The American Opportunity Tax Credit

U.S. Department of the Treasury

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The President created the American Opportunity Tax Credit (AOTC) as part of the American Recovery and Reinvestment Act, which he signed into law in February 2009. For tax years 2009 and 2010, the new law allows families with tuition expenses to receive a tax credit of up to $2,500 per student, and up to $1,000 per year of this amount is refundable. If the AOTC is made permanent, as proposed in the President's FY 2011 Budget, a student could receive a credit up to $10,000 over four years. This report explains how the AOTC works, estimates what benefits typical families can expect to receive compared with prior law, and shows how families have already benefited from the new credit.

Executive Summary

The President created the American Opportunity Tax Credit (AOTC) as part of the American Recovery and Reinvestment Act, which he signed into law in February 2009. The AOTC replaces the Hope Scholarship credit for Tax Years 2009 and 2010, increasing the benefits for nearly all Hope credit recipients and many other students by providing a maximum benefit up to $2,500 per student – 100 percent of their first $2,000 in tuition and 25 percent of the next $2,000 –expanding the income range over which taxpayers can claim a credit, and making the credit partially refundable. If the AOTC is made permanent, as proposed in the President's FY 2011 Budget, a student could receive a credit up to $10,000 over four years.

- ***The AOTC Increased Tax Incentives for Higher Education by over 90%,*** or $8.7 billion, in 2009.
- ***12.5 Million Students and Their Families Received a Tax Incentive for Higher Education in 2009,*** an increase of 400,000 from 2008.
- ***AOTC Recipients in 2009 Received an Average Tax Credit of Over $1,700, about 75% More*** than the average Hope or Lifetime Learning Credit recipient in 2008.
- ***4.5 Million Students and Families Received a Tax Refund from the AOTC in 2009 With An Average Value of $800,*** which they would not have been eligible for in 2008.
- ***The AOTC Reduces the Cost of College for Middle Class Families Because It:***
  - Is Available for Four Years of College – While The Hope Credit Is Available for Only Two
  - Makes It Possible for Students in Their Third and Fourth Year of College to Receive A Tax Incentive As Much As Double or Triple What They Could Receive Before
  - Provides Significant Savings Even In the First Two Years of College
  - Allows More Students to Receive the Credit and Increases its Value – by Making it Refundable, and Increasing the Income Range Over Which the Credit is Available

How the AOTC Made College More Affordable for Families in 2009

This report includes analysis by the Departments of Treasury and Education that estimates how families benefited from the new credit in 2009. The following are some key findings:

1. ***The AOTC Increased Tax Incentives for Higher Education by More Than 90 Percent, or $8.7 billion,*** in 2009.
   - The amount of total higher education tax incentives – including credits and deductions – ***rose from just under $9.6 billion in 2008 to more than $18.2 billion in 2009***.
2. ***12.5 Million Students and Their Families Received a Tax Incentive for Higher Education in 2009,*** an increase of more than 400,000 from 2008.
   - ***More than two-thirds of these students – 8.3 million – received the more generous AOTC*** in 2009, with a total value of $14.4 billion.
3. ***AOTC Recipients in 2009 Got an Average Tax Credit of More Than $1,700, about 75 percent more*** than the average Hope or Lifetime Learning Credit (LLC) recipient in 2008.

- ***In 2009, the average AOTC recipient received $1,736, 76 percent more than recipients of college tax credits received in 2008,*** when only the Hope credit and LLC were available.
- Even including students who still took the LLC in 2009, ***the average recipient of a college tax credit in 2009 received $1,714, 74 percent more than 2008.***

4. ***4.5 Million Students and Families Received a Tax Refund from the AOTC in 2009 With an Average Value of $800,*** which they would not have been eligible for in 2008.
    - Families whose AOTC exceeded their federal income tax liability collected ***$3.6 billion in refunds in 2009, which would have been unavailable through the Hope credit.***

How the AOTC Reduces the Cost of College for Middle-Class Families

Compared to the existing Hope credit, the American Opportunity Tax Credit:

1. ***Is Available for Four Years of College – While The Hope Credit Is Available for Only Two.***
    - ***The Hope credit is only available for the first two years of school,*** leaving students eligible for the significantly less generous Lifetime Learning Credit in their third and fourth years, which is equal to 20 percent of the first $10,000 in higher education expenses.
    - ***The AOTC is available for all four years***, allowing students at four-year colleges to receive substantially higher benefits as juniors and seniors.
2. ***Makes It Possible for Students to Receive a Tax Incentive in the Third or Fourth Year of College As Much As Double or Triple What They Could Receive Before***
    - Prior to the AOTC, a student at a four-year college with tuition of $4,000 would be eligible for a Lifetime Learning Credit up to $800 for their third or fourth year of college.
    - ***Under the AOTC, this student could receive an AOTC up to $2,500 during the third or fourth year –*** three times the amount they would have received otherwise. Even students with tuition up to $6,250 could see their tax benefit at least double.
    - ***This increased incentive is particularly important for community college students*** who might otherwise struggle to pay higher tuition after transferring to a four-year college
3. ***Provides Significant Savings Even In the First Two Years of College***
    - ***Under the Hope credit, the maximum a student could receive was $1,800 per year***.
    - ***Under the AOTC, the maximum benefit is $2,500*** – providing students who took the Hope credit with up to $700 more even during the first two years of college.
    - The AOTC – unlike the Hope or LLC – ***can also be used to cover the cost of textbooks and other course material during all four years of college.***
4. ***Allows More Students to Receive the Credit and Increases its Value– by Making it Refundable, and Increasing the Level of the Phase-out.***
    - ***The AOTC is refundable up to 40 percent of the credit – or up to $1,000 a year –*** allowing lower-income students without federal income tax liability to receive a benefit they would not get under the Hope credit, which is not refundable at all.
    - ***The AOTC phases out at a higher level – beginning at $160,000 for joint filers:*** While the Hope credit phased out between $100,000 and $120,000 for married couples filing jointly ($50,000 to $60,000 for single taxpayers), the AOTC phases out between $160,000 and $180,000 ($80,000 to $90,000 for single taxpayers), providing more families with a larger credit.

I. Introduction

The American Recovery and Reinvestment Act of 2009 (Recovery Act or ARRA) created the American Opportunity Tax Credit (AOTC) and increased the maximum Pell Grant. This new credit, combined with the larger Pell Grant, provides more help to families with college expenses, expands the number of years of postsecondary education that the credit can be used from two years to four years, and broadens eligibility so that more families can take advantage of the credit. The maximum Pell Grant increased further to $5,550 for the 2010-2011 award year due to an additional statutory increase unrelated to the Recovery Act. This report uses tax calculators from the Treasury Department and Pell Grant calculators from the Department of Education to provide estimates of what typical families could expect to receive under the new credit and expanded Pell Grants. It also uses data provided by the Internal Revenue Service on the number of families who received AOTC credits for Tax Year 2009 and how much, on average, they received. These figures are provided at both a national and state level.

II. Description of American Opportunity Tax Credit

The AOTC was designed to replace and improve upon existing tax benefits so that more students and their families could receive college tuition assistance and that assistance would be larger. With the AOTC, families with college tuition expenses can receive a tax credit of up to $2,500 each year for up to four years per student, with up to $1,000 of the annual credit amount refundable. The AOTC replaces and expands the Hope Scholarship credit (Hope credit), providing additional benefits for nearly all Hope credit students,[1] and many other students.

A. Prior Law

Prior to enactment of the Recovery Act, eligible taxpayers could receive a Hope credit or a Lifetime Learning credit (LLC). These two credits were enacted under the Tax Reform Act of 1997, as part of a two-pronged approach toward making college more affordable. The 1997 Hope credit was aimed at the more traditional student population: full-time students attending college for the first time. The LLC was (and remains) aimed at a more diverse student population, including those who may be attending college part-time, attending certificate programs, or returning to school mid-career.

In 1997, a student or, in the case of a dependent student, the student's family could claim either a Hope credit for 100 percent of the first $1,000 and 50 percent of the next $1,000 in qualified tuition and related expenses, or an LLC for 20 percent of up to $10,000 in tuition and related expenses annually. Thus, in 1997 the maximum Hope credit was $1,500 and the maximum LLC was $2,000. Because the Hope credit was indexed for inflation and the LLC was not, by 2009 the maximum Hope credit had increased to $1,800 (100 percent of the first $1,200 of qualified tuition and 50 percent of the next $1,200), but the maximum LLC remained at $2,000.

The Hope credit was only available to students attending school at least half-time and only available for the first two years of study. The LLC was available for any number of years and

[1] Although the AOTC replaced the Hope credit for most students, students eligible for Midwestern disaster area benefits in 2009 (for whom the value of the Hope credit was doubled) would have continued to claim a Hope credit.

could be claimed by students attending school less than half-time. The Hope credit was calculated per student, and the LLC per taxpayer.[2] In 2009, both credits phased out between $50,000 and $60,000 of adjusted gross income for unmarried taxpayers and between $100,000 and $120,000 for married taxpayers. Neither credit was refundable.

Because the maximum LLC was higher than the maximum Hope credit, the LLC served not only the part-time population and students attending school for more than two years, but also students attending higher-cost institutions. In 2009, many students paying tuition and related expenses greater than $9,000 would have been better off taking the LLC than the Hope credit.

