



# Higher Education Tax Credits: An Economic Analysis

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## Summary

Education tax credits, the Hope Credit and the Lifetime Learning Credit, were introduced as new subsidies for higher education in 1997 and have cost, on average, \$4.6 billion a year in lost tax revenue since their enactment. The introduction of the credits marked a dramatic increase in education spending through tax expenditures. Prior to 1997, tax incentives for higher education expenses totaled less than \$2 billion in estimated lost revenue. The introduction of education tax credits expanded the number of federal agencies involved in education policy making and increased the complexity and cost of administering the income tax system.

This report provides analysis of the education tax credit program. The report begins with a review of the economic rationale for subsidizing education, then describes federal subsidies for education in general and education tax credits in particular. An analysis of the education credits follows, and the report concludes with a discussion of education tax credit policy options.

Economists believe that education causes positive externalities since it generates both private benefits for individuals and social benefits for the public at large. Such social benefits may include better citizenship, higher degrees of compliance with public laws, increased productivity, and intergenerational transfers of knowledge. The individual does not capture these social benefits in decision making about his or her level of educational investment and, thus, underinvests in education. Government subsidies to finance education can stimulate private demand for education in order to attain more optimal levels of education production that achieve market equilibrium outcomes.

Government subsidies for higher education include indirect spending through the tax code and direct program spending. Most programs grant aid to education institutions and provide assistance directly to students and their families, as in the case of the education tax credits. The Higher Education Act (HEA), which most recently was extended through March 2008, authorizes many student aid programs which provide grants, loans, and work-study assistance.

Tax credits for higher education, one form of government education subsidy, can be evaluated by looking at tax policy criteria of economic efficiency, equity, and simplicity. Tax credits are not proven to be efficient at increasing enrollment and thus improving social welfare. Tax credits can, however, be beneficial in making college costs more affordable. Higher income households are more able, and more likely, to benefit from education credits, which some view as detracting from equity in the tax code. Yet, the credits provide needed relief for the middle class, many of whom may not qualify for any other source of financial aid. Education credits add complexity and cost to the administration of income taxes, both for individuals and the federal government, but may offer a less-complicated alternative to traditional financial aid.

This report will be updated as warranted by legislative events.

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**E**ducation tax credits were introduced as a new subsidy for higher education in 1997 and have cost, on average, \$4.6 billion a year in lost tax revenue since their enactment. The introduction of tax credits for higher education marked a dramatic increase in education spending through tax expenditures. Prior to 1997, tax incentives for education expenses totaled less than \$2 billion annually in estimated lost revenue.<sup>1</sup> The education tax credit program expanded the number of federal agencies involved in education policy making and increased the complexity and cost of administering the income tax system.

There are many direct federal spending programs for higher education. Some programs grant aid to state and local governments and to education institutions while others provide assistance directly to students and their families, as in the case of the education tax credits. The Higher Education Act (HEA; most recently extended by P.L. 110-109), which is scheduled to expire in the 110<sup>th</sup> Congress, authorizes these student aid programs which provide grants, loans, and work-study assistance.

Congress is considering a wide variety of issues as it faces the process of reauthorizing the programs of the Higher Education Act. The general higher education issues include the appropriate federal role in addressing both postsecondary access and affordability. Congress is also considering issues specific to individual HEA programs, like shortfalls in Pell Grant funding which provides need-based aid for undergraduate students.

This report provides analysis of the education tax credit program in the context of the higher education issues facing Congress. This report begins with a review of the economic rationale for subsidizing education, then describes federal subsidies for education in general and the education tax credits in particular. An analysis of the education credits follows and the report concludes with a discussion of education tax credit policy options.

## **Why Are There Government Subsidies for Higher Education Expenses?**

Economic theory suggests that government subsidies for higher education expenses are desirable because individuals do not invest in sufficient levels of education. This insufficient educational investment is due to market failures, which exist when the price system is unable to generate an efficient allocation of resources. The economic reasons most often cited for government involvement in education include the “neighborhood” or externality effect and the presence of capital market failure.

### **Positive Externalities**

An externality exists when the activity of an individual directly affects, positively or negatively, the welfare of another and that effect is not incorporated in market prices. Economic theory suggests that education causes positive externalities since it generates both private benefits for individuals and social benefits for the public at large. These social benefits may take on the form

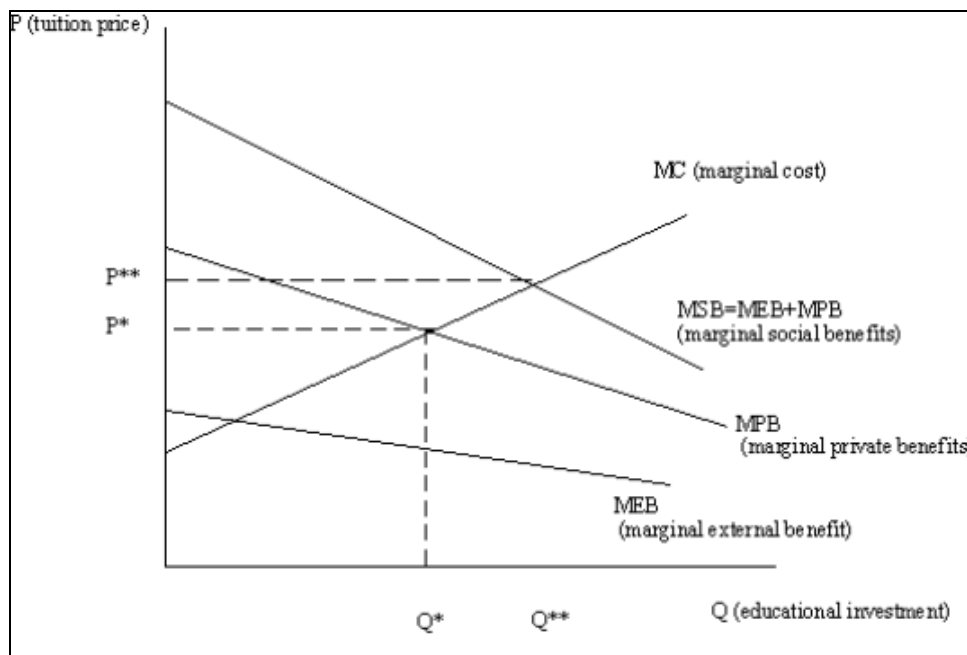
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<sup>1</sup> U.S. Congress, Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 1996-2000*, 104<sup>th</sup> Cong., 1<sup>st</sup> sess. (Washington: GPO, 1995), p. 16.

of better citizenship, higher degrees of compliance with public laws, increased productivity, and inter-generational transfers of knowledge. The individual does not capture these social benefits in decision making about his or her level of educational investment and, thus, under invests in education. The private demand for education is less than social demand and too little investment in education occurs. Government subsidies to finance education can stimulate private demand for education in order to attain more optimal levels of education production that achieve market equilibrium outcomes.<sup>2</sup>

The positive externality produced as a result of education investment is depicted in **Figure 1**. An individual chooses an education investment level of  $Q^*$ , where marginal cost (MC) is equal to marginal private benefit (MPB). Yet, the educational investment made by an individual creates positive marginal external benefits, (MEB). These external benefits are not taken into account by the individual as the choice of educational attainment,  $Q^*$ , is made. The marginal external benefit can be added to the marginal private benefit to arrive at the marginal social benefit (MSB) of educational investment. Economic efficiency requires the equality of marginal cost and marginal social benefit, which occurs at  $Q^{**}$ . Since the optimal educational level is greater than the individual's choice, introducing a subsidy to increase education can help correct for the difference.

**Figure 1. Illustration of a Positive Externality**



The magnitude of these external benefits is difficult to determine, particularly with regard to higher education. For example, while literacy is desirable for civic participation and the ability to conform to laws, this literacy is gained in elementary and secondary education. Yet, the benefits of additional higher education are more complex. If increases in productivity due to higher education are captured by the individual in the form of higher earnings, there are no spillover effects. It is also sometimes the case that increases in education do not yield the increases in job

<sup>2</sup> For a more detailed discussion of externalities, see Harvey Rosen, "Externalities" in Public Finance (Boston: McGraw-Hill, 1999), pp. 85-110.

opportunities, and associated earnings, commensurate with the higher skill levels.<sup>3</sup> Nevertheless, many economists believe that greater amounts of human capital are an important driver of growth and it is true that discoveries and advances in knowledge by highly skilled individuals spill over to the economy as a whole.

