995-96 than in 1992-93 (see table IV.4). Those whose parents were in middle-income groups were more likely to work while enrolled. The average number of hours worked changed little and varied little by income group.

**Table IV.4: A Greater Portion of Dependent Students at All Parental Income Levels Worked, With Number of Hours Remaining Relatively Steady, School Years 1992-93 and 1995-96**

| | Percentage of full-time undergraduates working during the school year | | Average number of hours worked per week | |
|---|---|---|---|---|
| Parental income | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| Less than $15,000 | 61 | 70 | 21 | 20 |
| $15,000-$29,999 | 68 | 78 | 20 | 22 |
| $30,000-$44,999 | 70 | 80 | 21 | 22 |
| $45,000-$59,999 | 71 | 77 | 22 | 20 |
| $60,000-$74,999 | 61 | 75 | 20 | 21 |
| $75,000-$99,999 | 57 | 74 | 19 | 21 |
| $100,000 or more | 54 | 65 | 18 | 21 |

## Race/Ethnicity

The percentage of students who worked in 1995-96 was higher than the percentage for 1992-93 across racial and ethnic groups as well (see table IV.5). White, black, and Hispanic students had the highest percentages of students who worked, and black and Hispanic students had the highest average hours worked per week.

**Table IV.5: A Greater Portion of Undergraduates Across All Racial and Ethnic Groups Worked, With Hours Remaining About the Same, School Years 1992-93 and 1995-96[a]**

| | Percentage of full-time undergraduates working during the school year | | Average number of hours worked per week | |
|---|---|---|---|---|
| Racial/ethnic group[a] | 1992-93 | 1995-96 | 1992-93 | 1995-96 |
| White, non-Hispanic | 65 | 74 | 22 | 23 |
| Black, non-Hispanic | 58 | 74 | 24 | 24 |
| Hispanic | 60 | 70 | 23 | 25 |
| Asian/Pacific Islander | 48 | 64 | 18 | 19 |
| American Indian/Alaskan Native | 61 | 62 | 25 | 23 |

[a]These racial and ethnic categories are mutually exclusive. For example, in this table, "white" refers to persons who identified themselves as white and not Hispanic.

## Data Supporting Figure and Tables

The following tables provide data supporting the preceding figure and tables, along with additional information, including confidence intervals for each estimate.

**Table IV.6: Data Supporting Table IV.1, Percentage of Undergraduates Who Borrowed During 1 or More Years, School Years 1992-23 and 1995-96**

| | Percentage who borrowed | |
|---|---|---|
| Class level | Percent | Confidence interval |
| **1992-93** | | |
| Freshman | 37.7 | 35.8 - 39.5 |
| Sophomore | 39.5 | 37.4 - 41.6 |
| Junior | 48.7[a] | 46.7 - 50.7 |
| Senior | 49.3[a] | 47.7 - 51.0 |
| **1995-96** | | |
| Freshman | 40.9[b] | 38.6 - 43.1 |
| Sophomore | 48.7[a,b] | 45.0 - 52.3 |
| Junior | 60.7[a,b] | 57.4 - 64.0 |
| Senior | 60.8[a,b] | 58.0 - 63.7 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for freshmen.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table IV.7: Data Supporting Table IV.1, Average Cumulative Amount Borrowed by Undergraduates Who Borrowed During 1 or More Years, School Years 1992-93 and 1995-96**

| | Average total principal borrowed (constant 1995-96 dollars) | |
|---|---|---|
| **Class level** | **Amount** | **Confidence interval** |
| **1992-93** | | |
| Freshman | $4,167 | $3,993 - $4,340 |
| Sophomore | 5,428[b] | 5,129 - 5,727 |
| Junior | 7,710[a] | 7,368 - 8,051 |
| Senior | 9,187[a] | 8,896 - 9,479 |
| **1995-96** | | |
| Freshman | 4,296 | 4,033 - 4,560 |
| Sophomore | 6,318[a,b] | 5,850 - 6,785 |
| Junior | 9,487[a,b] | 8,931 - 10,044 |
| Senior | 12,063[a,b] | 11,454 - 12,673 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for freshmen.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table IV.8: Data Supporting Figure IV.1, Percentage of Undergraduates Who Borrowed Among Dependent Graduating Seniors, by Amount of Parental Income, School Years 1992-93 and 1995-96**

