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Covering Assigned Student Responsibilities

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Dr. Gerald Setter died unexpectedly in 2008 after completing most of the in-depth analysis reflected in this report. The Office of Higher Education is grateful for his thoughtful insight, hard work and nearly 30-year commitment to public service.

Introduction

In *Overview of the Design for Shared Responsibility*, Assigned Student Responsibilities were defined and their role described. Assigned Student Responsibilities are similar to cost sharing found in other public and private transactions.

In this report, various approaches to financing the Assigned Student Responsibilities are explored. The first analysis examines the number of hours per week students would need to be employed to cover all of their Assigned Student Responsibilities. The second analysis examines the monthly payments if students borrowed to pay for all of their Assigned Student Responsibilities. A combination of the two is examined as the third option.

These analyses are illustrative of the feasibility of using employment, borrowing or a combination of both for financing Assigned Student Responsibilities. The results provide data to help readers judge the reasonableness and rigor of current assignments.

Paying Assigned Student Responsibilities with Current Income

This section of the paper describes how many hours per week students would need to be employed to pay their Assigned Student Responsibilities with minimum wage employment and mean Minnesota Work-Study wage rates.

The number of hours of employment needed to cover Assigned Student Responsibilities were calculated based on net earnings determined by wage and tax rates according to the following formulas:

$$\text{Target net earnings} = (\text{Wage Rate} * \text{Hours Worked}) - \text{Federal Income Tax Liability} - \text{Minnesota State Income Tax Liability} - \text{FICA and Medicare Tax}$$

$$\text{Target net earnings} = \text{Assigned Student Responsibility for each prototype student}$$

$$\text{Wage rate} = \text{Minimum wage rate}$$

Minimum Wage Rates

Year	1998	2001	2004	2007
Minimum Wage	\$5.15	\$5.15	\$5.15	\$6.15

Tax liabilities were calculated using standard federal and Minnesota tax returns based on current income only. An offset for FICA and Medicare Tax at a rate of 7.65 percent of gross income was deducted from earnings. Federal tax liabilities were computed on Form 1040 for the year the income was earned. To calculate income tax liabilities, standard deductions and exemptions were used for the year the income was earned. Persons itemizing their deductions could have a lower tax liability than calculated in this paper. The number of exemptions claimed for purposes of calculating federal income taxes for dependent students was assumed to be zero; it was assumed the parent claimed the student. Unmarried students with no dependents applying as independent students were assumed to be eligible to claim one exemption. Minnesota tax liability was computed on Form M1.

Dependent Students

The first case assumes dependent students pay Assigned Student Responsibilities with earnings by working the same number of hours per week for 50 weeks per year. In this case, the average work week required to pay Assigned Student Responsibilities ranged from 14 to 29 hours per week in Fiscal Year 1998 and 17 to 27 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top left panel on page F-6.

The second case assumes dependent students work the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment. The 12 weeks could occur anytime during the 52-week period. In this case, the average work week required to pay Assigned Student Responsibilities ranged from six to 25 hours per week in Fiscal Year 1998 and nine to 23 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the lower left panel on the next page.

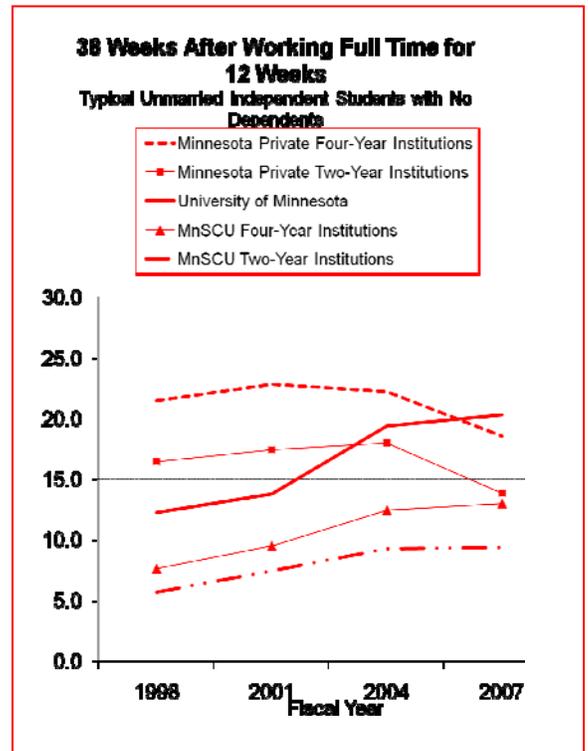
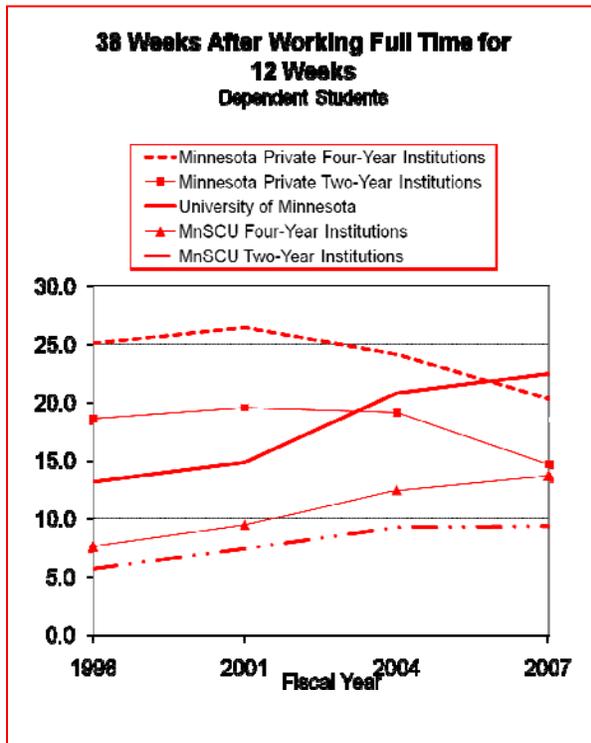
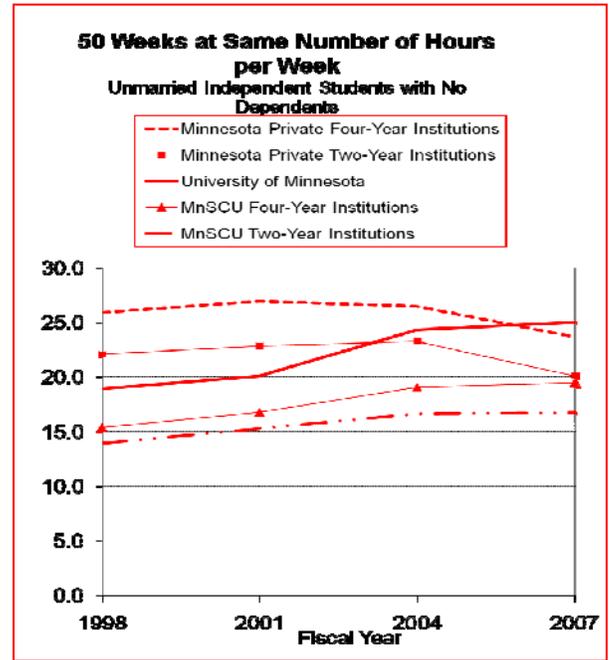
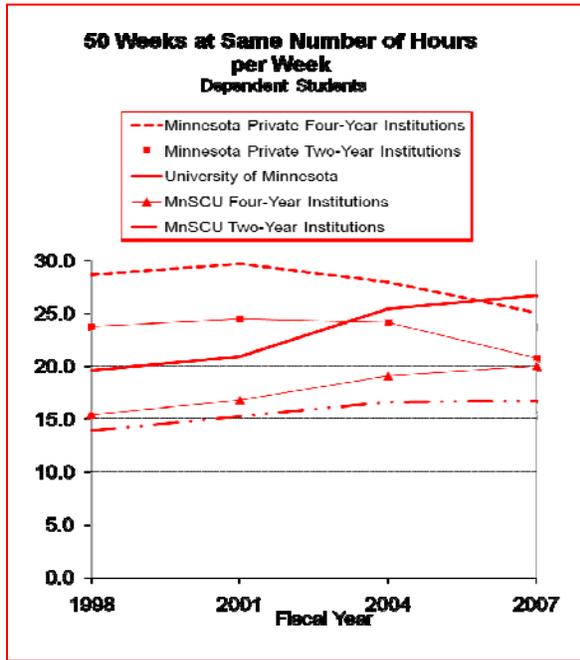
Unmarried Independent Students with No Dependents

