Financial Education and Savings Outcomes in Individual Development Accounts

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Abstract

This study is the first quantitative look at the effects of financial education on savings outcomes for the poor in Individual Development Accounts. The findings suggest that financial education has sizeable effects, and that courses need not be long to take advantage of them. Marketing and public-policy implications are noted.

INTRODUCTION

Personal saving serves two primary functions. First, savings provide the economic security of a safety net. By transferring resources from the present to the future via savings, individuals are prepared to face unexpected and irregular financial circumstances. Second, saving leads to accumulation of wealth that enables individuals to improve their living standard and to respond to new opportunities (Gokhale 2000).

But if saving were simple and easy, then few people would lack financial resources. To save means to use less resources in the present, so, even for the non-poor, saving is difficult. Of course, the sacrifice is greater for the poor because they have fewer resources relative to subsistence requirements. Furthermore, the poor lack access to (or awareness of) some public-policy mechanisms that, for the non-poor, decrease the current cost of saving. Finally, scarce resources and restricted access may combine to remove saving from the world view of the poor (Schreiner, et al 2001).

Recognizing the importance of saving and asset building for poor families, numerous states and the United States government have proposed or established Individual Development Account (IDA) policies (Edwards & Rist 2001; Friedman & Boshara 2000). Unlike other subsidized savings accounts such as Individual Retirement Accounts (IRAs) or 401(k) plans, IDAs are targeted to the poor, provide subsidies through matches rather than through tax breaks, and require participants to attend financial education. Participants accrue matches as they save for purposes that build assets that increase long-term well-being and financial self-sufficiency.

Matched uses of withdrawals typically include home purchase, post-secondary education or job training, and microenterprise (Sherraden 1991).

When it comes to saving, people in general—and the poor in particular—might not be completely rational and completely knowledgeable (Bernheim 1994). The goal of financial education is to make people more aware of financial opportunities, choices, and possible consequences. In particular, financial education may help individuals develop skills to accumulate savings. Recently, there is a growing recognition of the importance of financial education as it relates to saving (Bayer, Bernheim & Scholz 1996; Bernheim & Garrett 1996; Mathew Greenwald & Associates, Inc. 2001; Greenspan 2001). IDA programs require financial education, but there is no systematic/scientific evidence that this requirement is essential.

Does financial education increase savings and asset accumulation? Beverly and Sherraden (1999) say that "the extent to which an individual understands the process and benefits of asset accumulation is likely to affect her willingness to save (p. 464)." The purpose of this study is to examine the relationship between the hours of financial education attended by IDA participants and savings outcomes. The second section of this paper reviews the literature on financial education, followed by a description of the research design and analysis conducted. The final sections summarize the main results and implications for policy.

CONCEPTUAL FRAMEWORK

Effects of Financial Education

Research on 401(k) plans suggests that financial education increases saving. In 401(k) plans, financial education may consist of seminars, newsletters, and/or interactive materials covering topics such as attributes of the plan, investments and asset allocation, and planning for retirement. More frequent corporate-sponsored retirement seminars are associated with both higher participation rates and with higher levels of contributions to 401(k) plans (Bayer, Bernheim, and Scholz 1996). The links are strongest among non-highly compensated employees.

Bernheim and Garrett (1996) also report positive links between educational offerings and participation in retirement plans. Compared to firms that did not offer financial education, participation rates are 12 percentage points higher for companies that offered financial education. In firms that offered financial education, participation rates are 20 percentage points higher for employees who chose to attend. Education increased new savings of all types as a percentage of income by 1.7 percentage points. Effects may be greatest for people who saved little before they received education.

In addition, studies of individual 401(k) plans indicate that increased financial education can greatly increase both participation and the average percentage of salary deferred by employees (Richardson 1995; Borleis and Wedell 1994). Moreover, in workplace seminars employees attribute positive changes in their financial behaviors to financial education workshops (Garman et al.1999). Similarly, personal finance classes for high school students

positively impacts financial knowledge and savings behavior for teens (Boyce, et al 1998), and ultimately raises the rates at which individuals save as adults (Bernheim, Garrett & Maki 2001).

Inadequate Knowledge and Information

Little is known about how households make their financial decisions. However, researchers speculate that one of the major reasons for low personal savings is that people have a difficult time deciding how much to save and how to achieve goals by a savings plan (Thaler 1994). Moreover, individuals do not entirely understand the relation between choices and outcomes (Bernheim 1994). Finally, some individuals may not view saving and systematic budget planning as worthwhile, because of the uncertainties that the future holds and the inability to predict income, health, and labor-market conditions (Kennickell, Starr-McCluer & Sunden 1997).

