

# INCLUSION IN COLLEGE SAVINGS PLANS: PROGRAM FEATURES AND SAVINGS\*

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## INTRODUCTION

**I**N THE PAST 30 YEARS, THE UNITED STATES HAS experienced increases in the rates of graduation from high school, enrollment in college, and graduation from college. However, disparities still persist by income and race (Bauman and Graf, 2003; McNeil, 1998; National Center for Education Statistics, 2005). Whether someone goes to college often depends on how much the student and his or her family can afford to pay. In the last 20 years, higher education has become less affordable, which presents particular challenges for students from poor families (National Center for Public Policy and Higher Education, 2002, 2004; Parrish, 2004).

Increasingly, higher education is financed by student loans, rather than need-based grants. College costs and trends in student aid discourage many poor students from applying to college. For students from poor families who do apply and receive financial aid, many are fearful of debt, turn down student loans, and postpone enrollment or do not enroll in 4-year colleges (Giegerich, 2005; National Center for Public Policy and Higher Education, 2002). For middle- and upper-income families, the availability of resources to pay for college may influence where the student enrolls. For low-income families, available resources may influence whether the student applies to college or, once accepted, decides whether to enroll.

In 2001, the Internal Revenue Code authorized college savings plans (529 plans) as a tax-advantaged savings tool. In a 529 plan, individuals save money in an account that is dedicated for college expenses of a beneficiary. Although there is growth in awareness and participation, people saving in 529 plans have higher incomes and assets than

those not saving in these plans (Hurley, 2002; Investment Company Institute, 2003). In addition, 529 plans are regressive in their current form. Tax incentives provide more benefit to people with higher incomes. Individuals with lower incomes have little or no tax liability and may have little wealth to transfer into 529s to take advantage of tax-free earnings.

There is potential for 529 savings plans to reach a broader population and increase access to higher education. Some states have developed features in their 529 plans that facilitate the participation and saving of low-to-middle income families (Clancy and Sherraden, 2003). How do these features affect participation rates? Do the features help account owners save? Answers to these questions may inform future program and policy development. To date, there has been little research on inclusive aspects of 529s.

This study examines characteristics and savings of account owners in the NextGen College Investing Plan<sup>®</sup> (NextGen<sup>®</sup>), the state of Maine's 529 savings plan.<sup>1</sup> The study focuses on adults who have received at least one matching grant through the NextGen Matching Grant Program. This program is designed to raise 529 participation and savings among low-to-middle income Maine residents. Two broad research questions are asked: Who is saving in the NextGen Matching Grant Program? What factors are associated with saving?

## BACKGROUND

### Saving for College and 529 Plans

The 529 plans allow individuals to make after-tax deposits into an account dedicated to future higher education expenses. The account owner chooses a beneficiary, who can be changed at the owner's discretion. States administer 529 plans, and offer a limited selection of funds with a range of risk and return characteristics. This selection typically includes a principal preservation fund that guarantees a minimum rate of return, equity

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and fixed income options, and balanced allocation options based on the beneficiary's age. Earnings and qualified withdrawals for higher education are free from federal and state taxes.<sup>2</sup> In addition, contributions are tax deductible in many states for state-resident contributions to 529 plans.

Seven states offer 529 savings matches for account owners or beneficiaries who are state residents (see Clancy et al., 2006, for detail). Match designs vary by state.<sup>3</sup> In addition, state partnerships with public and nonprofit organizations help families learn about 529s and saving for college in venues such as school systems, public libraries, and child care centers, or via the State Department of Human Resources (e.g., mailing 529 savings plan information with every birth certificate) (Ferguson, 2004).

#### **NextGen Matching Grant Program**

NextGen, the state of Maine's 529 plan, was launched in 1999. The plan is administered by the Finance Authority of Maine (FAME), with financial oversight provided by the Maine State Treasurer. In 2002, Maine launched the NextGen Matching Grant Program, which provides eligible account owners with two types of grants: an Initial Matching Grant and an Annual Matching Grant.