| Parental income (constant 1995-96 dollars) | Percentage of dependent students who borrowed[a] | |
|---|---|---|
| | Percent | Confidence interval |
| **1992-93** | | |
| Less than $15,000 | 69.2 | 62.2 - 76.2 |
| $15,000 - $29,999 | 66.3 | 61.3 - 71.2 |
| $30,000 - $44,999 | 64.6 | 60.0 - 69.1 |
| $45,000 - $59,999 | 42.8[b] | 38.4 - 47.1 |
| $60,000 - $74,999 | 28.7[b] | 25.4 - 31.9 |
| $75,000 - $99,999 | 29.4[b] | 25.8 - 32.9 |
| $100,000 or more | 16.3[b] | 13.5 - 19.1 |
| **1995-96** | | |
| Less than $15,000 | 73.3 | 52.2 - 94.4 |
| $15,000 - $29,999 | 76.3 | 62.8 - 89.9 |
| $30,000 - $44,999 | 76.3[c] | 66.5 - 86.1 |
| $45,000 - $59,999 | 50.6 | 38.2 - 62.9 |
| $60,000 - $74,999 | 43.3[b,c] | 29.7 - 56.9 |
| $75,000 - $99,999 | 34.9[b] | 22.9 - 46.8 |
| $100,000 or more | 32.6[b,c] | 22.7 - 42.4 |

[a]Financial aid calculations are based on prior-year income; thus, parental income information for 1991 and 1994 was used for school years 1992-93 and 1995-96, respectively.

[b]This estimated value differs to a statistically significant extent from the corresponding estimated value for students whose parents' income was less than $15,000.

[c]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table IV.9: Data Supporting Figure IV.1, Average Cumulative Amount Borrowed by Dependent Graduating Seniors, by Amount of Parental Income, School Years 1992-93 and 1995-96**

| Parental income (constant 1995-96 dollars) | Amount borrowed (constant 1995-96 dollars)[a] | |
|---|---|---|
| | Amount | Confidence interval |
| **1992-93** | | |
| Less than $15,000 | $9,905 | $8,758 - 11,052 |
| $15,000 - $29,999 | 11,086 | 9,997 - 12,176 |
| $30,000 - $44,999 | 10,565 | 9,878 - 11,252 |
| $45,000 - $59,999 | 9,658 | 8,930 - 10,385 |
| $60,000 - $74,999 | 9,212 | 8,453 - 9,972 |
| $75,000 - $99,999 | 10,453 | 9,453 - 11,454 |
| $100,000 or more | 11,174 | 9,328 - 13,020 |
| **1995-96** | | |
| Less than $15,000 | 11,540 | 8,647 - 14,432 |
| $15,000 - $29,999 | 14,529[b] | 12,409 - 16,649 |
| $30,000 - $44,999 | 14,694[b] | 12,339 - 17,050 |
| $45,000 - $59,999 | 13,949[b] | 11,835 - 16,064 |
| $60,000 - $74,999 | 14,348[b] | 11,357 - 17,340 |
| $75,000 - $99,999 | 15,183[b] | 10,286 - 20,080 |
| $100,000 or more | 10,682 | 7,731 - 13,632 |

[a]None of the estimated values differ to a statistically significant extent from the corresponding estimated value for students whose parents' income was less than $15,000.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

