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In Defense of College Savings Plans: Using 529 Plans to Increase the Impact of Direct Federal Grants for Higher Education to Low- and Moderate-Income Students

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IN DEFENSE OF COLLEGE SAVINGS PLANS: USING 529 PLANS TO INCREASE THE IMPACT OF DIRECT FEDERAL GRANTS FOR HIGHER EDUCATION TO LOW- AND MODERATE-INCOME STUDENTS

by

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INTRODUCTION

A high school graduate with no college education can expect to earn on average $638 per week. Those holding a bachelor's degree earn almost twice as much at an average of $1,121 per week.[1] This will amount to almost $1 million more in earnings over a lifetime. These abstract numbers, however, do not tell the entire story. Consider that at $638 a week, a person with only a high school diploma will earn on average $33,176 per year. This falls below the average annual family budget by almost $7,000 per year when including only necessities.[2] In fact, this annual salary is lower than average family budgets in seven of the eight cities sampled.[3]

In addition to these individual monetary benefits, higher education also has significant non-monetary benefits as well. College graduates overwhelming report being happier and healthier than those who only attended high school, and most often reported being in "excellent" or "very good health."[4] This disparity increased with age — for those over the age of 65, 70 percent of college graduates identified themselves as being in good health compared to "only 45 [percent] of high school graduates."[5]

These benefits can be seen in society as a whole as well. Some of the societal benefits of increased enrollment in higher education include reductions in unemployment, poverty, dependence on social welfare programs, and crime. College graduates also have healthier lifestyles, more positive perceptions of personal health, and lower smoking rates than non-graduates.[6] Completing post-secondary education is also correlated with higher rates of civic participation, including volunteer work, blood donation,

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1. U.S. Bureau of Labor Statistics, Usual Weekly Earnings of Wage and Salary Workers News Release (Jan. 21, 2010), http://www.bls.gov/news.release/archives/wkyeng_01212010.htm. This difference means that a typical bachelor's degree holder will earn approximately 61 percent more over his or her working life than someone holding only a high school diploma. See generally Sandy Baum & Jennifer Ma, College Board, Education Pays: The Benefits of Higher Education for Individuals and Society, 11 (2007), http://www.collegeboard.com/prod_downloads/about/news_info/cbsenior/yr2007/ed-pays-2007.pdf.

2. Sylvia A. Allegretto, Economic Policy Institute, Basic Family Budgets: Working Families' Incomes Often Fail to Meet Living Expenses Around the U.S. (Aug. 30, 2005), available at http://www.epi.org/publications/entry/bp165/. "Necessities" in the study included food, housing, transportation, taxes, child care, and healthcare.

3. Id. The only city to have a family budget below this amount was Casper, Wyoming, the most rural city in the study.

4. Inside Higher Ed, The (Non-Monetary) Value of a College Degree (Sept. 13, 2007), http://www.insidehighered.com/news/2007/09/13/collegeboard (summarizing a survey conducted by the National Center for Health Statistics).

5. Id.

6. Baum & Ma, supra note 1, at 2.

voting, and openness to the opinions of others. There is even evidence that the earnings of workers with lower education levels are positively affected by increased numbers of college graduates in the workforce.[7]

Recognizing the numerous positive externalities and internalities associated with higher education, the federal government has chosen to heavily subsidize this area in order to increase enrollment. The government currently spends roughly $180 billion dollars per year subsidizing higher education costs through a variety of educational incentives ranging from direct grants to deductions for interest paid on student loans.[8] Despite this tremendous effort, there has been little increased enrollment in higher education in recent years.

The federal government began financing higher education in the 1960s.[9] This support came first in the provision of direct financial aid, primarily targeted at lower-income students and families. More recently, the government has expanded its role by delving into the world of tax incentives. While some of these incentives may still reach those in lower- and middle-income households (specifically the Hope and Lifetime Learning credits), they also include broader tax incentives and advantages that reach even those in the highest income ranges. None of these incentives can reach the low-income taxpayers who are generally in the zero bracket, and thus are not influenced by deductions, exclusions, and non-refundable credits, which are the forms current tax incentives take.[10]

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7. Id.

8. See College Board, Trends in Student Aid 2009, at 6 (2009), http://inpathways.net/2009_Trends_Student_Aid.pdf. Further, federal tax expenditures are currently estimated at $35 billion annually. Staff of the Joint Comm. on Tax'n, Estimates of Federal Tax Expenditures for Fiscal Years 2007-2011, at 31 tbl.1 (Comm. Print 2007), available at http://www.jct.gov/s-3-07.pdf. This estimate includes tuition tax credits, the deductions for tuition and interest on education loans, and education savings accounts. The Stafford Loan program, including subsidized, unsubsidized, and consolidated loans, currently costs roughly $7.05 billion annually. The Pell Grant Program is funded with $18.2 billion annually. See Memorandum from Deborah Kalcevic & Justin Humphrey on CBO March 2007 Baseline Projections for the Student Loan and Grant Programs (Mar. 2, 2007), available at http://www.cbo.gov/budget/ factsheets/2007b/studentloans.pdf; see also Sima J. Gandhi, Viewing Education Loans Through a Myopic Lens 11 (Brookings Inst., The Hamilton Project Discussion Paper 2008-05, 2008), available at http://ssrn.com/abstract=1607774.

9. See Higher Education Act of 1965, Pub. L. No. 89-329, § 401, 79 Stat. 1219, 1232 (1965).

10. As part of the American Recovery and Reinvestment Act of 2009, the American Opportunity Tax Credit replaced and revised the Hope Credit for tax years 2009 and 2010. This credit is partially refundable (40 percent of the maximum of $2,500 credit, or $1,000) and thus can reach those with little or no tax liability.

This paper will focus on one such tax incentive — the tax preferred college savings plan, or 529 plan — and its current and potential impact on higher-education participation rates among low- and moderate-income students.

This article will synthesize and describe the existing literature attempting to explain the low participation in higher education among low-to-moderate-income students, despite economic models that indicate that participation should be equivalent across income levels. Building on the recommendations stemming from the literature, which suggests that grants are the best way to increase those participations rates, I will argue that 529 college savings plans can, with important changes from their current structure, be a similar but more powerful tool than direct grants. In conclusion, the paper will attempt to illustrate one possible revenue-neutral plan for the federal government making use of 529 plans. The example will show that a 529 plan with an initial contribution from the government offered to every low- and moderate-income child, and matching grants annually, can increase enrollment among this group of students by almost five percentage points. This increase would far outpace any seen over the previous two decades, and yet is obtained using a very small portion of the total federal financial aid program.

Such an increase would have positive impacts on social equality and mobility and offer substantial monetary benefits to those affected. The increased enrollment would also have widespread societal benefits like raising all wages, reducing healthcare costs, and increasing volunteerism and civic participation.[11]

This article offers a revenue-neutral proposal for amending 529 plans simply to show the additional impact that the same amount of money could have if targeted differently. This paper argues, however, that these 529 plans are the most efficient way to offer financial aid incentives because they lead to the largest effective grant. I would therefore advocate for an increased amount of federal funding to be directed at these plans, either as increased spending on educational incentives or redirected from other programs. However, it is beyond the scope of this paper to analyze all of the financial aid programs and whether or how much of that funding would be better allocated to 529 plans.[12]

President Obama has proposed making this tax credit permanent but as of this writing it applies only for these two years.

11. Baum & Ma, supra note 1, at 1-2.

12. It would be too simplistic to say that all federal funding for education could or should be distributed through these 529 plans. It may be that no amount of incentive can entice those of very low-income to save for education or otherwise. After all, it is impossible to save money that you do not have. The best incentive to enroll in education for these households would therefore be an upfront grant at the time of enrollment, like the Pell Grant. It would therefore not be wise to redirect all

Part I will offer a brief description of the federal financial aid scheme as it exists today, including an overview of 529 plans as currently structured. Part II explains why grants are the most effective form of financial aid for increasing enrollment in higher education, and how 529 plans operate in largely the same manner. Part III offers a number of proposals for maximizing the impact that 529 plans can have on higher education attainment. Part IV provides an illustration of how a 529 plan might be structured around these proposals and demonstrates the impact that such a remodeled 529 plan could have on enrollment rates.

I. FEDERAL FINANCIAL AID SCHEME

A. Background

The federal financial aid scheme was adopted in response to the widely held beliefs that (1) the high cost of higher education was acting as a barrier to entry, (2) higher education produces a number of positive externalities, and (3) a failure to equalize opportunity perpetuates income inequality because of the associated market rewards.[13] All three of these beliefs led to the aim of decreasing the cost in order to increase enrollment.

The initial push of federal financial aid focused on direct aid targeted at lower-income students under the rationale that moderate- and high-income students could afford to attend college without help from the federal government. This remained true for roughly twenty years through the Pell Grant and Stafford Loans systems, both of which are need-based and primarily awarded to students from families with income below $40,000.[14] The formula for determining eligibility for these types of aid is highly progressive.[15]

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of that type of funding into a 529 matching program. A similar argument could be made for student loans; one aspect of Human Capital Theory, discussed infra, is that there is no liquidity problem for obtaining college education. This is largely true because of the availability of student loans. Eliminating government support of student loans could therefore change that entire calculus. Again, in-depth analysis into such issues is beyond the scope of this paper. Suffice it to say that there are certainly existing government expenditures that would be more effective if spent on matching grant 529 plans.

13. See Deborah H. Schenk & Andrew L. Grossman, Failure of Tax Incentives for Education, 61 Tax L. Rev. 295, 296-97 (2008).

14. Susan Dynarski, Hope for Whom? Financial Aid for the Middle Class and its Impact on College Attendance 1 (Nat'l Bureau of Econ. Research, Working Paper No. 7756), available at http://www.nber.org/papers/w7756.pdf.

15. See id. Progressive as used here indicates that these types of aid are given more heavily to students of lower income and less to students of relatively moderate income, and generally not at all to students of high-income households.

Over the past twenty years, however, there has been a substantial increase in the cost of both public and private higher education. This rise in price has outpaced increases in both inflation and family income and has priced many more families out of higher education obtainment.[16] In inflation-adjusted dollars, the price of a four-year private education rose by $5,500 over the past decade, while four-year public universities have increased by $2,200.[17]

To counter this trend, many of the new federal financial aid programs have been targeted less toward lower-income students and instead more toward moderate-to-high-income families. Many of the incentives directed toward these classes of students are tax incentives such as the deduction for interest on student loans, tax preferred savings vehicles, and more recently, higher education tax credits.

At the same time, those programs targeted at lower-income families have lost much of their power. The maximum Pell Grant, when established in the 1970s, covered approximately 77 percent of the cost of a four-year public education for those who received it. It now covers only 30 percent of that cost.[18] These changes, combined with the fact that low-to-moderate-income students are much more price-sensitive to college tuition, means that there are far less of these students obtaining higher education than high-

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This thus results in a redistribution of wealth from higher-income students and households to lower-income students and households. A progressive tax system is one where average rates go up as income increases, so that those with a higher income are paying a larger percentage of that income towards taxes. This is contrasted with a proportional system where the tax rate remains constant for every level of income. For example, in a proportional system a taxpayer with $50,000 of income would pay $5,000 (10 percent) of taxes and someone with income of $100,000 would pay $10,000 (10 percent still) of taxes. In contrast, under a progressive system, someone with income of $50,000 might pay $5,000 (10 percent) of taxes while a taxpayer with income of $100,000 might pay $20,000 (20 percent) of taxes. Because the many complex features of the tax code that affect the effective tax rate that people pay, some scholars have advocated thinking of a progressive tax system more simply as one where after-tax income is more equally distributed than before-tax income. See, e.g., Thomas Piketty & Emmanuel Saez, How Progressive is the U.S. Federal Tax System? A Historical and International Perspective, 21 J. Econ. Persp. 3, 5 (2007).

