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GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

SEED for Oklahoma Kids

Experimental Test of a Policy Innovation in a Full Population

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SEED for Oklahoma Kids: Experimental Test of a Policy Innovation in a Full Population

The Center for Social Development at Washington University in St. Louis has implemented an ambitious policy demonstration: SEED for Oklahoma Kids (SEED OK). This initiative uses multiple research methods, including a scientific experiment in a full population, to test a policy innovation. The innovation is providing a Child Development Account (CDA) to all children at birth. In SEED OK, randomly selected newborn children in Oklahoma received a college savings account “seeded” with a \$1,000 initial deposit, plus additional components of the SEED OK intervention. This case study describes the multiyear process of designing and implementing SEED OK and sheds light on (a) organization and challenges of large-scale applied social research, (b) rigor and process required for a well-designed experiment, and (c) early research findings and policy implications.

Note: This case study was commissioned by SAGE Publications to be included in SAGE Research Methods Cases, a collection of studies from around the world. This collection provides undergraduate students, graduate students, and faculty with practical examples of research in action that can be used to teach research methods.

Learning outcomes

- *To understand the role of large-scale, multimethod social research in policy innovation*
- *To understand the complexities of implementing applied research with multiple partners, including state agencies and a financial services organization*
- *To understand how to generate a representative sample of a full population for a social experiment*
- *To understand how a large, long-term, randomized experiment can be implemented*
- *To understand how a long-term study testing impacts on well-being can yield meaningful results that inform policy*

Key words: *Savings, college, higher education, children, well-being, applied research*

SEED for Oklahoma Kids Background

What would happen if every child in the United States received a savings account at birth, opened in that child’s name, and “seeded” with an initial investment? Michael Sherraden (1991) first posed this question in *Assets and the Poor: A New American Welfare Policy*. In this groundbreaking work, Sherraden argued that an asset-based approach to social welfare should complement the income-based and safety net approaches that characterized much of 20th century social policy. According to Sherraden, accumulating assets for specific purposes would encourage and enable people to develop and attain important life goals, such as completing higher education, owning a home, starting a business, or securing a stable retirement. He also theorized that asset accumulation affects people’s self-concept, future orientation, and social and civic participation.

From IDAs to CDAs

Sherraden’s policy idea—originally called Individual Development Accounts (IDAs)—caught on in a demonstration mode as short-term (i.e., three- to five-year) matched savings accounts for low-income adults. Studies of IDAs for adults, such as Sherraden (2001) and others, showed that these accounts enabled adults across the US. to save and attain goals, and an institutional theory of asset accumulation effects emerged. However, the original policy concept of lifelong accounts opened at birth for all children had yet to be implemented or tested.

In the early 2000s, the Saving for Education, Entrepreneurship, and Downpayment (SEED) initiative was launched as a vision of Bob Friedman, the founding director of CFED. SEED overall was designed to demonstrate and spur policy for Child Development Accounts (CDAs) in the US. SEED was a partnership among several national organizations and included demonstration sites around the US as well as policy initiatives at state and federal levels.¹

In the context of the SEED initiative, Sherraden and colleagues at the Center for Social Development (CSD) conceived, designed, and implemented an experimental test of CDAs. CSD researchers proposed large-scale policy research now known as SEED for Oklahoma Kids (SEED OK), which tests the effects of accounts opened at birth in a full population through multiple research methods, including a rigorous experimental design. In contrast to IDAs, which had become short-term financial tools targeted to specific populations, CDAs would be *universal* (i.e., provided to all newborns through automatic enrollment) and *progressive* (i.e., include features that offer greater financial incentives to the lowest income households). SEED OK’s test of a universal policy through experimentation is an ideal—and rare—design in social research.

