November 2009

Building Assets: An Impact Evaluation of the MI SEED Children's Savings Program

Prepared for

The Ford Foundation
320 E. 43rd Street
New York, NY 10017

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EXECUTIVE SUMMARY

In 2004, the Oakland Livingston Human Services Agency (OLHSA) in Pontiac, Michigan began to implement a program to provide college savings accounts for a group of 3- and 4-year old children attending Head Start. The program—referred to as MI SEED—incorporated a quasi-experimental research design, using treatment and comparison groups, to ascertain its impact. Children of treatment group members attended one of seven Head Start centers; children of comparison group members attended one of another seven Head Start centers matched to the first set on various socioeconomic factors. The program was part of a national initiative, Saving for Education, Entrepreneurship, and Downpayment (SEED).

Treatment group families were offered an initial deposit of $800 into the Michigan Education Savings Plan (a 529 account) on behalf of the focal child and almost all were eligible for an additional $200 gift from the state of Michigan, so almost all who opened a MI SEED account began with $1,000 in SEED savings. Subsequent deposits made on behalf of the focal child were eligible for a 1:1 match up to a maximum of $1,200. Comparison group families were not offered these benefits. The first accounts were opened in December 2004; the experiment ended 4 years later. All else being equal, any measured differences between the treatment and comparison groups by the end of the experiment can be attributed to MI SEED. Major findings from the impact evaluation, based on data from two surveys and account monitoring reports, are summarized below.

Recruitment. Similar to the experiences of other SEED community partners, OLHSA experienced challenges recruiting individuals to open accounts. The challenges were undoubtedly higher because a research study was interwoven with the savings initiative, but OLHSA staff encountered reluctance among potential account holders even when the association with research was removed. Conservatively, we estimate that at most 40–60% of eligible participants accepted the offer and agreed to open a SEED account.

Account Holders. Interestingly, only 31% of treatment group members said they had saved money for their child's education, whereas in fact 62% had a SEED account. Among those who gave the "wrong" response, significantly more did not deposit any funds into the SEED account over the course of the initiative. The discrepancy suggests SEED account holders who do not put in their own resources may perceive the account as something other than their savings for the child's education. In terms of demographic and financial factors, account holders were more likely to be employed, own their home, and demonstrate financial knowledge than

those who declined to accept the SEED account. Direct contact with OLHSA staff regarding MI SEED was also associated with account acceptance, suggesting the "high touch" approach used in the experiment was valuable and important.

Savings. Of 495 MI SEED account holders, 161 deposited some of their own funds into the account. If all had saved an amount to take maximum advantage of the match available to them and experienced no investment loss, they would have accumulated about $3,200. By the end of MI SEED, accumulated savings ranged from a low of less than $250 (due to a handful who withdrew savings) to a high of almost $17,000. The average quarterly contribution was $16 and the average total accumulated was $1,483 (the median totaled $1,131). A typical MI SEED account holder deposited a total of $184 over the course of the initiative.

Impacts on Savings. Using data from treatment and comparison group members collected through telephone surveys, the calculated mean impact of MI SEED on saving for the focal child's education was modest, raising savings from the parent/guardian by $484 (a statistically significant difference) and decreasing savings from others by $188. The mean impact of total savings for the child's education is not statistically significant from zero. A substantial portion of account holders deposited no funds during MI SEED, so the distribution is skewed and the average is driven by a relatively small proportion of "high savers" who tend to be white, have higher levels of education, have higher incomes, and banked.

Impacts on Other Financial Outcomes. In general, MI SEED did not contribute to changes in the types of financial assets or debts families hold, although the data suggest MI SEED families may be more likely to have more stocks or mutual funds.

Impacts on Psychosocial and Educational Outcomes. MI SEED had a positive impact on the importance parents attach to a college education. The program had virtually no impact on other psychological, social, and educational considerations, including the caregiver's level of stress, feelings about parenthood and parenting, self-efficacy, social support, attitudes toward the future, involvement with the focal child's education, and reports of the child's educational accomplishments.

MI SEED is the first large-scale experiment of the impacts of savings accounts for young children. Measured outcomes may be less than SEED planners had hoped for or expected, perhaps because of multiple factors such as the realities of program operations, limitations inherent in social science research, the relatively low levels of savings, and the long time horizon associated with saving for young children's education. Information from the initiative and the evaluation can be used for extensive research to further understand savings behavior and asset development.

1. INTRODUCTION AND RESEARCH METHODS

Asset Development and Children's Savings Accounts

Spurred by Michael Sherraden of Washington University, a new approach to the nation's welfare policies began to emerge about two decades ago:[1]

> Instead of focusing welfare policy on income and consumption, as we have done in the past, we should focus more on savings, investment and asset accumulation. This idea … suggests that poor people, if they are to overcome their poverty—not only economically, but also socially and psychologically—must accumulate a stake in the system … . I refer to this new thinking as *asset-based welfare policy*. Instead of merely providing subsistence, asset-based welfare policy would seek to integrate social policy with economic development.

Whereas traditional welfare programs focus on the provision of income for immediate consumption to meet immediate needs, an asset-based program would complement them by focusing on building household assets. The theory suggests building assets would allow for future consumption and may also lead to more stable households, the development of other assets, and improved well-being.[2] One important component of the argument for asset-based policy concerns equitable access: while the middle class and above have asset accounts such as 401(k)s and IRAs and their use has grown in recent years, low-income individuals do not typically have access to these kinds of accounts.[3] Thus, lack of access and other institutional barriers can adversely affect the poor's ability to develop assets. Proponents of asset-based policy suggest four strategies to help overcome these barriers and promote savings among low-income households: institutionalized saving mechanisms, targeted financial education, attractive saving incentives, and facilitation.[4]

An early asset-based program created Individual Development Accounts (IDAs), which are savings accounts set up to help low-income families save and build assets. IDAs typically include a matching component, so for every dollar saved in the account, some additional "matching" funds from government or private sources are

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1 Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. Armonk N.Y.: M.E. Sharpe, p. xv.

2 Sherraden, M. (1991). op. cit.

3 Carney, S., & Gale, W. (2000). Asset accumulation among low-income households. Presented at a 1998 Ford Foundation conference on Benefits and Mechanisms for Spreading Asset Ownership in the United States. Retrieved from http://www.brookings.edu/~/media/Files/rc/papers/1999/11useconomics_gale/19991130.pdf.

4 Beverly, S. G., & Sherraden, M. (1999). Institutional determinants of saving: implications for low-income households and public policy. *Journal of Socio-Economics*, 28(4), 457.

deposited into the IDA. Savings from IDAs can typically be used for limited purposes, such as purchasing a home, paying for higher education, or starting a business.[5]

The United States currently has several hundred IDA programs, and several research studies have examined their effects. The first large-scale experiment on the effects of IDAs was the American Dream Demonstration (ADD). The ADD evaluation found positive outcomes from the IDA program, including an increase in home ownership and an increase in real assets and retirement savings for certain types of individuals, notably African Americans.[6]

Analyses from the ADD experiment found while homeownership rates increased for the treatment group (who received financial education and a 2:1 match on savings for home ownership), the increase was not significantly greater than those for the control group (who did not receive education or the match).[7] The analyses also revealed that IDAs significantly impacted rates of homeownership for renters and simultaneously decreased other nonretirement financial assets. Follow-up studies with IDA participants who had initially been renters found they had significantly higher rates of cleared debts (at 18 months after they entered the program) and homeownership (at 48 months after they entered the program).[8] Smaller studies of IDA programs have also shown positive outcomes; one study showed people who gained assets through an IDA program retained those assets even after the IDA program ended.[9]

To further access to asset-based accounts and to increase their potential effectiveness, Michael Sherraden conceived of the idea of asset-based accounts for children.[10] Children's savings accounts (CSAs) are structured similarly to IDAs. They are matched savings accounts to be used toward building the child's assets and can eventually be used for postsecondary education, purchasing a home, starting a

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5 CFED Focus: Individual Development Accounts (IDAs). (n.d.). Retrieved August 6, 2009, from http://www.cfed.org/focus.m?parentid=2&siteid=374&id=374.

6 Mills, G., Patterson, R., Orr, L., & DeMarco, L. (2004, August). Evaluation of the American dream demonstration: Final evaluation report. Cambridge, MA: Abt Associates Inc. Retrieved from http://www.abtassociates.com/reports/Final_Eval_Rpt_8-19-04.pdf.

7 Mills, G., Gale, W., Patterson, R., Engelhardt, G., Eriksen, M., & Apostolov, E. (2008). Effects of individual development accounts on asset purchases and saving behavior: Evidence from a controlled experiment. *Journal of Public Economics*, 92(5-6), 1509-1530. doi: 10.1016/j.jpubeco.2007.09.014.

8 Grinstein-Weiss, M., Lee, J., Greeson, J., Han, C., Yeo, Y., & Irish, K. (2008). Fostering low-income homeownership through Individual Development Accounts: A longitudinal, randomized experiment. *Housing Policy Debate*, 19(4), 711-739.

9 Christy-McMullin, K., Shobe, M., & Wills, J. (2009). Arkansas IDA programs: Examining asset retention and perceptions of well-being. *Journal of Social Service Research*, 35(1), 65-76. doi: 10.1080/01488370802477485.

10 Sherraden, 1991. Curley, J., & Sherraden, M. (2000). Policy Lessons from children's allowances for Children's Savings Accounts. *Child Welfare*, 79(6), 661-687.

business, or retirement. Because these savings will not be used until the child is older, CSAs have time to grow considerably during the child's lifetime. In addition, building assets through CSAs may improve family well-being and educational expectations and outcomes.[11] Various forms of CSAs have been implemented in several countries including Singapore, Korea, Canada, and the United Kingdom.[12] In the United States the first large-scale implementation of CSAs is through an initiative known as SEED: Saving for Education, Entrepreneurship and Downpayment.

The SEED Initiative

SEED is an ambitious, national initiative to develop, implement, and test various approaches for building assets in children's savings accounts. The initiative targets children and youth from lower-income families and communities. The premise is simple: open savings accounts for children with an initial deposit and match additional deposits to help build assets for goals such as postsecondary education or training.

Drawing on a legacy of support for vulnerable populations and consistent with its mission to reduce poverty and advance human achievement, the Ford Foundation and other philanthropic organizations[13] are funding the SEED initiative, which seeks to set the stage for universal, progressive asset-building policy. National partners of the SEED Policy, Practice, and Research Initiative include CFED,[14] the Center for Social Development at Washington University, the School of Social Welfare at the University of Kansas, and the New America Foundation.

SEED accounts are a kind of CSA. They are savings accounts subsidized through matches for low-income families and are structured to help families jump-start savings. They often begin with an initial deposit of several hundred dollars, to which family members, friends, accountholders, and others may add over time. Funds from SEED accounts can be used to help pay for education, start a small business, or buy a home. The theory is that longer-term investment combined with financial management education may reap many benefits including:

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[11] Zhan, M. (2006). Assets, parental expectations and involvement, and children's educational performance. *Children and Youth Services Review*, 28(8), 961-975. Shobe, M., & Page-Adams, D. (2001). Assets, future orientation, and well-being: Exploring and extending Sherraden's framework. *Journal of Sociology & Social Welfare*, 28(3), 109-127.

[12] Loke, V., & Sherraden, M. (2009). Building assets from birth: a global comparison of Child Development Account policies. *International Journal of Social Welfare*, 18(2), 119-129.

[13] Other funders of the SEED Policy and Practice Initiative include the Charles and Helen Schwab Foundation, Jim Casey Youth Opportunity Initiative, Citigroup Foundation, Ewing Marion Kauffman Foundation, Charles Stuart Mott Foundation, Richard and Rhoda Goldman Fund, Metlife Foundation, Evelyn and Walter Haas, Jr. Fund, W. K. Kellogg Foundation, and Edwin Gould Foundation for Children.

[14] Formerly the Corporation for Enterprise Development.

- **Future financial resources.** For example, a deposit of $10 per week starting at birth will grow to over $13,700 dollars (assuming 4% interest) by the time the child reaches age 18.[15] This amount can be substantial when paying for college costs.

- **Greater earnings from wages.** Median earnings for a worker with a bachelor's degree are 74% higher than median earnings for a worker with a high school diploma.[16]

- **Psychosocial benefits.** The ability to have savings, purchase a home, and engage in financial planning may positively affect individuals, their families, and communities.[17]

Twelve community-based programs are a central focus of the SEED initiative. Based on the success of the American Dream Demonstration, which established individual development accounts to help low-income families save to purchase homes and achieve other goals, the SEED community partners program was designed to explore and assess the potential of accounts for young people, with concurrent research to fill knowledge gaps. The request for proposals issued in March 2003 stated:

> At present little is known about the real potential of SEED accounts—about how they may be best structured and supported; about their psychological, social, behavioral, and economic effects; about the policy structure most likely to garner support; or about the system best able to deliver them effectively and efficiently. What is known is that people—even poor people—can and will save, given the right supports. And when they do, their growing assets change attitudes and behaviors as well as economic and social opportunity. Experience shows that savings tools, community practice, public policy, private markets, and political understanding evolve best when they evolve together.[18]

Each community partner followed a basic outline for implementing the SEED program but customized its SEED program to its target population and community. To operate SEED programs, the community partners had to provide staff, recruit participants,

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[15] FinAid! The SmartStudent Guide to Financial Aid. Retrieved June 25, 2009, from http://www.finaid.org/calculators/scripts/savingsgrowth.cgi.

[16] Crissey, S.R. (2009). Educational attainment in the United States: 2007. U.S. Census Bureau. Accessed online, June 29, 2009. http://www.census.gov/prod/2009pubs/p20-560.pdf.

[17] Lerman, R., & McKernan, S. (2008). Benefits and consequences of holding assets. In M. Sherraden & S. McKernan (Eds.), *Asset building and low-income families*. Washington, DC: Urban Institute Press.

[18] Saving for Education, Entrepreneurship, and Downpayment: A national policy and practice initiative to explore the efficacy of long-term savings and investment accounts for all American children. An invitation to partners—Request for full proposals. (2003, March). Organized by Corporation for Enterprise Development, Washington, DC; evaluated by Center for Social Development at Washington University and School of Social Welfare at University of Kansas, p. 4.

open and manage SEED accounts, and provide financial education. Of the 12 sites, 11 had a target of enrolling 75 participants. The focus of this report—the SEED program operated by the Oakland Livingston Human Service Agency—was designated the quasi-experimental site and had a goal of 500 SEED accounts. Each of the 12 community partner sites targeted a particular age group to recruit for the SEED program. Half targeted children of preschool or elementary school age, two recruited children of middle-school age, and three targeted those of high-school age. Programs varied in the initial amount deposited into the SEED account, the types of financial incentives available to SEED participants, and services provided to participants.[19]

MI SEED

The Oakland Livingston Human Service Agency (OLHSA) is a community action agency in Pontiac, Michigan that provides services to low-income families throughout Oakland and Livingston Counties. OLHSA was selected through a competitive process for the first large-scale study of SEED impacts. We refer to the program and the evaluation as "MI SEED." OLHSA designed MI SEED to offer SEED accounts to children enrolled in selected Head Start centers.[20] Participants had funds deposited into the Michigan Education Savings Plan (MESP), a plan managed by TIAA-CREF that helps develop college savings and offers state tax advantages.

Each SEED account holder received an initial deposit of $800 into the MESP and could earn a dollar-for-dollar match on additional savings up to $1,200, for a total of $2,000. For most account holders, the state of Michigan deposited an additional $200 per participant into the SEED accounts. MI SEED was launched in the 2004-2005 school year. Through OLHSA's efforts a total of 499 SEED accounts were opened.

The MESP is a 529 plan, a tax-deferred form of saving for education governed by Section 529 of the Internal Revenue Code. These plans have two key parties: the beneficiary and the owner of the account. The beneficiary is a child for whom the funds will be used for qualified educational expenses. The owner is typically an adult who contributes to the plan, such as a parent, grandparent, other relative, or friend. The owner controls the plan and has certain authority over the account, such as the ability to change the beneficiary and the opportunity to withdraw funds at any time.

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[19] A description of the 12 community partner programs is provided in Marks, E. L. Rhodes, B. B., Wheeler-Brooks, J., & Adams, D. (2009). A process study of the SEED Community Partners Initiative. Research Triangle Park, NC: RTI International. http://www.rti.org/pubs/seed_process_study_final_report.pdf.

[20] Head Start is a federally funded early childhood program that offers education, nutrition, and health services to children between the ages of 3 and 5.

A child may be named as a beneficiary in multiple accounts; an owner may have multiple accounts for multiple beneficiaries.

Contributions to a 529 are not tax-deductible for the purposes of determining the owner's federal taxable income, but earnings on deposits are tax-free as long as the funds are withdrawn and used for qualified educational purposes. In Michigan, these include tuition, books, supplies, required fees, and some room and board costs at an in-state or out-of-state public or private university or trade school. The value of the plan is excluded from financial aid calculations at in-state institutions.

Although 529 plans are based in federal law, states sponsor them, choose the financial institutions to administer the plans, and design them, including state income tax treatment for state residents, the menu of investment alternatives, fee structures, and vendors. The 529 plans vary substantially across states. The Michigan Education Savings Plan provides these important features:

- For plan owners, the earnings portion of qualified withdrawals is not subject to state income tax for Michigan residents.
- The minimum contribution is $25, or $15 per pay period via payroll deduction.
- There is no annual limit on contributions to the account, although there is a $235,000 limit on the maximum account balance.
- A portion of the owner's contributions (net of any withdrawals) to the account is tax deductible for calculating state taxable income if the owner is a Michigan resident. The annual limit on deductible contributions is $5,000 for single individuals and $10,000 for married couples, regardless of the owner's income level.[21]
- For certain investment options, Michigan allows TIAA-CREF to charge 0.45% of the average daily net assets as an annual administration fee.

Contributions may be eligible for a matching contribution from the state in the first year of the beneficiary's enrollment (another feature OLHSA made available to SEED participants). The match rate is 33% on every dollar contributed up to $600, for a maximum state match amount of $200. Only one account owner per beneficiary can apply for the matching grant. Eligibility is determined by the characteristics of the beneficiary, who must be under 7 years old, reside in a household with annual income of $80,000 or less, and be a Michigan resident. When the SEED experiment began in 2004, MESP had three investment options for participants: 100% equity, managed allocation, and guaranteed (this last option provides a minimum return, plus an additional return).

[21] Additional tax benefits can accrue to owners related to the estate and gift tax.

MI SEED Evaluation Design

The impact of 529 plans in general and SEED accounts in particular on saving and financial outcomes cannot be determined by examining data from the other, non-experimental SEED sites because they have no control group against which to measure impacts. MI SEED is intended to help overcome this limitation.

Designed primarily by Deborah Adams and Sondra Beverly, School of Social Welfare, University of Kansas,[22] the MI SEED research sought to answer the following research questions:

- What are the patterns of participation in SEED?
- What is the impact of SEED on saving for children?
- What are the predictors of asset accumulation in SEED accounts?
- What is the impact of SEED on parents?
- What is the impact of SEED on children?[23]

MI SEED planners reviewed various research options and opted for a quasi-experimental design. They identified 14 OLHSA Head Start centers (out of a total of 19 OLHSA administers) and matched them two-by-two (thus resulting in 7 pairs) according to enrollment and demographic characteristics such poverty rates, racial and ethnic composition, and proportion of one-parent families. One of each pair was randomly assigned to the treatment group and the other to the comparison group. After enrolling individuals into the research study (discussed below), all participants completed a baseline telephone survey.[24] After the baseline survey was completed, families of children attending Head Start centers in the treatment group were informed of their eligibility for SEED; children attending Head Start centers in the comparison group were not eligible for SEED. A follow-up survey was conducted with the same respondents about 4 years later. These activities are shown in Exhibit 1-1.

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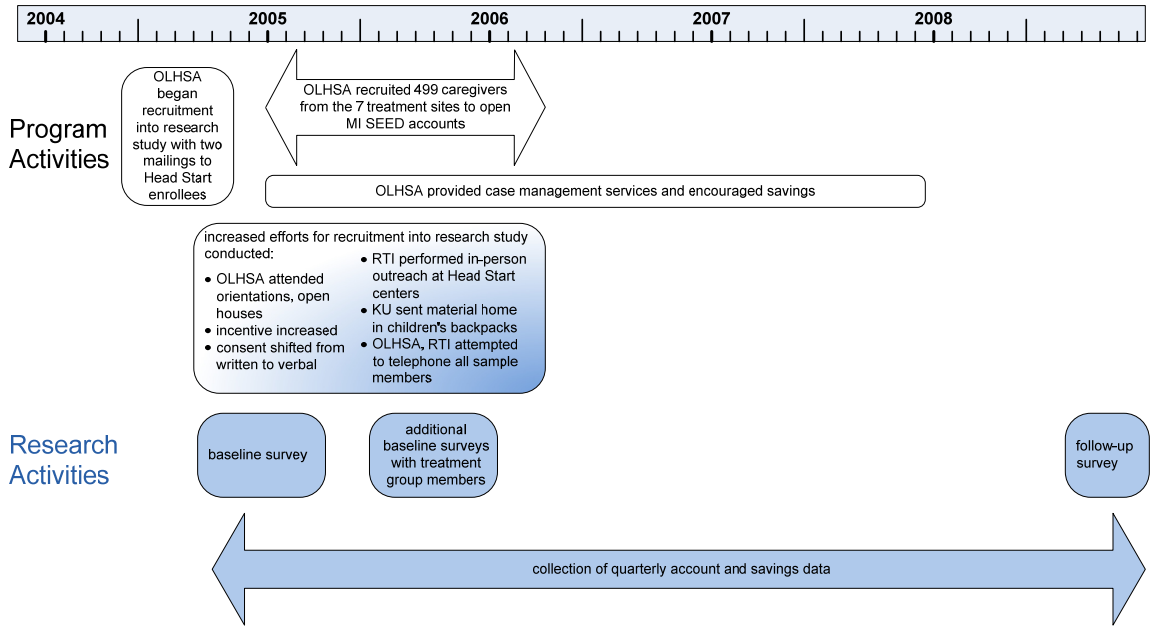
[22] Michael Sherraden, Washington University, and Trina Williams Shanks, University of Michigan, also helped design MI SEED. A comprehensive list of researchers and research for the entire SEED initiative is found at http://www.cfed.org/focus.m?parentid=31&siteid=288&id=295.

[23] See Appendix A for the full set of research questions and hypotheses.

[24] Findings from the baseline survey are contained in Marks, E. L. & Rhodes, B. B. (2005, September). Saving for education, entrepreneurship, and downpayment: Impact evaluation, year 1. Research Triangle Park, NC: RTI International. http://www.rti.org/seed_report.

Exhibit 1-1. MI SEED Tasks and Activities



With this kind of research design, all else being equal, any differences measured between treatment and comparison group members from baseline to follow-up can be attributed to the intervention—in this case, the SEED account.

Independent Evaluator. As the program was rolled out at OLHSA, RTI International was selected as the evaluator for the MI SEED initiative through a competitive process. RTI's responsibilities are to:

- prepare a final version of the survey instrument;
- finalize the research design for the impact assessment;
- collect two waves of survey data;
- enter and clean the data after each wave;
- deliver clean data sets and codebooks for each wave;
- undertake basic analysis and reporting following wave 1 and wave 2 interviews; and
- prepare a final report analyzing the impact of SEED accounts on the outcomes specified in research hypotheses.[25]

[25] See Appendix A for the research questions and hypotheses.

Recruitment into the Research Study. OLHSA began work on MI SEED by recruiting individuals. MI SEED planners decided to not announce the intervention—namely, the forthcoming deposit into the MESP and matched savings opportunities—to avoid bias among potential study participants. Instead, the plan was to encourage individuals to enroll in a research study—and announce the initiative to treatment group members only after participants had been recruited and interviewed.

To recruit study participants, OLHSA mailed letters in summer 2004 to all families enrolled in the 14 selected Head Start centers. The letters explained the study, outlined the incentive structure ($30 for a completed baseline interview in fall 2004, $10 for each confirmation or update of contact information, and $60 for a completed follow-up interview in fall 2008), and asked recipients to indicate their willingness to participate by signing and returning a consent form. After two mailings, responses were sparse. As Head Start centers opened for the school year in September 2004, OLHSA staff attended open houses and parent orientation sessions during which they explained the study and encouraged participation. When enrollment into the research study was still not proceeding as rapidly as planners had expected, RTI joined the recruitment effort and placed staff at Head Start centers to explain the study to parents and invite them to participate as they dropped off and picked up their children.

Additional steps were taken midway through the enrollment process to increase the number of study participants. Researchers at the University of Kansas and the University of Michigan developed methods for obtaining verbal consent, and the incentive for all participants was increased to $40.[26] OLHSA staff tried to contact all remaining eligible parents by telephone to urge their participation. Because OLHSA's staff and hours of operation for telephone efforts were limited, RTI called each remaining individual at least twice. In addition, staff at the University of Kansas prepared attention-getting information packets and sent them home in Head Start children's backpacks.

Data Collection. As individuals agreed to participate in the research study, RTI conducted a baseline survey by telephone. To meet planners' scheduling requirements while simultaneously trying to increase the sample size, recruitment continued on a rolling basis as RTI was administering the baseline survey from September 21 to December 1, 2004. At the end of data collection the sample was still smaller than planners had expected, so additional study members were recruited

[26] To ensure equity in the study, RTI sent a $10 supplement to all respondents who had previously received $30 for completing the survey.

from Head Start treatment sites. A follow-up telephone survey was conducted with the same respondents in fall 2008.[27]

SEED Accounts. After the baseline survey was conducted, OLHSA offered MESP 529 accounts for the benefit of each child in the seven treatment centers. We estimate that between 532 and 688 children were enrolled in the seven Head Start treatment centers in fall 2004, of whom 328 accepted the offer to open SEED accounts.[28] Like many other organizations involved with the community partners component of SEED,[29] OLHSA experienced challenges as staff tried to recruit individuals into SEED. To increase the size of the treatment group, OLHSA expanded the period for recruitment into the 2005-2006 school year and added 171 participants to SEED. Thus, through diligent efforts over a 16-month period, OLHSA staff recruited and opened accounts for 499 SEED participants.[30]

MI SEED Services. Similar to experiences of the other SEED community partners,[31] OLHSA experienced practical challenges as staff tried to help low-income families establish and grow their MESP accounts. These challenges were perhaps exacerbated by features of the research study, namely that (1) initial outreach from OLHSA staff was to invite people into the research study, not a savings program, and (2) invitations to open SEED accounts could not be extended until after the baseline survey was completed. In addition to establishing the accounts, OLHSA also attempted to provide financial education, encourage savings in the SEED account, and host events for SEED participants and families.

OLHSA's attempts to encourage savings and educate SEED participants and families met varying levels of success. OLHSA staff communicated with SEED families by mail, by phone, and through in-person visits. They created a quarterly SEED newsletter and mailed it to SEED families. The newsletter contained information on

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[27] A discussion of the data collection methods and results is presented in Appendix B.

[28] Because we were unable to obtain enrollment figures for the Head Start treatment centers, we developed estimates as follows. At the time the experiment was designed, the plan for random assignment of paired Head Start centers resulted in 43% of the total sample attending treatment sites and 57% of the total sample attending comparison sites. We assume the 43:57 ratio remained constant in subsequent years. We have two figures to use as the total number enrolled in the 14 Head Start centers for the 2004-2005 school year. One Head Start figure counted 1,237 children enrolled at the start of the school year; a report from OLHSA estimated about 1,600 children constituted the pool for the SEED initiative. Using 43%, we estimate somewhere between 532 (.43 * 1,237) and 688 (.43 * 1,600) children could have received a SEED account. Of those candidates, 328 opened SEED accounts, resulting in an enrollment rate of 48 to 62% (328/532 and 328/688, respectively). (Note: 171 of the 499 MI SEED participants were recruited from families whose children attended the treatment Head Start centers in the 2005-2006 school year.)

[29] Challenges community partners experienced are discussed in Marks et al., op cit., 2009.

[30] From MI SEED planning documents, it appears no specific number of enrollees was expected per Head Start Center; rather, the focus was on a total of 500 SEED accounts.

[31] Marks et al., op cit., 2009.

the SEED program, upcoming events and services, and tips to help save money. Letters and postcards reminding parents to save were sent to SEED families throughout the year. As the SEED program progressed, communication—especially attempts at telephone and in-person contacts—became more targeted to families who had saved little or no money in their SEED accounts. OLHSA staff also provided case management services during their contact with SEED families, such as providing referrals, monitoring family needs, and encouraging savings.

SEED staff often had difficulty just locating SEED participants. In September 2008, near the end of the program, SEED staff could not reach more than 200 SEED account holders because of a disconnected phone number, incorrect address, or both. Even when OLHSA had up-to-date information, locating participants proved difficult. In one typical month staff attempted 68 calls to participants; only 28 resulted in actual contact with a participant (Exhibit 1-2). In-person contact was even more difficult. In that same month 16 in-person attempts were made, of which 3 were successful.

Exhibit 1-2. OLHSA Outreach During September 2008

Type of Contact	Number Attempted	Number Completed
phone	68	28
face to face	16	3
e-mail	5	4
Case Management	**Internal to OLHSA**	**External**
referrals provided	14	31

Source: SEED Resource Development Monthly Report, communication from Susan Mosqueda, OLHSA, November 21, 2008.

Based on OLHSA data regarding services provided,[32] most SEED account holders interacted with OLHSA staff over the course of the demonstration (Exhibit 1-3). This interaction was minimal for most SEED participants. Only 10% attended any sort of group activity. More than three-fourths received at least one call from SEED staff; less than half received more than two calls during the 4-year demonstration. Similarly, nearly three-fourths had at least one in-person contact with SEED staff; 44% had more than one such contact during the duration of the SEED program.

[32] Services data were collected as part of research conducted under the direction of Deborah Adams at the University of Kansas and Trina Williams Shanks at the University of Michigan.

Exhibit 1-3. OLHSA Contacts with Treatment Group Members Who Completed the Survey (n=234)

Type of Contact	Percent Did	Percent Did Not
Attended informational or educational class, group, meeting or other gathering	10	90
Sent an individual e-mail or letter (not including mass mailings)	46	54
One or more phone contacts with SEED staff	77	23
One or more in-person visits with SEED staff	72	28

OLHSA held several events specifically for SEED families, such as family education nights at each treatment Head Start center. These events typically included food and games for children, basic financial education, discussion about ways to save money, and encouragement to save in the SEED account. Attendance at events varied. At one large Head Start center, 26 families attended an event, but some events at smaller centers had no one show up. Typically fewer than 10 families participated at any given SEED event. OLHSA also provided free tax preparation services specifically for SEED families, which some participants used.

In February 2006, OLHSA held the first meeting of a SEED Parent Advisory Board to help advise SEED staff on ways to encourage savings, be a voice for SEED families, and give input on services that might interest SEED families. The Parent Advisory Board was open to all SEED parents. The board met four times per year; between two and 11 parents attended each meeting.

Baseline and Follow-up Surveys

The original baseline sample consisted of 871 individuals who consented to participate in the research study. In fall 2004, 732 interviews were completed with eligible respondents, resulting in a response rate for the baseline survey of 89.97%.[33] Because the number of SEED accounts opened during the 2004-2005 school year was lower than expected, OLHSA and SEED planners extended the initiative and the evaluation was correspondingly extended when RTI was asked to attempt to locate and interview individuals who had agreed to open SEED accounts during the 2004-2005 school year but had not completed the baseline survey. RTI

[33] AAPOR Response Rate 4. The American Association for Public Opinion Research (2004). Standard definitions: Final dispositions of case codes and outcome rates for surveys. 3rd edition. Lexena, KS: AAPOR, p. 29.

identified 100 such individuals, most of whom entered Head Start *after* the fielding period for the baseline survey ended. Of the 100, we completed "baseline" interviews with 58. The final total baseline sample was 790.

RTI administered the follow-up survey in fall 2008, attempting to locate and interview a total sample of 819 SEED parents or caregivers. The addition of 29 sample members since the baseline survey reflects changed living arrangements of the focal child. If the child moved from the baseline survey respondent's household, we tracked the child, identified the new primary caregiver, and tried to interview both caregivers (i.e., the one at baseline and the one at follow-up). Exhibit 1-4 shows the number of completed interviews for the 790 original baseline respondents. The completion rate at follow-up for these 790 respondents was 86.8%.

Exhibit 1-4. Sample Size and Interview Completion Rates

	Overall Sample			
	Baseline		Follow-Up	
Characteristics[a]	Treatment	Comparison	Treatment	Comparison
Full sample	381	409	338	348
Age				
18-25	117	133	96	102
26-35	188	181	169	161
35 and above	76	94	68	84
Gender				
female	345	382	304	329
male	36	27	29	191
Education				
less than high school	117	113	100	93
high school diploma	118	125	102	109
more than high school	145	169	130	146
Race				
Caucasian (non-Hispanic)	188	156	170	132
African American (non-Hispanic)	120	201	105	176
other[b]	73	52	63	40
Marital status				
never married	166	205	144	174
married	145	130	128	110
divorced/separated/widowed	70	73	61	63

Exhibit 1-4. Sample Size and Interview Completion Rates (continued)

Characteristics[a]	Overall Sample			
	Baseline		Follow-Up	
	Treatment	Comparison	Treatment	Comparison
Public assistance				
receive TANF	168	168	144	142
receive food stamps	102	121	89	102
Poverty[c]				
above federal poverty line	165	146	147	122
below federal poverty line	199	238	179	209
Housing				
live in public housing	28	19	21	16
own home	105	109	99	95
rent home	221	256	186	215
Ratio of adults to kids in household				
adults > children	127	60	113	46
adults = children	86	136	77	112
adults < children	168	213	148	190

[a] Defined by status in the baseline survey.

[b] The "other" category includes all those not included in the preceding categories and primarily consists of Hispanics (60%) and those who gave more than one race (24%).

[c] Poverty status is based on reported income and family composition at baseline. Poverty guidelines are updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. § 9902(2). They are based on total income and the number of people in the household (see http://aspe.hhs.gov/poverty/04poverty.shtml).

Key Analysis Decisions

Any evaluation requires decisions about how to handle various aspects of analysis.[34] In this section, we outline the key decisions we made and present explanations for our choices.

Equivalency of Treatment vs. Comparison Groups. Planners of the SEED preschool impact evaluation created a quasi-experimental design in which pairs of Head Start centers were matched according to enrollment and demographic characteristics, then one center from each pair was randomly assigned to the treatment group and the other to the comparison group. Because MI SEED planners

[34] Patton, M. Q. (2008). *Utilization-focused evaluation*. Newbury Park, CA: Sage Publications.

determined it was not possible to randomly assign individual Head Start children to treatment and comparison groups, this approach was a prudent compromise.

With this kind of research design, a critical analytical question is to determine the extent of comparability between treatment and comparison group members. The basic premise in determining impact requires the two groups to be equivalent; the greater the equivalence between the treatment and comparison groups, the more likely analysts can measure the true impact of SEED.