16. See College Board, Trends in College Pricing 2006, at 7 (2006), http://www.collegeboard.com/prod_downloads/press/cost06/trends_college_pricing_06.pdf

17. College Board, Trends in College Pricing 2008, at 9 (2008), http://professionals.collegeboard.com/profdownload/trends-in-college-pricing-2008.pdf.

18. Francine Knowles, Durbin, Roosevelt Students Tout Hike in Pell Grants, Chicago Sun-Times (Mar. 30, 2010), http://www.suntimes.com/business/2129674,CST-NWS-Pell30.article.

income students. The rate of enrollment among those from households with income below $18,000 per year has never been above 30 percent, while the rate for students from households with annual income of $60,000 (still considered moderate income) is consistently above 50 percent.[19] Further, the percentage of high school graduates enrolling in college in the lowest quintile stayed roughly the same from the 70s to the 90s, at about 43 percent. At the same time, however, the percent of those in the highest quintile rose by approximately ten percentage points, from about 70 percent to about 80 percent.[20]

A number of commentators have called these recent tax incentives for higher education complete failures — they cost the federal government billions of dollars annually but incentivize essentially no one to obtain a higher education.[21] In fact, after these tax incentives took effect in 1998, there was no increase in the percentage of high school graduates enrolled in post-secondary education (Table 1).

TABLE 1
POPULATION AGE 18-24 ENROLLED IN POST-SECONDARY SCHOOLS [22]

Year	Percent of High School Graduates
1992	41.9
1993	41.4
1994	42.4
1995	42.4
1996	43.5
1997	45.2
1998	45.3
1999	43.8
2000	43.3
2001	44.1
2002	45.0

This is true not only of the population as a whole, but for lower- and middle-income students as well (Table 2). Enrollment rates for these students showed fluctuations over the time period but no clear increase over previous rates of enrollment (Table 2).

19. See infra Table 2.

20. Charles F. Manski, Income and Higher Education, 14 Focus 14, 17 (1992), http://www.irp.wisc.edu/publications /focus/pdfs/foc143c.pdf.

21. See Schenk & Grossman, supra note 13, at 298-99.

22. U.S. Census Bureau, Current Population Survey tbl.A-5, The Population 14 to 24 Years Old by High School Graduate Status, College Enrollment, Attainment, Sex, Race, and Hispanic Origin: October 1967 to 2002 (Jan. 4, 2004), available at http://www.census.gov/population/ socdemo/school/tabA-5.pdf.

TABLE 2
PERCENTAGE OF POPULATION, AGE 18-24,
ENROLLED IN COLLEGE BY FAMILY INCOME[23]

Year/Income	***$18,000***	***$35,000***	***$60,000***
1992	29.4	38.2	52.6
1997	26.1	40.1	58.4
2002	29.2	32.8	52.6
2005	29.9	40.2	53.8

The problem is that these tax incentives are too opaque and targeted at the wrong people. One incentive that has been particularly criticized is the 529 college savings plan. These plans are: regressive, in that the benefit is tied to the taxpayer's tax bracket; expensive, costing the federal government approximately $1 billion annually; and used almost entirely by high-income households.[24] Since high-income students are presumed to need no incentive to obtain higher education, many believe that these plans are an entirely misdirected use of federal funds.[25] Despite the fact that many believe that high-income families need no incentive to save money or to enroll in higher education, almost 60 percent of the funds in 529 accounts are held by those in the top 5 percent of household income.[26] In contrast, virtually none of the balance of these accounts is held by those in the first quartile.[27]

23. Data from 1992-2002 from Schenk & Grossman, supra note 13, at 362, slightly modified to reflect changes in reporting in the 2005 reported data. 2005 data compiled from U.S. Census Bureau, Current Population Survey tbl.14, Enrollment Status of Dependent Primary Family Members 18 to 24 Years Old, by Family Income, Level of Enrollment, Attendance Status, Type of School, Sex, Race, and Hispanic Origin: October 2005, available at http://www.census.gov/population/www/socdemo/school/cps2005.html. The income listed on the table represents the median of the range used by the Census Bureau.

24. Staff of the Joint Comm. on Tax'n, supra note 8. One billion dollars is the estimate provided for 2010.

25. See William G. Bowen, Martin A. Kurzweil & Eugene M. Tobin, Equity and Excellence in American Higher Education 97 (2005) ("Children from families [in the highest income brackets] almost surely would go to college in any case."); see also Schenk & Grossman, supra note 13, at 351 ("Higher income taxpayers, []have a strong propensity to save, especially for college, and need no incentive to do so . . . .").

26. See Schenk & Grossman, supra note 13, at 351; infra Figure 1.

27. See infra Figure 1.

B. Current 529 Plans

1. Structure

Qualified tuition plans, commonly referred to as "529 plans" for the code section which authorizes them, were first introduced into the tax code in 1996.[28] Section 529 allows all fifty states and the District of Columbia to administer such plans and provides rules that the plans must follow in order to receive favorable tax treatment.[29] The plans are then administered by the states. Forty-three of the states allow investment by out-of-state residents while five make them available only for in-state residents.[30] Most states contract out management and record-keeping functions, and all states contract out investment services to third-party financial services companies.[31] These plans can, but do not always, come with fees attached for enrollment, maintenance, and administration.[32] The state tax benefits can vary widely but are generally more favorable than federal tax treatment. Most are *both* deductible when money is contributed *and* excludable upon withdrawal under state income taxes.[33]

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28. IRC § 529. There are actually two different types of plan authorized under § 529 of the code: college savings plans and prepaid tuition plans. In 2008, 88 percent of assets were in college savings plans with only 12 percent in prepaid tuition plans. There has been a steady shift away from prepaid tuition plans (which pre-date college savings plans) to college savings plans. While the tax treatment of the two types of plans are highly similar, this paper will only specifically discuss college savings plan and this is what is meant by 529 plans.

29. The only rule of real consequence here is that each plan must have one and only one "designated beneficiary" at all times.

30. The plans are available in the District of Columbia and every state except Wyoming. In addition, Tennessee and Washington offer only prepaid tuition plans and not savings plans. Dep't of Treas., An Analysis of Section 529 College Savings and Prepaid Tuition Plans: A Report Prepared by the Department of Treasury for the White House Task Force on Middle Class Working Families 1 (Sept. 9, 2009), http://www.treasury.gov/resource-center/economic-policy/Documents/09092009TreasuryReportSection529.pdf

31. Id. at 2.

32. Plans with no fees attached are offered in Arizona, California, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Oklahoma, Tennessee, and Vermont. See generally Your Guide to Saving for College, http://www.savingforcollege.com (last visited Jan. 26, 2011).

33. A total of thirty-two states offer a full or partial income tax deduction for contributions to the state's 529 plan or have no income tax. Of those, five states offer a full income tax deduction, twenty states a partial income tax deduction, and seven states have no income tax. Those states that offer a partial income tax deduction often allow a carry forward of excess contributions for up to five years. See Saving For College, Compare 529 Plans, Compare by Features, http://www.savingforcollege.com/compare_529_plans/index.php?plan_question_ids[

Investors in these accounts cannot fully control how the funds are invested, but generally are able to choose between several options. This choice usually allows variations based on the time until college enrollment for the beneficiary and personal preferences for risk.[34] Some states offer investment options that are guaranteed to grow with the rate of tuition for in-state colleges.[35]

The primary federal tax benefit stems from the exclusion from federal income tax of withdrawals from a qualified account used for qualified higher education expenses. The earnings accrued on the accounts are also tax-free. Contributions are made from after-tax income for federal tax purposes.[36] 529 plans grew significantly after 2001 when they were revised to make distributions tax-free at a federal level as long as used for qualified expenses.[37] Prior to that time, the benefit of such plans was that contributions could grow tax-deferred; the earnings on such accounts were only taxable once distributed. After the benefit changed from deferral to exemption, the assets in 529 plans grew from $14 billion to $130 billion within six years.[38]

Section 529 plans also allow for beneficial gift tax treatment.[39] Up to five years of tax-exempt giving can be compressed into a one-year period. As of 2010, the § 2503(h) gift tax exclusion was $13,000 annually.[40] Based on this amount, a donor could deposit up to $65,000 into the account in one year without being subject to the gift tax. The donor could then not take advantage of the annual exclusion as to that beneficiary for the next four years, but this allows a larger lump sum and therefore a larger accumulation of interest over that time.

]=437&plan_question_ids[]=85&mode=Compare&page=compare_plan_questions&plan_type_id=; http://www.finaid.org/savings/529plans.phtml (last visited Jan. 26, 2011).

34. Schenk & Grossman, supra note 13, at 303-04.

35. See, e.g., Montana Family Education Savings Program, CollegeSure® CD, http://montana.collegesavings.com/Montana/collegesure_cd.asp (last visited Jan. 26, 2011).

36. See generally What is a 529 Plan?, http://savingforcollege.com/intro_to_529s/what-is-a-529-plan.php (last visited Jan. 26, 2011).

37. IRC § 529(e)(3)(B); Economic Growth and Tax Relief Reconciliation Act, Pub. L. No. 107-16, 115 Stat. 38, (2001); see also Christopher E. Houston, Section 529 Plans: Opportunities and Uncertainties, 2002 A.L.I.-A.B.A. Sophisticated Est. Plan. Techs. 63, 65.

38. Dep't of Treas., Analysis of Section 529, supra note 30, at 3. For comparison, there are an estimated $2 trillion in assets in 401(k) accounts.

39. IRC § 529(c)(2)(B). This result is achieved through an election that allows the taxpayer to treat a contribution as if it was made over a five-year period rather than in one year.

40. Rev. Proc. 2009-50, 2009-45 I.R.B. 617.

2. Previous Evaluations of Effectiveness

529 plans have been largely criticized as being both ineffective and highly regressive. Because the primary benefit from 529 plans is the exclusion from income, the benefit from these plans is tied to the taxpayer's tax bracket and is thus worth more for high-income (high-bracket) taxpayers. The regressivity of the program is compounded by the fact that high-income taxpayers generally are willing and able save more than middle- and lower-income taxpayers. The plans can also offer no (federal) incentive to the significant number of taxpayers in the zero bracket who can make no use of an exclusion (or deduction).[41]

There are a number of additional elements of 529 plans that make them particularly attractive for high-income taxpayers. First, the limits on such plans are quite high, generally allowing enough investment to cover four years of private higher education plus additional years of graduate study, varying by state. Further, while each beneficiary can have only one account in his or her name in each state, there is no limit to the number of total accounts in each beneficiary's name. Therefore a family could potentially hold one account in each state open to non-residents for each beneficiary up to the limit of approximately $300,000.[42] This would result in a total investment of roughly $12.9 million per beneficiary.[43] The benefit of investing more than could possibly be spent on qualified higher education expenses is that when a non-qualified distribution from the account is made (i.e., not for higher education expenses), it can be included in the *beneficiary's* income and thus is taxed at a lower rate than would apply to the account owner. Non-qualified withdrawals have also still benefited from

41. It has been estimated that 43.4 million individuals paid no income tax in 2006, amounting to 32 percent of the returns filed. Scott A. Hodge, Number of Americans Paying Zero Federal Income Tax Grows to 43.4 Million, Tax Found. 1, 2 (2006), http://www.taxfoundation.org/files/ff54.pdf. The number of those individuals actually in the zero bracket is no doubt lower than that number given that some of these people eliminated their tax liability through the use of credits, and the number of these individuals making use of the educational credits is not known. It is clear that the percentage of people who cannot make use of these tax incentives is not insignificant.

42. The limit currently ranges from $224,465 to $368,600 and exceeds or equals $300,000 in a majority of states. There are forty-three states offering plans that are open to non-residents. See Dep't of Treas., Analysis of Section 529, supra note 30, at 2.