For unmarried independent students with no dependents, the average work week required to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from 14 to 26 hours per week in Fiscal Year 1998 and 17 to 25 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top right panel on the next page.

For unmarried independent students with no dependents, the average work week required to pay Assigned Student Responsibilities by working same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from six to 21 hours per week in Fiscal Year 1998 and nine to 20 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the bottom right panel on the next page.

For students working full-time during the summer, weekly hours for the remaining 38 weeks of the year ranged from nine hours per week (MnSCU two-year institutions) to 23 hours per week (University of Minnesota) for dependent students and nine hours per week (MnSCU two-year institutions) to 20 hours per week (University of Minnesota) for independent students. If students work the same number of weekly hours for 50 weeks per year, the weekly hours ranged from 17 hours per week (MnSCU two-year institutions) to 27 hours per week (University of Minnesota) for dependent students and 17 hours per week (MnSCU two-year institutions) to 25 hours per week (University of Minnesota) for independent students.

Average Work Week Needed to Pay Assigned Student Responsibilities at Minimum Wage



Covering Assigned Student Responsibilities with Earnings from Jobs Paying Mean Minnesota Work Study Wages

Instead of using minimum wage rates, the mean Minnesota State Work-Study wage rates were used in this section to show what is occurring in the labor markets. These rates are shown in the next table and were used to calculate target net earnings.¹

Mean Minnesota Work Study Wage Rates

Institution Type	1998	2001	2004	2007
MnSCU Two-Year Institutions	\$6.03	\$7.36	\$7.73	\$7.99
MnSCU Four-Year institutions	\$5.31	\$6.84	\$7.38	\$7.93
University of Minnesota	\$7.79	\$7.84	\$8.58	\$8.41
Minnesota Private Two-Year Institutions	\$6.62	\$8.01	\$8.22	\$8.15
Minnesota Private Four-Year Institutions	\$5.89	\$6.54	\$7.13	\$7.85

Dependent Students

In the first case, the average work week required for dependent students to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from 11 to 23 hours per week in Fiscal Year 1998 and 13 to 20 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top left panel on the next page.

In the second case, the average work week required for dependent students to pay Assigned Student Responsibilities by working the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from three to 19 hours per week in Fiscal Year 1998 and four to 13 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the lower left panel on the next page.