¹ For a summary of progress and learning from the larger SEED initiative, see Sherraden, M., & Stevens, J. (Eds.) (2010). *Lessons from SEED: A national demonstration of Child Development Accounts* [research and demonstration synthesis]. St. Louis: Washington University, Center for Social Development. Retrieved from http://csd.wustl.edu/Publications/Documents/SEEDSynthesis_Final.pdf

CSD researchers chose to implement the experiment within an existing savings account structure dedicated for postsecondary education use—Section 529 College Savings Plans (529s)—because 529s:

- use a state-sponsored structure that a national system of accounts could be modeled after and
- provide low-cost, inclusive savings options with potential to serve individuals of all economic backgrounds.

Because 529 plans exist in every state, the policy test in SEED OK is carried out on a policy platform that can potentially “go to scale” and reach millions of young people. In this regard, a key lesson from early testing of IDAs—which informed SEED OK—is that it may be easier and more effective to extend an existing policy to achieve new goals, rather than design and implement a whole new policy instrument.

Study aims

In 2007, CSD launched the SEED OK experiment, and by mid-2008, a 529 Oklahoma College Savings Plan (OK 529) account—seeded with a \$1,000 investment—had been opened automatically for each of 1,358 randomly-selected Oklahoma newborns (the “treatment” group). An additional 1,346 randomly-selected Oklahoma newborns did not receive an account (the “control” group). By combining random selection, randomization, and longitudinal data collection, SEED OK is poised to answer important questions about the effectiveness of universal and progressive CDAs for the general population. SEED OK aims to study the following policy impacts:

- College savings, account holding, and asset accumulation for children
- Parents’ attitudes about and aspirations for children’s education
- Parents’ social, psychological, and behavioral changes
- Children’s cognitive and behavioral development
- Children’s eventual educational aspirations and school performance

Why a Social Experiment?

In *Social Experiments: Evaluating Public Programs with Experimental Methods*, Larry Orr (1999) describes the why and how of social experimentation. Through a well-designed social experiment, researchers can examine whether and to what extent a public policy or program improves outcomes for participants. The hallmark of a social experiment is random assignment of participants to treatment and control groups. If properly executed, random assignment ensures that the treatment and control groups differ from each other only in access to treatment and sampling variability (i.e., systematic differences between treatments and controls simply due to chance). While individuals within each group will vary in ways that may impact the effect of the program or policy for an individual, groups as a whole should not be meaningfully different before the experiment, unless sampling variability exists.

Because CDAs are meant to serve all newborns in the US, SEED OK takes the rigor of experimentation one step further. The study uses not only random assignment but also random selection of study participants to increase the likelihood that study findings will be generalizable to a broader population.

Designing and Implementing the Experiment

Initial planning and state selection

Before Oklahoma was selected for the CDA experiment, the study was called the Universal Model—a reference to universal access of CDAs as proposed by Sherraden. From 2000 to 2005, CSD leaders detailed the study and policy design, identified potential impacts that the experiment would test, and secured foundation funding for the study.² In 2005, CSD issued a request for proposal from all U.S. states (Sherraden & Clancy, 2005), and a study planning group chose Oklahoma after narrowing the proposals to three state finalists. A key determinant in this selection was the state’s ability to execute the study requirements in cooperation with multiple state agencies and organizations. Also, Oklahoma was chosen because of its substantial subpopulations of African Americans, Hispanics, and American Indians, as required for the racial and ethnic diversity of the study design.

Building research collaboration: New partnerships and institutional arrangements

From 2005 to 2007, CSD developed partnerships and established protocols with several key state agencies and organizations. The Oklahoma Treasurer’s Office is CSD’s main partner in implementing accounts and providing a “state level home” to the SEED OK program. The Oklahoma State Department of Health played an invaluable role by providing statewide birth records from which the probability sample of prospective participants was drawn.

The Oklahoma Tax Commission released tax return data to the Treasurer’s Office, which allowed the state to automate an income-based savings incentives offered for the first four years of SEED OK (described further below). For participants with no tax return records, the state used information from the Oklahoma Department of Human Services to determine if those participants received public benefits (e.g., Supplementary Nutrition Assistance Program [SNAP, formerly known as Food Stamps], Medicaid, or Temporary Assistance for Needy Families [TANF]). This allowed the state to determine automatically the income eligibility for progressive savings incentives through official state—rather than individual self-report—records.