**Table IV.10: Data Supporting Table IV.2, Undergraduate Borrowing, by Racial/Ethnic Group, Percentage of Graduating Seniors Who Borrowed in 1 or More Years, School Years 1992-93 and 1995-96**

| | Percentage of graduating seniors who borrowed | |
|---|---|---|
| **Racial/ethnic group** | **Percent** | **Confidence interval** |
| **1992-93** | | |
| White, non-Hispanic | 44.6 | 42.7 - 46.5 |
| Black, non-Hispanic | 61.0[a] | 54.8 - 67.2 |
| Hispanic | 56.5[a] | 50.5 - 62.5 |
| Asian/Pacific Islander | 38.1[a] | 32.9 - 43.4 |
| American Indian/Alaskan Native | 64.3[a] | 47.6 - 80.9 |
| **1995-96** | | |
| White, non-Hispanic | 58.6 | 54.2 - 63.0 |
| Black, non-Hispanic | 75.7[a,b] | 64.7 - 86.7 |
| Hispanic | 72.8[a,b] | 61.5 - 84.2 |
| Asian/Pacific Islander | 53.3 | 38.7 - 67.9 |
| American Indian/Alaskan Native | [c] | [c] |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for white students.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

[c]Information is only available for 1992-93. Information was collected in 1995-96 that included American Indians/Alaskan Natives, but the data were insufficient for analysis.

**Table IV.11: Data Supporting Table IV.2, Undergraduate Borrowing by Racial/Ethnic Group, Average Cumulative Amount Borrowed by Graduating Seniors Who Borrowed in 1 or More Years, School Years 1992-93 and 1995-96**

| | Average total principal borrowed (constant 1995-96 dollars) | |
|---|---|---|
| Racial/ethnic group | Amount | Confidence interval |
| **1992-93** | | |
| White, non-Hispanic | $10,314 | $9,168 - $9,859 |
| Black, non-Hispanic | 9,489 | 7,991 - 9,513 |
| Hispanic | 8,146[a] | 6,550 - 8,477 |
| Asian/Pacific Islander | 9,613 | 7,345 - 10,387 |
| American Indian/Alaskan Native | 8,543 | 4,836 - 10,923 |
| **1995-96** | | |
| White, non-Hispanic | 13,076[b] | 12,056 - 14,096 |
| Black, non-Hispanic | 14,246[b] | 10,313 - 18,179 |
| Hispanic | 11,910[b] | 9,769 - 14,051 |
| Asian/Pacific Islander | 16,531[b] | 12,691 - 20,372 |
| American Indian/Alaskan Native | [c] | [c] |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for white students.

[b]This estimated value differs to a statistically significant extent from the estimated value for 1992-93.

[c]Information was only available for 1992-93. Information was collected in 1995-96 that included American Indians/Alaskan Natives, but the data were insufficient for analysis.

**Table IV.12: Data Supporting Table IV.3, Percentage of Full-Time, Full-Year Undergraduates Who Worked While Enrolled, School Years 1992-93 and 1995-96**

| | Percentage who worked while enrolled | |
|---|---|---|
| Class level | Percent | Confidence interval |
| **1992-93** | | |
| Freshman | 59.5 | 57.5 - 61.5 |
| Sophomore | 63.3[a] | 61.2 - 65.5 |
| Junior | 64.4[a] | 62.2 - 66.6 |
| Senior | 69.1[a] | 67.6 - 70.6 |
| **1995-96** | | |
| Freshman | 68.9[b] | 66.6 - 71.3 |
| Sophomore | 73.0[b] | 69.0 - 77.1 |
| Junior | 75.3[a,b] | 72.2 - 78.5 |
| Senior | 77.6[a,b] | 74.1 - 81.0 |

[a]This estimate differed to a statistically significant extent from the estimate for freshmen.

[b]This estimate differed to a statistically significant extent from the estimate for 1992-93.

**Table IV.13: Data Supporting Table IV.3, Average Number of Hours Worked per Week by Full-Time, Full-Year Students Who Worked While Enrolled, School Years 1992-93 and 1995-96**

| | Estimated average hours worked per week while enrolled | |
|---|---|---|
| Class level | Hours | Confidence interval |
| **1992-93** | | |
| Freshman | 22.7 | 21.9 - 23.4 |
| Sophomore | 22.1 | 21.2 - 23.0 |
| Junior | 20.7[a] | 20.1 - 21.3 |
| Senior | 22.4 | 21.7 - 23.0 |
| **1995-96** | | |
| Freshman | 23.1 | 22.4 - 23.7 |
| Sophomore | 23.4 | 21.8 - 25.0 |
| Junior | 21.7[a,b] | 20.7 - 22.6 |
| Senior | 21.1[a] | 20.1 - 22.0 |

[a]This estimate differed to a statistically significant extent from the estimate for freshmen.

