An Experimental Test of Child Development Accounts on Early Social-Emotional Development

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Outline

• Child Development Accounts (CDAs)
• The SEED OK Experiment
• Methods: Data, Measures, and Estimation
• Results
• Discussion: Results Interpretation, Limitations, and Policy Implications
Child Development Accounts: A Policy Innovation for Asset Building

- Special savings accounts for children
- Savings subsidized for the poor (e.g., matching)
- Can be multiple sources of deposits
- With financial education
- For homes, education, businesses, or other development purposes
- Ideally, CDAs are lifelong (begin at birth), universal (available to all), and progressive (greater subsidies for the poorest children)

(for policy concept, see Sherraden, 1991)
Child Development Accounts: A Beginning for Lifelong Accounts

- Singapore’s Baby Bonus and CDAs
- United Kingdom’s Child Trust Fund
- Korea’s Child Development Accounts
- Canada’s several CDA policies
- YouthSave demonstration in developing countries

(for CDA policy review, see Loke & Sherraden, 2009)
Child Development Accounts in USA: Asset Building for Education

- CDA policies are focused on asset building for child development, education, lifelong well-being.
- Saving behavior matters for CDAs, but this is not the primary focus.
- Psychological and behavioral effects may include hope, control, and future orientation.
- By design, CDA policies can be very paternalistic, with automatic enrollment, restrictions on access until a certain age, and restrictions on use.
Policy Test of Universal & Progressive CDAs: SEED for Oklahoma Kids (SEED OK)

- Policy and research initiative designed to test the idea of universal, progressive accounts, lifelong asset building
- SEED OK tests whether CDAs promote asset accumulation and improve attitudes and behaviors of parents and children
- Research is multi-method: Experiment, Account Monitoring, and In-depth Interviews
- Oklahoma selected for the SEED OK experiment through competitive process
An experiment with random sample of newborns from a statewide population

Oversamples of African Americans, Latinos, and American Indians

Random assignment to treatment group (n=1,358) and control group (n=1,346)

Integrated into an existing policy structure—the Oklahoma College Savings Plan, or OK 529
Intervention Features of SEED OK

State-owned OK 529 account:
1. Provides a $1,000 initial deposit;
2. Provides information on this account;

Participant-owned OK 529 account:
3. Offers a $100 account-opening incentive;
4. Offers a savings match for income-eligible participants;
5. Provides information on this account.

= Opt-out enrollment  = Opt-in enrollment
Methods: SEED OK Survey Data

- Baseline survey (August 2007-April 2008)
- Follow-up survey (March-July 2011)
- Sample size:
  - N=2,704 (baseline survey)
  - n=2,236 (analytic sample)
Methods: Social-Emotional Development Questions

- Ages and Stages Questionnaire: Social Emotional items for four-year-old children
  - self-regulation (9 items)
  - compliance (2 items)
  - interaction with other people (6 items)
- Example: When upset, can the child calm down within minutes?—“most of time” (0), “sometimes” (5), and “rarely or never” (10)
Methods: Identification & Estimation

- Mean difference in social-emotional development between treatments and controls
- Sub-sample comparison
- Weighted and non-weighted analyses
- Demographic and socioeconomic characteristics to control for sampling variation
- Confirmatory Factor Analysis to control for measurement errors
SEED OK Sample Characteristics

- Children: male (53%); white (65%)
- Participants: age (m=26); high school and below (56%); married (61%); employed (47%); income-needs ratio below two (66%); and renters (55%)
- Balance check in the baseline sample (N=2,704) and in the follow-up sample (N=2,236)
- Comparison on demographic and socioeconomic characteristics between those participants included in and excluded from the follow-up sample
**Social-Emotional Development**

<table>
<thead>
<tr>
<th>Social-emotional Development Measures</th>
<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>Mother-reported social-emotional development</td>
<td>29.40</td>
<td>18.77</td>
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<tr>
<td>Sub-scales</td>
<td></td>
<td></td>
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<tr>
<td>Self-regulation</td>
<td>19.07</td>
<td>12.67</td>
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<tr>
<td>Compliance</td>
<td>4.02</td>
<td>4.89</td>
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<tr>
<td>Interaction with People</td>
<td>6.31</td>
<td>6.79</td>
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Mean Difference in Social-Emotional Development: Whole Sample

- Positive impact in mean difference in social-emotional development in non-weighted sample (treatment-control difference = -1.55, p<.10)
- No significant difference in weighted sample
Mean Difference in Social-Emotional Development: Low-income Participants

• Low-income participants: income-to-needs ratio < 2 (n=1,053)

• Positive impact in non-weighted and weighted samples (treatment-control difference= -2.2, p<.05)
Mean Difference in Social-Emotional Development: Low-education Participants

- Low-education participants: education not higher than high school (n=1,193)
- Positive impact in non-weighted sample (treatment-control difference= -2.2, p<.10) and weighted sample (treatment-control difference= -1.7, p<.05)
Mean Difference in Social-Emotional Development: Welfare Recipients

- Welfare recipients: Income from TANF, Food Stamps, Supplemental Security Income, or Social Security Disability Insurance in the previous 12 months (n=970)

- Positive impact in non-weighted sample (treatment-control difference= -3.4, p<.01) and weighted sample (treatment-control difference= -2.4, p<.05)
Mean Difference in Social-Emotional Development: Renters

- Renters (n= 1,318)
- Positive impact in non-weighted sample (treatment-control difference= -2.1, p<.05,) and weighted sample (treatment-control difference= -1.7, p<.05)
Mean Differences in Sub-Scales

- For subscale on self-regulation, positive impact in non-weighted sample ($p<.07$) but not in weighted sample
- For subscale on compliance, no significant differences
- For subscale on interaction with people, positive impact in non-weighted sample ($p<.10$) and in weighted sample ($p<.09$)
Socio-Emotional Development Effect Size

Mean Difference in Social-Emotional Development

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
<td>1.55</td>
<td>9.97</td>
<td>11.74</td>
<td>6.87</td>
<td>10.14</td>
</tr>
<tr>
<td>28.99</td>
<td>23.74</td>
<td>24</td>
<td>27.55</td>
<td>24.53</td>
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</tbody>
</table>

A=treatment vs. control; B=low vs. high income; C=low vs. high education; D=welfare recipients vs. non-recipients; E=renters vs. home owners
• Treatment-control difference in social-emotional development: Cohen’s d = -.08

• Treatment-control difference in social-emotional development for the low-income participants: Cohen’s d = -.25

• The Head Start Impact Study (2010): hyperactive behavior (Cohen’s d = -.21); problem behavior (-.14); social skills (.11); positive relationships between parents and children (.10)
Key hypotheses in SEED OK include more positive development of children (and later, improved educational outcomes).

Wave 2 of SEED OK occurred in 2011, when children were four years old. Social-emotional development is reported by parents via 17 items in the survey.

Early results suggest that SEED OK may lead to more positive child social-emotional development, and the impact appears greater for disadvantaged sub-samples.
Results Interpretation

- Random error (chance)
- Social desirability bias
- Measurement error
- Impacts of household economic resources on child development:
  1. access to economic resources and
  2. indirect effects through parenting and parental behaviors
Limitations

- External validity
- Measurement of social-emotional development
- Results interpretation
Policy Implications

• At this early stage, the SEED OK intervention appears to counteract some effects of disadvantage.

• As a complement to Head Start and food supplement programs policies, universal and progressive CDAs may have potential to enhance parental expectations and involvement in child development.
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