TIAA-CREF facilitated automatic opening of an OK 529 account for each child assigned to the treatment group. Based on an agreement with the OK 529 plan Board, TIAA-CREF delivers quarterly account and savings data to the Treasurer’s Office, which then transfers selected data to CSD.

RTI International, the study’s survey research partner, recruited participants in 2007 and 2008, fielded the baseline survey in 2007 and 2008, and conducted the first follow-up survey in 2011.

² For additional details, see Sherraden, M., & Clancy, M. (2005). *The universal model in SEED*. St. Louis, MO: Washington University, Center for Social Development. Retrieved from http://csd.wustl.edu/Publications/Documents/overview_um_seed_092005.pdf

Sampling and recruiting study participants

Researchers' goals for sampling and recruitment were to (a) obtain a sample representative of all Oklahoma newborns to ensure the external validity of study findings and (b) obtain a sample consisting of minority groups large enough to analyze whether the experiment has the same impacts for different racial and ethnic groups. To fulfill these aims, SEED OK conducted sampling and recruitment as follows:³

- To generate a representative sample of a full population (i.e., all Oklahoma newborns), SEED OK researchers used birth certificate data of all Oklahoma children born during certain time periods—April through June 2007 and August through October 2007—as its sampling frame. The Oklahoma State Department of Health provided birth certificate data via secured electronic records.
- Using race and ethnicity information from birth certificate data, SEED OK researchers used stratified random sampling for racial and ethnic groups, and included oversampling of three minority groups: African Americans, American Indians, and Hispanics.
- SEED OK researchers used various strategies to promote participation by those in the sample. A study invitation letter sent by the Oklahoma State Treasurer informed caregivers—mostly mothers—that they had a 50–50 chance of receiving a 529 account with a \$1,000 deposit for their newborn if they participated in the study. RTI International also mailed follow-up letters to potential participants, visited select sample members' homes, and offered a study participation incentive, among other strategies.

RTI International conducted baseline surveys of participants by telephone between fall 2007 and spring 2008. Mothers of 2,704 children (of the 7,115 who were eligible) completed the baseline survey. Although this 38% response rate is not atypical in the survey research field (e.g., Keeter et al., 2006), possible nonresponse bias must be assessed to inform the external validity of study results. To examine such possible bias, Yunju Nam and colleagues (2013) compare participants and nonparticipants using birth certificate data. They find that the two groups are not significantly different on most observed characteristics, and that any statistically significant differences are small in practical terms. Nonetheless, the possibility of systematic differences between participants and nonparticipants in unobserved characteristics cannot be ruled out. To address the potential nonresponse bias as well as oversampling of minority groups, SEED OK studies use weighting variables, a common post-survey adjustment (Groves, 2006).

Some features of SEED OK that may have reduced the participation rate include the following:

- SEED OK required mothers to provide children's Social Security numbers to automatically open the state-owned 529 account.
- The generous \$1,000 financial incentive in SEED OK may have generated skepticism about the legitimacy of the study among some mothers.

³ For additional details, see Marks, E. L., Rhodes, B. B., & Scheffler, S. (2008). *SEED for Oklahoma Kids: Baseline analysis*. Research Triangle Park, NC: RTI International; and Nam, Y., Kim, Y., Clancy, M., Zager, R., & Sherraden, M. (2013). Do Child Development Accounts Promote Account Holding, Saving, and Asset Accumulation for Children's Future? Evidence from a Statewide Randomized Experiment. *Journal of Policy Analysis and Management*, 32(1), 6–33.