Through 2009, taxpayers were also eligible to claim an above-the-line deduction for up to $4,000 of qualified tuition (tuition deduction), subject to income limitations of $80,000 ($160,000 for joint filers). An individual student would be eligible for only one of the three benefits in a particular tax year.

B. Detailed Description of the AOTC and Comparison with Previous Credits

The AOTC replaces the Hope credit for taxable years 2009 and 2010. Comparing the AOTC to the Hope credit, the AOTC:

- Is ***available for four years of postsecondary education***, whereas the Hope credit is available for two years;
- Has a ***higher maximum credit amount ($2,500)*** than the Hope credit ($1,800);
- Is ***partially refundable up to 40 percent of the credit – or $1,000 a year –*** whereas the Hope credit is not refundable;
- Has ***higher income phase-out limits*** (between $160,000 and $180,000 for married couples filing joint returns) than the Hope credit (between $100,000 and $120,000 for married taxpayers filing joint returns); and,
- ***Includes textbook costs and course materials –*** not covered by the Hope credit **–** which at some schools can even exceed the cost of tuition paid by students.

The AOTC equals 100 percent of the first $2,000, plus 25 percent of the next $2,000, of qualified tuition and related expenses (for a maximum credit of $2,500). Under the Recovery Act, the definition of related expenses for the AOTC includes course materials, which is an expansion from the prior-law Hope credit.

Other aspects of the Hope credit are retained under the AOTC, including the requirement that AOTC recipients be enrolled at least half-time. Under current law, the AOTC will expire after 2010, at which point tax benefits for students will once again be limited to the less generous Hope credit and LLC**.** Table 1 compares the Hope credit, the LLC, the AOTC, and the Tuition Deduction for 2009.

[2] Thus, taxpayers with more than one student could claim a Hope credit for each qualifying student but expenses eligible for an LLC were capped at $10,000 covering all students in the household.

Table 1
Major Tax Benefits for Education in 2009 Under Recovery Act and Prior Law

	Provision			
	Hope Scholarship Credit	**Lifetime Learning Credit**	**American Opportunity Tax Credit**	**Tuition Deduction**
Tax Benefit	Per student tax credit	Per taxpayer tax credit	Per student tax credit	Above-the-line tax deduction
Qualifying Expenses	Tuition and required fees[1]	Tuition and required fees[1]	Tuition and required fees, books	Tuition and required fees
Eligible Individuals	Taxpayer, spouse or dependent in 1st or 2nd year of higher education enrolled at least half-time in degree or certificate program	Taxpayer, spouse or dependent enrolled in higher education	Taxpayer, spouse or dependent in first four years of higher education enrolled at least half-time in degree or certificate program	Taxpayer, spouse or dependent enrolled in higher education
Maximum Benefit and Calculation of Benefit	$1,800: 100% of the first $1,200 and 50% of the next $1,200 (indexed for inflation, non-refundable)	$2,000: 20% of the first $10,000 total across all eligible students in household (not indexed for inflation, non-refundable)	$2,500: 100% of first $2000 and 25% of next $2,000 (40% refundable)	Deduction of up to $4,000
Income Limits in 2009	Phase-out begins at $50,000 ($100,000 if joint return) and is pro rata over next $10,000 ($20,000 if joint return)	Phase-out begins at $50,000 ($100,000 if joint return) and is pro rata over next $10,000 ($20,000 if joint return)	Phase-out begins at $80,000 ($160,000 if joint return) and is pro rata over next $10,000 ($20,000 if joint return)	Deduction limited to $4,000 if AGI is less than $65,000 ($130,000 if joint return); and to $2,000 if AGI is between $65,000 and $80,000 ($130,000 and $160,000 if joint return)

[1] In 2009, only individuals eligible for Midwestern disaster area benefits should claim a Hope scholarship credit. Additional expenses are allowed for both the Hope and the LLC for students eligible for Midwestern disaster area benefits.

C. Pell Grants and Tax Credits

Pell Grants are need-based grants available to low-income undergraduate students.[3] Pell Grants are the largest source of grant aid in the Higher Education Act of 1965 (HEA) and are available for use at more than 5,400 institutions.[4] In Fiscal Year 2009, Pell Grants averaging $3,591 were received by an estimated 8.1 million students.[5]

Maximum Pell Grant increased in 2009: Since entering office, President Obama has doubled the funding for Pell Grants, not only to provide aid for the increasing numbers of students going back to school, but to increase the amount of support students receive. The maximum Pell Grant for the 2008-2009 award year was $4,731. The maximum Pell Grant increased to $5,350 for the 2009-2010 award year largely due to a $500 increase as part of the Recovery Act. The maximum Pell Grant increased further to $5,550 for the 2010-2011 award year due to an additional statutory increase unrelated to the Recovery Act. As a result of the SAFRA Act (part of the Health Care and Education Reconciliation Act of 2010), starting with the 2013-2014 academic year, the maximum grant will also automatically increase by the Consumer Price Index rate. These increased Pell Grant awards will provide additional direct aid to low-income students and families in future years

Pell Grant eligibility: In general, Pell Grants are awarded to dependent students whose parents have income less than $50,000 per year and to independent students whose income is less than $20,000 per year.[6] Grant amounts are calculated using a formula that compares costs of attendance to the expected contribution of the student and their family to the student's education (the Expected Family Contribution, or EFC) with any shortfall made up by a Pell Grant, subject to the maximum award amount. The cost of attendance includes tuition and fees, books, and living expenses. The Expected Family Contribution is calculated by the Department of Education using a formula that considers the financial resources of the student and the student's family (including, for example, the student's income and financial assets, the family's income and financial assets, family size, the number of additional family members attending post-secondary education.) Part-time students and students attending less than a full academic year receive prorated grants.[7] Young, low-income independent students, however, may not be eligible for Pell grants because their parents' income may preclude them from qualifying for a Pell Grant even if the students file non-dependent tax returns.[8]

Interaction between Pell Grants and higher education tax credits: A student could receive both a Pell Grant and a tax credit, but only if the student's tuition and fees exceeded the amount of the Pell Grant received. Pell Grants are subtracted from tuition and fees in calculating the tax credit. Only tuition and fees paid by the student, after subtracting grant aid, are qualifying expenses for

[3] Certain post-baccalaureate students in teacher certification programs may also be eligible.
[4] Department of Education, Description of Federal Pell Grant Program, http://www2.ed.gov/programs/fpg/index.html
[5] See Appendix to the Budget of the U.S. Government, Fiscal Year 2011, page 383.
[6] The income limits described here assume a very simple case where families have few other resources and very limited assets. The actual process for determining eligibility is complex and will affect these cut-offs.
[7] The 2009/2010 academic year was the first year that Pell Grants were available to less than half-time students.
[8] Under Federal financial aid formulas, families of younger students (those under age 25) are generally expected to contribute to their children's education. Pell Grant awards are based on this expectation and therefore may be lower or denied if the parents have significant income even in the case where the parents do not actually contribute to the child's education. There are a number of exceptions to this rule (e.g., young students with children of their own are treated the same as older independent students). The rules are intended to target aid to the neediest students.

the purpose of the tax credits.[9] As a result, Pell Grant recipients with relatively low levels of tuition and fees may not be eligible for the tax credits (if the Pell grant equals or exceeds qualifying tuition and related expenses) or may have the amount of their education tax credit limited. However, in 2009, even with the new higher maximum Pell Grant, a student's award pays only 68 percent of average cost of attendance at two-year public institutions and 35 percent at four-year public institutions, most of the 8.1 million Pell Grant recipients stand to benefit from a higher education tax credit.

D. Reasons for Enacting the AOTC

The value of higher education is substantial and growing: Economics research has consistently documented a large payoff to higher education.[10] All types of higher education, including both four-year colleges and two-year community colleges, have been found to significantly increase productivity and wages.[11] Moreover, the payoff to higher education has increased sharply over the past 30 years.[12] In 2009, the median college graduate earned 63 percent more than the median high-school graduate. College graduates were also much less likely to be unemployed.[13]

The increases in productivity and pay associated with post-high school education benefit not only the workers that attain higher education, but also society more broadly: research has shown, for example, that college educated workers improve the productivity of nearby non-college educated workers.[14]

Paying for college is a pressing concern for many students and parents, and the value of the Hope credit did not keep up with the rising costs of education: While the benefits of a college education are high, so are the costs, and paying for college is a pressing concern for many students and parents. This has become increasingly true for many middle class families, as college tuition has recently risen at a much higher rate than inflation (specifically, general price inflation between September 1999 and September 2009 was 29 percent: during the same period, tuition and fees more than doubled).

Although the Hope credit was indexed for overall inflation, it had not kept up with rising tuition and fees. When adjusted for inflation, tuition and fees rose over 50 percent at four-year public colleges and by a third at four-year private colleges since the Hope Scholarship credit was enacted

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[9] This is true for all grant aid, not just Pell grants. All federal, state and private grants must be subtracted from tuition and fees when calculating eligible expenses for the education credits.

[10] Card, David, "The Causal Effect of Education on Earnings," in Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics*, Vol. 3A, (1999), pp. 1801-63.