## **Imperfect Capital Markets**

The imperfection of capital markets arises as a result of students being unable to obtain commercial loans to finance their higher education. Unlike the way loans for homes or automobiles are obtained, commercial lenders cannot mortgage a person's future income and, in the event of default of the loan, sell the student's services to the highest bidder. As a result, commercial lenders would be reluctant to float student loans without government guarantees.<sup>4</sup> Providing private loans guaranteed by the government is one solution to this failure, as is providing student loans directly from the government.

## **Income Inequality**

As noted previously, investment in higher education can lead to increases in earnings. Some argue that it is appropriate to subsidize education to ensure that educational opportunities are widely available, particularly to students from lower income households. In this context, educational investment can be a significant factor in reducing poverty and income inequality. Zimmerman examined this issue and concluded that higher income students have higher marginal rates of return and lower marginal costs of financing.<sup>5</sup> These factors led to higher net return and lifetime earnings for higher income students as compared to lower income students. Thus, providing lower income students with larger subsidies would tend to equalize earnings differentials. If the goal for education subsidies is to reduce income inequality, the cost of subsidies should be measured in terms of the private benefits received by targeted groups, rather than the social benefits that might be generated by positive externalities.

## **Existing Government Subsidies for Higher Education Expenses**

Government subsidies for education are provided at the federal, state, and local levels. Governments employ two types of subsidies to help families pay for higher education. First, there are direct appropriations from state and local governments to public postsecondary institutions. A majority of this funding is used to minimize tuition charges for in-state students.

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<sup>3</sup> I. Berg and M. Freedman, "The American Workplace: Illusions and Realities", *Change* 9, Nov. 1977, vol. 62, pp. 24-30.

<sup>4</sup> For a more thorough discussion of capital market failure, see CRS Report 97-581, *Tax Subsidies for Higher Education: An Analysis of the Administration's Proposal*, by Jane Gravelle and Dennis Zimmerman. (Out of print report—Available from author.)

<sup>5</sup> Dennis Zimmerman, "Expenditure-Tax Incidence Studies, Public Higher Education, and Equity," *National Tax Journal*, vol. 26, no. 1, Mar. 1973, p. 67.

A second form of public subsidy is need-based aid to students and families. This represents the largest share of student financial aid. Current education subsidies provided by the federal government include student loans, grants, and work-study programs. Both of the major federal grant programs, Pell Grants and Federal Supplemental Educational Opportunity Grants (FSEOG) are need-based. There are also many specialized federal grants and scholarship programs provided for students at the graduate level. The Federal Work Study program and the Student Educational Employment programs allow students to earn money while in school.

According to FY2002 data, \$108 billion was spent by the federal government on education. While the largest portion of spending occurred through the U.S. Department of Education (\$46.3 billion or 43%) large amounts of education spending also came from the Department of Health and Human Services (\$22.9 billion), the Department of Agriculture (\$11.9 billion), the Department of Labor (\$6.4 billion), the Department of Defense (\$4.7 billion), and the Department of Energy (\$3.6 billion).<sup>6</sup> Twenty-two billion eight hundred million dollars of the FY2002 spending on education was allocated to postsecondary education (21%) while another \$25.7 billion was allocated to research at universities and related institutions (24%). Fifty-three billion was allocated for elementary and secondary education (49%) and \$6.2 billion for other programs (6%).<sup>7</sup>

In addition to direct spending programs administered by the U.S. Department of Education and other executive branch agencies, government subsidies for higher education are also made through the income tax system. From 1954 to 1978, four tax benefits for education existed, an exclusion for scholarship and fellowship income, a parental exemption for students age 19 to 23 who were enrolled in college, a business expense deduction for work-related education, and the deduction of student loan interest.<sup>8</sup> In 1978 an exclusion for employer-provided education assistance was enacted and 10 years later an exclusion for the interest earned on educational savings bonds was enacted. In 1996, after the enactment of an exclusion for earnings from qualified tuition programs, the number of tax benefits for higher education expenses rose to seven.

The Taxpayer Relief Act of 1997 (P.L. 105-34) introduced four new tax benefits that more than doubled the number of subsidies available through the tax system for higher education expenses. They were two tax credits, a deduction for interest on student loans, and an exclusion for earnings from Coverdell savings accounts. The provisions were estimated to cost \$41 billion<sup>9</sup> over five years beginning in 1998 and represented the largest increase in federal funding for higher education since the GI Bill. Additionally, in the fall of 2001, an above-the-line deduction for higher education expenses was authorized by the Economic Growth and Tax Relief

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<sup>6</sup> National Center for Education Statistics (NCES) Digest 2002, Chapter 4: Federal Programs for Education and Related Activities, at <http://nces.ed.gov/> visited Feb. 23, 2004.

<sup>7</sup> For more detailed information about federal spending programs for higher education see CRS Report RL33040, *The Higher Education Act: Reauthorization Status and Issues*, by Adam Stoll (out of print report—available from author); and CRS Report RL31668, *Federal Pell Grant Program of the Higher Education Act: Background and Reauthorization*, by Charmaine Mercer; and CRS Report RL31618, *Campus-Based Student Financial Aid Programs Under the Higher Education Act*, by David P. Smole.

<sup>8</sup> The deductibility of student loan interest was eliminated in 1986 as a result of the Tax Reform Act (P.L. 99-514), which disallowed deduction of all forms of personal interest.

<sup>9</sup> U.S. Congress, Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 1998-2002*, 105<sup>th</sup> Cong., 1<sup>st</sup> sess. (Washington: GPO, 1997), p. 23.



Reconciliation Act of 2001 (P.L. 107-16). This incentive increased the number of tax benefits for higher education expenses to 12.

## **Overview of Education Tax Credits**

Two education tax credits are available to taxpayers to offset the cost of higher education, the Hope Credit and the Lifetime Learning Credit. Unlike tax deductions, which reduce the amount of income subject to tax, credits reduce the tax liability itself. The extent of the credits allowed depends on many factors, including the amount of taxpayer income and the amount of tax liability.

### **Hope Credit**

The Hope Credit is a nonrefundable credit that may be claimed for the qualified tuition expenses of each eligible student in the taxpayer's family. The student must be enrolled at least half-time in one of the first two years of postsecondary education and must be enrolled in a program leading to a degree, certificate, or other recognized educational credential.

The amount of credit that may be claimed is generally equal to: 100% of the first \$1,000 of the taxpayer's out-of-pocket expenses for each student's qualified tuition and related expenses, plus 65% of the next \$1,000 of the taxpayer's out-of-pocket expenses for each student's qualified tuition and related expenses. In order for the maximum amount of the Hope Credit to be received, assuming there is sufficient tax liability, a minimum of \$2,000 in tuition and fees per eligible student must be expended. The maximum credit a taxpayer may claim for a taxable year is \$1,650 multiplied by the number of students in the family who meet the enrollment criteria.

The amount a taxpayer may claim as a Hope Credit is gradually reduced for higher-income taxpayers who have modified adjusted gross income between \$47,000 (\$94,000 for married taxpayers filing jointly) and \$57,000 (\$114,000 for married taxpayers filing jointly). Taxpayers with modified adjusted gross income over \$57,000 (\$114,000 for married taxpayers filing jointly) may not claim the Hope Credit. These income phase-out amounts are for tax year 2007 and are adjusted annually for inflation.<sup>10</sup>

### **Lifetime Learning Tax Credit**

The Lifetime Learning Credit may be claimed for the qualified tuition and related expenses of the students in the taxpayer's family who are enrolled at eligible institutions. The credit amount is equal to 20% of the taxpayer's first \$10,000 of out-of-pocket qualified tuition and related expenses. The maximum credit a taxpayer may claim is \$2,000. If a taxpayer is claiming a Hope Credit for a particular student, none of that student's expenses may be applied to the Lifetime Learning Credit.