43. Calculations derived using the estimate of a $300,000 limit in forty-three plans. Note that a resident in one of the five states with accounts open only to residents could have plans in forty-four states — all forty-three open to non-residents plus in his or her resident state.

deferral. The 10 percent penalty is often not sufficient to offset the benefit of tax deferral and eventual taxation at this lower rate.[44]

Besides the fact that it appears that high-income tax payers can use 529 plans as a tax shelter, reaping tax benefits even when not used for educational savings, it also seems that they provide no actual incentive to higher-income individuals. High-income individuals tend to save for education without any tax incentive to do so.[45] Those in the highest tax brackets also generally have enough current income to pay for education such that they do not need a financial incentive to encourage enrollment.[46]

There is also an element of uncertainty surrounding 529 plans that reduce any incentive that these plans might have for middle- and lower-income families.[47] Families, especially at lower levels of income, are often uncertain whether their children will attend college, what type of college they will attend, the amount of tuition that will need to be paid, and the amount of financial aid that they will receive. There is further uncertainty and complexity surrounding the interaction of 529 plans with other benefits, particularly availability of need-based federal financial aid. This uncertainty arises because assets of both the parents and the child are counted in determining the amount of aid the student is otherwise eligible to receive, and a 529 plan is an asset that is considered in the determination. These ambiguities might well keep an interested taxpayer from taking advantage of 529 plans.[48]

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44. Assume the withdrawal is $10,000. Also assume that the account owner is in the 35 percent bracket and the beneficiary, son of the account owner, is in the 15 percent bracket. Without even considering the benefit of deferral, the account owner would owe taxes of $3,500 ($10,000 * .35) on a taxable account, while the beneficiary would owe taxes of only $2,500 [($10,000*.15) + ($10,000 * .10)] when withdrawing from a 529 plan with a penalty.

45. Schenk & Grossman, supra note 13, at 350. ("[I]nvestment decisions [of taxpayers in the 33 percent and 35 percent tax brackets] with respect to education will not be affected by the availability of a 529.")

46. Bowen, Kurzweil & Tobin, supra note 25, at 197 ("Children from families who elect to participate in the savings plan almost surely would go to college in any case."); see also SallieMae, How America Pays for College, at 6 (2009), available at http://www.salliemae.com/NR/rdonlyres/52D9FB57-D14A-46EA-A6D9-ECB284D13FD/11499/GCR1979_2009_PAYS_survey_final_091609.pdf, (finding that families of higher-income students cover, on average, over two-thirds of costs out of current income as compared to only 19 percent for lower-income families).

47. See Schenk & Grossman, supra note 13, at 346 (arguing that "it is . . . extremely unlikely that taxpayers in either [the 10 percent bracket] or the 15 percent bracket will be able to overcome the ambiguities associated with 529 accounts").

48. Id.

Assuming that this incentive then is aimed almost entirely at those who do not need to be incentivized, this is an extremely inefficient use of government funds if the goal is to increase college enrollment.

Empirical data relating 529 participation rates to income, while limited, confirms this expected pattern of contribution. As illustrated in Table 3 and Figure 1, data from the Survey of Consumer Finances shows that participation rises rapidly with income; less than 1 percent of those in the lower half of the income distribution participate while over 30 percent participate in the top 5 percent of the income distribution.[49] The asset balance in 529 plans also follows this trend; for the taxpayers with income in the first three quartiles, the average account balance is about $8,000. The average balance rises to over $100,000 for those in the 95-100 percentiles (Table 3 and Figure 1).

TABLE 3

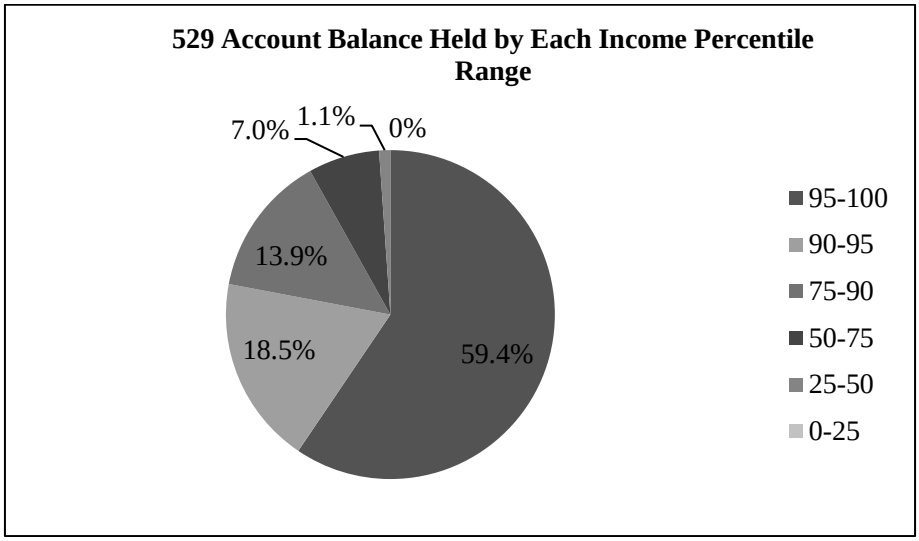
EDUCATION SAVINGS PLANS ACCOUNT BALANCES HELD BY INCOME GROUP[50]

Section 529 and Coverdell ESA Account Balances by Income Group						
Item	Income Percentile Range					
	0-25	25-50	50-75	75-90	90-95	95-100
With Children						
Observations	1,439	1,479	1,428	966	440	1,808
Percent w/ 529/CSA	0.4	1.2	8.6	15.0	27.8	31.4
With Children & 529						
Observations	1	20	112	148	117	352
Average for:						
Income	$27,766	$47,827	$80,005	$120,177	$176,284	$548,077
529/CSA Balance	$ 3,000	$ 8,794	$ 8,111	$ 15,482	$ 30,674	$106,250
Balance as % of Income	10.8	20.0	10.2	13.4	18.0	24.5
Number of Children	1.0	1.3	1.9	1.8	2.4	2.0
Age Oldest Child	17.0	13.0	12.7	11.9	12.0	12.8
Percent of Total:						
529/CSA Balance	0.0	1.1	7.0	13.9	18.5	59.4
Income	0.0	1.0	11.6	18.1	17.9	51.3

49. The survey suffers from a number of problems. First, it has a relatively small sample size. Second, both income and assets were self-reported and thus subject to measurement error. While the survey asked about 529s and Coverdells separately, the public data does not distinguish between the two. This is likely to skew the data somewhat because high-income individuals are more likely to invest in 529s than Coverdells because of Coverdells low contribution limits.

50. Dep't of Treas, Analysis of Section 529, supra note 30, at 30 tbl.7.

FIGURE 1
EDUCATION SAVINGS PLANS ACCOUNT BALANCES HELD BY INCOME GROUP[51]



II. COLLEGE SAVINGS AS A USEFUL ELEMENT OF FEDERAL FINANCIAL AID

There is no question that qualified tuition plans can be structured in a way that would make them less regressive, and thus a more tailored tool for lowering the cost of higher education for those most in need of the incentive. The question, though, is not how these plans can be structured to maximize the effectiveness of saving for college. Instead, the correct inquiry is whether a savings plan can ever be the most effective and efficient way for the government to spend a given amount of money to incentivize enrollment in higher education.

This part argues that students should decide whether to obtain higher education based on a fairly simple evaluation of the costs of education and the expected returns. Empirical evidence suggests that the returns from higher education are always greater than the costs and thus everyone, regardless of income, should make the decision to invest in higher education. This does not hold true, however, because low-to-moderate-income students systematically misestimate these values for a number of reasons, making them believe that higher education is not a worthwhile investment. The best

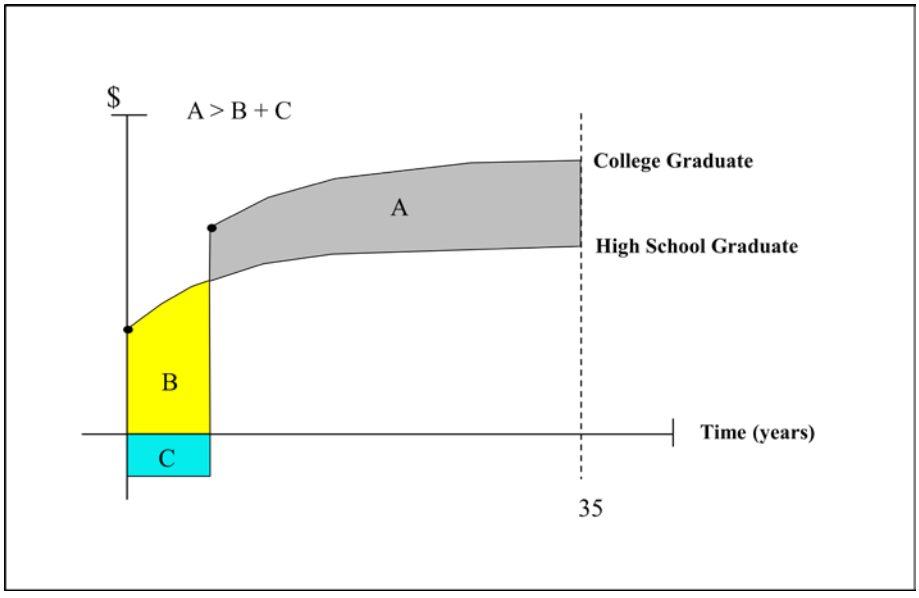
51. Id.

way to change that calculus and incentivize these students to enroll in higher education is to lower the upfront cost (or net price) of higher education by providing them with grants. A properly structured college savings plan can provide the same incentive as a grant but be of greater financial value at the time the college decision is made.

A. Lower-Income Students Under-Invest in Higher Education

The prevailing theory on the provision of financial aid generally stems from Gary Becker's Human Capital Theory (HCT). This theory simply states that people use the same cost and return analysis in making decisions about training and education as they do in other areas of economic decision-making. As applied to higher education, this means that so long as the investment in higher education will lead to more future income than it will cost, rational people will invest in higher education. In terms of the below graph, as long as area A (future income) is larger than areas B (forgone income) and C (tuition) then a rational person will make the investment.

FIGURE 2
STANDARD HUMAN CAPITAL THEORY[52]



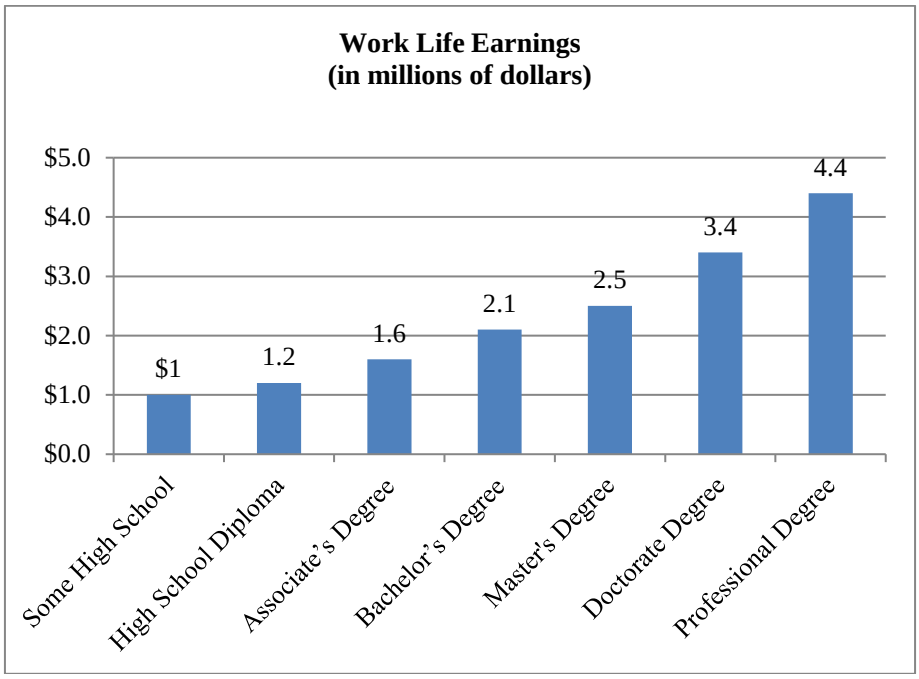
52. Alex Usher, Grants for Students: What They Do, Why They Work, Educ. Policy Inst. 16 (2006), http://www.educationalpolicy.org/pdf/grantsforstudents.pdf.