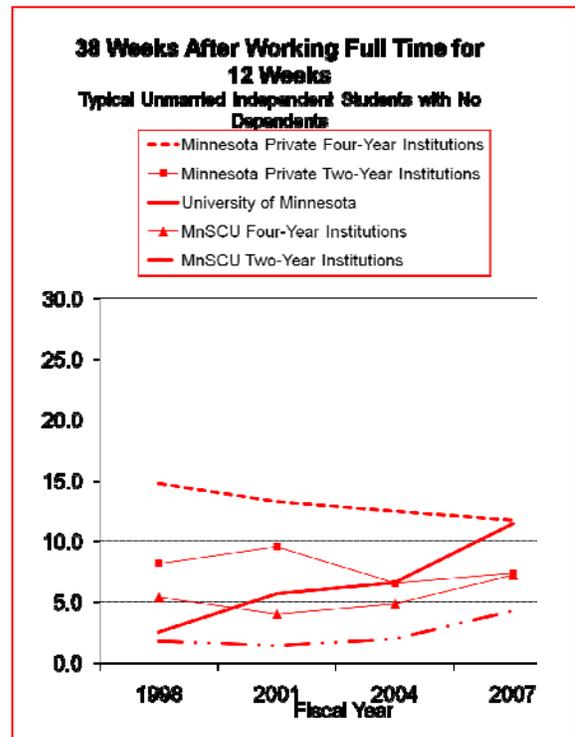
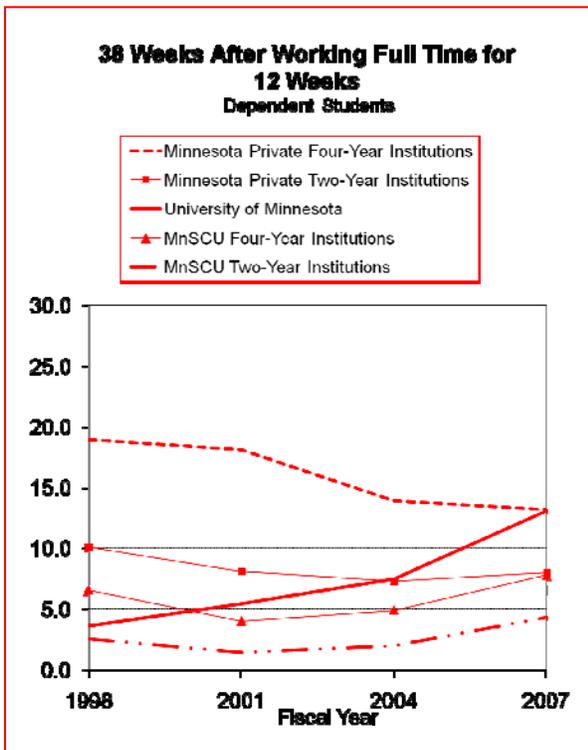
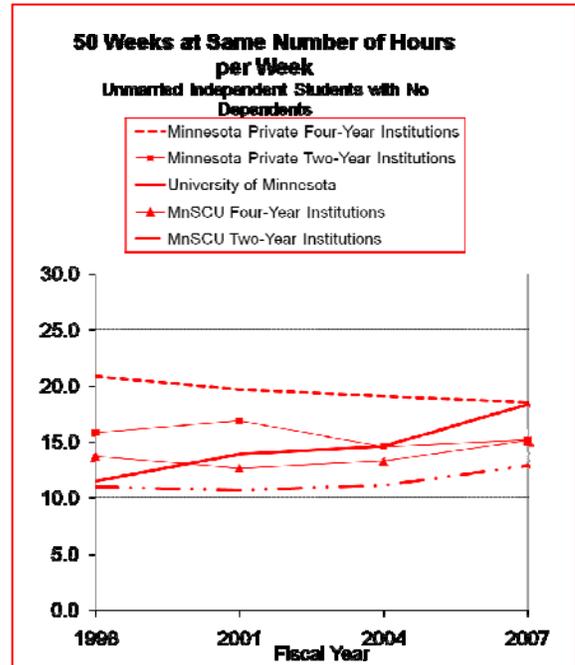
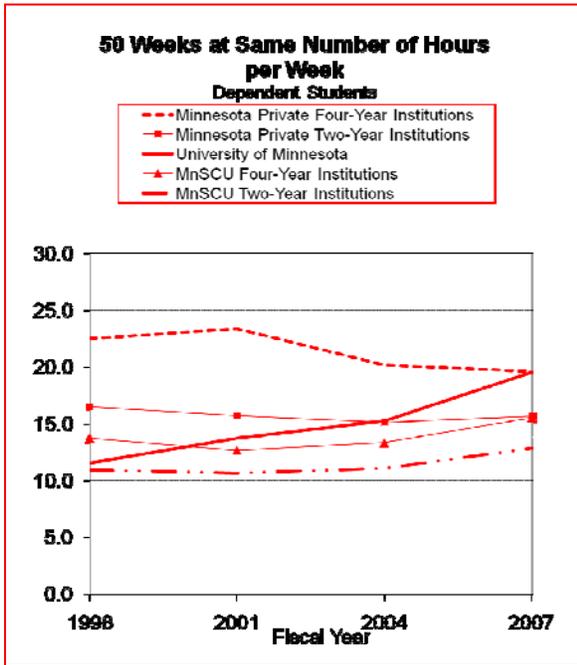
Unmarried Independent Students with No Dependents

For unmarried independent students with no dependents, the average work week required to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from 11 to 21 hours per week in Fiscal Year 1998 and 13 to 18 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top right panel on the next page.

For unmarried independent students with no dependents, the average work week required to pay Assigned Student Responsibilities by working the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from three to 19 hours per week in Fiscal Year 1998 and four to 12 hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the bottom right panel on the next page.

¹ Staff are examining other market based averages that might work to expand these analyses.

Average Work Week Needed to Pay Assigned Student Responsibilities at Mean Minnesota Work Study Wage



Paying Assigned Student Responsibilities with Future Income by Borrowing

This section describes how much students would have to borrow to pay their Assigned Student Responsibilities for one academic year. By borrowing, students effectively defer paying for their Assigned Student Responsibilities until after they complete their educations. Most examples are based on one year of borrowing. Thus, the monthly payment obligation for students borrowing for multiple years would be significantly higher than those shown. However, the last panels in this section show the ratio of monthly payments to income for students borrowing for multiple academic years.

Amount Borrowed

This section uses the terms of Federal Stafford Loans to examine the implications of borrowing to cover Assigned Student Responsibilities.² There are two kinds of federal Stafford loans, subsidized and unsubsidized. For students eligible for subsidized federal Stafford loans, the federal government pays the interest while the student is attending. Students borrowing unsubsidized federal Stafford loans accrue interest while attending.

The terms of federal Stafford loans for the four years used in this section are shown below.

Federal Stafford Student Loan Terms

Item	1998	2001	2004	2007
In-School Interest Rate (Applies to Unsubsidized Loans Only)	7.7%	7.6%	2.8%	6.8%
Repayment Interest Rate	8.2%	8.2%	3.4%	6.8%
Origination and Insurance Fees	4.0%	4.0%	4.0%	4.0%

It was assumed, for this analysis, students borrowed enough so the net proceeds (loan amount less origination and insurance fees) would cover Assigned Student Responsibilities. Since Assigned Student Responsibilities have been increasing with time, loan amounts were increasing as well, as shown in top panel on the next page. Again, these amounts were calculated to show the impact of covering Assigned Student Responsibilities with future income and were not intended to reflect current student behavior.

² Some students will not be eligible to borrow enough with a Federal Stafford Loan to cover Assigned Student Responsibilities. For those with a credit worthy co-signer, Minnesota SELF Loans are available to cover the amount of Assigned Student Responsibilities. For this analysis, Federal Stafford Loan terms were used.

Monthly Payments

To calculate monthly payments, the following terms were specified. A repayment period of 10 years was used. Interest for life of the loan equaled the terms in place at the time the loan contract was signed.

Generally, personal interest other than certain mortgage interest is not deductible from income reported on the federal individual income tax return. Interest paid on student loans used for higher education is an exception. Prior to tax year 2002, tax filers could deduct the annual interest paid on student loans during the tax year, but only for the first 60 months they were required to make payments. Beginning with tax year 2002, tax filers could deduct the annual student loan interest paid, including voluntary payments, until the loan is paid in full.³

In this analysis, it was assumed students would earn enough to fall in the lowest marginal income tax rate on their federal and Minnesota individual income tax return.

For Fiscal Year 1998:

- Monthly payments for a subsidized federal Stafford loan for one academic year, ranged from \$42 to \$79, as shown on the bottom left panel on the next page.
- Monthly payments for an unsubsidized federal Stafford loan for one academic year, ranged from \$46 to \$85, as shown on the bottom right panel on the next page.