The minimum contribution to open a NextGen account is \$250, higher than the amount required by a majority of states to open a 529.<sup>4</sup> However, since 2002, state-resident families have been able to open accounts with as little as \$50 if they apply for a \$200 Initial Matching Grant (IMG).<sup>5</sup> The Annual Matching Grant (AMG) is available to any eligible account, including those opened prior to 2002. From 2002 to 2004, the maximum AMG was \$100 per year. In 2005, the maximum increased to \$200 (see Clancy et al., 2006, for detail).

While the IMG is a one-time grant, account owners can apply for the AMG each year if they meet the eligibility criteria. Application forms and information about the grants are available on the FAME Web site, and FAME mails AMG applications to all NextGen account owners every year. For both types of grants, account owners must return the applications and self-certify that their adjusted gross income (AGI) meets the eligibility criteria.

#### **Asset Accumulation among Low-Income Households: Perspective and Evidence**

An institutional perspective on saving, and evidence from research on matched savings pro-

grams, suggest that some low-income families can and will save for higher education (Schreiner and Sherraden, 2006; Sherraden, Schreiner, and Beverly, 2003; Zhan and Schreiner, 2004). This perspective focuses on structural determinants of saving, which may include access, information, incentives, facilitation, expectations, restrictions, and security (Beverly and Sherraden, 1999; Sherraden and Barr, 2005; Sherraden, Schreiner, and Beverly, 2003).

Among other research questions, this study examines two institutional constructs—incentives and facilitation—as possible predictors of saving among people who received a matching grant in a 529 savings plan. For example, incentives such as matching grants, tax-free earnings, and rebates are expected to influence saving. In a study of matching in pension plans, Munnell, Sundén, and Taylor (2003) find positive relationships between an employer's match rate and employee participation in and contribution to their pensions. In Individual Development Account (IDA) programs, higher match rates are associated with reduced unmatched withdrawals and program dropouts (Schreiner, 2005).<sup>6</sup> In the American Dream Demonstration study of IDAs, about 95 percent of IDA participants agreed that matching positively affected their personal saving (Moore et al., 2001).

Many 529 plans also offer services that increase access and facilitate participation. Madrian and Shea (2001) find that automatic enrollment is positively related to participation rate in 401(k) plans. Similar results have been replicated in other studies (Choi et al., 2004; Thaler and Benartzi, 2004), where automatic enrollment plans increased participation rates and contribution rates in pension plans. Sherraden et al. (2003) regard facilitation as a key feature of most contractual saving programs, and evidence supports the effects of facilitation on saving outcomes.

## **METHODOLOGY**

### **Data and Sample**

Data for this study come from: (1) NextGen account and savings data from FAME for 137 account owners in the NextGen Matching Grant Program; and (2) a telephone survey of the same 137 account owners.<sup>7</sup> FAME provided annual and cumulative savings data for the plan years beginning in 1999 and ending in 2005, as well as the

birth dates of the beneficiaries. The savings data include account owner contributions, withdrawals, matching grant awards (in total dollars) and matching grant distributions for each year since the account was opened, as well as the total account value, total contributions and awards, and total withdrawals and distributions.

To create the telephone survey sample, FAME provided a file of 1,335 NextGen accounts that were open and had received at least one matching grant award (an IMG or an AMG) as of December 31, 2004. After narrowing the study criteria,<sup>8</sup> researchers randomly selected 350 accounts for potential participation in the study. Multiple attempts were made to contact the 350 account owners by mail and phone to invite participation in the study. The final survey sample size was 137.<sup>9</sup> Based on the limited information available in the account and savings data file from FAME, the 137 survey participants appear generally representative of the 343 account owners invited to participate in the study. No statistically significant differences were found between survey participants and nonparticipants on measures of total account value, total contributions and awards, how long the account had been open, first year contribution values, or age of the beneficiary. Survey participants did differ significantly from nonparticipants on two measures: annual deposit frequency (the percentage of years that an account was open, in which at least one deposit was made each year) and total matching dollars. Survey participants had an average annual deposit frequency of 81 percent compared to 68 percent for nonparticipants. Survey participants had also received slightly higher total matching grant dollars than nonparticipants. The average total for survey participants was \$300, compared to \$265 for nonparticipants. Although statistically significant, the difference of \$35 between the two groups is not large in practical terms.

