

The Early Pipeline for Economic Development Success – Children and Youth

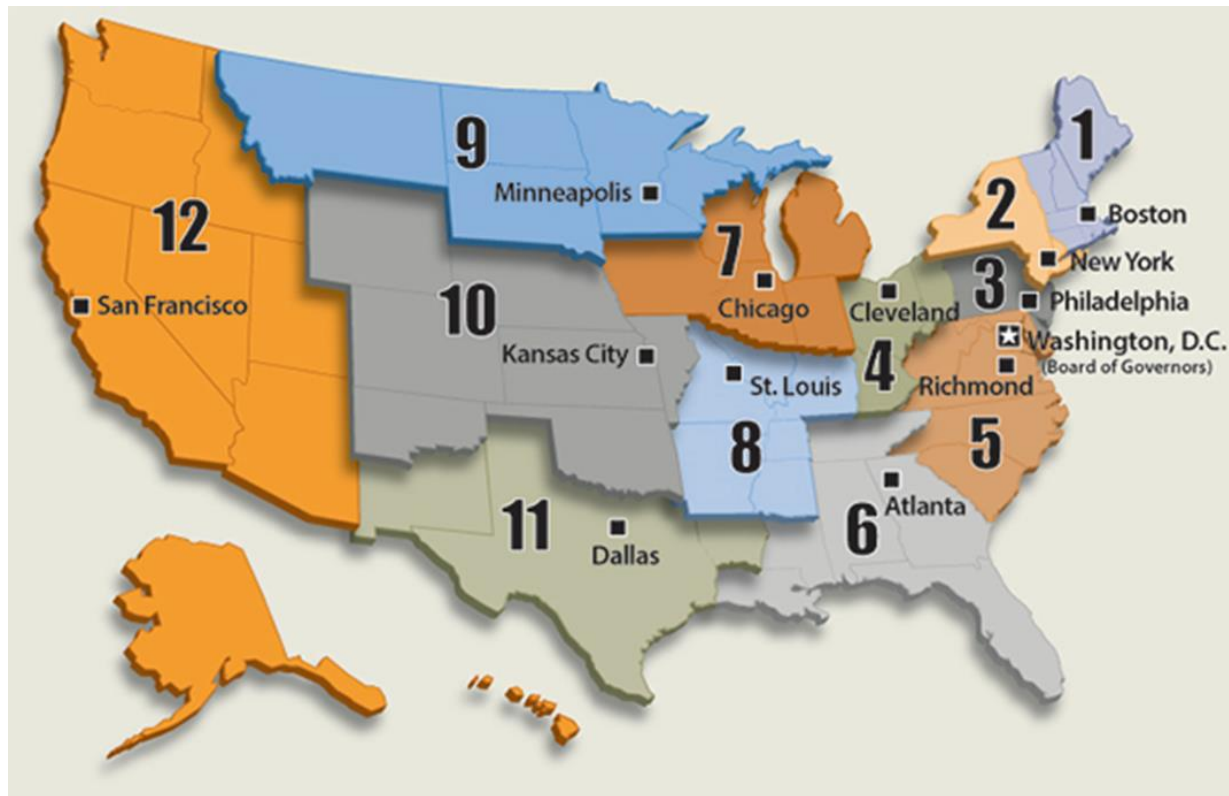


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**The views expressed here are those of the author and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.*