As noted previously, because enrollment into the research study was lower than expected, MI SEED planners lengthened the recruitment period and subsequently invited account openers to participate in the research study after the period for administering the baseline survey. As a result, 58 additional individuals joined the treatment group. We analyzed their characteristics to determine the effect of adding these individuals to the baseline sample. The analysis between the original baseline group and the additional 58 account openers shows very few statistically significant differences between the two. Compared to the baseline treatment group, members of the new cohort (1) reported higher incomes, (2) showed greater knowledge of banking practices (but only on one of four indicators), and (3) had more saved for the child's education.[35]

At baseline we analyzed data to determine any significant differences between treatment and comparison groups and found significant differences in race, ratio of adults to children in the household, average housing payment, and having savings.[36] At follow-up we again analyzed the data to see if demographic differences existed between treatment and comparison group members and found significant differences in race and marital status (Exhibit 1-5):

- Treatment group members were more likely to be married, whereas comparison group members were more likely to have never married.
- Treatment group members were more likely to be Caucasian, whereas comparison group members were more likely to be African American.

[35] The 58 individuals who entered the sample after receiving a MI SEED account are not included in the impact analyses presented in this report, but are included in discussions of account holders. Individuals who were new caregivers (i.e., they were not baseline respondents) are also not included in the impact analyses.

[36] Marks & Rhodes, op cit., 2005.

Exhibit 1-5. Treatment vs. Comparison Group Characteristics at Follow-up

Characteristic	Total Sample	Treatment	Comparison	Difference (T-C)
Mean age	34.4	34.6	34.2	0.3
Gender (%)				
female	90.8	89.4	92.2	-2.8
male	9.2	10.7	7.8	2.9
Education (%)				
less than high school	25.4	26.9	23.9	3.0
high school diploma or GED	30.0	29.0	31.0	-2.0
some college or more	44.6	44.1	45.1	-1.0
Race/ethnicity (%)***				
Caucasian (non-Hispanic)	42.9	50.5	35.7	14.8
African American (non-Hispanic)	42.5	32.3	52.3	-20.0
other	14.6	17.2	12.1	5.1
Marital status (%)*				
never married	37.8	34.0	41.4	-7.4
married	41.0	47.0	35.1	11.9
divorced, separated, widowed	21.3	18.9	23.6	-4.7
Ratio of adults to kids in household				
adults > children	10.3	9.8	10.9	-1.1
adults = children	27.1	26.3	27.9	-1.6
adults < children	62.5	50.4	61.2	-10.8
Mean annual income	$24,240	$25,115	$23,381	$1,734
Public assistance (%)				
receive TANF	26.0	28.2	23.9	4.3
receive food stamps	57.0	57.7	56.3	1.4
Poverty (%)				
above poverty line	40.0	41.7	38.6	3.1
below poverty line	60.0	59.4	61.4	-2.0
Housing				
live in public housing (%)	3.6	4.2	3.1	1.1
own home (%)	31.6	33.6	29.6	4.0
mean housing payment	$722	$743	$703	$40

*$p < .05$
*** $p < .001$

Difference-in-Differences Analysis. Because the treatment and comparison groups are not equivalent, a basic premise of the research design is called into question. The quasi-experimental design in principle says that any measured differences are due to the intervention, all else being equal. For MI SEED, the treatment and comparison groups are not equivalent in terms of marital status and race, factors that are likely to be associated with the primary outcome variables of interest involving savings behavior.

When this situation occurs, analysts have several tools available to ameliorate potential bias. Most (such as weighting or imputation) have some drawbacks, so various considerations come into play as decisions are made on how to proceed. For MI SEED, we can take advantage of the longitudinal design, which means we can measure *the difference* from baseline to follow-up and determine whether those differences are significantly different for treatment and comparison group members. This is referred to as a "difference in differences" technique.[37]

As an example, we can examine differences in the amounts saved for the focal child in the following way:

1. Take the amount saved for the child at baseline.
2. Subtract that amount from the amount saved for the child at follow-up.
3. The result is the difference.
4. Compare the measured differences between treatment and comparison group members.
5. If, while controlling for relevant factors, the differences are statistically significant (i.e., different from zero), attribute change to the MI SEED intervention.

In sum, the difference-in-differences method in effect eliminates many observed or unobserved differences between treatment and comparison group members,[38] so it is the primary analytical approach used in the regression analyses throughout the report. Its primary limitation is that it can be used only when there are pre- and post-intervention measures. Thus, questions asked at only one wave of data collection cannot be analyzed in this fashion.

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[37] See, for example, Card, D. & Krueger, A. B. (1994). Minimum wages and employment: A case study of the fast-food industry in New Jersey and Pennsylvania., *American Economic Review*, 84, 772-793. Meyer, B. D., Viscusi, W. K., & Durbin, D. L. (1995). Worker's compensation and injury duration: Evidence from a natural experiment. *American Economic Review*, 85, 322-340. Bertrand, M., Duflo, E., & Mullainathan, S. (2004, February). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics*, 119(1), 249-275.

[38] It does not eliminate unobserved differences that change over time.

Nonresponse Analysis. Response bias is a common concern in survey research. When some sample members complete the survey and others do not, a natural question is: are the results biased in some way? Are certain sociodemographic segments of the sample more likely to respond than others? Nonresponse bias analysis compares characteristics of respondents and nonrespondents to determine whether any measured differences exist. If they do, analysts have a number of statistical methods to address the problem (e.g., weighting, response propensity adjustment, and imputation).

We first focus nonresponse analysis on *attrition from baseline to follow-up*. We began by classifying the 790 baseline respondents into two categories—those who responded to the follow-up survey and those who did not. The next step was to conduct a number of univariate chi-square tests to determine whether differences existed between the two groups. Exhibit 1-6 summarizes the distribution of respondents at baseline and follow-up as well as the *p* values for the chi-square tests. In the absence of nonresponse bias, the two columns of distributions should be very similar.

Exhibit 1-6. Nonresponse Analysis

Factor	Distribution of Baseline Respondents (n =790) (in %)	Distribution of Follow-up Respondents (n = 686) (in %)	*p* value
Age			**.0092**
21-25	29.3	26.9	
26-30	30.4	31.1	
31-35	17.9	18.9	
36-40	10.5	10.8	
over 40	11.9	12.4	
Education			.3967
less than high school	29.2	28.4	
high school diploma	30.9	31.0	
more than high school	39.9	40.6	
Race			**.0081**
Caucasian	32.4	33.9	
African American	40.0	40.5	
Hispanic	15.2	13.8	
other	12.4	11.8	

Exhibit 1-6. Nonresponse Analysis (continued)

Factor	Distribution of Baseline Respondents (n =790) (in %)	Distribution of Follow-up Respondents (n = 686) (in %)	*p* value
Marital status			.9359
single	47.0	46.8	
married	34.9	35.0	
divorced/separated/widowed	18.1	18.2	
Number of children in household			.2979
1	22.3	21.2	
2	37.5	37.3	
3	23.9	24.4	
4 or more	16.3	17.2	
Poverty			.9464
below poverty line	70.5	70.6	
below 2x poverty line	23.4	23.4	
above 2x poverty line	6.1	6.0	
One-parent homes			.8553
one-parent homes	56.1	56.0	
more than one parent	43.9	44.1	

Overall, the response rate was high between baseline and follow-up with 681 individuals (86%) completing both surveys. The two factors related to variable attrition at follow-up were age and race. While 21–25 year olds represented 29.3% of the overall sample, almost half of the nonrespondents at follow-up were in this age group. Nonrespondents were disproportionately Hispanic or classified as "other." However, since the total number of nonrespondents was relatively small, these biases did not have a large impact on the sociodemographic characteristics of the respondents as a whole. For example, the percentage of 21–25 year old respondents at follow-up was 26.9%, whereas it would have been 29.3% (2.4 percentage points higher) had there been no attrition. Likewise for race: 13.8% of the follow-up respondents were Hispanic, compared to 15.2% had all baseline respondents participated in the follow-up survey. The difference between other races was even smaller—11.8% vs 12.4%.

Since the profile at baseline and follow-up is very similar (<5% differences), we can choose whether to take corrective action by weighting the data to account for these slight response propensities. Weighting can "correct" the sample so that follow-up sociodemographics perfectly mirror the baseline data. However, using weighted data has disadvantages because statistical power is lost due to inflation of the variance caused by variable weights.[39] This is known as the unequal weighting effect (UWE); the drop in sample size can be expressed as:

$$n_{effective} = \frac{n_{actual}}{UWE}$$

where *n* represents the sample size. So if weights result in an inflation of 10% (UWE = 1.10), then the sample size is effectively reduced by a factor of 1/1.10=0.91 or a reduction of 9%. The study has not lost any sample members; rather, the statistical efficiency has been compromised due to unequal weighting. When a survey has issues with response bias, it is worth the sacrifice to weight the data and address the problem. For MI SEED, however, we judge that the penalty due to UWE would be worse than the slight differences due to nonresponse and that it is better for the study as a whole to use unweighted data.[40] Furthermore, the difference in distributions in Exhibit 1-6, even for age and race, for individual values are within sampling error and do not indicate any source of major and systematic nonresponse bias.

We conducted a second set of analyses to examine *item nonresponse* on specific measures of interest. Item nonresponse occurs when an individual participates in the survey, but does not answer every question. For this particular analysis, we examined key variables to determine whether sample members in the treatment and comparison groups differed in item response. Exhibit 1-7 lists the variables in this analysis along with their *p* values.

Overall, the item response rates were very high (>90%) on most key measures. In fact, many were 99%+. The lowest item was the amount that others had saved for the child (81.2% in the comparison group). The comparison group consistently had lower item response rates than the treatment group. However, the item response rate was statistically different only on two items—overall amount saved and the

[39] Kish, L. (1965). *Survey sampling*. New York: John Wiley & Sons, Inc.

[40] To examine the impact weighting would have on the analysis, key analyses—including impact on savings amounts and predictors of asset accumulation—were run with weighted and unweighted data. The results show that weighting the data would have minimal impact (i.e., no changes in statistical significance) on the analysis outcomes. For example, by weighting the data comparison group saving for education would increase by about $5 and treatment group saving for education would decrease by about $7; the *p* value would change by less than .001.

Exhibit 1-7. Examination of Item Nonresponse for Key Variables[a]

Variable	Item Response Rate, Treatment Group (in %)	Item Response Rate, Comparison Group (in %)	*p* value
Overall amount saved	95.3	89.2	**.0081**
Saved for child's education	99.6	99.0	.6578
Amount saved for education	97.0	93.9	.0911
Others saved for child	96.6	95.4	.5430
Others saved amount	87.6	81.2	**.0361**
Imputed income	92.3	90.5	.4733
Rent or own house	100.0	99.8	1.0000
Own a car	100.0	99.3	.5573
Have a checking account	100.0	99.0	.3023
Have a savings account	100.0	99.5	.5363
Have a retirement account	99.6	98.5	.4317
Savings by others	91.0	87.0	.1574
Saving by others, education	96.2	92.7	.0863

[a] Because of the very high item response rates, Fisher's exact test was used instead of the Pearson chi-square to determine statistical significance.

amount saved by others. The net difference between the groups on these two items was approximately 6%. Weighting or other adjustment methods could be used to bring these results in line with each other but several considerations argued against this approach. First, the most suitable methodology for handling item nonresponse is imputation, which is nontrivial and somewhat subjective. Second, when doing the analysis runs we can control for these differences by using appropriate predictor variables. Third, these relatively small differences are unlikely to influence in any significant way the parameters of the statistical models being studied. For these reasons we decided to analyze the data in their unweighted form.

Analytical Approach: Treatment on the Treated. A critical determination affecting the impact analysis is the definition of the intervention that treatment group members received. Because we have strong reason to believe that not all treatment group members were exposed to the offer to open a SEED account, we

choose to define the central intervention of interest as the SEED account. This leads to our decision to use the "treatment of the treated" analytical approach,[41] which adjusts for the fact that some treatment group members opted to accept the SEED account and some did not. Mathematically, "treatment of the treated" adjusts estimates according to the probability that a member of the treatment group took up the SEED account. We considered whether to include all members of the treatment group in the analysis (in other words, use an "intent to treat" approach) but chose not to because members of the treatment group may never have received any information to tell them they were designated as eligible for the SEED account.[42]

Baseline vs. Follow-up Demographic Characteristics. In the multivariate analysis examining predictors of opening a SEED account and accumulation in the SEED accounts, baseline survey data are used. Using the baseline measure allows us to determine which characteristics can predict SEED take-up and asset accumulation, without any contamination or effects from the SEED program itself. The baseline characteristics are also descriptors of families at the time the SEED program was introduced. Some factors that may influence SEED savings, however, may have changed even before the SEED account was opened since recruitment for account holders extended over a long period. For example, someone may have been unemployed at the time of the baseline survey, but then got a full-time job a short time later—and having that job could affect the family's ability to save.

To examine whether these kinds of changes might result in different outcomes, all models in this report were run for demographic characteristics at baseline and at follow-up for marital status, number of children in the household, employment status, income, access to health insurance, and education level. The additional analyses produced only one statistically significant change, specifically in regard to marital status. Those who were divorced, separated, or widowed at follow-up were less likely to have opened a SEED account; in contrast, marital status at baseline was not a statistically significant predictor of opening a SEED account. We surmise these individuals may have been in unstable relationships at baseline, so they may

[41] The "treatment of the treated" approach is discussed in Bloom, H.S. (2006). The core analytics of randomized experiments for social research. New York: MDRC. Orr, L.L. (1999). *Social experiments: Evaluating public programs with experimental methods*. Thousand Oaks, CA: Sage Publications.

[42] The "intent to treat" research approach derives from randomized control trials, primarily in the medical sciences. Researchers using this approach analyze impacts for the entire treatment group, regardless of whether individuals actually received treatment. For readers interested in the "intent to treat" approach, Appendix D presents these estimates.

have been experiencing negative financial circumstances associated with the negative effects of divorce and marital instability on family finances.[43]

We judge the use of baseline characteristics to be preferable to the use of follow-up characteristics in the multivariate analyses.

Outline of the Report

The remainder of this report presents evaluative findings from MI SEED. Chapter 2 analyzes characteristics of individuals who opened SEED accounts. Chapter 3 presents information about MI SEED account holders, focusing on their characteristics and account balances. Chapter 4 analyzes the impact of the MI SEED program on financial outcomes by contrasting treatment and comparison group members. Chapter 5 analyzes the impact of SEED on psychosocial and educational outcomes, and Chapter 6 presents conclusions.

[43] Duncan, G. J., & Hoffman, S. D. (1985). Economic consequences of marital instability. In T. Smeeding (Ed.), *Horizontal equity, uncertainty, and well-being* (pp. 427-467). Chicago: University of Chicago Press. Smock, P. J. (1993). The economic costs of marital disruption for young women over the past two decades. *Demography*, 30, 353-371.

2. SEED ACCOUNT OPENERS

This chapter analyzes characteristics of individuals who opened SEED accounts. The discussion examines (1) treatment versus comparison group members, and (2) characteristics of treatment group members who did and did not open SEED accounts. The major findings are as follows:

- **There was a substantial increase in the establishment of 529 plans**: the MI SEED initiative had a large positive impact on the likelihood that the focal child had a 529 plan. Responses from survey participants show the rate of ownership of a 529 plan for the focal child was 23 percentage points higher for the treatment relative to the comparison group.

- **Certain factors are associated with individuals who accepted the MI SEED account:** eligible study participants were more likely to accept the offer of a SEED account if they were economically stable (employed and owned a home), learned about SEED directly from OLHSA staff, knew financial practices, and had parents who had a savings account.

Financial Structure of the MI SEED Initiative

The MI SEED experiment was designed around the focal child who attended one of 14 Head Start centers in Oakland and Livingston Counties in Michigan. For purposes of the evaluation, if more than one child in a family attended a center assigned to the treatment group, the youngest child was deemed the focal child; among twins, one was randomly chosen.

MI SEED has five important dimensions for saving opportunities for treatment group members (Exhibit 2-1):

1. They were offered an $800 initial deposit from the SEED program into a Michigan 529 plan, naming the focal child as the beneficiary and the parent/guardian as the owner. This plan is termed the "non-match account."

2. Savings could be accumulated for the focal child through additional contributions (from the parent or others) into this account. Deposits could be made by mail or electronically through direct deposit.

3. These additional contributions were matched dollar-for-dollar (i.e., a 100% match rate) by SEED on the first $1,200 of additional contributions, after which the match was exhausted. The $1,200 limit applied to all contributions pooled across the years of the SEED demonstration. For administrative purposes, the matching contributions were placed into a second, custodial 529 plan, termed the "match account," naming the child as the beneficiary and the state of Michigan program as the owner.

4. Since the focal children in the treatment group were preschoolers and residents of Michigan, contributions in the first year they had accounts were eligible for an additional match from the state (a maximum of $200) if annual

household income was less than $80,000. In all, 97% of treatment group account openers qualified for the state matching grant.[44] The state match was placed in the SEED "match account."

5. Both the non-match and match accounts could have earnings; the non-match account could have incurred losses and management fees.

Exhibit 2-1. Potential Sources of Saving in Michigan SEED

Treatment Group		Comparison Group
Non-match Account (under participant control)	**Match Account** (not under participant control)	
$800 SEED gift		
Individual contributions	1:1 match on individual contributions to $1,200 maximum	Individual contributions
	$200 from Michigan (if eligible)	$200 from Michigan (if eligible)
Earnings	Earnings	Earnings

The owner has control over how to invest the assets in the non-match account. Funds in the match account are invested in the Michigan Education Savings Plan's guaranteed option described earlier.

All individuals can save for education through the Michigan 529 plan described in the previous chapter, regardless of their designation as members of the SEED treatment or comparison group. Thus, comparison group families could also save for their children's education through the MESP. Overall, differences in purely financial incentives to save between the treatment and comparison group families were generated by the initial $800 deposit, plus the match on additional contributions.[45] For a treatment group family that deposited the maximum amount available for the

[44] Since comparison group members who opened 529 accounts were also eligible for this grant, it is not a source of differential incentives between the treatment and control group families.

[45] Ten of the 11 other, nonexperimental SEED sites offered financial incentives for the achievement of saving or educational benchmarks. These types of incentives were not part of the MI SEED program design.

SEED match, withdrew no funds, and experienced no investment losses, the total SEED balance would be at least $3,200:[46]

	$800 SEED initial deposit
+	$1,200 in individual deposits
+	$1,200 in matching funds
=	$3,200
+	$200 from Michigan (if eligible)
+	additional individual deposits
+	earnings
−	losses
−	fees
=	total SEED balance

Importantly, as the account owner, parents/guardians had control over both their own contributions and the initial $800 SEED deposit—including the ability to make nonqualified withdrawals and the right to decide how to invest the assets—but did not have control over funds in the match account (the parent/guardian could not withdraw funds from the match account nor choose an investment option). Only one 529 account designating the focal child as the beneficiary was eligible for the match.[47]

In many states, assets in 529 plans count in determining eligibility for many public assistance programs. Michigan granted the SEED demonstration an exemption when determining eligibility for Food Stamps, Medicaid, and TANF. The exemption continues after the demonstration for the life of the accounts. SEED assets in the non-match account are not exempt from the SSI eligibility tests (those in the match account and, hence outside the control of the owner, were exempt).

Estimated SEED Impact: College Savings Account

In general, SEED programs are designed to generate savings for children to help finance their education, entrepreneurship, and home purchases as an adult. Because MI SEED is tied to a 529 plan, the only qualified use of the funds is for education. Thus, the Michigan SEED program should be viewed as a subsidized saving program for education.

[46] Of the $3,200, $2,000 would be under the direct control of the parent and $1,200 would be held by the SEED program in trust for the child. A small portion of the $3,200 could have been charged as management fees.

[47] Any given child can have more than one 529 account.

Given the incentives offered, the impacts of SEED are most likely to be changes in saving for the focal child's education. Thus, the number of children with 529 plans may increase if participants respond to incentives associated with the initial deposit and matching contributions. Some comparison group families would be expected to open 529 plans anyway, but the treatment group response should be far larger due to the structure and incentives of the MI SEED program.

One SEED impact is shown in the first row of Exhibit 2-2. Respondents were first asked if they had ever saved any money for the focal child; those who said yes were then asked if the family had a 529 plan, SEED account, or a college savings plan for the child. A total of 31% of treatment group families said they had opened such a plan for the focal child by the time of the follow-up survey. However, the comparison group also had the opportunity to open a 529 plan and 8% said they had by follow-up.[48] Therefore, the SEED initiative raised ownership of 529 plans by 23 percentage points (i.e., from 8% to 31%).[49]

Exhibit 2-2. Have Education Savings for the Focal Child at Follow-up

Outcome: Have a 529 Plan, SEED Account, or College Savings Plan for Focal Child (n = 681)	Proportion		
	Treatment Group	Comparison Group	SEED Impact
According to survey response	0.31	0.08	0.23* (0.04)
According to account monitoring data	0.62	n/a	n/a
SEED Account Holders: Have a 529, SEED Account, or College Savings Plan for Focal Child**	**n**	**Made Deposits into SEED Account**	
		Yes	**No**
Survey response: yes	91	0.58	0.42
Survey response: no	119	0.22	0.78

*p < .05, standard error in parentheses
****p < .0001

[48] Some treatment and comparison group members may have had 529 accounts for the focal child before the SEED initiative began. (Data from the account monitoring study show 5 of 495 account holders did.) Those with 529 accounts opened for the focal child before MI SEED began perhaps should be excluded from calculations in Exhibit 2-2. Neither the survey nor the account monitoring data, however, have this information. We assume those with 529 accounts before MI SEED are similarly distributed through both the treatment and comparison groups, so the SEED impact would be the same whether these account holders are included or excluded in Exhibit 2-2.

[49] The question in the baseline survey asked about saving for the focal child's education in general, not specifically about 529 plans. The follow-up survey question asked specifically about 529, SEED, and college saving plans. When the treatment effects are recalculated accounting for any baseline differences in saving for the focal child's education in general between the treatment and control groups, the program impacts are not materially different from those shown in the exhibit.

Whether this is a "large" effect is a matter of perspective. On the one hand, it nearly triples (.23/.08 = 288%) the incidence of these saving plans among this low-income sample, which would appear to be a quite substantial impact. On the other hand, because the treatment offer consisted of an $800 contribution into an account under the direct control of the parent/guardian and a substantial outreach effort by OLHSA staff, it is surprising that the self-reported take-up rate of the treatment was not much higher, if not close to full. After all, even a family with no intention of making additional deposits or using the funds for education could have taken the $800 out of the plan at any time, for any use—if they understood how the program worked.

It is very interesting to observe the actual number of SEED accounts opened for treatment group members:

- In the follow-up survey, 31% of treatment group respondents said they had college savings for the focal child. According to administrative data from the account monitoring study,[50] 62% did—exactly double the proportion according to self-reports.[51]

- When the follow-up survey asked SEED account holders specifically if they recalled opening a SEED account, fully 89% said yes.

Thus, we are left to question why many treatment group members did not consider the OLHSA-provided account as a 529 plan, SEED account, or college savings plan when asked if they had one. The problem is largely attributable to SEED account holders who made no individual deposits into their account, as shown in the last row of Exhibit 2-1. More than three-fourths of these said they did not have education savings for their children, even though they did in fact have a SEED account. We wish to caution readers that survey respondents may not have interpreted the question as intended, which could help explain the discrepancy.[52]

Who Opened a SEED Account?

As discussed previously, OLHSA experienced challenges during the 6 months of recruiting individuals into the research study and the 10+ months of getting them to

[50] The Center for Social Development at Washington University in St. Louis conducts account monitoring research for the SEED initiative. Information about this work is presented in Chapter 3.

[51] Because account monitoring data were not collected for comparison group families, the actual proportion of that group who opened 529 accounts cannot be similarly obtained, which means we cannot determine SEED's impact on opening a 529 account using account monitoring data.

[52] The question asked whether the respondent or the respondent's spouse/partner had ever saved any money specifically for the child. We cannot determine whether respondents included the MI SEED account, particularly the matching funds and/or initial deposit, in response to this question. We examined savings amounts to see if we could infer the respondent's interpretation, but the results were mixed—it appears that some did and some did not.

accept the SEED account. We find this intriguing. Those who declined to open an account were, in essence, turning down $800 or more in "free money." It is possible that some initially declined the account because of confusion over program requirements—for example, some potential account holders were told they would need to provide $25 from their own funds to open the SEED account, a requirement OLHSA lifted at the end of April 2005. We heard anecdotally that some potential account holders may have thought they needed to contribute a certain amount monthly, which is incorrect.

These misunderstandings were resolved fairly early in program operations, so despite them, the question remains: Why was it so hard to get people to accept the SEED account? It is possible that people rationally and consciously chose to decline the SEED account. It is also possible the research study could have dampened participation rates during the early part of the demonstration,[53] but its effects should have been negligible after the baseline survey had been completed and OLHSA staff were trying to induce potential account holders to accept the SEED gift without any research requirements. To help understand why some people may be more willing to accept a SEED account, this section examines characteristics of treatment group members who did and did not open a SEED account.

The follow-up survey asked the 118 treatment group members who did not open a SEED account why they did not. The most common answer (given by 43 respondents) was that they did not have the money. Several said "they could not afford it" or "were not financially able to at the time." It is not clear whether their responses indicate confusion about program requirements (including the initial one of $25 to open the account) or their particular financial circumstances (such as their expectation about an inability to deposit any funds into a savings account). Several (22) could not remember why they did not open an account. Five said they had never heard of SEED. Other reasons for not accepting the SEED account include:

- siblings would not receive one;
- the child already had a savings account;
- parent was unemployed;
- parent is used to keeping savings at home; and
- family problems.

[53] OLHSA staff feel strongly that the research study impeded their efforts to promote the MI SEED initiative and open MI SEED accounts.

In terms of demographic characteristics, very few differences between those who opened a SEED account and those who did not are evident when respondent characteristics are examined singly. According to characteristics at the time of the baseline survey, ***no*** significant differences were measured between the two groups in terms of the following factors:

- race,
- marital status,
- age,
- ratio of children to adults in the household,
- employment status,
- respondent or spouse have any money saved,
- whether the sample member had saved any money for the child,
- expectations regarding the child's education,
- food security,
- satisfaction with being a parent,
- source of household income (employment, public assistance),
- feelings of efficacy,
- extent of social support, and
- symptoms of depression.

In other words, people who opened the SEED account were identical to those who declined the SEED account for the above characteristics examined independent of each other. For example, African Americans were as likely as whites to accept (or decline) the SEED account, as were those who were married or not, younger vs. older, and those who were employed or not.

Statistically significant differences were detected for four factors, as measured in the baseline survey:[54]

[54] It is appropriate to use indicators from the baseline survey rather than the follow-up because the former (1) more accurately reflects an individual's status at the time the SEED account was offered, and (2) is free from the potential influence of the intervention (in this case, the offer of the SEED account).

- Level of education: those with higher levels of education (particularly at least some college) were more likely than those with lower levels of education to accept the SEED account.

- Home ownership: those who owned their homes were more likely to accept the SEED account than those who rented.

- Banked: Those with bank accounts were more likely to accept the SEED account than those who did not have bank accounts.

- Financial education: Those who had taken any class were more likely to accept the SEED account than those who had not.

Determinants of SEED Participation

This section reports the results of multivariate regression analysis of the determinants of SEED participation, which enables an assessment of the way factors may interact to affect account take-up. The basic statistical model for participation is

Eq. 2.1 $$D_{Fi} = \boldsymbol{\alpha}\mathbf{X}_{Bi} + u_i ,$$

where the subscript *i* refers to the household, B to the baseline, F to the follow-up, and D is an indicator variable that takes on a value of one if, by the time of the follow-up, the treatment-group family took up the offer and opened a SEED account and zero otherwise. The vector $\mathbf{X}$ represents a set of income and demographic characteristics from the baseline survey that influence the take-up decision. The parameters in the model, represented by the vector $\boldsymbol{\alpha}$, were estimated by probit maximum likelihood.

For the analyses that follow, we separated possible explanatory factors into (1) a set of core sociodemographic variables and (2) various blocks or dimensions. We do this because the high degree of multicollinearity among many variables could mask significant differences.[55]

The marginal effects of demographic and financial factors for opening a SEED account are shown in Exhibit 2-3, along with standard errors. Three individual characteristics—employment, home ownership, and financial knowledge—and two program features—whether the respondent attended a group orientation about SEED and whether the respondent met with a SEED coordinator—are statistically significant in predicting whether treatment group members accepted the offer of a SEED account.

[55] Appendix E presents the full model.

Exhibit 2-3. Financial Predictors of SEED Account Openers (n = 318)

Explanatory Variable	Estimate	Standard Error
Intercept	-2.437	0.657
Age	0.002	0.015
High school degree	-0.367	0.266
More than high school	0.071	0.265
Married	0.069	0.270
African American	0.022	0.268
Other race/ethnicity	-0.280	0.247
Divorced, separated, widowed	-0.188	0.296
Number of children	-0.073	0.092
Income	0.003	0.004
Employed*	-0.825	0.268
Have health insurance	0.289	0.228
Have bank account	0.163	0.253
Have car	0.232	0.339
Have financial assets	-0.225	0.276
Have a credit card	-0.374	0.258
Homeowner*	0.789	0.288
Filed state tax return	0.886	0.657
Filed federal tax return	-0.498	0.662
Financial knowledge score*	0.252	0.099
Taken any financial class	0.188	0.295
Attended group orientation re SEED****	2.064	0.323
Had individual meeting re SEED****	2.804	0.292

*$p < .05$.
****$p < .0001$

Next, we examine the possible effects of psychosocial factors in explaining whether individuals accepted the offer of a SEED account. As shown in Exhibit 2-4, contact with SEED staff either individually or during a group orientation was again a significant predictor of opening a SEED account, showing the importance of the "high touch" approach mentioned earlier.[56] Employment status was also a significant

[56] The study cannot infer causality solely from the survey data regarding the "high touch." It is possible that OLHSA outreach led to people accepting the MI SEED account; it is also possible that those more predisposed to save chose to participate in group or individual meetings. Reports from OLHSA staff and experiences in other SEED community partner sites suggest extensive outreach, education, persuasion, and reassurance were necessary to achieve participation in SEED, thus leading us to conclude that the "high touch" was, in fact, an important causal factor in helping people choose to accept the SEED account.

predictor of opening a SEED account in this model. All psychosocial factors examined, however, are not statistically significant, meaning that treatment group members were equally likely to accept the account, regardless of their expectations for the child's future, extent of social support, and feelings of mastery over their lives.

Exhibit 2-4. Psychosocial Predictors of Opening a SEED Account (n=333)

Explanatory Variable	Parameter	Standard Error
Intercept	-1.5000	1.6780
Age	0.0144	.0137
High school degree	-0.2591	.2581
More than high school	0.1535	.2541
African American	-0.0748	.2540
Other race/ethnicity	-0.3667	.2413
Married	0.1902	.2541
Divorced, separated, widowed	-0.1984	.2832
Number of children	-0.0041	.0842
Income	0.0031	.2832
Employed*	-0.5418	.2277
Attended a group SEED orientation****	2.1039	.3090
Met individually with SEED staff****	2.7136	.2764
Have a checking or savings account	0.2646	.2367
Hopeful about financial situation	0.1146	.2589
Pearlin Mastery Scale score	-0.0272	.0319
Social support score	0.0125	.0462
Importance of a college education	-0.2118	1.3366
How far parent thinks child will go in school	-0.4136	.3517
CES-D score	0.0832	.0566
Practice of religion "very important"	-0.0609	.2095

*$p < .05$
****$p < .0001$

We ran similar models for other factors that may explain why some people opened SEED accounts and others did not. In terms of fiscal factors the analysis shows

- no statistically significant differences in terms of savings behavior at baseline as measured by whether the sample member had any savings, any general savings for the child, or any savings for the child's education, or whether others had saved for the child's education;

- no statistically significant differences in terms of amounts people had saved at baseline;
- no statistically significant differences in terms of reasons people reported at baseline for having savings; and
- no statistically significant differences in money management strategies and behaviors (how they would handle a $200 windfall, the time horizon for money management, amount that should be saved for emergencies, whether set financial goals, whether stick to financial plans, whether keep track of spending).

We did, however, find differences associated with financial attitudes and experiences (Exhibit 2-5). Treatment group members were more likely to accept the SEED account if their parents had a savings account; they were less likely to open an account if their parents talked about money management when they were growing up or if the respondent had a savings account while growing up. Although unexpected, the negative influence of a parent talking about money management may have a plausible explanation, such as a practice of paying bills in full or saving for a major purchase (like a home or car).[57]

Exhibit 2-5. Predictors of Opening a SEED Account: Financial Attitudes and Experiences (n =318)

Explanatory Variable	Parameter	Standard Error
Intercept	-2.6941	.7582
Age	-0.0007	.0156
High school degree	-0.4099	.2801
More than high school	0.2941	.2836
African American	0.3382	.2893
Other race/ethnicity	-0.2647	.2720
Married	0.1913	.2811
Divorced, separated, widowed	-0.2110	.3072
Number of children	-0.0615	.1010
Income	0.0028	.0044
Employed*	-0.8166	.2973
Attended a group SEED orientation**	2.5739	.3663
Met individually with SEED staff**	3.0848	.3240
Have a checking or savings account	-0.0205	.2929

[57] We can conceive of no reasonable explanation for the negative effect of the respondent having a checking account while growing up, so we suspect it is statistically significant through random chance alone.

Exhibit 2-5. Potential Predictors of Opening a SEED Account: Financial Attitudes and Experiences (n =318) (continued)

Explanatory Variable	Parameter	Standard Error
Own a car	0.1942	.3608
Homeowner*	0.9798	.3004
Have financial assets	-0.2167	.2848
Have a credit card	-0.3595	.2626
Trust banks	0.4028	.2543
Agree it's important to have a savings account	-0.1628	.3825
Neighbors have a checking or savings account	-0.0081	.2396
It's important for a child to have a savings account	0.4840	.3129
Parents were good at managing finances	0.4499	.2873
Parents talked about money management*	-0.6114	.2726
Have a written budget	-0.1887	.2309
Parents had a savings account*	0.5861	.2684
Respondent had a savings account growing up*	-0.5191	.2545
Use cash checking store to cash checks	0.1846	.2582

*$p < .05$
****$p < .0001$

In sum, economic stability (as indicated by employment and home ownership) and connection to SEED program staff are associated with a family's likelihood of accepting the offer to open a SEED account. Although many indicators of savings behavior, attitudes, and experiences are unrelated to the decision to open a MI SEED account, a few are statistically significant: two early experiences suppress the likelihood of opening a SEED account (parents talking about money management and having a savings account while growing up) and one early experience increases the likelihood (parents had a savings account).

3. SEED ACCOUNTS

This chapter presents descriptive information about characteristics of SEED account holders and balances in their SEED accounts by the end of the demonstration.[58] Most information in this chapter comes from TIAA-CREF savings data for all MI SEED account holders collected by the Center for Social Development at Washington University.[59] The major findings are as follows:

- **The total amount of funds for 495 MI SEED account holders at the end of the demonstration averaged $1,483, with a range from $227 to $16,724.**[60] This amount includes the initial $800 deposit, the $200 deposit from Michigan, participant deposits, match funds, withdrawals, and net interest or earnings.

- **About one-third of MI SEED account holders deposited some funds into their accounts during the initiative;** about two-thirds did not.

- **The typical MI SEED respondent deposited about $184 over the course of the demonstration.**[61]

- **Those who are married, have at least some college education, own their home, and have a bank account all saved substantially more in their SEED accounts**.