### Measures

#### Dependent variables

This study uses average annual contribution to measure 529 saving. Average annual contribution is the sum of all account owner contributions to the account, divided by the age of account. Since this measure considers each account's age, it is used to compare savings among account owners who opened their accounts in different years. Of particular importance, this measure does not

include the value of any matching grants; only contributions made by the account owner are included.<sup>10</sup>

Specific research questions are tested regarding 529 saving outcomes: 1) do individual characteristics predict 529 saving? 2) does receipt of an Initial Matching Grant or Annual Matching Grant predict 529 saving? and 3) does automatic deposit use predict 529 saving?

#### Independent variables

An institutional perspective, which informs this study, suggests that structural factors may influence 529 saving. To test this theory, various individual characteristics are included as controls: age of the beneficiary, age of the account owner, account owner relationship to the beneficiary, and account owner marital status, education level, and income.<sup>11</sup>

The relationship between structural factors and 529 saving is tested by including the following independent variables: receipt of an Initial Matching Grant (yes/no), receipt of an Annual Matching Grant (yes/no), and use of NextGen's Automated Funding Service (AFS)<sup>12</sup> (yes/no).

## RESULTS

### Descriptive Statistics

Characteristics of the survey sample (N=137) are presented in Table 1. Individuals of different age, marital status, educational, and income backgrounds are participating in the NextGen Matching Grant Program. Account owners in this study range in age from 27 to 87, and have a mean age of 49. The mean age of beneficiaries is 9. About 61 percent of account owners are married, and about 69 percent of the sample is parents who designated their child as the account beneficiary. While a majority of account owners have at least a college degree, some have a high school diploma or less. In addition, even some very low-income families with less than \$30,000 AGI are saving in the program.

About 83 percent of the survey sample opened their accounts since 2002. Among all account owners in this study, mean average annual contribution to accounts is \$933. Account owners appear to be active savers, with mean annual deposit frequencies of 81 percent. On average, account owners have two NextGen accounts.

Table 1  
**Characteristics of the Sample**

<i>Variables</i>	<i>Survey Sample (N=137)</i> <i>Frequency (%) &amp; Mean</i>	<i>Analysis Sample (N=131)</i> <i>Frequency (%) &amp; Mean</i>
Average annual contribution (\$)	933.29	660.63
Average annual account value (\$)	1,214.28	867.73
Age of beneficiary	8.7	6.1
Age of account holder	48.7	42.9
Parent of beneficiary	69.3	68.7
Married	60.6	62.6
Educational attainment		
Up to high school diploma or GED	13.9	14.5
Some college, voc/tech, associate's	24.8	23.7
Bachelor degree or more	61.3	61.8
Adjusted gross income		
Less than \$30,000	25.6	25.2
\$30,000 to \$39,999	19.7	19.9
\$40,000 to \$49,999	30.7	30.5
More than \$50,000	24.1	24.4
First year contribution (\$)	1,832.06	839.90
Number of NextGen accounts	1.8	1.8
Annual deposit frequency since 1999 (%)	80.7	81.4
Annual deposit frequency since 2002 (%)	80.7	81.6
Account open since 2002	83.2	83.2
Receipt of IMG	72.3	72.5
Receipt of AMG	73.0	72.5
AFS use	30.7	31.3

Table 1 also presents descriptive findings for an analysis sample (N=131) that was created by removing six outliers due to large contributions to the accounts during the first year of account opening.<sup>13</sup> Of note, the average first-year contribution amount of the analysis sample decreases by over 50 percent, from about \$1,832 to \$840. Average annual contribution decreases from about \$933 to \$661, and average annual account value from \$1,214 to \$868.

All account owners in this study had received at least one matching grant, as required by the study criteria. About 72 percent received an IMG, and 73 percent received an AMG. Account owners who received both an IMG and AMG represent 45 percent of the sample. About 31 percent of the sample use AFS, a service provided by NextGen, through which account owners make direct deposits into accounts.

A comparison of all study participants with the general population of Maine shows that matching grant recipients are more educated and may have a somewhat higher median income. About 61 percent of account owners have at least a bachelor's degree, compared to 26 percent of the Maine population

over age 25. Median household AGI in this study was \$40,000 to \$50,000,<sup>14</sup> and the median total household income in Maine was \$42,163 in 2004 (U.S. Census Bureau, 2006).