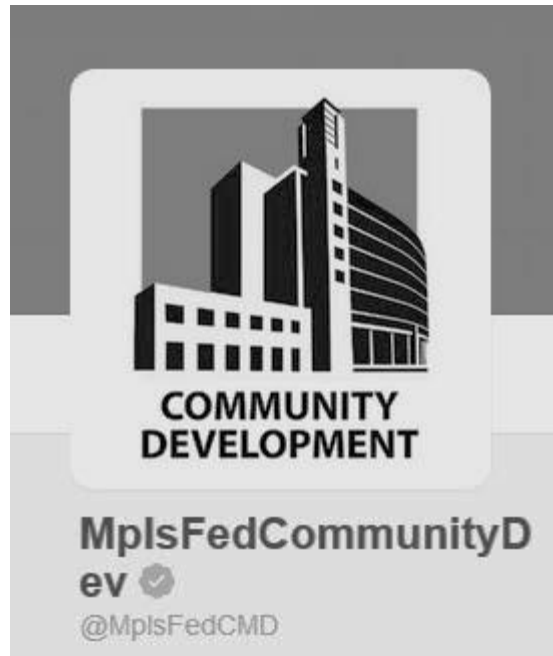
Federal Reserve System

Overview



Federal Reserve

Community Development



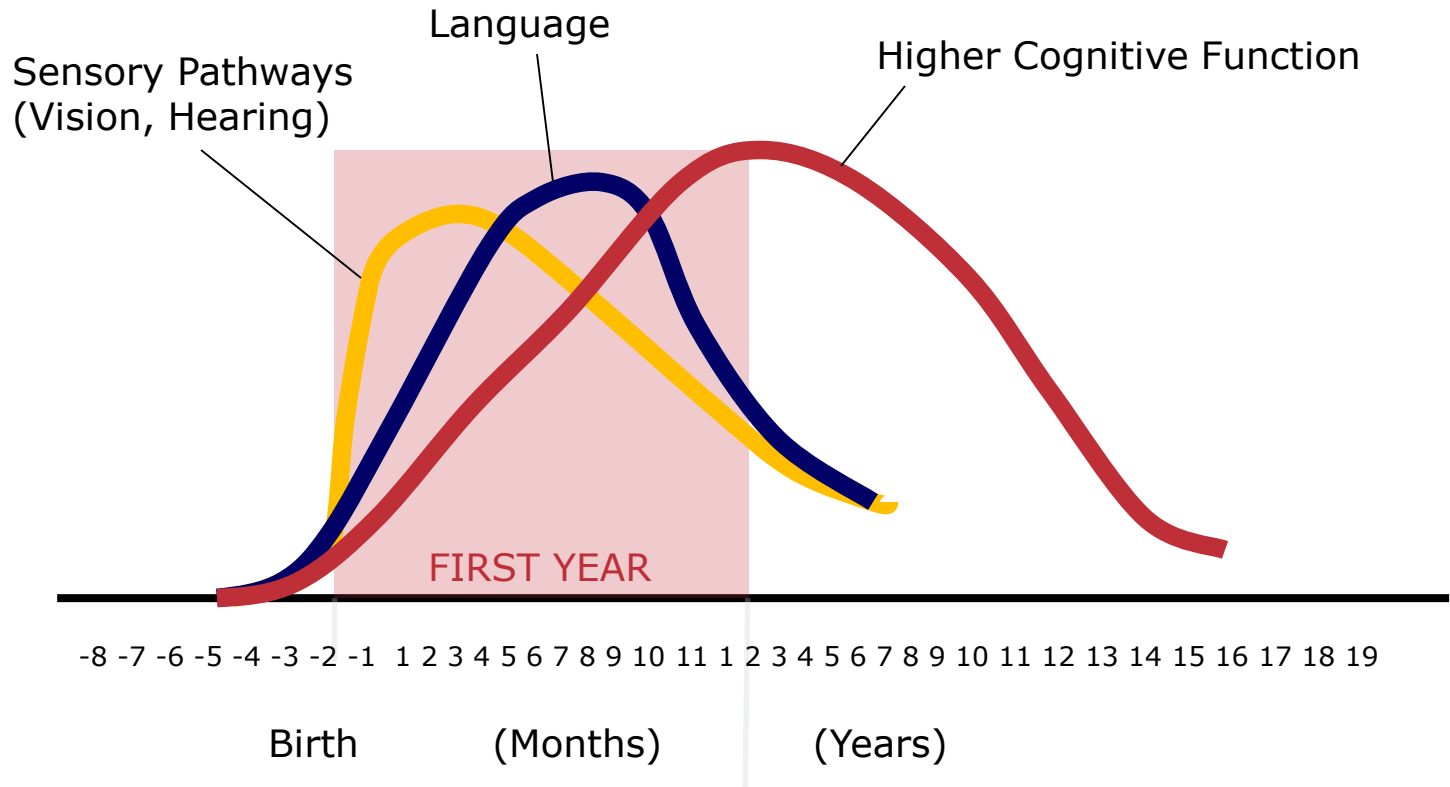
- Promote fair access to credit and economic growth in LMI communities.
- Research. Information Sharing. Training. Convening.