Personal saving behavior may not result from sophisticated planning, rather most individuals make their savings decisions based on their own, fairly rudimentary, judgment. Indeed, empirical evidence suggests that the majority of the population is not capable of making even the most basic economic calculations and that their financial knowledge is generally inadequate (Kennickell, Starr-McCluer & Sunden 1997; Bernheim 1996).

For the poor, historically low asset limits for public assistance sent a message that they should not or could not save. Recent changes in welfare law greatly relaxed these limits—and explicitly exempted IDA balances from means-tests in some states—but many poor people seem to be unaware of the changes (Hogarth and Lee 2000).

Challenges in Delivery of Financial Education

Even if financial education makes a difference for savings outcomes, the provision and receipt of education presents challenges both for end users and for educators. Obstacles to class attendance for potential IDA participants are, according to focus groups, childcare, transportation, work schedules, and not understanding how classes will help (William M. Mercer, Inc. 2001**)**. In the absence of workplace financial education, logistics play a role in the educational offering. Time outside of work is scarce, and marketing techniques are essential to help persuade people that classes are worthwhile.

Financial education seeks to influence behavior, and, as Kotler and Andreason (1996) argue, "influencing behavior is largely a matter of communication (p. 478)." Schreiner and colleagues (2001) note the following communication challenges in the delivery of financial education. First, the curriculum must somehow translate the abstract and complex language of finance into concrete and simple terms, yet convey the correct message. Second, various literacy levels must be addressed; individuals may lack strong skills in math, reading, and/or English. Finally, without proper attention to cultural differences, financial-education messages may get lost in cultural gaps. Accordingly, financial education curricula are available specifically for unique markets such as women, battered women, Native Americans, and children.

Community-based organizations may be the most well-suited to deliver financial education services to the poor because they understand the particular financial education needs

of their communities and have staff who can communicate comfortably with participants (Caskey 2000).

METHODS

Subjects

The data are from 14 IDA programs across the United States that are part of the American Dream Policy Demonstration (ADD). Enrollment began in July 1997, and as of June 30, 2000, ADD had 2378 participants. A *participant* is defined as an enrollee with at least one savings account statement. Participants include enrollees who have exited the program without a matched withdrawal.

The majority of participants are female (80 percent), and unmarried (79 percent). The average age at enrollment was 36. The participants primarily identify as African-American (47 percent) or Caucasian (37 percent). Overall, participants mostly come from the "working poor" because most programs in ADD target this group. Participants are disadvantaged in that they are disproportionately female, African-American, and never-married.

Design

Program staff collect saving and financial education data for the evaluation of ADD with the Management Information System for Individual Development Accounts (MIS IDA). Saving data come from monthly passbook savings account records from depository institutions. The financial education data cover hours of sessions required. All 14 programs require that participants take some general financial education, but each program determined how many hours of financial education they would offer and require. Some programs require these classes

before an enrollee can open an account, and others require them before a matched withdrawal. Program staff enter the financial education hours attended by participants on an *ad hoc* basis. Programs were asked to distinguish explicitly between cases with zero or unknown hours.

Financial education for IDAs may be classified as *general* or *asset-specific*. General financial education includes topics such as how to make a budget and how to manage money. The classes teach psychological and behavioral strategies meant to help participants to make deposits and to maintain balances (Beverly, Moore, and Schreiner 2001). For example, financial education might highlight that one can make a budget and then choose to treat monthly deposits as if they were bills. Some programs use motivational slogans such as "Pay yourself first" on magnets and pamphlets as reminders for participants to save. Marketing messages may also point out that frequent deposits are more likely to lead to high asset accumulation than infrequent deposits. Financial education moves the concepts of choices and consequences closer to objective reality with discussion, for example, of the long-term costs faced by home owners versus renters or of the long-term effects of post-secondary education on wages.

In contrast, asset-specific education deals with the purchase and management of assets with the proceeds of IDA savings and matches. Thus, education for home purchase often involves one-on-one counseling to ensure that the participants can demonstrate creditworthiness and potential future income sufficient to repay debt.

Measurement

To measure savings outcomes in ADD, we define two concepts: a*verage monthly net deposit* (AMND) and d*eposit frequency*. AMND is defined as deposits plus interest minus

unmatched withdrawals, divided by the number of months of participation. AMND controls for the length of time that a participant has saved. The second measure, deposit frequency, is defined as the number of months with a deposit (excluding interest) divided by the number of months of participation. It shows how steadily a participant saves through time.