The amount a taxpayer may claim as a Lifetime Learning Credit is gradually reduced for taxpayers in the same manner as the Hope Credit.

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<sup>10</sup> CCH Editorial Staff Publication, *2006 U.S. Master Tax Guide* (Chicago: CCH Incorporated, 2005), p. 448.

## Comparison of Education Tax Credits

The Hope Credit is allowable for up to \$1,650 per year for each eligible student and taxpayers can claim more than one Hope Credit on a tax return, provided that more than one individual (the taxpayer, the spouse, or a dependent) meets the qualifications. In contrast, the Lifetime Learning Credit may be claimed only once on a tax return for a maximum of \$2,000. The Lifetime Learning Credit can include all of the qualifying educational expenses pooled together from the taxpayer, the spouse and/or their dependent(s). Neither tax credit is refundable, meaning that taxpayers would not receive a tax refund if the amount of their allowable education credit exceeded their income tax liability. The Hope Credit is indexed for inflation, while the Lifetime Learning Credit is not.

Unlike the Hope Credit, the Lifetime Learning Credit can be used for graduate or undergraduate school, does not require the student to be in the first two years of undergraduate schooling, and only requires the student to be enrolled in one course at an eligible educational institution. The Hope Credit requires that the student not have a felony drug conviction, which is not a requirement of the Lifetime Learning Credit.

Both credits disallow a double tax benefit for higher education expense. Some taxpayers can deduct the expenses of higher education from their income tax by claiming an above-the-line tuition and fees deduction or by claiming the expenses as business related. In doing so, the taxpayer cannot also claim an education credit for those same expenses. Taxpayers cannot claim an education credit on expenses paid with tax-free scholarship, grant, or employer-provided educational assistance. Pell Grants, veterans' educational assistance, and tax-exempt scholarships are included in this category of tax-free educational assistance. Taxpayers must reduce qualified education expenses by the amount of any tax-free financial assistance before using the expenses to claim an education tax credit.<sup>11</sup>

## Number and Amount of Tax Credits Claimed

The number of education credits claimed and the value of the credits are shown in **Table 1**. After the 1997 enactment, the credits became available in tax year 1998. A significant increase in participation occurred between 1998 and 1999, presumably as taxpayers learned about the existence of the education credits and learned how to claim them. After 1999, the rate of increase in participation decreased sharply, as is shown in **Figure 1**. Data show a rate of increase in participation up to 2002, with a slight downturn that year and then a plateau in participation through recent years. The same is true for the amount of credits claimed.

The changes in 2002 may be due to the enactment of the Economic Growth and Tax Relief and Reconciliation Act of 2001 (EGTRRA, P.L. 107-16), which reduced tax liabilities for all taxpayers in 2001. The tax relief provided by EGTRRA, which was designed to stimulate the economy, seems to have had the unintended consequence of reducing the number of taxpayers eligible to claim education tax credits, as households experienced reductions in their income tax liability or no longer owed any tax.

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<sup>11</sup> Additional information about the education credits is provided in CRS Report RL31129, *Higher Education Tax Credits and Deduction: An Overview of the Benefits and Their Relationship to Traditional Student Aid*, by Linda Levine and Charmaine Mercer.

Also, a new tax benefit for higher education expenses, an above-the-line tuition and fees deduction, was enacted by EGTRRA. Many taxpayers may have been eligible to claim either the tax credits or the new deduction which may have contributed to the lower number of education credits claimed, as reported preliminarily, in 2002.

As shown in **Table 1**, in five years, the average value claimed per tax credit has not exceeded \$860 even though the largest possible value for eligible participants is \$1,500 for the Hope Credit and \$1,000<sup>12</sup> for the Lifetime Learning Credit. These averages suggest a large portion of claimants are not able to claim the full value of the credits and that the maximum level of program participation available is not being achieved.

**Table 1. Number and Amount of Education Tax Credits Claimed**

	1998	1999	2000	2001	2002	2003	2004	2005
Number of tax returns claiming education credits (millions)	4.7	6.4	6.8	7.2	6.5	7.3	7.1	7.1
Amount of education credits claimed (billions)	\$3.4	\$4.7	\$4.9	\$5.2	\$4.9	\$5.8	\$6.0	\$6.1
Average amount claimed per return	\$723	\$734	\$721	\$722	\$753	\$794	\$845	\$859

**Source:** CRS table created from data obtained from the IRS *Statistics of Income (SOI)*, <http://www.irs.gov>, Table 1.3 (2002, 2001, 2000, 1999, 1998) and Table 3.3 for recent years. Most recent data available at <http://www.irs.gov/pub/irs-soi/05in33ar.xls>, visited Jan. 22, 2008.

When the tax credits were proposed, the tax revenue loss was expected to be higher than the levels that actually occurred. In anticipation of the first year the education tax credit program, the tax revenue loss was projected to be \$6.2 billion in 1998, then rise to \$7.2 billion by 2000 and \$7.6 billion by 2002.<sup>13</sup> These estimates were more than 30% greater than the actual tax revenue loss and reflected an expectation of higher participation in the tax credit programs. For instance, in 1999, the Clinton Administration estimated that nearly 13 million credits would be claimed with a revenue loss of \$7 billion,<sup>14</sup> which was nearly 50% greater than the actual participation for that year.

## Economic Analysis

Tax credits are a form of federal subsidy that treats eligible activities favorably compared to others, and channels economic resources into qualified uses. Subsidies influence how economic actors behave and how the economy's resources are employed. Economic theory suggests tax credits for higher education expenses can be evaluated by looking at the impact on economic efficiency, equity, and simplicity.

<sup>12</sup> The maximum Lifetime Learning Credit amount of \$5,000 became effective in 2003. Prior to 2003, the maximum amount was \$1,000.

<sup>13</sup> U.S. Congress, Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 1998-2002*, 105<sup>th</sup> Cong., 1<sup>st</sup> sess. (Washington: GPO, 1997), p. 23.

<sup>14</sup> U.S. Executive Office of the President, *Budget of the United States Government, Fiscal Year 2000* (Washington: GPO, 2000), p. 69.

## Demand-Side Response: Students and Families

Tax credits for higher education expenses provide subsidies to encourage more investment in education than would otherwise be undertaken. As discussed at the beginning of this report, tax subsidies for education can enhance economic efficiency if they are successful in increasing investment in education. However, tax credits may not be effective if they subsidize activities that would have been undertaken in the absence of the tax incentive, i.e. subsidize enrollment that would have occurred anyway, or fail to increase enrollment at all.

To date, only one empirical study has specifically examined the education tax credits and their impact on enrollment. Long found that,

what was intended to be a transfer to the middle class did benefit families with incomes between \$30,000 and \$75,000 the most. For the 2000 tax year, nearly half of the credits claimed in 2000 were by returns with adjusted gross income between \$30,000 and \$75,000 although this group makes up only 35% of the eligible returns. In a similar manner, although they make up only 13% of returns, families with adjusted gross incomes between \$50,000 and \$75,000 claimed 22% of all education tax credits during tax year 2000 and realized the largest credit on average.<sup>15</sup>

An examination of the 2004 education tax credit data organized by adjusted gross income is consistent with Long's findings that the middle class benefitted the most from education credits. In total, households with adjusted gross income (AGI) of \$30,001 or more claimed 64% of the credits and 73% of the credit amount, even though these households comprise only 49% of all taxpayers. As shown in **Table 2**, households with AGI of \$50,001 to \$100,000 had the highest portion of returns claiming education credits (35.9%) and the highest portion of the total amount of education credits claimed (nearly 43.3%). The AGI category of \$30,000 to \$50,000 was second in both the portion of credits claimed and the amount of credits claimed. Taxpayers with incomes \$15,000 or below claimed the second smallest portion of education tax credits (8.8%) and received the second smallest portion (3.5%) of the amount of education tax credits, while comprising the largest portion of taxpayers (28.2%).