[11] Kane, Thomas and Cecilia Rouse, "The Community College: Educating Students at the Margin between College and Work," *The Journal of Economic Perspectives*, Vol. 13, No. 1 (Winter, 1999), pp 63-84

[12] Goldin, Claudia and Lawrence Katz, "Long-Run Changes in the Wage Structure: Narrowing, Widening, Polarizing," *Brookings Papers on Economic Activity*, Vol. 2, (2007), pp 135-165

[13] Bureau of Labor Statistics, 2009 Current Population Survey, from: http://www.bls.gov/emp/ep_chart_001.htm

[14] Moretti, Enrico, "Estimating the Social Return to Higher Education: Evidence from Longitudinal and Repeated Cross-section Data," *Journal of Econometrics*, Vol. 121, No. 102, (2004).

in 1997.[15] By increasing the maximum tax credit by 28 percent (from $1,800 to $2,500) the new AOTC credit restored much of the value of the original Hope credit.

The structure of the AOTC also provides two improvements for taxpayers eligible for education-targeted tax benefits:

1. ***Equal Benefits:*** Because the AOTC varies little with tuition costs, reaches its maximum far below average tuition rates and is available for four years, the new law confers more equal benefits across students for the first four years of postsecondary school, especially as compared to the LLC which only gives out its maximum credit to families expending over $10,000; and,

2. ***Simplicity:*** Because the AOTC is always larger than the LLC, students no longer have to do complex calculations to see which credit they should take. If a student qualifies for the AOTC, then the student should take it. If not, then the student can take the LLC.

The AOTC persists through all four years of a four-year college program, reducing the stress on students who may be less likely to finish their studies without consistent financial support: Although prior law was successful in making the first two years of college more affordable, it did less to support retention in successive years. In 2007, full-time enrollment of 19 year olds was 42 percent but only 57 percent of full-time bachelor's degree students who began their studies in 2001 had a bachelor's degree by 2007.[16]

The AOTC is partially refundable, making it available to low income families and therefore more likely to increase enrollments than the Hope credit: Prior tax law also offered limited assistance to the lowest income students, in part because the benefits were non-refundable and thus of little value to those with no federal income tax liability. Research has shown that low income students are the most sensitive to tuition prices and the most likely to increase their enrollments in response to tuition grants.[17] The AOTC is partially refundable for up to 40 percent of the credit, making it more available to low income families (and others with no federal income tax liability) and therefore more likely to increase enrollments than the Hope credit.

The addition of textbook costs will make a meaningful difference in college affordability. According to the College Board, the average cost for books and supplies exceeded $1,000 per student at public four-year, private four-year, and public two-year colleges in 2009-10.[18] A recent study by California's State Auditor found that for the 2.9 million students in the California Community College system, textbooks are their largest single higher education expense.[19]

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[15] College Board, Table 4, "Trends in College Pricing 2009." The table weights tuition increases by full-time equivalent enrollment.
[16] National Center for Education Statistics, "Enrollment in Postsecondary Institutions, Fall 2007; Graduation Rates, 2001 & 2004 Cohorts; and Financial Statistics, Fiscal Year 2007, March 2009. http://nces.ed.gov/pubs2009/2009155.pdf
[17] See Dynarski, Susan, "Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion," *The American Economic Review*, March 2003.
[18] The College Board, Table 1: Average Estimated Undergraduate Budgets, 2009-10 (Enrollment Weighted). *Annual Survey of Colleges.* The Table weights estimated tuition and fee costs by full-time enrollment.
[19] California State Auditor, "Affordability of College Textbooks," California State Auditor Report 2007-116, August 2008.

III. Estimated Effect of Expanded Education Benefits on Typical Families

A. Overview of Analysis

Examples show a broad cross-section of families benefiting from a combination of the AOTC and increases in Pell grants: Table 2 shows the benefits of the education provisions in the Recovery Act – including the AOTC and the expanded Pell grant – for a hypothetical married couple with one dependent student at varying income levels. Table 3 does the same for a single parent family with a dependent student, while Table 4 shows what benefits could be for an independent student paying their own way through college. Lastly, Table 5 shows a brief analysis of the effects of extending AOTC benefits to the first four years of education, relative to the two years allowed for receipt of the Hope credit, which are substantial. While eligibility for the AOTC is the same for schools attending public and private colleges, gross tuition is assumed to be $7,500 for a four-year public college and $25,000 for a four-year private college, respectively.[20]

Background on the analysis: The tables present tax information under 2009 law, with Pell grants calculated for the 2010-2011 academic year. There are additional benefits available to taxpayers beyond the education tax credits and the Pell Grants. Taxpayers with education expenses for a dependent student attending full-time may claim a dependency exemption for five extra years until the student is 24. Similarly, taxpayers with moderate incomes may claim the student as a qualifying child for five extra years for Earned Income Tax Credit (EITC) purposes until the student is 24. In 2009, taxpayers could claim a tuition deduction, although most individuals eligible for the education credits would have found the credits more beneficial. Additional benefits, including those for work-related education or education savings, are not included here.

Assumptions of the analysis: In the examples, all students are assumed to attend full-time and be in their first two years of study unless otherwise noted. Families are assumed to have only wage income and are assumed to have a typical level of deductible expenses.[21] For purposes of computing the Pell Grant, it is assumed that the student is beginning his or her education this year, and thus received neither a Pell Grant nor an education credit the previous year. It is also assumed that the student and the parent have few additional assets. Pell grant amounts and income tax liabilities would vary if these assumptions were changed.

Table 4, which summarizes the combined tax and grant benefits for a set of individuals paying for their own education, looks at an individual who earns $10,000 while in school either part-time or full-time. For purposes of computing the Pell Grant, it is assumed that the individual's parents are married with a household income of $40,000. The Appendix presents a set of tables with more detail about the tax situation of each family described in the tables, as well as more detailed notes on the how the benefits were calculated.

[20] These figures are simplified for ease of calculation, but roughly in line with College Board data on published tuition and fees. They also do not take into account grants, scholarships, or other reductions to educational costs (other than the Pell Grant) that would not be contained within the eligible cost basis for the AOTC. College Board, *Annual Survey of Colleges*, October 2009.

[21] For purposes of these calculations, we used the assumption that itemized deductions are equal to 18 percent of income. Each family is assumed to itemize deductions only if doing so reduces its Federal income taxes (i.e., if the itemized deductions exceed the standard deduction).

B. The Benefits of AOTC to Families with a Dependent Student

Married parents with one dependent child in college: Table 2 shows the benefits of the education provisions in the Recovery Act for a hypothetical married couple with one dependent student. Education benefits are shown for families with earnings of $20,000, $40,000, $80,000 and $120,000. For each income level, the table shows a summary of the annual tax benefits and Pell Grants for a student attending an average four-year public college and four-year private college.[22] The EITC phases out as income increases beyond a specified amount. In contrast, the value of the dependency exemption increases with the marginal tax rates (and thus, the incomes) of the families over the income range considered here, but may be constrained by limited tax liability. Since the student is assumed to attend full-time, the family may benefit from the EITC and dependency exemption.

Table 2
Summary of Tax and Grant Benefits
2009 Law with and without Recovery Act (ARRA) Education Provisions[1]
Married Taxpayer with Education Expenses for One Dependent Child Attending Full-Time

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Household Income = $20,000				
Total Benefits for Education	9,503	8,223	9,723	8,223
Total Tax-Based Education Benefits	3,953	3,173	4,173	3,173
Federal Pell Grant	5,550	5,050	5,550	5,050
Value of Tax-Based Education Benefits in ARRA	780		1,000	
Value of Tax and Pell Grant Benefits from ARRA	1,280		1,500	
Household Income = $40,000				
Total Benefits for Education	5,621	4,421	5,621	4,621
Total Tax-Based Benefits for Education	3,121	2,421	3,121	2,621
Federal Pell Grant	2,500	2,000	2,500	2,000
Value of Tax-Based Education Benefits in ARRA	700		500	
Value of Tax and Pell Grant Benefits from ARRA	1,200		1,000	
Household Income = $80,000				
Total Benefits for Education	3,048	2,348	3,048	2,548
Total Tax-Based Benefits for Education	3,048	2,348	3,048	2,548
Federal Pell Grant	0	0	0	0
Value of Tax-Based Education Benefits in ARRA	700		500	
Value of Tax and Pell Grant Benefits from ARRA	700		500	
Household Income = $120,000				
Total Benefits for Education	3,413	1,913	3,413	1,913
Total Tax-Based Benefits for Education	3,413	1,913	3,413	1,913
Federal Pell Grant	0	0	0	0
Value of Tax-Based Education Benefits in ARRA	1,500		1,500	
Value of Tax and Pell Grant Benefits from ARRA	1,500		1,500	

[1] A detailed analysis of each case, along with a description of all assumptions is presented in the Appendix. Tax benefits for education include education credits, tuition deduction, EITC and the additional dependency exemption.

[22] As noted above, gross tuition is assumed to be $7,500 for a four-year public college and $25,000 for a four-year private college, respectively.