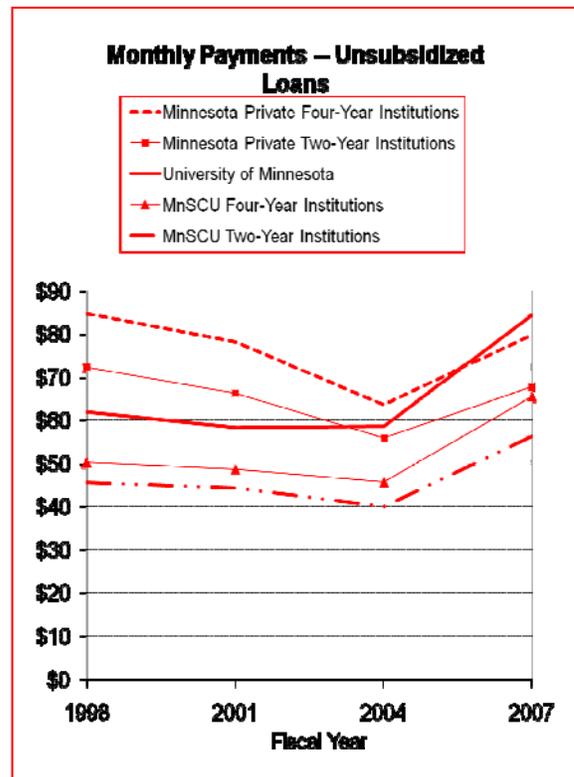
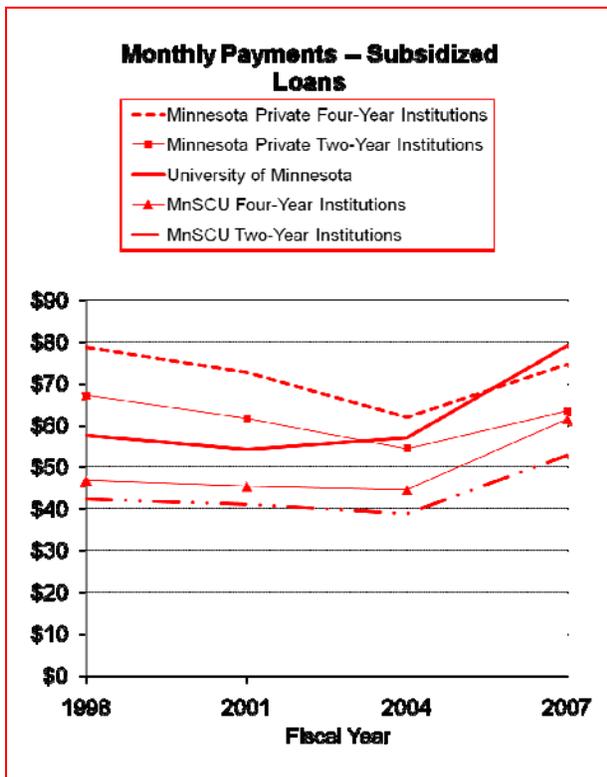
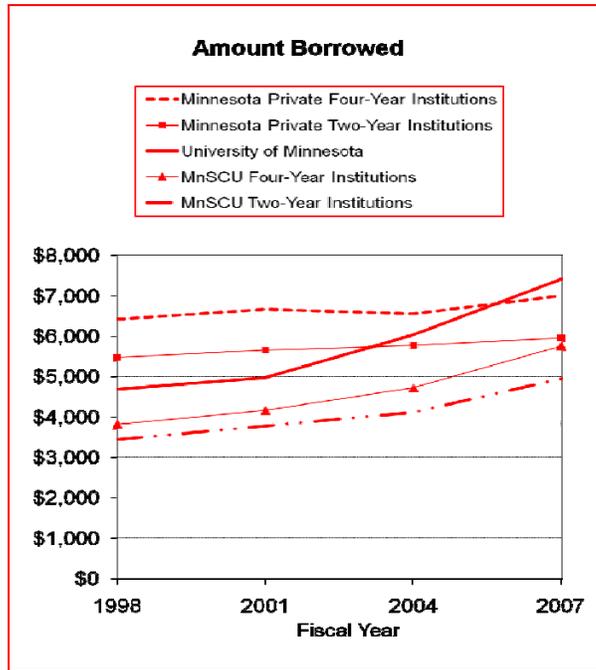
For Fiscal Year 2007:

- Monthly payments for a subsidized federal Stafford loan for one academic year, ranged from \$53 to \$79, as shown on the bottom left panel on the next page.
- Monthly payments for an unsubsidized federal Stafford loan for one academic year, ranged from \$56 to \$84, as shown on the bottom right panel on the next page.

Recognized prices and the resulting Assigned Student Responsibilities increased each year examined in this analysis, Fiscal Years 1998-2007. Monthly repayment amounts did not proportionally increase because: (1) loan interest rates decreased up to Fiscal Year 2007, and (2) student loan interest was a tax deduction after 2002.

³ IRS Publication 970 (2006), p. 24-25.

Borrowing to Cover Assigned Student Responsibilities

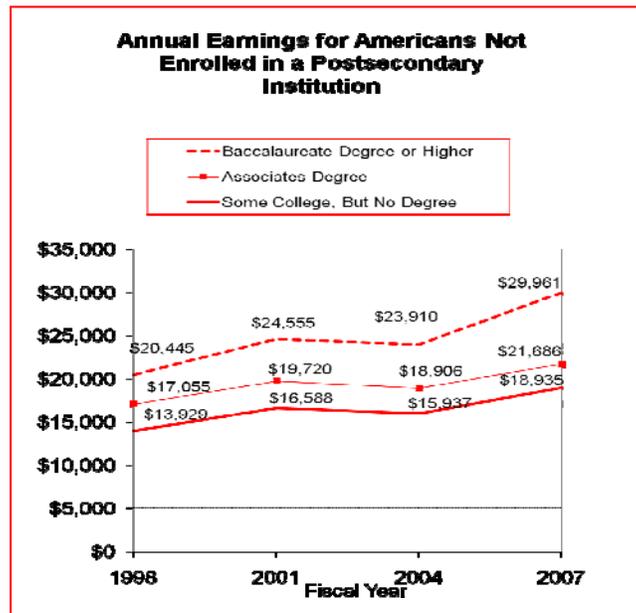


Payment Efforts

Another measure of the impact of borrowing on students is the ratio of their monthly loan repayment amount to their monthly income. The salaries of young Americans with at least some college experience have been increasing over time, as shown on the top panel on the next page. The analysis in this section was based on the reported earnings before deductions of Americans age 20 to 25 not currently enrolled who have at least a baccalaureate degree, as shown by the top line on the chart in the panel on the this page.