**Table 2. By Adjusted Gross Income, the Number and Amount of Education Credits Claimed in 2004**

Adjusted Gross Income	Total number of returns filed	Percent of total returns	Total returns claiming education credits	Percent of total returns claiming education credits	Amount of education credit claimed (\$ in the thousands)	Percent of total amount of education credits
\$15,000 and under	37,315,393	28.2%	641,088	8.8%	210,644	3.5%
\$15,001 to \$30,000	29,580,707	22.3%	1,970,286	27.2%	1,420,578	23.4%
\$30,001 to \$50,000	24,536,044	18.5%	1,986,654	27.4%	1,807,230	29.7%

<sup>15</sup> Bridget Terry Long, "The Impact of Federal Tax Credits for Higher Education Expenses," *Harvard Graduate School of Education and the National Bureau of Economic Research (NBER) Working Paper*, September 2003, p. 45.

Adjusted Gross Income	Total number of returns filed	Percent of total returns	Total returns claiming education credits	Percent of total returns claiming education credits	Amount of education credit claimed (\$ in the thousands)	Percent of total amount of education credits
\$50,001 to \$100,000	28,195,618	21.3%	2,606,261	35.9%	2,630,920	43.3%
\$100,001 to \$200,000	9,750,175	7.4%	48,945	0.7%	7,550	0.1%
\$200,001 or more	3,006,981	2.3%	—	—	—	—
Total	132,384,919		7,253,234		6,076,920	

**Source:** CRS table created using data obtained from IRS *Statistics of Income*, <http://www.irs.gov/pub/irs-soi/04in01pl.xls>, visited Feb. 20, 2007.

Long's analysis found no enrollment responses to the tax credits three years after the policy enactment.

General enrollment did not appear to increase nor did the proportion of students that attended four-year institutions or were full-time. The lack of finding a substantial response in student enrollment conforms to many forecasts by researchers and critics. The principal benefactors [sic] of the tax credits are not likely to be marginal students, and the disconnect between the aid and college attendance is likely to limit the effect of credits on enrollment.<sup>16</sup>

More generally, studies of tuition price changes and enrollment response can provide some insight into expected changes in enrollment due to the price reduction that education tax credits provide. If students are sensitive to tuition price changes, the net reduction in price caused by tax credits would positively affect enrollment. If students are relatively insensitive to price changes, the net price reduction caused by tax credits would have little impact on enrollment. Typically, students from higher income families have the resources to finance college enrollment without federal subsidies and are relatively insensitive to price changes.

The demand-side response of students and families can be further stratified by distinguishing between the participation and margin effects of tuition price changes, as depicted in **Table 3**. Overall investment in education would increase if students (potential students) were induced by the tax credits to increase (begin) enrollment in higher education. The participation effect captures students (or their families) who would not invest in higher education without the tax credits. The margin effect captures students who invest in higher education without the tax credits, and who may increase their investment in response to the tax credits. That increase in investment can occur in many ways, including increases in the hours of participation (e.g., moving from part-time to full-time status), increases in the longevity of participation (pursuing a bachelor's degree rather than associate's), or increases in the quality of investment (transferring to a more expensive school, i.e. from public to private institution, or from a two-year to four-year school).

<sup>16</sup> Long, pp. 30-31.

**Table 3. Participation and Margin Effects of Tuition Price Reductions**

	<b>Participation Effect</b> Non-college students (never enrolled)	<b>Margin Effect</b> College students (currently enrolled)
Price sensitive	increase enrollment	increase expenditure
Relatively price insensitive	little response; thus little enrollment increase	no response; maintain current enrollment

**Source:** Table created by CRS.

### Participation Effect

In the economic literature, many studies have been conducted of participation rates and the relationship between tuition price and college enrollment. The studies are diverse in both their methods and their results. Some studies estimated price elasticities of demand which reflected changes in education demand (as proxied by changes in enrollment) due to changes in tuition price. Other studies created student-price-response-coefficients that were defined as the change in college participation rates in response to tuition price changes. In 1987, Leslie and Brinkman provided a comprehensive review of studies of the relationship between price and college enrollment.<sup>17</sup> These studies, which were published between 1967 and 1982, examined different types of institutions, public and private, two-year and four-year and found that, for every \$100 increase in tuition price—given 1982-1983 average weighted higher education prices of \$3,420 for tuition and room and board—it was expected that the national participation rate, 33%, would fall about three-quarters of a percentage point.<sup>18</sup> This translated into a price elasticity of demand of 0.78 which suggests that students were slightly unresponsive to tuition price changes.<sup>19</sup> The authors noted, however, that “demand is known to be affected not only by price but by the money income of the buyer, by tastes and preferences, and by the value of the good from a consumption or an investment perspective.”<sup>20</sup>

In 1997, another review of the literature on tuition and enrollment in higher education was published by Heller, who compared the results of 20 quantitative studies to the Leslie and Brinkman study.<sup>21</sup> Heller confirmed that as the price of attending college increased, the probability of enrollment decreased. The consensus among the studies reviewed was consistent with Leslie and Brinkman, though the response found was smaller, in that every \$100 increase in college costs caused enrollment decline of 0.5% to 1.0% across all types of institutions. Additionally, decreases in financial aid led to declines in enrollment with the effect differing depending upon the type of aid awarded.<sup>22</sup> The studies reviewed were consistent in their conclusions that lower-income students were more sensitive to changes in tuition and aid than students from middle- and upper-income families. These results suggest that the benefits of the

<sup>17</sup> Larry L. Leslie and Paul T. Brinkman, “Student Price Response in Higher Education: The Student Demand Studies,” *Journal of Higher Education*, vol. 58, no. 2, March/April 1987, pp. 181-204.

<sup>18</sup> *Ibid.*, p. 188-189.

<sup>19</sup> In this context, price elasticity reflects the change in the participation rate for higher education relative to the change in tuition price  $[(0.0075/0.33)/(100/3420)]$ . A price elasticity value greater than one would reflect elastic demand and indicate students were very sensitive to price changes.

<sup>20</sup> Leslie and Brinkman, p. 200.

<sup>21</sup> Donald E. Heller, “Student Price Response in Higher Education: An Update to Leslie and Brinkman,” *Journal of Higher Education*, vol. 68, no. 6, Nov./Dec. 1997, pp. 624-659.

<sup>22</sup> Heller, p. 650.

education tax credits would be greater for lower-income students, though they are the least likely to be able to claim the credits.<sup>23</sup>

## **Margin Effect**

The margin effect, which captures currently enrolled students' changes in higher educational investment, differs depending on the price paid for tuition and fees. While all students who claim the credits will experience a favorable price effect, those students paying higher tuition and fees are least sensitive to price changes. For instance, a student whose total tuition and fees payments are equal to \$1,500 and who is eligible to claim the Hope Credit, will experience a net price reduction of \$1,250. An eligible student whose tuition and fee payments are equal to \$5,000, would experience a net price of \$3,500 (assumes the maximum Hope Credit amount can be taken). An educational investment elasticity can be created by assuming both students increase investment by \$1,000. For the first student, a change in educational investment, from \$1,500 to \$2,500, given the net price reduction of \$1,250, would yield an elasticity of 4.125  $[(1000/1500)/(250/1500)]$ . For the second student, a change in educational investment from \$5,000 to \$6,000, given the net price reduction of \$1,500 would yield an elasticity value of 0.28  $[(1000/5000)/(3500/5000)]$ . The student currently investing at the higher price has a high degree of insensitivity to price changes, while the student investing at the lower price is highly sensitive to changes in price.

CRS examined the possible consequences of enacting the education credits. This empirical work distinguished the margin effect from the participation effect as it examined the possible responses to the education tax credits. It found that the percentage of existing students who experience a relative price effect from the credits would be 56.5%.<sup>24</sup> It also concluded that students who spend large amounts on education simply reap a "windfall gain" of about 42% since the credits would cause no price change for additional spending.<sup>25</sup> Thus, they would receive the tax benefit but would not alter their level of educational investment. Federal taxpayers would receive no offsetting social benefits in the form of increased investment.

## **Affordability**

While credits may not, in some cases, change the price of marginal (additional) education, they can still reduce its cost relative to income. For some households, particularly those families with higher incomes, tax credits may be the only source of financial aid assistance available. According to the Joint Committee on Taxation, tax credits were enacted to make college more affordable.