Single parents with one child in college: Table 3 shows the value of education tax benefits and grants for a hypothetical single parent with one dependent child with earnings of $20,000, $40,000, and $80,000. As above, the table shows the education benefits for students attending an average four-year public college and a four-year private college. Since the student is assumed to attend full-time, the family also may benefit from the EITC and dependency exemption.[23]

Table 3
Summary of Tax and Grant Benefits
2009 Law and without Recovery Act (ARRA) Education Provisions[1]
Unmarried Taxpayer with Education Expenses for One Dependent Child Attending Full-Time

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Household Income = $20,000				
Total Benefits for Education	9,601	8,321	9,821	8,321
Total Tax-Based Education Benefits	4,051	3,271	4,271	3,271
Federal Pell Grant	5,550	5,050	5,550	5,050
Value of Tax-Based Education Benefits in ARRA	780		1,000	
Value of Tax and Pell Grant Benefits from ARRA	1,280		1,500	
Household Income = $40,000				
Total Benefits for Education	5,848	4,648	5,848	4,848
Total Tax-Based Benefits for Education	3,048	2,348	3,048	2,548
Federal Pell Grant	2,800	2,300	2,800	2,300
Value of Tax-Based Education Benefits in ARRA	700		500	
Value of Tax and Pell Grant Benefits from ARRA	1,200		1,000	
Household Income = $80,000				
Total Benefits for Education	3,413	1,413	3,413	1,413
Total Tax-Based Benefits for Education	3,413	1,413	3,413	1,413
Federal Pell Grant	0	0	0	0
Value of Tax-Based Education Benefits in ARRA	2,000		2,000	
Value of Tax and Pell Grant Benefits from ARRA	2,000		2,000	

[1] A detailed analysis of each case, along with a description of all assumptions is presented in the Appendix. Tax benefits for education include education credits, tuition deduction, EITC and the additional dependency exemption.

[23] When calculating total education benefits, it is assumed that the parent would still file as a head of household if the student did not attend college.

The simulations in tables 2 and 3 – for married and unmarried couples with a dependent student – demonstrate the following effects across income and family types for dependent students:

The AOTC Delivers a Substantial Refund to Low-Income Students and their Families.

- Tables 2 and 3 show that both married and single parent families earning $20,000 with one child attending a public four-year college ***receive a $780 refund*** from the AOTC that they would have been ineligible for without the Recovery Act being enacted.
    - This $780 increase in the AOTC represents over 10% of that student's tuition costs; and,
    - When combined with the Pell Grant, this student's higher education benefits exceed the tuition cost by $2,100, allowing some of their Pell Grant to be freed up for much-needed books, supplies, and living expenses.
- Lower- or moderate-income families with children in private four-year colleges could also receive ***a $1,000 refund from the AOTC***, which they would not have received without the Recovery Act being enacted.

- ***Families with Dependent Students Across all the Income Levels Analyzed would Receive Substantial Increases in Tax Incentives to Attend Four-Year Colleges.***
    - All 14 family compositions and income levels in the simulation – from $20,000 to $120,000 – received an increase of at least $500 in tax incentives compared to the prior year for their child's first or second year at a four-year college as a result of the AOTC.
    - Some families could receive up to $2,000 more than under prior law, due to the AOTC.

C. The Benefits of AOTC to an Independent Student

Independent students, paying their own way through college, also can benefit substantially from the AOTC: Table 4 shows the value of education tax benefits and grants for an independent student who earns $10,000 and attends a typical four-year public college as full-time status and age are varied. Benefits are shown for full and half-time attendance, and for students under age 25 and at least 25 years old. Age is important because for purposes of computing the Pell Grant, parental income is considered for childless students under 25 years old, even if the student is not considered a dependent for tax purposes.[24] This example shows that younger students receive much smaller Pell Grants due to the expected parental contribution. The smaller Pell Grant for younger independent students is partly offset by the resulting increase in the education credits from the AOTC. In all cases, the overall benefits available to independent students under the Recovery Act are significantly larger than those under prior law.

Table 4
Summary of Tax and Grant Benefits
2009 Law and without Recovery Act (ARRA) Education Provisions[1]
Independent Student with $10,000 Income and Tuition Expenses for Self

	25 or Older		Under 25	
	ARRA	No ARRA	ARRA	No ARRA
Full-Time Student (Tuition $7,500)				
Total Benefits for Education	6,005	4,665	1,620	65
Total Tax-Based Education Benefits	905	65	1,065	65
Federal Pell Grant	5,100	4,600	555	0
Value of Tax-Based Education Benefits in ARRA	840		1,000	
Value of Tax and Pell Grant Benefits from ARRA	1,340		1,555	
Part-Time Student (Tuition $3,750)				
Total Benefits for Education	3,095	2,365	1,040	65
Total Tax-Based Benefits for Education	545	65	1,040	65
Federal Pell Grant	2,550	2,300	0	0
Value of Tax-Based Education Benefits in ARRA	480		975	
Value of Tax and Pell Grant Benefits from ARRA	730		975	

[1] A detailed analysis of each case, along with a description of all assumptions is presented in the Appendix. It is assumed that the student's parents are a married couple earning $40,000 who do not pay the education expenses of their child or claim the child as a dependent on their tax return.

[24] Procedures are in place for young students to appeal this classification. Age also affects eligibility for the EITC for taxpayers without children; the EITC in this case is not affected by student status.

Table 4 shows that:

- ***Across both full- and part-time independent students earning $10,000, the AOTC's refund led to a large increase in their higher education tax incentives due to the passage of the Recovery Act:***
  - As seen in the table above, full-time students in the simulation example could take home an additional $840 to $1,000 in higher education credits from the AOTC and part-time students received an additional $480 or $975 due to the AOTC.

- ***Full- and part-time students paying their way through college can get tax incentives through the AOTC and received about a $1,000 increase in benefits due to passage of the Recovery Act:***
  - For independent students under 25, parental income in this simulation makes them ineligible for a Pell Grant. These students would only have received $65 total for their education benefits under prior law – including credits, deductions, and the Pell – because the Hope and LLC were not refundable.
  - However, as the simulation shows, the AOTC would increase their tax incentives by $975 if they are part-time and $1,000 if they are full-time, resulting in 16 times the tax incentives for this student due to passage of the Recovery Act.

D. The Substantial Impact of a Reliable Four Year AOTC

Added benefits of the AOTC in the third and fourth years: Table 5 compares the benefits of the Recovery Act's education provisions for a hypothetical married couple with a dependent student in the third and fourth years of study to those whose daughter or son is in the first two years of study. The family is otherwise identical to the family described in Table 2. Results are presented for students attending a four-year public college, but the results are similar for other households and tuition levels.

Table 5

Summary of Tax and Grant Benefits for Students in Different Years of Study

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Married Taxpayer with Education Expenses for One Dependent Child Attending Full-Time

	4-Year Public College		
		No ARRA	
	ARRA	Year 1 & 2	Year 3 & 4
Household Income = $20,000			
Total Benefits for Education	9,503	8,223	8,223
Total Tax-Based Education Benefits	3,953	3,173	3,173
Federal Pell Grant	5,550	5,050	5,050
Value of Tax-Based Education Benefits in ARRA		780	780
Value of Tax and Pell Grant Benefits from ARRA		1,280	1,280
Household Income = $40,000			
Total Benefits for Education	5,621	4,421	3,721
Total Tax-Based Benefits for Education	3,121	2,421	1,721
Federal Pell Grant	2,500	2,000	2,000
Value of Tax-Based Education Benefits in ARRA		700	1,400
Value of Tax and Pell Grant Benefits from ARRA		1,200	1,900
Household Income = $80,000			
Total Benefits for Education	3,048	2,348	2,048
Total Tax-Based Benefits for Education	3,048	2,348	2,048
Federal Pell Grant	0	0	0
Value of Tax-Based Education Benefits in ARRA		700	1,000
Value of Tax and Pell Grant Benefits from ARRA		700	1,000
Household Income = $120,000			
Total Benefits for Education	3,413	1,913	1,913
Total Tax-Based Benefits for Education	3,413	1,913	1,913
Federal Pell Grant	0	0	0
Value of Tax-Based Education Benefits in ARRA		1,500	1,500
Value of Tax and Pell Grant Benefits from ARRA		1,500	1,500

[1] A detailed analysis of each case, along with a description of all assumptions is presented in the Appendix. Tax benefits for education include education credits, tuition deduction, EITC and the additional dependency exemption.

Underpinning the results in the Table 5 for $40,000 and $80,000 income households, is that some AOTC recipients in their third or fourth years of school could see an American Opportunity Tax Credit as much as two to three times as large as the Lifetime Learning Credit they would have otherwise received:

- As Table 5 shows, a family earning $40,000 with a student at the average public university could receive $1,400 more from the AOTC in their dependent student's junior and senior years than they would have under prior law – as they could be eligible to receive $2,500 under the AOTC, compared to $1,100 under the Lifetime Learning Credit.
- Over the course of a four-year education, this family could receive $4,200 more in tax credits to help get through college because of the AOTC than they could have received under prior law.
- In certain cases – for example, at a college with tuition of $4,000 – a maximum AOTC benefit of $2,500 could be over three times as large as the maximum Lifetime Learning Credit (in this case, $800) during the third or fourth year of college.

Benefits to community college transfer students: By providing a maximum credit of $2,500 and eligibility to more students, the AOTC provides the same benefits to community college students during their first two years of college as students at four year colleges. In addition, community college students who transfer into a four-year program to complete a bachelor's degree receive the same strengthened tax credits for their junior and senior years as students who began their studies at a four-year college. This is especially valuable for students who choose community colleges as a more affordable option for their first two years of college and who might otherwise struggle to pay higher tuition if they pursue further education after receiving an associate's degree.