The most recent estimates show that college graduates earn roughly $900,000 more over a lifetime than those with only a high school diploma, have a far more stable work life, and enjoy a much more stable working career (Figure 4). The College Board estimates the present value of this amount to be around $450,000, well over the amount of loans the average person incurs to attend college.[53] This number also exceeds the cost of borrowing to pay for four years of private education, including all living expenses.[54]

53. See Sandy Baum & Kathleen Payea, College Board, Education Pays: The Benefits of Higher Education for Individuals and Society, 11 (2004), http://www.collegeboard.com/prod_downloads/press/cost04/EducationPays2004.pdf.

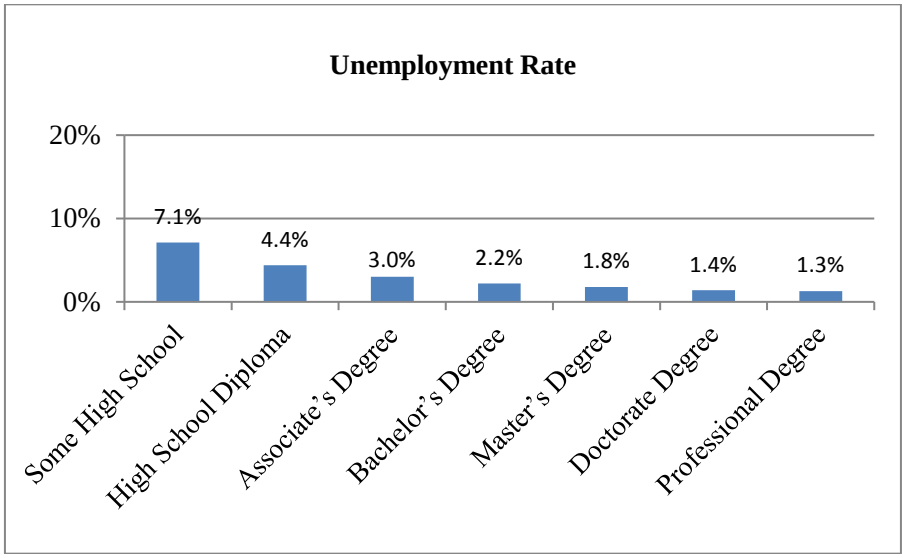
54. The most expensive college for this school year was Sarah Lawrence College with tuition plus room and board costing $54,410. See Campus Grotto, Most Expensive Colleges for 2009-2010, http://www.campusgrotto.com /most-expensive-colleges-for-2009-2010.html (last visited Apr. 25, 2009). Even factoring in an additional $10,000 of living expenses, the entire four years would cost $257,640. The College Board estimates that average cost of a four-year private education will cost $244,571 in 2019, including tuition, fees, room, and board. See Minnesota Higher Educ. Servs. Office, Start Today. Invest in a Child's Tomorrow, at 1 (2003), http://529professor.com/pdfs/mn_eb.pdf.

FIGURE 3
EARNINGS FOR FULL-TIME WORKERS BY EDUCATION ATTAINMENT OVER 40-YEAR WORK LIFE [55]



55. U.S. Census Bureau, The Big Payoff: Educational Attainment and Synthetic Estimates of Work-life Earnings, at 4 (2002), http://www.census.gov/prod/2002pubs/p23-210.pdf

FIGURE 4
UNEMPLOYMENT RATE OF THE POPULATON 25 YEARS AND OVER BY EDUCATIONAL ATTAINMENT[56]

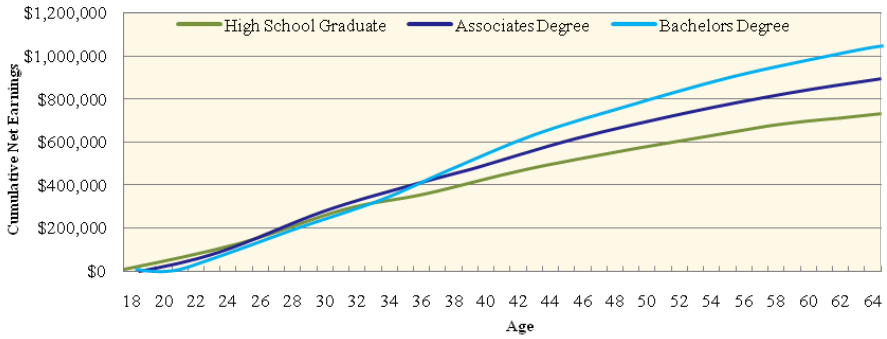


The College Board further estimates that the average college graduate has earned enough to compensate for borrowing for full tuition and forgone income by the age of 33, as shown in Figure 5 below.[57]

56. U.S. Bureau of Labor Statistics, Education Pays 2009, available at http://www.bls.gov/emp/ep_chart_001.htm.

57. See Baum & Ma, supra note 1, at 11.

FIGURE 5
CUMULATIVE EARNINGS RELATIVE TO COSTS OF EDUCATION, INCLUDING LOAN REPAYMENT AND FOREGONE INCOME [58]



Based on this data, it seems empirically clear that the return from investment in higher education (area C on the HCT graph) is larger than the cost of obtaining that education (areas A and B).

The only hindrance from obtaining higher education thus ought to arise from cash-flow shortages; even if a person realizes that higher education is a good investment (and empirical evidence has clearly shown that it is in almost all cases), not everyone can afford to pay for it. This cash-flow problem is most cheaply and easily solved through the availability of student loans.[59] In other words, if student loans are readily available then there can be no cash-flow problem and thus no barrier to obtaining higher education.[60]

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58. Id.

59. This theory does not suggest that these loans should be subsidized through below-market interest rates or deductions for interest paid, only that they should be readily available.

60. In theory, student loans are universally available because of the robust market for private student loans. Private student loans do not have caps on the interest that can be charged and also are not dischargeable in bankruptcy, leading to very high approval rates for student borrowers. See, e.g., Deanne Loonin & Alys Cohen, Nat'l Consumer L. Ctr., Paying the Price: The High Cost of Private Student Loans and the Dangers for Student Borrowers 12-14 (Mar. 2008), www.studentloanborrowerassistance.org/uploads/File/Report_PrivateLoans.pdf.

Analyzing how this affects the returns to education as illustrated in Figure 2 is beyond the scope of this paper and should not have a dramatic impact given that only 14 percent of undergraduate students use private loans, and many of them could be using federal loan programs. The Project on Student Debt, Private Loans: Facts and Trends (Aug. 2009), http://projectonstudentdebt.org/files/pub/private_loan_facts_trends_09.pdf.

Human capital theory and the estimated returns from higher education thus suggest that financial aid incentives should not be needed to induce students to obtain a higher education; this should apply equally to students of all income levels.[61] This theory though does not square with reality. In fact, lower- and middle-income students attend college at much lower rates than high-income students: 90 percent of graduates from families earning $80,000 or more are attending college compared to only 60 percent of other graduates, and around 30 percent of those at the lowest income levels.[62] Even among only high-achieving students, virtually all students from the top quarter of families in terms of income enroll in post-secondary education compared to only 75 percent of those in the lowest quartile.[63] Empirical evidence further shows that reducing the upfront costs of college has a dramatic impact on enrollment in lower-income students.[64] This evidence thus suggests that lower-income students are systematically undervaluing the return from education and are not making the rational decision to invest in higher education.[65] The behavioral economic theories of myopia and debt aversion appear to be the best explanations for this phenomenon.

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61. Increasing the number or percentage of students obtaining a higher education should have no impact on the returns to college education, although early proponents of this theory suspected that it would. See Herbert L. Smith, Overeducation and Underemployment: An Agnostic Review, 59 Soc. Educ. 85, 97 (1986) (quoting Finis Welch, an early proponent of Human Capital Theory, as saying that "one of the most important phenomena of our time is that rates of return to investments in schooling have failed to decline under the pressure of rapidly rising educational levels" and noting that "this observation is still relevant today").

62. Lawrence Gladieux, Low-Income Students and the Affordability of Higher Education, in America's Untapped Resource: Low-Income Students in Higher Education 17, 20 (Richard D. Kahlenberg ed., 2004).

63. High-achievement is measured based on high ("top") standardized test scores. Baum & Ma, supra note 1, at 2.

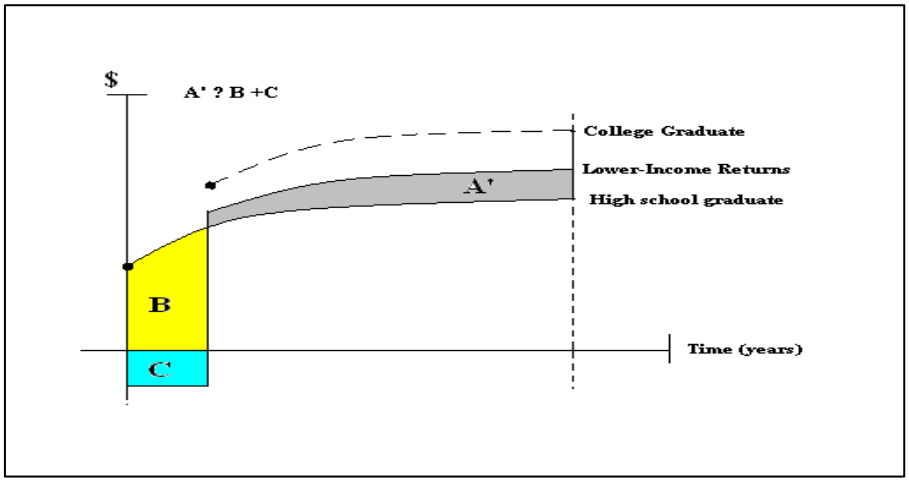
64. See Usher, supra note 52, at 23 (reviewing the research on price elasticity to changes in net price and finding that "[o]ne constant across all research findings is that grants/reductions in net price are much more effective among low-income students than among middle- or high-income students").

65. See supra note 12. One other explanation is that lower-income people are more prone to over-estimating the costs of higher education, something that has been proven through empirical evidence. However, it seems that to the extent that that is the problem, the most efficient solution would be an information approach, not lowering the cost. For that reason, I have left this explanation out of the analysis.

1. Low- and Moderate-Income Students May Have Lower Returns from Higher Education

There is some evidence that those coming from lower-income families cannot expect to have these same high returns from investment in education. One study in Canada actually found that the rate of return to education was approximately 30 percent for the top quintile of university graduates, but was negative for the bottom quintile.[66] If this is true, the returns to higher education for lower-income students might look more like the following:

FIGURE 6
HUMAN CAPITAL THEORY – LOWER RETURNS[67]



However, this picture does not seem to hold in the U.S. The College Board found that higher education provides more than adequate returns to cover costs for all income levels, racial and ethnic groups, and both genders.[68] Even assuming that the returns from education are lower for lower-income students (but still positive), the solution would be the same as

66. See Daniel Boothby & Geoff Rowe, Rate of Return to Education: A Distributional Analysis Using the LifePaths Model (Human Resources Development Canada, Working Paper No. W-02-8E, 2002), available at http://www.s3ri.soton.ac.uk/qmss/documents/RateofReturn_to_Education-DistributionalAnalysisusing_LifePaths.pdf.

