

Addendum to “What is Gainful Employment? What is Affordable Debt?”

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EXECUTIVE SUMMARY

This addendum to the March 11, 2010 report, *What is Gainful Employment? What is Affordable Debt?*, supplements the report with a few additional insights. The insights include the analysis of a combination of two alternatives (as opposed to the original report’s analysis of each alternative separately), observations on the interchangeability of the loan repayment terms and debt-service-to-income thresholds, analysis of the relationships of the debt-service-to-income thresholds to loan amounts, discussion of changes in median income by educational attainment from age 25-34 to age 35-44, and charts showing the percentile distribution of debt at graduation by control of institution.

ANALYSIS OF COMBINATIONS OF TWO ALTERNATIVES

The March 11, 2010 report explored the impact of several alternatives to the US Department of Education’s proposal for an 8% debt-service-to-income ratio based on a standard 10-year repayment plan for the unsubsidized Stafford loan. These included replacing the 8% threshold with a 10% or 15% threshold and replacing the 10-year repayment term with a 20-year repayment term. Each of these proposals was evaluated separately, not in combination. After the publication of the report some people have advocated for combining two or more of the alternatives. The following discussion analyzes the impact of combining two of the alternatives.

The following table from the March 11, 2010 report shows the implications of using a 15% debt-service-to-income threshold with a 10-year repayment term.

2007-08 NPSAS Implications of 15% Debt-to-Income Threshold	Associate’s Degree	Bachelor’s Degree
Median Income	\$35,535	\$42,092
Monthly Loan Payment at 15% of Income	\$444.19	\$526.15
Equivalent Loan Balance (6.8%, 10 year)	\$38,598	\$45,720
Percentage of Graduates with Less Debt		
For-Profit Colleges	93.3%	84.0%
Non-Profit Colleges	91.0%	86.0%
Public Colleges	97.6%	94.6%

The following table from the March 11, 2010 report shows the implications of using an 8% debt-service-to-income threshold with a 20-year repayment term.

2007-08 NPSAS Implications of 20-Year Repayment Term	Associate's Degree	Bachelor's Degree
Median Income	\$35,535	\$42,092
Monthly Loan Payment at 8% of Income	\$236.90	\$280.61
Equivalent Loan Balance (6.8%, 20 year)	\$31,035	\$36,761
Percentage of Graduates with Less Debt		
For-Profit Colleges	85.2%	63.6%
Non-Profit Colleges	86.2%	75.2%
Public Colleges	95.7%	88.1%

The following table combines these two alternatives, yielding a 15% debt-service-to-income threshold with a 20-year repayment term.

2007-08 NPSAS Implications of 15% Debt-to-Income Threshold and 20-Year Repayment Term	Associate's Degree	Bachelor's Degree
Median Income	\$35,535	\$42,092
Monthly Loan Payment at 15% of Income	\$444.19	\$526.15
Equivalent Loan Balance (6.8%, 20 year)	\$58,193	\$68,931
Percentage of Graduates with Less Debt		
For-Profit Colleges	99.7%	98.8%
Non-Profit Colleges	98.6%	96.8%
Public Colleges	99.9%	99.4%

Since almost all graduates from for-profit colleges would graduate with less debt, this alternative would not have any impact on for-profit colleges.

The following table combines a 10% debt-service-to-income threshold with a 20-year repayment term.

2007-08 NPSAS Implications of 10% Debt-to-Income Threshold and 20-Year Repayment Term	Associate's Degree	Bachelor's Degree
Median Income	\$35,535	\$42,092
Monthly Loan Payment at 10% of Income	\$296.13	\$350.77
Equivalent Loan Balance (6.8%, 20 year)	\$38,796	\$45,954
Percentage of Graduates with Less Debt		
For-Profit Colleges	93.5%	84.6%
Non-Profit Colleges	93.6%	90.2%
Public Colleges	99.1%	96.7%

Notice how the results are very similar to those for a 15% debt-service-to-income threshold with a 10-year repayment term. The 15% / 10-year results show that 93.3% of Associate's degree graduates and

84.0% of Bachelor’s degree graduates would graduate with less debt, while the 10% / 20-year results from this table show 93.5% of Associate’s degree recipients and 84.6% of Bachelor’s degree recipients graduating with less debt. This suggests that the debt-service-to-income thresholds and loan terms may be interchangeable in effect.

INTERCHANGEABILITY OF THRESHOLDS AND LOAN TERMS

Changing either the loan term or the debt-service-to-income threshold changes the equivalent loan balance. Holding the loan balance constant while changing either variable allows one to calculate the corresponding loan term or debt-service-to-income threshold. This yields conversion factors that are in proportion to the monthly loan payments. This makes it possible to convert debt-service-to-income thresholds with a 15-year or 20-year repayment into the equivalent thresholds under a 10-year repayment term, simplifying comparisons of the alternatives.

