The Economic Case for
Investing in Young Children

Rob Grunewald, Economist
Community Development, Federal Reserve Bank of Minneapolis*

*The views expressed here are those of the author and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.
Federal Reserve System
Overview
Federal Reserve
Community Development

- Promote fair access to credit and economic growth in LMI communities.
Human Brain Development
Synapse Formation Dependent on Early Experiences

Sensory Pathways (Vision, Hearing)
Language
Higher Cognitive Function

Birth (Months) | (Years)
-8 -7 -6 -5 -4 -3 -2 -1  1 2 3 4 5 6 7 8 9 10 11 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Human Brain at Birth  6 Years Old  14 Years Old

Source: Chugani, Phelps & Mazziotta (1987)
Barriers to Social Mobility Emerge at a Very Young Age

Risk Factors for Adult Heart Disease are Embedded in Adverse Childhood Experiences (ACEs)

Source: Dong et al., 2004
High/Scope Study of Perry Preschool

- In early 1960s, 123 children from low-income families in Ypsilanti, Mich.

- Children randomly selected to attend Perry or control group.

- High-quality program with well-trained teachers, daily classroom sessions and weekly home visits.

- Tracked participants and control group through age 40.
Perry: Educational Effects

Source: Schweinhart, et al. (2005)
Perry: Economic Effects at Age 40

- **Own home**
  - Program group: 30%
  - No-program group: 20%

- **Earn $26,000+**
  - Program group: 50%
  - No-program group: 30%

- **Have a savings account**
  - Program group: 75%
  - No-program group: 50%

Source: Schweinhart, et al. (2005)
Perry: Arrested 5 or More Times Before Age 40

Source: Schweinhart, et al. (2005)
Perry Preschool
Costs and Benefits Over 62 Years

Source: Schweinhart, et al. (2005)
Perry Preschool —
Estimated Return on Investment

- Benefit-Cost Ratio = $16 to $1
- Annual Rate of Return = 18%
- Public Rate of Return = 16%
- Heckman Reanalysis = 10%

Sources: Schweinhart, et al. (2005); Author’s calculations; Heckman, Moon, Pinto, Savelyez, & Yavitz (2010)
Benefit-Cost Ratios for Other Longitudinal Studies

- Abecedarian Educational Child Care
  - $7 to $1

- Chicago-Child Parent
  - $10 to $1

- Elmira Prenatal/Early Infancy Project
  - $5 to $1

Sources: Garcia, Heckman, Leaf, & Prados (2016); Reynolds, Temple, White, Ou, & Robertson (2011); Karoly, et al. (1998)
Short-Run Benefits

- Fewer low-weight and pre-term births
- Fewer emergency room visits
- Reduced child abuse and neglect
- Reduced grade retention and special education
- Reduced employee absenteeism and turnover

Source: American Community Survey

- At least one parent not in the labor force: 35%
- All parents in the labor force: 65%
Lessons Learned from Research

- Invest in quality
- Involve parents
- Start early
- Reach vulnerable children and families
- Bring to scale
Early Childhood Development
Investment Opportunities

- Access to high-quality early learning programs
- Home visiting programs for families with pregnant women and young children
- Intersection between child protection system and early childhood services, including mental health services
- Health and dental care
Early Childhood Development
Investment Opportunities

- Connecting healthy and local food sources with early learning programs

- Programs for young children and families in Native American communities that incorporate language and culture

- Engaging business leaders with ECD through business mentoring, supporting parent employees, and leadership
Sources