#### Saving Analysis in NextGen

An ordinary least squares regression model tests associations between individual and institutional characteristics and 529 saving (measured by average annual contribution) (Table 2).<sup>15</sup> Model construction was affected by the small sample size and large number of covariates. Variables were selected based on the theoretical background and empirical evidence from other studies, as discussed previously. In addition, several demographic and socioeconomic variables such as race or ethnicity, home ownership, ownership of other assets, and public assistance receipt were not included in the models, as they have small variation in the sample.<sup>16</sup>

#### Average annual contribution

Table 2 presents findings for the model of average annual contribution. The model explains about

*Table 2*  
**Predictors of Average Annual Account Owner Contribution (N=131)**

<i>Variables</i>	<i>Beta</i>	<i>P value</i>
Age of beneficiary	.04	.64
Age of account owner	.10	.43
Parent of beneficiary	-.05	.71
Married	.17	.03
Educational attainment		
Up to high school diploma or GED		
Some college, voc/tech, associate's	.16	.13
Bachelor degree or more	.04	.72
Adjusted gross income		
Less than \$30,000		
\$30,000 to \$39,999	-.05	.58
\$40,000 to \$49,999	.04	.65
More than \$50,000	.03	.74
Number of NextGen accounts	.02	.77
Account open since 2002	.05	.67
Receipt of IMG	-.15	.17
Receipt of AMG	.39	<.01
AFS use	.41	<.01
F value (df)		6.83 (14)
Adjusted R Square		.386

39% of the variance in the dependent variable and is statistically significant ( $F=6.83$ ,  $p<.001$ ).

With the exception of marital status, account owner and beneficiary characteristics are not significantly associated with average annual contribution. Married account owners are more likely to have higher average annual contributions than non-married owners. Neither the age of beneficiary nor the age of the account owner is associated with 529 saving. Similarly, no saving relationship is found with the account owner's AGI, educational attainment, relationship to the beneficiary, or number of NextGen accounts owned.

Consistent with an institutional perspective on saving, account owners who use AFS are more likely to have higher average annual contributions. In addition, account owners who received an Annual Matching Grant are more likely to have higher contributions than those who did not receive this kind of grant. Receipt of an Initial Matching Grant is not associated with higher 529 saving by the account owner.

#### LIMITATIONS

Certain limitations in the study discourage generalization of the results. The study sample is small in size, and not representative of Maine's general

population on characteristics such as education and income. In addition, out of all potential study participants, those who completed a survey had saved more frequently (on an annual basis) than those who did not complete the survey. The study's use of cross-sectional data prevents us from analyzing how changes in participant characteristics over time are related to saving. Since the duration of account ownership is short for most participants in the study (three years or less), we cannot estimate long-term relationships between predictors of saving and 529 saving outcomes.

#### DISCUSSION

It is noteworthy that, controlling for other factors, most individual features such as age of beneficiary, age of account owner, and education status are not statistically associated with 529 saving in this study. An exception to this is marital status, as we find that account owners who are married contribute more to the account each year than those who are not married. Perhaps more interestingly, higher income is not a significant predictor of 529 saving. Regardless of the observed personal characteristics, matching grant recipients seem to save somewhat equally in 529 plans with inclusive program features.

Our findings are more consistent with an institutional view of saving, which suggests that individuals respond to structured opportunities to save such as incentives and facilitation (Sherraden and Barr, 2005). In this study of NextGen matching grant recipients, the receipt of an Annual Matching Grant and the use of NextGen's Automated Funding Service (to make direct deposits into the account) emerged as key factors associated with 529 saving. These findings may be an expression of the importance of institutional characteristics in 529 saving outcomes.