[b]This estimate differed to a statistically significant extent from the estimate for 1992-93.

**Table IV.14: Data Supporting Table IV.4, Percentage of Full-Time, Full-Year Dependent Undergraduates Who Worked While Enrolled, by Parental Income Level, School Years 1992-93 and 1995-96**

| | Estimated percentage of students who worked while enrolled | |
|---|---|---|
| 1994 parental income (constant 1995-96 dollars) | Percent | Confidence interval |
| **1992-93** | | |
| Less than $15,000 | 61.5 | 56.7 - 66.2 |
| $15,000 - $29,999 | 68.2[a] | 65.0 - 71.4 |
| $30,000 - $44,999 | 70.2[a] | 67.5 - 72.8 |
| $45,000 - $59,999 | 70.6[a] | 67.8 - 73.3 |
| $60,000 - $74,999 | 61.2 | 58.6 - 63.9 |
| 75,000 - $99,999 | 56.5 | 52.9 - 60.1 |
| $100,000 or more | 53.8[a] | 50.5 - 57.1 |
| **1995-96** | | |
| Less than $15,000 | 70.3[b] | 63.7 - 76.9 |
| $15,000 - $29,999 | 77.7[b] | 73.6 - 81.8 |
| $30,000 - $44,999 | 80.5[a,b] | 77.3 - 83.7 |
| $45,000 - $59,999 | 76.9[b] | 73.3 - 80.6 |
| $60,000 - $74,999 | 74.9[b] | 70.5 - 79.3 |
| $75,000 - $99,999 | 74.1[b] | 70.3 - 77.9 |
| $100,000 or more | 65.3[b] | 60.6 - 70.1 |

[a]This estimate differed to a statistically significant extent from the estimate for dependent students with parental income less than $15,000.

[b]This estimate differed to a statistically significant extent from the estimate for 1992-93.

**Table IV.15: Data Supporting Table IV.4, Average Hours Worked per Week by Dependent Undergraduates Who Worked While Enrolled, by Parental Income Level, School Years 1992-93 and 1995-96**

| 1994 parental income (constant 1995-96 dollars) | Estimated average hours worked per week | |
|---|---|---|
| | Hours | Confidence interval |
| **1992-93** | | |
| Less than $15,000 | 21.1 | 19.7 - 22.5 |
| $15,000 - $29,999 | 20.2 | 19.1 - 21.2 |
| $30,000 - $44,999 | 20.9 | 20.0 - 21.8 |
| $45,000 - $59,999 | 21.8 | 20.9 - 22.7 |
| $60,000 - $74,999 | 20.5 | 19.7 - 21.2 |
| $75,000 - $99,999 | 19.1 | 17.9 - 20.3 |
| $100,000 or more | 18.3[a] | 17.2 - 19.3 |
| **1995-96** | | |
| Less than $15,000 | 20.0 | 18.6 - 21.3 |
| $15,000 - $29,999 | 21.8 | 20.1 - 23.4 |
| $30,000 - $44,999 | 22.0 | 20.5 - 23.5 |
| $45,000 - $59,999 | 20.0 | 19.1 - 20.9 |
| $60,000 - $74,999 | 21.3 | 20.1 - 22.6 |
| $75,000 - $99,999 | 21.5 | 19.3 - 23.6 |
| $100,000 or more | 21.2[b] | 19.5 - 22.8 |

[a]This estimate differed to a statistically significant extent from the estimate for dependent students with parental income less than $15,000.

[b]This estimate differed to a statistically significant extent from the estimate for 1992-93.