67. Author's illustration.

68. Baum & Ma, supra note 1, at 12.

if those returns were simply misevaluated — lower the upfront costs in order to make the investment worthwhile and encourage enrollment.[69]

2. Hyperbolic Discounting

In calculating rates of return, each person must use his or her own discount rate — the rate at which he or she values money in the present more than money in the future. A higher discount rate makes one less likely to make an investment — someone with a higher discount rate values the returns on the investment less than someone with a lower discount rate, even if both accurately estimate what that return will be.

A number of empirical studies have shown that myopia, or the tendency to have a high discount rate, increases as income decreases.[70] This outlook makes low- and moderate-income people less likely to make any investment where the returns come only in the future. A high discount rate is also related to the amount of uncertainty related to an investment. Since low- and middle-income students are far less likely to attend and complete college than higher-income students, this uncertainty means that the discount rate as related to education returns may be even higher than the already hyperbolic discount rate of lower-income people in general.[71]

A degree in higher education takes a substantial amount of time to acquire. Further, the College Board estimates that it takes on average until the age of 33 for that particular investment to begin showing positive returns. That long time horizon, combined with the uncertainty of obtaining the degree and the returns from that degree once obtained, makes those with shorter temporal preferences less likely to pursue a degree in higher education.

3. Debt Aversion

Empirical evidence also suggests that lower-income students are more averse to debt than are higher-income students. This tendency is

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69. Another issue with this line of argument is whether lower-income students could possibly know that their expected return may be lower than that of higher-income students. While some argue that lower-income students would not know this information and thus not include it in their calculus, others argue that lower-income students are well aware that their performance levels tend to be lower than those of more affluent students. Lower-income students could thus assume from that knowledge that they would experience lower returns because of lesser performance. See supra Figure 2. Either way, the answer must be the same — lower the upfront costs to make the investment worthy.

70. See, e.g., Gary S. Becker & Casey B. Mulligan, The Endogenous Determination of Time Preference, 112 Q.J. Econ. 729 (1997).

71. Id. at 745 (income), 742 (certainty).

generally tied to the behavioral economic theory of loss aversion. Loss aversion means that a loss generates more disutility than a gain generates utility. Some studies have shown that a loss can generate twice the disutility that a gain can generate utility — in other words, the pain someone incurs from a $100 loss is more than the pleasure he gets from a $100 gain, and equal to the pleasure from a $200 gain.[72] Loss aversion then is presumed to manifest itself as debt aversion because taking on debt is a constructive out-of-pocket expense equivalent to a loss.[73] Since this myopic loss aversion is most commonly associated with low-income people, many presume that low-income students are also debt averse and thus under-invest in higher education because of a reluctance to take on debt in order to finance that education.

The most sophisticated study on debt aversion stems from England and used multivariate analysis to attempt to disaggregate the view on debt from actual decisions. The study found a very significant relationship between debt and social class.[74]

Empirical evidence suggests that this debt aversion can be seen in lower-income students but is not entirely conclusive. In one study Tom Mortensen analyzed Federal Reserve data on perceptions about borrowing for higher education and found that low-income individuals were less inclined to borrow and concluded that loans were not a viable option for increasing participation of these students in higher education.[75] More recent studies have found that the significant factor is not income, but race and ethnicity, determining that minority students are less likely to borrow to finance unmet need for all income levels.[76] There is still a strong correlation between minority status and low-income status such that most of those averse to borrowing are low-income.

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72. Gandhi, supra note 8, at 14.

73. Id.

74. See Claire Callender, Access to Higher Education in Britain: The Impact of Tuition Fees and Financial Assistance, in Cost-sharing and Accessibility in Higher Education: A Fairer Deal? 105, 126 (2005).

75. See The Project on Student Debt, The Student Debt Dilemma: Debt Aversion as a Barrier to College Access 4, available at http://projectonstudentdebt.org/files/pub/DebtDilemma.pdf; Tom Mortensen, Attitudes of Americans Toward Borrowing to Finance Educational Expenses 1959-1983 14, 22 (ACT Student Financial Aid Research Report Series No. 88-2, 1988).

76. Alisa F. Cunningham & Deborah A. Santiago, The Inst. for Higher Educ. Policy & Exelencia in Educ., Student Aversion to Borrowing: Who Borrows and Who Doesn't 17, http://www.ihep.org/assets/files/publications/s-z/StudentAversiontoBorrowing.pdf.

B. Lower-Income Students Respond More to Grants Than Other Types of Aid

The failure of lower-income students to properly evaluate the cost of and returns from higher education suggests a particular role for grants in the financial aid system. There are two aspects of grants that distinguish them from other modes of financial aid: first, they are paid directly to the student (or to the institution on behalf of the student); second, they do not require repayment.

The unique aspect of grants in the financial aid system is that they reduce both out-of-pocket costs and "net price," two factors that bear most heavily on the cost-benefit ratio when making the higher education decision. "Net price" or "net tuition" is the idea that the price of a year of higher education to the student is not the full price of tuition or the amount of money that will be paid by the student over time for tuition, but is actually the amount of tuition reduced by guaranteed payments made to, or on behalf of, the individual student.

Grants are the only type of federally sponsored financial aid that immediately reduces both net price and out-of-pocket expenses. Tax incentives (such as deductions and credits) and subsidized loans both reduce the cost of higher education, but only in the future, thus not changing the immediate calculus. Tax incentives generally have a time lag because they are administered through the tax system rather than concurrently with provision of financial aid or the payment of tuition. Further, the credits are often taken by the parents of dependent students while it is the student making the cost and returns evaluation.[77] In these instances, the credit cannot change that ratio.

Grants alone can make what is perceived as an otherwise unworthy investment worthy by lowering the "net price" of higher education (areas A plus B in Figure 2) to less than the return (area C in Figure 2). This reduction in net price essentially offsets the hyperbolic discount rate or debt aversion so that even lower-income students subject to these behavioral economic biases will perceive the returns from higher education as exceeding these reduced costs.

Empirical evidence supports the theory that grants most effectively correct for the irrational failure to invest in higher education. Studies into this phenomenon largely began after taking note of changes in patterns of financial aid and enrollment in the 1970s and 1980s. The 1970s were marked

77. See Jeffrey Taylor, Marcia B. Harris & Susan Taylor, Nat'l Ass'n of Colleges & Employers, Parents Have Their Say . . . About Their College-Age Children's Career Decisions (2004) (finding that 91.8 percent of parents felt that they should be either neutral or have very little influence on their children's college and career decisions).

by high amounts of direct government aid to low-income and minority students and were also a period of relatively high participation rates for those groups. The 1980s saw a marked decline in both indicators.[78]

The important findings from these studies are that grants (or reductions in net price) increase enrollment, particularly for lower-income students, and that loan subsidization does not have the same effect.[79]

The fact that low-to-moderate-income students seem to have systematically higher discount rates and may be subject to debt aversion suggests that these students are less likely to attend higher education even when not credit-constrained. These biases influence these students to subjectively value higher education at less than its objective value. Therefore low-to-moderate-income students will under-invest in higher education unless they are given a subsidy — a grant — which increases this subjective rate of return. In other words, grants can have a much larger effect on the higher education choice of low-to-moderate-income students than on high-income students who already perceive higher education to be a good investment.[80]

C. 529 Plans Have the Same Effect as Grants

Recall from above that the salient features of grants are that they do not require repayment and that they be paid directly to the student for educational purposes or to the institution on behalf of the student. The important point in time at which to look is when the college decision is made, the time when the costs of higher education are compared to the returns. At that time, the 529 plan must be paid toward education expenses and must be used for the particular designated beneficiary.[81] This means that the 529 acts to reduce the net tuition on that day — it is an available amount of money that is guaranteed to be paid to the student to reduce the amount of tuition that needs to be funded from elsewhere. For example, imagine two students, Anna and Ben, both deciding whether to attend school X. School X has tuition of $20,000 and both students receive a grant of $5,000. Anna, however, is the designated beneficiary of a 529 account worth $5,000. On the day that the college decision is made, the net price to Ben is $15,000 but the

78. Edward P. St. John, Refinancing the College Dream: Access, Equal Opportunity, and Justice for Taxpayers 100, 113 (Johns Hopkins University Press 1997).

79. Gandhi, supra note 8, at 23.

80. See Usher, supra note 52, at 23 (making this same argument, but finding no debt aversion and relying largely on lower returns for lower-income students).

81. This is what distinguishes 529 plans from general savings or income — the latter may or may not be used toward education and thus are not earmarked in the same way as 529 plans.

net price to Anna is only $10,000 because the 529 account must be paid toward the tuition (or else the penalties will be incurred). The 529 plan then has the same effect of reducing net price as a grant and therefore offers the same efficient incentive to low-income taxpayers.

III. POLICY PROPOSALS TO MAXIMIZE THE IMPACT OF 529 PLANS

A. Structure Plans to Induce Savings

In order for 529 plans to be a more efficient incentive than outright grants, they must induce those taxpayers who can save for college to do so in order to increase the "grant" at the time the enrollment decision is made. For example, say the government has $500 to use toward each student to incentivize his or her college decision. The above analysis shows that the most efficient use of that $500 is to give it directly to the student to reduce net price at the time of enrollment. However, this sum of money would be a better incentive if the government could use it to encourage the family to pledge an additional $500 toward the student's education. If that can be done, the amount of the grant received by the student is no longer the $500 of federal aid, but instead is $1,000.

There are ways to structure 529 plans to increase participation and the amount of savings, especially by lower-income families. On this point it is best to look at different ways that the states have experimented with increasing participation and the effectiveness of those programs.[82]

One successful program involves opening an account in the name of all children with an initial contribution by the government to the fund. Maine currently offers such a program, the Harold Alfond College Challenge. The program, now in its initial phases, was funded by a large grant from a Maine philanthropist and provides a one-time grant ("scholarship") into a Maine 529 account in the name of any newborn resident of Maine. The paperwork required to open the account and receive the grant is reviewed with the mother along with other hospital paperwork before discharge after giving birth. It is also available on the internet and in government offices and the program is widely advertised on TV, radio, and in newspapers. In the first two months of the program roughly 1,000 people began the process to open the account.[83] Given that there are around 14,000 births in Maine per year, this would indicate that almost half of the newborns in Maine will open an

82. See Appendix B for a summary of the state programs offering some sort of initial grant or matching grant for contributions.

83. Press Release, Western Maine Health, Over 1,000 Families Have Requested Harold Alfond College Challenge Grant Information, http://www.wmhcc.org/wmh_body.cfm?id=5439.

account and receive the grant.[84] In the national study only roughly 10 percent of respondents with children indicated having a 529 account.[85] This is also a significant increase over previous participation; only 8,000 accounts had previously been opened in Maine since the program began in 1999. Those administering the program expect that number to increase as the program becomes more widely known. The program has not yet released information on effects by income level, but is a clear indication that this upfront grant can greatly increase participation.

A more ideal program along these lines would open an account in the name of every child with this initial contribution, but only make the program available to children in families below a certain income threshold. This presents two administrative difficulties: first, determining the appropriate income level where the cut-off should be, and second, dealing with changing levels of income over the life of the child. The first has been given much attention by states experimenting with incentives that target only low- and moderate-income families. While none of these involve income limits for an initial contribution, most of the states offering a matching grant program have an income limit that attempts to track the line between moderate-income households in need of an incentive to save, and high-income households without need for such an incentive. This income limit is generally between $50,000 and $80,000.[86]

There is also evidence stemming from a number of programs that offering a matching grant increases both participation and the amount of saving by participants. Increased savings is the variable that makes these plans more effective than a traditional grant. One study focused on the Maine NextGen Matching Grant Program (before the introduction of the initial contribution, discussed above). The program was available to lower-income households, defined as those with income below $50,000 adjusted gross income (indexed to CPI). Of the 6,414,529 NexGen accounts in the state, 1,335 had received at least one matching grant, meaning that they met this income threshold. This indicates that at least 20 percent of the accounts were held by those with household AGI below $50,000. This is a stark improvement over the national data discussed previously where those in the lower half of the income distribution held only 2.8 percent of the 529

84. Press Release, Fin. Auth. of Maine, Harold Alfond College Challenge Celebrates Six Months of Awards (Aug. 1, 2008), http://www.famemaine.com/blog/post/harold_alfond_college_challeng.aspx.