MI SEED Goals and Objectives

For the MI SEED initiative, OLHSA set the following goal:

> *Of the 500 Head Start families enrolled in the program, 50% will save enough to access $1200 in match for their account over the course of the program and all 500 will save some amount.*

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[58] MI SEED savings data in this report were provided by the Center for Social Development (CSD) at Washington University in St. Louis. As part of its account monitoring research, CSD collected MI SEED savings data quarterly from October 1, 2004, through December 31, 2008. Data came directly from TIAA-CREF, the financial provider that holds MI SEED accounts. CSD implemented regular data checks to identify any problems or missing values and resolved data questions with TIAA-CREF. To prepare the savings data for analysis, CSD combined quarterly data files into a single cumulative file, reviewed and cleaned the file, documented variable descriptions and special cases, and created three variables: (1) average quarterly net savings, (2) average quarterly net contribution, and (3) total SEED accumulation.

[59] CSD's report on MI SEED is contained in Loke, V., Clancy, M., & Zager, R. (2009). *Account monitoring research at Michigan SEED* (CSD Research Report 09-62). St. Louis, MO: Washington University, Center for Social Development.

[60] OLHSA opened 499 SEED accounts but typically reported on activities for 500 SEED account holders. Of those who opened SEED accounts, 495 gave permission for TIAA-CREF to share data with the researchers at CSD conducting the account monitoring study.

[61] This is the average SEED participant contribution for 494 account holders. One account holder contributed considerably more than any other and so was removed to calculate the typical SEED deposit amount. The mean contribution for all 495 account holders was $220.

OLHSA projected that of the 500 enrolled (1) 50% will save at least $75 per quarter and (2) 75% will save regularly. In practice, achieving this goal was difficult (Exhibit 3-1). According to account monitoring data:

- 338 deposited no money into the SEED account and 161 deposited some funds into the SEED account.
- Of the 161 who had deposited some funds, 48 (i.e., 10% of all MI SEED accounts) reached the maximum amount of deposits eligible for the match ($1,200).
- Among account holders, 23 saved some amount each quarter.

Exhibit 3-1. Target and Actual Numbers for MI SEED Account Holders

OLHSA Goal or Objective	Target Number	Actual Number
Save some amount in SEED account	500	161
Save enough for maximum match *measure: saved a total of $1,200 over the course of the demonstration*	250	48
Save at least $75/quarter *measure: saved an average of $75/quarter starting with the quarter after the SEED account was opened*	250	48
Save regularly *measure: saved some amount each quarter starting with the quarter after the SEED account was opened*	375	23

Balances in the SEED Account

The SEED account consists of two components: the non-match account and the match account. Balances for each component, plus the total accrued, are discussed below and presented in Exhibit 3-2.

The **non-match account** balance consists of:

the $800 SEED initial deposit
+ deposits made by SEED families and others
+ earnings
− losses
− withdrawals
− fees

_____
= balance in non-match account

Exhibit 3-2. MI SEED Account Balances

Account Information	Mean	Percentiles			
		Median	25th	50th	75th
Non-match account (n = 495)					
amount of withdrawals	$45.33	0	0	0	0
account balance	$1092.94	$901.41	$895	$901	$930
Match account (n = 492)					
cumulative deposits	$360.74	$200.00	$200	$200	$250
account balance	$400.97	$228.67	$228	$229	$281
Total accumulation (n = 495)					
amount	$1,482.91	$1,130.64	$1,123	$1,131	$1,197

As noted above, 161 MI SEED account holders made a deposit into the non-match account during the course of the MI SEED initiative. Although SEED participants could withdraw savings from the non-match account, SEED program staff discouraged them from doing so and fully 477 of the 495 (over 96%) MI SEED account holders withdrew no SEED funds. Of those who did, the mean amount withdrawn was $1,246.68 and the median was $894.22.

By the end of MI SEED, non-match account balances ranged from $0.00 (those who withdrew all money including the initial deposit) to as much as $15,214.26.[62] The mean non-match account balance was $1,092.94; the median was $901.41 (Exhibit 3-2). Participants could select from several investment options so the portion of this amount that reflects earnings varies. To give some perspective, an $800 initial deposit, no further deposits, and a 3% interest rate compounded annually[63] would grow to $900.41 in 4 years—almost exactly the median amount of all MI SEED accounts.

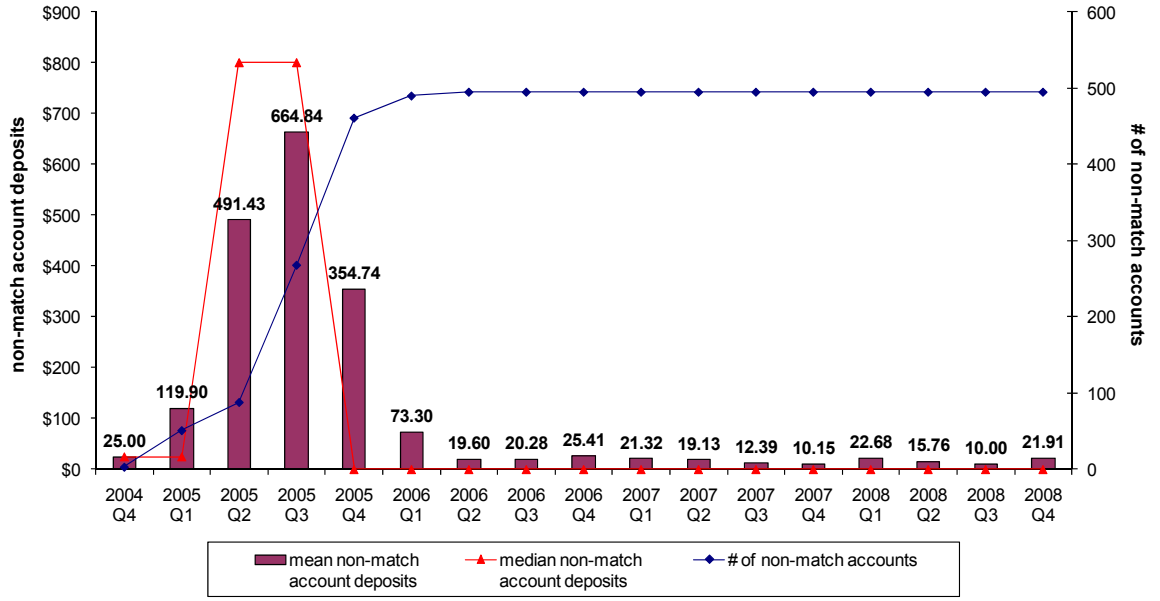
By the end of the second quarter of 2006 all non-match accounts were open. Mean and median quarterly deposits from the last quarter of 2004 (when MI SEED began) through the end of 2008 (when the demonstration period ended) are shown in Exhibit 3-3. Mean deposit amounts spiked early in the demonstration as accounts

[62] Five MI SEED account holders had established a 529 account for the focal child before the program started. Any pre-SEED deposits are included in the account balance.

[63] The 3% interest rate is an estimate based on the 5-year average annual total return for the MESP's guaranteed option, which was used for all MI SEED match accounts and could have been selected for non-match accounts, http://www.misaves.com/pdf/performance.pdf.

were opened with the $800 initial deposit. Once all accounts were open, the average quarterly deposit ranged from $10.00 to a high of $25.41. After the initial spike, the median quarterly deposit was $0.

Exhibit 3-3. Quarterly Deposits in Non-Match Accounts



The **match account** consists of deposits, plus earnings, minus fees. SEED participants were unable to withdraw funds from the match account. Two types of information about savings in the match account, shown in Exhibit 3-2, are as follows:

- The cumulative deposit consists of (1) the $200 deposit from the state of Michigan (12 participants were not eligible for this match) and (2) funds to match deposits participants or others made into the non-match account. Any amount over $200 in the match account is due to deposits made into the non-match account. For the 492 MI SEED match account holders[64] the mean cumulative deposit was $360.74 and the median was $200.

- The match account balance includes cumulative deposits and earnings on the account. The average account balance was $400.97 and the median account balance was $228.67.

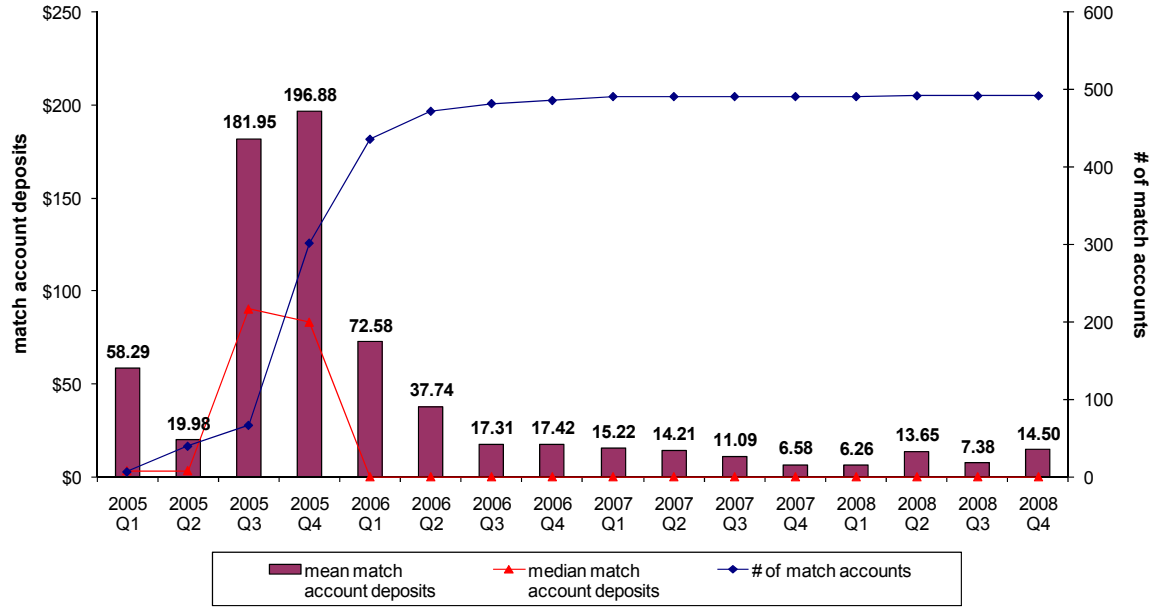
The quarterly pattern of match account deposits (Exhibit 3-4) closely follows that of the non-match account.[65] Deposits into the match account spiked during the beginning of the demonstration, reflecting the $200 contribution from the state of

[64] According to the account monitoring data, three people had a non-match account but did not open a match account.

[65] Since the match was applied at the end of each quarter, match deposits typically lag the non-match deposits by one quarter.

Michigan into these accounts. Median amounts were $0 for all quarters after all accounts were open.

Exhibit 3-4. Quarterly Deposits in Match Accounts



CSD calculated two measures of **accumulation** in SEED accounts, the average quarterly net contribution (AQNC) and the total SEED accumulation. The average quarterly net contribution is defined in Equation 3.1.

Eq. 3.1 AQNC = (deposits into account) – (529 deposits prior to MI SEED + initial deposit + withdrawals from participant deposits + withdrawals from initial deposit)
÷
number of quarters the account was open

The mean AQNC was $15.54 and the median was $0.00. Thus, on average, a MI SEED account holder deposited about $1.30 weekly.

The total SEED accumulation is the sum of the account balance (the initial deposit in the account, the participant's net savings, and investment gains or losses and net of fees) and total match (defined as match dollars allocated and accrued). The mean total SEED accumulation for all account holders was $1,482.91, with a median of $1,130.64.

Characteristics and Attitudes of Account Holders

Exhibit 3-5 gives basic characteristics for SEED account holders. The first column of the exhibit shows the percentage of account holders associated with each

demographic and financial characteristic and, hence, gives information on the composition of account holders. SEED account holders were predominantly educated (more than a high school degree), banked, renters, and had access to health insurance.

Exhibit 3-5. Characteristics of SEED Account Holders and their Account Balances

Baseline Characteristic	% of All Account Holders (n=495)	Mean Amount of Participant Deposits[a]	Mean Total Balance[b]
All	100%	$220	$1,483
Education			
less than high school	20%	$15	$1,156
high school diploma	30%	$108	$1,323
more than high school	50%	$370	$1,710
Race/ethnicity			
white	42%	$256	$1,599
African American	33%	$41	$1,191
other race/ethnicity	25%	$394	$1,672
Marital Status			
single	48%	$32	$1,195
married	39%	$452	$1,812
divorced, separated, widowed	13%	$221	$1,555
Public assistance			
receive TANF	12%	$67	$1,291
receive Food Stamps	53%	$108	$1,330
receive neither TANF nor Food Stamps	44%	$366	$1,683
Employment[c]			
unemployed	50%	$154	$1,417
employed (part- or full-time)	50%	$287	$1,549
Health insurance			
have health insurance	90%	$227	$1,496
uninsured	9%	$181	$1,402
Banked			
have bank account	67%	$327	$1,656
do not have bank account	33%	$32	$1,144
Car			
have car	81%	$265	$1,555
do not have car	18%	$24	$1,168

Exhibit 3-5. Statistics on SEED Balances (continued)

Baseline Characteristic	% of All Account Holders (n=495)	Mean Amount of Participant Deposits[a]	Mean Total Balance[b]
Homeownership			
homeowner	39%	$464	$1,811
renter	60%	$72	$1,275

[a] Participant contributions are calculated as: deposits during MI SEED, minus the initial deposit, minus withdrawals from contributions, minus withdrawals from the initial deposit.
[b] Calculated as the total of funds in the match and non-match accounts.
[c] "Unemployed" includes those currently in school, seeking employment, disabled and not seeking employment, homemakers not seeking employment, retired, and laid off workers.

The second column in the exhibit shows the average amount participants had deposited by the end of the MI SEED experiment, and the third column shows the total average SEED balance they had accumulated by the end of the experiment.[66] Across all account holders, the average total participant deposit at the end of the demonstration was $220, but amounts varied substantially according to account holder characteristics. For example, single parents/guardians had mean deposits of $32, whereas those who were married had deposits of $452. The groups with the largest deposits—over $400—were those who were married and homeowners. The groups with the smallest deposits—under $50—were without a high school degree, single, African American, unbanked, and without an automobile. The same patterns basically remain when examining the total SEED balances.

One series of questions in the follow-up survey asked treatment group members who said they had SEED accounts about potential barriers and facilitators to saving in those accounts. Exhibit 3-6 shows responses, divided into those who did and did not deposit money into their SEED account. Nearly all did not have a problem with the SEED account itself. More than 90% felt the account was secure, they liked the financial institution used, and they liked that deposits were matched. The ability to save, however, shows significant differences between savers and non-savers. Non-savers are significantly more likely to say it is hard to save because most of their money goes to necessities and that they could save a little but not enough to make a difference.

[66] The total average SEED balance does not adjust for the length of time the accounts were open, which ranges from 11 to 17 quarters.

Exhibit 3-6. Attitudes of Account Holders toward the SEED Account

Statement	% of SEED Account Holders who Strongly Agree or Agree (Survey Respondents)		
	Savers (n = 79)	Non-savers (n = 121)	Total (n = 200)
I liked the financial institution used for the SEED account.	94	93	93
SEED account seems secure.	95	94	94
I like that the money in the SEED account is matched.	99	96	97
It is hard to save money the SEED account because all or most of my money goes to buy "necessities."*	82	92	88
I could save a little in the SEED account, but not enough to make a difference.*	49	69	61

* $p < .05$

Determinants of SEED Balances

Up to this point, this chapter has primarily reported on SEED savings for all 495 account holders who agreed to participate in the account monitoring study. To better understand SEED savings behavior, we now turn to information from the surveys. In total, 210 SEED account holders completed both the baseline and follow-up surveys; due to item nonresponse on key variables, a subsample of 193 SEED account holders constitutes the basis for the following analyses.[67]

To better understand SEED saving behavior, we used multivariate regression analysis to estimate the determinants of SEED account balances. The basic statistical model is

Eq. 3.2
$$S_{Fi} = \boldsymbol{\alpha}\mathbf{X}_{Bi} + u_i,$$

where the subscript *i* refers to the household, B to the baseline, F to the follow-up, and S is the SEED account balance at the time of the follow-up. The vector $\mathbf{X}$ represents a set of core income and demographic characteristics from the baseline survey that many previous studies indicate should influence the account balance. These include age, income, number of children in the household, and indicator variables for education (high school degree, more than high school), marital status (married, divorced/separated/widowed), race (African American, other), health

[67] See Chapter 1 for a discussion of nonresponse.

insurance, employment, homeownership, car ownership, bank account ownership, ownership of financial assets, two variables measuring tax filing status, and two variables measuring the mode of contact in the SEED program (by mail or by phone).[68]

The coefficients in the model, represented by the vector α, were estimated by ordinary least squares (OLS) regression and are shown in Exhibit 3-7.

Exhibit 3-7. Determinants of SEED Account Balances among Survey Respondents (n = 193)

Explanatory Variable	Estimate	Standard Error	*p* value
Age of respondent	7.1	3.2	**.0266**
Education of respondent			
less than high school (reference)			
high school degree	-29.1	63.3	.6458
more than high school	135.0	60.9	**.0266**
Race/ethnicity			
Non-Hispanic white (reference)			
African American	-154.0	59.0	**.0091**
other race/ethnicity	-43.3	56.6	.4446
Marital status			
single (reference)			
married	88.9	59.7	.1359
divorced, separated, widowed	6.3	67.3	.9259
Number of children	18.9	20.4	.3546
Income (in $1000s)	2.7	0.9	**.0023**
Employed	-24.4	55.5	.6607
Have health insurance	55.4	51.6	.2829
Have bank account	11.6	62.1	.8522
Have car	-89.9	83.6	.2827
Homeowner	33.8	57.4	.5560
Have financial assets	77.7	64.1	.2261
Have a credit card	180.5	64.1	**.0019**
Financial knowledge score	-43.5	21.1	**.0387**

[68] The omitted group is, therefore, single, white individuals with less than a high school education, who do not own a home, car, or bank account, and do not file a tax return.

Exhibit 3-7. Determinants of SEED Account Balances among Survey Respondents (n = 193) (continued)

Explanatory Variable	Estimate	Standard Error	*p* value
Taken a financial class	-102.5	62.3	.0998
Filed state tax return	-226.6	186.9	.2253
Filed federal tax return	287.1	189.9	.1306
Program contact by mail	29.3	92.9	.7521
Program contact by phone	-9.0	71.2	.8995
Intercept	22.0	147.7	.8818
	Mean	**Standard Error**	
Average SEED savings	$379.05	$378.78	

Age, education, and race are the key demographic determinants of account balances. Individuals with more than a high school degree have accumulated $135 more in their accounts (than those with less than a high school education, the omitted educational category). This is a substantial effect since the average balance across these accounts was $379. There are significant differences by race: African American participants accumulated 39% less in their accounts than white participants (i.e., $154/$379 = 0.39).

Ownership of a credit card was associated with statistically significant differences in account balances. Those with a credit card had about 50% larger SEED balances than those who did not. Mode of contact with program personnel had little impact on accumulations.

The baseline survey asked a large number of questions about reasons for saving, saving attitudes, experiences, and money management. We expand the model in Eq. 3.3 to include a vector $\mathbf{W}$ that includes a set of indicator variables for these qualitative measures:

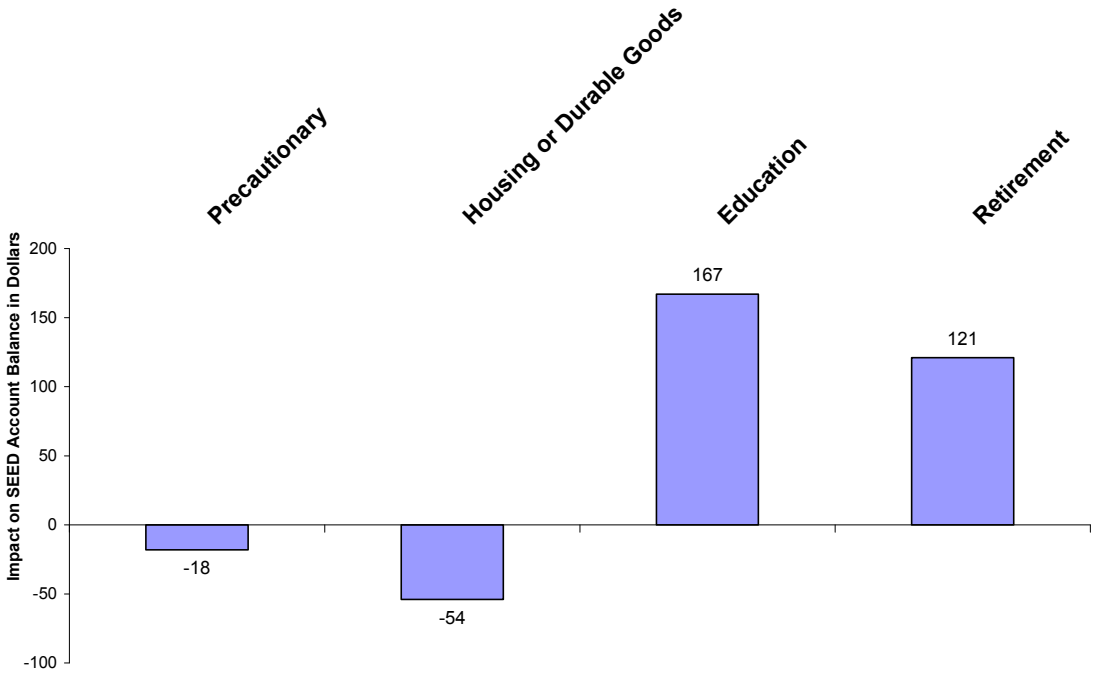
Eq. 3.3 $$S_{Fi} = \boldsymbol{\alpha}\mathbf{X}_{Bi} + \boldsymbol{\beta}\mathbf{W}_{Bi} + u_i .$$

Overall, there are 30 such measures, many of which are highly correlated with one another. Therefore to avoid multicollinearity, we summarize in Exhibits 3-8 through 3-11 the estimated impact of these measures in four blocks. The four blocks reflect segments of the survey and are grouped together based on results from cognitive testing and understanding of how individuals think about savings and money

management. In short, each block is composed of factors that cognitively cluster together.[69]

For example, Exhibit 3-8 shows estimates for the first block of factors: reasons for saving respondents stated in the baseline interview, which include saving for precautionary reasons (e.g., rainy day), housing or durable goods, education, and retirement. The bars in the exhibit show the estimated impact on SEED account balances, $\hat{\beta}$, at the end of the demonstration associated with that baseline saving reason from the OLS estimation of Eq. 3.3, relative to all other reasons for saving at baseline. Although it appears the amounts seem substantial—for example, the level of SEED accumulations increased by $167 for those who said at baseline that educational saving was an important reason for their saving—the amounts are not statistically different from zero (although saving for education came close). Thus, reasons to save have little economic or statistical impact on SEED account balances.

Exhibit 3-8. Impact of Reasons for Saving on SEED Account Balances

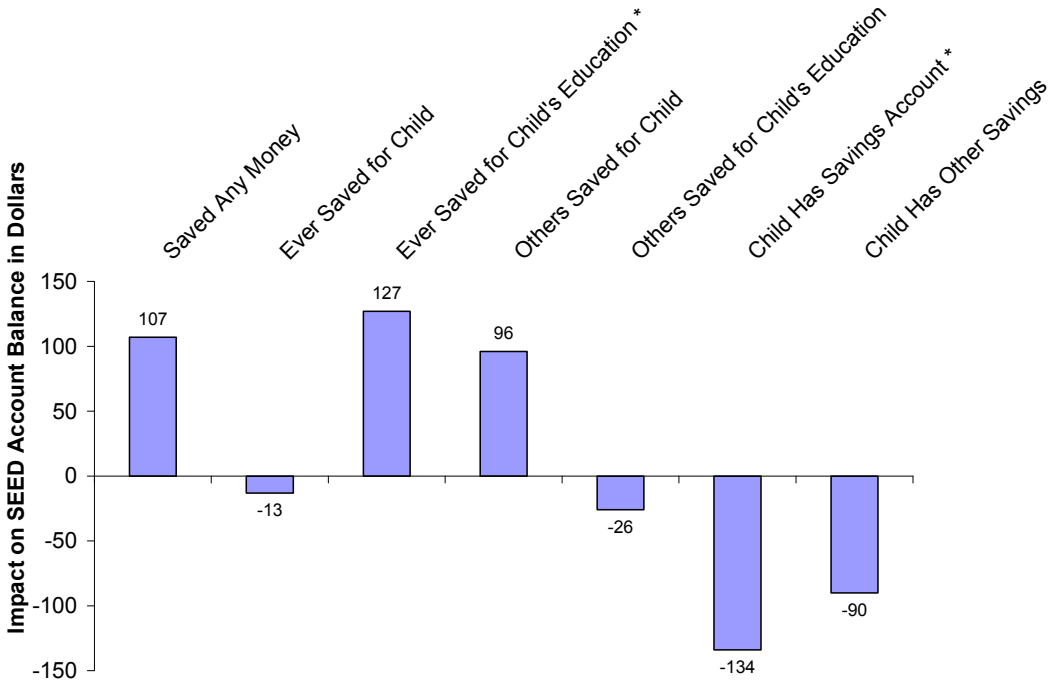


[69] Different combinations of parameters would possibly yield different results. However, given the extraordinary number of potential parameter combinations and model size constraints, the analysis in this section focuses on these 4 logical blocks of parameters. We conducted confirmatory factor analysis to examine the extent to which the 4 blocks have communal properties. The results show a good degree of consistency, but future research may want to examine other combinations of parameters.

We present estimates in Appendix E from a comprehensive model of Eq. 3.3, in which all (four blocks) of measures are entered simultaneously.

In Exhibit 3-9, the additional factors in $\mathbf{W}$ are measures of saving behavior that are more focused than the reasons for saving just discussed. The new measures capture saving actions and account ownership already undertaken for the focal child at the time of the baseline survey. The key finding is that parents/guardians who already had saved for the focal child at baseline ended up with $127 (or 34% of the average balance) more in SEED account accumulations. This finding is consistent with that in the previous exhibit: much of the activity in SEED accounts was associated with "savers," i.e., those with inclinations to save even before the onset of the demonstration. Offsetting this, however, is a second fact that emerges from Exhibit 3-10: a focal child with a savings account at baseline ended up with far less ($134 or 36% of the average balance) in the SEED account at the end of the demonstration.

Exhibit 3-9. Impact of Pre-Existing Saving on SEED Account Balances



* $p < 0.05$.

The next two exhibits show the impact of a variety of additional factors. These include the parent's/guardian's attitudes as an adult toward and experiences as a child with saving (Exhibit 3-10) and money management behavior (Exhibit 3-11). Each exhibit is from a separate estimation of Eq. 3.3. Few consistent patterns emerge. Account balances are higher among those with long investment horizons (and those who trust financial institutions come close to statistical significance), but, perhaps paradoxically, they are lower for those with written household budgets and those who view family saving as important. Overall, no strong conclusions can be drawn.

Exhibit 3-10. Impact of Attitudes and Experiences on SEED Account Balances

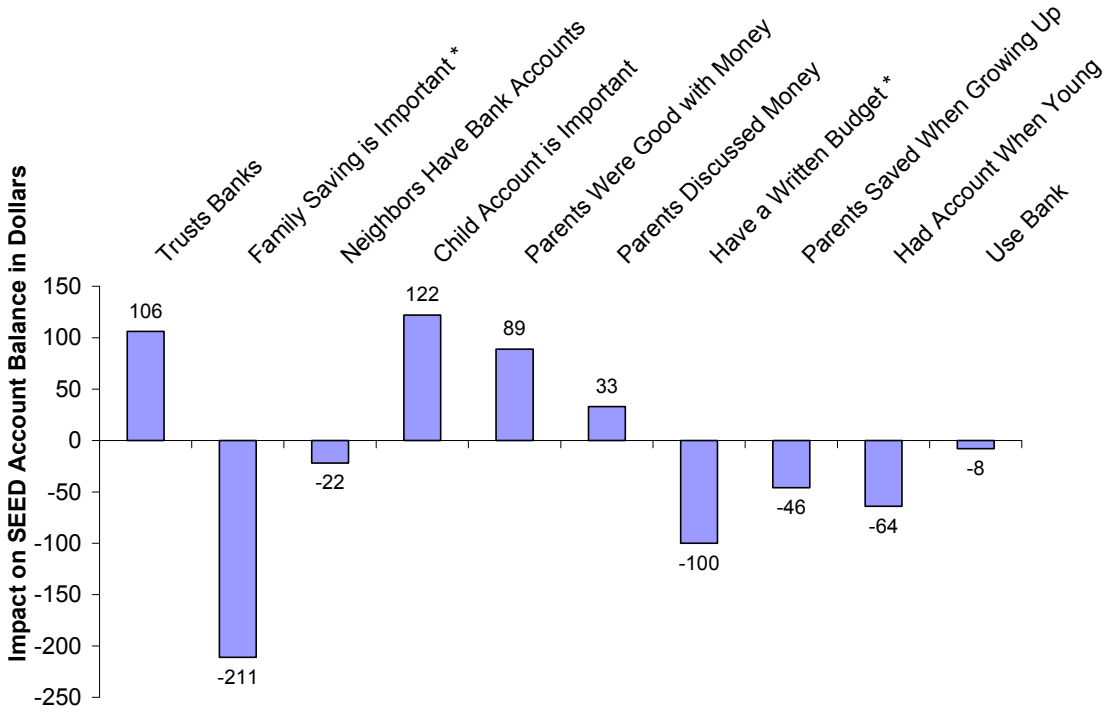
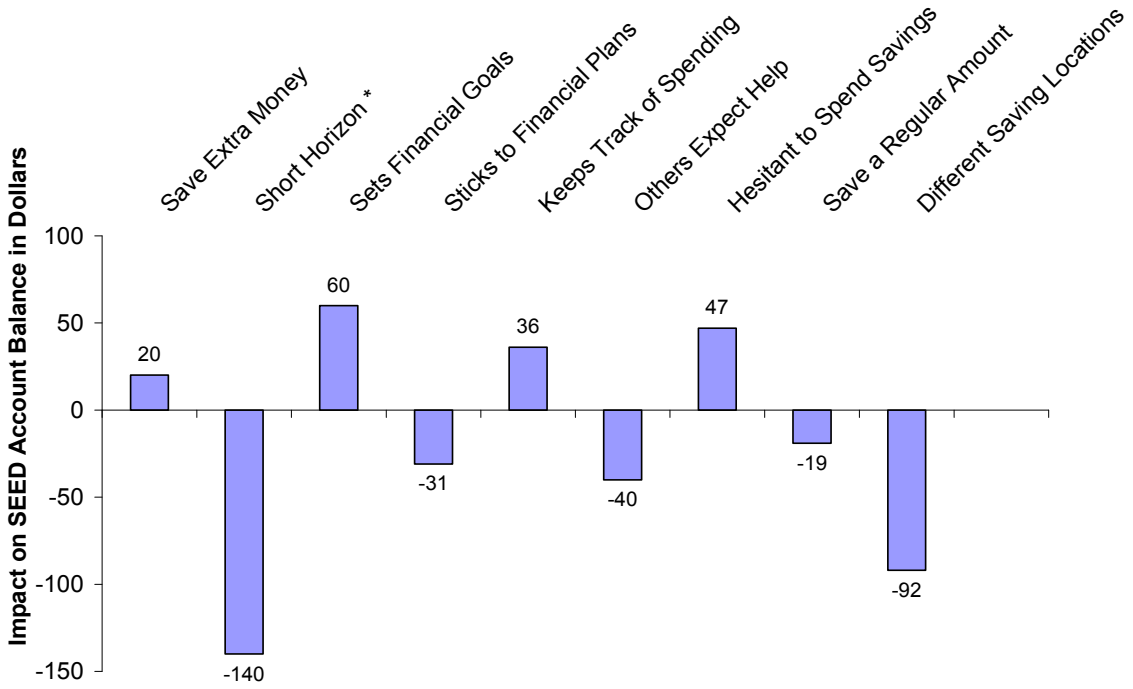


Exhibit 3-11. Impact of Money Management Factors on SEED Account Balances



* $p < 0.05$

Demographic Differences: An Exploration into Explanation

Like previous research reports on asset development, MI SEED finds certain demographic characteristics associated with savings. Some are logical and expected, such as those that indicate more financial security or stability (such as age and education). Others are perplexing but not new in the field of asset development, such as differences in race/ethnicity while holding constant factors such as income. In this section we briefly discuss some interesting indicators detected during exploratory analyses for three sociodemographic variables of particular interest: race/ethnicity, marital status, and home ownership. (In Exhibits 3-12 through 3-14, a plus sign indicates a significant increase in the amount of SEED savings and a negative sign indicates a significant decrease in the amount of SEED savings.)

Wealth discrepancies between African Americans and whites have been carefully examined and documented in many previous studies.[70] As shown in Exhibit 3-7, analysis of the MI SEED data shows that African Americans are significantly less likely to save in the SEED account (holding constant many other factors including employment status and income) than members of other racial groups. To try to understand this finding, we ran two separate regression models—one for African Americans and one for whites—to predict the amount of savings in the SEED account. In the models we put factors that had appeared linked to SEED savings, particularly in regard to differences between African Americans and whites. The results in Exhibit 3-12 are interesting: the factors that significantly predict savings are different for the two racial groups. For African Americans, higher income and being divorced, separated, or widowed lead to higher SEED balances, whereas unemployment and being a homeowner lead to lower SEED balances. For whites, being married and having already saved for the child's education at baseline lead to higher SEED balances. Some of these intuitively make sense (for example, being a homeowner may mean less slack in the budget for savings) and others do not (for example, marital status), but the fact that they differ for the two groups is important.

[70] See, for example, Oliver, M. L. & Shapiro, T. M. (2006). *Black wealth/white wealth: A new perspective on racial inequality*. New York: Routledge; Charles, K. K. & Hurst, E. (2002). The transition to home ownership and the black–white wealth gap. *Review of Economics and Statistics*, 84, 281–297.; Munnell, A. H., Tootell, G. M. B., Browne, L. E., & McEneaney, J. (1996). Mortgage lending in Boston: Interpreting HMDA data. *American Economic Review*, 86, 25–53; Charles, K. K. & Hurst, E. (2009). Conspicuous consumption and race. *Quarterly Journal of Economics*, 124, 425-467.

Exhibit 3-12. Exploratory Analysis of Factors that Predict SEED Savings, by Race

Factor at Baseline	African Americans (n = 58)	Whites (n = 85)
Age		
High school degree		
More than high school		
Married		+
Divorced, separated, widowed	+	
Income	+	
Employment	–	
Banked		
Own home	–	
Program contact by mail		
Program contact by phone		
Trust banks		
Religiosity		
Give to church		
Have a credit card		
Filed state tax return		
Filed federal tax return		
Saved money for child		
Saved for child's education		+

Separate regressions to predict the amount of savings according to marital status also show no overlap between factors associated with those who are married and those who are not. Among married respondents, the amount of SEED savings was positively associated with those who were older respondents, owned a home, filed a tax return, and had saved money for the child's education at baseline. Among those who were not married, income and education were positive factors, but unemployment was negative (Exhibit 3-13).

Exhibit 3-13. Exploratory Analysis of Factors that Predict SEED Savings, by Marital Status

Factor at Baseline	Married (n =83)	Not Married (n =122)
Age	+	
High school degree		
More than a high school degree		+
African American		
Other race/ethnicity		
Income		+
Employment		–
Banked		
Own a home	+	
Trust banks		
Have a credit card		
Would save an extra $200		
Filed state and/or federal tax return	+	
Saved money for child's education	+	

The last item we examined in this approach is home ownership because it featured prominently in several models. Exhibit 3-14 shows that SEED savings are higher for home owners who are older; SEED savings for renters are higher when they have higher incomes and higher levels of education, but are lower when they are unemployed.