To assist low- and middle-income families and students in paying for the costs of postsecondary education, the Congress believed that taxpayers should be allowed to claim a

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<sup>23</sup> Lower income students are most likely to have insufficient tax liability against which to claim the education tax credits and, therefore, are least able to claim education tax credits.

<sup>24</sup> CRS Report 97-581, *Tax Subsidies for Higher Education: An Analysis of the Administration's Proposal*, by Jane Gravelle and Dennis Zimmerman. (Out of print report—Available from author.)

<sup>25</sup> Gravelle and Zimmerman, p. 22. (Out of print report—Available from author.)

credit against federal income taxes for certain tuition and related expenses incurred when a student attends a college or university (or certain vocational schools).<sup>26</sup>

A 2001 study examining the Hope Credit addressed the federal policy shift from providing access to college to making college affordable for the middle class.<sup>27</sup> The author found that tax credits had only a small positive impact on the affordability of higher education for middle income families because middle-income students were not so sensitive to changes in the cost of education as low-income students. Students from middle income families had not significantly changed their patterns of enrollment in higher education in response to price increases relative to income. Instead, the greatest and most rapidly increasing burden of paying for college was on low-income, not middle-income families, when the cost of education was compared to household income.<sup>28</sup> Wolanin stated that “in 1972, the burden of both the average price of four-year public and private colleges and universities was about three times greater for a low-income than for a middle-income family. By 2000, the burden on the low-income family was about four times greater than the burden on the middle-income family.”<sup>29</sup>

In a 1998 study of the education tax credits and state higher education policy, Conklin showed that the burden of college expenses, relative to taxpayer income, could decrease moderately in response to the Hope Credit.<sup>30</sup> Those middle-income families with incomes between \$30,000 and \$90,000 could experience a reduction of college costs as a percentage of income from 0% to 5%, with an average of 2%. Families with incomes below \$30,000 would experience no reduction of college costs because they would be unable to claim the education credits. **Tables 4 and 5** show the potential degree of relief provided by the Hope Credit at different levels of family taxable income at public and private institutions respectively. At incomes of \$40,000 to \$60,000, the reduction in cost as a percentage of income is the highest for students at both public and private institutions, with an average of 3 percentage points.

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<sup>26</sup> U.S. Congress, Joint Committee on Taxation, *General Explanation of Tax Legislation Enacted in 1997*, 105<sup>th</sup> Cong., 1<sup>st</sup> sess. (Washington: GPO, 1997), p.14.

<sup>27</sup> Wolanin, Thomas R., *Rhetoric and Reality: Effects and Consequences of the Hope Scholarship*, The Institute for Higher Education Policy, Working Paper, April 2001, pp. 1-34.

<sup>28</sup> *Ibid.*, p. 10.

<sup>29</sup> *Ibid.*, p. 10.

<sup>30</sup> Kristin D. Conklin, *Federal Tuition Tax Credits and State Higher Education Policy*, The National Center for Public Policy and Higher Education, Working paper, 1998, pp. 1-31.



**Table 4. Estimated Cost of Attendance, before and after Hope Credit, Four-Year, Public Institution**

Average tuition: \$3,000, total price of attendance: \$10,000

Taxable family income (\$)	Cost of attendance after Title IV aid and before the Hope Credit (\$)	Cost of attendance as a percent of income	Cost of attendance after the tax credit (\$)	Cost of attendance as a percent of income	Change in cost as a percent of income
10,000	6,125	61%	6,125	61%	0%
20,000	6,125	31%	6,125	31%	0%
30,000	6,125	20%	5,575	18%	10%
40,000	8,175	20%	6,675	17%	15%
50,000	9,125	18%	7,625	15%	17%
60,000	10,000	17%	8,500	14%	18%
70,000	10,000	14%	8,500	12%	14%
80,000	10,000	13%	8,500	11%	15%
90,000	10,000	11%	9,250	10%	9%
100,000	10,000	10%	10,000	10%	0%

**Source:** Kristin D. Conklin, *Federal Tuition Tax Credits and State Higher Education Policy*, The National Center for Public Policy and Higher Education, Working paper, 1998, pp. 22-23.

**Note:** Calculations are for full-time freshmen. Income is defined as adjusted gross income for taxpayers filing jointly with two dependents. Pell Grant (Title IV) subsidy ranges from \$3,000 at the lowest level of income to \$950 at the \$40,000 taxable income level.

Students at higher priced institutions benefit more from education tax credits than students at lower priced institutions. As an example, using the *tuition* cost information in **Tables 4 and 5**, taxpayers with the same income (e.g., \$30,000) and the same Pell Grant award (e.g., \$2,450) cannot claim the same amount of Hope Credit. At the public institution, the amount of tuition and fees remaining after receiving the Pell Grant amount is \$550, which can be used to claim the Hope Credit. Yet, at the private institution, with significantly higher tuition costs, the amount of tuition and fees remaining after receiving the Pell Grant is \$10,550 and the maximum amount of Hope Credits of \$1,500 could be claimed. If it is presumed that students at higher priced institutions come from higher income households more often than lower income households, this would further support that the conclusion that tax credits contribute to regressivity in the tax system.

**Table 5. Estimated Cost of Attendance, before and after Hope Credit, Four-Year, Private Institution**

**Average tuition: \$13,000, total price of attendance: \$20,000**

<b>Taxable family Income (\$)</b>	<b>Cost of attendance after Title IV aid and before the Hope Credit (\$)</b>	<b>Cost of attendance as a percent of income</b>	<b>Cost of attendance after the tax credit (\$)</b>	<b>Cost of attendance as a percent of income</b>	<b>Change in cost as a percent of income</b>
10,000	16,125	161%	16,125	161%	0%
20,000	16,125	81%	16,125	81%	0%
30,000	16,125	56%	15,175	51%	7%
40,000	18,175	45%	16,675	42%	7%
50,000	19,125	38%	17,625	35%	8%
60,000	19,125	32%	17,625	31%	3%
70,000	19,125	27%	17,625	26%	4%
80,000	19,125	24%	17,625	23%	4%
90,000	19,125	21%	18,375	21%	0%
100,000	19,125	19%	19,125	19%	0%

**Source:** Kristin D. Conklin, *Federal Tuition Tax Credits and State Higher Education Policy*, The National Center for Public Policy and Higher Education, Working paper, 1998, pp. 22-23.

**Note:** Calculations are for full-time freshmen. Income is defined as adjusted gross income for taxpayers filing jointly with two dependents. Pell Grant (Title IV) subsidy ranges from \$3,000 at the lowest level of income to \$950 at the \$40,000 taxable income level.

### *Timing of Tax Payments*

For those individuals who can benefit from the tax credits, another challenge arises if their cash flow is constrained. The benefits of tax incentives for education are realized at the time of income tax return filing which, for most taxpayers, typically occurs in the spring by the April 15<sup>th</sup> deadline. This is in contrast to most academic tuition and fees payments that are made at the beginning of each academic year, typically occurring in the prior months of August or September. This lagged difference, often up to 10 or more months, in receiving the benefit of the tax credit cannot provide assistance to anyone trying to raise enough funds to pay initial college bills. Lower income students may not be able to expend the funds and wait for reimbursement. However, the issue of when the tax credit benefit is received may not be significant if taxpayers alter their behavior in anticipation of the benefit. Taxpayers could, for instance, reduce their income tax withholding such that their take home income is greater than it would be otherwise.

### **Supply-Side Response: Higher Education Institutions**

Increases in government aid to students allows them to pay more for college, which could induce schools to respond by raising their tuition prices or reducing financial aid resources. If this occurs, the education credits would not increase overall investment in education.