Human Brain Development

Synapse Formation Dependent on Early Experiences



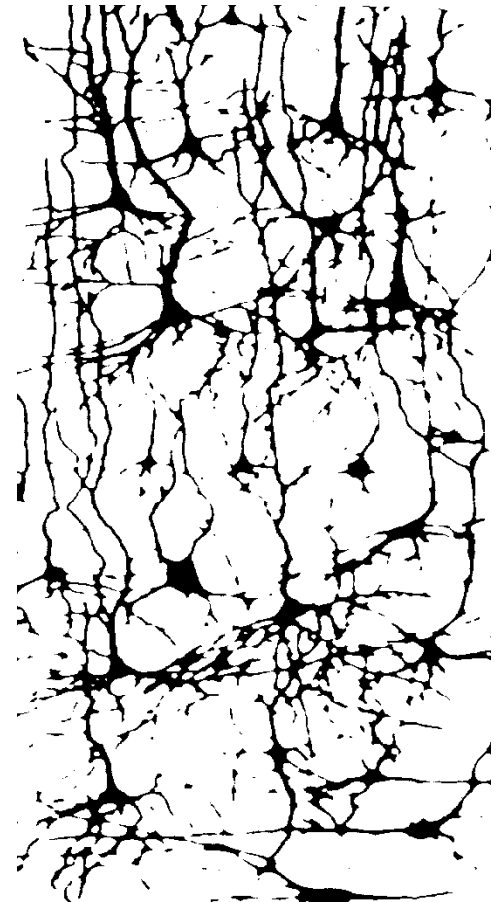
Human
Brain
at Birth



6 Years Old



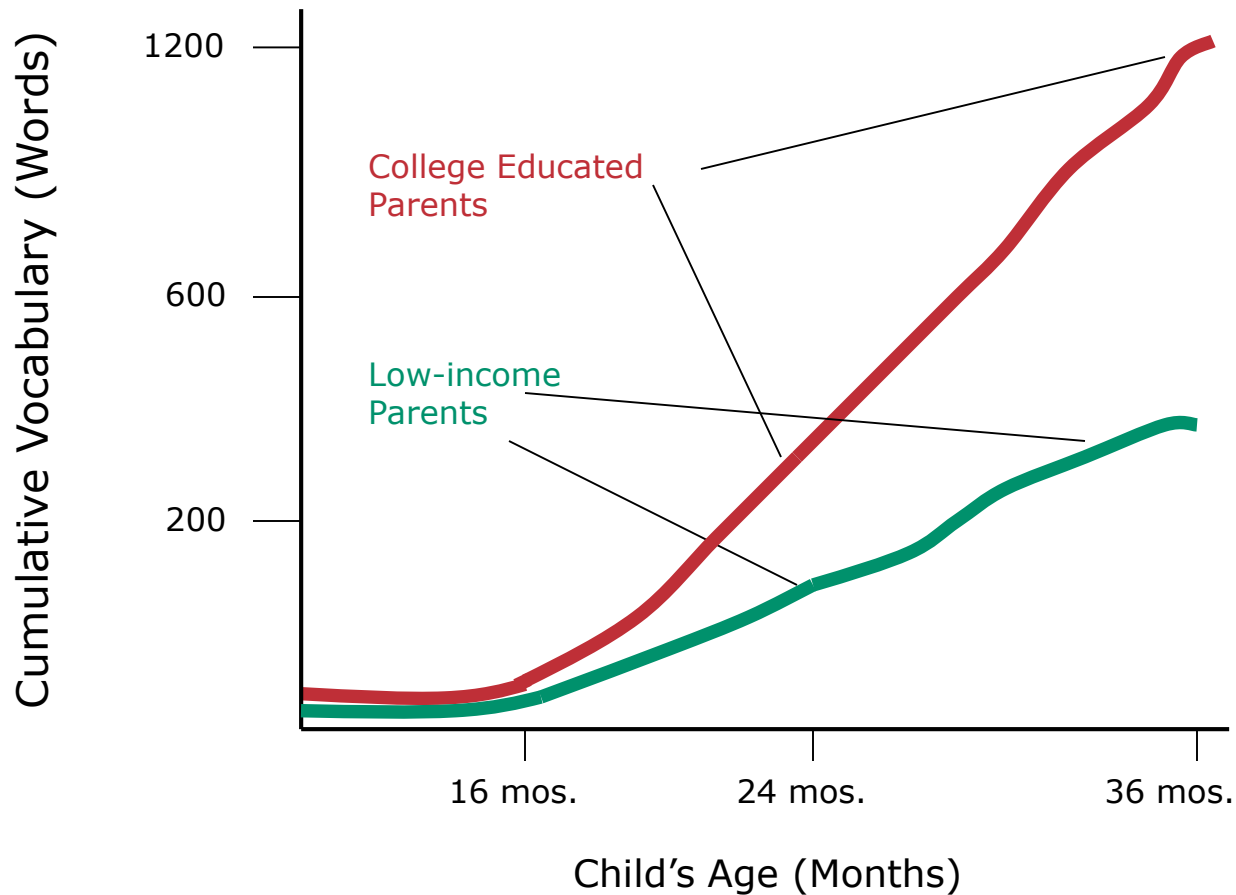