Exhibit 3-14. Exploratory Analysis of Factors that Predict Savings, by Home Ownership Status

Factor at Baseline	Own Home (n = 72)	Rent (n =133)
Age	+	
High school degree		
More than a high school degree		+
African American		
Other race/ethnicity		
Married		

Exhibit 3-14. Exploratory Analysis of Factors that Predict Savings, by Home Ownership Status (continued)

Factor at Baseline	Own Home (n = 72)	Rent (n =133)
Divorced, separated, or widowed		
African American and married		
African American and divorced, separated, or widowed		
Other race/ethnicity and married		
Other race/ethnicity and divorced, separated, or widowed		
Income		+
Employment		–
Banked		
Trust banks		
Have a credit card		
Would save an extra $200		
Filed state and/or federal tax return		
Saved money for child's education		

Psychosocial Predictors of SEED Asset Accumulation

Previous research has shown that psychological and social factors such as goal clarity, future orientation, a sense of control over life, and social support can play a role in predicting savings behavior.[71] Regression analysis (Eq. 3.3) was used to examine their effects on the accumulation of savings in the SEED account.

Several psychosocial factors measured in the baseline survey may help predict the amount of SEED savings. For example, parents or caregivers who see a college education as important or think their child will go far in school might be more likely to save for their child's postsecondary education and take advantage of a program like SEED.[72] Similarly, a parent or caregiver's mental health, well-being, and social support networks may influence how much they save in a SEED account. Other social

[71] Hershey, D., Jacobs-Lawson, J., McArdle, J., & Hamagami, F. (2007). Psychological foundations of financial planning for retirement. *Journal of Adult Development*, 14(1/2), 26-36. doi: 10.1007/s10804-007-9028-1. Lunt, P. & Livingstone, S. (1991). Psychological, social, and economic determinants of savings: Comparing recurrent and total savings. *Journal of Economic Psychology*, 12, 621-641.

[72] Hossler, D., & Vesper, N. (1993). An exploratory study of the factors associated with parental saving for postsecondary education. *Journal of Higher Education*, 64(2), 140-165.

factors such as religiosity and whether the household participates in the banking system (by having either a checking or savings account) may also predict of savings behavior.[73] The regression models include the core set of demographic variables used previously—namely, household income, race, program services, and parent's education level—since they may affect the amount saved in SEED accounts.

Exhibit 3-15 shows that, as in other analyses, income, age, and education level are associated with higher levels of savings and being African American is associated with lower levels of savings. Engagement from MI SEED staff is associated with higher savings.

Exhibit 3-15. Psychosocial Predictors of Savings in the SEED Account (n = 193)

Explanatory Variable	Estimate	Standard Error
Age*	9.3	3.4
Education		
high school degree	-31.8	66.5
more than high school*	124.7	62.2
Race		
African American*	-178.8	61.0
other race/ethnicity	-57.3	59.1
Marital Status		
married	80.5	61.7
divorced, separated, widowed	18.4	68.7
Income (in $1000s)*	3.2	0.9
Employed	-26.5	52.5
Number of children	4.1	20.4
Banked	91.7	61.8
Hopeful about financial situation	81.5	59.7
Pearlin Mastery Scale score*	-19.6	7.4
Social support score	14.6	11.3
Importance of a college education	307.7	348.6
How far parent thinks child will go in school	-14.3	105.2
CES-D score	6.6	12.5

[73] Keister, L. A. (2003). Religion and wealth: The role of religious affiliation and participation in early adult asset accumulation. *Social Forces*, 82(1), 175-207. Hungerford, T. (2000). Who doesn't have a bank account? *Challenge* (05775132), 43(6), 65.

Exhibit 3-15. Psychosocial Predictors of Savings in the SEED Account (n = 193) (continued)

Explanatory Variable	Estimate	Standard Error
Practice of religion "very important"	54.4	16.1
Attended group SEED orientation	67.7	57.0
Program contact by mail****	27.6	96.0
Program contact by phone****	-14.7	72.5
Intercept	-252.4	442.2

* p < .05
**** *p* < .0001

One psychological measure was statistically significant: the respondent's score on the Pearlin Mastery Scale, which measures the individual's sense of control over his or her life. For each one point increase in Pearlin Mastery Scale score, the predicted savings in SEED *decreases* by $19.65, holding constant the other variables in Exhibit 3-15. We find this an intriguing and perhaps puzzling result—why should individuals who feel more mastery over their lives deposit less into savings accounts? An examination of the individual items in the scale shows strong influence from one of the eight items: whether the respondent strongly agrees, agrees, disagrees or strongly disagrees with the statement, "I have little control over the things that happen to me." Those who agree or strongly agree (indicating less mastery) saved more than those whose answers indicated more mastery. While we have no definitive explanation for this finding, we speculate that people who feel others control their lives may want to develop a sense of security or a rainy day fund in the event their concerns are warranted.

Comparability of SEED Account Holders and SEED Survey Respondents

The rest of this report focuses on assessing the impact of SEED on MI SEED participants, using survey data. To ascertain the comparability of the 495 SEED account holders to the 210 SEED account holders who completed both the baseline and follow-up surveys, we examined various demographic and savings characteristics (Exhibit 3-16). In all aspects survey respondents were not significantly different from all SEED account holders. For the analyses presented in the rest of this report, it is reasonable to infer that findings from account holders who are survey respondents accurately reflect those of account holders who did not participate in the survey insofar as they share the same characteristics.

Exhibit 3-16. Comparison of Survey Respondents to All Account Holders

Characteristic at Enrollment into SEED	Survey Respondents (n= 210)	All Account Holders (n=495)
Education		
less than high school	20%	20%
high school degree	30%	30%
more than high school	50%	50%
Race/ethnicity		
white	44%	42%
African American	34%	33%
other race/ethnicity	22%	25%
Marital status		
single	42%	48%
married	42%	39%
divorced, separated, widowed	15%	14%
Public assistance		
receive TANF	12%	12%
receive Food Stamps	55%	54%
Employment		
unemployed	51%	50%
employed	49%	50%
Health insurance		
have health insurance	90%	91%
uninsured	10%	9%
Banked		
have bank account	71%	67%
do not have bank account	29%	33%
Car		
have car	83%	82%
do not have car	17%	18%
Homeownership		
homeowner	42%	39%
renter	58%	61%
SEED Savings (mean)		
total SEED accumulation	$1,519	$1,483
participant matched deposits into SEED	$174	$163

4. MI SEED IMPACTS ON SAVINGS

The last chapter examined SEED account holders whose child had attended one of the seven Head Start centers randomly selected as treatment sites, primarily using data from the account monitoring study. This chapter shifts the focus and assesses impacts of MI SEED by comparing savings outcomes for treatment and comparison group members. Outcome data for the analyses in this chapter come solely from the baseline and follow-up surveys. The bulk of the analysis measures impacts of the SEED treatment on the treated (TOT) using the sample of baseline and follow-up survey respondents in the treatment and control groups.[74]

Major findings are as follows:

- **The impact on saving for the child's education was not significant**. Participation in MI SEED raised the average saving by the parent/guardian for the focal child's education by $484, a statistically significant effect. However, the average saving by others for the child's education decreased by $188. The combined savings (parent/guardian plus others) is $279, which is not statistically different from zero.

- **The impact of MI SEED on family saving and net worth was mixed**. Although treatment group families had greater assets in the form of retirement accounts, measured differences in liquid net worth between the treatment and control groups had large standard errors, preventing any firm conclusions about effects from SEED accounts.

Impact on Saving for the Child's Education

We examined whether SEED increased or decreased saving for the focal child's education.

- Saving by the parent/guardian may increase or decrease. It could increase if the parent/guardian responds to incentives for saving by increasing efforts to make contributions, or consumption could decrease if the parent/guardian economizes on family expenditures, thus enabling "new savings." However, saving for the focal child's education may decrease if the parent/guardian has a target level of saving in mind and SEED does not change that target. In this case, the initial $800 deposit and matching contributions could enable the parent/guardian to achieve the target with less of their own funds.

- Saving by others for the focal child's education may increase or decrease. It may increase if incentives fundamentally enhance the prospects for future

[74] As explained previously, we chose to use the TOT research approach rather than the "intent to treat" (ITT) research approach. Researchers using ITT define the treatment group as all those who were assigned to the treatment group, regardless of whether they actually received treatment. Since the MI SEED design involves the assignment of matched Head Start centers (i.e., not individuals) to treatment and comparison groups and the exposure to the offer of a SEED account was highly variable, we do not use this approach. For those who may be interested, we include ITT estimates in Appendix D.

> education and complement others' saving efforts, generating a bandwagon effect. Alternatively, saving by others for the focal child may decrease if SEED funds are perceived as a substitute for financing the child's education. In this case, SEED "crowds out" saving for the focal child that would have been made by other adults in the absence of the initiative.

In short, the offer to open a SEED account and its associated incentives to save may increase the frequency and amount of saving for the focal child's education, but the effects are potentially complex and not unambiguous.

Exhibit 4-1 presents basic information on assets accumulated by the parent/guardian for the focal child's education. The follow-up survey asked respondents if they had savings for the focal child and, if so, whether savings were at a financial institution, in a college savings plan, with an investment company, in a pension plan, at home, or somewhere else.[75] Those who indicated they had savings in a college plan were asked:

> About how much in total is in the child's college savings plan, SEED account, or 529 account?

The mean response for the comparison group was $256; the mean response for the treatment group was $510. Therefore, the difference between the groups at follow-up, which is one measure of the impact of SEED, was $254, with a standard error of $175.[76] Given the size of the standard error relative to the impact estimate, this SEED impact is not statistically different from zero at conventional significance levels.

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[75] An issue with using self-reported data to assess saving impacts is the prospect of reporting error by the respondent. One indicator of the concurrence between self-report and actual savings can be computed by comparing the amount SEED account holders reported in their account against TIAA-CREF reports of the amount in the account. Both were collected at approximately the same time period. Among treatment group members with SEED accounts, 18% did not know the amount of savings in their accounts. Of the 154 who answered the question, the mean amount was $1,103; the actual amount for the same respondents is $1,561, making a mean difference of -$458. A paired t-test shows the amounts to be statistically different at $p < .0001$.

As discussed in Chapter 2, some MI SEED account holders may not have answered the survey questions as intended in that they may not have considered the SEED account as their own savings for the focal child. Of the 210 treatment group members with SEED accounts, most could have reported at least $800 (reflecting the initial deposit) in savings for the focal child; 100 did.

Although treatment group respondents may have underreported the total amount of savings for the focal child, it is possible comparison group respondents did so, too. If the problem of underreporting is disproportionately among treatment group members, it is likely attributable to the initial deposit, so their self-reports would still reflect the impact of SEED on their own savings behavior.

[76] Since the 14 Head Start centers were first paired into 7 groups according to the characteristics of their clientele, robust standard errors clustered by center pair were calculated.

Exhibit 4-1. Differences in Accumulation of Assets for Focal Child's Education between Treatment and Comparison Groups, Based on Self-Report (standard errors) [*p* value]

Source of Saving	Baseline	Follow-up	Difference
Saving by parent/guardian through a 529 plan, SEED, or college saving account			
Treatment group (n = 244)	500.3 (211.9)	509.9 (155.7)	9.6 (94.5) [0.922]
Comparison group (n = 296)	283.3 (33.06)	255.9 (120.0)	-27.4 (140.9) [0.852]
Group difference	217.0 (239.6) [0.400]	254.0 (175.3) [0.197]	
Difference-in-difference (n = 540)			37.0 (193.2) [0.854]
Saving by others in all assets			
Treatment group (n = 199)	105.5 (44.1)	172.7 (62.2)	67.2 (88.2) [0.475]
Comparison group (n = 238)	521.3 (111.1)	329.6 (87.6)	-191.6 (152.8) [0.256]
Group difference	-415.7 83.3 [**0.002**]	-156.9 111.9 [0.210]	
Difference-in-difference (n = 437)			258.8 153.1 [0.142]

The baseline survey asked a somewhat different question, so a direct difference-in-difference comparison is not possible for this outcome. The baseline survey asked:

About how much money do you have saved for the child's education?

The mean amount at baseline was $500 for the treatment group, but $283 for the comparison group (shown in blue in Exhibit 4-1).[77] The variance suggests substantial differences in underlying saving behavior for the two groups, probably associated with demographic differences discussed in Chapter 1. The difference-in-difference estimate combines responses from these two questions and determines that the treatment group saved only $37 more than the comparison group once baseline differences in accumulation are accounted for. The difference is not statistically significant.

A second outcome, shown in the bottom half of Exhibit 4-1, measures assets accumulated by those other than the parent/guardian for the focal child's education. At follow-up, the mean response for the treatment group was $173; the mean response for the comparison group was $330. The difference between the groups at follow-up was negative, -$157, suggesting that SEED may have crowded out saving by others for the focal child's education. However, the two groups had substantial differences in the amount reported at baseline, with saving by others much higher for the comparison group. The direct difference-in-difference estimate of the SEED impact, shown in the bottom row, is that change in saving by others from baseline to follow-up was $259 higher for the treatment group once baseline differences are accounted for. With a standard error of $153, though, the difference-in-difference impact is not statistically significant.

An important lesson from the analysis in Exhibit 4-1 is that unbiased estimates of the impact of MI SEED must account for the substantive differences in baseline saving behavior between the treatment and comparison groups. Exhibit 4-2 presents regression-based estimates of the mean impact of the SEED treatment on those who opened an account from the following statistical model:

Eq. 4.1 $$Y_{Fi} = \delta_0 + \delta_1 D_i + \delta_2 Y_{Bi} + \theta \mathbf{X}_{Bi} + \varepsilon_i ,$$

where the subscript *i* refers to the household; B to the baseline and F to the follow-up surveys, respectively; Y denotes the financial outcome of interest; D is an indicator variable for whether a family opened a SEED account, taken from the

[77] All dollar amounts from the baseline survey were converted to real 2008 dollars using the all-items Consumer Price Index (CPI) to make the baseline and follow-up values comparably adjusted for inflation.

account monitoring data; and ε is a household-specific error term. $\mathbf{X}$ is a vector of socioeconomic characteristics at baseline and includes age, indicators for education category (high school graduate, more than high school), marital status (married; widowed, divorced, or separated), employed, race (African American, other), health insurance, tax filing status (filed federal, filed state), number of children, household income, financial education, financial knowledge score, and indicators for ownership of a bank account, credit card, home, and auto.

In this model, the baseline value of the outcome appears as an explanatory variable, along with the socioeconomic characteristics, to directly control for any underlying differences in saving behavior in the treatment and comparison groups prior to MI SEED. Here, δ_1 is the SEED program impact for those in the treatment group who accepted the offer and opened a SEED account. This TOT estimate of δ_1 is calculated using random effects instrumental variable estimation over the full sample of survey households, where the treatment status indicator, T, is the instrumental variable, the random effect is defined by Head Start center pair.[78] If the estimated effect, $\hat{\delta}_1$, is statistically different from zero at conventional significance levels, then the conclusion is that MI SEED affected the saving outcome. Standard errors are shown in parentheses in the exhibit; *p* values associated with the two-tailed test of the null hypothesis that MI SEED participation has no impact on the saving outcome are shown in square brackets.

In the first row of Exhibit 4-2, the outcome is the assets accumulated by the parent/guardian for the focal child's education in a 529, SEED, or college saving plan. The average impact for those who opened a SEED account was to increase assets accumulated for the focal child's education by $484, a 190% increase in assets relative to the mean accumulation of the comparison group shown in the second column (i.e., 484/256=1.90). This estimated impact is statistically significant.

The second row of Exhibit 4-2 shows the estimated impact of SEED participation on saving by others for the focal child's education. Here, the estimated impact is a decline in saving by others of $188, but with a standard error of $186 the effect is not statistically different from zero.

[78] This model was chosen over a clustered IV regression due to the small number of clusters. See Feng, Z., McLerran, D., & Grizzle, J. (1996). A comparison of statistical methods for clustered data analysis with Gaussian error. *Statistics in Medicine*,15(16), 1793-1806. Cameron, A. C., Gelbach, J. B., & Miller, D. L. (2008). Bootstrap-based improvements for inference with clustered errors. *Review of Economics and Statistics*, 90(3), 414-427. Bertrand, M., Duflo, E. & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *Quarterly Journal of Economics*, 119, 249–275.

The third row presents saving for the focal child's education by all parties and in effect sums outcomes from the first two rows. Overall, SEED participation was associated with an increase in saving for the focal child of $279, but this impact is not statistically significant.

Because averages can be heavily influenced by outliers, which can skew mean estimates and inflate standard errors, the fourth column of the exhibit shows parameter estimates from Eq. 4-1 after the top 2% of the saving outcomes have been trimmed from the sample. The estimated impacts from SEED participation on saving for the focal child's education are similar to the full sample estimates in the third column, though more precisely estimated (i.e., they have smaller standard errors), as expected.

Another important feature of mean estimates is that they represent the average MI SEED impact, which blends the potentially different impacts that program participation might have across different types of savers (e.g., low, moderate, and high). A common finding is that subsidized saving programs tend to have larger impacts for high savers, i.e., those in the upper part of the saving distribution. This has been found in estimates of the impact of IRAs,[79] 401(k)s,[80] traditional pensions,[81] and IDAs[82] on saving.

The last three columns of Exhibit 4-2 show the estimated impacts of SEED participation for high savers, specifically those at the 70th, 80th, and 90th percentiles of the saving distribution.[83] For saving by the parent/guardian, MI SEED substantially increases 529 assets for the focal child's education of around $900 for high savers, all of which are statistically significant. There are no impacts for low savers (data not shown). Therefore, the mean treatment effect of $484 can be thought of a weighted average of no impact at the low end and progressively larger impacts, topping out at around $900, at the high end of the family saving distribution. Similarly, there are statistically significant and larger impacts ($700-$900) at the 70th and 80th

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[79] Poterba, J., Venti, S., & Wise, D. (1995). Do 401(k) contributions crowd out other personal saving? *Journal of Public Economics*, 58, 1-32.

[80] Chernozhukov, V., & Hansen, C. (2004). The effects of 401(k) participation on the wealth distribution: an instrumental quantile regression analysis. *Review of Economics and Statistics*, 86, 735-751.

[81] Engelhardt, G., & Kumar, A. (2009). Pensions and household wealth accumulation. Syracuse University, mimeo.

[82] Mills, G., Gale, W., Patterson, R., Engelhardt, G., Eriksen, M., & Apostolov, E. (2008). Effects of individual development accounts on asset purchases and saving behavior: evidence from a controlled experiment. *Journal of Public Economics*, 92, 1509-30.

[83] These were calculated using the instrumental variable quantile treatment effect estimator of Abadie, A., Angrist, J., & Imbens, G. (2002). Instrumental variables estimates of the effect of subsidized training on the quantiles of trainee earnings. *Econometrica*, 70, 91-117.

percentiles of the distribution of saving by all parties shown in the third row of the exhibit.

The fourth row of Exhibit 4-2 shows impact estimates for saving for all purposes for the focal child. This is a broader measure of saving, recognizing that accumulated assets may be fungible so non-educational saving for the focal child can be retargeted toward education. This broader definition of saving may be a better metric by which to measure the impact of MI SEED on asset accumulation for the focal child. As shown, the mean SEED impact raises overall saving for the focal child by $235, but it is not statistically significant. The trimmed mean SEED impact raises savings by $349, which is significant.

One possibility is that any new saving for the focal child generated by MI SEED comes at the cost of less saving for non-focal children residing in the household or elsewhere. Hence, the fifth row of the exhibit provides a similar set of estimates of the impact of MI SEED on saving for all non-focal children by the parent/guardian. At the mean, there is less saving (-$43), but this estimated offset is not statistically different than zero.

The next to last row explores another possibility: that MI SEED has an impact on broader household saving behavior, measured as saving for all purposes other than children done by the parent/guardian. Here, SEED participation could either "crowd out" other saving as household resources are shifted toward saving for the focal child saving and away from other purposes, or SEED could "crowd in" other saving as the initial deposit and match free up household resources to be saved for other purposes. The estimates suggest that other saving increased, but with large standard errors, no firm conclusions can be drawn.

The final row of the exhibit presents estimates of the net saving effect from MI SEED participation. Here, the outcome is the parent/guardian saving for all purposes (the sum of rows 4-6). Again, the aggregate saving effect is positive, i.e., an increase of $1,100 based on the mean estimate, but not statistically significant and imprecise, as shown by the large standard errors.

It is interesting to examine the characteristics of "high savers" for the focal child's education (defined as those at or above the 75th percentile; having deposits greater than or equal to $275 in savings for the focal child's education) and compare them to other survey respondents who saved less. The high savers are significantly more likely to be white (67%), be married (56%), have completed at least some college (57%), have a checking or savings account (90%) and have higher incomes (mean $34,129) than average, low, or non-savers (Exhibit 4-3).

Exhibit 4-2. TOT Impacts on Saving for the Focal Child, Mean and by Percentile (standard error) [*p* value]

Assets accumulated for …	Comparison Group Mean	Estimated TOT Impact (standard error) [*p* value], Measured as Differences from Baseline, at the …				
		Mean	Trimmed Mean	70th Percentile	80th Percentile	90th Percentile
the focal child's education						
by the parent/guardian through a 529 plan, SEED account, or college saving account (n = 562)	256	484 (198) [**0.015**]	498 (81) [**0.0001**]	900 (247) [**0.0003**]	900 (189) [**0.000002**]	879 (349) [**0.012**]
by others (n = 437)	521	-188 (188) [0.319]	-84 (57) [0.063]	0 (23) [0.999]	0 (90) [0.999]	-23 (285) [0.937]
by all (n = 437)	806	279 (552) [0.593]	197 (206) [0.337]	890 (277) [**0.001**]	672 (320) [**0.035**]	388 (502) [0.440]
all purposes for the focal child by the parent/guardian (n = 495)	411	235 (230) [0.306]	349 (106) [**0.001**]	327 (176) [0.062]	398 (242) [0.099]	166 (543) [0.759]
all purposes for non-focal children by the parent/guardian (n = 538)	691	-43 (276) [0.875]	63 (167) [0.705]	40 (147) [0.788]	-35 (251) [0.889]	-355 (414) [0.392]
all purposes other than children by the parent/guardian (n = 537)	1,803	898 (1012) [0.375]	634 (461) [0.168]	85 (196) [0.665]	179 (395) [0.651]	383 (777) [0.622]
all purposes combined by the parent/guardian (n = 472)	2,707	1,100 (1,082) [0.309]	362 (553) [0.513]	436 (700) [0.533]	900 (839) [0.283]	-9 (1,648) [0.996]

Exhibit 4-3. Characteristics of High Savers vs. Others

Characteristic	High Savers (%)	Average, Low, and Non-savers (%)	*p* value
Full sample	25	73	
Education			**.0002**
less than high school	18	35	
high school	25	36	
more than high school	57	30	
Race			**.0102**
white, non-Hispanic	67	46	
African American	19	34	
other	14	19	
Marital status			.0725
married	56	42	
separated/divorced/widowed	19	19	
single	25	39	
Employment status			.3865
employed	71	65	
unemployed	29	35	
Banked			**.0007**
had a checking or savings account at baseline	90	70	
did not have a checking or savings account at baseline	10	30	
Income (mean)	$34,129	$20,459	**<.0001**

Impact of SEED on Other Financial Outcomes

Participation in MI SEED may have impacts on financial outcomes other than savings (Exhibit 4-4). The survey examined outcomes related to financial knowledge, specifically asking if respondents had participated in any financial education and determining how well they answered questions of basic financial knowledge. There were no significant SEED impacts in either of these domains. The survey also looked at money management skills, asking if respondents had a written budget, paid off the entire balance of their credit card almost every month, and whether they would save or spend the money if they had an extra $200. No significant differences were found on these measures.

Exhibit 4-4. Impact of SEED on Financial Knowledge and Money Management

Other Financial Outcomes	SEED Account Holders: Percent "Yes"		Comparison Group: Percent "Yes"		SEED Impact	*p* value
	Baseline	Follow-up	Baseline	Follow-up		
Taken any financial class	19	19	20	20	-.0532	.335
Answered at least 2 of 3 financial knowledge questions correctly	55	58	53	55	.0937	.290
Have a written budget	66	62	62	58	.0351	.689
Pay off entire credit card balance almost every month	34	21	35	34	-.0150	.938
Would save most or all of an extra $200	65	56	65	58	-.0308	.738

Impact on Overall Family Net Worth

One issue in evaluating the impact of MI SEED is the extent to which deposits into SEED accounts represent net new saving. In principle, the overall family saving impact of SEED is the sum of two key reactions to the MI SEED initiative. First, deposits by families could represent increases in overall family net worth, shifts in assets from non-subsidized (saving account) to subsidized forms (529 plan), or money that would have been saved otherwise, even in the absence of the SEED intervention. Second, program deposits in the form of the initial deposit and matching contributions could be offset by less family saving. Exhibit 4-2 analyzes the net saving effects based on direct questions in the baseline and follow-up surveys on targeted forms of saving. The analysis below provides a second perspective by examining household responses to specific asset and debt questions posed in the baseline and follow-up surveys.

The first four columns of Exhibit 4-5 show the percentage of the treatment and comparison group families, respectively, that hold various broad classes of liquid and financial assets. These assets are the ones most likely to act as a substitute for SEED saving and, therefore, the most likely to be shifted into SEED accounts. The fifth column shows the TOT estimate from the following statistical model

Eq. 4.2
$$O_{Fi} = \phi_0 + \phi_1 D_i + \phi_2 O_{Bi} + \gamma \mathbf{X}_{Bi} + \upsilon_i ,$$

where O is an indicator variable that takes on a value of one if the family held that asset and zero otherwise, D is an indicator if the family opened a SEED account,

taken from the account monitoring data, $\mathbf{X}$ is the same vector of socioeconomic characteristics at baseline used in Exhibit 4-2, and υ is a family-specific error term. In this model, an indicator for whether the asset was held at the time of the baseline survey also appears as an explanatory variable. Here, ϕ_1 is the SEED participation impact, or TOT, and is estimated by random effects instrumental variable regression, with the treatment status indicator as the instrumental variable and the random effect defined by Head Start center pair. The inclusion of the baseline indicator controls for differences in asset holding at baseline in the calculation of SEED impacts. Standard errors clustered by center pair are shown in parentheses; *p* values are shown in brackets.

Exhibit 4-5. Impact on Probability of Ownership and Amount of Banking and Financial Assets (standard error) [*p* value]

	Treatment Group		Comparison Group		Probability Ownership	ITT
Type of Asset	% at Baseline	% at Follow-up	% at Baseline	% at Follow-up	TOT Estimate	Amount Estimate
Checking account (n = 573)	56.8	66.4	62.1	68.8	-0.0376 (0.0644) [0.560]	-76.7 (76.3) [0.314]
Savings account (n =572)	52.3	49.6	57.6	55.1	-0.0264 (0.0710) [0.710]	-336.8 (303.7) [0.267]
Bonds or CDs (n = 565)	7.5	8.2	14.5	8.4	0.0119 (0.0412) [0.773]	8.9 (67.1) [0.895]
Stocks or mutual funds (n = 565)	5.5	5.9	5.8	3.9	0.0539 (0.0320) [0.093]	391.2 (378.4) [0.301]
Retirement account (n = 564)	15.6	25.4	19.5	24.4	0.0774 (0.0591) [0.190]	2,335.0 (1,149.4) [**0.042**]

If asset shifting occurred for a particular asset class, then the mix of asset types held should change and the estimated effect, $\hat{\phi}_1$, should be negative and statistically different from zero. Alternatively, if SEED stimulated saving in assets outside of SEED accounts and thereby changed the composition of family portfolios, then the estimated effect, $\hat{\phi}_1$, should be positive and statistically different from zero. The

estimates in the fifth column suggest that, in general, MI SEED did not induce changes in the prevalence of any of the measures of banking and financial assets.

One possibility is that SEED may not have induced large changes in the mix of assets held, but to a greater extent changed the amount of assets held. To explore this, the final column of the exhibit shows estimates of the parameters of a final statistical model,

Eq. 4.3
$$A_{Fi} = \xi_0 + \xi_1 T_i + \psi \mathbf{X}_{Bi} + \varepsilon_i ,$$

where A is the dollar amount of the asset held, T is the treatment status indicator, $\mathbf{X}$ is the same vector of socioeconomic characteristics at baseline used in Exhibit 4-2, and ε is a family-specific error term. Here, ξ_1 is the ITT impact of the SEED program and is estimated by maximum likelihood.[84]

None of the estimated treatment effects are statistically significant for checking, saving, bonds, and stocks. Treatment group families did see statistically significant higher accumulations in retirement accounts, such as IRAs and 401(k)s, which are less liquid than the other financial asset classes shown in the exhibit, of over $2,300.

Exhibit 4-6 expands this analysis to selected measures of wealth that are substantially less liquid than financial assets, including real estate and business wealth. MI SEED participants have less auto debt. The asset amount estimates in the final column again are positive for many of these assets, but have large standard errors that prevent many firm conclusions from being drawn.

Exhibit 4-6. Impact on Probability of Ownership and Amount for Selected Measures of Non-liquid Wealth (standard error) [*p* value]

	Treatment Group		Comparison Group		Probability Ownership	
Type of Asset or Debt	% at Baseline	% at Follow-up	% at Baseline	% at Follow-up	TOT Estimate	ITT Amount Estimate
Home (n = 575)	28.2	34.0	26.6	28.8	0.0153 (0.0601) [0.799]	4,878.0 (4,898.6) [0.319]
Mortgage (n = 571)	19.5	26.5	19.4	22.0	0.0363 (0.0544) [0.505]	

[84] We were unable to estimate TOT impacts for the asset and debt amounts because the likelihood function was not globally concave. See the note at the end of this chapter for details of the ITT estimation. The likelihood function for ITT with random effects also was not globally concave. Block-bootstrapped standard errors are shown in parentheses.

Exhibit 4-6. Impact on Probability of Ownership and Amount for Selected Measures of Non-liquid Wealth (standard error) [*p* value]

Type of Asset or Debt	Treatment Group		Comparison Group		Probability Ownership TOT Estimate	ITT Amount Estimate
	% at Baseline	% at Follow-up	% at Baseline	% at Follow-up		
Home equity loans (n = 570)		9.0		5.1	0.0405 (0.0381) [0.288]	694.9 (589.1) [0.238]
Other real estate assets (n = 573)		2.7		5.4	-0.0405 (0.0309) [0.190]	-35010.9 (54,380.2) [0.520]
Other real estate debt (n = 572)		3.9		3.8	0.0221 (0.0293) [0.451]	754.5 (644.1) [0.241]
Business assets (n = 573)		5.0		4.8	-0.00521 (0.0329) [0.874]	-23,292.5 (11,322.5) [**0.040**]
Business debt (n = 574)		0.8		1.0	-0.00975 (0.0143) [0.640]	-241.8 (305.3) [0.428]
Has automobile (n = 576)	88.5	83.8	87.0	81.0	-0.00885 (0.0549) [0.872]	
Automobile debt (n = 572)		32.6		42.0	-0.1060 (0.0708) [0.134]	-918.6 (370.0) [**0.013**]

One reason why, in principle, family deposits into SEED accounts might not represent new saving is that they may have been accompanied by increases in household debt. To explore the extent to which SEED participants changed their debt holding relative to comparison group families, Exhibit 4-7 presents estimates of the SEED impact on selected measures of debt.

The first five columns of the exhibit show that in, general, SEED participants did not differ from comparison group members in the type of debt held. The most noticeable impact is a 9–point difference in the fraction of families with credit cards (column 5). However, this effect is not statistically significant.

Exhibit 4-7. Impact on Probability of Having and Amount Selected Measures of Debt (standard error) [*p* value]

Type of Debt	Treatment Group % at Baseline	Treatment Group % at Follow-up	Comparison Group % at Baseline	Comparison Group % at Follow-up	Probability Ownership TOT Estimate	ITT Amount Estimate
Has credit card (n = 573)	30.9	37.5	29.0	32.2	0.0913 (0.0646) [0.158]	
Credit card debt (n = 571)		45.3		44.1	-0.000637 (0.0709) [0.993]	-80.0 (298.8) [0.789]
Personal debt (n = 570)		15.9		15.4	-0.0148 (0.0561) [0.792]	-536.8 (624.2) [0.390]
Medical debt (n = 573)		43.2		45.2	-0.0729 (0.0752) [0.332]	167.7 (390.2) [0.667]
Installment debt (n = 573)		7.7		7.0	0.00791 (0.0399) [0.843]	-71.6 (76.3) [0.348]
Student loan (n = 573)		32.4		36.0	0.0614 (0.0634) [0.333]	66.7 (565.0) [0.906]
Overdue bills (n = 571)		52.7		55.3	-0.0409 (0.0758) [0.590]	153.3 (211.0) [0.467]
Other debt (n = 571)		9.7		6.1	0.0513 (0.0414) [0.215]	303.4 (487.5) [0.534]

Exhibit 4-8 gives the many ITT results for asset and debt amounts in a summary form by presenting estimates for aggregated measures of liquid assets and debts. Liquid is defined as non-housing, non-business, and non-automobile assets and debts, which are arguably the easiest categories of net worth to change in response to SEED. Overall, the treatment group raised its total financial assets by over $2,300, but incurred essentially no more debt than the comparison group of families. Across all forms of liquid assets and debts, the treatment group accumulated an

estimated $2,026 more in net worth, but with a large standard error of $2,192, MI SEED has no statistically significant impacts on household portfolios.

Exhibit 4-8. Impact on Amount of Selected Measures of Liquid Assets and Debt

Measure	ITT Amount Estimate (standard error) [*p* value]
Total financial assets	2,322 (1,455) [0.111]
Total non-housing, non-business, non-auto assets	2,028 (1,456) [0.164]
Total non-housing, non-business, non-auto debt	2 (999) [0.998]
Total non-housing, non-business, non-auto net worth	2,026 (2,192) [0.355]

A note on estimation of impacts on assets and debts:

One complication in estimating the parameters of the model in Eq. 4-3 is that the follow-up survey asked the respondent to give asset and debt amounts in intervals. For example, for checking accounts, the intervals were (1) zero; (2) more than zero, but less than $250; (3) more than $250, but less than $500; (4) more than $500 but less than $1,000; (5) more than $1,000, but less than $2,000; (6) more than $2,000, but less than $10,000; and (7) more than $10,000. To estimate the SEED impact with interval-coded asset data, let $\varepsilon \sim N(0,\sigma^2)$ and note that the true asset amount, A_{Fi}, falls into the *j*th interval if

Eq. 4.4 $$\alpha_{j-1} < A_{Fi} < \alpha_j ,$$

where α_{j-1} and α_j represent the lower and upper thresholds for the interval. For example, for checking account assets, where there are 7 intervals, $\alpha_0 = -\infty$, $\alpha_1 = 0$, $\alpha_2 = 250$, $\alpha_3 = 500$, $\alpha_4 = 1000$, $\alpha_5 = 2000$, $\alpha_6 = 10000$, and $\alpha_7 = \infty$. To estimate ξ_1 by maximum likelihood, define Z such that Z_{ij} equals one if assets reported, A_{Fi}, fall into the *j*th interval and zero otherwise. For example, for family *i* with $100 in its checking account, $Z_{i2} = 1$. Then the probability of observing family *i* having assets in interval *j* is

Eq. 4.5 $$\Pr(Z_{ij} = 1) = \Phi\left(\frac{\alpha_j - \xi_0 - \xi_1 T_i - \psi \mathbf{X}_{Bi}}{\sigma}\right) - \Phi\left(\frac{\alpha_{j-1} - \xi_0 - \xi_1 T_i - \psi \mathbf{X}_{Bi}}{\sigma}\right),$$

where Φ is the standard normal cumulative distribution function. This implies a likelihood function of the form

Eq. 4.6 $$L = \prod_{i=1}^{N} \prod_{j=1}^{7} \left[\Phi\left(\frac{\alpha_j - \xi_0 - \xi_1 T_i - \psi \mathbf{X}_{Bi}}{\sigma}\right) - \Phi\left(\frac{\alpha_{j-1} - \xi_0 - \xi_1 T_i - \psi \mathbf{X}_{Bi}}{\sigma}\right) \right]^{Z_{ij}}$$

Standard errors from this estimation are calculated by block-bootstrapping on center pair, based on 199 bootstrap replications.