Monthly payments decreased between Fiscal Years 1998 and 2004, as shown in the prior section. The ratio of payment amounts to monthly income decreased as well, as shown on the top panel on the next page. Both payment amounts and ratios of payment amounts to monthly income increased from Fiscal Year 2004 to Fiscal Year 2007. Since the monthly payment amount is based on a Stafford Loan for only one academic year, the ratio of monthly loan repayment amount to monthly income would significantly increase for students who borrowed for multiple academic years. The chart on the next page shows the ratio of monthly loan payments to monthly income when borrowing Stafford Loans for two or four years, based on the type of institution shown. Payment to income ratios for most institutions remained relatively stable between Fiscal Years 1998 to 2008, with the exception of a decrease for private four-year institutions. For Fiscal Year 2007, the ratios ranged from 4.2 percent of income at MnSCU two-year institutions and 12.7 percent of income at the University of Minnesota for subsidized loans. Ratios were slightly higher for unsubsidized loans.

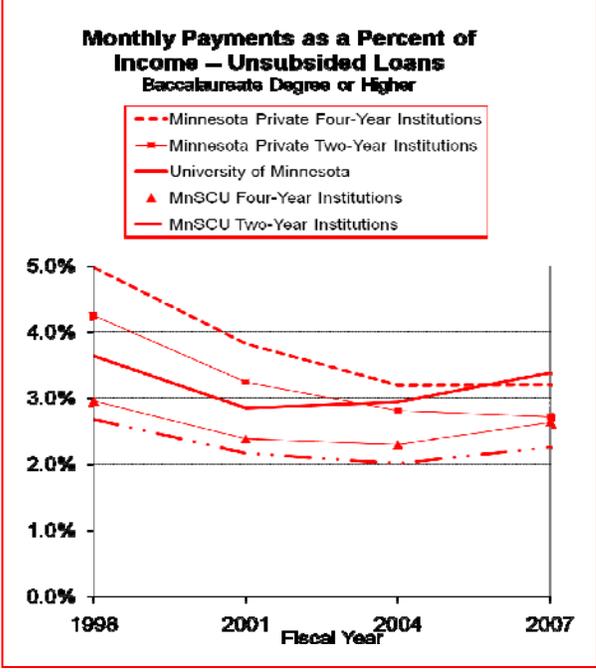
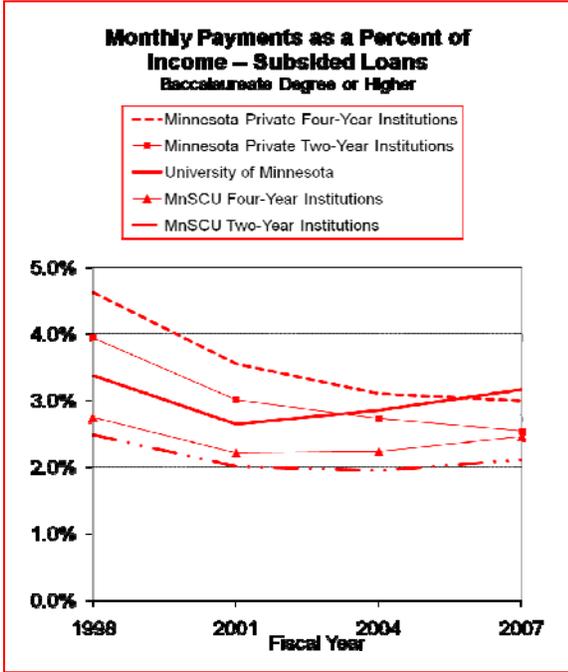
Annual Earnings for Americans Age 20 to 25 Not Enrolled in a Postsecondary Institution, 1998–2007



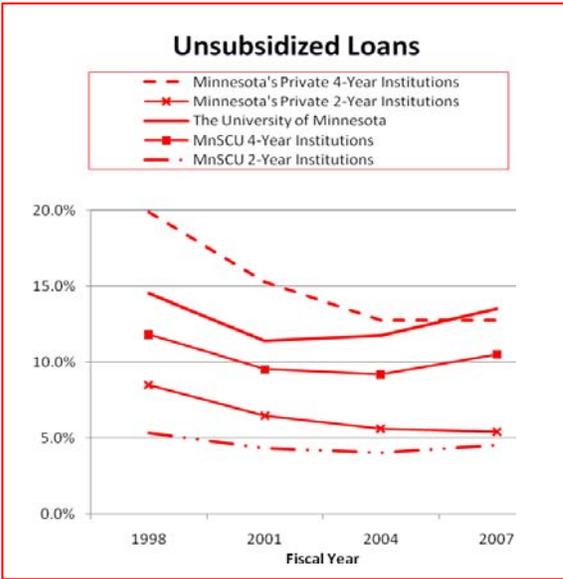
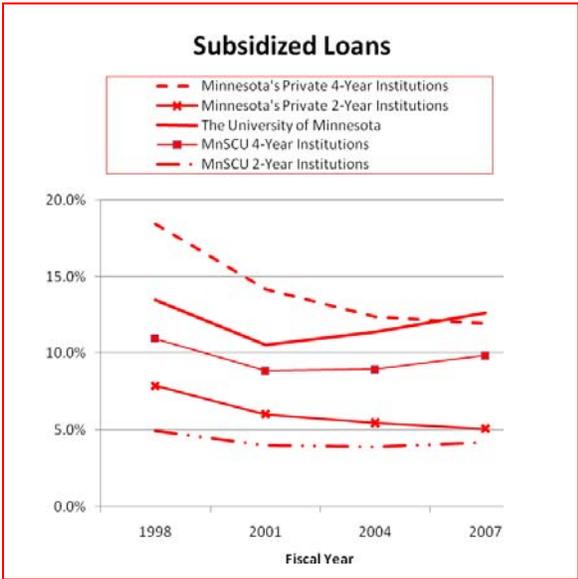
Source: U.S. Census Bureau, Current Population Survey, March Supplement

Monthly Payments as a Percent of Income of Americans Age 20 to 25 with Baccalaureate Degree or Higher

Stafford Loan for One Academic Year



Stafford Loans for Length of Degree Program



Paying Assigned Student Responsibilities with a Combination of Current and Future Income

This section describes a scenario in which students combine earnings and borrowing to cover Assigned Student Responsibilities. First, it was assumed all students borrowed an amount equal to Assigned Student Responsibilities of students attending MnSCU two-year colleges. As such, all students were assumed to borrow the same amount and students attending MnSCU two-year colleges covered their Assigned Student Responsibilities completely with borrowing. All other students were assumed to work enough to make up the difference between their Assigned Student Responsibilities and the assumed amount borrowed. The minimum wage rates, mean Minnesota Work Study wages, and Federal Stafford Loan terms used above were applied in this section.

Covering Assigned Student Responsibilities with Earnings from Minimum Wage Jobs

Dependent Students

In the first case, the average work week required by dependent students to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from zero to 12 hours per week in Fiscal Year 1998 and zero to eight hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top left panel on the next page.