Random assignment and implementation of intervention

After RTI conducted baseline surveys, researchers randomly assigned 1,358 study participants to the treatment group and 1,346 to the control group. This experimental design (a) generated a condition in which variation in access to the intervention (i.e., CDAs and related financial incentives and communications) was the only systematic difference between treatment and control groups and (b) allows researchers to examine the impacts of the intervention on children and their families. After random assignment, the steps to fully implement the intervention for the treatment group only were as follows:

- A state-owned OK 529 account was opened automatically and seeded with a deposit of \$1,000—unless it was rejected by the mother—with the child designated as the account beneficiary. Money in this account can be used for postsecondary education until the child reaches age 30.
- Participants were offered a \$100 account opening incentive (available through April 2009) to open their own individual, not state-owned, OK 529 account with the child named as the beneficiary.⁴
- Additional financial incentives were offered to low- and moderate-income participants through the matching of deposits made in an individual OK 529 account. The matching funds were put into the state-owned account. These incentives were designed to be progressive as policy features of a universal CDA, wherein the lowest income families would be eligible for the most savings incentives. The savings match was available for four years, through December 2011.
- Regular, professionally-designed packets, postcards, and letters are mailed to participants by the Oklahoma Treasurer’s Office, on behalf of SEED OK researchers. These communications explain OK 529 accounts, introduce SEED OK financial incentives, and communicate messages about the importance of education. Mothers also occasionally receive small gifts (e.g., storybooks) for the children.⁵
- Via TIAA-CREF, participants receive quarterly statements of their state-owned accounts.

The control group was free to open 529 accounts or any other savings accounts, like all Oklahoma residents. However, the control group did not receive a state-owned 529 account, nor any special information or incentives regarding 529 accounts.

⁴ Separating deposits made by treatment participants from those made by SEED OK prevents the money in state-owned accounts from jeopardizing families’ eligibility for federal financial aid for college or other public benefits. Access to state-owned accounts is restricted to the intended purpose of postsecondary education only. Funds in the individual account may be withdrawn for other purposes with a penalty. If a CDA policy were made available to all Oklahoma residents, the OK 529 plan structure could be changed so that state-owned assets would be kept separate from families’ deposits with two investment portfolios in a single account.

⁵ For a summary of SEED OK communications with treatment families, see Appendix A of Gray, K., Clancy, M., Sherraden, M. S., Wagner, K., & Miller-Cribbs, J. (2012). *Interviews with mothers of young children in the SEED for Oklahoma Kids college savings experiment* (CSD Research Report 12-53). St. Louis, MO: Washington University, Center for Social Development. Retrieved from <http://csd.wustl.edu/Publications/Documents/RP12-53.pdf>

Multiple research methods and data sources

As noted above, baseline survey data were collected in 2007 and 2008 before random assignment. In spring 2011, SEED OK researchers conducted a follow-up survey to estimate the experiment's initial impacts on children and their parents. Among 2,704 study participants in the baseline survey, 2,251 completed the follow-up survey, an 83% response rate. SEED OK researchers intend to conduct additional follow-up surveys in the future.

In addition to survey and birth certificate data, SEED OK collects financial and savings data. CSD researchers receive financial account and quarterly savings data electronically for all state-owned accounts and any individual accounts opened for study children, as described above. This direct transmission of financial data will ensure high-quality, reliable account information for the duration of the SEED OK experiment.

In-depth, qualitative interviews also are being used in SEED OK. Interviews of 60 mothers—40 from the treatment group and 20 from the control group, with oversampling of racial and ethnic minority groups—occurred when study children were two to three years old. Interviews were conducted to help researchers understand mothers' short-term experiences in and perceptions of SEED OK (Gray, Clancy, Sherraden, Wagner, & Miller-Cribbs, 2012).

Initial Findings

The results highlighted here are short-term findings. Data from the first follow-up survey in 2011 are being analyzed, and research papers are under review. Results that measure the impact of the SEED OK intervention will be available in the near future, and outcomes for children—especially cognitive and educational—will be measured in the long term. Hence, a comprehensive report of the impact of SEED OK is not yet available. However, a few studies have examined the effects of the experiment on savings and other outcomes using account data and qualitative data from in-depth interviews. Initial findings include the following:

- Automatic account opening is highly successful—99.9% of treatment mothers accepted the automatically opened, state-owned SEED OK account with \$1,000 initial deposit (Nam, Kim, Clancy, Zager, & Sherraden, 2013). One mother opted out for religious reasons. These state-owned accounts exist several years later, indicating that the 529 platform with automatic account opening can create a universal system of accounts.
- SEED OK has positive effects on savings outcomes. The treatment group's account holding rate, mean savings amount, and mean asset-accumulation amount are significantly higher than those of the control group.
- SEED OK's impact on saving is moderated by participants' financial knowledge (Huang, Nam, & Sherraden, 2013). Treatment participants with a higher level of financial knowledge are significantly more likely to hold individual OK 529 savings accounts than their counterparts with a low level of financial knowledge.