5. PSYCHOSOCIAL AND EDUCATIONAL OUTCOMES

Asset theory suggests that having assets may lead to positive psychological, social, and educational outcomes for both children and their caregivers,[85] and research has shown some of these positive benefits. One study found that having assets can have a positive effect on prudence or risk avoidance; efficacy; and connectedness with friends, family and organizations.[86] Another study found that IDA participants felt more confident about their futures and more in control of their lives because of their savings accounts.[87]

The fact that a parent has assets—independent of the parent's income—may also be associated with a number of education-related outcomes including the physical and social environment of the home,[88] an orientation to the future,[89] and children's educational attainment[90] and behavior.[91] Other research has demonstrated that the relationship between assets and educational achievement is mediated by parental expectations and involvement[92] and the physical and social environment of the home.[93]

To date, previous research has focused on correlations between assets and outcomes. MI SEED helps advance knowledge through its quasi-experimental design (using random assignment) and longitudinal data (enabling measurement of change over time). The SEED initiative hopes to produce beneficial psychosocial, educational,

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[85] Shobe, M., & Page-Adams, D. (2001). Assets, future orientation, and well-being: Exploring and extending Sherraden's framework. *Journal of Sociology & Social Welfare*, 28(3), 109-127. Lerman & McKernan, 2008, op cit.

[86] Yadama, G. N., & Sherraden, M. (1996). Effects of assets on attitudes and behaviors: Advance test of a social policy proposal. *Social Work Research*, 20(1), 3-12.

[87] Moore, A., Beverly, S., Schreiner, M., Sherraden, M., Lombe, M., Cho, E. N. Y., et al. (2001). Saving, IDA programs, and effects of IDAs: A survey of participants (CSD Report). St. Louis, MO: Washington University, Center for Social Development.

[88] Yeung, W. J., & Conley, D. (2008). Black-white achievement gap and family wealth. *Child Development*, 79, 303-324.

[89] Shobe, M., & Page-Adams, D. (2001). Assets, future orientation, and well-being: Exploring and extending Sherraden's framework. *Journal of Sociology & Social Welfare*, 28(3), 109-127.

[90] Conley, D. (2001). Capital for college: Parental assets and postsecondary schooling. Sociology of Education, 74(1), 59-72. doi: 10.2307/2673145. Shanks, T. R. W. (2007). The impacts of household wealth on child development. *Journal of Poverty*, 11, 93-116. Zhan, M. (2006). Assets, parental expectations and involvement, and children's educational performance. *Children and Youth Services Review*, 28(8), 961-975. doi: 10.1016/j.childyouth.2005.10.008. Zhan, M., & Sherraden, M. (2003) Assets, expectations, and children's educational achievement in female-headed households. *Social Service Review* 77(2), 191-211.

[91] Shanks, 2007, op cit.

[92] Grinstein-Weiss, M., Yeo, Y. H., Irish, K., & Zhan, M. (2009). Parental assets: A pathway to positive child educational outcomes. *Journal of Sociology and Social Welfare*, 36, 61-85.

[93] Orr, A. J. (2003). Black-white differences in achievement: The importance of wealth. *Sociology of Education*, 76, 218-304. Yeung & Conley, 2008, op cit.

and motivational effects for focal children and their caregivers. To measure these effects, the MI SEED survey asked a variety of questions about family and individual well-being, parent expectations, and educational involvement and achievement.

This chapter analyzes the impact of the SEED program on these psychosocial and educational outcomes. The impact is measured by contrasting treatment and comparison group members.[94] The major findings are:

- **The SEED program had a significant, positive impact on how parents view college**. MI SEED parents place more importance on a college education than parents in the comparison group.
- **MI SEED resulted in positive impacts for two attitudinal measures among parents.** SEED parents were less likely to feel too critical of their children, and more likely to be satisfied with the amount of time they give their children.
- **Overall, MI SEED had little impact on psychosocial or educational outcomes**. The survey collected several measures of well-being, social support, and educational outcomes. Although some indicators changed from baseline to follow-up, the changes were not significantly different for treatment and comparison group members.

Caregiver and Familial Outcomes

Several indicators of the well-being of the caregiver and the family were collected in the MI SEED survey. These are discussed below.

Caregiver Well Being

The survey used a modified 12-item version of the Center for Epidemiological Studies in Depression (CES-D) scale as an indicator of respondent mental health, asking the frequency that respondents had felt certain ways during the past 30 days.[95] The result is a score between 0 and 36, with a higher score indicating a higher level of distress.[96] As shown in Exhibit 5-1, about one-third of all survey respondents had

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[94] As in Chapter 4, the impact analyses in this chapter use a treatment on the treated approach, analyze difference-in-differences when there are both baseline and follow-up measures, use the standard list of covariates (age, education category, marital status, employment, race, health insurance, tax filing status, number of children, household income, financial education, financial knowledge score, and indicators for ownership of a bank account, credit card, home, and auto), and are calculated using random effects instrumental variables estimation over the full sample of survey households.

[95] The psychometric properties of the 12-item version (including factor structure, reliability, and characteristics of the subscale) have been determined with an alpha reliability of 0.85 for women and 0.81 for men. Ross, C. E., & Mirowsky, J. (1984). Components of depressed mood in married men and women: The Center for Epidemiologic Studies' depression scale, *American Journal of Epidemiology*, 119, 997–1004.

[96] Response categories for the 12-item CES-D used by Ross et al. are coded 0 if the symptom was experienced "rarely or none of the time," 1 for "1 to 2 days," 2 for "3 to 4 days," and 3 for "5 to 7 days." Cognitive interviews determined the need to simplify these

moderate or severe depressive symptoms (score greater than 9), quite comparable to a national survey of mothers using the same items that found the prevalence of moderate or severe depressive symptoms to be 35%.[97],[98] The treatment on the treated effect of SEED on depressive symptoms was not significantly different from zero.

Exhibit 5-1. CES-D Level of Distress (measured at follow-up only)

Classification	Treatment Group (n=330)	Comparison Group (n = 348)		
Not depressed (score of 0-4)	42	41		
Mildly depressed (score of 5-9)	30	30		
Moderately depressed (score of 10-14)	17	15		
Severely depressed (score of 15-36)	11	14		
	Mean	**Mean**	**SEED Impact**	***p* value**
CES-D score	7.25	7.52	-.1313	.408

The survey posed the Pearlin Mastery Scale to respondents to assess their current level of "mastery," or the extent to which they consider factors in their lives as being under their control rather than "fatalistically ruled."[99] The scale presents seven agree/disagree statements that express attitudes about control over life events. The scale has two positive statements that express a high level of mastery and five statements that express negative mastery. Exhibit 5-2 shows the percentage of

categories for telephone interviews, so we modified them accordingly. Items in the MI SEED version of the CES-D were scored as 0 for "none of the time," 1 for "some of the time," and 3 for "most or all of the time" during the past week.

[97] Pascoe, J. M., Stolfi, A., & Ormond, M. B. (2006). Correlates of mothers' persistent depressive symptoms: A national study. *Journal of Pediatric Health Care*, 20(4), 261-269. doi: 10.1016/j.pedhc.2006.01.006.

[98] A study using the 20-item version of the CES-D scale has shown that about 20% of the general population show high depressive symptoms. Radloff L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401. A study of low-income mothers using the 20-item CES-D found that the portion with high depressive symptoms among this group was as high as 48%. Hall, L. A., Williams, C. A., & Greenberg, R. S. (1985). Supports, stressors, and depressive symptoms in low-income mothers of young children. *American Journal of Public Health*, 75(5), 518-522.

[99] Pearlin, L. I., & Schooler, C., (1978). The structure of coping. *Journal of Health and Social Behavior*, 19, 2–21. Pearlin, L. I., et al. (1981). The stress process. *Journal of Health and Social Behavior*, 22, 337–356.

respondents who reported feelings of control over their lives for each statement. Mastery levels for the entire sample were quite high on many items in the scale at both baseline and follow-up.[100] Over 95% agreed they can do anything they set their mind to and that what happens to them in the future depends on them. For all items except one, more than 80% gave a response that would indicate mastery. The exception is the statement, "there is no way I can solve some of the problems I have," with which 66% disagreed at the follow-up survey. The effect of SEED was not significantly different from zero for all individual items and for the scale as a single measure.

Exhibit 5-2. Pearlin Mastery Scale (difference in differences)

	Treatment Group (n= 333)		Comparison Group (n=348)			
Percent Who Show Mastery[a]	Baseline	Follow-up	Baseline	Follow-up	SEED Impact	*p* value
There is no way I can solve some of the problems I have.	69	66	68	66	.0140	.868
I feel that I am being pushed around in life.	87	89	85	87	.0470	.473
I have little control over the things that happen to me.	85	84	83	84	.0184	.791
I can do anything I set my mind to.	94	96	97	97	-.0358	.320
I feel helpless in dealing with the problems of life.	84	86	86	85	-.0611	.350
What happens to me in the future depends on me.	93	94	96	95	.0026	.953
There is little I can do to change the important things in my life.	84	84	86	84	-.0825	.174

[a] Those who (1) strongly agree or agree with positive mastery statements or (2) disagree or strongly disagree with negative mastery statements.

Family Environment and Well-Being

MI SEED tried to determine whether SEED affected certain aspects of family relations, namely participants' assessment of their parenting skills and feelings about

[100] There may be a ceiling effect for some items in the scale.

the burdens of parenting. Eight survey items asked whether respondents agreed or disagreed with statements about their role as a parent or caregiver (Exhibit 5-3).[101] Universally, respondents were happy with their role as a parent or caregiver and enjoy time they spend with their child, at both baseline and follow-up. Four indicators of parental stress decreased from baseline to follow-up across the entire sample, but MI SEED had no significant impact on any of the eight items.

Exhibit 5-3. Parental Stress (difference in differences)

	Percent Who Strongly Agree or Agree					
	Treatment Group (n= 333)		Comparison Group (n=348)			
Indicator Statement	Baseline	Follow-up	Baseline	Follow-up	SEED Impact	*p* value
I am happy with my role as a parent/caregiver.	99	99	98	99	-.0315	.196
I often find I have too little time for myself.	69	64	67	65	-.0199	.809
I enjoy the time I spend with my children.	100	100	100	99	.0044	.790
I feel overwhelmed with the responsibilities of being a parent/caregiver.	35	26	39	31	-.0569	.491
I am able to find a balance between the many demands for my time and energy.	84	85	88	89	-.0118	.865
I often find that my life is more work than pleasure.	56	51	58	57	-.0499	.597
I am satisfied as a parent/caregiver.	97	99	97	99	.0078	.801
I often feel tired worn out or exhausted by the responsibilities of being a parent/caregiver.	42	33	48	41	-.0307	.738

[101] Modified from the Parental Stress Scale from Berry, J. O., & Jones, W. H. (1995). The parental stress scale: Initial psychometric evidence. *Journal of Social and Personal Relationships*, 12(3), 463. Abidin, R.R. (1990). Parenting Stress Index short form: Test manual (36-item version). Unpublished doctoral dissertation. Charlottesville, VA: University of Virginia. Morrison, D., Zaslow, M., & Dion, R. (1998). Completing the portrayal of parenting behavior with interview-based measures. In M. Zaslow & C. Eldred (Eds.), *Parenting behavior in a sample of young mothers in poverty*. New York: MDRC.

Measures of self-efficacy were collected during the follow-up survey, which asked if respondents strongly agree, agree, disagree, or strongly disagree with the nine statements listed in Exhibit 5-4. For the whole sample nearly 40% wished they were more consistent with their children, and 60% wished they gave their children more individual attention. Nearly all said they think their children would consider them a good parent. Treatment and comparison group members differed on two measures, although it is unclear whether these differences are due to MI SEED or to other unmeasured differences between the two groups:

- SEED participants were significantly more likely to disagree with the statement "Sometimes I feel I am too critical of my children."
- They were also significantly more likely to agree with the statement "I am satisfied with the amount of time I can give my children."

The nine-item composite measure of parental self-efficacy showed no statistically significant difference between treatment and comparison group members.

Exhibit 5-4. Parental Self-Efficacy (measured at follow-up only)

	Percent of Treatment Group (n= 333)		Percent of Comparison Group (n=348)			
Indicator	Agree	Disagree	Agree	Disagree	SEED Impact	*p* value
As a parent/caregiver, I am able to find a balance between the many demands for my time and energy.	85	15	89	11	-.0119	.817
I wish I did not become so impatient so quickly with my child(ren).	32	68	28	72	.0330	.642
Sometimes I feel I am too critical of my child(ren).	23	77	31	69	-.1547	**.024**
I think my child(ren) would consider me a good parent.	99	1	98	2	.0338	.071
I wish I gave my child(ren) more individual attention.	59	41	61	39	-.0394	.601
I am satisfied with the amount of time I can give my child(ren).	74	26	66	34	.1407	**.048**

Exhibit 5-4. Parental Self-Efficacy (measured at follow-up only)(continued)

Indicator	Percent of Treatment Group (n= 333)		Percent of Comparison Group (n=348)		SEED Impact	*p* value
	Agree	Disagree	Agree	Disagree		
I am satisfied with the way I discipline my child(ren)	93	7	95	5	-.0280	.450
Sometimes I feel I should provide more supervision for my child(ren).	23	77	25	75	-.0270	.680
I wish that I were more consistent in my parenting behaviors.	41	59	40	60	-.0083	.913

Social Support

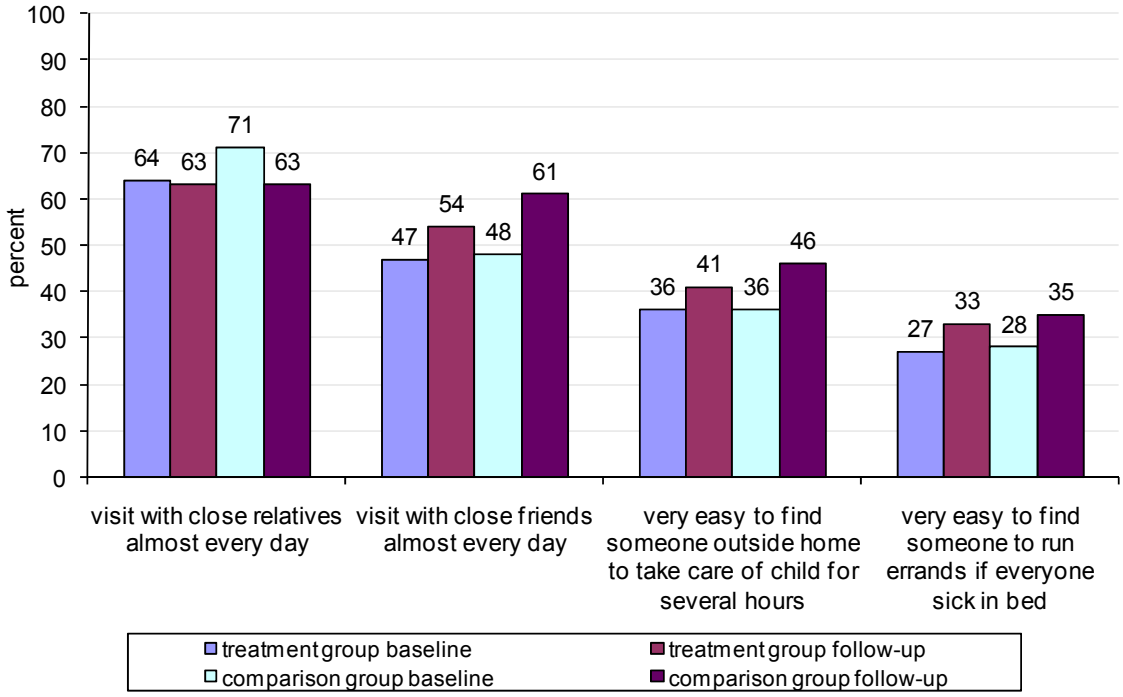
Social support can have an important influence on parental and child mental health, especially among low-income families.[102] Some evidence shows that having assets may increase civic engagement and general social well-being. Another survey found that about one-third of IDA participants said they were more likely to be involved in their neighborhoods than those without IDAs.[103] Participation in SEED may allow families to increase their levels of social support—for instance, it is possible that having assets may enable families to interact more with others. Alternatively, people with differing levels of social support may have differential levels of savings.

To measure social support the survey asked about the frequency of contact with close friends and family and the family's ability to find support from people outside the home. Social support increased from baseline to follow-up on three indicators (Exhibit 5-5). At follow-up over half visited with close friends almost every day. However, no significant impacts were associated with MI SEED. If participation in MI SEED could increase social support through attendance at SEED events, the effect may have been dampened because of low participation rates.

[102] Ceballo, R., & McLoyd, V. C. (2002). Social support and parenting in poor, dangerous neighborhoods. *Child Development*, 73(4), 1310-1321.

[103] Moore, A., Beverly, S., Schreiner, M., Sherraden, M., Lombe, M., Cho, E. N. Y., et al. (2001). Saving, IDA programs, and effects of IDAs: A survey of participants (CSD Report). St. Louis, MO: Washington University, Center for Social Development.

Exhibit 5-5. Social Support



Future Orientation

Research on adult Individual Development Accounts suggests that parents who saved were goal-driven and motivated by the expectations of a better future for their children.[104] Similarly, MI SEED examined whether those who saved would have improved future expectations and goals for their children. Several indicators were used to measure whether treatment group members exhibited a greater future orientation than comparison group members, such as through talking with focal children about their future, expectations about their financial situation, and educational expectations for the focal child. Exhibit 5-6 provides data regarding parent attitudes about the future. Both groups showed an increase in how often they discussed the future with the focal child, which makes sense given the natural course of child development and expansion of topics discussed as they age—but differences for the three indicators were not statistically significant between the treatment and comparison groups.

[104] Hogan, J., Solheim, C., Wolfgram, S., Nkosi, B., & Rorigues, N. (2004). The working poor: From the economic margins to asset building. *Family Relations*, 53(2), 229-236.

Exhibit 5-6. Future Orientation (difference in differences)

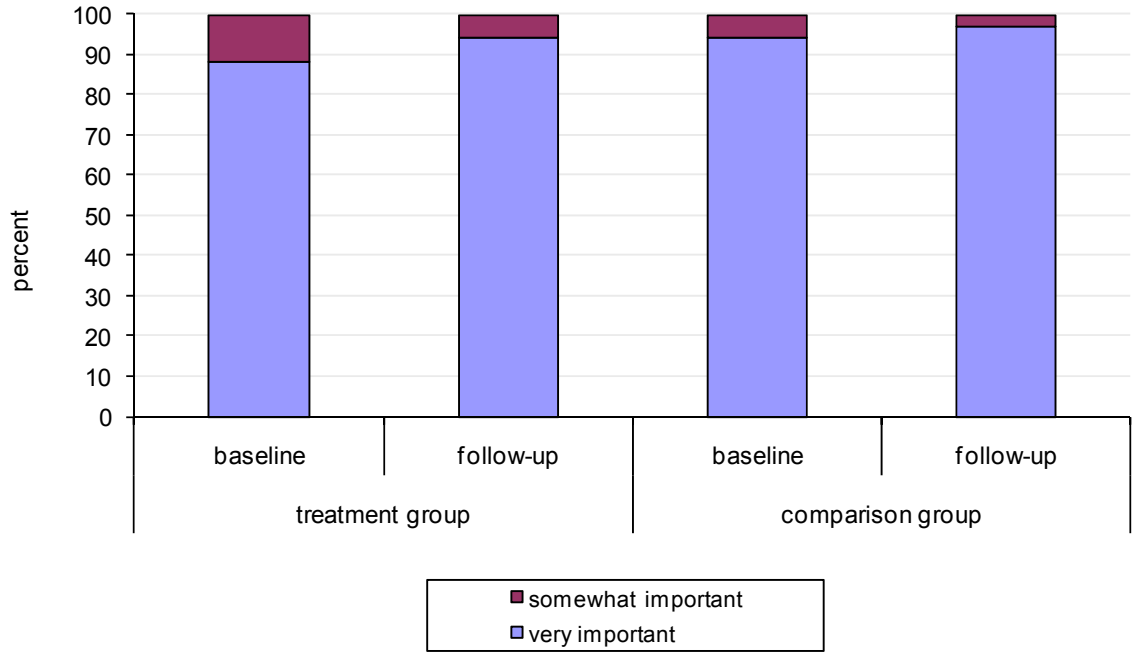
Indicator	Percent of Treatment Group (n=333)		Percent of Comparison Group (n=348)		SEED Impact	*p* value
	Baseline	Follow-up	Baseline	Follow-up		
How often parent discusses the future with the focal child					-.2517	.171
greater than once a week	23	37	28	38		
once a month to once a week	39	50	35	49		
once a year	8	10	10	10		
never	29	3	28	3		
Expectations for the child's financial future					.0174	.736
better than parents	93	92	95	95		
same as parents	7	7	5	4		
worse than parents	1	1	<1	1		
Expectation for the child's educational future (How far in school do you expect the child to go?)					-.0707	.454
graduate from high school	7	4	6	3		
some post-high school education	22	22	17	13		
college graduate or greater	71	74	77	85		

Education-Related Outcomes

Attitudes About Education

Having assets designated for their child's postsecondary education may lead caregivers to see college as a more viable option and place more value on education generally. Accordingly, we examined whether parents of treatment group members placed a greater value on their children's education. Exhibit 5-7 presents the percentage of parents who thought a college education is very or somewhat important at both the baseline and follow-up and shows that 90% or more in both groups regarded college education as very important at both baseline and follow-up. MI SEED had a significant impact on parents' view on the importance of a college education (***p*=.014**).

Exhibit 5-7. Value of Higher Education



Parent Involvement in Children's Education

One indicator of the value parents place on their children's education is the extent of parent involvement with their children's schooling. MI SEED measured this indicator in two ways. First, a series of items asked whether the parent had participated in each of six types of school activities over the past 12 months. Parents answered "yes" or "no" to each of the following:

- attended an open house or back-to-school night;
- attended a meeting of a PTA, Parent-Teacher Organization, or other such organization at the child's school;
- gone to a regularly scheduled parent-teacher conference with the child's teacher;
- attended a school or class event, such as a play, sports event, music concert, or science fair at the child's school;
- volunteered at the child's school or served on a committee; and
- participated in fundraising for the child's school.

Second, two items asked about the parents' discussions with their children about school.

- Within the past 12 months, how often have you and your child discussed school activities or events of particular interest to him/her? Would you say never, rarely, occasionally, or regularly?
- Within the past 12 months, how often have you and your child discussed things he/she has studied in class? Would you say never, rarely, occasionally, or regularly?

Data for these variables are presented in Exhibit 5-8. We formed two composites for both indicators. The Parent Participation composite was formed by counting "1" for each activity the parent had done, summing the number of activities, and computing the mean. The composite score indicates that parents in both groups reported participating in an average of more than four types of school activities (of a possible six) during the previous 12 months. Treatment group and comparison group members were not statistically different in the number of school activities in which they participated.

Exhibit 5-8. Parent Involvement in Education (measured at follow-up only)

	Treatment Group		Comparison Group			
Type of Involvement	n	Mean	n	Mean	SEED Impact	*p* value
Number of events parent participated in at school	333	4.39	348	4.45	.0155	.944
Frequency parents discuss education with child	333	5.50	348	5.60	.1085	.371

The composite for Parent Discussions was formed by assigning a value of 0 to 3 for each of the response options, then summing the scores such that the total ranges from 0 to 6. These data also indicate that treatment group and comparison group members were similar in the frequency of discussions parents had with their children regarding school activities or material studied in class. Data from the individual items indicate that 80% of treatment group members and 76% of comparison group members discussed school activities regularly; 92% of treatment group and 93% of comparison group members discussed matters studied in class regularly with their child. There are no statistical differences between them.

Investments in Cognitive Development

Parents with larger amounts of assets tend to make greater investments in their children's development by providing a more optimal physical, social, and cultural environment.[105] We examined whether parents in the treatment group would likewise

[105] Yeung & Conley, 2008, op cit.

make greater investments in their children's cognitive development. The SEED survey included items from the *Home Observation for the Measurement of the Environment (HOME) – Short Form* that assess the provision of stimulating activities and materials. Items included the availability of books and musical instruments, attendance at museums and theatrical performances, provision of sports, music, art, drama, or dance lessons, as well as the time the child spends reading.

Exhibit 5-9 presents the percentage of respondents in the two groups who indicated they provided their children with each of the different types of activities or materials. Over half of respondents in both groups said the child had at least 10 books, had a musical instrument, read several times per week, and got special lessons or belonged to an organization. SEED had no significant impact on these measures. We also formed a composite indicator by combining all of the items from the HOME, also shown in Exhibit 5-9. MI SEED had no statistically significant impact on this overall composite measure. On average, parents in both groups provided close to four of the six activities or materials to their children.

Exhibit 5-9. Provision of Stimulating Activities and Materials (measured at follow-up only)

HOME Components Individual Measures	Percent of Treatment Group		Percent of Comparison Group		SEED Impact	*p* value
Child has 10 or more books	89		92		-.0222	.608
Have a musical instrument in the house	56		60		-.0828	.268
Child reads for enjoyment several times a week or more	91		90		.0680	.131
Child gets special lessons or belongs to an organization	53		59		-.0770	.307
Child taken to a museum at least once in the past year	77		82		-.0352	.572
Child attended a musical or theatrical performance at least once in the past year	62		69		-.0301	.674
Composite score	**n**	**mean**	**n**	**mean**		
	333	4.29	348	4.49	-.1794	.343

Some research has shown that computer and internet access at home is linked to academic achievement and cognitive development in children.[106] To measure the level of access the SEED survey asked respondents if they had a computer and internet access in the home. Overall, 80% of treatment group and 78% of comparison group members said they had a computer and about two-thirds (65% and 63%, respectively) had internet access in the home.[107] There were no significant differences between the treatment group and the comparison group.

Child-Related Outcomes

Academic Outcomes

Previous research indicates that parental assets are related to children's educational attainment.[108] To determine whether SEED affects academic outcomes, we asked parents questions during the telephone follow-up survey.[109]

We conceptualize "academic outcomes" broadly. First, we asked parents to rate their child's overall work in school. As shown in Exhibit 5-10, ratings were similar for treatment and comparison group members. Although the comparison group had a slightly higher percentage of children rated in excellent and above average categories as compared to the treatment group, the difference was not statistically significant (p=.123).

We also asked parents to rate their children's performance in each of four subject areas—language arts, mathematics, social studies, and science—as excellent, above average, average, below average, or failing. We then created a measure of the child's academic performance, based on a typical grade point average (GPA) scale,

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[106] Jackson, L. A., von Eye, A., & Biocca, F. A. (2003). Does home internet use influence the academic performance of low-income children? Findings from the HomeNetToo Project. Proceedings of First Latin American Web Congress (LA-WEB'03). http://www.computer.org/portal/web/csdl/abs/proceedings/la-web/2003/2058/00/20580187abs.htm (accessed July 29, 2009). Li, X., & Atkins, M. S. (2004). Early childhood computer experience and cognitive and motor development. *Pediatrics*, 113(6), 1-8.

[107] The figure is nearly identical to the national estimate of 81% obtained in a 2007 survey of 1,600 randomly selected households across the United States. Leichtman Research Group. Press release June 7, 2007. http://www.leichtmanresearch.com/press/060707release.html (accessed July 29, 2009).

[108] Conley, op cit., 2001; Shanks, op cit., 2007; Zhan, op cit., 2006; Zhan & Sherraden, 2003.

[109] A more rigorous approach would collect teacher reports or directly assess children. That type of investment was outside the scope of this study and would not have been advisable in any case, given the very early stage of the academic careers of children in the MI SEED study. Their current academic performance (even if measured through grades and standardized scores) may not be solid predictors of their ultimate educational achievements.

Exhibit 5-10. Ratings of Overall School Performance (measured at follow-up only)

Parent Rating of Child's School Performance	Percent of Treatment Group (n=333)	Percent of Comparison Group (n=348)
Excellent	30	33
Above average	21	25
Average	41	38
Below average	4	4

from 4 (excellent) to 0 (failing). These ratings were summed and averaged to yield a GPA-like score.

- Among the treatment group, the "GPA" score was 2.54.
- Among comparison group members, the "GPA" score was 2.70.

Although children in the comparison group had a higher GPA-like score, after controlling for covariates the difference was not significant.

The third indicator was school engagement, a motivational factor associated with school performance. To measure school engagement, parents were asked to rate children's attitudes toward school and schoolwork-related behaviors. Seven items were included, all of which were rated on a 4-point scale as follows:

- 1 = none of the time
- 2 = some of the time
- 3 = most of the time
- 4 = all of the time

Parent ratings of these behaviors and attitudes, along with a composite score, are shown in Exhibit 5-11. With a possible range in scores from 7 to 28 (higher scores indicate greater engagement), children in both groups were generally rated as exhibiting the behavior or attitude most of the time. SEED did not have a significant impact on the mean composite score.

Parents were also asked to indicate whether their children had skipped or refused to go to school during the previous year. Only a small percentage of children were reported as truant by their parents, with rates nearly identical for the two groups (5 and 4 percent, for treatment group and comparison group members, respectively).

Exhibit 5-11. Parent Ratings of School Engagement

Indicator	School Engagement			
	Percent of Treatment Group	Percent of Comparison Group	SEED Impact	*p* value
How often would you say your child…				
does just enough school work to get by (most or all of the time)	44	38	.0878	.240
always does homework (most or all of the time)	93	95	-.0011	.976
likes to make his/her own decisions (most or all of the time)	79	83	-.0069	.907
cares about doing well in school (most or all of the time)	86	89	-.0016	.974
worries about grades (most or all of the time)	46	49	-.0269	.726
cares when he/she makes mistakes (most or all of the time)	79	75	.1017	.119
enjoys school (most or all of the time)	87	91	-.0561	.257

	n	Mean		Mean		
Composite School Engagement	333	22.19	348	22.39	.1463	.742

Social Development

Children's behavior has been linked to parental assets.[110] The MI SEED follow-up survey examined whether the children in the treatment group exhibited greater social and behavioral competence than their counterparts in the comparison group. Two indicators were used to measure social development—ease of raising the child and the child's ability to get along with peers.[111] Parent ratings of these two items are shown in Exhibit 5-12. At follow-up, about 84% of the children in the comparison group were described as very easy or easy to raise, compared to 78% of the

[110] Shanks, op cit., 2007.
[111] The latter was measured only at follow-up because the focal children were only 3-4 years old at baseline.

treatment group. When measured as change from baseline to follow-up, the SEED impact was negative.[112] The two groups were similar in their ability to get along with peers: over 80% in each group were reported as often getting along well with other kids.

Exhibit 5-12. Social/Behavioral Competence

Indicator	Percent of Treatment Group Members		Percent of Comparison Group Members		SEED Impact	*p* value
	Baseline	Follow-up	Baseline	Follow-up		
Ease of raising child					-.1652	**.022**
very easy or easy	80	78	78	84		
somewhat hard or very hard	20	22	22	16		
Indicator	**Follow-up only**		**Follow-up only**			
Gets along well with other kids					.0557	.333
often		86		84		
sometimes		14		15		
never		0		1		

[112] We do not believe that MI SEED causes negative consequences for ease of rearing children, but infer that the difference is negative and significant either because of unmeasured factors or only through random chance.

6. SUMMARY AND CONCLUSIONS

The MI SEED experiment is the first large-scale test of the impacts of savings accounts for young children. It provides a rich data set that can be explored in ways different from previous studies due to its experimental design (with treatment and comparison groups) and longitudinal nature (baseline and follow-up surveys). It is, of course, subject to limitations associated with social science research, including the realities of program operations that led to SEED planners designing a quasi-experimental research approach and the realities of limitations due to the use of a telephone survey for data collection.

Funds for College Tuition

Given the design of MI SEED and its focus on saving for education, it is useful to look at the amount of funds that would be available for a child's education if saving behavior established in the demonstration continues until the child is 18. Exhibit 6-1 shows tuition (but not costs of room and board, fees, and textbooks) projections for

- **three types of savers**—low, average, and high (defined as MI SEED account holders who, respectively, accepted the $800 + $200 deposits but made no additional deposits, accumulated the mean amount of savings, and were at the 90th percentile of accumulated savings);
- **three public, in-state schools**—Oakland Community College, Wayne State University, and the University of Michigan; and
- **costs with and without financial aid** (namely, a Pell Grant, which provides needs-based funds to low-income students for postsecondary education).

Exhibit 6-2 presents the same information in a graph. Note that we assume a steady rate of savings throughout the 10 years after MI SEED ends.[113]

In short, the projections do not suggest a consistently promising outcome unless the child expects to earn an associate's degree from a local community college—which may be unlikely for the three-fourths of MI SEED account holders who said they expect their child will graduate from college or continue their education beyond college. For those who attend community college, even low savers will see a

[113] At least two competing factors may affect the accuracy of this assumption. On the one hand, families may accelerate the rate of savings as the child ages, which would then underestimate the amount accumulated in the SEED account. On the other hand, some deposits may have been put into the SEED account only to earn matching funds and will subside, which would then overestimate the amount accumulated in the SEED account. Without more information about savings behavior over time, it seems reasonable to offer these projections based on the assumption that the rate of savings will continue as it did through the MI SEED initiative.