It is interesting to note that receipt of an Annual Matching Grant was associated with higher annual 529 saving, while receipt of an Initial Matching Grant was not associated with 529 saving. These results suggest that the type of matching grant received, controlling for many other factors, is associated with saving in NextGen's Matching Grant Program. In some ways, this may seem obvious, as account owners must contribute a minimum amount to the account in order to qualify for an Annual Matching Grant (minimum of \$200 per year from 2002-2004, and \$50 per year from 2005 forward). At the same time, receipt of a matching grant would not seem likely to guarantee significantly higher saving, as some accounts owners could accept matching grants (a de facto high rate of return) and then do little or nothing more in the way of additional saving. Indeed, this might even be predicted. But the opposite appears to be true. The implication of this finding is that NextGen's Annual Matching Grant may be effective in "jump starting" 529 saving among low-to-middle income families.

An important question, not fully addressed by this study, is what are the predictors of receiving an Annual Matching Grant. Some possible explanations emerge from the survey results. Among 21 account owners who received an Annual Matching Grant in the past, but who no longer do, self-reported reasons for no longer receiving this grant include: did not apply, did not save enough to be eligible, did not receive the paperwork, overwhelmed with paperwork, and did not hear about it. These results suggest that Maine may want to look further into the matching grant application process and examine whether this process can be simplified. In addition, given that certain program changes were implemented in 2005, a more longitudinal analysis would help determine whether these changes make it easier for account owners to qualify for an Annual Matching Grant.

With regard to the Initial Matching Grant, although receipt of this grant is not statistically related to the 529 saving outcome measured in this study, it is possible that the presence of this incentive led some account owners to open a NextGen account, when they otherwise would not have. When asked about the importance of the Initial Matching Grant in their decision to open an account, 83 percent of IMG recipients report that the grant was very or somewhat important to them.

To be sure, we cannot conclude in this study that receipt and type of matching grants cause additional saving in NextGen. It could be that savings-oriented account owners are also the ones who take most advantage of matching grants, and very likely the actual explanation is some combination of both.

Regarding facilitation as a determinant of 529 saving, the study finds that using NextGen's Automated Funding Service (AFS) is significantly associated with higher average annual contributions among matching grant recipients. These results strongly support the use of automated deposits as a facilitation mechanism for accumulating savings in a 529.

Further inquiry can examine why some account owners use AFS and why others do not. Findings from the survey provide preliminary answers to this question. Among account owners in this study, about 69 percent do not use AFS. They provide a variety of reasons for why they are not enrolled in the service, including: irregular paychecks, did not know the feature was available, insufficient funds to make deposit, too high minimum deposits for AFS, and retired. These responses suggest that resource constraints may prevent some account owners from using AFS, which requires an automated contribution equivalent to at least \$50 per month.

## IMPLICATIONS

Matching incentives appear to influence saving in this study of a 529 matching grant program. Thus, one area for policy development may be greater use of income tax refunds as a source of deposits into 529 accounts, to help account owners earn matching grant awards. It may also be desirable to ask what matching grant awards might lead to the most effective use of public funds and greater college savings for low-to-middle income families. For

example, what information and outreach strategies might increase the use of matching grants? What is the ideal income, relationship to the beneficiary, or other matching eligibility criteria? Could online submission of matching grant applications further facilitate receipt of these awards? Can matching grant awards be awarded automatically, avoiding an annual application process?

Because automated deposits also appear to have a strong influence on 529 saving, key questions emerge regarding how to increase utilization rates of automated funding services. How can automated deposits be encouraged among account owners? What is the ideal minimum automated funding contribution requirement? What prevents account owners from utilizing automated funding? Can automated deposits of tax refunds be implemented, particularly in light of changes to the tax refund process, wherein refunds can be directed to more than one account?

Turning to research, our main point is that more is needed. Research on 529 savings plans with inclusive features and studies of account owners receiving matching grants—such as this study—can inform development of inclusive 529 savings policies at federal and state levels. In order to assess how the NextGen Matching Grant Program expands use of 529s, future research could compare matching grant recipients to all other NextGen account owners, and all NextGen account owners to participants in other 529 savings plans. Such comparisons would require Maine and other states to gather additional demographic information about account owners at enrollment, to lay the groundwork for cross-plan and cross-state comparisons.

Given the importance of higher education, the increasing difficulty that many families face in affording college, and the widespread availability of 529 plans, the current low level of research knowledge hinders policy and program improvements. As can be seen from the results of this one study, research can inform and point to key areas in 529 policy and programming. The research agenda on 529s—especially related to inclusive features—should be expanded.