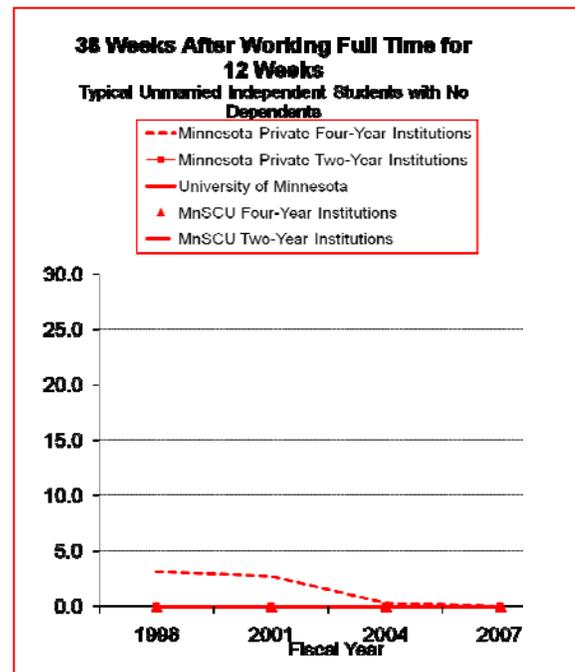
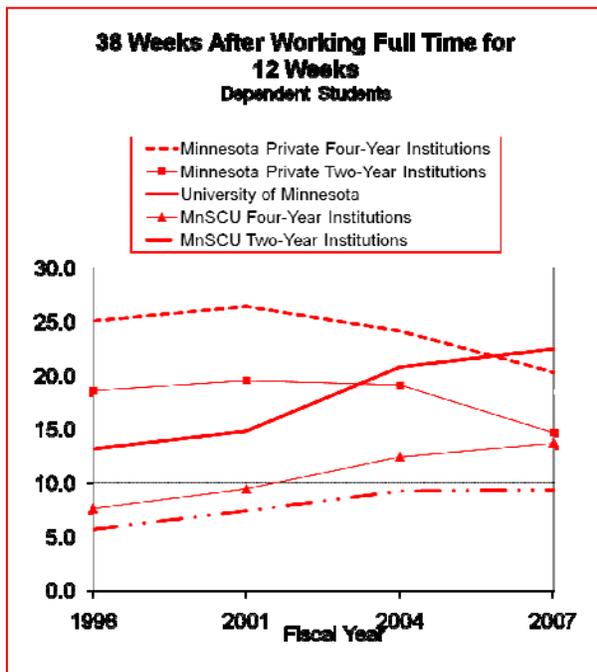
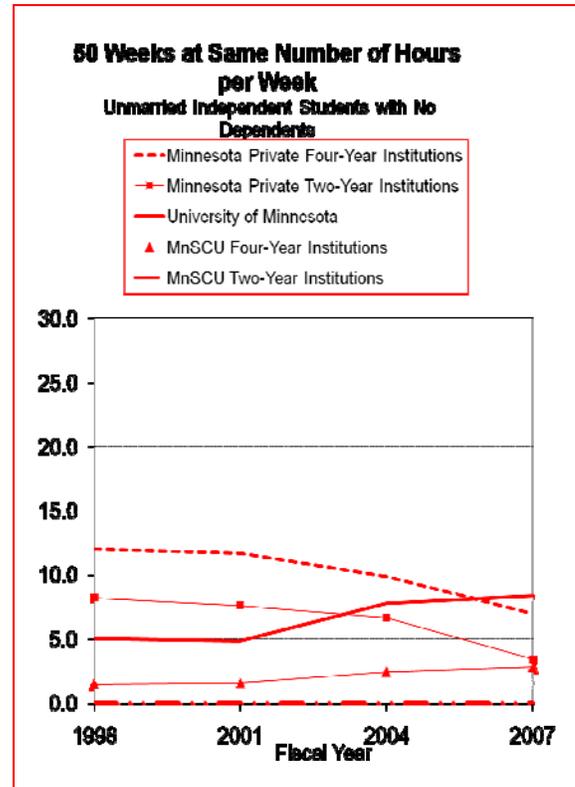
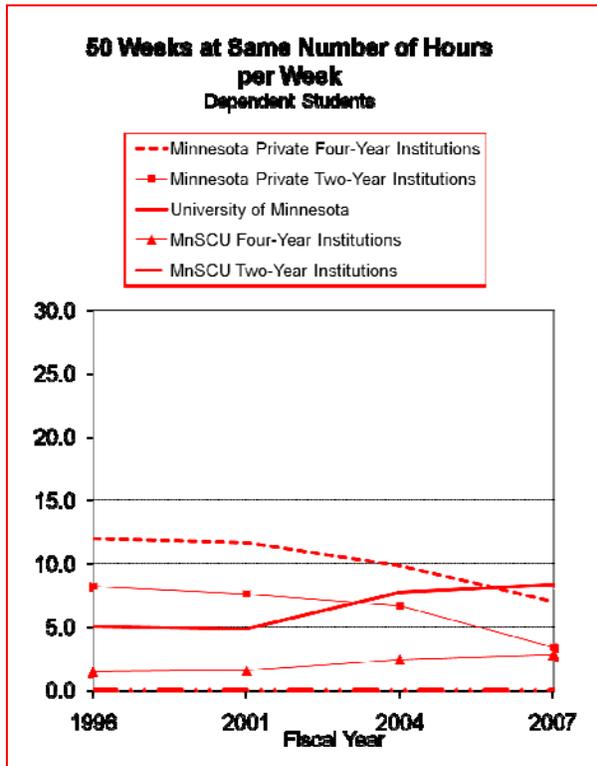
In the second case, the average work week required by dependent students to pay Assigned Student Responsibilities by working the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from zero to three hours per week in Fiscal Year 1998 and zero to less than one hour per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the lower left panel on the next page.

Unmarried Independent Students with No Dependents

In the first case, the average work week required by unmarried independent students to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from zero to three hours per week in Fiscal Year 1998 and zero to eight hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top right panel on the next page.

In the second case, the average work week required by unmarried independent students to pay Assigned Student Responsibilities by working the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from zero to three hours per week in Fiscal Year 1998 and zero hours per week in Fiscal Year 2007 at the prices used in this analysis, as shown on the bottom right panel on the next page.

Average Work Week Needed to Pay Assigned Student Responsibilities at Minimum Wage



Covering Assigned Student Responsibilities with Earnings from Jobs Paying Mean Minnesota Work-Study Wages

Dependent Students

In the first case, the average work week required by dependent students to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from zero to 10 hours per week in Fiscal Year 1998 and zero to six hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the top left panel on the previous page.