14 Years Old



Source: Chugani, Phelps & Mazziotta (1987)



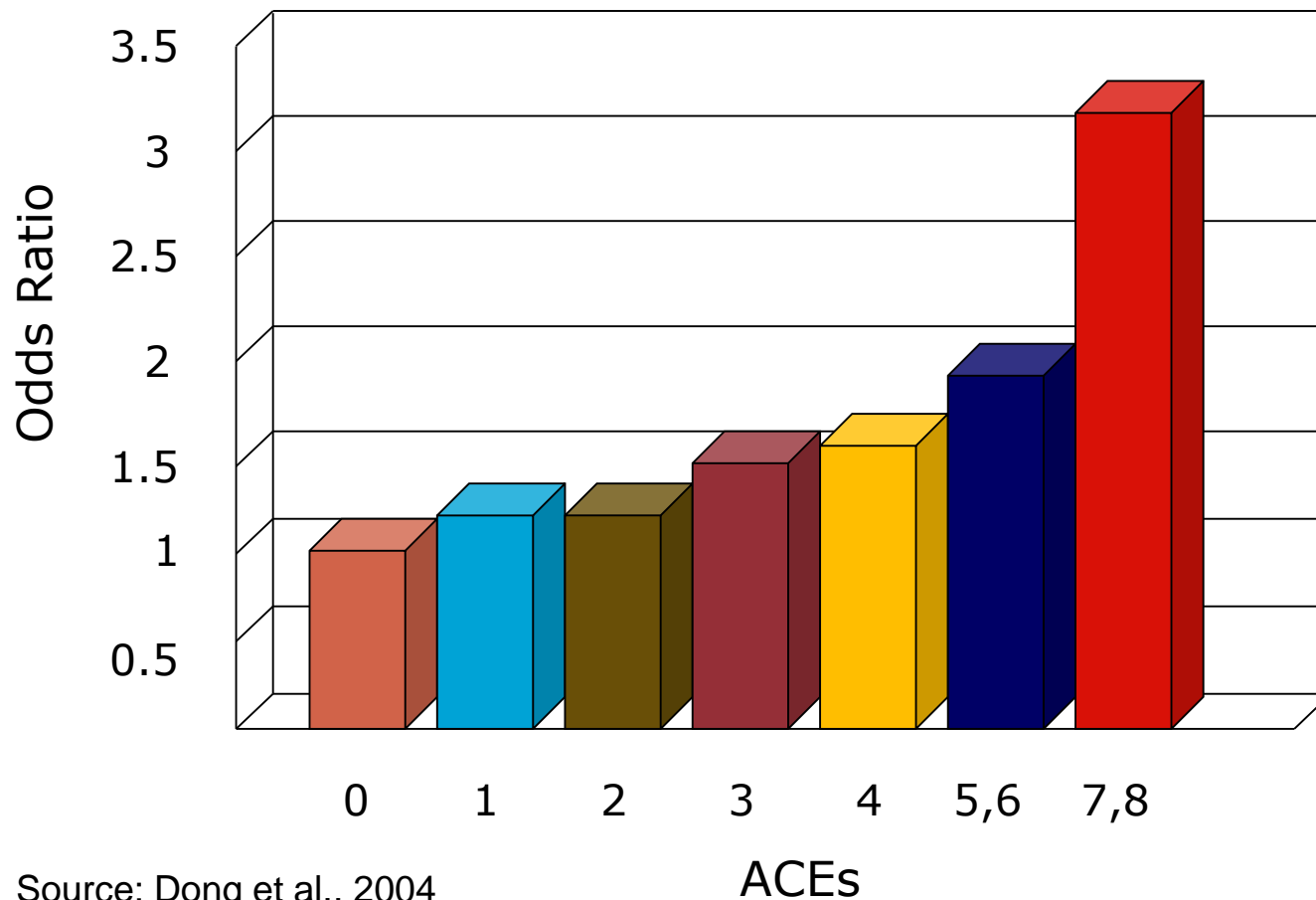
Barriers to Social Mobility Emerge at a Very Young Age