ANALYSIS

The analysis is based on hours of general financial education recorded as of June 30, 2000. We use only data on general financial education because asset-specific education deals with the use of savings rather than with saving itself and because the data on general financial education are more complete.

To measure the association between attendance at financial education and savings outcomes, we use two Heckman two-step regressions. One regression is run with AMND as the dependent variable and the other is run with deposit frequency as the dependent variable. The first step of the Heckman two-step regression predicts exit from the IDA program (and thus a high likelihood of a low opportunity for attendance at financial education). The second step predicts the savings outcome measure for those participants who did not exit, controlling for length of participation and a wide range of other factors that might affect AMND and deposit frequency.

RESULTS

We first present descriptive information, then bivariate comparisons, and finally statistical tests from regressions in which we control for other factors that might be correlated both with hours of financial education and with savings outcomes.

As of June 30, 2000, 81 percent of the participants had attended at least some general financial education classes. Most participants (65 percent) have one to twelve hours recorded, 16 percent have 13 hours or more, and 14 percent are explicitly recorded as having no hours. About five percent have no records in MIS IDA and are counted as missing. Mean attendance is 10.4 hours, with a low of zero and a high of 35.

Table 1 presents the relationship between hours of general financial education and AMND. Average AMND is lower for people with zero hours ($8.01) than for people with 1 to 6 hours ($20.38). People with 7 to 12 hours have even higher average AMND ($32.55). More hours after that are associated with small decreases in AMND—people with 13 to 18 hours averaged $26.88, and people with 19 to 35 hours averaged $30.48. That is, AMND increased sharply as hours of general financial attendance increased from zero to 12, after which it leveled off. People with missing hours saved $19.13; perhaps some of their hours were not recorded, or perhaps they skipped or were excused from classes precisely because they did not need them.

The relationship between hours of general financial education and deposit frequency is presented in Table 2. The percentage of months in which participants make a deposit increased with the number of general education hours until it peaks at 64 percent in the range of 7 to 12

hours. From this point onward, more hours are associated with essentially no change in deposit frequency. This is the same pattern observed for financial education and AMND in Table 1.

The Heckman two-step regressions described below control for other observed factors, in particular, for exit status and for length of participation. This matters because new participants or people who exit will have fewer hours all else constant, than experienced participants or people who do not exit. If these people also save differently for reasons unrelated to financial education, then bivariate analyses confuse the effects of financial education with the effects of the length of participation and/or with whatever causes exit without a matched withdrawal.

Table 3 presents the second step of the Heckman two-step regression on AMND that controls for exit, length of participation, and many other observed factors. In the range of 1 to 6 hours, each additional hour is associated with a $1.24 increase in AMND. This implies that, all else constant, a participant with six hours of general financial education will have $6 more AMND than a participant with one hour. From 7 to 12 hours, the increase for each hour is $0.56, also a large effect. All else constant, a participant with 12 hours has $9.40 more AMND than a participant with one hour. From 13 hours to 18 hours, each hour is associated with a $0.70 decrease in AMND. Additional hours beyond 18 are linked with a $0.54 increase in AMND. Figure 1 is derived from regression coefficients, and depicts this relationship.

Table 4 presents the second step of the Heckman two-step regression on deposit frequency. Each additional hour in the range of 1 to 6 hours is associated with a 2 percentage point increase in deposit frequency. Similarly, from 7 to 12 hours, the increase for each hour is

associated with a 2 percentage point increase in deposit frequency. This implies that, holding all other independent variables constant, a participant with 12 hours of general financial education will have a 22 percentage point greater deposit frequency than a participant with one hour. Additional hours beyond 12 did not have effects that were significantly different from zero (Figure 2 depicts the results from the regression coefficients).

Why would the effects peak at 12 hours? If education has diminishing returns, then its effects might reach a plateau, but they need not turn negative. Perhaps programs require more hours from participants who would tend to save less anyway. If the additional education does not completely compensate, then the peaked pattern of Figures 1 and 2 could appear. The data limitations discussed below may also cause the peaked pattern.

Given that hours are in the range of 0 to 12, these results broadly suggest that additional hours of education have large, positive effects on savings (in the range of an average of one dollar of AMND for each hour of financial education up to 12 hours) and on frequency of saving. After that point, the effects leveled off. In short, financial education seems to have had large effects on savings outcomes.