In the second case, the average work week required by dependent students to pay Assigned Student Responsibilities by working the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from zero to 0.1 hours per week in Fiscal Year 1998 and zero hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the bottom left panel on the previous page.

Unmarried Independent Students with No Dependents

In the first case, the average work week required by unmarried independent students to pay Assigned Student Responsibilities by working the same number of hours per week for 50 weeks per year ranged from zero to 10 hours per week in Fiscal Year 1998 and zero to six hours per week in Fiscal Year 2007 at the prices used in this analysis, as shown on the top right panel on the previous page.

In the second case, the average work week required by unmarried independent students to pay Assigned Student Responsibilities by working the same number of hours per week for 38 weeks per year combined with 12 weeks of full-time employment ranged from zero to 0.1 hours per week in Fiscal Year 1998 and zero hours per week in Fiscal Year 2007, at the prices used in this analysis, as shown on the bottom right panel on the previous page.

- For students working full-time during the summer, weekly hours for the remaining 38 weeks of the year ranged from four hours per week (MnSCU two-year institutions) to 13 hours per week (University of Minnesota) for dependent students and four hours per week (MnSCU two-year institutions) to 12 hours per week (University of Minnesota) for independent students. If students work the same number of weekly hours for 50 weeks per year, the weekly hours ranged from 13 hours per week (MnSCU two-year institutions) to 20 hours per week (University of Minnesota) for dependent students and 13 hours per week (MnSCU two-year institutions) to 18 hours per week (University of Minnesota) for independent students.

Interaction of Assigned Student and Family Responsibilities for Unmarried Independent Students with No Dependents

The Design for Shared Responsibility distributes the Recognized Price of Attendance among students, families and, if necessary, taxpayers. Assigned Student Responsibilities are assigned to all students. This assignment is based on the economic benefits of receiving a postsecondary education. Assigned Family Responsibilities for dependent students are based on parents' incomes and net worth.

Assigned Family Responsibilities for independent students are based on students' incomes and net worths. In effect, independent students assume the responsibility assigned to parents of dependent students once they qualify as independent students.

Some independent students do not have any Assigned Family Responsibilities because the Federal Need Analysis, used in the Minnesota State Grant Program, shelters enough of their income through an Income Protection Allowance. Some students using earnings to pay for their Assigned Student Responsibilities, however, will generate Assigned Family Responsibilities.

This section shows how many more hours of work per week unmarried independent students with no dependents would have to work to earn enough to cover their Assigned Student Responsibilities and any Assigned Family Responsibilities generated by those earnings. Two financing strategies were considered: (1) cover all of Assigned Student Responsibilities with earnings, and (2) cover the difference, if any, between their Assigned Student Responsibilities and a loan that covers Assigned Student Responsibilities of students attending MnSCU two-year colleges. These parallel the analysis presented above.

In this section, target net earnings were defined as follows:

Target Net Earnings = (Wage Rate * Hours Worked) - Federal Income Tax Liability - Minnesota State Income Tax Liability - FICA and Medicare Tax - **Assigned Family Responsibility**.

Target net earnings = Assigned Student Responsibility for each prototype student.

Wage rates = Average Minnesota Work-Study wage rate.

Assigned Family Responsibility = Amount associated with earnings calculated in Target Net Earnings equation.

The results for unmarried independent students with no dependents working 50 weeks at the same number of hours per week are shown on the upper left hand panel on the next page. The results for these students are:

- Unmarried independent students with no dependents attending MnSCU two-years, MnSCU four-year institutions and Minnesota private two-year institutions would not have had to work more hours per week.
- Unmarried independent students with no dependents attending the University of Minnesota would have had to increase the number of hours worked per week by 2.4 hours, from 18.3 to 20.7 hours.
- Unmarried independent students with no dependents attending Minnesota private four-year institutions would have had to increase the number of hours worked per week by 1.7 hours, from 18.5 to 20.2 hours.

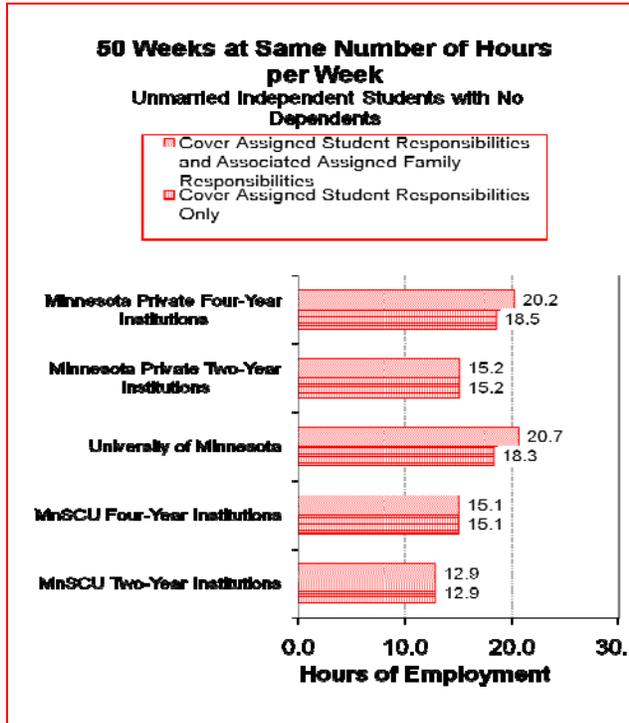
The results for independent students with no dependents working 38 weeks after working full time for 12 weeks are shown on the lower left hand panel on the next page. The results for these students follow.

- Unmarried independent students with no dependents attending MnSCU two-years and MnSCU four-year institutions and Minnesota private two-year institutions would not have had to work more hours per week.
- Unmarried independent students with no dependents attending the University of Minnesota would have had to increase the number of hours worked per week by 3.1 hours, from 11.5 to 14.6 hours.
- Unmarried independent students with no dependents attending Minnesota private four-year institutions would have had to increase the number of hours worked per week by 2.2 hours, from 11.8 to 14.0 hours.