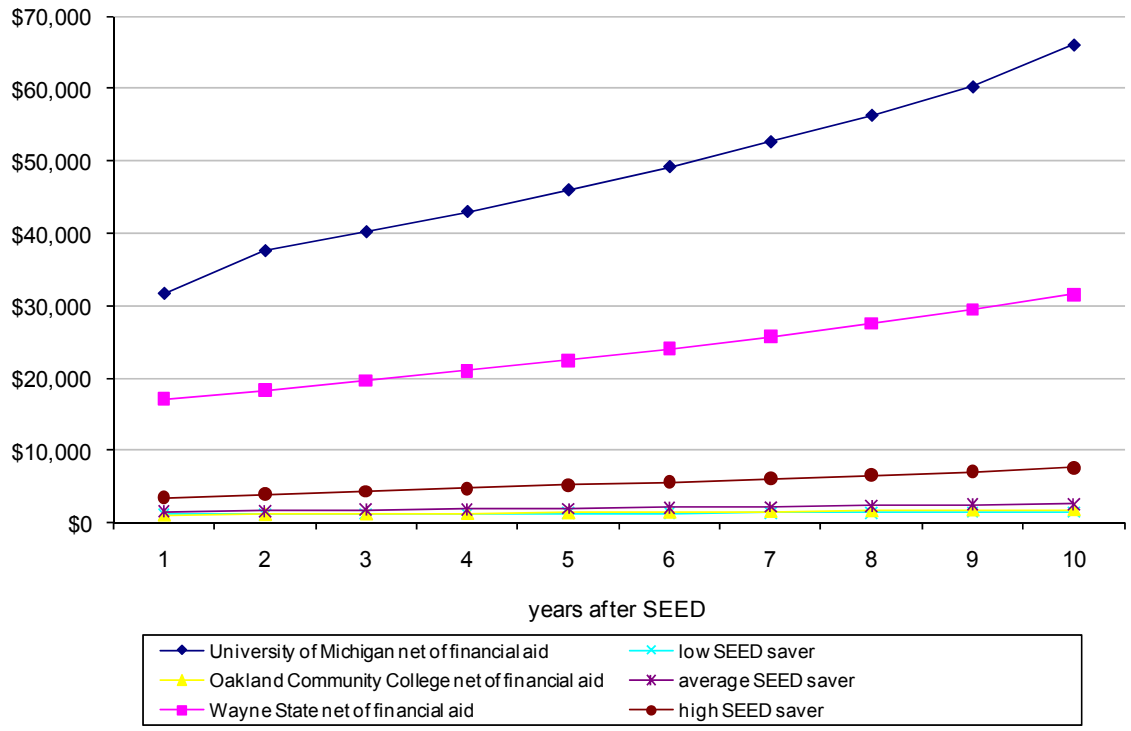
Exhibit 6-1. Estimated Costs of Tuition and Projections of SEED Savings

SEED Financial Information	Low Saver ($800 + $200, but no other deposits)	Average Saver (mean)	High Saver (90th percentile)
SEED accumulation as of 12/08	$1,126.99	$1,482.91	$3,112.05
Average quarterly deposit	0	$15.54	$73.08
SEED account balance at age 18	$1,523.62	$2,705.04	$7,533.46
Tuition at In-state Schools			
Oakland Community College			
associate's degree (no financial aid)	$5,176.57		
associate's degree (with Pell grant)	$1,802.56		
no financial aid: SEED covers	29.4%	52.3%	145.5%
with Pell grant: SEED covers	84.5%	150.1%	417.9%
Wayne State University			
bachelor's degree (no financial aid)	$62,975.40		
bachelor's degree (with Pell grant)	$31,529.52		
no financial aid: SEED covers	2.4%	4.3%	11.9%
with Pell grant: SEED covers	4.8%	8.6%	23.9%
University of Michigan			
bachelor's degree (no financial aid)	$97,507.34		
bachelor's degree (with Pell Grant)	$66,061.45		
no financial aid: SEED covers	1.6%	2.8%	7.7%
with Pell grant: SEED covers	2.3%	4.1%	11.4%

Notes: Exhibit 6-1 assumes a 3% rate of return, consistent with the rate of return during the MI SEED demonstration period. The child is assumed to be 8 years old at the end of the demonstration period.

Sources: Savings projections are from http://www.finaid.org/calculators/scripts/savingsgrowth.cgi. Cost projections are based on each school's website, and http://www.finaid.org/calculators/costprojector.phtml. Financial aid calculations were done for a single, 42-year old (34-year old, the sample mean, plus 8 years of aging) mother with one child, and $25,000 of earned income (roughly the sample mean, with $2,000 of assets (the TANF/Food Stamp, SSI, Medicaid limit), renting a home. The student was assumed to have zero earnings. The projections were from http://www.finaid.org/calculators/finaidestimate.phtml

Exhibit 6-2. Estimated Costs of Tuition and Projections of SEED Savings (graph)



meaningful benefit. To earn an associate's degree without any financial aid, SEED will pay almost one-third of tuition costs; with a Pell Grant, SEED will pay for almost 85%.

At a mid-range public school (Wayne State University), the projections suggest SEED would pay for 2-4% of tuition costs for a bachelor's degree for low- and mid-range savers; the rate doubles to 5-9% if the student gets a Pell Grant. High savers fare better, with SEED covering from 12-24% of tuition.

At the University of Michigan, the SEED balance would cover 2-4% of tuition for low- and mid-range savers. It would cover 8-11% of tuition for those at the 90th percentile of savers among the SEED treatment group members in the survey sample.

Lessons from MI SEED

As implemented, MI SEED provides valuable, data-based lessons in several domains. First, it shows the challenges associated with changing the behavior of non-savers to become savers, particularly for lower-income families. Despite a consistent, substantial outreach effort by local staff from a community-based organization and

meaningful amounts of funding (both the initial deposit of $800-$1,000 and 1:1 matches on subsequent deposits), it was difficult to get people to accept the SEED account. It took more than 12 months for local staff to get 499 families to agree to open SEED accounts. This lesson is consistent with that from other community partners, suggesting future efforts need to find alternative ways to engage potential participants. Still, MI SEED added families to the ranks of those with college savings accounts, so it is important to recognize the types of efforts and types of individuals this kind of initiative can reach. In MI SEED, in-person outreach to people with predispositions to save seem to be a particularly important factor in getting people to accept SEED-type accounts.

Second, relatively few people withdrew funds from their SEED accounts. The amount available was at least $800, a nontrivial consideration for most families with children, especially low-income families. It is possible they did not fully understand the accessibility of the non-match funds, or it is possible they perceive the value of saving for education (perhaps supported by work of OLHSA SEED staff who helped them understand the value of leaving funds in the account for their children's education).

Third, MI SEED shows the challenges associated with having account holders put money into their savings accounts. Of 495 SEED account holders, 161 deposited some funds into their accounts. It is reasonable to conclude that the initial deposit and matching funds are particularly attractive to those with an economic ability to save and those predisposed to save. The structure and incentives of a program such as MI SEED, however, do not seem to be sufficient to jump-start savings for families with limited economic circumstances or to generate savings among those who had not previously been so inclined.

Fourth, MI SEED begins to help answer questions about reasons for differential savings behavior among individuals with diverse characteristics. An example comes from the exploratory analysis conducted for savers by race. With the kinds of survey data available from MI SEED, it appears the lower rate of savings by African Americans—even when controlling for income—may be due to multiple underlying factors that become evident only when sample sizes are sufficiently large and variables sufficiently comprehensive. Although MI SEED does not enable a full explanation for differential savings rates, it seems factors such as employment, home ownership, and marital status *plus* income contribute to the measured outcomes.

Fifth, the average SEED balance across all SEED account holders was $1,483 at the end of the demonstration. Of that, $800 is from the initial deposit and almost all

received $200 from Michigan. The balance comes from deposits, matching deposits, and earnings and interest. SEED accounts holders deposited on average about $16 per quarter. The figure is smaller than SEED planners and program operators expected, who were diligent in their ongoing efforts to encourage and facilitate savings. The average savings amounts mask an underlying trend: most MI SEED account holders did not make any deposits into their accounts during the period of program operations. Instead, a relatively small proportion of MI SEED account holders made disproportionately larger deposits.

Sixth, MI SEED—in contrast to results from correlational studies—shows little psychosocial or educational effects for account holders based on the measures examined with one very important exception, namely parents' attitudes toward college education. We examined a large set of variables and behaviors and found hardly any statistically significant differences between account holders and comparison group members. We conclude that MI SEED produces very few positive psychosocial or educational effects, at least for the indicators measured at this point in the child's and family's development.

The findings from the MI SEED evaluation do not point to many tangible benefits. The following factors may explain these findings:

1. The potential benefits of assets may not be seen at the relatively low amount of savings accumulated in the MI SEED accounts.

2. Account holders may not perceive the SEED account as savings for their children's education.

3. Measurable benefits may only emerge over a longer time frame or when the use of SEED savings for the child's education is more imminent. Much of the research on benefits from assets is based on outcomes from Individual Development Accounts, homeownership generally, and general savings. Unlike IDAs, the MI SEED time horizon for helping to pay for college is at least 10 years away, so measurable benefits may emerge only when a tangible result is more immediate.

4. If some positive benefits of assets come from the sense of economic security they provide (e.g., families can draw from them in times of need, such as loss of a job), the benefit may be mitigated since account holders may have perceived them as inaccessible.

5. Our ability to measure potential benefits is limited by the nature of a telephone interview and the particular indicators selected for the study. For example, in measuring academic outcomes, neither direct assessment of children's achievement nor teacher ratings were collected. While a parent's assessment is important and valuable, it may differ from a teacher's because the parent may not have yet developed a good yardstick for rating a young

child. Similarly, collecting financial savings data during a telephone interview is notoriously difficult and subject to error.

This is not the end of the SEED story. Data collected for the evaluation and account monitoring study produce many opportunities for additional research to further understand savings behavior and asset development. While hopes and expectations may not have yet been met for the MI SEED participants, a seed has been planted with these families. They have the ability to continue accumulating savings into their accounts, building assets for their families and saving for their children's education. These kinds of longer-term outcomes are ultimately the measure of MI SEED's impact.

APPENDIX A

RESEARCH QUESTIONS AND HYPOTHESES PRESENTED AS APPENDIX F OF THE REQUEST FOR PROPOSALS ESTABLISHING THE MI SEED EVALUATION

APPENDIX A

The following are the research questions and hypotheses presented as Appendix F of the request for proposals establishing the MI SEED evaluation.

Participation in SEED at OLHSA

A. How much is accumulated in SEED accounts?
B. What are the patterns of deposits into SEED accounts?
C. Who contributes to SEED accounts?

Predictors of Asset Accumulation in SEED accounts at OLHSA

A. How do demographic variables affect asset accumulation in SEED accounts?
B. How do non-demographic variables affect asset accumulation in SEED accounts?

Impact of SEED on Parents (relative to parents of children in comparison group)

A. Parents of SEED participants will have greater future orientation
    1. Longer time horizon
    2. More likely to value saving
B. Parents of SEED participants will have greater financial knowledge
C. Parents of SEED participants will have better money management
    1. More likely to monitor spending
    2. More likely to spend efficiently
    3. More likely to save regularly
    4. More likely to "protect" savings
D. Parents of SEED participants will save more for SEED children
    1. More savings designated for child
    2. More savings designated for child's post-secondary training and education (net of initial SEED deposit and SEED match money)
E. Parents of SEED participants will feel more positive about the future
    1. Feel more hopeful about financial situation
    2. Feel more positive about child's future
F. Parents of SEED participants will have better mental health
    1. Less likely to be depressed
    2. Greater self-esteem
G. Parents of SEED participants will place greater value on parenting and feel more positive about parenting
    1. Greater parenting self-efficacy
    2. Less parenting aggravation
H. Parents of SEED participants will place greater value on child's education
    1. More likely to value higher education for child
    2. More likely to take responsibility for child's learning
    3. Higher expectations for child's education
I. Parents of SEED participants will make greater investments in child's cognitive development
    1. More likely to regulate child's TV viewing
    2. More likely to encourage reading
    3. More likely to provide enriching experiences outside the home
J. Parent outcomes will be stronger when asset accumulation in SEED accounts is greater

Impact of SEED on SEED Participants (relative to children in the comparison group)

A. SEED participants will show greater school engagement
   1. Better attendance
   2. Better relationships with teachers
   3. Greater eagerness to learn

B. SEED participants will show greater cognitive ability
   1. Greater numeracy skills
   2. Greater literacy skills
   3. Greater verbal language skills

C. SEED participants will have better academic performance
   1. Higher grades
   2. Higher standardized test scores

D. SEED participants will have more positive social and emotional development
   1. Higher self-esteem
   2. Higher self-efficacy
   3. Fewer behavior problems

E. SEED participants will have higher educational aspirations

F. SEED participants will have greater financial knowledge

G. SEED participants will place greater value on saving

H. Child outcomes will be stronger when asset accumulation in SEED accounts is greater

APPENDIX B

DATA COLLECTION

APPENDIX B
DATA COLLECTION

RTI followed systematic processes to prepare for and conduct the MI SEED baseline and follow-up surveys, which were administered via a computer-assisted telephone interviewing (CATI) system from RTI's call centers. The sections below discuss these procedures.

Instrument Development

A similar process was used in the development of both the baseline and follow-up surveys. Deborah Adams and Sondra Beverly at the University of Kansas and Trina Williams Shanks at the University of Michigan first prepared a draft version of the survey instrument. RTI reviewed it, recommended changes, and distributed the revised draft—along with a list of research hypotheses and research questions—to SEED research partners, the Ford Foundation, and Research Advisory Council members. We asked for comments, suggestions, and recommendations.

After incorporating recommendations, RTI subjected the instrument to cognitive testing. RTI conducted cognitive interviews with parents of children of the appropriate age (i.e., 3 to 4 years old for the baseline instrument and 7 to 8 years old for the follow-up instrument). RTI presented recommendations based on the cognitive interviews and integrated them into the survey instrument.[114] RTI then circulated the draft instrument for final review and comment. The final survey instrument is presented in Appendix C.

After the final survey instrument was created, RTI translated the instrument into Spanish and programmed the English and Spanish versions for CATI. The CATI instrument was tested to ensure it met exact specifications including question wording, order, and skip logic.

Training

Before beginning each wave of data collection, RTI call center staff attended training sessions that covered the study background, methods for administering the questionnaire, confidentiality and informed consent requirements, question-by-question item review, refusal avoidance techniques, methods to maximize response rates, and quality control and performance expectations. RTI conducted multiple types of training sessions: one for supervisors covering the study protocol,

[114] Follow-up instrument cognitive interview report: Snodgrass, J., & Twiddy, S (2008, July). *SEED preschool demonstration and impact assessment: Cognitive interviewing report*. Research Triangle Park, NC: RTI International.

questionnaire administration, expectations for interviewers, and production goals; a 4-hour training session on questionnaire administration for interviewers; and a language-specific training session for Spanish-speaking interviewers.

All staff received a study manual outlining the purpose of the study, key facts, answers to frequently asked questions, policies and procedures, and the survey instrument. During training, candidate interviewers practiced skills with each other and with supervisors. They were evaluated for mastery of the following:

- accurately explaining the purposes of the survey;
- gaining respondent cooperation;
- administering informed consent procedures;
- refusal avoidance and conversion skills;
- effective communication skills;
- adherence to scripts and text; and
- professional approach and pleasant demeanor.

Only interviewers whose skills met project standards and who passed a test were certified to serve as telephone interviewers. Interviewers were closely monitored throughout the project by supervisors who listened to at least 10% of their calls, checked responses interviewers entered into the computer system against answers respondents gave, and reviewed their telephone demeanor and behavior. Those who performed exceptionally well were rewarded with cash bonuses. These staff demonstrated skills during interviews such as persevering with difficult respondents, re-asking questions neutrally to help respondents understand the matter, proposing solutions to technical problems, or achieving high completion rates.[115]

All interviewers were required to sign an RTI pledge of confidentiality and another confidentiality pledge specific to the MI SEED study. During training, supervisors emphasized the approved procedures for human subjects protection and the study's privacy and confidentiality aspects. Throughout the survey's administration, interviewers were monitored for adherence to human subjects protection and confidentiality procedures.

[115] The cash incentives acted as a powerful benefit for the study. We were able to retain top performers throughout the study period, thereby keeping turnover to a minimum. Telephone interviewers developed a sense of commitment to the study that resulted in consistently superior performance, which in turn resulted in high completion rates.

Baseline Survey Data Collection

The baseline survey was conducted between September 21 and December 1, 2004.[116] A total of 732 interviews were completed. Most participants were reached through telephone calls to their homes, although a substantial portion—143 respondents—called the project's toll-free number in response to messages left on an answering machine or with someone at their home.

Surveys conducted in English and Spanish lasted 45 minutes on average. Because a number of respondents wanted to conduct the survey in Arabic, RTI trained a translator who participated in a three-way call between the respondent, the interviewer, and the translator. The telephone interviewer asked questions, the translator posed the question in Arabic, the respondent answered the question, and the translator provided the answer in English to the telephone interviewer. Surveys conducted in Arabic took about 92 minutes to administer (about twice as long as those conducted in English and Spanish).[117]

Because the sample consisted primarily of low-income families and was much smaller than the 1,400 participants study designers had originally anticipated, special efforts were made to enable the maximum number of participants to complete interviews. The first effort was to extend the period for obtaining consent, which led to doubling the period for fielding the survey—from 5 weeks to almost 10 weeks.

The second effort was initiated after RTI had made at least 10 attempts to reach a respondent by telephone. At that point, cases were assigned to specially trained field representatives who visited the sample members' homes to encourage participation. Field representatives offered to phone RTI's call center using a cellular telephone in case lack of access to a phone had hindered participation in the study.

Of the study's 732 respondents, 588 either answered RTI's call or called RTI after receiving a message, 105 called RTI after having been contacted by a field representative at their homes, and 39 used a field representative's cellular telephone to call RTI and complete the interview (see Exhibit B-1).

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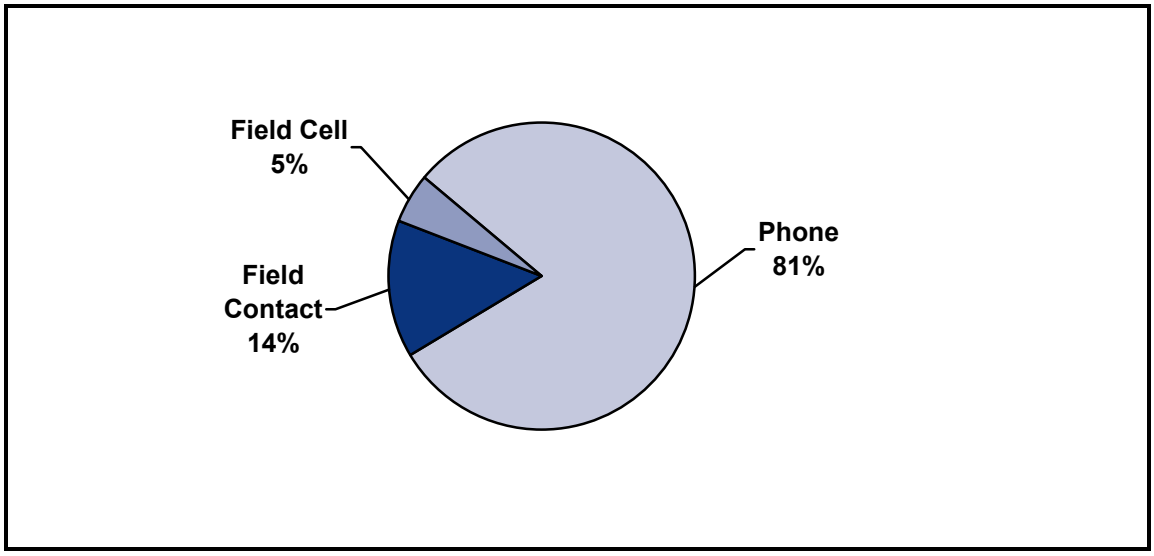
[116] Initially, survey operations were to be completed on or about October 20. Because the process of obtaining signed consent did not produce the expected number of study participants, new plans had to be implemented to increase sample size and the period of survey operations was extended.

[117] The initial plans for the impact evaluation did not consider the possibility of Arabic-speaking respondents. Staff from the University of Michigan made RTI aware that a sizable number of Arabic-speaking children were enrolled in Head Start and their teacher was encouraging parents to participate in the study. To enable broad representation of the target population, RTI considered options and adopted the three-person interview protocol.

Exhibit B-1. Methods of Reaching MI SEED Baseline Respondents



Nonrespondents. The survey sample had 139 individuals who consented to participate but never completed the interview. Based on the limited amount of information we had about these nonrespondents, they appeared to be comparable to sample members.

- Nonrespondents were significantly more likely to have provided oral consent than written consent: Of those who provided written consent, 87% completed the survey, compared to 73% of those who provided oral consent.
- 12 were duplicate cases, meaning two separate adults had consented to participate in the survey for the same focal child.[118]
- 32 were classified as "hard refusals," meaning they adamantly refused to participate in the interview.
- 10 used a language other than English, Spanish, Arabic, or American Sign Language (other languages included Albanian, Korean, and Farsi).
- 17 could not be reached or located through any mail, phone, or in-person attempts.

People classified as "hard refusals" constitute an interesting subset of nonrespondents because they had previously agreed to participate but then later firmly declined. Initially, 41 individuals were classified as hard refusals, but 11 responded positively to a letter RTI sent asking them to reconsider their decision. To see if we could change the minds of other hard refusals, we conducted an

[118] We classify these 12 as nonrespondents consistent with survey research standards that define the sample population and results of attempts to gain study participation.

experiment. About midway through the fielding period, the RTI project director sent a personal letter via Federal Express to all individuals who had firmly refused to participate. The letter acknowledged their decision not to participate and stated that RTI would not make any more calls to them. However, the letter offered one final opportunity to have their experiences and opinions heard, and offered a higher incentive payment of $40. Not one recipient called the project's toll-free number in response; therefore, no further attempts were made to convert hard refusals in this way.

Response Rates. The sample comprised 871 individuals who consented to participate in the survey; 732 interviews were completed with eligible respondents.

To calculate the response rate, RTI first developed decision rules for determining the final disposition of each case. Next, we computed response rates based on guidelines from the American Association for Public Opinion Research (AAPOR).[119] The results are presented in Exhibit B-2.

Exhibit B-2. SEED Fall 2004 Response Rates

Description	Variable Name	Number	Percentage
Completed interview	I	732	84.04
Partial interview (an eligible sample member completed 50 to 80% of the interview)	P	1	0.11
Refusal or break-off (an eligible sample member completed less than 50% of the interview)	R	5	0.57
No contact was made with the sample member by phone or in person	UH	12	1.38
Eligibility undetermined (contact made with sample member, but interviewer did not get to or get answer to question regarding child's enrollment in an eligible Head Start center)	UO	65	7.46

[119] The American Association for Public Opinion Research (2004). *Standard definitions: Final dispositions of case codes and outcome rates for surveys. 3rd edition*. Lexena, KS: AAPOR. Because AAPOR does not have standard definitions for telephone surveys with a list sample, such as the fall 2004 survey used, we synthesized definitions from AAPOR guidance for random digit-dial telephone surveys, in-person household surveys, and mail surveys of specifically named people.

Exhibit B-2. SEED Fall 2004 Response Rates (continued)

Description	Variable Name	Number	Percentage
Not locatable (sample member did not reside at the given address or phone number)	UH	5	0.57
Child not enrolled in an eligible Head Start center	ineligible	29	3.33
Language barrier (sample member speaks language other than English, Spanish, or Arabic)	ineligible	10	1.15
Duplicate case (more than one caregiver signed consent for a child)	ineligible	12	1.38

The AAPOR Response Rate 4 formula includes complete and partial interviews in the numerator and all eligible respondents plus an estimate of the proportion of cases of unknown eligibility that are eligible (this is represented by *e*).[120] The formula is:

$$e = \frac{\text{\# eligible}}{\text{\# eligible + \# ineligible}} = \frac{732 + 1 + 5}{732 + 1 + 5 + 51} = .94$$

The formula for computing Response Rate 4 is:

$$RR4 = \frac{(I\ P)}{(I + P) + e(UH + UO)} = \frac{(732 + 1)}{(732 + 1)[.94*(12+ 5 + 65)]} = 89.97$$

The response rate for this survey was 89.97%.

The AAPOR Cooperation Rate 4 is defined as:[121]

$$COOP4 = \frac{(I + P)}{(I + P) + R} = \frac{732 + 1}{732 + 1 + 5} = 99.32$$

The cooperation rate for this survey was 99.32%.

Of the 732 completed interviews, 685 were completed in English, 31 in Spanish, 15 in Arabic, and 1 in American Sign Language.[122]

[120] Ibid., p. 29.
[121] Ibid., p. 30.
[122] We sent an American Sign Language (ASL) translator to the home with a field representative, who called the project's toll-free number. A trained interviewer asked questions of the translator, who posed them in ASL to the respondent, then translated the answers for the interviewer.

Additional Interviews. MI SEED encountered unexpected challenges, resulting in far fewer SEED accounts opened than expected during the 2004-2005 school year. In response, OLHSA extended the initiative and the evaluation was correspondingly extended when RTI was asked to attempt to locate and interview individuals who had signed documents to open SEED accounts during the 2004-2005 school year but had not completed the baseline survey.

We identified 100 such individuals, many of whom entered Head Start *after* the fielding period for the baseline survey ended. Of the 100, we completed "baseline" interviews with 58. Because these respondents were interviewed after the MI SEED initiative began (unlike the other 732 sample members), they are not included in impact analyses presented in Chapters 4 and 5 of this report.

Sample Maintenance

After completing the baseline survey, RTI conducted sample maintenance activities every 6 months to retain current contact information on all sample members. For the first two rounds of sample maintenance full-scale locating was conducted on all sample members. This method involved attempting to contact respondents through the mail, by telephone, and in person. Because we sensed that sample members were becoming a bit numb to the approaches we used in the first and second rounds of sample maintenance, we instituted a new procedure starting with the third round of sample maintenance, which splits the sample based on the birth date of the respondent.

Those born during the first half of the year received a birthday card in the month of their birth with a request to confirm or update their contact information by telephone, mail, or web. Sample members who responded received $10.00.

During that same period, the other half of the sample (those with birthdays between July and December) received "full-scale locating," which means we sent a letter asking them to confirm or update their contact information. If they did not respond, we sent a second letter, followed by a telephone call and an in-person visit. People who responded within 10 days of the initial letter received $20.00; people who responded at some other time received $10.00. The process was switched for the two samples during the second half of the year. Thus, during the course of each 12-month period, each sample member received one birthday card and one attempt at intensive tracing.

These techniques proved to be very successful. In each round more than 92% of respondents participated in full-scale locating efforts, and about one-third answered requests in the birthday card mailings.

To enhance the sample's engagement with the SEED evaluation and in anticipation of the fall 2008 survey, RTI sent a $10 gift card to all sample members during December 2007.

Follow-up Survey Data Collection

RTI fielded the follow-up survey between September 4, 2008, and November 30, 2008. Training and interviewing procedures were modeled after those used in the baseline survey. A total of 701 follow-up interviews were conducted in English, Spanish, and Arabic. Surveys lasted 47 minutes on average.

Locating respondents for a follow-up survey is a challenge of longitudinal surveys, and MI SEED was no exception. Sample members who were harder to locate during data collection and those who were less likely to participate in sample maintenance activities shared some characteristics. They tended to:

- be among the lower income members of this already low-income sample;
- have not responded to our sample maintenance activities in more than 1 year; and
- have required a visit from a field representative before completing the baseline survey.

Anticipating these challenges RTI took several steps to help locate as many sample members as possible, including:

- requesting updated address information on all returned mail to sample members;
- attempting to contact all other named contacts provided by the sample member during the baseline survey;
- using RTI's tracing unit to locate the most current address and telephone number for sample members; and
- provide an additional incentive to sample members who reply quickly to study mailings.

Sample members unreachable by telephone for the follow-up survey were assigned to RTI field representatives. As during the baseline survey, these representatives attempted to visit sample members homes and encouraged them to participate by calling into RTI's call center. They also offered the use of a cell phone to complete the interview.

We completed 790 interviews at baseline; the total sample size at follow-up was 825. The addition of 35 sample members since baseline reflects changed living

arrangements of the focal child. If the child moved from the baseline respondent's household, we tracked the child, identified the new primary caregiver, and tried to interview both the Wave 1 and Wave 2 caregivers.

Exhibit B-3. MI SEED Fall 2008 New Caregiver Responses

	Number	Percentage (n=35)
Completed interview	15	42.9
Unable to locate	12	34.3
Located but not interviewed	8	22.9

To compute response rates (shown in Exhibit B-4) AAPOR Response Rate 4 was again used.

Exhibit B-4. MI SEED Fall 2008 Response Rates

Description	Variable Name	Number	Percentage
Completed interview	I	701	85.0
Partial interview (an eligible sample member completed 50 to 80% of the interview)	P	0	0.0
Refusal or break-off (an eligible sample member completed less than 50% of the interview)	R	15	1.8
No contact was made with the sample member by phone or in person	NC	54	6.5
Not locatable (sample member did not reside at the given address or phone number)	NC	32	3.9
Eligibility undetermined	UO	6	0.7
Incapacitated, incarcerated, out of the country, or institutionalized	ineligible	11	1.3
Deceased	ineligible	4	0.5
Language barrier (sample member speaks language other than English, Spanish, or Arabic)	ineligible	2	0.2

The AAPOR Response Rate 4 formula includes complete and partial interviews in the numerator and all eligible respondents plus an estimate of the proportion of cases of unknown eligibility that are eligible (this is represented by *e*).[123] The formula is:

$$e = \frac{\#\text{ eligible}}{\#\text{ eligible} + \#\text{ ineligible}} = \frac{701+15}{701+15+32+54+11+4+2} = .87$$

The formula for computing Response Rate 4 is:

$$\text{RR4} = \frac{I}{I+(R+NC)+e(UO)} = \frac{701}{701+(15+86)+(.87*6)} = 86.84$$

[123] Ibid., p. 29.

APPENDIX C

MI SEED FOLLOW-UP SURVEY

SEED Michigan

Saving for Education, Entrepreneurship and Downpayment Impact Evaluation

Follow-up Survey

Note: The SEED Michigan follow-up survey draws heavily on the SEED Michigan baseline survey, which was initially prepared by Sondra Beverly and Deborah Adams, School of Social Welfare, University of Kansas and Trina Williams Shanks, University of Michigan.

Saving for Education, Entrepreneurship, and Downpayment (SEED) is a national policy, practice and research initiative to explore the efficacy of long-term savings and investment accounts for all American children. The SEED initiative is organized and administered by CFED. SEED research is planned and conducted by the Center for Social Development at Washington University, the School of Social Welfare at the University of Kansas and RTI International.

Note to reviewers: "don't know" and "refused" are automatically added to each question, so they are not included here unless they are necessary for skip patterns.

A. Introduction

May I speak with (INSERT NAME FROM PRELOAD)?

[ONCE R IS ON PHONE] Hello, this is _____ from RTI International. I hope you remember completing a telephone survey a few years ago and receiving a letter saying that we would call to conduct a follow-up survey. I'm calling to conduct the interview.

Before we begin, I need to tell you a few things. The purpose of this study is to learn how parents are saving and investing for their child's education. The survey asks questions about your household composition, employment, assets and debts, emotional well-being, family interactions, and expectations for your child's future.

The interview will take about 45 minutes. After completing the interview, you will be sent $60.

Taking part in this interview is entirely voluntary. It is possible that some questions may be uncomfortable. You can skip any question that you do not want to answer.

We will not share your answers with anyone outside this project.

If you have any questions about your rights as a research participant in this study, I can give you a phone number to call.

[INTERVIEWER: If R asks, give number for RTI's Office of Research Protection—1-866-214-2043].

A1. Can we begin?

1 YES
2 NO, WANT TO CONFIRM → SCHEDULE CALLBACK
3 WANT TO THINK ABOUT IT → SCHEDULE CALLBACK
4 NOT AVAILABLE NOW → SCHEDULE CALLBACK
9 REF

A1a. Does (CHILD) live with you at least half the time?
YES → GO TO START OF INTERVIEW
NO

A1b. {IF A1a=NO} Do you know who (CHILD) lives with at least half the time?
YES
NO → GO TO START OF INTERVIEW

Alc. {IFA1b=YES} What is the name of the person (CHILD) lives with at least half the time?
_____(ENTER FIRST AND LAST NAME)

A1d. {IF A1b=YES} What is that person's full address?
Street address?_____
City?_____
State?_____
Zip code?_____

A1e. {IF A1b=YES} What is that person's phone number?

A2. {A1 = 9} Could you please tell me why you do not wish to participate in the study?

1 NOT INTERESTED
2 DON'T PARTICIPATE IN ANY SURVEYS
3 DON'T HAVE THE TIME ➔ SCHEDULE CALLBACK
4 INCONVENIENT NOW ➔ SCHEDULE CALLBACK
5 OPPOSED TO INTRUSIVENESS INTO MY PRIVACY
6 OTHER (Specify: _____)

A3. {IF A1 = 2, 3, 4 OR IF A2 = 3, 4} When would be a good time for me to call back?

DATE: _ _/_ _/_ _ TIME:_ _:_ _ AM/PM

Thanks. We will call back then.

A4. I'd like to begin by asking you some questions about you and your family. Are you currently...

1 Married,
2 Widowed,
3 Divorced,
4 Separated, or
5 Never married?

A5. **Including yourself**, how many adults age 18 and older live in your household?

_____ NUMBER OF ADULTS

A6. How many children age 17 and younger live in your household?

_____ NUMBER OF CHILDREN

A7. I'd like to get the first name of everyone in your household. Let's start with you. I have your first name as (FILL). Is that correct? [IF NOT, CHANGE]. And what is your age? And you are (FILL CHILD's FILL RELATIONSHIP). Is that correct?

[INTERVIEWER: CATI WILL BE PRELOADED WITH NAMES FROM BASELINE. ONCE YOU HAVE IDENTIFIED AND CONFIRMED THE AGE OF THE SAME PERSON AND THE RELATIONSHIP TO THE FOCAL CHILD AND THE R, SELECT AND INSERT INTO ROSTER. IF ANY INFORMATION IS DIFFERENT FROM PRELOAD, CORRECT. DO NOT READ NAMES TO R, NOR INDICATE THAT YOU HAVE THEM.]

{PROGRAMMER: FOR EVERY INDIVIDUAL IN HH, PROMPT FOR NAME, AGE, AND RELATIONSHIP TO CHILD.}

Next, (FILL CHILD), I have the first name as (CHILD). Is that correct? [IF NOT, CHANGE].

Besides you and (CHILD), how many people live with you?

_____ NUMBER OF PEOPLE

And who else lives with you? What is his or her first name? Age? And relationship to (CHILD)?

And relationship to you?

PROMPT: Anyone else?

FIRST NAME	AGE	RELATIONSHIP TO CHILD	RELATIONSHIP TO R	GENDER (M/F)
a.				
b.				
c.				
d.				
e.				

Mother *Father* *Stepmother* *Stepfather* *Daughter/Stepdaughter* *Son/Stepson* *Grandmother* *Grandfather* *Great Grandmother* *Great Grandfather* *Sister/stepsister* *Brother/stepbrother* *Aunt* *Uncle* *Cousin*	*Other Relative or In-law* *Other relative or in-law* *Legal Guardian* *Foster Parent* *Other Non-relative (Adult)* *Other Non-relative (Child)* *R's Husband* *R's Wife* *R's Partner* *R's Niece* *R's Nephew* *Other:* _____

A8. And now, a few more questions about your background.

What is the highest grade or year of school you have completed? [SELECT ONE]

1 NO FORMAL SCHOOLING
2 7TH GRADE OR LESS
3 8TH GRADE
4 9TH GRADE
5 10TH GRADE
6 11TH GRADE
7 12TH GRADE BUT NO DIPLOMA
8 HIGH SCHOOL DIPLOMA
9 GED OR EQUIVALENT
10 VOC/TECH PROGRAM AFTER HIGH SCHOOL BUT NO VOC/TECH DIPLOMA
11 VOC/TECH DIPLOMA AFTER HIGH SCHOOL
12 SOME COLLEGE BUT NO DEGREE
13 ASSOCIATE'S DEGREE
14 BACHELOR'S DEGREE, GRADUATE FROM 4-YEAR COLLEGE OR UNIVERSITY
15 GRADUATE OR PROFESSIONAL SCHOOL BUT NO DEGREE
16 MASTER'S DEGREE (MA, MS)
17 DOCTORATE DEGREE (PHD, EDD)
18 PROFESSIONAL DEGREE AFTER BACHELOR'S DEGREE (MD, DDS, JD, ETC.)

