Who Benefits Most from Section 529 Plans and Coverdell ESA Accounts?

While much has been written on the influence of current financial aid policy on improving college attendance, little empirical research has studied who benefits most from Section 529 plans and Coverdell ESA accounts. Descriptive and multivariate results in this paper show that more educated, wealthier, and higher-income households are more likely to use tax-advantaged educational 529 or ESA plans, even after controlling for other factors (such as receiving financial advice). Given the desire to establish policies that lead to underserved populations receiving increasing opportunities to complete higher education, the current structure of 529/ESA plans are regressive in nature—higher-income or socio-economic households actually benefit more from these educational savings vehicles. This paper concludes with a discussion on the possible creation of an Education Savers Credit which could provide greater incentives for lower-income households to save for education.

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Introduction

Improving access to quality education for underserved populations has frequently been pegged as a U.S. government priority. More recently, not only has the media covered stories on education (Education Nation), but the U.S. Department of Education recently headlined a national event to encourage schools to adopt grant programs that help students successfully complete high school diplomas and prepare for and succeed in postsecondary education (Pacchetti, 2010). However, lack of funding can present significant barriers to persisting with a college education. For instance, Long and Riley (2007) found that even after taking into account all financial aid sources received (such as grants, work-study, and loans), dependent full-time, full-year students in the lower income quartile still had on average $6,783 of unmet needs ($7,568 for independent full-time, full-year students in the lowest income quartile). As part of an effort to ease the burden of college costs and provide incentives for households to save for education, in 1996 Congress enacted Section 529 of the Internal Revenue Code (IRC), which granted states the ability to establish tax-exempt prepaid tuition and college savings plans. Shortly thereafter, a similar tax-advantaged instrument, the Educational IRA (later named the Coverdell Education Savings Accounts (ESA) in 2001), was established through the Taxpayer Relief Act of 1997. While much has been written on the influence of current financial aid policy on improving college attendance, the purpose of this paper is to investigate which U.S. households are more likely to own and therefore benefit from tax-advantaged ESAs and 529 Plans.

Literature

Dynarski (2004, 2005) discusses theoretically how the current structure of 529 Savings and Coverdell Education Savings Accounts (ESAs) significantly benefit higher income households in three ways. First, since both 529 Saving and ESA allow households to contribute after-tax income in an account where earnings accrue tax-free and withdrawals are tax-free as long as used for qualified higher education expenses, households with higher marginal tax rates (higher income) will gain most from sheltering income. ESAs, in addition to post-secondary expenses, also permit tax-free withdrawals for elementary or secondary expenses, such as tuition for the cost of private school. Second, since withdrawals from both 529 Saving and ESA are penalized using a fixed percentage (10% penalty tax) for non-qualified educational withdrawals and usually taxed at the beneficiary's rate, higher income earnings households are hurt less by the penalty in relative terms and may even benefit more from investing in 529s or ESAs and withdrawing for non-qualified use versus investing in a non-tax advantaged account. Third, highest-income families, who are very unlikely to qualify for financial aid, are unaffected by an aid tax, or reduction in financial aid received due to greater amounts of financial assets (currently 529 and ESA accounts count as financial assets). In contrast, lower-income households, who are more likely to be eligible for financial aid, are more impacted by this aid tax. Dynarski (2004) note that this annual aid tax can reach as high as 5.64% per year on outstanding financial asset balances. To illustrate these benefits to higher-income households Dynarski (2004, 2005) calculated returns that would be generated through 529 or ESA accounts and compared them to returns generated in a non-tax advantaged account, such as in a taxable mutual fund. Assuming similar investments for each account (weight to stocks decline, weight to bonds increase as time horizon declines) and after considering taxes (aid tax, capital gains and dividend taxes), Dynarski demonstrated that higher-income households realize much larger returns relative to investing in non-tax advantaged accounts compared to lower-income households.

While Dynarski (2004, 2005) presented a thorough discussion on why higher-income households should have a greater incentive to use 529 and ESA accounts, little empirical research has been performed in this area, mainly due to limited availability of data. Dynarski (2004) used the 2001Survey of Consumer Finances to present descriptive statistics that provided a general profile of U.S. households that hold 529 or ESA accounts. The Department of the Treasury (2009) used the 2007 Survey of Consumer Finances to present similar descriptive statistics results. We are not aware of any empirical study that has sought to combine SCF years 2001, 2004, and 2007 to evaluate educational savings vehicle ownership. 2001 was the first year in which the Survey of Consumer Finances asked information on 529 and ESA accounts. Further, in 2001 Educational IRAs were renamed Coverdell Education Savings Accounts (ESAs). Separate analysis by SCF year was run and yielded similar results as when years were combined as shown in this paper. By combining these three years and including other variables (such as education, use of financial planner) in regression form, this study seeks to more clearly isolate the effects of different factors and determine which households are more likely to take advantage of 529 or ESA ownership.