**Table IV.16: Data Supporting Table IV.5, Percentage of Full-Year Undergraduates Who Worked While Enrolled, by Racial/Ethnic Group, School Years 1992-93 and 1995-96**

| | Estimated percentage who worked while enrolled | |
|---|---|---|
| **Racial/ ethnic group** | **Percent** | **Confidence interval** |
| **1992-93** | | |
| White, non-Hispanic | 65.3 | 63.9 - 66.7 |
| Black, non-Hispanic | 58.1[a] | 54.0 - 62.3 |
| Hispanic | 60.3[a] | 55.6 - 64.9 |
| Asian/Pacific Islander | 47.8[a] | 43.8 - 51.8 |
| American Indian/Alaskan Native | 61.4 | 51.7 - 71.0 |
| **1995-96** | | |
| White, non-Hispanic | 73.7[b] | 71.9 - 75.5 |
| Black, non-Hispanic | 74.4[b] | 70.5 - 78.4 |
| Hispanic | 70.3[b] | 62.2 - 78.4 |
| Asian/Pacific Islander | 64.1[a,b] | 57.6 - 70.6 |
| American Indian/Alaskan Native | 62.0 | 47.8 - 76.2 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for white, non-Hispanic.

[b]This estimate differed to a statistically significant extent from the corresponding estimate for 1992-93.

**Table IV.17: Data Supporting Table IV.5, Average Number of Hours Worked per Week by Full-Time, Full-Year Undergraduates Who Worked While Enrolled, by Racial/Ethnic Group, School Years 1992-93 and 1995-96**

| | Estimated average hours worked per week | |
|---|---|---|
| **Racial/ethnic group** | **Hours** | **Confidence interval** |
| **1992-93** | | |
| White, non-Hispanic | 22.1 | 21.6 - 22.6 |
| Black, non-Hispanic | 23.7[a] | 22.5 - 24.9 |
| Hispanic | 23.0[a] | 21.6 - 24.5 |
| Asian/Pacific Islander | 18.0[a] | 16.5 - 19.6 |
| American Indian/Alaskan Native | 25.2 | 20.5 - 29.8 |
| **1995-96[b]** | | |
| White, non-Hispanic | 22.6 | 21.9 - 23.2 |
| Black, non-Hispanic | 24.5[a] | 23.0 - 25.9 |
| Hispanic | 24.8 | 22.4 - 27.2 |
| Asian/Pacific Islander | 18.7[a] | 16.7 - 20.7 |
| American Indian/Alaskan Native | 22.8 | 20.3 - 25.4 |

[a]This estimated value differs to a statistically significant extent from the corresponding estimated value for white, non-Hispanic.

[b]None of the estimates for 1995-96 differed to a statistically significant extent from the corresponding estimate for 1992-93.

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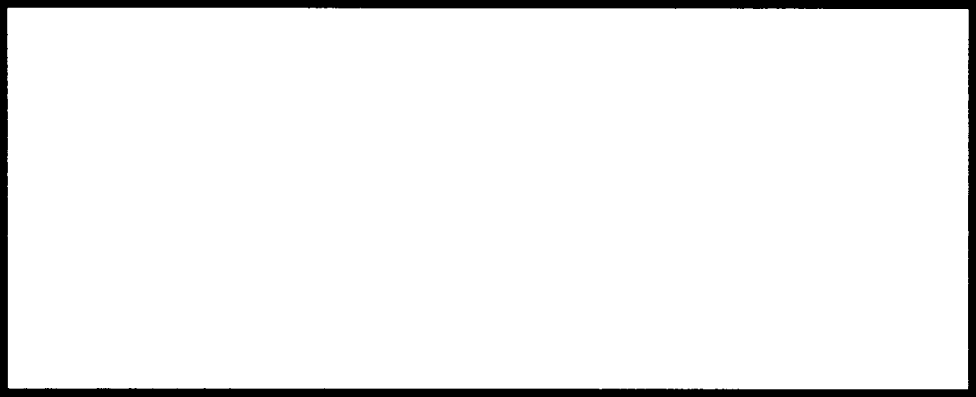

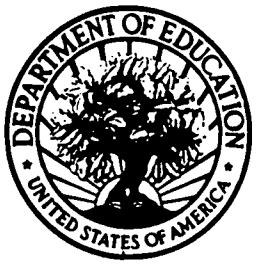


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