85. There were 7,560 total respondents and 750 indicated having a 529 plan. See supra Table 3.

86. See Margaret Clancy, Lisa Reyes Mason & Soda Lo, Ctr. for Soc. Dev., Wash. Univ. St. Louis, State 529 Matching Grant Program Summary (2008), available at http://csd.wustl.edu/Publications/Documents /529_Summary.pdf.

accounts;[87] $50,000 is roughly the 55th percentile in terms of income distribution.[88] The data further shows that at least 2 percent of the participants have household AGI of less than $20,000 compared to around .1 percent in the national survey.[89]

The results of the study on Maine's Matching Grant Program also support the fact that lower- and moderate-income people are incentivized to save by the program. The report states that "the most important results of this study are the simple facts that low-to-moderate income individuals save in NextGen, and save through the Matching Grant Program," and that "income level is not statistically associated with saving performance."[90] The study further finds that about 80 percent of those who receive a matching grant go on to receive continued matching contributions. The "very positive impact on low- and moderate-income families" eventually formed the basis for a proposal of a similar matching grant program in Missouri.[91]

The fact that a matching grant program encourages participation as compared to deductions is also evidenced by a comparison of the Kansas and Louisiana 529 programs. The programs are similar in most respects, but at the time of the study Louisiana offered a progressive matching grant system (increasing the amount of the match as income decreased) while Kansas offered only the deduction. In Louisiana, participants in the 0-50 income percentiles held almost 23 percent of the total accounts. Participants of the same income level in Kansas held only about 8 percent of the total 529 accounts.

Both of these studies compare the use of matching grants to the use of deductions and find significantly increased participation among low-to-moderate-income households with use of matching grants. While a refundable credit provides an economically equivalent benefit to a matching grant, empirical evidence has shown that people are more incentivized by the matching grant than the equivalent credit. The main study in this area found that participants gave around 20 percent more to charities when the incentive

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87. Of the 750 accounts in the survey, twenty-one were held by those in the 0-50 percentiles. See supra Table 3.

88. Dep't Treas., Analysis of Section 529, supra note 30, at 11 (noting less than 1 percent participation); Margaret Clancy, Chang-Keun Han, Lisa Reyes Mason & Michael Sherraden, Ctr. For Soc. Dev., Wash. Univ. St. Louis, Inclusion in College Savings Plans: Participation and Saving in Maine's Matching Grant Program 5 (2006), http://csd.wustl.edu/Publications/Documents/RP06-03.pdf.

89. Only one of the 750 survey participants was in the 0-25 percentile, which corresponds to a maximum income of roughly $22,500.

90. Clancy, Han, Mason & Sherraden, supra note 88, at 40.

91. Press Release, George Warren Brown Sch. of Soc. Work, Wash. Univ. St. Louis, Center for Social Development's Research Informs Missouri's Legacy Initiative (Jan. 22, 2007), http://gwbweb.wustl.edu/newsroom/PressRelease/Pages/MissouriTreasurerSarahSteelman.aspx.

was structured as a matching grant rather than a subsidy rebate.[92] For this reason, the ideal program should use a matching grant in order to induce the most savings.[93]

B. Reduce Regressivity

The role of federal financial aid is to increase enrollment in higher education. Lower- and middle-income students are most responsive to and in need of such an incentive, and grants are most effectively and efficiently targeted at those groups. In order to achieve that goal through 529 plans, the plans need to be made not regressive but progressive means of federal financial aid. There are a number of simple changes that can and should be made to 529 plans to achieve such progressivity. Many of these proposals have been experimented with for state tax purposes but should be implemented for federal tax purposes as that is the primary benefit of the 529 plans.

First, there should be an overall contribution limit. This is probably most easily implemented by allowing only one account total (as opposed to one per state) per designated beneficiary. It may also be that the contribution limit, which now hovers around $300,000, should be lowered.

Further, there should be an income limit which an account owner must fall below in order to participate in a 529 plan.[94] Empirical evidence shows that low-income families are most incentivized by direct financial aid, but middle-income families can be responsive to such incentives as well. Middle-income families are also more able to save for higher education and take advantage of this particular incentive. Thus it is probably the case that direct financial aid, Pell Grants in particular, should remain focused on the lowest-income families while 529 plans may be a better vehicle for those who are somewhat better off but not high-income. 529 plans can still be

92. Catherine C. Eckel & Philip J. Grossman, Rebate Versus Matching: Does How we Subsidize Charitable Contributions Matter? 87 J. Pub. Econ. 681 (2003).

93. See infra note 96 for a discussion of the terminology of match vs. refund.

94. Consistent with the existing 529 matching programs targeted at lower- and middle-income families, the eligibility should be means-tested based on the AGI of the child's family for the previous one to three years. Note that the relevant income is that of the child's family and not that of the owner/donor of the account. This is a more accurate measure of the financial resources available to the child. Eligibility must be re-established every year.

available to even the very lowest-income families but with recognition that they likely will not be able to make much use of them.[95]

The most important change is that the contributions should be structured as a matching grant.[96] Either a matching grant or a refundable credit must be used in order to prevent the tax incentive aspect of 529 plans from being regressive. An exclusion is always regressive because it is tied to the taxpayer's tax bracket. Excluding an item of income of $1,000 is worth $350 to a wealthier taxpayer in the 35 percent tax bracket, but worth only $150 to a lower-income taxpayer in the 15 percent tax bracket.

A non-refundable credit is not necessarily regressive but is limited by a taxpayer's tax liability. If two taxpayers are both entitled to a $1,000 deduction and one has tax liability of $3,000 while the other's is only $800 then the non-refundable credit will be worth the full $1,000 for the first (probably higher-income) taxpayer but worth only $800 to the second (probably lower-income) taxpayer, making the credit regressive.

A refundable credit is not limited in this way. As to the $800 taxpayer, he or she would be entitled to a $200 payment, or refund. The refundable credit is therefore worth $1,000 to both of the taxpayers. A matching grant would be a payment into the account equal to some percentage of the payments made by the taxpayer.[97] Therefore both the refundable credit and the matching grant would solve the regressivity problem of the current exclusion.

Given the tax-neutral choice between a matching grant and refundable credit, empirical evidence suggests that people will contribute more money when the incentive is a matching grant rather than a refundable credit, even where the economic impact is exactly the same. A credit would be implemented as follows: the taxpayer would pay $2 into the account and the government would remit $1 to the taxpayer. The account would have a $2 balance and the government and taxpayer would each have $1 less. A matching grant would have the following effect: the taxpayer would pay $1 into the account and the government would match that with a $1 payment

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95. It is probably also the case that we do not want to force these taxpayers to use 529s because we do not want to force the very limited funds of these families into one particular use.

96. Match here is used to mean that the funds are deposited directly into the account (or linked account in the beneficiary's name) even though theoretically either a refundable tax credit or a spending grant program could be structured either way (to be paid to the donor or the account). For purposes of this paper, a "match" or "matching grant" is payment made to the account while a "refund" is a payment to the donor.

97. In actuality, the matching grants, or contributions by the government, are almost universally held in a separate but linked account. This allows the state or the plan to be the legal owner of the funds and eases administration and return in the event that the funds are not used for qualified expenses.

(depending on the match ratio). The account balance is again $2 and both the government and taxpayer have $1 less, the exact economic equivalent. Despite this equivalence, empirical evidence is replete with studies showing that taxpayers respond more to matching grants than credits, though these are not in the educational context.[98]

C. Reduce Uncertainty

Middle- and lower-income families may be dissuaded from taking advantage of the benefits of 529 plans, even as restructured, if the uncertainty surrounding the child's college choice and financial aid remain too high. There are a number of changes that can be made that would reduce this uncertainty and allow these families to use these accounts in the event that their children do attend college.

First, there needs to be a mechanism by which the family is not fully penalized if the student fails to attend college. Such a penalty could be an overriding deterrent for families where even high-achieving students are attending college only 75 percent of the time.[99] Given that most of this decision is made well before the family knows anything about the child's performance or desires (imagine the Maine program where the mother is asked to enroll in the program at the time she gives birth), this is a huge level of uncertainty. Current 529 plans do not deal with this uncertainty at all — the only way to withdraw funds in that scenario is to incur the penalty.[100] The portion of the Maine plans contributed by the state, which makes the initial contribution, simply reverts back to the state if the child does not

98. A real but easily corrected problem with a matching grant is churning. Churning results when a deposit is made into an account just long enough to receive the match and then both the grant and the match are immediately withdrawn. The problem of churning is generally dealt with in one of two ways: either the grant is recaptured upon early withdrawal, or matches are disallowed during the calendar year (or two, etc.) in which a withdrawal is made from the account. See, e.g., Notice of Hearing on Proposed Administrative Rulemaking, State of Kan., State Treasurer's Office (2009), http://www.kansasstatetreasurer.com/prodweb/pdfs/hearing_notice_09.pdf (including a discussion of this proposed change to the regulations). This is also the approach used with the Saver's Credit. IRC § 25B(d)(2)(A). Since this latter anti-churning rule only extends the time period during which churning can occur, the recapture of the match option is the better one and should be adopted. This rule would essentially require that should the expenses be withdrawn for any non-qualified reason, the matches that had been deposited into the account would be reclaimed by the government.

99. Supra note 63.

100. As noted earlier, while it is possible that a high-income taxpayer may still be better off in this scenario than if they had saved in a taxable account, this is unlikely to ever be true for the lower-income taxpayers who will be eligible to use these 529 plans.

enroll in higher education or to the extent not used for that purpose. It probably would not work to allow the family to withdraw and reclaim the funds with no penalty like the state can do. The problem would be that this could be used against the student — essentially the family could pressure the student not to attend college in order to regain use of those funds. In other words, in order for the family's portion of the contribution to act as a grant, it must be earmarked for education. The loss of the state funds alone would not act as a deterrence or penalty as to the family's portion.

An option would be to allow the 529 plans to be rolled over into another such account for a different beneficiary, to the extent that that account was below the limit. In the case where there is no such account or all such accounts are at the contribution limits, the family could have the choice to withdraw the fund with penalty, or to roll it into another tax-preferred account such as a 401(k) or IDA.

Another major cause of uncertainty that leads marginal taxpayers to avoid use of 529 plans is the effect that these assets will have on financial aid. Most low-to-moderate-income students will be eligible for federal financial aid, and accumulating assets can act to reduce that financial aid. As it currently stands, 529 plans count as an asset of the parent for purposes of determining the financial aid eligibility of the student. This means that roughly 5.6 percent of the value of the account is treated as being available to pay for college.[101] In order to eliminate this disincentive to save, these plans should be excluded from consideration when determining need-based financial aid.