IV. Tax Data on Take-Up of AOTC in 2009

Complete data for Tax Year 2009, the first year of the AOTC, are not yet available; however, an overview of the AOTC's usage can be obtained from the Internal Revenue Service's (IRS) individual income tax processing data through June 2010.[25]

A. Take-up of the AOTC

8.3 Million Returns Have Claimed the AOTC for 2009, and the Value of the Refund is Substantial: IRS processing data through June 2010 show that 8.3 million returns claimed an AOTC for Tax Year 2009. These taxpayers claimed $14.4 billion in AOTCs, or an average of over $1,700 per return. For more than 4.5 million returns, the AOTC generated a tax refund because the value of the AOTC exceeded the tax liability otherwise due. These returns received $3.6 billion in refunds.[26] Table 6 shows these totals and the distribution of claims by adjusted gross income categories. The distributions of the number of returns with and dollars amounts of AOTC are heavier at the higher end of the AGI distribution than is the distribution of all returns processed. Dividing the distribution of total returns into approximate thirds gives AGI break-points of $20,000 and $50,000. Approximately 27 percent of AOTC claimants have AGI below $20,000 while 41 percent have AGI above $50,000. The average credit amount tends to rise with AGI class and then drop off for those with AGI over $100,000 as the credit gets phased out.

Table 6
American Opportunity Tax Credit - US Totals - Tax Year 2009

	Returns Processed		Returns with AOTC			Dollars of AOTC		
Adjusted Gross Income	Thousands	Percent	Thousands	Percent	Percent of Returns Processed	Millions	Percent	Average in Dollars
$0 to $10,000	21,246	16%	897	11%	4%	719	5%	802
$10,000 to $20,000	22,427	17%	1,341	16%	6%	1,495	10%	1,115
$20,000 to $30,000	17,724	14%	1,079	13%	6%	1,710	12%	1,585
$30,000 to $50,000	23,643	18%	1,491	18%	6%	2,921	20%	1,959
$50,000 to $75,000	17,563	13%	1,257	15%	7%	2,715	19%	2,160
$75,000 to $100,000	10,625	8%	905	11%	9%	2,137	15%	2,362
$100,000 to $150,000	9,189	7%	1,004	12%	11%	2,230	15%	2,221
$150,000 to $200,000	3,023	2%	273	3%	9%	455	3%	1,663
Over $200,000	2,981	2%	0	0%	0%	0	0%	0
Total	130,263		8,321		6%	14,449		1,736
Addendum: Returns with Outlay and Outlay Dollars			4,581	55%		3,634	25%	793

Source: IRS processing data through June 2010.

Notes: Excludes US Territories.
Taxpayers with negative AGI are not shown, but are included in the totals.

[25] The totals in this report are based on a partial year of processing data (through June 2010). However, the totals are unlikely to change substantially as additional returns for Tax Year 2009 are processed. Note that by June 2009 the IRS had processed 93 percent of all Tax Year 2008 individual income tax returns, and 97 percent of returns that claimed an education credit. By June 2010, the IRS had processed 130 million returns. Note also that these data have been processed into the IRS's computer systems and checked for simple math errors but have not gone through the IRS' more rigorous editing and data cleaning procedures

[26] The addendum in Table 6 showing returns with and dollars of outlays is preliminary and subject to change.

Table 7 compares the number of returns with, and dollar amounts of, tuition deductions and education tax credits in Tax Year 2009 to Tax Year 2008. Taxpayers in 2008 and 2009 were eligible for an above-the-line deduction for tuition expenses, the Hope credit and the LLC. In 2009 taxpayers would also have been eligible for the AOTC. Although taxpayers cannot claim more than one type of education tax benefit for any one student in a given tax year, taxpayers with tuition expenses for more than one student may utilize different tax benefits for different students.

Data for Tax Year 2008: Data for 2008 were drawn from the IRS Statistics of Income Division (SOI) Individual Income Tax Sample file. In that year, 4.6 million returns claimed a tuition deduction and 7.8 million returns claimed a Hope credit, an LLC, or both. Approximately 250,000 returns claimed the tuition deduction and at least one of the two education credits. Thus 12.1 million returns claimed at least one of the three education tax benefits for Tax Year 2008. The tuition deduction totaled $11 billion, with an average deduction of $2,404. The tax value of the tuition deduction depends on the claimant's marginal tax rate. Overall, the tax value of the tuition deduction was approximately $1.9 billion in Tax Year 2008, with an average of value of $423. The education credits totaled $7.6 billion, with an average credit of $986. In sum, these tax incentives for education were worth about $9.6 billion to taxpayers in Tax Year 2008.

Table 7
Tuition Deduction and Education Credits - Tax Years 2008 and 2009

	Tax Year 2008	Tax Year 2009	Change
Tuition Deduction			
Returns (Thousands)	4,577	2,325	-2,252
Dollars of Deductions (Millions)	11,002	5,208	-5,794
Average Deduction (Dollars)	2,404	2,240	-164
Tax Value of Deductions (Millions)	1,937	843	-1,093
Average Tax Value (Dollars)	423	363	-60
Education Credits			
Hope/Lifetime Learning Credits			
Returns (Thousands)	7,741	1,826	-5,915
Dollars (Millions)	7,633	2,942	-4,690
Average (Dollars)	986	1,611	625
American Opportunity Tax Credit			
Returns (Thousands)	NA	8,321	8,321
Dollars (Millions)	NA	14,449	14,449
Average (Dollars)	NA	1,736	1,736
Total Education Credits			
Returns (Thousands)	7,741	10,147	2,406
Dollars (Millions)	7,633	17,392	9,759
Average (Dollars)	986	1,714	728
Total Education Tax Incentives			
Returns (Thousands)[1]	12,068	12,472	405
Total Tax Value (Millions)	9,569	18,235	8,666

Sources:

Tax Year 2008: Statistics of Income individual income tax sample.
Tax Year 2009: IRS processing data through June 2010, excluding US Territories.

Notes:

NA = Not Available.

[1] For Tax Year 2008, total is adjusted for 250,000 returns that claimed the tutition deduction and at least one of the two education credits. For Tax Year 2009, the total assumes no overlap among the tuition deduction, the Hope/Lifetime Learning credits, and the American Opportunity Tax credit.

B. Value of the AOTC in 2009

The total value of tax incentives for education in 2009 rose to $18.4 billion, an increase of $8.7 billion, which is about 90% above the 2008 total. It is likely that these amounts will increase modestly as the remaining returns for Tax Year 2009 are received and processed by the IRS. The data for Tax Year 2009 show a decrease in the number of returns and dollar amounts of tuition deduction and Hope and Lifetime Learning credits, because taxpayers switched to the AOTC. Approximately 2.3 million returns claimed the tuition deduction while the total amount deducted fell to $5.2 billion. The total tax value of the tuition deduction fell to approximately $840 million, while the average tax value fell by $60 to $363. The Hope credit and LLC fell to $2.9 billion dollars, while the number of returns claiming those credits fell to 1.8 million.[27] Much of the decline in deductions and credit was transferred to claims for the AOTC. As shown in Table 6, 8.3 million returns claimed $14.4 billion in AOTC. As a result of the AOTC, students and their families claimed 127% more in higher education tax credits in 2009 than in 2008. The Tax Year 2009 IRS processing data do not have sufficient detail to determine the overlap among the four education benefits for that tax year. If, however, that overlap is negligible, then 12.5 million returns claimed one of the four education tax benefits in TY 2009. This would be an increase of about 400,000 returns from Tax Year 2008.

AOTC increased the number of beneficiaries across most income levels, but yielded greater increases in participation at the low and high ends: Table 8 shows the distribution of return counts, dollars of claim, and average claim for the tuition deduction and the combined education credits in Tax Years 2008 and 2009. For Tax Year 2008, the columns showing education credits include the Hope and Lifetime Learning credits. For Tax Year 2009, the AOTC is also included. The table shows that the number of taxpayers claiming a tuition deduction fell in every AGI category over the two years, while the number of taxpayers claiming an education credit rose in almost every AGI category. The increases in returns with an education credit at the low and high ends of the AGI distribution are larger than the decreases in returns with a tuition deduction. The result at the lower end of the AGI distribution may be due to the refundable nature of the AOTC, which enhances the ability of taxpayers with lower incomes to claim an education credit. Such returns may not have had enough income tax liability to claim a (non-refundable) Hope credit or LLC.

Two AGI categories show a decline in the number of returns claiming an education credit. Recall that the processing of Tax Year 2009 returns is not complete. The return counts for all groups can be expected to rise with further processing, possibly eliminating the declines for both groups currently showing a decline. Moreover, fewer returns overall were processed through June 2010 than were processed through June 2009. This overall decline may be attributable to variation in the processing calendar, but could also reflect an overall decline in tax returns filed from Tax Year 2008 to 2009.

[27] In Tax Year 2009, any student eligible for the Hope credit is also eligible for the AOTC. While the AOTC is generally larger than the Hope Credit, the latter credit may be larger for relatively small number of students attending school in the Midwestern disaster area. The expense breakpoints for the Hope credit are doubled and the definition of eligible expenses is expanded for those students.

