

Education tax credits, higher education, federal

Dennis Zimmerman

Congressional Research Service, Library of Congress

Tax credits created in 1997 for postsecondary education.

The Taxpayer Relief Act of 1997 created two tax credits for postsecondary education expenses. One, the Hope Scholarship Credit, can be claimed for each student in the family (including the taxpayer, the spouse, or their dependents) for two taxable years for expenses incurred attending a qualified education program. Each student's credit is equal to 100 percent of the first \$1,000 of qualified tuition and fees and 50 percent of the next \$1,000. Tuition and fees financed with scholarships, veterans' education assistance, and other income not included in gross income for tax purposes do not qualify (with the exception of gifts and inheritances).

The other, the Lifetime Learning Credit, provides a 20 percent credit for the first \$5,000 of qualified tuition and fees (the first \$10,000 after 2002) that taxpayers pay for themselves, their spouse, or their dependents. The credit is available for any number of years and for any level of postsecondary education.

Both credits are phased out for single taxpayers with a modified adjusted gross income over \$40,000 (\$80,000 for joint-return taxpayers). Neither credit is refundable, and the sum of these and other credits is limited to the excess of the taxpayer's regular income tax liability over the minimum tax.

Rationales for the credits

Federal subsidy of higher education has three potential economic justifications: a capital market failure; external benefits; and nonneutral federal income tax treatment of physical versus human capital. Subsidies that correct these problems are said to provide taxpayers with "social benefits."

Capital market failure

Many students find themselves unable to finance their postsecondary education from earnings and personal or family savings. Student mobility and a lack of property to pledge as loan collateral require that commercial lenders charge high interest rates on loans for postsecondary education to reflect their high risk of default. As a result, students often find themselves unable to afford postsecondary loans from the financial sector. By definition, this financial constraint bears more heavily on lower-income

groups than on higher-income groups and leads to inequality of opportunity. It is also inefficient because these students, on average, might be expected to earn a rate of return on postsecondary education loans that is higher than the rate of return earned on the alternative loans made by the financial sector.

This "failure" of the capital market is attributable to the legal restriction against pledging an individual's future labor supply as loan collateral—that is, against indentured servitude. Since allowing indentured servitude is something modern society rejects, the federal government pursues an alternative strategy to correct this market failure—it provides a guarantee to absorb most of the financial sector's default risk associated with postsecondary loans to students. This financial support is provided through the Federal Family Education Loan Program and the Direct Loan Program. These programs guaranteed approximately \$34 billion of loans for postsecondary education in fiscal year 1997. Outlays in 1997 for the default costs of guaranteed loans made in prior years totaled almost \$3 billion. This guarantee is an entitlement, and it equalizes the financing cost for some portion of most students' education investment. When it is combined with Pell grant programs for lower-income students, it appears that at least some portion of the capital market failure has been corrected and equality of opportunity has been improved.

External benefits

Some benefits from postsecondary education may accrue not to the individual being educated, but rather to the members of society at large. These external benefits are not valued by individuals, causing them to invest less than is optimal for society (even assuming no capital market imperfections). External benefits are variously described as taking the form of better citizenship and increased productivity generated by knowledge.

Public subsidies to postsecondary education that are at least partially motivated by these external benefits, as opposed to the capital market failure addressed by the federal student loan and Pell Grant programs, are considerable. The state-local sector is by far the major contributor here, spending \$50 billion on public (and some private) higher education systems in 1993–94 that provided relatively uniform subsidies to all student participants. The federal government provided \$2.7 billion of interest subsidies through the student loan program in 1997 over and above the value of the guarantee being provided, several billion in work-study grants, and a variety of other assistance programs. Thus, federal and state-local subsidies to higher education that can be said to be designed to increase external benefits total tens of billions of dollars per year.

Nonneutral taxation of human capital

A third potential justification sometimes advanced for providing subsidies to human capital investment is the possibility that investment in human capital is more heavily taxed than is investment in physical capital. Some believe this to be true because individuals are not allowed to recover education expenses such as tuition costs over their lifetime. But forgone earnings, scholarships, and government grants represent a larger share of an individual's human capital investment than do most students' direct outlays such as tuition, and these investments are effectively deducted when incurred because they are never included in income in the first place.

The effective marginal tax rate on physical capital investment is estimated to be about 33 percent. Using reasonable assumptions about marginal tax rates for an individual as a student and as a recipient of his education investment returns, the timing of these returns over a 40-year period, and the share of investment expensed, the tax on human capital investment is 25 percent, actually lower than the tax on physical capital.

Summary

The return from investment in human capital receives more favorable treatment from the federal income tax than does the return from investment in physical capital. Thus, nonneutral income taxation cannot be used to justify subsidy of postsecondary education. The existence of a capital market failure and the presence of external benefits from higher education investments do provide justifications for public subsidy of higher education. However, the federal student loan program and Pell grants have partially corrected the capital market failure, and \$50 to \$60 billion of annual state-local and federal subsidies have probably gone a long way toward compensating for the existence of external benefits. At a minimum, additional subsidies such as the tax credit should be carefully targeted to those students still suffering from lack of access to capital or otherwise underinvesting in their own education.

Effect of tax credit

Potential students induced to enroll in higher education by these credits cause investment in education

to increase. But the overall effectiveness of the tax credit depends upon whether the cost of the marginal investment dollar of those already investing in higher education is reduced. For those whose tuition and fees exceed qualified tuition and fees, the credit applies to the last dollar of tuition and fees and the student's price is reduced by 50 percent with the Hope credit and by 20 percent with the Lifetime Learning Credit. The portion of the credit (and the federal revenue loss) that appears either as an increase in the quantity of education or as higher tuition depends upon the structure of the demand and supply schedules for higher education.

It is clear from the structure of these tax credits that tuition and fee payments will exceed qualified tuition and fees for a large number of students who are eligible for these credits. These students experience an income effect and a subsidy to participation but no marginal price effect. Moreover, because the subsidy is channeled through the tax system, students and families with lower income and little or no tax liability receive little or no benefit, even though these students are likely to have a larger participation response. The middle- and upper-middle-class students who receive tax benefits are likely to be relatively unresponsive to price changes, particularly with respect to participation. Thus, many of these families enjoy a windfall gain and the federal taxpayer gets no offsetting social benefits in the form of an increased quantity of investment.

Additional readings

Gravelle, Jane, and Dennis Zimmerman. *Tax Subsidies for Higher Education: An Analysis of the Administration's Proposal*. Congressional Research Service Report 97-581 E, May 30, 1997.

Kane, Thomas J. "Beyond Tax Relief: Long-Term Challenges in Financing Higher Education." *National Tax Journal* (June 1997): 335-49.

McPherson, Michael, and Morton Owen Schapiro. *Keeping College Affordable*. Washington, D.C.: The Brookings Institution, 1991.

Cross references: [child care expenses](#); [the child care credit](#); [education financing, state and local](#); [income tax, federal](#).