The last change that ought to be made to reduce the uncertainty is that withdrawals should be allowed without penalty to the extent that the student receives financial aid, either government or institutional, and does

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101. The calculation of the 5.6 percent is a bit complicated. All federal financial aid programs use the Free Application for Federal Student Aid (FAFSA). The FAFSA operates by calculating the "Expected Family Contribution," or the amount that the family should reasonably be expected to pay toward the student's college education. This in turn indicates to both the government and the institution the amount of need the student has (essentially the tuition at the institution minus the EFC). In calculating the EFC, the FAFSA determines the family's Adjusted Available Income, which is the family income plus 12 percent of the "unprotected" assets (i.e., those that are not specifically protected like the family home and retirement accounts), of which a 529 plan is one. Once the AAI is calculated, the EFC is 47 percent of that amount. Thus in the end 47 percent of 12 percent of the 529 is included in the EFC, or 5.6 percent. The FAFSA must be filled out each year and so this calculation will be repeated each year based on the value of whatever amount remains in the 529 plan. Note that these are maximum amounts, but they begin to apply at low levels of income, generally below $30,000. See U.S. Dep't of Educ., Info. for Fin. Aid Profs., The EFC Formula, 2010-2011 19, http://www.ifap.ed.gov/efcformulaguide/attachments/111609EFCFormulaGuide20102011.pdf.

not need to use the funds from the 529 account. This would be only a slight expansion from the current rules which allow withdrawal without penalty when the student receives a scholarship and thus does not need to use the 529 plan. The withdrawal would be subject to taxation but not the 10 percent penalty. One possibility would be that the amount no longer needed for education expenses would be returned to the state and withdrawn by the family penalty-free in proportion to overall contributions to the plan. Alternatively, the state may want its own contributions to be returned before the family withdrew any funds without penalty.

IV. AN ILLUSTRATION

Building on the evidence taken from state experimentation and studies about matching grants, it seems that the best way to structure a 529 plan to encourage participation is with an initial contribution by the government with no initial contribution requirement on the individual's behalf. In order to induce additional contributions by the owner, the matching grant is the most effective option. Empirical evidence is fairly clear that a matching grant encourages greater contribution than a refundable credit.[102] This empirical evidence further shows that at least a one-to-one match encourages more contribution than any lower level of match.[103] Therefore, the lowest level of match should be one-to-one.

It is crucial that the program address the fact that low-income households are less likely to save (or save as much) in response to savings incentives, but are more likely to respond to any program that lowers the net price of higher education because they have the lowest enrollment rates. In order to compensate for those facts, the match should be higher for low-income families and then reduced to one-to-one for higher-income families. Similarly, the initial contribution by the government should be higher for lower-income families and reduced as income increases until it is phased out.[104]

The federal tax benefits of 529 plans currently cost the government around $1 billion annually.[105] Given this ideal structure of an initial contribution and at least one-to-one matching grant, this section will make a number of assumptions and attempt to estimate the impact that 529 plans

102. Eckel & Grossman, supra note 92.

103. Id.

104. This design is essentially a compromise between increasing the size of grants to the lowest-income students and offering a savings incentive that would be used more often by middle-income students' families. This phasing out also prevents the cliff effect and impact on marginal rates when the taxpayer first becomes ineligible.

105. Staff of the Joint Comm. on Tax'n, supra note 8.

could have on college enrollment among low- and moderate-income groups given a reasonable scenario.

According to the U.S. Census Bureau, in 2006 there were approximately 4.2 million births in the U.S.[106] Additional data (see Appendix A) shows that about 52 percent of these births were in households with an income below $50,000 per year.[107] That means that around 2.2 million children were born into households below that level of income in 2006; approximately 550,000 to households with income between $35,000 and $50,000 and 1.63 million to households with an income below $34,999.

Consistent with the federal financial aid plan and the existing matching programs for 529 plans, this illustration will treat a household with income below $35,000 as low-income, and those with income between $35,000 and $50,000 as moderate-income. In order to offer the best incentive and increase enrollment rates the most, an initial contribution of $300 and a later match with a three-to-one ratio will be given to students from households of low-income.[108] For those households of moderate income, the beneficiary will receive an initial grant of $100 and one-to-one matches for later contributions.[109]

Looking at the existing plans and participation rates suggests that participation might be somewhere in the 30 percent range. Recall that the Louisiana Matching Grant Program had about 20 percent participation for these income ranges, without an initial contribution from the government. The Maine plan may have had up to a 50 percent participation rate, but that was not controlled for income. It makes sense then to assume that the participation rate when limited to this income would be above that seen in Louisiana (with no initial grant) but below that observed in Maine.

If the participation rate were around 30 percent, and assuming it is equal for households of low- and moderate-income, then participation could be expected for about 489,000 children of low-income and 165,000 of

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106. U.S. Census Bureau, Statistical Abstract of the United States: 2011 tbl. 78, Live Births, Deaths, Marriages, and Divorces: 1960 to 2007, available at http://www.census.gov/compendia/statab/2011/tables/11s0078.pdf.

107. Jane Lawler Dye, U.S. Census Bureau, Fertility of American Women: 2006, 6 tbl. 3, available at http://www. census.gov/prod/2008pubs/p20-558.pdf.

108. There should be no requirement of initial (or any) contribution by the family. The earlier Maine program as well as the OK SEED program both saw large increases in participation when this requirement was eliminated and in interviews most account owners indicated that the lack of upfront requirement was a decisive factor in opening an account. See Lisa Reyes Mason, Margaret Clancy, Margaret Sherraden & Chang-Keun Han, Ctr. for Soc. Dev., Wash. Univ. St. Louis, Saving for College in Maine's Matching Grant Program: Account Owner Experiences 13 (2006), http://csd.wustl.edu/ Publications/Documents/RP06-04.pdf.

109. As discussed above, the determination of eligibility should be based on the average AGI of the previous three years of the family of the beneficiary.

moderate income. Given these participation numbers, the $1 billion could fund almost $1,530 per plan initially if it were all used for these upfront grants.

Some of the funds, however, should be reserved for matching grants to encourage additional investment by the owner of the plan. Recall that in a study of Maine's matching grant program, 80 percent of participants who received a first match continued to make contributions to receive subsequent matches; this data was using only low-to-middle-income taxpayers.[110] Assuming that this rate would be somewhat lower for those only of low-income, because of the difficulty of saving any money, it seems reasonable to estimate roughly 60 percent of low-income households will continue to participate. The 80 percent observed in the Maine program will be assumed to be the continued participation rate among moderate-income households. This would mean that 18 percent of low-income families (60 percent of the original 30 percent) and 24 percent of moderate-income families (80 percent of the original 30 percent) of those in the targeted income group could be expected to maximize the matching portion of the account.

Assuming these participation rates, a roughly $1 billion budget, and initial grants of $300 and $100 respectively, the government could offer the following (very basic) program: low-income households would receive the $300 initial grant and a three-to-one match of up to $150 per year; moderate-income families would receive the $100 initial grant and a one-to-one match of up to $50 per year.[111] If the account owner (or friends, family, etc.) contributed the full matching amount of $50 per year, and the account grew at a rate of 6 percent annually and had earnings

110. The matching amount for that program was $100 per year at the beginning of the study and $200 per year by the end. Mason, Clancy, Sherraden & Han, supra note 108, at 2.

111. Creating and incentivizing the use of these accounts will certainly raise a number of administrative issues, many of which have already been dealt with by the states experimenting in this area or discussed previously in this paper. As noted several times, the contributions from the family/donor and the matches from the state will almost certainly be kept in different accounts to allow for separate ownership until the point of distribution. The funds can then be paid directly to the institution or paid as reimbursement upon proof of spending for qualified expenses. The fact that all of these 529 accounts are held as part of a larger plan of the state allows for administration of even the smallest accounts. Providers therefore do not need to avoid small, unprofitable accounts because these have been shown to be adequately supported by the larger accounts of the plan. See Margaret Clancy, Peter Orszag & Michael Sherraden, Ctr. for Soc. Dev., Wash. Univ. St Louis, College Savings Plans: A Platform for Inclusive Savings Policy? (2004), http://www.cfsinnovation.com/system/files/imported/managed_documents/clancy_et_al_2004.pdf.

taxed at a 20 percent rate, then on the day the child made his or her college decision, the plan for each household would look as follows:[112]

TABLE 4
ACCOUNT FOR FULL PARTICIPATING ACCOUNT FOR FULL PARTICIPATING MODERATE-INCOME HOUSEHOLD LOW-INCOME HOUSEHOLD

Year	Gov Match	Family Contri-bution	Account Balance		Year	Gov Match	Family Contri-bution	Account Balance
0	$100		$100		0	$300		$300
1	$50	$50	$205		1	$150	$50	$514
2	$50	$50	$315		2	$150	$50	$739
3	$50	$50	$430		3	$150	$50	$975
4	$50	$50	$550		4	$150	$50	$1,221
5	$50	$50	$677		5	$150	$50	$1,480
6	$50	$50	$809		6	$150	$50	$1,751
7	$50	$50	$948		7	$150	$50	$2,035
8	$50	$50	$1,094		8	$150	$50	$2,333
9	$50	$50	$1,246		9	$150	$50	$2,645
10	$50	$50	$1,406		10	$150	$50	$2,972
11	$50	$50	$1,573		11	$150	$50	$3,314
12	$50	$50	$1,749		12	$150	$50	$3,673
13	$50	$50	$1,933		13	$150	$50	$4,050
14	$50	$50	$2,126		14	$150	$50	$4,444
15	$50	$50	$2,328		15	$150	$50	$4,857
16	$50	$50	$2,539		16	$150	$50	$5,291
17	$50	$50	$2,761		17	$150	$50	$5,745

112. This does not assume the current benefit of deferral but instead the account balance reflects a tax on the earning of 20 percent. The benefit of the accounts as presented here is not deferral but instead is the match. Thus, an account's earnings should be taxable to the owner of the account, which in most cases is the parent. The tax (as assumed here) should be able to be paid out of the account balance in order to ease what might otherwise be a liquidity problem. Note too that many of these taxpayers will almost certainly be in the zero bracket. Also, recall from above that the contributions from the state and federal government likely should and would be kept in a separate but linked account, in the beneficiary's name but technically owned by the plan or the state.

While the balance of these accounts is not insignificant, the impact is greatly increased if the account also gets the benefit of a state matching program as well. As an illustration, assume that this is a plan in Arkansas which provides a two-to-one match for low-income households and a one-to-one match for moderate-income households, with a maximum $500 match per year.[113]

TABLE 5
ACCOUNT FOR FULL PARTICIPATING ACCOUNT FOR FULL PARTICIPATING MODERATE-INCOME HOUSEHOLD, LOW-INCOME HOUSEHOLD, INCLUDING STATE MATCH INCLUDING STATE MATCH

Year	Gov Match	State Match	Family Contri-bution	Account Balance		Year	Gov Match	State Match	Family Contri-bution	Account Balance
0	$100			$100		0	$300			$300
1	$50	$50	$50	$255		1	$150	$100	$50	$614
2	$50	$50	$50	$417		2	$150	$100	$50	$944
3	$50	$50	$50	$587		3	$150	$100	$50	$1,289
4	$50	$50	$50	$765		4	$150	$100	$50	$1,651
5	$50	$50	$50	$952		5	$150	$100	$50	$2,030
6	$50	$50	$50	$1,148		6	$150	$100	$50	$2,428
7	$50	$50	$50	$1,353		7	$150	$100	$50	$2,844
8	$50	$50	$50	$1,568		8	$150	$100	$50	$3,281
9	$50	$50	$50	$1,793		9	$150	$100	$50	$3,738
10	$50	$50	$50	$2,029		10	$150	$100	$50	$4,218
11	$50	$50	$50	$2,276		11	$150	$100	$50	$4,720
12	$50	$50	$50	$2,536		12	$150	$100	$50	$5,247
13	$50	$50	$50	$2,807		13	$150	$100	$50	$5,799
14	$50	$50	$50	$3,092		14	$150	$100	$50	$6,377
15	$50	$50	$50	$3,391		15	$150	$100	$50	$6,983
16	$50	$50	$50	$3,703		16	$150	$100	$50	$7,618
17	$50	$50	$50	$4,031		17	$150	$100	$50	$8,284