Building on the discussion presented by Dynarski (2004, 2005) we frame the likelihood of owning an educational savings vehicle as follows:

Likelihood of Owning an Educational Savings Vehicle (529 or ESA account) =

f (Education Saving Motive, Financial Advice, Probability Beneficiary Use for Education, Net Worth, Income)

We hypothesize that households with motives to save for education, who receive financial advice from a financial planner, who face a greater probability that beneficiaries will use funds for qualified education expenses, and who have greater net worth and income are more likely to own either a 529 or ESA account.

Methods

Data

The Surveys of Consumer Finances (SCF) is a triennial cross-sectional survey sponsored by the Federal Reserve Board (FRB) and includes details on household education, income, wealth, and other factors important for this study (such as whether the household owns a 529 or ESA plan). Given the oversampling of wealthy respondents inherent in the SCF, descriptive data in this survey was appropriately weighted using the SCF sampling weights provided by the Federal Reserve Board to generate nationally representative statistical estimates. Further, given the use of multiple imputed data, the repeated-imputed inference (RII) technique was used in our regression analysis to more appropriately test our hypotheses (Montalto and Sung, 1996).

Empirical Model and Coding

Given our interest in examining the factors associated with the likelihood of 529 or ESA ownership, the following logistic regression model is developed:

$$\log\left(p_i/(1-p_i)\right) = \beta_0 + \beta_1 \text{Educ Sav Motive}_i + \beta_2 \text{Fin Advice}_i + \beta_3 \text{Prob Funds for Educ}_i \beta_4 \text{Net Worth}_i + \beta_5 \text{Net Income}_i + \varepsilon_i$$

In this model, p_i = the probability that household i owns an educational savings vehicle. A household is determined to own an educational savings vehicle if it owns at least one 529 *or* ESA account. A household that reports one of its top three reasons for saving is for education for someone (either spouse, child, grandchild, or someone else) is considered to have a strong motive to save for education (coded 1). A household is determined to have received independent, expert financial advice (coded 1) if it reported that one of its top three sources of information when making investment decisions was a financial planner. This approach is similar to how Finke, Huston, and Waller (2009) treated whether a household received comprehensive financial advice when considering insurance contracts. Given that the SCF does not ask households the probability that a child or beneficiary will attend college, we develop two general proxies for this measure. First, a household with at least one child that is under the age of 16 is considered to have a greater probability of having a child go to college (coded 1) than a child who is much older and already past college age. Second, consistent with research has shown that students whose parents did not go to college are also much less likely to go to college (Choy, 2001) households headed by a parent with greater education are considered to have a greater probability of having a child go to college. Five dummy variables were created for different levels of education of the head of household: no high school degree, high school degree, some college, college degree, and attended graduate school. Finally, after adjusting for inflation using the CPI index and same methodology employed by the Federal Reserve Board when reporting on the SCF, quintiles of net worth and income were created.

Results and Conclusion

Table 1 presents descriptive statistics for all households, non-529/ESA savers, and 529/ESA savers. The descriptive statistics are consistent with our expectations regarding 529/ESA savers—54.06% possess a strong education savings motive (19.25% for non-529/ESA savers), 31% report financial planners as a major source when making investment decisions (15.84% for non-529/ESA savers), 61.55% have a child under 16 (27.64% for non-529/ESA savers), 75.33% hold at least a college degree (35.65% for non-529/ESA savers), 77.49% are in top two quintiles of net worth (39.08% for non-529/ESA savers), and 87.34% are in top two quintiles of income (39.07% for non-529/ESA savers).

Table 1 Descriptive Statistics of Total Sample, Non-529/Coverdell Savers, 592/Coverdell Savers

Variable	**Total Sample (N=13,379)**	**Non-529/ESA Savers (N=12,898)**	**529/ESA Savers (N=481)**
Dependent Variable			
529 or Coverdell Saver	2.43%	-	100%
Not 529 or Coverdell Saver	97.57%	100%	-
Independent Variables			
Motive			
Education Savings Motive	20.09%	19.25%	54.06%
Financial Advice			
Advice from Financial Planner	16.21%	15.84%	31.00%
Probability Beneficiary Uses Funds for Education			
Have Child under 16	28.47%	27.64%	61.55%
Education			
Not High School Graduate	13.50%	13.82%	0.83%
High School Graduate	30.13%	30.58%	12.15%
Some College	19.75%	19.95%	11.68%
College Degree	24.34%	23.85%	44.04%
Graduate School	12.27%	11.80%	31.29%
Net Worth			
1st Quintile	20.00%	20.43%	2.83%
2nd Quintile	20.00%	20.35%	5.77%
3rd Quintile	19.99%	20.14%	13.92%
4th Quintile	20.01%	19.85%	26.38%
5th Quintile	20.00%	19.23%	51.11%
Income			
1st Quintile	19.99%	20.46%	1.23%
2nd Quintile	19.94%	20.39%	1.79%
3rd Quintile	19.83%	20.08%	9.64%
4th Quintile	20.16%	20.06%	24.03%
5th Quintile	20.08%	19.01%	63.31%
Motive			