The following table illustrates a few useful heuristics based on this approach.

Threshold Conversion Heuristics		
From	To	Change
20-year repayment term	10-year repayment term	Divide by 63.3%
15-year repayment term	10-year repayment term	Divide by 77.1%
10-year repayment term	20-year repayment term	Multiply by 63.3%
10-year repayment term	15-year repayment term	Multiply by 77.1%

For example, a 10% threshold with a 20-year repayment term is the equivalent of a $10\% / 63.3\% = 15.8\%$ threshold with a 10-year repayment term. This explains why the 10% / 20-year example above is similar to the 15% / 10-year example.

The following are equivalent thresholds for some of the more common alternatives that have been proposed.

12% / 15-year	→	15.6% / 10-year
15% / 15-year	→	19.5% / 10-year
15% / 20-year	→	23.7% / 10-year
10% / 15-year	→	13.0% / 10-year
10% / 20-year	→	15.8% / 10-year
13.8% / 10-year ¹	→	10.6% / 15-year
13.8% / 10-year	→	8.7% / 20-year
8% / 10-year	→	6.2% / 15-year
8% / 10-year	→	5.1% / 20-year
8% / 15-year	→	10.4% / 10-year
8% / 20-year	→	12.1% / 10-year

¹ 13.8% / 10-year corresponds to the rule of thumb that affordable debt at graduation should be less than the student’s expected starting salary (i.e., a debt-to-income ratio of 1:1).

RELATIONSHIP OF THRESHOLDS TO LOAN AMOUNTS

Each 1% increase in the debt-service-to-income-thresholds yields a \$2,573 increase in allowable debt for Associate's degree recipients and \$3,048 for Bachelor's degree recipients, assuming median income of \$35,535 for Associate's degree recipients and \$42,092 for Bachelor's degree recipients at for-profit colleges. (These figures correspond to dividing the median income by 13.8.) The starting debt figures at the 8% debt-service-to-income threshold are \$20,586 and \$24,384, respectively.

The median debt at graduation for an Associate's degree at a for-profit college, \$18,783, corresponds to a 7.3% debt-service-to-income ratio based on the median income. Similarly, the median debt at graduation for a Bachelor's degree at a for-profit college, \$32,625, corresponds to a 10.7% debt-service-to-income ratio based on the median income. The 90th percentile debt at graduation for an Associate's degree at a for-profit college, \$34,884, corresponds to a 13.6% debt-service-to-income ratio based on median income. The 90th percentile debt at graduation for a Bachelor's degree at a for-profit college, \$50,709, corresponds to a 16.6% debt-service-to-income ratio based on median income.

MEDIAN INCOME BY AGE DECILES

The March 11, 2010 report used US Census Bureau median income data from the age 25-34 decile.² The following table includes information about median income for the age 35-44 decile.