## Tuition Prices

At the time of the introduction of the education credits, many economists theorized that colleges and universities would increase their tuition prices. McPherson and Schapiro stated that for states with community college systems in which average tuition was below \$1,500, they would have incentives to raise tuition in response to the student populations that qualify for the full credit.<sup>31</sup> Kane concluded that with a marginal tuition subsidy between 50% and 100% for institutions charging less than \$2,000, state governments might be tempted to capture a share of the federal subsidies by tailoring their own tuition and financial aid policies.<sup>32</sup>

Only one study has specifically examined the institutional response to the new education credits. Long (2003) found support for the hypothesis that colleges act strategically to capture benefits created by the federal tax credits. The strongest incentives to increase price are for colleges that charge tuition at or below \$1,000. For example, if a school charges \$750 in tuition, its first- and second-year students could claim the full amount of tuition in tax credits and thus incur no tuition cost. The same scenario would also be true if the school raised tuition to \$1,000 and students would experience no difference. In particular, Long found that colleges that cost between \$1,000 and \$2,000 and that had many credit-eligible students did experience 18% faster growth in tuition prices relative to schools with fewer potential recipients or a more expensive price. The same results were not found to be true for public four-year colleges.<sup>33</sup>

Another institutional response could be to alter the composition of costs students incur. Universities that charge \$1,000 for tuition and \$3,000 in room and board charges may be encouraged to increase tuition costs to \$2,000 and reduce room and board costs to \$2,000. The student would experience the same cost but could receive credit for a larger portion of that cost since tuition and fees but not room and board are eligible expenses for the tax credits.

Such increases in tuition price would constitute an adverse effect of the tax credits on low-income students. Not only are they unable to participate in the tax benefit programs, they may experience tuition price increases as a result of institutional response to the tax credits. To the extent this occurred, low-income students would be made worse off by the government subsidy for higher education.<sup>34</sup>

## Financial Aid Reductions

The effects of tuition tax credits on financial aid choices available to students vary and are dependent on institutional responses to the availability of the tax credits. Educational costs to students are reduced by the amount of grants and scholarships students receive from federal, state,

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<sup>31</sup> Michael S. McPherson and Morton Owen Schapiro, "Financing Undergraduate Education: Designing National Policies," *National Tax Journal*, vol. 50, no. 3, Sept. 1997, pp. 558.

<sup>32</sup> Thomas J. Kane, "Beyond Tax Relief: Long-Term Challenges in Financing High Education," *National Tax Journal*, vol. 50, no. 2, June 1997, pp. 335-49.

<sup>33</sup> Long, p. 43.

<sup>34</sup> An additional price effect could occur if the increase in demand for education caused by the tax credits exceeded the capacity of the higher education community. If institutions have fixed supply and cannot absorb additional enrollment, higher education prices would rise in response. As institutions expand their capacity, they may have to pay higher costs (e.g., to attract professionals for teaching positions). This can be seen in **Figure 1**, which was discussed earlier in this report. At the socially optimal level of educational investment,  $Q^{**}$ , the prices faced by students have risen from  $P^*$  to  $P^{**}$ . The education credits, however, have not been shown to significantly increase demand for education.

institutional and other programs. Most of these grants are awarded on the basis of financial need which means that low-income students and families, who have the least tax liability and therefore the least eligibility for tax credits, also receive the largest amount of need-based grants which further reduces or eliminates their eligibility for tax credits.<sup>35</sup>

Low-income students also tend to be more highly concentrated in lower priced public two-year and four-year colleges. In 2003, 73% of full-time students were enrolled in public colleges and universities. About 29% of full-time, undergraduate students were enrolled at institutions charging less than \$4,000 in tuition and fees.<sup>36</sup>

In 1998, students attending public two-year colleges, the lowest priced postsecondary institutions, accounted for 32% of all first-year students but 47% of the first-year students from families with incomes of less than \$20,000.<sup>37</sup> These low income students pay lower amounts of tuition and related fees, which are more likely to be offset by tax-free educational assistance such as a Pell Grant, thus rendering them more likely to be ineligible for tax credits.

## **Equity Among Taxpayers**

A component of fairness in taxation is vertical equity, a concept which requires that tax burdens be distributed fairly among people with different abilities to pay. Tax credits benefit those who have sufficient income to pay tax. Those individuals without sufficient income to pay tax do not have the opportunity to benefit from education tax credits. The disproportionate benefit of tax expenditures to individuals with higher incomes reduces the progressivity of the tax system, which is often viewed as a reduction in equity.

The tax credits are regressive in that the more income taxpayers have, the more benefits they receive (up to the maximum phase out limits of the tax provision). As a result of their nonrefundable nature and the fact that the tax credits are not based on need, the tax credits move the distributional balance of federal aid away from low-income students towards middle-income students.

According to Wolanin, in 1998 40% to 45% of first and second year, low-income students were dependents and about half of these students, 1 million, received no benefit from the Hope Credit. Another one million students had incomes too low to be eligible to claim the full Hope Credit amount. Independent students, those solely responsible for their own higher education expenses, make up most of the remaining percentage of low-income first- and second-year students. Almost 1 million of these independent students, nearly two-thirds of whom have children, have incomes too low to be eligible for the Hope Tax Credit.<sup>38</sup> These numbers are part of the roughly 6.6 million students enrolled in their first two years of college in 1998.<sup>39</sup>

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<sup>35</sup> For a more in-depth discussion and analysis of tax benefits and their relationship to traditional financial aid, see CRS Report RL31129, *Higher Education Tax Credits and Deduction: An Overview of the Benefits and Their Relationship to Traditional Student Aid*, by Linda Levine and Charmaine Mercer, and CRS Report RL32155, *Tax-Favored Higher Education Savings Benefits and Their Relationship to Traditional Federal Student Aid*, by Linda Levine and Charmaine Mercer.

<sup>36</sup> The College Board, *Trends in College Pricing 2003* (New York: College Entrance Examination Board, 2003) p.4.

<sup>37</sup> Michael S. McPherson and Morton Owen Schapiro, "Financing Undergraduate Education: Designing National Policies," *National Tax Journal*, vol. 50, no. 3, Sept. 1997, pp. 557-71.

<sup>38</sup> Thomas R. Wolanin, *Rhetoric and Reality: Effect and Consequences of the Hope Scholarship*, *The New Millennium* (continued...)

Tax benefits such as the education credits can result in individuals with similar incomes paying differing amounts of tax. Conklin found that differences across states, including average state tuition prices and the amount of state sponsored aid, would result in an uneven distribution of tax credit use among taxpayers.<sup>40</sup> This differential treatment is a deviation from what has been described as a standard of horizontal equity, which states that people in equal positions should be treated equally.

The total amount of tax credits received by residents of a particular state depends on the income levels of college students and families in that state and the number of college students or their families who file federal income taxes. Additionally, the distribution of students among lower and higher priced institutions and the amount of state-sponsored financial aid also affect the equitable distribution of tax credits across states. States with a high proportion of middle- and high-income taxpayers may have more students claiming the maximum tax credit relative to states with high proportions of lower-income taxpayers who may not be able to claim the credits. States with relatively high priced public and private institutions of higher education are more likely to have more taxpayers claiming the education credits and receiving above average amounts. States with large state-based student financial aid programs may find that fewer taxpayers are eligible to claim the credits. This would be due to the state-based financial aid reducing the amount of qualified education expenses a taxpayer could claim.

Conklin cited examples of the inter-state differences. Montana, which had 38% of its college population made up of lower and lower-middle income students in 1998, was projected to have 23% of its student population unable to participate in the education tax credit programs. In contrast, Illinois was projected to have only 4% of its student population ineligible to claim the education tax credits. This was due, in part, to Illinois having one of the highest rates of students attending college out-of-state. These rates were in comparison to the national average which was 9%.<sup>41</sup>

## **Simplicity**

Tax credits for higher education expenses contribute to the complexity of the tax code and raise the cost of administering the tax system. Those costs, which can be difficult to isolate and measure, are rarely included in the cost-benefit analysis of tax provisions. The complexity of the tax code adds to the cost of taxpayers in either learning how to claim incentives and doing so, or an increased direct cost of paying tax professionals to perform the service for the taxpayer.

## **Taxpayers**

Taxpayers must be familiar with the necessary forms, the technical language, and the bureaucratic system in order to maximize the benefits of the tax code and minimize their required

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(...continued)

*Project on Higher Education Costs, Pricing and Productivity*, sponsored by The Institute for Higher Education Policy, April 2001.