The total amount of higher education tax credits received was higher across all income levels: The second section of the table shows the increased generosity of the education credits (attributable to the AOTC) in Tax Year 2009 over Tax Year 2008. All AGI categories received greater tax benefits in 2009 than they did in 2008. The tax value of the tuition deductions in each AGI category fell between the two tax years, however, the increase in education credit claimed exceeded those declines in every AGI category. The bottom section of the table shows the average tax value of the deduction, the average credit, and the changes in those values from Tax Year 2008 to Tax Year 2009 for each AGI class. All AGI categories show an increase in average education credit from Tax Year 2008 to 2009, and these increases more than offset the decreases in the tax value of the tuition deduction.

Table 8
Distributions of Education Deductions and Credits by Adjusted Gross Income - Tax Years 2008 and 2009

	Return Counts (Thousands)					
	Tuition Deductions			Education Credits		
Adjusted Gross Income	Tax Year 2008	Tax Year 2009	Change	Tax Year 2008	Tax Year 2009	Change
$0 to $10,000	710	437	-273	50	910	860
$10,000 to $20,000	400	220	-180	1,096	1,592	495
$20,000 to $30,000	270	167	-103	1,298	1,342	44
$30,000 to $50,000	465	263	-201	2,192	1,915	-277
$50,000 to $75,000	643	378	-265	1,500	1,602	103
$75,000 to $100,000	361	158	-203	1,305	1,170	-135
$100,000 to $150,000	1,435	550	-885	300	1,218	918
$150,000 to $200,000	144	53	-91	0	326	326
All	4,577	2,325	-2,252	7,741	10,147	2,406

	Dollars of Tax Incentives (Millions)					
	Tax Value of Tuition Deductions			Education Credits		
Adjusted Gross Income	Tax Year 2008	Tax Year 2009	Change	Tax Year 2008	Tax Year 2009	Change
$0 to $10,000	114	69	-45	3	721	718
$10,000 to $20,000	172	85	-87	517	1,673	1,156
$20,000 to $30,000	143	84	-59	1,070	2,055	984
$30,000 to $50,000	255	135	-120	2,271	3,598	1,327
$50,000 to $75,000	236	125	-111	1,759	3,356	1,597
$75,000 to $100,000	132	53	-79	1,754	2,659	905
$100,000 to $150,000	826	267	-560	258	2,713	2,455
$150,000 to $200,000	43	14	-29	0	550	550
All	1,937	843	-1,093	7,633	17,392	9,759

	Average Tax Incentive (Dollars)					
	Tax Value of Tuition Deductions			Education Credits		
Adjusted Gross Income	Tax Year 2008	Tax Year 2009	Change	Tax Year 2008	Tax Year 2009	Change
$0 to $10,000	161	158	-3	58	792	734
$10,000 to $20,000	431	389	-42	471	1,051	580
$20,000 to $30,000	531	505	-25	825	1,531	707
$30,000 to $50,000	549	514	-34	1,036	1,879	843
$50,000 to $75,000	368	331	-37	1,173	2,095	922
$75,000 to $100,000	367	337	-30	1,344	2,273	928
$100,000 to $150,000	576	485	-91	858	2,228	1,370
$150,000 to $200,000	302	271	-30	0	1,689	1,689
All	423	363	-60	986	1,714	728

Sources:
Tax Year 2008: Statistics of Income individual income tax sample.
Tax Year 2009: IRS processing data through June 2010, excluding US Territories.

Note: Taxpayers with negative AGI are not shown, but are included in the totals.

C. State-by-State Analysis of AOTC

Distribution of AOTC by state: Table 9 shows state-level estimates of the number of tax returns potentially eligible for any of the tax incentives for education (calculated as the number of returns with postsecondary students), the number of tax returns with AOTC, the dollar amount of AOTC, and average credit claimed. The table also shows the number of returns with AOTC as a percentage of the potentially eligible returns. This percentage is an estimate of the "take-up rate" of the AOTC, but only as a function of returns potentially eligible. It does not restrict the pool of returns to those actually eligible for the credit because the data necessary to determine actual eligibility are not yet available.

The Tax Year 2007 SOI individual income tax sample was used to determine the count of tax returns filed from each state. The sample was matched to Tax Year 2007 1098T information returns to determine the count of returns in each state that received at least one information return. This second count is an estimate of the number of returns potentially eligible for a tax incentive for education.[28] The share of returns potentially eligible for the AOTC is simply the ratio of this second count to the number of returns from the state. To estimate the Tax Year 2009 count of each state's potentially eligible returns, the number of Tax Year 2009 returns processed for each state was multiplied by its Tax Year 2007 share. This estimation strategy assumes that the ratio of potentially eligible returns to total returns for any given state did not vary significantly between Tax Year 2007 and Tax Year 2009.

The take-up rates and average credits vary by state: The number of returns claiming the AOTC and amount of credit claimed varied from 11,000 returns and $19 million dollars in Wyoming to 1 million returns and $1.5 billion dollars in California. The highest average credit amount was claimed in New Hampshire ($2,155). For the entire United States, 37.8 percent of potentially eligible returns claimed the AOTC. Florida had the highest take-up rate, at 57.8 percent of potentially eligible returns. These take-up rates will not equal 100 percent because (1) some students with tuition expenses do not attend at least half-time; (2) some students with tuition expenses receive Pell Grants or other financial aid which may completely offset the qualified tuition expenses used to compute the AOTC; (3) some taxpayers may have had incomes too high to claim the AOTC; and (4) some taxpayers may have been eligible for the AOTC, but simply not claimed it.

[28] The Tax Year 2007 sample was used for this calculation because the Form 1098T returns are not yet available. 1098T information returns are issued by postsecondary institutions to individuals that enrolled during the calendar year. If at least one 1098T matches to a tax return, that return is assumed to have at least one student potentially eligible for a tax incentive for education.

Table 9
American Opportunity Tax Credit - Distribution by State - Tax Year 2009

State	Estimated Eligible Returns[1]	Returns with AOTC		Dollars of AOTC	
	Thousands	Thousands	Take-up Rate	Total in Millions	Average in Dollars
Alabama	283	138	48.7%	232	1,685
Alaska	66	17	25.5%	30	1,788
Arizona	418	145	34.8%	224	1,539
Arkansas	182	58	31.7%	91	1,572
California	2,598	1,012	38.9%	1,461	1,444
Colorado	398	133	33.3%	247	1,861
Connecticut	272	94	34.6%	192	2,039
District of Columbia	40	14	35.3%	25	1,735
Delaware	46	22	47.5%	41	1,885
Florida	1,071	619	57.8%	951	1,538
Georgia	588	289	49.1%	469	1,624
Hawaii	104	34	32.5%	61	1,792
Idaho	120	39	32.6%	64	1,630
Illinois	989	382	38.6%	711	1,859
Indiana	478	154	32.2%	285	1,855
Iowa	227	70	30.8%	130	1,849
Kansas	260	74	28.5%	131	1,768
Kentucky	273	96	35.3%	170	1,769
Louisiana	271	108	39.8%	171	1,584
Maine	88	31	35.3%	62	1,994
Maryland	479	170	35.5%	318	1,874
Massachusetts	552	175	31.7%	358	2,048
Michigan	859	319	37.1%	583	1,830
Minnesota	489	166	34.0%	333	2,006
Montana	59	22	37.7%	39	1,744
Mississippi	151	77	50.6%	116	1,518
Missouri	457	142	31.1%	249	1,754
North Carolina	687	222	32.4%	361	1,622
North Dakota	74	20	27.4%	39	1,927
Nebraska	170	44	25.8%	76	1,738
Nevada	159	72	45.3%	106	1,480
New Hampshire	110	34	31.1%	74	2,155
New Jersey	701	281	40.1%	556	1,981
New Mexico	168	41	24.8%	57	1,374
New York	1,360	584	43.0%	1,089	1,863
Ohio	894	313	35.0%	600	1,918
Oklahoma	250	77	30.7%	123	1,596
Oregon	260	86	33.2%	147	1,711
Pennsylvania	967	335	34.7%	690	2,059
Rhode Island	80	29	35.7%	56	1,945
South Carolina	305	106	34.8%	180	1,692
South Dakota	69	23	32.9%	44	1,954
Tennessee	392	145	37.0%	245	1,690
Texas	1,583	671	42.4%	1,104	1,645
Utah	213	88	41.0%	145	1,656
Vermont	55	13	24.0%	28	2,138
Virginia	580	205	35.4%	377	1,837
Washington	451	150	33.3%	265	1,760
Wisconsin	492	141	28.7%	274	1,935
West Virginia	118	29	24.9%	51	1,730
Wyoming	37	11	31.0%	19	1,615
Total	21,991	8,321	37.8%	14,449	1,736

Sources:
AOTC counts and dollars: IRS processing data through June 2010.
Estimated eligible returns: SOI sample data and information returns for Tax Year 2007.

Notes:
Excludes US Territories.
[1] Eligible returns are estimated from counts of Tax Year 2007 individual income tax returns that match to a 1098T information return. return. The total count of Tax Year 2007 matching returns for each state is scaled up or down to Tax Year 2009 using the ratio of Tax Year 2009 returns processed to Tax Year 2007 returns processed. For any state: TY2009 AOTC Eligible Returns = (TY 2007 Returns with matching 1098T*Tax Year 2009 Returns Processed)/Tax Year 2007 Returns

VI. Appendix

Detailed Tables on Higher Education Incentives by Family Composition and Income: This appendix presents a set of seven tables with explanations about the tax situation of each family described in Section III with a focus on education benefits and the effects of the Recovery Act. Tables A1-A4 present the tax and grant benefits for a hypothetical married couple with earnings of $20,000, $40,000, $80,000 and $120,000 with a dependent child attending college. Tables A5-A7 present the tax and grant benefits for a hypothetical single parent earning $20,000, $40,000, and $80,000 with a dependent child attending college. In the examples, all students are assumed to attend full-time. Families are assumed to have only wage income and are assumed to have a typical level of deductible expenses.[29] For purposes of computing the Pell Grant, it is assumed that the student is beginning his or her education this year, and thus received neither a Pell Grant nor an education credit the previous year. The family is assumed to have earned the same income in 2008 and 2009 (adjusted for inflation). It is also assumed that the student and the parent have few additional assets. Pell Grant amounts and income tax liabilities would vary if these assumptions were changed.