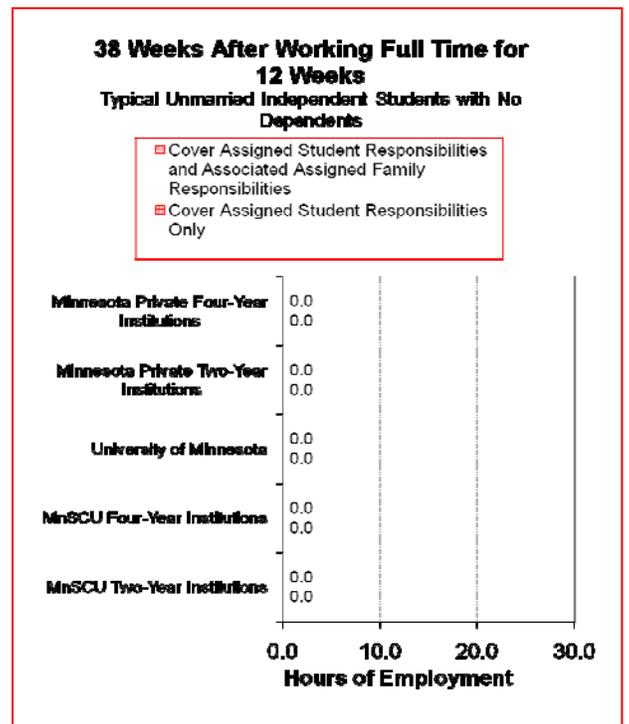
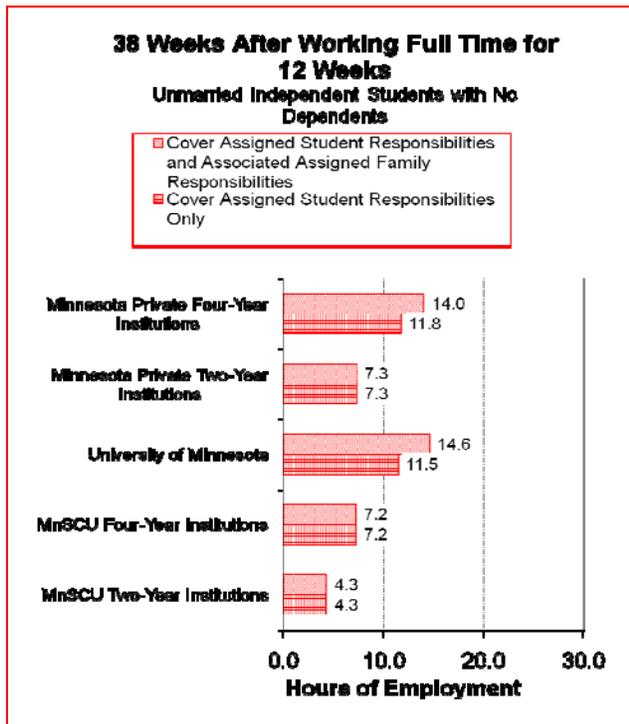
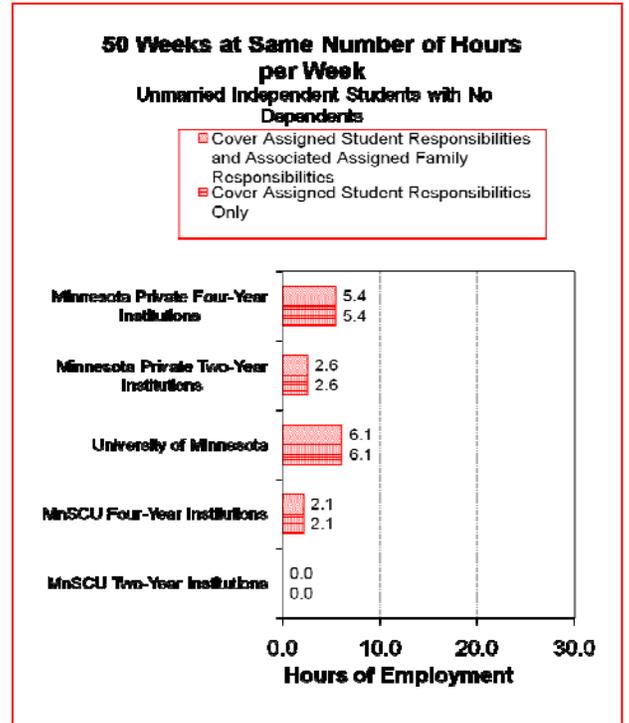
The results for unmarried independent students with no dependents using a combination of work and borrowing are shown on the two panels on the right hand side of the next page. No additional hours of work per week were required for independent students with no dependents attending any of the institutional types.

Average Work Week Needed to Pay the Assigned Student and Family Responsibilities at Average Minnesota Work Study Wage, Fiscal Year 2007

Current Income



Combined Current & Future Income



Findings

This report explores the feasibility of dependent and single independent students using employment, borrowing, or a combination of both for financing Assigned Student Responsibilities within the State Grant program. In many cases, the number of weekly hours of employment required to cover the student responsibility are reasonable, as are the monthly loan repayments for repaying student loan debt used to finance the responsibility when loan debt is limited to one academic year. However, the Assigned Student Responsibility is limited by price constraints used within the award calculation budget, such as tuition and fee maximums and a Living and Miscellaneous Allowance that may not represent realistic living expenses for most students. One possibility for further study is the ability of students or families to cover the net price remaining after gift aid is subtracted from the campus cost of attendance, which is generally considered a more realistic picture of actual educational and living costs than the award budget.

The examples in this section indicate that, for Fiscal Year 2007:

- The hours of weekly employment at minimum wage required to fund the Assigned Student Responsibility for students were manageable for students attending most institution types, but exceeded 20 hours per week for some cases, which is generally the maximum number of hours per week colleges assign for work-study jobs to avoid negative effects on academic performance.
- The hours of weekly employment at state Work-Study program wages required to fund the Assigned Student Responsibility for students were manageable for students at most types of institutions.
- When students borrow subsidized Federal Stafford Loans to cover the Assigned Student Responsibility for one academic year, the ratios of monthly loan payments to monthly incomes would generally be considered reasonable, with a range of two percent of monthly income (MnSCU two-year institutions) to 3.2 percent of monthly income (University of Minnesota). The ratios are only slightly higher for unsubsidized federal Stafford loans. However, when loan debt is increased to the amount needed to cover the Assigned Student Responsibility for two or four academic years, the ratios increased to 4.2 percent (MnSCU two-year institutions), 5.1 percent (private two-year institutions), 9.8 percent (MnSCU four-year institutions), 12 percent (private four-year institutions) and 12.7 percent (University of Minnesota).
- When students use a combination of borrowing and employment to cover the Assigned Student Responsibility, the hours of weekly employment needed to cover the remaining responsibility after the loan is applied are minimal, with a maximum of six hours per week at the minimum wage (University of Minnesota) and eight hours per week at State Work Study program wages (University of Minnesota). The amount of the loan applied was equal to the Assigned Student Responsibility at MnSCU two-year institutions.

References

Internal Revenue Service (2003). *Tax Benefits for Education* Publication 970.

Internal Revenue Service (2006). *Tax Benefits for Education* Publication 970.