<sup>39</sup> National Center for Education Statistics (NCES), *Digest of Education Statistics*, <http://nces.ed.gov/programs/digest/index.asp>.

<sup>40</sup> Conklin, pp. 7-9.

<sup>41</sup> Conklin, pp. 8-9.

contributions, much like the financial aid process. Both the income tax filing and the financial aid application processes can be labor intensive, complicated and require hours of attention by households. For both the student financial aid process and the income tax filing process, participants must first learn how and where to obtain the correct publications and forms. They then must learn how to complete and file the appropriate materials with the relevant agencies. The alternative available to households is to pay someone to assist in the process. Middle- and upper-income taxpayers have both a higher degree of interest and potential gain from acquiring the necessary knowledge and experience, or even paying a professional to do so for them.

The record-keeping requirements for taxpayers increase significantly for those taxpayers claiming the education credits. Taxpayers must first determine what their education expenses were for the tax year, then subtract ineligible expenditures, and then reduce that amount by any tax-free assistance used to pay for those expenses. To be eligible to claim the Hope Credit, in addition to other requirements, taxpayers must determine that they have not claimed expenses for the same student for more than two years and that the student is still in his or her first two years of schooling. The administrative complexity of this process is compounded if the student has not attended college on a consistent basis and this or her status as a first or second year student has to be verified. For instance a student may attend college, take two classes a year for three years and still be considered by the institution to be in the first year of college.

After ascertaining expenses and confirming eligibility for the tax credits, taxpayers then have to complete the income tax forms with the addition of a separate form (Form 8863) as part of the process to claim the credits.

This process must be followed for each student eligible for a Hope Credit and for all of the education expenses used to determine the Lifetime Learning Credit.

## **Federal Government**

The cost to the federal government resulting from the introduction of education tax credits occurs in many different ways. Federal policymaking in higher education expanded to include additional executive branch agencies and legislative committees. The administration of the income tax system became more complex.

Since the education tax credits were enacted, the number of federal agencies involved in education policy increased. Prior to 1998, federal policy making for student aid was concentrated in four congressional committees and one executive branch agency. The tax credits caused an increase in congressional committee involvement and executive branch agency involvement. In Congress, non-tax education policymaking occurs in the House Education and Workforce Committee, the Senate Health, Education, Labor and Pensions Committee, the House Appropriations Committee and the Senate Appropriations Committee, while in the executive branch of government, the Department of Education carries out education policy. The introduction of education tax credits increased the roles of the Senate Finance Committee, the House Ways and Means Committee, and the Treasury Department.

The largest education grant program to serve middle-income students became the tax credit program, while the largest program to serve low-income students is the Pell Grant program. These programs are not linked in the same legislation nor are they acted upon and implemented by the same institutions. This complicates, rather than simplifies, financial aid systems and arguably hinders the integration of student aid policies.

The education tax credits increased the costs of administering the income tax system significantly as the complexity of tax returns increased. The number of forms to file with the return increased. The IRS now has to receive forms (1098T) from universities and other institutions of higher learning. These 1098T forms have to be matched up with individual income tax returns.

Additionally, the IRS may now duplicate some of the work that occurs in the Department of Education. The criterion for the education credits requires several academic criteria be satisfied. For the Hope Credit, these include the student's status: of being enrolled at least part-time, for at least one academic period beginning during the year; of pursuing an undergraduate degree or other recognized education credential; and of being in the first two years of post-secondary education. Typically, similar student status verification is required for participation in Title IV programs, which are administered by the Department of Education.

## **Federal Tax Policy**

As federal tax policies change, there are unintended consequences for education subsidies enacted through the tax code. Several significant tax cuts have been enacted since the introduction of the education credits in 1997, all of which have affected the pool of potential beneficiaries of the education tax credits. As mentioned previously, the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA, P.L. 107-16) reduced marginal income tax rates for individuals, causing lower tax burdens. In providing tax relief that was designed to stimulate the economy, an unintended consequence was to reduce the number of taxpayers eligible to claim education credits. As a result of the EGTRRA changes, households, more likely lower income households, experienced reductions in their tax liability. These reductions may have caused them to be unable to claim the education tax credits. This may be, at least in part, an explanation for the reduction in credits claimed, both the number and amount, after tax year 2001 that is shown in **Table 1**. Additionally, in response to continued sluggish economic performance, another tax stimulus plan, the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA; P.L. 108-27), was passed in May 2003. JGTRRA accelerated many of the tax provisions of EGTRRA, causing increased tax relief which was likely to further increase the number of taxpayers no longer able to participate in the education tax credit program. This is more likely to be true for lower income households than higher income households.

## **Higher Education Institutions**

Financial aid for college through the income tax system creates regulatory requirements for higher education institutions. Colleges and universities must supply the IRS with the names, addresses and social security numbers of all students enrolled at the institution. They must also indicate whether the student is enrolled full-time or not. At the time of the enactment of the credits, higher education institutions were required to report even more detailed information to the IRS, for example, the identity of the taxpayer claiming each student as a tax dependent. The National Association of College and University Business Officers estimated that compliance with this full set of requirements could have cost higher education institutions \$137 million in 1999.<sup>42</sup>

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<sup>42</sup> National Association of College and University Business Officers (NACUBO) *The Taxpayer Relief Reporting Task Force: Highlight of Activities*. Prepared for the 1998 National Association of Student Financial Aid Administrators Conference, Chicago, July 15-18, 1998, p.3.

In response to concerns about the substantial cost of compliance, the IRS limited the reporting requirements of higher education institutions from 1998 to 2001 and again in 2002.<sup>43</sup>

## **Legislative Activity**

### **Legislation Enacted in the 109<sup>th</sup> Congress**

While fewer proposals to change tax credits were made in the 109<sup>th</sup> Congress, the tax law was temporarily enhanced. The Gulf Opportunity Zone Act of 2005 (P.L. 109-135) temporarily increased the Hope Credit to 100% of the first \$2,000 in qualified tuition and related expenses and 50% of the next \$2,000 of qualified tuition and related expenses for a maximum credit of \$3,000 per student. The Lifetime Learning credit rate was increased from 20% to 40%. The definition of qualified expenses was expanded to mean qualified higher education expenses as defined under the rules relating to qualified tuition programs, including certain room and board expenses for at least half-time students.

These provisions were applicable to qualified students attending (i.e., enrolled and paying tuition at) eligible education institutions located in the Gulf Opportunity Zone (GO Zone). The GO Zone was defined as that portion of the Hurricane Katrina Disaster Area (in Mississippi, Louisiana, and Alabama) determined by the President to warrant individual or individual and public assistance from the Federal Government under the Robert T. Stafford Disaster Relief and Emergency Assistance Act by reason of Hurricane Katrina.

### **Proposals Made in the 110<sup>th</sup> Congress**

Early in 2007, legislative attention has begun to focus on proposals to merge the Hope Credit and the Lifetime Learning Credit. For example, S. 97 and S. 614 propose to replace the two credits with one credit.<sup>44</sup> If the credits were merged, proposals suggest that the rules defining eligible students would be consistent with the Hope Credit, which defines eligible students as those students who are enrolled at least half-time in a program leading to a degree, certificate, or other recognized educational credential and have not yet completed the first two years of postsecondary education (thus, eligible students are generally freshmen and sophomores). The Lifetime Learning Credit does not make these requirements.

### **Proposals Made in the 108<sup>th</sup> Congress**

In the 108<sup>th</sup> Congress, many bills were introduced to modify and/or expand the education tax credits. The legislative proposals included making the education tax credits refundable, allowing students to claim expenses that have been paid using Pell Grant funds for the education tax credits, and expanding the education tax credits to include the total cost of higher education, rather than only qualified tuition and fee expenses. Each of these possibilities would have

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<sup>43</sup> A detailed synopsis of the changes is provided in CRS Report RL31129, *Higher Education Tax Credits and Deduction: An Overview of the Benefits and Their Relationship to Traditional Student Aid*, by Linda Levine and Charmaine Mercer.