Qualitative data from in-depth interviews highlight the following themes (Gray et al., 2012):

- The SEED OK intervention seems to give a number of treatment participants confidence in their children’s future. Mothers expressed a sense of “security” and “relief” that “something has begun” for their children’s college education.
- The initial deposit, the symbolic message that someone outside the family cares about their children’s future, regular account statements, and program materials included in the SEED OK intervention seem to motivate some mothers to see their children as college bound.

Policy Impacts

SEED OK research has been used for policy consideration by agencies at federal, state, and city levels. These include the U.S. Department of Education, the San Francisco Treasurer’s Office for the Kindergarten2College Program, and the Office of Nevada State Treasurer Kate Marshall for the Nevada College Kick Start Program, among others. Perhaps the most important example of how SEED OK research has informed policy is in the state of Maine. The Harold Alfond College Challenge offers \$500 to every newborn in Maine enrolled in the state’s 529 college savings plan. To enroll, a family member must complete the state’s 529 college savings plan application before the child’s first birthday. At present, about 40% of newborns currently enroll in the program and receive the funds. In the foundation’s *2012 Grant Report*, the Chair of the Harold Alfond Foundation cited SEED OK research as a reason for considering automatic program enrollment to achieve 100% participation. In this case, SEED OK research is feeding directly into the policy design of the only statewide CDA policy in the nation with the intention of making the policy truly universal.

Conclusions

SEED OK is a rigorous and innovative test of a real-world policy idea to invest in all children at birth to enable them to grow up with greater financial resources, security, and potential for development. The experiment tests a policy in a full state population, with no selection in the sample. This is ideal for a test of a universal policy, and is uncommon in social research.

This case study traces the SEED OK experiment from early articulations of theory and policy in the 1990s, through multifaceted study implementation in the 2000s, to ongoing data collection, analyses, early research findings, and policy implications today. Successful institutional arrangements among government agencies, a financial services organization, and researchers have been a critical feature of the study.

Critical research features of SEED OK include random stratified sampling design, random assignment of treatments and controls, and integration of multiple research methods to examine study effects. Through careful planning and implementation, these arrangements and features have laid the groundwork for how a universal, progressive CDA policy could be made available to all children born in the US. Even at this early stage, SEED OK research results are informing policy—especially college savings plan policy at the state level—and will provide research findings and additional policy implications for many years.

Exercises and Discussion Questions

1. In social experimentation and randomized control trials, ethics are important to consider. What ethical dilemmas do you think the SEED OK planners may have encountered?
2. SEED OK attempts to generate a representative sample of a full population using birth certificate data. Are there alternative strategies to generate sampling frameworks for newborns when birth certificate data are not available? What sampling frameworks would be available for other populations, such as school-aged children, working-age adults, or the elderly?
3. How does oversampling of three minority groups in this study contribute to the researchers' ability to understand the impacts of CDAs for children and families?
4. The authors identify two possible explanations for why prospective participants may not have joined the SEED OK study. What other explanations might there be? What other strategies would you have tried to increase the study participation rate?
5. What do you think are the most important policy lessons from SEED OK so far? What could be important lessons going forward?
6. What is a policy innovation that you are interested in? How could you use a social experiment to test your idea? Please describe your hypothetical study setting, sample size, and research methods.

Web Resources

[Center for Social Development SEED OK Publications](#)

[Center for Social Development SEED OK Website](#)

[State of Oklahoma SEED for Oklahoma Kids Website](#)

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