113. Assume for the time being that the account owner still only contributes up to the level of the federal match.

A significant number of studies have found that an increase in direct aid leads to an increased enrollment of roughly 3.6 to 4 percentage points, or correspondingly, that an increase in net price leads to decreased enrollment of the same level.[114] One such study looked at the elimination of the Social Security Student Benefits Program, which provided aid to students who had suffered the death of a parent. This study found, consistent with previous studies, that $1,000 in grant aid leads to an increase in enrollment of 3.6 percentage points.[115]

Since the aid provided by these 529 accounts will be almost entirely redirected from higher-income students to these low- and moderate-income students, almost all, if not all, of this amount should be treated as an increase in aid. Even assuming that only $7,500 (low-income) and $3,500 (moderate-income) represent additional aid, and assuming the 18 percent (low-income) and 24 percent (moderate-income) participation rates, this basic scenario could lead to an increase in enrollment of up to 4.8 percentage points (low) and 3 percentage points for these income classes, increasing participation from around 40 percent to as high as 44 percent.[116]

There is also reason to believe that these classes of students are more price-elastic than higher-income students, and the Dynarski study on the impact of aid did not address differential impact based on income. To the extent that that is true, the increase in enrollment may be toward the higher end of the spectrum (4 percent) since it is targeted only toward low- and moderate-income students. This would represent increased enrollment of 3.6

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114. Susan Dynarski, Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion 16 (John F. Kennedy Sch. of Gov't, Faculty Research Working Paper Series, No. RWP01-034, 2001), available at http://web.hks.harvard.edu/publications/getFile.aspx?Id=21. See also Larry L. Leslie & Paul T. Brinkman, The Economic Value of Higher Education 124-25, 155 (1988) (stating that a $1,000 increase in net price decreases attendance by 3-5 percent); Charles F. Manski & David A. Wise, College Choice in America 119-28, 123 tbl.7.4 (1983) ($1,000 in aid increases enrollment by 3.8 percent); Thomas J. Kane, College Entry by Blacks since 1970: The Role of College Costs, Family Background, and the Returns to Education, 102 J. Pol. Econ. 878, 892-93 tbls.3 & 4 (1994) (finding that a $1,000 increase in price decreases enrollment by 3.7 percent).

115. Dynarski, supra note 114, at 16.

116. This assumes a linear impact of the aid such that the third $1,000 has the same impact as the first, an assumption also made in these studies. Thus, this number is calculated as 3.6 percent (7.5) = 27 percent (.18) = 4.86 percent, and for moderate-income students 3.6 percent (3.5) = 12.6 percent (.24) = 3.02 percent. Note also that this should not have an impact on college prices — when Pell Grants were introduced many argued that the increase in aid would just be directly offset with an increase in tuition. This never materialized and is not suspected to be problem. See id.

percentage points for low-income students and 2.7 percentage points for moderate-income students.

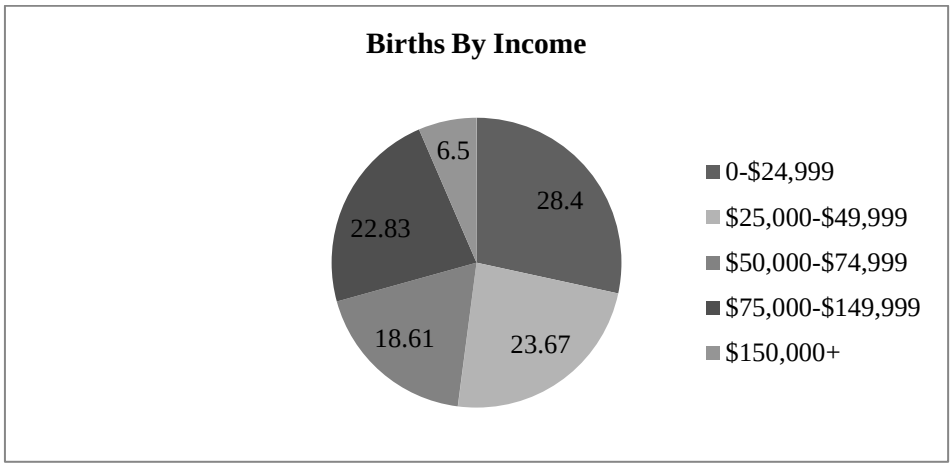
CONCLUSION

Federal financial aid has recently moved away from focusing on giving direct aid to low- and moderate-income students and at the same time has seen a stalling of enrollment rates. There is also a continued and wide gap between the enrollment rates of lower-income students and higher-income students. This paper has shown that the most effective way to increase the enrollment rates among low-to-moderate-income students is to decrease net price by offering a grant at the time of enrollment. A 529 plan can not only affect this same decrease in net price and thus have the same incentive, but it can also induce families to save on their own — thus giving the student a grant in the amount not only of the government's share, but of the family's contributed share as well. This can be accomplished in a revenue-neutral manner by eliminating the current tax benefits on 529 accounts, thus giving the government $1 billion annually for the program. The government can thus offer an initial grant into a 529 account for each child born into a family with low-to-moderate income, as well as annual matching grants, both dependent on income. Based on evaluations of similar current programs, this could lead to an increase in enrollment among these students of almost 5 percentage points, a number which could be much larger if expanded beyond this revenue-neutral analysis. This increase would be more than any seen in the previous two decades and was achieved using only $1 billion of federal funds already allocated to 529 plans — a paltry sum compared to either the $180 billion of total federal financial aid or the $35 billion of tax incentives for education.

APPENDIX A — BIRTHS BY INCOME FOR 2006

Income Minimum	Income Maximum	Number of women	Births per 1,000 Women	Births	%
0	$10,000	15,889,965	33.2	527,547	12.61%
$10,000	$14,999	2,308,705	89.5	206,629	4.94%
$15,000	$24,999	5,324,892	85.2	453,681	10.85%
$25,000	$34,999	5,864,945	74.7	438,111	10.47%
$35,000	$49,999	8,599,979	64.2	552,119	13.20%
$50,000	$74,999	13,215,740	58.9	778,407	18.61%
$75,000	$99,999	9,647,862	51.9	500,724	11.97%
$100,000	$149,999	9,444,088	48.1	454,261	10.86%
$150,000	$199,999	3,105,652	46.7	145,034	3.47%
$200,000+		2,770,679	45.7	126,620	3.03%
Total		76,172,507		4,183,133	100.00%

Source: Jane Lawler Dye, U.S. Census Bureau, Fertility of American Women: 2006, 6, available at http://www.census.gov/ prod/2008pubs/p20-558.pdf.



Source: Jane Lawler Dye, U.S. Census Bureau, Fertility of American Women: 2006, 6, available at http://www.census.gov/ prod/2008pubs/p20-558.pdf.

APPENDIX B — STATE PLANS

State	Name of Plan	Eligibility	Match Criteria	Funding	Procedure for Granting Match	Distribution
Arkansas	GIFT College Investing Plan	Household Income below $60,000	For income below $30,000, the match is 2 to 1. For income between $30,000 and $60,000 the match is 1 to 1. Both are capped at $500 per year.	State appropriation of $250,000 for a pilot program.	Match contributed to account opened by the owner.	
Colorado	Direct Portfolio College Savings Plan, Scholars Choice College Savings Program, Stable Value Plus College Savings Program	Household income up to 200% of the federal poverty line, and beneficiary under the age of 13 at the time of application.	1 to 1 match for contributions up to $500 per year and limited to 5 years of matches.	Annual budgeting by the state.	Match goes into separate account in the beneficiary's name that is owned by CollegeInvest (the investment management company).	Paid directly to institution, matches revoked if no qualified withdrawals by age 22.
Kansas	Learning Quest	Household income below 200% of the federal poverty level and available to first 300 applicants in each of the four Congressional districts.	1 to 1 match for contributions above $100 and up to $600 per year.	Pilot program funded for three years by the state.	Match goes into separate account in the beneficiary's name but tied to the same investment portfolio.	Paid directly to institution or to beneficiary with proof for reimbursement of qualified expenses.
Louisiana	START Saving Program	All residents are eligible but the match is progressive based on household	Progressive match based on income which ranges from 2% to 14%.	Subject to yearly appropriations.	Credited directly to the accountholder.	State recovers match and earnings accrued if withdrawal for non-

		income, with the highest match (14%) available to those with income up to $29,999.				qualified purpose.
Maine	NextGen College Investing Plan	Families with AGI of $75,000 or less.	State provides a $200 initial grant on accounts funded with at least $50. The Harold Alfond Foundation makes available a $500 initial grant to ALL babies to open such an account, regardless of income. (The annual contribution match was not renewed for 2010).	Funded by the user fees that are paid by non-resident accountholders.	Matches go to separate account in beneficiary's name but owned and invested by FAME.	Application process to apply for use of the funds.
Michigan Discontinued for 2009-2010	Michigan Educaiton Savings Program	Available to those with AGI up to $80,000 and beneficiary under the age of seven.	One time matching grant of $1 for every $3 contributed, capped at a total match of $200.	State appropriation from tobacco settlement fund.	Matches go to separate account owned by the Savings Program and invested in institutional bonds.	Paid directly to the institution and recovered by the state if not used by the age of 30 or if no longer needed by beneficiary.
Minnesota	Minnesota College Savings Plan	AGI up to $80,000 and must contribute $200 per year.	15% match for those with income up to $50,000, 10 % match for those with income between $50,000 and $80,000. Both	Funded by annual appropriations where matches reduced proportionately when not sufficient to cover all.	Matches go to separate account owned by the state and invested in guaranteed return fund.	No distributions can be made until the account has been open for 3 years.

			are capped at $400 per year.			
Nebraska	College Savings Plan of Nebraska	Available to residents and non-residents attending a Nebraska university.	Can apply for additional contribution from a private fund.	Privately-funded endowment.	Matches go to the account.	
Nevada	The Upromise College Fund	Prior-year AGI of $61,950 or less and Nevada resident.	$300 annual matching contribution with a $1,500 lifetime limit.			
New Jersey	Any NJ College Savings Plan	Eligible to anyone with a NJ College Savings plan with contributions requirements (not yet set).	$1,500 scholarship at NJ college for first semester if have met the contribution requirements.	State appropriations.	Directly to institution.	
North Dakota	College SAVE	ND residents with incomes below $80,000 (joint) or $40,000 (single) and beneficiary under the age of 12.	One time 1 to 1 match of up to $300.	Funded by user fees.	Matches go to separate account owned by Bank of North Dakota.	Payment sent directly to institution.
Oklahoma	Oklahoma College Savings Plan	Randomly selected children born in the state in 2007.	Received an initial $1,000 contribution and are eligible for a .5 to 1 ($125 total) or 1 to 1 ($250 total) match based on income.	Part of a study called SEED OK funded by the Ford Foundation.	Matches and initial contribution go to beneficiary's account.	
Rhode Island	CollegeBoundFund	Eligibility based on previous-year AGI but income limits not yet set.	1 to 1 match up to $500 annually.	Funded by national user fees (and reduced proportionally preserving 1 to 1 match where necessary).	Matches go to separate account in beneficiary's name and owned and invested by CollegeBound.	Sent directly to institution and will be revoked if not used within "reasonable" time of becoming eligible to withdraw.

Utah	Utah Education Savings Plan	Up to 200% of federal poverty level or eligible for TANF, AND must commit to saving $25 per month in account.	1 to 1 match up to $300 per year for a maximum of four years.	Pilot program funded by the state.	Matches go to separate account owned by the Plan and in the beneficiary's name.	Paid directly to instution.

Sources: SavingforCollege.com, Compare 529 Plans, http://www.savingforcollege.com/compare_529_plans/index.php?plan_question_ids[]=438&mode=Compare&page=compare_plan_questions&plan_type_id= (last visited Jan. 24, 2011).

Margaret Clancy, Lisa Reyes Mason, & Soda Lo, Ctr. for Soc. Dev., Wash. Univ. St. Louis, State 529 Matching Grant Program Summary (2008), available at http://csd.wustl.edu/Publications/Documents/529_Summary.pdf.