[29] These calculations use the assumption that itemized deductions are equal to 18 percent of income. Each family is assumed to itemize deductions only if doing so reduces its Federal income taxes (i.e., if the itemized deductions exceed the standard deduction).

A. Additional Explanation of AOTC Benefits to Married Couples with a Dependent Student

Following are some more detailed explanations of the analysis calculating the benefits of the AOTC to married families with a dependent student, detailed in Table 2 in the report:

Married couple with $20,000 in income and one child in college: Table A1 shows that a married couple with earnings of $20,000 with one child attending a public four-year institution of average cost would receive an additional annual benefit through the Internal Revenue Code (Tax Code) of $780 (for a total increase of $1,280 including the increase in Pell Grants).

This increased benefit is due to the refundable portion of the AOTC. The total tax-based education benefit for this family would be $3,953 per year. At the highest levels of tuition, this family would see an increase in annual tax benefits of $1,000, all refundable (for a total increase of $1,500 per year, including the increase in Pell Grants). Because this family has no federal income tax liability, the value of the dependency exemption is negligible.

Married couple with $40,000 in income and one child in college: An otherwise similar couple with earnings of $40,000 per year (Table A2) would receive an additional annual benefit through the Tax Code of $700 if the student attended a public four-year college of average cost (for a total increase of $1,200 per year including the increase in Pell Grants). The total tax-based education benefit for this family would be $3,121 per year.

Married couple with $80,000 in income and one child in college: If the couple earned $80,000 per year (Table A3), the family would receive between an additional $325 and $700 per year compared with prior law (for a total annual education-based tax benefit between $2,673 and $3,048, depending on tuition). If the student attended a four-year public school, the family goes from a maximum Hope credit of $1,800 under prior law to a maximum annual AOTC of $2,500 under the Recovery Act, an increase of $700 per year. If the student attended a four-year private school (with a relatively large tuition payment), the family goes from a maximum LLC of $2,000 under prior law to a maximum annual AOTC of $2,500, an increase of $500 per year. This family would not be eligible for the EITC or a Pell Grant due to their income level.

Married couple with $120,000 in income and one child in college: The Recovery Act would give a married couple with earnings of $120,000 an additional annual tax benefit of $1,500. This family would have switched from the above-the-line tuition deduction to the more valuable AOTC available under the Recovery Act, as can be seen in Table A4.

Table A1

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Married Taxpayer with Income of $20,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	5,550	5,050	5,550	5,050
Net Tuition	**1,950**	**2,450**	**19,450**	**19,950**
Total Income (= AGI)	**20,000**	**20,000**	**20,000**	**20,000**
(all income from wages and salaries)				
Less: Deductions (Larger of Standard or Itemized[4])	11,400	11,400	11,400	11,400
Less: Personal Exemptions ($3,650 per exemption)[5]	10,950	10,950	10,950	10,950
Less: Above-the-Line Tuition Deduction[6]	0	0	0	0
Taxable Income	**0**	**0**	**0**	**0**
Federal Income Tax Liability Before Credits	**0**	**0**	**0**	**0**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	0
Hope Credit	0	0	0	0
American Opportunity Tax Credit	780	0	1,000	0
Earned Income Tax Credit (EITC)	3,043	3,043	3,043	3,043
Total Education-Related Credits	**3,823**	**3,043**	**4,043**	**3,043**
Total Tax After Credits[7]	**-4,623**	**-3,843**	**-4,843**	**-3,843**
(includes $800 Making Work Pay credit)				
Total Tax-Based Education Benefits	**3,953**	**3,173**	**4,173**	**3,173**
(credits, tuition deduction, EITC, exemption)				
Value of Tax-Based Education Benefits in ARRA	**780**		**1,000**	
Value of Tax and Pell Grant Benefits from ARRA	**1,280**		**1,500**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $130.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

Table A2

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Married Taxpayer with Income of $40,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	2,500	2,000	2,500	2,000
Net Tuition	**5,000**	**5,500**	**22,500**	**23,000**
Total Income (= AGI) *(all income from wages and salaries)*	**40,000**	**40,000**	**40,000**	**40,000**
Less: Deductions (Larger of Standard or Itemized[4])	11,400	11,400	11,400	11,400
Less: Personal Exemptions ($3,650 per exemption)[5]	10,950	10,950	10,950	10,950
Less: Above-the-Line Tuition Deduction[6]	0	0	0	0
Taxable Income	**17,650**	**17,650**	**17,650**	**17,650**
Federal Income Tax Liability Before Credits	**1,813**	**1,813**	**1,813**	**1,813**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	2,000
Hope Credit	0	1,800	0	0
American Opportunity Tax Credit	2,500	0	2,500	0
Earned Income Tax Credit (EITC)	74	74	74	74
Total Education-Related Credits	**2,574**	**1,874**	**2,574**	**2,074**
Total Tax After Credits[7] *(includes $800 Making Work Pay credit)*	**-1,561**	**-861**	**-1,561**	**-1,061**
Total Tax-Based Education Benefits *(credits, tuition deduction, EITC, exemption)*	**3,121**	**2,421**	**3,121**	**2,621**
Value of Tax-Based Education Benefits in ARRA	**700**		**500**	
Value of Tax and Pell Grant Benefits from ARRA	**1,200**		**1,000**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $130.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

Table A3

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Married Taxpayer with Income of $80,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	0	0	0	0
Net Tuition	**7,500**	**7,500**	**25,000**	**25,000**
Total Income (= AGI) *(all income from wages and salaries)*	**80,000**	**80,000**	**80,000**	**80,000**
Less: Deductions (Larger of Standard or Itemized[4])	14,400	14,400	14,400	14,400
Less: Personal Exemptions ($3,650 per exemption)[5]	10,950	10,950	10,950	10,950
Less: Above-the-Line Tuition Deduction[6]	0	0	0	0
Taxable Income	**54,650**	**54,650**	**54,650**	**54,650**
Federal Income Tax Liability Before Credits	**7,363**	**7,363**	**7,363**	**7,363**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	2,000
Hope Credit	0	1,800	0	0
American Opportunity Tax Credit	2,500	0	2,500	0
Earned Income Tax Credit (EITC)	0	0	0	0
Total Education-Related Credits	**2,500**	**1,800**	**2,500**	**2,000**
Total Tax After Credits[7] *(includes $800 Making Work Pay credit)*	**4,063**	**4,763**	**4,063**	**4,563**
Total Tax-Based Education Benefits *(credits, tuition deduction, EITC, exemption)*	**3,048**	**2,348**	**3,048**	**2,548**
Value of Tax-Based Education Benefits in ARRA	**700**		**500**	
Value of Tax and Pell Grant Benefits from ARRA	**700**		**500**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $130.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

Table A4

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Married Taxpayer with Income of $120,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	0	0	0	0
Net Tuition	**7,500**	**7,500**	**25,000**	**25,000**
Total Income (= AGI) *(all income from wages and salaries)*	**120,000**	**120,000**	**120,000**	**120,000**
Less: Deductions (Larger of Standard or Itemized[4])	21,600	21,600	21,600	21,600
Less: Personal Exemptions ($3,650 per exemption)[5]	10,950	10,950	10,950	10,950
Less: Above-the-Line Tuition Deduction[6]	0	4,000	0	4,000
Taxable Income	**87,450**	**83,450**	**87,450**	**83,450**
Federal Income Tax Liability Before Credits	**14,238**	**13,238**	**14,238**	**13,238**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	0
Hope Credit	0	0	0	0
American Opportunity Tax Credit	2,500	0	2,500	0
Earned Income Tax Credit (EITC)	0	0	0	0
Total Education-Related Credits	**2,500**	**0**	**2,500**	**0**
Total Tax After Credits[7] *(includes $800 Making Work Pay credit)*	**10,938**	**12,438**	**10,938**	**12,438**
Total Tax-Based Benefits for Education *(credits, tuition deduction, EITC, exemption)*	**3,413**	**1,913**	**3,413**	**1,913**
Value of Tax-Based Education Benefits in ARRA	**1,500**		**1,500**	
Value of Tax and Pell Grant Benefits from ARRA	**1,500**		**1,500**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $130.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

B. Additional Explanation of AOTC Benefits to Single Parent Families with a Dependent Student

Following are some more detailed explanations of the analysis calculating the benefits of the AOTC to single parent families with a dependent student, detailed in Table 3 in the report:

Single parents with one child in college: Table 3 shows the value of education tax benefits and grants for a hypothetical single parent with one dependent child with earnings of $20,000, $40,000, and $80,000. As above, the table shows the education benefits for students attending an average four-year public college, and a four-year private college. Since the student is assumed to attend full-time the family also may benefit from the EITC and dependency exemption.[30]

Single parent household with $20,000 in income and one child in college: A single parent with earnings of $20,000 and one child attending college would receive very similar additional benefits to a married couple with the same earnings. In all cases, the annual education benefits under the Recovery Act are larger than under prior law.