## Notes

- <sup>1</sup> Maine's 529 plan was selected for this study because of the duration of its match program and the types of match incentives provided.
- <sup>2</sup> For out-of-state plan participation, several states impose taxes on qualified withdrawals, and a few states tax earnings.
- <sup>3</sup> Michigan offers a match on deposits within the first year of opening the account. Others, such as Louisiana and Minnesota, offer annual matches. In some cases, the match increases as household adjusted gross income decreases.
- <sup>4</sup> Twenty-five states require an opening deposit of \$50 or less. The amount required by other states ranges from \$100 to \$1,000 (see Clancy et al., 2006, for detail).
- <sup>5</sup> To apply for an IMG, an account owner must open an account with a minimum \$50 contribution and meet income eligibility requirements. From 2002 to 2004, the income eligibility threshold was household federal adjusted gross income (AGI) equal to or less than \$50,000 in the previous tax year. In 2005, FAME increased the AGI limit to \$52,500 and announced that the limit would adjust annually based on the Consumer Price Index. After opening a Maine NextGen account, the account owner has 12 months to apply for an IMG. In addition, total account owner contributions must equal at least \$250 within five years of opening the account, or the IMG will be rescinded by FAME.
- <sup>6</sup> IDAs are a savings tool designed to increase opportunities for asset accumulation among low-income households (Sherraden, 1991). IDA programs provide subsidized savings accounts that are targeted for a special purpose, typically home ownership, small business capitalization, post-secondary education, home improvement, or retirement.
- <sup>7</sup> The phone survey was developed by the Center for Social Development (CSD) and took about 20 minutes to complete.
- <sup>8</sup> Accounts were removed if the account owner and beneficiary were the same person, since this study focuses on saving for children's higher education. Accounts were also removed if state residency requirements prohibited the account owner from receiving future matching grants. These criteria narrowed the number of accounts to 1,310. Many individuals owned more than one of the 1,310 accounts. For these account owners, one account was randomly selected for inclusion in the study, yielding 802 accounts owned by different account owners.
- <sup>9</sup> Signed informed consent forms were returned by 143 account owners, and phone surveys were conducted with 141. Four survey participants were removed from the study because they had been identified incorrectly as having received at least one matching grant award prior to invitation.
- <sup>10</sup> Average annual contribution was positively skewed. Thus, the dependent variable was transformed with the natural log, a common procedure with financial variables in which there tend to be very large values. After the log transformation, skew and kurtosis of average annual contribution decreased from 5.25 to

-0.60 and from 31.71 to 1.49, respectively. The skew and kurtosis of residual terms in average annual contribution decreased from 3.37 to -0.13 and from 20.72 to 0.94, respectively.

- <sup>11</sup> Since some account owners may be saving in more than one NextGen account, the number of NextGen accounts owned is included as a control variable. Account owners with more than one account may have lower contributions to the account included in this study, if they are at the same time saving in other accounts. Also included as a control variable is whether an account was open since 2002, when the NextGen Matching Grant Program was launched. Account owners who enrolled prior to 2002 were not eligible to receive an Initial Matching Grant.
- <sup>12</sup> The Automated Funding Service (AFS) provides account owners with a way to make automated deposits into the account, through payroll deduction or regular transfers from a bank account.
- <sup>13</sup> The outlying amounts (\$10,000 to \$50,000) suggest that the six account owners likely transferred wealth from other accounts into NextGen. Of course, other account owners may have transferred funds. This study cannot address savings or assets overall, or changes in net worth.
- <sup>14</sup> Given that the matching grant application has income eligibility requirements, it is expected that median AGI in this study is less than \$50,000.
- <sup>15</sup> This study uses mean substitution as the imputation method, since missing data appear to be random, and there are few missing values. The variable with the largest number of missing values in this study is adjusted gross income, with six missing values. Many other variables have one or two missing values.
- <sup>16</sup> About 90 percent of beneficiaries are Caucasian, and a similar percentage are home owners. About 96 percent of account owners have a savings account, and 99 percent have checking accounts. Only 1 percent of households receive Temporary Assistance for Needy Families (TANF), and 2 percent of households receive Food Stamps.

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