<sup>44</sup> S. 614 also proposes to repeal the higher education deduction.



expanded either the eligible population for the tax credits or the amount of education credits that could be claimed. While this would have increased tax revenue losses by the federal government, it may also have increased social welfare by subsidizing increases in educational investment that would not occur without the government subsidy. There are no available cost estimates of the revenue loss.

## **Discussion of Certain Proposals**

### **Refundable Tax Credits**

Education credits provide no benefit to lower income individuals who have no tax liability. Tax credits offset tax liability directly and have become an increasingly popular method of providing tax relief and social benefits in general. If education tax credits were made refundable, taxpayers could receive a payment from the government if the credit exceeded tax liability.

In the 109<sup>th</sup> Congress, S. 3528 proposed making a portion of the Lifetime Learning Credit refundable and would have directed the Secretary of the Treasury to establish a program for making advance payments of such credits to eligible institutions on behalf of certified individuals. This kind of proposal would have provided cash assistance at the time of enrollment (presumably September) rather than after filing the tax return (presumably April or later).

Currently, the only refundable tax credits are the earned income credit and the child tax credit (only for families with three or more children in some circumstances). If Congress chose to make education tax credits refundable, more lower income households would be able to claim the credits and participation rates in higher education could increase. Refundable education tax credits would also insulate potential beneficiaries of the credits from the effects of other tax changes. This, in turn would increase the budgetary cost of the subsidy.

Refundable education tax credits would be very likely to satisfy the economic criteria discussed previously in this report. If refundable tax credits increased enrollment in higher education, they likely would increase efficiency and improve social welfare. The increased administration required to manage the refundable credits would add to the costs and complexity of the program, but those costs would be offset by the increase in social welfare.

### **Tax Credits Applicable to Total Cost of Education**

In 2003-2004, the average four-year public institution's tuition and fees were \$4,694 and the total cost of attendance averaged in excess of \$10,000. In contrast, two-year colleges averaged \$1,905 for tuition and fees.<sup>45</sup> This suggests that many students attending two-year institutions paid less than the \$2,000 in tuition and fees needed to qualify for the maximum tax credit even though their total expense payment would indeed qualify them to receive the maximum allowable tax credit. Allowing the tax credits to be applicable for all higher education expenses would expand the benefits to students who might increase investment in education and, by doing so, improve social

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<sup>45</sup> The College Board, *Trends in College Pricing 2003* (New York: College Entrance Examination Board, 2003) p. 3.

welfare. The expansion of qualified expenses for this program might allow for a more equitable distribution among taxpayers who participate in the program.

However, expanding eligible expenses to include living expenses would be complex to administer for students who do not purchase school-provided room and board. Some students might reside at home and incur implicit costs of room and board, which would not be eligible to be claimed for the education tax credits. Other students may incur an explicit room and board cost, in which case taxpayers would be responsible for providing receipts to document the expenses. This could increase the possibility of fraudulent claims because it would be difficult for the IRS to verify the expenses. The increase in administrative costs associated with this proposal would likely be marginal, though the information that higher education institutions would have to report would be increased.

## **Double Benefit with Federal Grants**

As mentioned previously in this report, current law requires that expenses paid using Pell Grant funds cannot be used in claiming the education credits. In past congresses, legislation has been introduced that would exempt federal grants from reducing expenses that could be claimed for the education credits. In the 108<sup>th</sup> Congress, H.R. 442 and H.R. 3251 proposed to exempt Pell Grants and supplemental educational opportunity grants from reducing expenses claimed for the Hope Credit. Similar proposals were included in H.R. 625, H.R. 1380, and S. 1697 in the 109<sup>th</sup> Congress.

This kind of change to the current program could create a double subsidy. As an example, a student incurring \$3,000 in total tuition and fees could receive a Pell Grant in the amount of \$3,000 to pay these expenses. The student could then claim the Hope Credit, assuming the student met all other eligibility criteria, in the amount of \$1,500 (100% of the first \$1,000 plus 50% of the second \$1,000). The student would have received both a direct subsidy, the grant, and an indirect subsidy, the credit, for the same expenses. This “double” subsidy benefit would not be true for students who incurred larger amounts of tuition and fees expense.

Students with the least income, the largest Pell Grants, and the lowest price of attendance benefit the least from tax credits as they currently exist. This proposal would allow lower income students to benefit from a double subsidy only if they had sufficient tax liability against which to apply the education credits. For those students who were able to participate, their enrollment level, at the margin, may increase if students increased their education spending in response to the proposed benefit. The proposal might allow students at two-year colleges to enroll in programs at four-year institutions or it might increase the number of credit hours per semester the student is able to take.

Students with higher incomes, who do not receive Pell Grants, would not benefit from this opportunity, though they may already have sufficient income tax liability and higher education expenses to benefit from the tax credits.

The program would not add significantly to the complexity of administering the program. The proposal would require that universities change the information that is reported on the Form 1098-T that is sent to households. Taxpayers would incur a time cost to learn about the program change but the administrative costs to file tax returns would not likely be increased. Some would view this approach as a potential windfall to students, particularly if it did not lead to the increased educational outcome for which it was intended.

## **Enhance the Hope and Lifetime Learning Tax Credits**

In the 108<sup>th</sup> Congress several pieces of legislation proposed the enhancement of one or both of the tax credits in a variety of ways. H.R. 3251 and S. 2087 proposed to increase the Hope Credit and to repeal the Lifetime Learning Credit. The proposed increase of \$1,000 would have increased the maximum allowable Hope Credit amount to \$2,500. S. 174 proposed to increase the amount of the Lifetime Learning Credit from 20% of \$10,000 in tuition and fees to 25% of \$12,000 in tuition and fees (thus increasing the maximum possible credit amount from \$2,000 to \$3,000). This bill would have also increased the annual income limits for both credits to \$55,000 for single taxpayers (up from \$51,000) and \$110,000 for married taxpayers filing jointly (up from \$103,000). S. 2360 proposed to increase the Lifetime Learning Credit from 20% to 50%, but would reduce the eligible expenses from \$10,000 to \$4,000. S. 1793 proposed to make the Hope Credit available for all four years of college, as opposed to the current provisions applying only to the first two years.

In each of these cases, the eligible population of participants would have increased. The modified tax credits would have contributed to making higher education affordable, either for more individuals, or at greater amounts.

The expansion proposals would not have changed the complexity of administering the current program, though there would be costs incurred to publicize and learn about the changes in the program. The expansion proposals were unlikely to improve the accessibility criteria of new students enrolling in college.

## **Advance Loan Against the Tax Credits**

As mentioned, the tax credit benefits are typically received by taxpayers after the income tax filing season in the spring of each year. While educational expenditures are made several months earlier, presumably in the early or late fall of the prior year. Proposals were made to allow taxpayers to apply for, and receive, a short-term loan using the anticipated tax credit benefit as collateral, which would allow the proceeds to be used at the time tuition payments are required. In the 108<sup>th</sup> Congress, H.R. 2150 proposed to allow taxpayers to obtain short-term student loans by using the future refund of the Hope Credit and/or the Lifetime Learning Credit as collateral for the loans. Similarly, in the 109<sup>th</sup> Congress, S. 3528 proposed such a process.

This type of proposal would have added complexity and cost to administering the education tax credit program and essentially created a new financial aid program to administer for higher education institutions and/or financial institutions, who would, presumably, be making the loans. The proposal would have increased enrollment if the timing of the receipt of the tax benefit were a significant factor. As mentioned previously, taxpayers may have already adjusted their behavior in response to the benefit such that this timing factor is not a variable in the enrollment choice. This kind of proposal also would have created potential difficulty if the taxpayer were unable to claim the tax credits at the end of the year and thus, might not have had the proceeds to pay back the loan.

If Congress intends that education tax credits provide relief for middle income households and the higher education costs they incur, the tax credits may be ideal. In this case, enhancing or altering the credits may improve the relief they provide. If, on the other hand, Congress intends to increase access to higher education, education tax credits are not proven to be effective at

increasing enrollment. An alternative to better achieve this objective could be to eliminate the tax credits and allocate additional funding to alternative education funding programs, like those authorized by the Higher Education Act, which may be more successful at increasing enrollment and access to college.

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