A9. What language is spoken most in your home?

1 ENGLISH
2 SPANISH
3 OTHER (Specify: _____)

A10. {IF A9 ≠ 1} Is English also spoken in your home?

1 YES
2 NO

B. Housing

Now I have some questions about your housing arrangements.

B1. What is your current housing situation? Do you:

1 Own
2 Rent, or
3 Have some other arrangement?

B2. {IF B1 = 3} What is your current arrangement?

PROMPT: Who do you live with? Do you help with expenses?

1 LIVE WITH FRIENDS OR RELATIVES AND PAY PART OF HOUSING EXPENSES,
2 LIVE WITH FRIENDS OR RELATIVES AND NOT PAY FOR HOUSING,
3 LIVE IN TEMPORARY HOUSING OR A SHELTER,
4 EXCHANGE SERVICES FOR HOUSING,
5 NOT PAY FOR HOUSING AS PART OF A JOB (E.G., MILITARY, CLERGY), OR
6 HAVE ANOTHER TYPE OF HOUSING ARRANGEMENT? (Specify: _____)

B3. {IF B1 = 1} Could you tell me what the value of your home is - I mean about how much would it bring if you sold it today?

PROMPT: For this question, we are not concerned about whether or not you have a mortgage. We'd just like to know what your house would sell for.

$ _____ VALUE OF HOME
8 DK
9 REF

B4. {IF B3 = DK OR REF} I'm going to read a list of housing values. Stop me when I've read the number your house is worth. If you don't know the exact number, tell me your best guess:

1 Less than $20,000
2 Between $20,000 and $50,000
3 Between $50,000 and $100,000
4 More than $100,000

B5. {IF B1 = 1} Do you have a mortgage on this property?

1 YES
2 NO

B6. {IF B1 = 2} Do you live in a …

PROMPT: In Section 8 housing, a person receives a rent subsidy or pays a lower rent because the government pays part of the cost

1 Privately owned apartment or house,
2 Public housing,
3 Rent subsidized or Section 8 housing, or
4 Some other type of housing (Specify: _____)?

B7. {(IF B1 = 1 and B5=1) or B1=2 or (B1=3 AND B2=1)} Last month, what was the amount of your {IF B1 = 1 "mortgage payment"} {IF B1 = 2 or B2=1 "rent"} ?

_____ AMOUNT OF PAYMENT

1 NO RENT OR MORTGAGE PAYMENT

B8. How many bedrooms are there in your home?

_____ NUMBER OF BEDROOMS

B9. How many times have you moved in the past 12 months?

_____ NUMBER OF TIMES

B10. {IF B9 > 0} In the past 12 months, did you or (CHILD) move in with other people even for a little while because you could not afford to pay your mortgage, rent, or other bills?

1 YES
2 NO

C. Health and Insurance

The next few questions are about your health and insurance.

C1. In general, would you say your health is ...

1 Excellent,
2 Very good,
3 Good,
4 Fair, or
5 Poor?

C2. Do you have a physical, mental, or other health condition that limits the kind or amount of work you can do?

1 YES
2 NO

C3. Are you covered by any health insurance? I'm asking about health insurance provided through an employer, purchased directly from an insurance company, or government programs like military health care and Medicaid.

1 YES
2 NO

Now I'm going to ask some questions about (CHILD)'s health and insurance.

C4. Is (CHILD) covered by any health insurance now? I'm asking about health insurance provided through an employer, purchased directly from an insurance company, or government programs like military health care, Medicaid, or the state children's health insurance program.

INTERVIEWER: THE MICHIGAN STATE CHILDREN'S HEALTH INSURANCE PROGRAMS ARE CALLED MIChild OR HEALTHY KIDS.

1 YES
2 NO

C5. In the past year, for how many months was (CHILD) covered by any health insurance or any health care plan?

_____ NUMBER OF MONTHS

C6. In general, would you say (CHILD)'s health is ...

1 Excellent,
2 Very good,
3 Good,
4 Fair, or
5 Poor?

C7. During the past 12 months, did (CHILD) see a medical professional for well-child care, such as a check-up?

PROMPT IF NECESSARY: A medical professional is a doctor, nurse practitioner, physician assistant or midwife.

1 YES
2 NO

C8. Does (CHILD) have any special needs or disabilities—for example, physical, emotional, language, hearing, learning difficulty, or other special needs?

1 YES
2 NO

C9. {IF C8 = 1} How would you describe (CHILD)'s special need or needs?

[CHECK ALL THAT APPLY]

PROMPT: Any others?

1 EPILEPSY OR CONVULSIONS
2 ASTHMA
3 DIABETES
4 MORE THAN 3 EAR INFECTIONS IN A YEAR
5 SPEECH IMPAIRMENT OR DELAY
6 SERIOUS HEARING DIFFICULTY OR DEAFNESS
7 SERIOUS DIFFICULTY SEEING OR BLINDNESS
8 MENTAL RETARDATION
9 A SERIOUS EMOTIONAL DISTURBANCE
10 ANEMIA OR IRON DEFICIENCY
11 ELEVATED LEVELS OF LEAD IN THE BLOOD
12 ORTHOPEDIC IMPAIRMENT
13 DEVELOPMENTAL DELAY
14 A LEARNING DISABILITY
(Specify:_____)
15 AUTISM
16 HYPERACTIVITY, ADHD, OR ADD
17 ANY OTHER PROBLEMS
(Specify:_____)

C10. {IF C8 = 1} Does (CHILD)'s disability/disabilities limit (his/her) participation in the usual kind of activities done by most children (his/her) age?

1 YES
2 NO

D. Attitudes about Parenting

Next, I'd like to ask you some questions about parenting and your satisfaction with your role as a parent. Please tell me how much you agree with each of the statements. You may choose to strongly agree, agree, disagree, or strongly disagree with each statement.

{PROGRAMMER: USE "CAREGIVER" IF R IS NOT CHILD'S PARENT, STEP-PARENT, OR FOSTER PARENT. USE "CHILD" IF ONLY ONE CHILD IN HH; ELSE USE "CHILDREN."}

D1. I am happy with my role as a (parent/caregiver). Do you …

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D2. In my role as a (parent/caregiver), I often find that I have too little time for myself. Do you …

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D3. As a (parent/caregiver), I enjoy the time I spend with my child(ren).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D4. I feel overwhelmed with the responsibilities of being a (parent/caregiver).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D5. As a (parent/caregiver), I am able to find a balance between the many demands for my time and energy.

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D6. As a (parent/caregiver), I often find that my life is much more work than pleasure.

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D7. I am satisfied as a (parent/caregiver).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D8. I often feel tired, worn out or exhausted by the responsibilities of being a (parent/caregiver).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D9. I wish I did not become impatient so quickly with my child(ren).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

(IF NEEDED: "Impatient" means lose your ability to stay calm or become irritated with.)

D10. Having (a child/children) has kept me feeling young.

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D11. Sometimes I feel I am too critical of my child(ren).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

(IF NEEDED: "Critical" means disapproving of or pointing out their faults.)

D12. I think my child(ren) would consider me a good parent.

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

(IF NEEDED: "Consider me" means think of you as.)

D13. I wish I gave my child(ren) more individual attention.

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

(IF NEEDED: "Individual attention" means time when you can focus on just your child(ren), one at a time.)

D14. I am satisfied with the amount of time I can give my child(ren).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D15. I am satisfied with the way I discipline my child(ren).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

D16. Sometimes I feel I should provide more supervision for my child(ren).

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

(IF NEEDED: "Supervision" means knowing what they are doing and providing guidance or limits on their behavior.)

D17. I wish that I were more consistent in my parenting behaviors.

1 Strongly agree
2 Agree
3 Disagree, or
4 Strongly disagree?

(IF NEEDED: "Consistent" means clear, dependable, even.)

E. Family Routines

Next, I'd like to ask some questions about family activities.

E1. About how many books does (CHILD) have?

1 NONE
2 1or 2
3 3 to 9
4 10 to 25
5 25 or more

E2. Is there a musical instrument, for example, a piano, drum, or guitar, that (CHILD) can use at home?

1 YES
2 NO

E3. About how often does (CHILD) read for enjoyment? Would you say…

1 Every day
2 Several times a week
3 Several times a month
4 Several times a year
5 Never

E4. Does (CHILD) get special lessons or belong to any organization that encourages activities such as sports, music, art, dance, or drama?

1 YES
2 NO

E5. In the past year, how often have you or a family member taken or arranged for (CHILD) to visit a museum? I'm asking about any kind of children's, scientific, art, or historical museum.

1 Never
2 Once or twice
3 Several times
4 About once a month
5 About once a week or more

E6. In the past year how often have you or a family member taken or arranged for (CHILD) to go to any type of musical or theatrical performance?

1 Never
2 Once or twice
3 Several times
4 About once a month
5 About once a week or more

E7. Do you have a computer in your home?

1 YES
2 NO

E8. Do you have internet service in your home?

1 YES
2 NO

F. Child Temperament and Academic Performance

Next, I have some questions about (CHILD).

F1. How easy or hard would it be for the average parent to raise (CHILD)?

1 Very easy,
2 Somewhat easy,
3 Somewhat hard, or
4 Very hard?

F2. In general, how often would you say that (CHILD) gets along well with other kids?

1 Never
2 Sometimes
3 Often

F3. What grade in school is (CHILD)?

[INTERVIEWER: THIS IS THE GRADE THE CHILD WILL BE IN FOR THE 2008-2009 SCHOOL YEAR]

1 1ST
2 2ND
3 3RD
4 4TH
5 5TH
6 IN UNGRADED PROGRAM
7 CHILD IS HOME-SCHOOLED
8 CHILD IS NOT IN SCHOOL (CHILD IS SICK OR UNABLE TO ATTEND SCHOOL FOR SOME REASON)

F4. Including kindergarten, has (CHILD) ever repeated any grades, or been held back, for any reason?

1 YES
2 NO

F5. How well is (CHILD) performing in reading, English, or language arts?

{IF F3=8 FILL "Please think about the last time (CHILD) was in school."}

1 Excellent,
2 Above average
3 Average
4 Below average
5 Failing?

F6. How well is (CHILD) performing in arithmetic or math?

{IF F3=8 FILL "Please think about the last time (CHILD) was in school."}

1 Excellent,
2 Above average
3 Average
4 Below average
5 Failing?

F7. How well is (CHILD) performing in social studies?

{IF F3=8 FILL "Please think about the last time (CHILD) was in school."}

PROBE: For example history, geography, civics, or economics.

1 Excellent,
2 Above average
3 Average
4 Below average
5 Failing?

F8. How well is (CHILD) performing in science?

{IF F3=8 FILL "Please think about the last time (CHILD) was in school."}

PROBE: For example the human body, earth or nature studies, the environment, or astronomy.

1 Excellent,
2 Above average
3 Average
4 Below average
5 Failing?

F9. Overall, would you describe (his/her) work in school as...

{IF F3=8 FILL "Please think about the last time (CHILD) was in school."}

1 Excellent,
2 Above average
3 Average
4 Below average
5 Failing?

F10. Does (CHILD) receive any special education services?

1 YES
2 NO

G. Parent Involvement in School

G1. What is the name of the school (CHILD) is attending?

_____

(CHILD) IS HOME-SCHOOLED ➔ SKIP TO SECTION H

G2. Within the past 12 months, have you {FILL IF MORE THAN ONE ADULT IN HH "or other adults in your household"} attended an open house or a back-to-school night at (CHILD)'s school?

1 YES
2 NO

G3. Within the past 12 months, have you {FILL IF MORE THAN ONE ADULT IN HH "or other adults in your household"} attended a meeting of a PTA, Parent-Teacher Organization or other such organization at (CHILD)'s school?

1 YES
2 NO

G4. Within the past 12 months, have you {FILL IF MORE THAN ONE ADULT IN HH "or other adults in your household"}gone to a regularly scheduled parent-teacher conference with (CHILD)'s teacher?

1 YES
2 NO

G5. Within the past 12 months, have you {FILL IF MORE THAN ONE ADULT IN HH "or other adults in your household"}attended a school or class event, such as a play, sports event, music concert, or science fair at (CHILD)'s school?

1 YES
2 NO

G6. Within the past 12 months, have you {FILL IF MORE THAN ONE ADULT IN HH "or other adults in your household"} volunteered at (CHILD)'s school or served on a committee?

1 YES
2 NO

G7. Within the past 12 months, have you {FILL IF MORE THAN ONE ADULT IN HH "or other adults in your household"} participated in fund raising for (CHILD)'s school?

1 YES
2 NO

G8. Within the past 12 months, how often have you and (CHILD) discussed school activities or events of particular interest to (him/her)? Would you say….

1 Never
2 Rarely
3 Occasionally
4 Regularly

G9. Within the past 12 months, how often have you and (CHILD) discussed things (he/she) has studied in class?

1 Never
2 Rarely
3 Occasionally
4 Regularly

H. School Engagement

For each of the following statements, please tell me if you think it describes (CHILD) all of the time, most of the time, some of the time, or none of the time.

H1. How often would you say (CHILD) does just enough schoolwork to get by?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time

H2. How often would you say (CHILD) always does homework?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time

H3. How often would you say (CHILD) likes to make (his/her) own decisions?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time

H4. How often would you say (CHILD) cares about doing well in school?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time

H5. How often would you say (CHILD) worries about grades?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time
97 NOT APPLICABLE / CHILD DOES NOT RECEIVE GRADES

H6. How often would you say (CHILD) cares when (he/she) makes mistakes?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time

H7. How often would you say (CHILD) enjoys school?

1 All of the time
2 Most of the time
3 Some of the time
4 None of the time

H8. During the past year, has (CHILD) skipped school, cut classes, or refused to go to school?

1 YES
2 NO

I. Child's Future

Now I have some questions about your thoughts about the future.

I1. In general, do you think a college education is…

1 Very important
2 Somewhat important, or
3 Not very important?

I2. How often do you talk with (CHILD) about (his/her) future as an adult, meaning after he/she turns 18?

1 Never,
2 About once a year,
3 About once a month,
4 About once a week,
5 More than once a week, or
6 Nearly every day?

I3. When (CHILD) is grown, do you expect that (his/her) financial situation will be…

1 Better than yours,
2 About the same as yours, or
3 Worse than yours?

I4. How far in school do you expect (CHILD) to go?

1 Some high school,
2 Graduate from high school,
3 Graduate from vocational or trade school,
4 Attend some college,
5 Get a two-year college degree,
6 Get a 4-year college degree, or
7 Go beyond a 4-year college degree?

J. Social Support

Next I have a few questions about interaction with family, friends, and others.

J1. In the past month, how often did you visit or talk with close relatives who don't live with you? This would include visits, phone calls, letters, or e-mail messages.

1 Almost every day,
2 About once a week,
3 Once or twice a month, or
4 Not at all?

J2. In the past month, how often did you visit or talk with close friends? This would include visits, phone calls, letters, or e-mail messages.

1 Almost every day,
2 About once a week,
3 Once or twice a month, or
4 Not at all?

J3. If you needed to find someone outside your household to take care of your child(ren) for several hours, would that be…?

1 Very easy,
2 Somewhat easy,
3 Somewhat hard, or
4 Very hard?

J4. If you needed to find someone to run errands if everyone in your house was sick in bed, would that be…?

1 Very easy,
2 Somewhat easy,
3 Somewhat hard, or
4 Very hard?

K. Caregiver's Mental Health

K1. Now I'm going to read a list of statements about the way people sometimes feel about themselves or life in general. Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements.

		Strongly agree	Agree	Disagree	Strongly disagree
a.	There is no way I can solve some of the problems I have.	1	2	3	4
b.	I feel that I am being pushed around in life.	1	2	3	4
c.	I have little control over the things that happen to me	1	2	3	4
d.	I can do anything I set my mind to.	1	2	3	4
e.	I feel helpless in dealing with the problems of life	1	2	3	4
f.	What happens to me in the future depends on me.	1	2	3	4
g.	There is little I can do to change the important things in my life.	1	2	3	4

I am going to read a list of ways you may have felt or behaved. Please tell me how often you have felt this way during the past week: none of the time, some of the time, most of the time, or all of the time?

K2. In the past week, how often was it that…

		None of the time	Some of the time	Most of the time	All of the time
a.	You were bothered by things that usually don't bother you?	1	2	3	4
b.	You did not feel like eating; your appetite was poor?	1	2	3	4
c.	You could not shake off the blues, even with help from your family and friends?	1	2	3	4
d.	You had trouble keeping your mind on what you were doing?	1	2	3	4
e.	You were depressed?	1	2	3	4

		None of the time	Some of the time	Most of the time	All of the time
f.	Everything you did was an effort?	1	2	3	4
g.	You were fearful?	1	2	3	4
h.	Your sleep was restless?	1	2	3	4
i.	You talked less than usual?	1	2	3	4
j.	You were lonely?	1	2	3	4
k.	You were sad?	1	2	3	4
l.	You could not get “going”?	1	2	3	4

L. Money Management and Saving

I'm now going to ask a series of questions about savings you {and your spouse/partner} may have. I'm going to start with savings you may have specifically for (CHILD), {FILL IF MORE THAN ONE CHILD IN HH "then for other children in your household,"} and then we'll move on to other savings you may have.

{BEGIN LOOP FOR EACH PERSON IN HOUSEHOLD UNDER 18 INCLUDING SAMPLE CHILD. FOR FILLS HHCHILD = CHILD FOR THIS TIME THROUGH THE LOOP. LOOP SHOULD START WITH SAMPLE CHILD}

L1. {AFTER FIRST TIME THROUGH FILL} Now I am going to ask some questions about savings for {FILL HHCHILD}. Have you (or your spouse/partner) ever saved any money specifically for (HHCHILD)?

1 YES
2 NO

L2. {IF L1 = 1} About how much money do you (or your spouse/partner) have saved for (HHCHILD)?

$ _____ AMOUNT SAVED

L3. {IF L1 = 1} Why are you (or your spouse/partner) saving for (HHCHILD)?

[SELECT ALL THAT APPLY]

PROMPT: Any other reasons?

1 IN CASE OF ILLNESS; MEDICAL/DENTAL EXPENSES
2 EMERGENCIES; "RAINY DAYS"; OTHER UNEXPECTED NEEDS; "SECURITY"
3 CHILD'S ELEMENTARY/SECONDARY EDUCATION;
4 CHILD'S COLLEGE EDUCATION
5 FOR CHILD TO START, BUY, OR INVEST IN A BUSINESS
6 CHILD'S RETIREMENT/OLD AGE
7 TO HELP CHILD BUY A HOUSE
8 "TO GET AHEAD;" FOR THE FUTURE; TO ADVANCE STANDARD OF LIVING
9 WISE/PRUDENT THING TO DO; GOOD DISCIPLINE TO SAVE; HABIT
10 OTHER: _____

L4. {IF L2 > 0} Do you (or your spouse/partner) have these savings for (HHCHILD) in any of the following? Please tell me yes or no.

[CHECK ALL THAT APPLY]

1 In a bank or credit union?
2 In a college savings plan or 529 account {FILL IF TREATMENT "or SEED account"}?
3 With an investment company?
4 In a pension plan?
5 At home?
6 Somewhere else? (Specify: _____)

L5. {IF L4 = COLLEGE SAVINGS PLAN OR 529 ACCOUNT} About how much in total is in (HHCHILD)'s college savings plan {FILL IF TREATMENT ", 529 account, or SEED account"; ELSE FILL "or 529 account"}?

$ _____ AMOUNT SAVED

L6. Have any other people ever saved any money **specifically** for (HHCHILD)?

1 YES
2 NO ➔ GO TO LOOP END

L7. {IF L6 = YES} In total, about how much money do other people have saved for (HHCHILD)?

[IF NONE, WRITE 0]

$ _____ AMOUNT SAVED

L8. Have other people ever saved any money **specifically** for (HHCHILD)'s education?

1 YES
2 NO ➔ GO TO LOOP END

L9. {IF L8 = YES} In total, about how much money do other people have saved for (HHCHILD)'s education?

[IF NONE, WRITE 0]

$ _____ AMOUNT SAVED

{END LOOP}

L10. Have you (or your spouse/partner) ever saved any money **specifically** for children who do not live in this household at least half the time?

PROBE: Do not include any savings for children we have already discussed.

1 YES
2 NO

L11. {IF L10 = YES} About how much money do you (or your spouse/partner) have saved for these other children?

$ _____ AMOUNT SAVED

L12. {IF L11 > 0} Where do you (or your spouse/partner) have savings for these children? Please tell me yes or no.

1 In a bank or credit union?
2 In a college savings plan or 529 account {FILL IF TREATMENT "or SEED account"}?
3 With an investment company?
4 In a pension plan?
5 At home?
6 Somewhere else? (Specify: _____)

Now I'd like to ask some questions about savings you {or your spouse/partner} may have that are not specifically for children. For these questions please do **not** include any of the savings we have already talked about.

L13. Do you (or your spouse/partner) have any other money saved? Think about money in accounts, investments, money at home, and money other people are holding for you.

{IF L1=1 or L10=1: "Do not include any savings for children you have already told me about."}

1 YES
2 NO

L14. {IF L13 = 1} In total, about how much money do you have saved?

{IF L1=1 or L10=1: "Do not include any savings for children you have already told me about."}

PROBE IF NECESSARY: Think about money in accounts, investments, money at home, and money other people are holding for you.

$ _____ AMOUNT SAVED

L15. {IF L13 = 1} Why are you (or your spouse/partner) saving this money?

[NOTE: SELECT ALL THAT APPLY]

PROMPT: Any other reasons?

1 ORDINARY LIVING EXPENSES/BILLS
2 IN CASE OF UNEMPLOYMENT
3 IN CASE OF ILLNESS; MEDICAL/DENTAL EXPENSES
4 EMERGENCIES; "RAINY DAYS"; OTHER UNEXPECTED NEEDS; "SECURITY"
5 BUY A HOUSE
6 HOME IMPROVEMENTS/REPAIRS
7 BUY A CAR OR OTHER VEHICLE
8 CAR MAINTENANCE/REPAIRS
9 TO TRAVEL; TAKE VACATIONS; TAKE OTHER TIME OFF
10 BUY DURABLE HOUSEHOLD GOODS, APPLIANCES, HOME FURNISHINGS
11 MOVING
12 HOLIDAYS/SPECIAL OCCASIONS
13 BURIAL/FUNERAL EXPENSES
14 CHILDREN'S EDUCATION; EDUCATION OF GRANDCHILDREN
15 OWN EDUCATION; SPOUSE'S EDUCATION; EDUCATION FOR ANYONE OTHER THAN CHILD OR GRANDCHILD
16 "FOR THE CHILDREN/FAMILY"
17 TO START, BUY, OR INVEST IN A BUSINESS
18 CHARITABLE OR RELIGIOUS CONTRIBUTIONS
19 RETIREMENT/OLD AGE
20 INVESTMENTS REASONS (TO GET INTEREST, TO BE DIVERSIFIED, TO BUY OTHER FORMS OF ASSETS)
21 TO MEET CONTRACTUAL COMMITMENTS (DEBT REPAYMENT, INSURANCE, TAXES, ETC.)
22 TO PAY OFF HOUSE
23 "TO GET AHEAD;" FOR THE FUTURE; TO ADVANCE STANDARD OF LIVING
24 WISE/PRUDENT THING TO DO; GOOD DISCIPLINE TO SAVE; HABIT
25 LIQUIDITY; TO HAVE CASH AVAILABLE/ON HAND
26 NO REASON
27 OTHER: _____

L16. {IF L13 = 1} Where do you (or your spouse/partner) have these savings? Please tell me yes or no.

1 In a savings account with a bank or credit union?
2 In another account with a bank or credit union?
3 In a pension plan or retirement account through work?
4 In some other investment product like stocks, bonds, a mutual fund, or an IRA?
5 At home? or
6 Somewhere else? (Specify: _____)

L17. {IF TREATMENT} About four years ago you may remember the Oakland Livingston Human Services Agency, sometimes called OLHSA, offered you the chance to open a special savings account for (CHILD)'s future education called a SEED account. Did you open a SEED account for (CHILD) at that time?

1 YES
2 NO

L18. {IF TREATMENT AND L17 = NO} Why did you choose not to open a SEED account for (CHILD) at that time?

PROBE: Any other reasons?

[CHECK ALL THAT APPLY]

1 NEVER HEARD OF THE SEED PROGRAM
2 TOO MUCH PAPERWORK
3 HAD TO PROVIDE TOO MUCH PERSONAL INFORMATION \ PRIVACY REASONS
4 CHILD NOT GOING TO COLLEGE
5 THOUGHT I HAD TO PAY MONEY
6 SOUNDED TOO GOOD TO BE TRUE
7 DIDN'T UNDERSTAND PROGRAM
8 THOUGHT I WOULD NOT BE ABLE TO SAVE ANY AMOUNT FOR (CHILD)
9 DON'T REMEMBER
10 THOUGHT THE MONEY I PUT IN MIGHT BE LOST OR BE AT RISK
11 OTHER_____

L18a. {IF TREATMENT AND L17=YES} Do you happen to recall how much the SEED program offered as an initial deposit to open {child's} SEED account?

PROBE: Your best guess is fine.

PROBE IF NEEDED: What is that amount?

_____ (ENTER AMOUNT)
DK
RF

L18b. {IF TREATMENT AND L17=YES} About how much is in child's SEED account currently?

PROBE: Your best guess is fine.

_____ (ENTER AMOUNT)
DK
RF

{IF L17 = YES ASK L19 – L33}

L19. Have you (or your spouse/partner) ever put any money into (CHILD)'s SEED account?

1 YES
2 NO ➔ GO TO L22

L20. {IF L19 = YES} In total, about how much have you (and your spouse/partner) ever put into (CHILD)'s SEED account?

$ _____ AMOUNT DEPOSITED

L21. Where did you get most of the money that you put into (CHILD)'s SEED account?

1 JOB EARNINGS/INCOME
2 RETIREMENT ACCOUNT FROM EMPLOYER MATCHING
3 INHERITANCE
4 GIFT
5 TAX REFUND OR EITC
6 INSURANCE SETTLEMENT/PAYMENT
7 INVESTMENT INCOME
8 OTHER (specify _____)

L22. Have any relatives ever put money into (CHILD)'s SEED account?

PROBE: Include money any relatives may have given for deposit into (CHILD)'s SEED account, even if the relative did not deposit it themselves.

1 YES
2 NO ➔ GO TO L25

L23. In total, about how much have any relatives ever put into (CHILD)'s SEED account?

$ _____ AMOUNT SAVED

L24. Which relatives have ever put money into (CHILD)'s SEED account?

_____ {PROGRAMMER: USE TYPES OF RELATIVES FROM HH ROSTER}

L25. Have any friends ever put money into (CHILD)'s SEED account?

PROBE: Include money any friends may have given for deposit into (CHILD)'s SEED account, even if the friend did not deposit it themselves.

1 YES
2 NO ➔ GO TO L27

L26. In total, about how much have any friends ever put into (CHILD)'s SEED account?

$ _____ AMOUNT SAVED

L27. Do you think you would have opened a special savings account for (CHILD)'s education if you had not been offered a SEED account?

1 YES
2 NO

L28. Over the last four years do you think you have saved more, less, or about the same amount you would have saved if (CHILD) did not have a SEED account?

1 MORE THAN
2 LESS THAN
3 THE SAME AMOUNT

I'd like to know what has made it easier or harder to save money in (CHILD)'s SEED account. For the following statements tell me if you strongly agree, agree, disagree, or strongly disagree.

L29. I like the financial institution used for the SEED account. Do you…

1 Strongly agree,
2 Agree,
3 Disagree,
4 Or Strongly disagree.

L30. (CHILD)'s SEED account seems secure. Do you…

1 Strongly agree,
2 Agree,
3 Disagree,
4 Or Strongly disagree.

L31. I like that the money in (CHILD)'s SEED account is matched. Do you…

1 Strongly agree,
2 Agree,
3 Disagree,
4 Or Strongly disagree.

L32. It is hard to save money in (CHILD)'s SEED account because all or most of my money goes to buy "necessities." Do you…

1 Strongly agree,
2 Agree,
3 Disagree,
4 Or Strongly disagree.

L33. I could save a little in (CHILD)'s SEED account, but not enough to make a difference. Do you…

1 Strongly agree,
2 Agree,
3 Disagree,
4 Or Strongly disagree.

Now I'd like to ask you some questions about saving and spending money. We know that people manage their money in lots of different ways.

L34. Suppose you had some extra money, say $200. What would you probably do with that money?

1 Spend all of it,
2 Spend most of it,
3 Save most of it, or
4 Save all of it?

L35. {IF L34 = 1 OR 2} What would you spend it on?

[RECORD VERBATIM] _____

L36. When it comes to money management, do you usually think about ...

1 The current month,
2 The next few months,
3 The next year,
4 The next few years,
5 The next 5 to 10 years, or
6 Longer than 10 years?

L37. About how much do you think you should have saved for emergencies and other unexpected things that come up?

$ _____ AMOUNT SAVED

For each of the following statements, please tell me if it's often, sometimes, or rarely true for you.

L38. My family sets financial goals for our future. Is that …

1 Often,
2 Sometimes, or
3 Rarely true for you?

L39. My family sticks to the financial plans we set for ourselves. Is that …

1 Often,
2 Sometimes, or
3 Rarely true for you?

L40. I keep track of my spending. Is that …

1 Often,
2 Sometimes, or
3 Rarely true for you?

L41. Friends or relatives expect me to help them out when I have extra money. Is that …

1 Often,
2 Sometimes, or
3 Rarely true for you?

L42. Are you hesitant to spend money that you have saved, yes or no?

1 YES
2 NO

L43. When buying groceries, do you use coupons or a frequent buyer card, yes or no?

1 YES
2 NO

L44. Do you try to save a regular amount each month, yes or no?

1 YES
2 NO

L45. {IF L44 = YES} About how much do you try to save each month?

$_____ AMOUNT SAVED

L46. How difficult is it for your family to save money, would you say…

1 Very difficult,
2 Somewhat difficult,
3 Somewhat easy,
4 Or very easy?

L47. Which of following statements best describes the present situation in your household?

1 We are saving a lot,
2 We are saving a little,
3 We are not able to save at all right now,
4 We are having to withdraw from our savings,
5 We are going into debt

L48. Please tell me if you agree or disagree with the following statements about finances.

		Agree	Disagree
a.	I trust banks.	1	2
b.	It is important for my family to have a savings account.	1	2
c.	Most people in my neighborhood have a checking or savings account.	1	2
d.	It is important for a child to have a savings account while growing up.	1	2

L49. Do you have a written budget or spending plan?

1 YES
2 NO

The next few questions ask about where you shop and do business.

L50. Where do you **usually** shop for groceries? At a ….

1 Discount food store, like ALDI'S or Sam's,
2 A supermarket, like Kroger's
3 A small grocery store like a mom & pop store, or
4 A convenience store like a 7-11, or
5 Someplace else? (Specify:_____)

[CHECK ALL THAT APPLY]

L51. Where do you **usually** buy furniture and appliances? Do you buy them from …

1 Large retail stores,
2 Small retail stores,
3 Yard or garage sales,
4 Used furniture stores,
5 Rent-to-own stores, or
6 Someplace else? (Specify: _____)

[CHECK ALL THAT APPLY]

L52. Turning to your financial business, do you **usually** cash checks at ….

1 A bank or credit union,
2 Your work place
3 A check cashing outlet
4 A convenience or liquor store,
5 A grocery store, or
6 Someplace else? (Specify: _____)
97 N/A DOESN'T CASH CHECKS

[CHECK ALL THAT APPLY]

M. Economic Pressure

I have a few questions about your family's financial situation. Please remember that your answers are completely confidential.

M1. Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of the following statements about your family's financial situation.

		Strongly agree	Agree	Disagree	Strongly disagree
a.	My family has enough money to afford the kind of home we need. Do you strongly agree, agree, disagree, or strongly disagree?	1	2	3	4
b.	My family has enough money to afford the kind of clothing we need. Do you strongly agree, agree, disagree, or strongly disagree?	1	2	3	4
c.	My family has enough money to afford the kind of furniture or household equipment we need. Strongly agree, agree, disagree, or strongly disagree?	1	2	3	4
d.	My family has enough money to afford the kind of car we need. Strongly agree, agree, disagree, or strongly disagree?	1	2	3	4
e.	My family has enough money to afford the kind of food we need. Do you strongly agree, agree, disagree, or strongly disagree?	1	2	3	4
f.	My family has enough money to afford the kind of medical care we need. Strongly agree, agree, disagree, or strongly disagree?	1	2	3	4
g.	My family has enough money to afford the kind of leisure and recreational activities we need. Strongly agree, agree, disagree, or strongly disagree?	1	2	3	4

M2. During the past 12 months, did you ...

1 Always have enough to eat,
2 Sometimes have enough to eat, or
3 Often not have enough to eat?

M3. {IF M2 = 3 “often not have enough to eat”} Here are some reasons why people don’t always have enough to eat. For each one, please tell me if that is a reason why you don’t always have enough to eat.

[CHECK ALL THAT APPLY]

1 Not enough money for food
2 Too hard to get to the store
3 On a diet
4 No working stove available
5 Not able to cook or eat because of health problems
6 Any other reasons? (specify)_____

M4. During the past 12 months, has your financial situation...

1 Gotten better,
2 Gotten worse, or
3 Stayed the same?

M5. How hopeful would you say your financial situation looks? Would you say...

1 Very hopeful,
2 Somewhat hopeful,
3 Not very hopeful, or
4 Not at all hopeful?

N. Income

Next, I have some questions about your employment status.

N1. During the past week, did you work at a job or business for pay?

1 YES
2 NO

N2. {IF N1 ≠ 1} Were you on leave or vacation from a job or business?

1 YES
2 NO

N3. {IF N1 ≠ 1} What were you doing most of last week?

1 Keeping house or caring for children,
2 Going to school,
3 Retired,
4 Unable to work, or
5 Something else? (Specify: _____)

N4. {IF N1 ≠ 1} Have you been actively looking for work in the past 4 weeks?

1 YES
2 NO

N5. {IF N1 = 1} How many paying jobs do you have now?

_____ PAYING JOBS

N6. {IF N5 > 1: "Counting all jobs, about…" ELSE: "About…"} how many total hours per week do you usually work for pay?

_____ HOURS WORKED

N7. {IF N5 > 1: For the next set of questions, please think about the job where you currently work the most hours.} What is your job title? For example, typist, teacher, retail clerk.

_____ JOB TITLE

N8. {IF N1 = 1} For your job, do you get paid…?

1 Hourly,
2 Weekly,
3 Twice a month,
4 Monthly,
5 Annually, or
6 Some other way? (Specify: _____)

N9. {IF N1 = 1} How much do you earn {FILL N8} from this job before taxes and other deductions?

{IF N5>1 PROBE: Remember to think about the job where you currently work the most hours.}

PROMPT: Your best guess would be fine.

$ _____ AMOUNT EARNED

N10. {IF N1 = 1} Suppose you were to lose this job and needed to find another job. Would finding another one that paid about the same be:

1 Very easy,
2 Somewhat easy,
3 Somewhat hard, or
4 Very hard for you to do?

{IF N5>1 loop through N10a and N10c for each additional job}

N10a. For your {FILL "second", "third", "fourth"} What is your job title? For example, typist, teacher, retail clerk.

_____ JOB TITLE

N10b. For your job, do you get paid…?