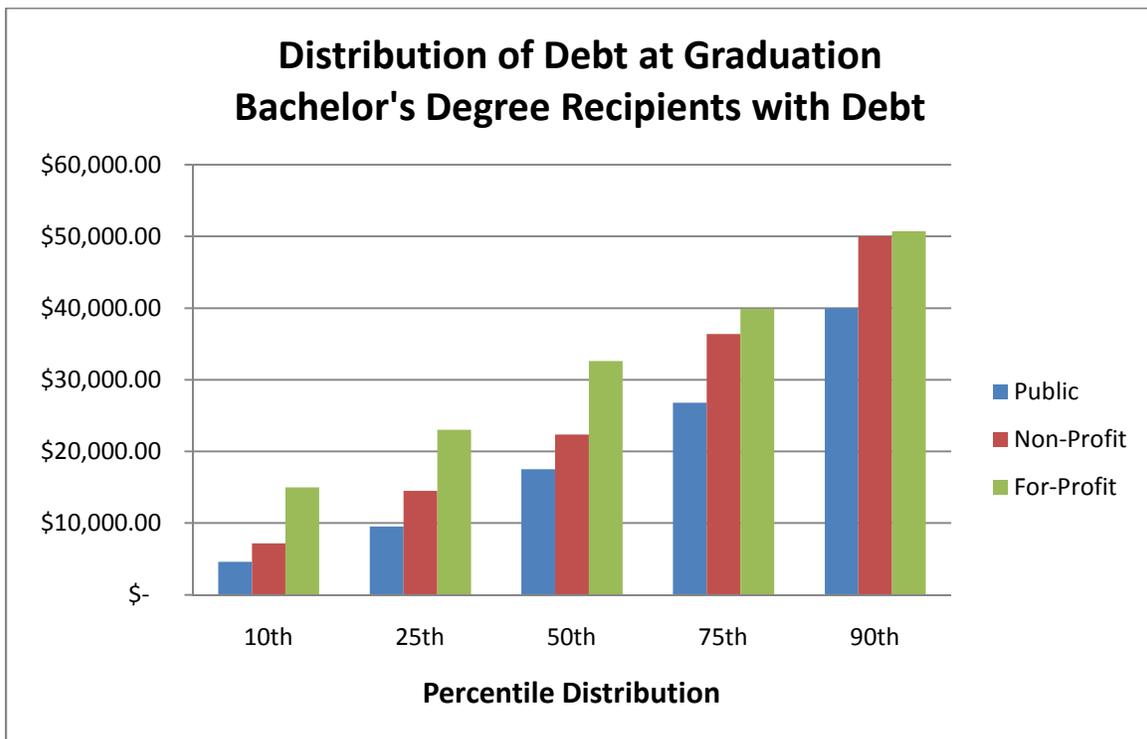
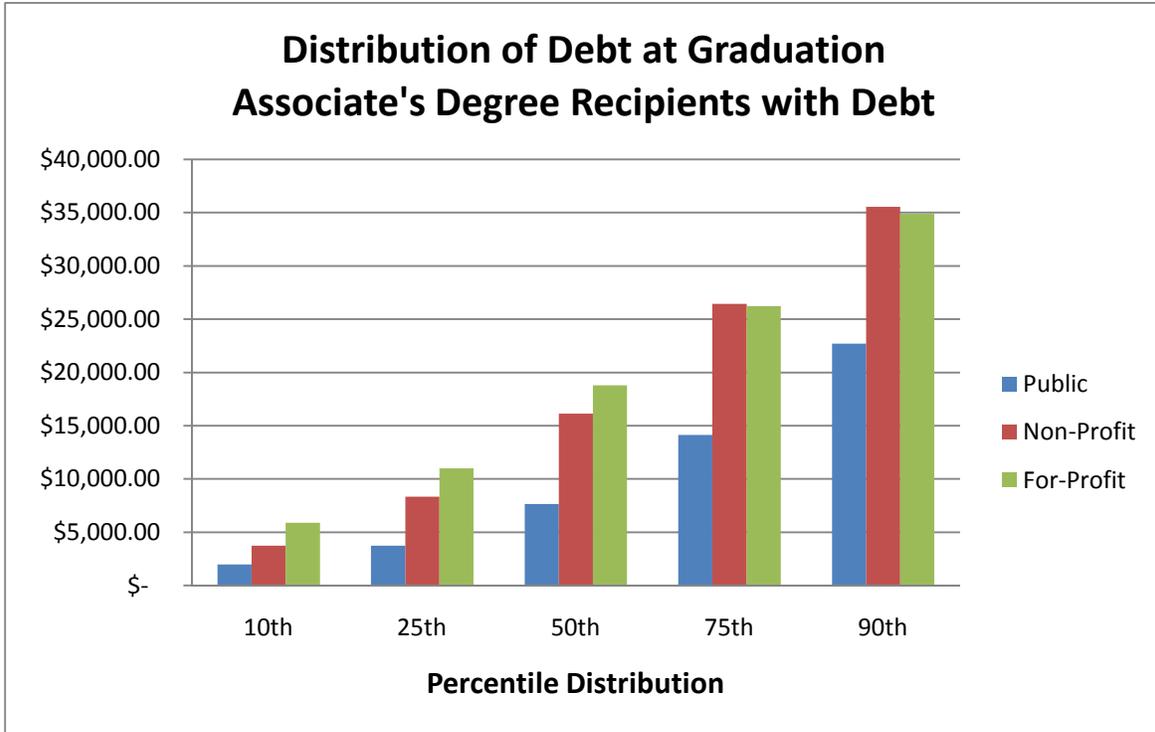
Median Income by Educational Attainment	Age 25-34	Age 35-44	Increase
High School	\$28,380	\$33,027	16.4%
Associate's Degree	\$35,535	\$42,184	18.7%
Bachelor's Degree	\$42,092	\$56,372	33.9%

The increase in income for Bachelor's degree recipients in the second decile is much greater than the increase in income for Associate's degree recipients and high school graduates. While the income advantage of Associate's degree recipients over high school graduates increases slightly from 25.2% in the age 25-34 decile to 27.7% in the age 35-44 decile, the advantage of Bachelor's degree recipients increases more dramatically, from 48.3% in the age 25-34 decile to 70.7% in the age 35-44 decile. This suggests that the financial advantage of a Bachelor's degree may be much greater than is evident in the first ten years after graduation.

² Note that these figures are for graduates from all types of colleges, not just for-profit colleges.

DISTRIBUTION OF DEBT AT GRADUATION BY CONTROL OF INSTITUTION

The following charts illustrate the percentile distribution of debt at graduation. The first set of charts show the debt at graduation for Associate's and Bachelor's degree recipients who graduated with some debt.



The second set of charts show the debt at graduation for all Associate's and Bachelor's degree recipients, including those who graduated with no debt.