Single parent household with $40,000 in income and one child in college: A similar single-parent family with earnings of $40,000 per year would receive an additional annual tax benefit from the Recovery Act of $500 to $700 if the student attends a four-year college.

Single parent household with $80,000 in income and one child in college: If the family earned $80,000 per year, the family would receive an additional annual benefit of between $1,625 and $2,000 (for a total education-based tax benefit of between $3,038 and $3,413 per year). The additional benefit compared to prior law is due to the higher income limits for eligibility for the AOTC. Under prior law, a single parent earning over $80,000 would not have been eligible for a Hope credit or LLC and therefore would have taken the less valuable tuition deduction. Under the Recovery Act, single parent families with AGI up to $80,000 qualify for the maximum AOTC. At this income, the family would not be eligible for the EITC or a Pell Grant.

[30] When calculating total education benefits, it is assumed that the parent would still file as a head of household if the student did not attend college.

Table A5

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Unmarried Taxpayer with Income of $20,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	5,550	5,050	5,550	5,050
Net Tuition	**1,950**	**2,450**	**19,450**	**19,950**
Total Income (= AGI)	**20,000**	**20,000**	**20,000**	**20,000**
(all income from wages and salaries)				
Less: Deductions (Larger of Standard or Itemized[4])	8,350	8,350	8,350	8,350
Less: Personal Exemptions ($3,650 per exemption)[5]	7,300	7,300	7,300	7,300
Less: Above-the-Line Tuition Deduction[6]	0	0	0	0
Taxable Income	**4,350**	**4,350**	**4,350**	**4,350**
Federal Income Tax Liability Before Credits	**435**	**435**	**435**	**435**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	0
Hope Credit	0	435	0	435
American Opportunity Tax Credit	1,215	0	1,435	0
Earned Income Tax Credit (EITC)	2,471	2,471	2,471	2,471
Total Education-Related Credits	**3,686**	**2,906**	**3,906**	**2,906**
Total Tax After Credits[7]	**-3,651**	**-2,871**	**-3,871**	**-2,871**
(includes $400 Making Work Pay credit)				
Total Tax-Based Education Benefits	**4,051**	**3,271**	**4,271**	**3,271**
(credits, tuition deduction, EITC, exemption)				
Value of Tax-Based Education Benefits in ARRA	**780**		**1,000**	
Value of Tax and Pell Grant Benefits from ARRA	**1,280**		**1,500**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24. Filing status is not considered.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $365.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

Table A6

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Unmarried Taxpayer with Income of $40,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	2,800	2,300	2,800	2,300
Net Tuition	**4,700**	**5,200**	**22,200**	**22,700**
Total Income (= AGI) *(all income from wages and salaries)*	**40,000**	**40,000**	**40,000**	**40,000**
Less: Deductions (Larger of Standard or Itemized[4])	8,350	8,350	8,350	8,350
Less: Personal Exemptions ($3,650 per exemption)[5]	7,300	7,300	7,300	7,300
Less: Above-the-Line Tuition Deduction[6]	0	0	0	0
Taxable Income	**24,350**	**24,350**	**24,350**	**24,350**
Federal Income Tax Liability Before Credits	**3,055**	**3,055**	**3,055**	**3,055**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	2,000
Hope Credit	0	1,800	0	0
American Opportunity Tax Credit	2,500	0	2,500	0
Earned Income Tax Credit (EITC)	0	0	0	0
Total Education-Related Credits	**2,500**	**1,800**	**2,500**	**2,000**
Total Tax After Credits[7] *(includes $400 Making Work Pay credit)*	**155**	**855**	**155**	**655**
Total Tax-Based Education Benefits *(credits, tuition deduction, EITC, exemption)*	**3,048**	**2,348**	**3,048**	**2,548**
Value of Tax-Based Education Benefits in ARRA	**700**		**500**	
Value of Tax and Pell Grant Benefits from ARRA	**1,200**		**1,000**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24. Filing status is not considered.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $130.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

Table A7

Tax and Grant Benefits

2009 Law and without Recovery Act (ARRA) Education Provisions[1]

Unmarried Taxpayer with Income of $80,000 and Education Expenses for One Dependent Child

	4-Year Public Tuition		4-Year Private Tuition	
	ARRA	No ARRA	ARRA	No ARRA
Gross Tuition[2]	7,500	7,500	25,000	25,000
Less: Federal Pell Grant[3]	0	0	0	0
Net Tuition	**7,500**	**7,500**	**25,000**	**25,000**
Total Income (= AGI) *(all income from wages and salaries)*	**80,000**	**80,000**	**80,000**	**80,000**
Less: Deductions (Larger of Standard or Itemized[4])	14,400	14,400	14,400	14,400
Less: Personal Exemptions ($3,650 per exemption)[5]	7,300	7,300	7,300	7,300
Less: Above-the-Line Tuition Deduction[6]	0	2,000	0	2,000
Taxable Income	**58,300**	**56,300**	**58,300**	**56,300**
Federal Income Tax Liability Before Credits	**9,428**	**8,928**	**9,428**	**8,928**
Federal Tax Credits for Education				
Lifetime Learning Credit	0	0	0	0
Hope Credit	0	0	0	0
American Opportunity Tax Credit	2,500	0	2,500	0
Earned Income Tax Credit (EITC)	0	0	0	0
Total Education-Related Credits	**2,500**	**0**	**2,500**	**0**
Total Tax After Credits[7] *(includes $300 Making Work Pay credit[8])*	**6,628**	**8,628**	**6,628**	**8,628**
Total Tax-Based Education Benefits *(credits, tuition deduction, EITC, exemption)*	**3,413**	**1,413**	**3,413**	**1,413**
Value of Tax-Based Education Benefits in ARRA	**2,000**		**2,000**	
Value of Tax and Pell Grant Benefits from ARRA	**2,000**		**2,000**	

[1] Education benefits are calculated as follows. A student may be eligible for more than one benefit, but a taxpayer may only claim one tax benefit per student per tax year. Income limits apply, and vary across the benefits. The calculations assume all taxpayers chose the optimal benefit or set of benefits. ARRA education benefits include AOTC and up to $500 of additional Pell grant. **AOTC**: 100% of the first $2,000 of eligible expenses and 25% of the next $2,000 of expenses for a maximum credit of $2,500. Up to 40% of the credit is refundable. A student may claim the AOTC for up to 4 years and must attend full time. **Hope credit**: 100% of up to $1,200 in eligible expenses and 50% of the next $1,200 of expenses for a maximum credit of $1,800. It is not refundable. A student may claim the Hope credit twice and must attend full time. **Lifetime learning credit**: a taxpayer may claim 20% of up to $10,000 of tuition and required fees. The credit is not refundable. The credit may be claimed in any year with education expenses. **Tuition Deduction**: taxpayers may claim an above-the-line deduction for up to $4,000 of tuition and required fees. In addition families with dependent students attending school at least half time may be eligible for **EITC** benefits and an **additional dependent exemption** until the student is 24. Filing status is not considered.

[2] Tuition is average tuition for the type of institution.

[3] Pell Grants are calculated using grant levels for 2010-2011 with reasonable assumptions for prior year tax liability and assets.

[4] Itemized deductions are assumed to be 18 percent of total income.

[5] The additional dependent exemption is worth $3,650 times the marginal tax rate of the taxpayer, subject to sufficient tax liability. For this family it is worth $130.

[6] Because tuition benefits are optimized, the deduction is zero for all taxpayers for whom other benefits are preferred.

[7] Families with a negative amount of tax after credits receive a refund. Families with a positive amount of tax after credits have a liability.

[8] This family is in the phaseout range for the Making Work Pay credit.

C. Additional Explanation of AOTC Benefits to an Independent Student

Following are some more detailed explanations of the analysis calculating the benefits of the AOTC to an independent student with $10,000 of income, detailed in Table 4 in the report:

Independent student earning $10,000 in income: Table 4 shows the value of education tax benefits and grants for an independent student who earns $10,000 and attends a typical four-year public college as full-time status and age are varied. Benefits are shown for full and half-time attendance, and for students under age 25 and at least 25 years old. Age is important because for purposes of computing the Pell Grant, parental income is considered for childless students under 25 years old, even if the student is not considered a dependent for tax purposes.[31] This example shows that younger students receive much smaller Pell Grants due to the expected parental contribution. The smaller Pell Grant for younger independent students is partly offset by the resulting increase in the education credits. In all cases, the overall benefits available to independent students under the Recovery Act are significantly larger than those under prior law.

Independent full-time student earning $10,000 in income: A full-time student would receive an additional annual tax benefit from the Recovery Act of between $840 and $1,000 (total annual education benefits would be between $1,340 and $1,550 if Pell grants are included). All the additional benefit is due to the AOTC being refundable. If the individual attended half-time, the annual education tax benefit from the Recovery Act would be between $480 and $920 (total annual education benefits would be between $730 and $1,475 if Pell grants are included).

[31] Procedures are in place for young students to appeal this classification. Age also affects eligibility for the EITC for taxpayers without children; the EITC in this case is not affected by student status.