1 Hourly,
2 Weekly,
3 Twice a month,
4 Monthly,
5 Annually, or
6 Some other way? (Specify: _____)

N10c. How much do you earn {FILL N10b} from this job before taxes and other deductions?

$ _____ AMOUNT EARNED

{END LOOP}

N11. Over the past four years, that is since {fill date}, have you or any member of your household started a business?

1 YES
2 NO

Now I have some questions about the different sources of income you have in your household.

N12. **Including yourself**, how many adults contribute to your household income?

_____ NUMBER OF ADULTS

N13.

		Yes	No
a.	In the past 12 months, that is, since (DATE), have you or any member of your household received any income from a job?	1	2
b.	Since (DATE), have you or any member of your household received any income from self-employment?	1	2
c.	Since (DATE), have you or any member of your household received any income from TANF, which is also called welfare or the Family Independence Program?	1	2
d.	From SSI or SSDI, which is also called disability? (IF NEEDED: SSI=Supplemental Security Income, SSDI=Social Security Disability Insurance)	1	2
e.	From food stamps?	1	2
f.	From Social Security Retirement or Survivor's benefits?	1	2
g.	Since (DATE), have you or any member of your household received any income from other retirement income, including pensions?	1	2
h.	From unemployment benefits?	1	2
i.	From veteran's benefits?	1	2
j.	Since (DATE), have you or any member of your household received any income from payments for providing foster care?	1	2
k.	From alimony, maintenance, or child support payments?	1	2
l.	From other money from a current or former spouse or partner who doesn't live with you?	1	2
m.	Since (DATE), have you or any member of your household received any income from money from friends or family?	1	2
n.	From occasional work, like hairdressing, baby-sitting, repairs, yard work, or selling things that you make?	1	2
o.	From the Earned Income Tax Credit, or EITC?	1	2
p.	From investments?	1	2
q.	Since (DATE), have you or any member of your household received any income from any other sources? {IF YES, ASK} What kind of income is that? _____	1	2

N14. Thinking about all of the sources of income you have told me about, what was the total income for your household during the past 12 months?

PROMPT: Your best guess would be fine.

IF NECESSARY: Before taxes.

$ _____ TOTAL YEARLY INCOME

{IF DK, REF} Would you say it was…

1 Less than $5,000,
2 Between $5,000 and $10,000,
3 Between $10,000 and $15,000,
4 Between $15,000 and $20,000,
5 $20,000 to $25,000?
6 $25,000 to $30,000,
7 Between $30,000 and $35,000,
8 $35,000 to $40,000,
9 $40,000 to $50,000,
10 Between $50,000 and $75,000, or
11 More than $75,000

N15. Did you file a state income tax return for 2007?

1 YES
2 NO

N16. Did you file a federal income tax return for 2007?

1 YES
2 NO

N17. {IF N15 OR N16 = YES} Did you receive a tax refund from the state or the federal government? I'm not asking about the $300 or $600 rebate the federal government provided, but a tax refund.

1 YES
2 NO

N18. {IF N17 = YES} Did you have the refund deposited directly into a bank account?

1 YES
2 NO

N19. {if N18 = YES} What type of bank account did you deposit the refund in?

1 CHECKING
2 SAVINGS
3 OTHER (specify _____)

N20. {IF N19 = 2} What type of savings account?

[CHECK ALL THAT APPLY.]

1 STANDARD PASSBOOK SAVINGS FOR R OR SPOUSE/PARTNER
2 529 ACCOUNT FOR FOCAL CHILD
3 OTHER SAVINGS ACCOUNT FOR FOCAL CHILD (specify _____)
4 ACCOUNTS FOR OTHER CHILDREN

PROBE: Any other types of savings accounts?

O. Assets and Debts

Now I have some questions about various assets you may have.

O1. First, how many vehicles are owned by people who currently live in your household? Please be sure to include motorcycles, mopeds and RVs.

_____ NUMBER OF VEHICLES ➔ {IF 0, GO TO O2}

O1a. {IF O1 = 1} What is the year of that vehicle?

{IF O1 > 1} What is the year of the newest vehicle?

_____ YEAR OF VEHICLE

O1b. {IF O1 ≥ 1} What make?

_____ MAKE

O1c. {IF O1 ≥ 1} What model?

_____ MODEL

{PROGRAMMER: DETERMINE WHETHER MORE THAN ONE ADULT IN THE HOUSEHOLD BASED ON ANSWERS TO A7. ANYONE > AGE 18 = ADULT.}

O2. Do you {FILL IF MORE THAN ONE ADULT IN THE HH AS INDICATED IN A7 "or any adults in your household"} have a checking account?

1 YES
2 NO

O2a. {IF O2 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total in checking accounts, is it…

1 less than $250;
2 more than $250, but less than $500;
3 more than $500, but less than $1,000;
4 more than $1,000, but less than $2,000;
5 more than $2,000, but less than $10,000;
6 or more than $10,000?

O3. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have a savings account?

1 YES
2 NO

O3a. {IF O3 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total in savings accounts, is it…

1 less than $250;
2 more than $250, but less than $500;
3 more than $500, but less than $1,000;
4 more than $1,000, but less than $3,000;
5 more than $3,000, but less than $50,000;
6 more than $50,000, but less than $100,000;
7 or more than $100,000?

{PROGRAMMER: RANDOMIZE O4 – O7a BY LOGICAL TWO QUESTION CHUNKS}

O4. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any savings bonds, certificates of deposit, treasury bills, or corporate bonds?

1 YES
2 NO

O4a. {IF O4 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total in certificates of deposit, treasury bills, or corporate bonds, is it…

1 less than $1,000;
2 more than $1,000, but less than $2,000;
3 more than $2,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $20,000;
6 more than $20,000, but less than $50,000;
7 or more than $50,000.

O5. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any retirement accounts, such as IRAs or 401(k)s?

1 YES
2 NO

O5a. {IF O5 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total in retirement accounts, such as IRAs or 401(k)s, is it...?

1 less than $3,000;
2 more than $3,000, but less than $5000;
3 more than $5000, but less than $10,000;
4 more than $10,000, but less than $25,000;
5 more than $25,000, but less than $50,000;
6 more than $50,000, but less than $100,000;
7 more than $100,000, but less than $200,000;
8 more than $200,000.

O6. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any other stocks or mutual funds?

1 YES
2 NO

O6a. {IF O6 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total in other stocks or mutual funds?

1 less than $1,000;
2 more than $1,000, but less than $5,000;
3 more than $5,000, but less than $10,000;
4 more than $10,000, but less than $25,000;
5 more than $25,000, but less than $50,000;
6 more than $50,000, but less than $100,000;
7 or more than $100,000.

O7. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any savings at home or with trusted friends or family members?

1 YES
2 NO

O7a. {IF O7 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total savings at home or with trusted friends or family members?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000, but less than $50,000;
7 or more than $50,000.

O8. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any other types of savings?

1 YES
2 NO

O8a. {IF O8 = YES} What kinds of savings are these?

_____ KINDS OF SAVINGS

PROBE: Any other kinds of savings?

O8b. {IF O8 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have in total in other types of savings?

1 less than $1,000;
2 more than $1,000, but less than $5,000;
3 more than $5,000, but less than $10,000;
4 more than $10,000, but less than $25,000;
5 more than $25,000, but less than $50,000;
6 more than $50,000, but less than $75,000;
7 or more than $75,000.

O9. {IF O3 = YES} Where did you get **most** of the money that you put into your savings account?

1 JOB EARNINGS/INCOME
2 RETIREMENT ACCOUNT FROM EMPLOYER MATCHING
3 INHERITANCE
4 GIFT
5 TAX REFUND OR EITC
6 INSURANCE SETTLEMENT/PAYMENT
7 INVESTMENT INCOME
8 OTHER (specify _____)

O10. {IF O2 OR O3 = 1} Do you {FILL IF MORE THAN ONE ADULT IN THE HH FROM A7 "or any adults in your household"} have money directly deposited into a checking or savings account?

PROMPT: Direct deposit means that the money is automatically transferred.

1 YES
2 NO

O11. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any business assets such as buildings, vehicles, equipment, or inventory?

1 YES
2 NO

O11a. {IF O11 = YES} How much do you think the total business assets are worth?

$_____

O12. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} have any assets in the form of rental property, land, or other real estate you own?

1 YES
2 NO

O12a. {IF O12 = YES} How much do you think the property would sell for now?

$_____

Now we have a few questions about various bills and debts you may have.

O13. Do you have a major credit card, like Visa, MasterCard, Discover, or American Express?

PROMPT: A major credit card can be used at many different stores.

1 YES
2 NO

O13a. {IF O13 = YES} If you have more than one major credit card, please think about the one you use most often. Do you pay off the entire balance on this major credit card:

1 Almost every month,
2 Sometimes,
3 Or hardly ever?
4 OTHER (Specify: _____)
97 NOT APPLICABLE / DON'T USE THE CARD

{PROGRAMMER: RANDOMIZE O14 – O23a BY LOGICAL TWO QUESTION CHUNKS}

O14. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on credit cards?

1 YES
2 NO

O14a. {IF O14 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on credit cards?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $2,000;
4 more than $2,000, but less than $10,000;
5 more than $10,000, but less than $20,000;
6 more than $20,000, but less than $50,000;
7 or more than $50,000.

O15. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on car loans or other vehicle loans?

1 YES
2 NO

O15a. {IF O15 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on car loans or other vehicle loans?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000, but less than $50,000;
7 or more than $50,000.

O16. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on personal loans from banks, credit unions, friends, or relatives?

1 YES
2 NO

O16a. {IF O16 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on personal loans from banks, credit unions, friends, or relatives?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000, but less than $75,000;
7 or more than $75,000.

O17. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on home equity loans?

1 YES
2 NO

O17a. {IF O17 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on home equity loans?

1 less than $5000;
2 more than $5000 but less than $10,000;
3 more than $10,000, but less than $25,000;
4 more than $25,000, but less than $75,000;
5 or more than $75,000.

O18. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on medical bills?

1 YES
2 NO

O18a. {IF O18 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on medical bills?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000, but less than $75,000;
7 or more than $75,000.

O19. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on business loans?

1 YES
2 NO

O19a. {IF O19 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on business loans?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000, but less than $75,000;
7 or more than $75,000.

O20. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on installment loans for major items like furniture or appliances?

1 YES
2 NO

O20a. {IF O20 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on installment loans for major items like furniture or appliances?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000.

O21. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on student loans?

1 YES
2 NO

O21a. {IF O21 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on student loans?

1 less than $500;
2 more than $500 but less than $1,000;
3 more than $1,000, but less than $5,000;
4 more than $5,000, but less than $10,000;
5 more than $10,000, but less than $25,000;
6 more than $25,000, but less than $75,000;
7 or more than $75,000.

O22. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on property {FILL IF B1=1 "other than your home"}?

1 YES
2 NO

O22a. {IF O22 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on property other than your home?

1 less than $10,000;
2 more than $10,000 but less than $25,000;
3 more than $25,000, but less than $75,000;
4 more than $75,000, but less than $100,000;
5 more than $100,000, but less than $250,000;
6 or more than $250,000.

O23. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on overdue bills?

1 YES
2 NO

O23a. {IF O23 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on overdue bills?

1 less than $250;
2 more than $250 but less than $500;
3 more than $500, but less than $1,000;
4 more than $1,000, but less than $5,000;
5 more than $5,000, but less than $10,000;
6 more than $10,000, but less than $50,000;
7 or more than $50,000.

O24. Do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe any money on any other debt?

1 YES
2 NO

O24a. {IF O24 = YES} What are these other debts? Specify

_____

O24b. {IF O24 = YES} How much do you {FILL IF MORE THAN ONE ADULT IN THE HH "or any adults in your household"} owe in total on any other debt?

1 less than $250;
2 more than $250 but less than $500;
3 more than $500, but less than $1,000;
4 more than $1,000, but less than $5,000;
5 more than $5,000, but less than $10,000;
6 more than $10,000, but less than $50,000;
7 or more than $50,000.

P. Financial Knowledge

We'd like to learn what parents know about some financial matters. You may not know the answers to these next few questions. If you don't, you can give your best guess or say you don't know.

P1. Would you say the following is generally true or generally false?

		True	False
a.	With an account that has compound interest, you earn interest on the principal and the interest. Is that generally true or false?	1	2
b.	People who deposit money in the Michigan Education Savings Program can get a tax break on their Michigan state income tax. Is that generally true or false?	1	2
c.	A bank will usually call to warn you if you write a check that would overdraw your account. Is that generally true or false?	1	2
d.	If you are comparing offers from credit cards and don't expect to pay the bill in full every month, the Annual Percentage Rate or APR is the most important thing to look at. Is that generally true or false?	1	2

P2. During the past two years, did you take classes or seminars that covered any of the following?

		Yes	No
a.	Basic budgeting?	1	2
b.	Did you take classes or seminars on basic banking?	1	2
c.	Did you take classes or seminars on basic saving strategies?	1	2
d.	About credit, loans, or credit repair?	1	2
e.	About buying a home?	1	2
f.	Did you take classes or seminars on starting a business?	1	2
g.	On basic investment strategies?	1	2
h.	On saving for retirement?	1	2
i.	On saving for college?	1	2
j.	On any other money management matters? Specify: _____	1	2

Q. Follow-up and Wrap-up

We're now reaching the end of the interview. I'd like to confirm your name and address.

Q1. First, please tell me your full legal name, starting with first, middle, then last.

FIRST: _____
MIDDLE: _____
LAST: _____

Q2. Do you go by any other names or nicknames?

1 YES
2 NO

Q2a. {IF Q2 = 1} What are they?

ALIAS #1: _____
ALIAS #2: _____

Q3. What is your birthday month, date, and year?

MONTH: _____
DATE: _____
YEAR: _____

Q4. Let me confirm your street address. I have it as…

[NOTE: VERIFY INFORMATION. CORRECT AS NEEDED.]

STREET ADDRESS: _____
CITY: _____
STATE: _____
ZIP: _____

Q5. I would like to verify some information about (CHILD). What is (CHILD)'s full name?

FIRST NAME : _____
MIDDLE NAME: _____
LAST NAME: _____

Q6. Does (CHILD) go by any other names or nicknames?

1 YES
2 NO

Q6a. {IF Q6 = YES} What are they?

ALIAS #1: _____
ALIAS #2: _____

Q7. And what is (CHILD)'s birthday, month, date, and year?

MONTH: _____
DATE: _____
YEAR: _____

Thank you very much for this information.

That's the end of the interview. I'd like to thank you for the time and information you've provided. We will soon send you $60 for participating in this interview. Your opinions and experiences will help plan programs to benefit children in your community.

Again, many thanks.

APPENDIX D

ESTIMATING PROGRAM IMPACTS USING AN INTENT TO TREAT APPROACH

APPENDIX D
ESTIMATING PROGRAM IMPACTS USING AN INTENT TO TREAT APPROACH

With the design of the MI SEED experiment, several analytical approaches are possible. As explained in Chapter 1, we use a "treatment on the treated" approach because not all treatment group members may have been exposed to the offer to open a MI SEED account.

Still, there may be meaningful lessons to be gleaned from considering treatment group members as an "intent to treat" population. In this case, the impacts of MI SEED can be estimated by contrasting outcomes of treatment vs. comparison group families. For researchers and observers interested in this approach, we present in this appendix information about savings for all treatment group members versus all comparison group members, using the full analysis sample of 681 families (333 treatment and 348 comparison who completed both the baseline and follow-up surveys).

Information is presented below on the "intent to treat" approach for effects on savings, followed by summary tables for the "intent to treat" approach for family net worth and psychosocial/educational outcomes. The tables parallel those presented in Chapters 4 and 5.

Exhibit D-1. ITT Impact on Saving for the Focal Child, Mean and by Percentile (TOT Impact: Exhibit 4-2)

Assets accumulated for ...	Comparison Group Mean	Estimated ITT Impact (standard error) [*p* value], Measured as Differences from Baseline, at the ...				
		Mean	Trimmed Mean	70th Percentile	80th Percentile	90th Percentile
the focal child's education						
by the parent/guardian through a 529 plan, SEED account, or college saving account (n = 562)	256	267 (110) [**0.015**]	276 (45) [**0.0001**]	0 (330) [0.999]	796 (350) [**0.023**]	460 (199) [**0.021**]
by others (n = 437)	521	-114 (114) [0.319]	-50 (34) [0.138]	0 (3) [0.999]	0 (88) [0.999]	-20 (184) [0.913]
by all (n = 437)	806	161 (300) [0.592]	114 (119) [0.338]	149 (196) [0.447]	310 (182) [0.089]	117 (352) [0.739]
all purposes for the focal child by the parent/guardian (n = 495)	411	137 (134) [0.306]	198 (61) [**0.001**]	179 (135) [0.186]	298 (129) [**0.021**]	193 (389) [0.619]
all purposes for non-focal children by the parent/guardian (n = 538)	691	-25 (157) [0.875]	36 (95) [0.705]	28 (116) [0.809]	34 (162) [0.835]	-473 (456) [0.300]
all purposes other than children by the parent/guardian (n = 537)	1,803	518 (581) [0.373]	369 (268) [0.168]	7 (72) [0.921]	81 (274) [0.768]	355 (655) [0.588]
all purposes combined by the parent/guardian (n = 472)	2,707	631 (563) [0.262]	233 (326) [0.475]	207 (348) [0.552]	166 (373) [0.657]	12 (983) [0.991]

Exhibit D-2. ITT Impact on Probability of Ownership and Amount of Banking and Financial Assets (standard error) [*p* value] (TOT Impact: Exhibit 4-5)

Type of Asset	Treatment Group		Comparison Group		Probability Ownership ITT Estimate	ITT Amount Estimate
	% at Baseline	% at Follow-up	% at Baseline	% at Follow-up		
Checking account (n = 573)	56.8	66.4	62.1	68.8	-0.0213 (0.0364) [0.559]	-76.7 (76.3) [0.314]
Savings account (n =572)	52.3	49.6	57.6	55.1	-0.0149 (0.0402) [0.710]	-336.8 (303.7) [0.267]
Bonds or CDs (n = 565)	7.5	8.2	14.5	8.4	0.00671 (0.0233) [0.773]	8.9 (67.1) [0.895]
Stocks or mutual funds (n = 565)	5.5	5.9	5.8	3.9	0.0305 (0.0181) [0.091]	391.2 (378.4) [0.301]
Retirement account (n = 564)	15.6	25.4	19.5	24.4	0.0435 (0.0333) [0.191]	2,335.0 (1,149.4) [**0.042**]

Exhibit D-3. ITT Impact on Probability of Ownership and Amount for Selected Measures of Non-liquid Wealth (standard error) [*p* value] (TOT Impact: Exhibit 4-6)

Type of Asset or Debt	Treatment Group		Comparison Group		ITT Probability Ownership Estimate	ITT Amount Estimate
	% at Baseline	% at Follow-up	% at Baseline	% at Follow-up		
Home (n = 575)	28.2	34.0	26.6	28.8	0.00862	4,878.0
					(0.0339)	(4,898.6)
					[0.799]	[0.319]
Mortgage (n = 571)	19.5	26.5	19.4	22.0	0.0204	
					(0.0306)	
					[0.506]	
Home equity loans (n = 570)		9.0		5.1	0.0227	694.9
					(0.0214)	(589.1)
					[0.289]	[0.238]
Other real estate assets (n = 573)		2.7		5.4	-0.0228	-35,010.9
					(0.0173)	(54,380.2)
					[0.188]	[0.520]
Other real estate debt (n = 572)		3.9		3.8	0.0125	754.5
					(0.0165)	(644.1)
					[0.451]	[0.241]
Business assets (n = 573)		5.0		4.8	-0.00294	-23,292.5
					(0.0186)	(11,322.5)
					[0.874]	[**0.040**]
Business debt (n = 574)		0.8		1.0	-0.00550	-241.8
					(0.0081)	(305.3)
					[0.640]	[0.428]
Has automobile (n = 576)	88.5	83.8	87.0	81.0	-0.00497	
					(0.0308)	
					[0.872]	
Automobile debt (n = 572)		32.6		42.0	-0.0598	-918.6
					(0.0398)	(370.0)
					[0.133]	[**0.013**]

Exhibit D-4. ITT Impact on Probability of Having and Amount Selected Measures of Debt (standard error) [*p* value] (TOT Impact: Exhibit 4-7)

Type of Debt	Treatment Group		Comparison Group		Probability Ownership ITT Estimate	ITT Amount Estimate
	% at Baseline	% at Follow-up	% at Baseline	% at Follow-up		
Has credit card (n = 573)	30.9	37.5	29.0	32.2	0.0516 (0.0364) [0.156]	
Credit card debt (n = 571)		45.3		44.1	-0.000359 (0.0399) [0.993]	-80.0 (298.8) [0.789]
Personal debt (n = 570)		15.9		15.4	-0.00832 (0.0316) [0.792]	-536.8 (624.2) [0.390]
Medical debt (n = 573)		43.2		45.2	-0.0412 (0.0424) [0.332]	167.7 (390.2) [0.667]
Installment debt (n = 573)		7.7		7.0	0.00447 (0.0225) [0.843]	-71.6 (76.3) [0.348]
Student loan (n = 573)		32.4		36.0	0.0347 (0.0359) [0.334]	66.7 (565.0) [0.906]
Overdue bills (n = 571)		52.7		55.3	-0.0230 (0.0427) [0.589]	153.3 (211.0) [0.467]
Other debt (n = 571)		9.7		6.1	0.0289 (0.0232) [0.212]	303.4 (487.5) [0.534]

Exhibit D-5. ITT Impact on Psychosocial and Education Outcomes (TOT Impact: Chapter 5 Exhibits)

Factor	Treatment Group: Percent "Yes" (n=333)[a]		Comparison Group: Percent "Yes" (n=348)		
	Baseline	Follow-up	Baseline	Follow-up	*p* value
Financial Knowledge and Money Management: Other Financial Outcomes					
Taken any financial class	16	16	20	20	.335
Answered at least 2 of 3 financial knowledge questions correctly	52	52	53	55	.290
Have a written budget	67	62	62	58	.689
Pay off entire credit card balance almost every month	35	25	35	34	.938
Would save most or all of an extra $200	65	57	65	58	.738
Percent Who Show Mastery					
There is no way I can solve some of the problems I have.	69	66	68	66	.868
I feel that I am being pushed around in life.	87	89	85	87	.473
I have little control over the things that happen to me.	85	84	83	84	.791
I can do anything I set my mind to.	94	96	97	97	.320
I feel helpless in dealing with the problems of life.	84	86	86	85	.350
What happens to me in the future depends on me.	93	94	96	95	.953
There is little I can do to change the important things in my life.	84	84	86	84	.174
Parental Stress: Percent Who Strongly Agree or Agree					
I am happy with my role as a parent/caregiver	99	99	98	99	.196
I often find I have too little time for myself	69	64	67	65	.809
I enjoy the time I spend with my children	100	100	100	99	.790
I feel overwhelmed with the responsibilities of being a parent/caregiver	35	26	39	31	.491

Exhibit D-5: ITT Impact on Psychosocial and Education Outcomes (TOT Impact: Chapter 5 Exhibits) (continued)

Factor	Treatment Group: Percent "Yes" (n=333)[a]		Comparison Group: Percent "Yes" (n=348)		
	Baseline	Follow-up	Baseline	Follow-up	*p* value
Parental Stress: Percent Who Strongly Agree or Agree (continued)					
I am able to find a balance between the many demands for my time and energy	84	85	88	89	.865
I often find that my life is more work than pleasure	56	51	58	57	.597
I am satisfied as a parent/caregiver	97	99	97	99	.801
I often feel tired worn out or exhausted by the responsibilities of being a parent/caregiver	42	33	48	41	.738
Parental Self-Efficacy					
As a parent/caregiver, I am able to find a balance between the many demands for my time and energy.	85	15	89	11	.817
I wish I did not become so impatient so quickly with my child(ren).	32	68	28	72	.642
Sometimes I feel I am too critical of my child(ren).	23	77	31	69	**.024**
I think my child(ren) would consider me a good parent.	99	1	98	2	.071
I wish I gave my child(ren) more individual attention.	59	41	61	39	.601
I am satisfied with the amount of time I can give my child(ren).	74	26	66	34	**.048**
I am satisfied with the way I discipline my child(ren)	93	7	95	5	.450
Sometimes I feel I should provide more supervision for my child(ren).	23	77	25	75	.680
I wish that I were more consistent in my parenting behaviors.	41	59	40	60	.913

Exhibit D-5: ITT Impact on Psychosocial and Education Outcomes (TOT Impact: Chapter 5 Exhibits) (continued)

Factor	Treatment Group: Percent "Yes" (n=333)[a]		Comparison Group: Percent "Yes" (n=348)		
	Baseline	Follow-up	Baseline	Follow-up	*p* value
Future Orientation					
How often parent discusses the future with the focal child					.171
greater than once a week	23	37	28	38	
once a month to once a week	39	50	35	49	
once a year	8	10	10	10	
never	29	3	28	3	
Expectations for the child's financial future					.736
better than parents	93	92	95	95	
same as parents	7	7	5	4	
worse than parents	1	1	<1	1	
Expectation for the child's educational future (How far in school do you expect the child to go)					.454
graduate from high school	7	4	6	3	
some post high school education	22	22	17	13	
college graduate or greater	71	74	77	85	
Behavioral Competence					
Ease of raising child					**.022**
very easy or easy	80	78	78	84	
somewhat hard or very hard	20	22	22	16	

Exhibit D-5: ITT Impact on Psychosocial and Education Outcomes (TOT Impact: Chapter 5 Exhibits) (continued)

Items Asked Only at Follow-up	Treatment Group: Percent "Yes"	Comparison Group: Percent "Yes"	*p* value
CES-D Classification			
Not depressed (score of 0-4)	42	41	
Mildly depressed (score of 5-9)	30	30	
Moderately depressed (score of 10-14)	17	15	
Severely depressed (score of 15-36)	11	14	
	Mean	**Mean**	***p* value**
CES-D score	7.25	7.52	.408
Provision of Stimulating Activities and Materials: HOME Components			
Child has 10 or more books	89	92	.608
Have a musical instrument in the house	56	60	.268
Child reads for enjoyment several times a week or more	91	90	.131
Child gets special lessons or belongs to an organization	53	59	.307
Child taken to a museum at least once in the past year	77	82	.572
Child attended a musical or theatrical performance at least once in the past year	62	69	.674
Composite score (mean)	3.76	3.88	.343
Parent Rating of Child's Overall School Performance			.123
Excellent	30	33	
Above average	21	25	
Average	41	38	
Below average	4	4	

Exhibit D-5: ITT Impact on Psychosocial and Education Outcomes (TOT Impact: Chapter 5 Exhibits) (continued)

Items Asked Only at Follow-up	Treatment Group: Percent "Yes"	Comparison Group: Percent "Yes"	*p* value
Parent Ratings of School Engagement			
How often would you say your child…			
does just enough school work to get by (most or all of the time)	44	38	.240
always does homework (most or all of the time)	93	95	.976
likes to make his/her own decisions (most or all of the time)	79	83	.907
cares about doing well in school (most or all of the time)	86	89	.974
worries about grades (most or all of the time)	46	49	.726
cares when he/she makes mistakes (most or all of the time)	79	75	.119
enjoys school (most or all of the time)	87	91	.257
Composite School Engagement (mean score)	22.18	22.69	.742
Social Competence: Gets Along Well with Other Kids			.333
Often	86	84	
Sometimes	14	15	
Never	0	1	
Parent Involvement in Education			
Mean number of events parent participated in at school	4.39	4.45	.944
Mean frequency parents discuss education with child	5.50	5.60	.371

[a] This represents the full sample for the treatment and comparison groups. Response rates for all items were above 97% of these numbers.

APPENDIX E

SUPER MODELS

APPENDIX E
SUPER MODELS

The exhibits in this appendix (E-1 and E-2) show two regression models with all variables placed into a single model.

A number of problems can challenge the construction of good statistical models. One common concern is the size of the model itself. Models that are overly parsimonious have the problem that they may not adequately or accurately describe the data. The exclusion of key variables can lead to other included independent variables being significant when they otherwise would not be (i.e., surrogate effects). However, models that contain too many variables can have a multitude of problems as well:

1. The sample size may be insufficient to support the size of the model.

2. Multi-collinearity can lead to model instability as well as incorrect interpretations of the main effects.

3. The sheer size of the model means that some variables will be significant simply due to chance alone which can lead to incorrect conclusions.

To illustrate the last problem, we present below two super models (opening a SEED account and the amount within a SEED account) that combine all of the independent variables together. Although the first model ran and parameter estimates were generated, SAS reported that convergence was not attained. From a modeling perspective, this is a serious error and the results from unconverged models are typically discarded. The cause for this error is broad. It could be due to a single variable or the model could be stretched past its limits in terms of the number of variables relative to the number of cases (in this instance, respondents). In either case, an analyst needs to reduce or collapse the model.

The second model (SEED amount) did converge. However, the size of some parameter estimates and their standard errors are quite large to the relative size of individual savings. This is usually a sign of multi-collinearity and is typically due to too many independent variables being in the model.

The solution we have chosen in this report is to break variables into reasonable blocks and run the models for a core set of variables, plus each block. We present information below on the super models for readers who may be interested.

Exhibit E-1. SEED account opening model

Explanatory Variable	Estimate	Standard Error
Intercept	-4.0288	2.9545
age	0.0013	0.0241
income	0.0112	0.0067
number of children in household	0.0076	0.1741
married	0.5075	0.4479
divorced, separated, widowed	0.1440	0.4344
African American	0.7820	0.4811
other race	-0.2741	0.4024
high school diploma or GED	-1.1515	0.4461
at least some college	0.1803	0.4328
have health insurance	0.3024	0.3539
filed a state tax return*	2.0039	0.9906
filed a federal tax return	-1.4176	0.9568
have a checking or savings account	-0.6517	0.4652
own a car	0.1230	0.4824
homeowner***	1.6265	0.4869
have financial assets	-0.3382	0.4386
have a credit card	-0.4690	0.3658
financial knowledge score*	0.4004	0.1593
taken a financial class	0.4984	0.5074
attended group orientation re SEED****	3.6699	0.6548
had individual meeting re SEED****	4.6802	0.6702
employed***	-1.2983	0.4821
saved money	0.1413	0.3906
saved money for focal child	0.3845	0.4058
saved money for focal child's education	0.5924	0.4738
others saved money for focal child	-0.4466	0.4698
others saved money for focal child's education	-0.0337	0.5671
child has a savings account*	1.0716	0.4800
child has other kind of bank account	0.6283	0.5213
child has savings bonds	0.4936	0.6004
other child in household has a savings account	-0.3528	0.4537
other child in household has a other kind of bank account	0.0280	0.4337
other child in household has a other kind of bank account	-0.0939	0.6968
amount saved for child**	-0.5579	0.1918
amount saved for child's education	-0.0519	0.0849
amount saved for child by others	0.7329	0.4865
amount saved for child's education by others	-0.5682	0.5167
saving for precautionary reasons	0.0534	0.5001

Exhibit E-1. SEED account opening model (continued)

Explanatory Variable	Estimate	Standard Error
saving for education	0.3943	0.7096
saving for retirement	-0.5945	0.8410
would save extra $200	-0.6281	0.3635
short time horizon for finances	0.6648	0.4267
how much think should be saved	0.0067	0.0058
set financial goals*	-0.8485	0.3849
stick to financial plans	0.1397	0.3509
keep track of spending	-0.1901	0.3871
others expect respondent to help out with finances*	0.7390	0.3614
hesitant to spend savings	-0.1436	0.3501
save a regular amount each month	-0.1949	0.3226
save in different places	0.3749	0.3247
trust banks*	0.8547	0.3791
think savings is important	-0.0317	0.4897
think others in neighborhood have savings account	-0.1848	0.3388
think important for a child to have a savings account	0.5949	0.3899
parents were good with money	0.3387	0.4187
parents talked about money	-0.4690	0.4090
keep a written budget	-0.6357	0.3550
parents saved money**	1.4099	0.4578
had a savings account while growing up**	-1.2657	0.4027
cash checks at check cashing stores	0.2635	0.3586
how hopeful financial situation looks	-0.1986	0.3892
Pearlin mastery score	-0.0935	0.0551
social support score	-0.0375	0.0760
importance of college education	0.7972	2.0437
how far think child will go in school	-0.6575	0.5438
CES-D score	0.1355	0.0999
religiosity	-0.6045	0.3561

* $p < .05$, ** $p < .01$, *** $p < .001$, **** $p < .0001$

NB: Convergence not attained in 200 iterations. Interpret the estimates with care.

Exhibit E-2. SEED account balances model

Explanatory Variable	Estimate	Standard Error
Intercept	-171.06	434.02
age**	9.83	3.28
income*	2.17	0.85
number of children in household	5.71	23.15
married	40.21	56.55
divorced, separated, widowed	35.72	60.75
African American*	-168.26	68.32
other race*	-149.43	59.74
high school diploma or GED	-8.22	64.03
at least some college	120.88	61.85
have health insurance	61.90	54.42
filed a state tax return**	-483.39	178.81
filed a federal tax return**	605.34	184.41
have a checking or savings account	68.04	65.01
own a car	-91.81	81.80
homeowner	68.99	53.09
have financial assets	0.51	63.52
have a credit card**	142.20	52.38
financial knowledge score**	-55.14	20.98
taken a financial class**	-191.83	63.09
attended group orientation re SEED	-49.56	90.44
had individual meeting re SEED	48.23	67.61
employed	-71.85	52.21
saved money	56.73	60.71
saved money for focal child	85.61	63.71
saved money for focal child's education	105.20	65.96
others saved money for focal child	101.67	76.28
others saved money for focal child's education	15.86	92.85
child has a savings account	-80.98	60.38
child has other kind of bank account*	-173.19	79.39
child has savings bonds	32.70	87.32
other child in household has a savings account	18.13	60.30
other child in household has a other kind of bank account	84.58	66.86
other child in household has a other kind of bank account	-70.49	91.45
amount saved for child	-8.70	25.68
amount saved for child's education	-6.51	9.87
amount saved for child by others**	-116.82	37.62
amount saved for child's education by others	89.42	59.25
saving for precautionary reasons	71.97	68.96

Exhibit E-2. SEED account balances model (continued)

Explanatory Variable	Estimate	Standard Error
saving for education	69.59	88.56
saving for retirement	170.73	106.98
would save extra $200	-52.77	50.98
short time horizon for finances	-102.91	60.98
how much think should be saved	-0.41	0.67
set financial goals	68.70	53.33
stick to financial plans	-86.59	55.75
keep track of spending	-8.74	51.69
others expect respondent to help out with finances	37.99	55.44
hesitant to spend savings	48.78	51.74
save a regular amount each month	8.54	47.92
save in different places	-14.31	49.49
trust banks*	119.30	58.37
think savings is important*	-169.14	77.08
think others in neighborhood have savings account	-30.97	52.08
think important for a child to have a savings account	80.98	71.98
parents were good with money**	185.81	60.05
parents talked about money	-58.57	52.13
keep a written budget**	-137.60	47.79
parents saved money	-25.82	55.11
had a savings account while growing up	-83.34	52.47
cash checks at check cashing stores	2.06	56.60
how hopeful financial situation looks	32.85	56.53
Pearlin mastery score**	-20.78	7.47
social support score	4.26	11.38
importance of college education*	683.51	307.06
how far think child will go in school	-107.62	98.11
CES-D score	4.60	12.93
religiosity	24.77	49.31

* $p < .05$, ** $p < .01$, *** $p < .001$, **** $p < .0001$