CONCLUSIONS

A key difference between IDAs and other subsidized-savings programs is that IDAs require financial education. This study is the first quantitative look at the effects of financial education on savings outcomes in IDAs. The results seem to suggest that a few hours of general

financial education increases saving a lot, although the effects may diminish or reverse as hours increase.

Limitations

Data limitations should be noted. Participants in ADD are both self-selected (they chose to participate based on expected net benefits) and program-selected (most programs targeted the "working poor," women, and/or people of color). With data only on participants, we cannot sort out the effects of selection from the effects of use. Furthermore, participants have not taken all hours of financial education that they plan to take, and the data include only the hours of attendance, not the quality of hours. The form of the class, the student/teacher ratio, the content of sessions, the types of materials used, or the quality of teaching are unknown. All hours of financial education are not the same, but the analysis here must assume that they are. Also, in some programs, class requirements reflect what staff expected of the saving behavior of members of their particular target group. These weaknesses of the study are unusual only in their acknowledgement, but they do limit the strength of the results. If financial education is to remain a central part of IDAs and other public-policy initiatives, more research is needed.

Public-Policy Implications

Although public policy implications can only be drawn for ADD participants, the following may be relevant. First, the findings suggest that financial education has sizeable effects for the poor, and that courses need not be long to take advantage of most of the potential benefits. Short courses may still have large effects. Second, the benefits of financial education point to the importance of communicating saving as a wise choice with positive outcomes.

Targeted, culturally-relevant social marketing messages to help convince people to attend classes and to communicate that classes can increase savings may be worthwhile. *America Saves* is an example of a privately-supported social marketing campaign designed to persuade low- and moderate-income households to save (Consumer Federation of America 2001). Third, if education matters, and if costs turn out to be far less than the benefits, then individuals should be given opportunities to attend classes across the life span. It may be desirable for public policy to encourage and support such classes. Some possibilities are to offer financial education at Head Start, in primary and secondary schooling, in military and in civilian service (eg. *Americorp*), in prisons, and beyond retirement planning in the workplace.

Table 1 Average Monthly Net Deposit by Hours of General Financial Education

Hours	N	Mean ($)	Median ($)
Missing	129	19.13	7.62
Zero	314	8.01	0.00
1 to 6	479	20.38	12.04
7 to 12	1,080	32.55	26.09
13 to 18	253	26.88	24.44
19 to 35	123	30.48	20.12
All ADD	2,378	25.42	17.96

Table 2 Deposit Frequency by Hours of General Financial Education

Hours	N	Mean (%)	Median (%)
Missing	129	45	38
Zero	314	39	33
1 to 6	479	57	58
7 to 12	1,080	64	67
13 to 18	253	60	59
19 to 35	123	58	53
All ADD	2,378	58	57

Table 3 Financial Education and AMND

Hours	Mean	Change in $	p-value
Zero	0.08	6.71	0.12
1 to 6	5.7	1.24	0.08
7 to 12	3.5	0.56	0.10
13 to 18	0.8	-0.70	0.14
19 to 35	0.4	0.54	0.14

Table 4 Financial Education and Deposit Frequency

Hours	Mean	Change in Frequency	p-value
Zero	0.08	0.06	0.20
1 to 6	5.7	0.02	0.01
7 to 12	3.5	0.02	0.01
13 to 18	0.8	-0.004	0.37
19 to 35	0.4	-0.000	0.90

Figure 1 Effect of Financial Education on AMND

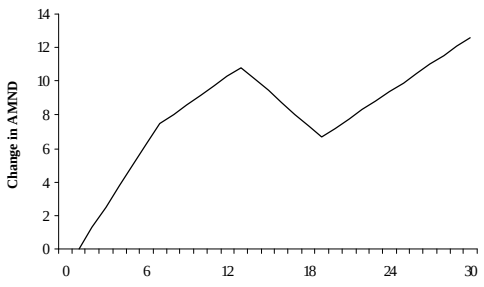
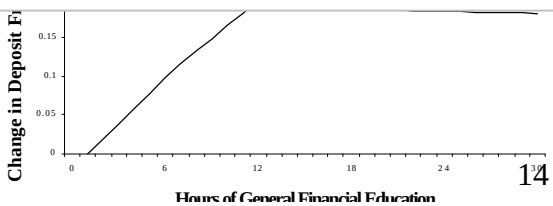


Figure 2 Effect of Financial Education on Deposit Frequency



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