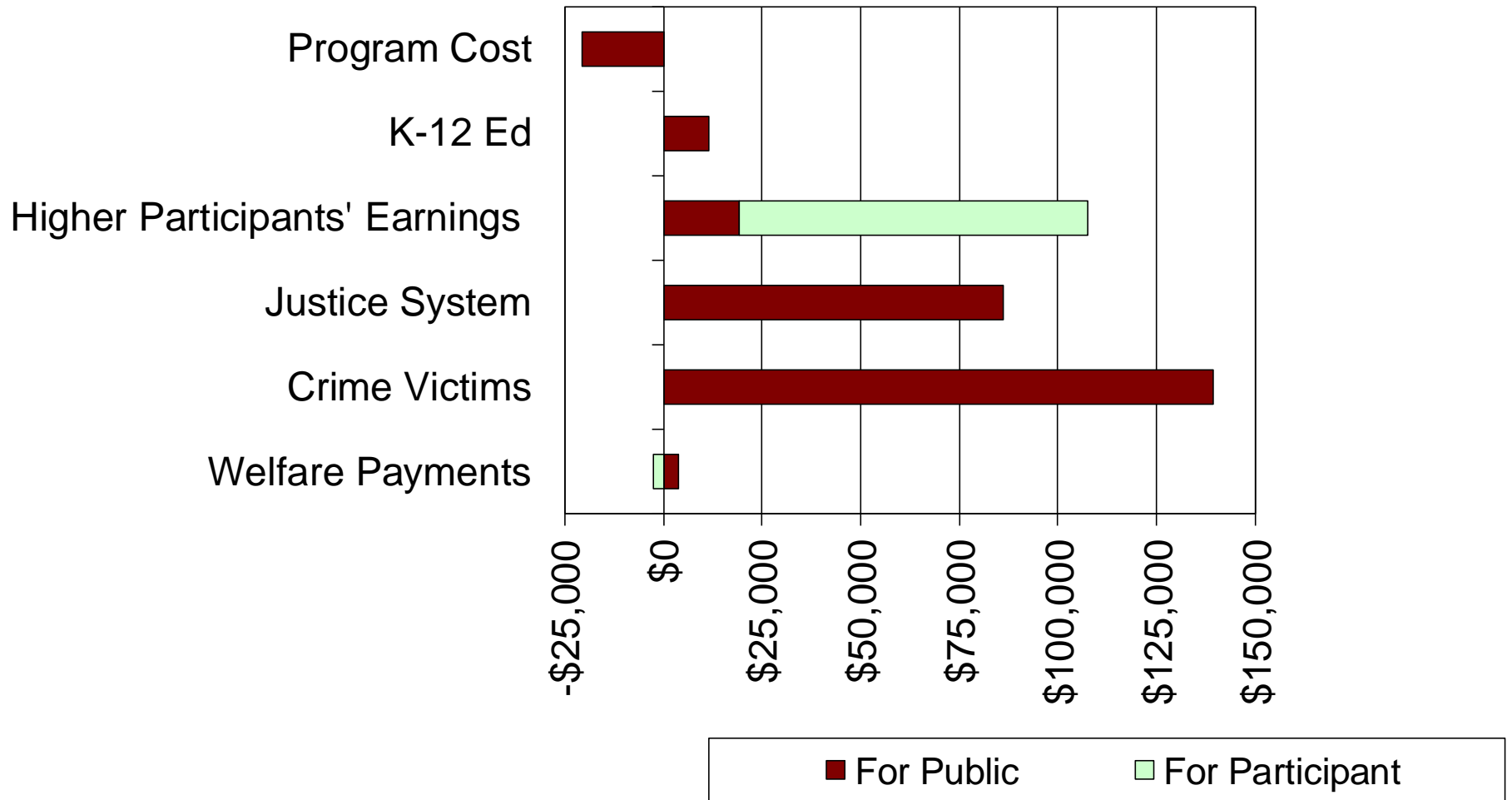
Source: Hart & Risley (1995)



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



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

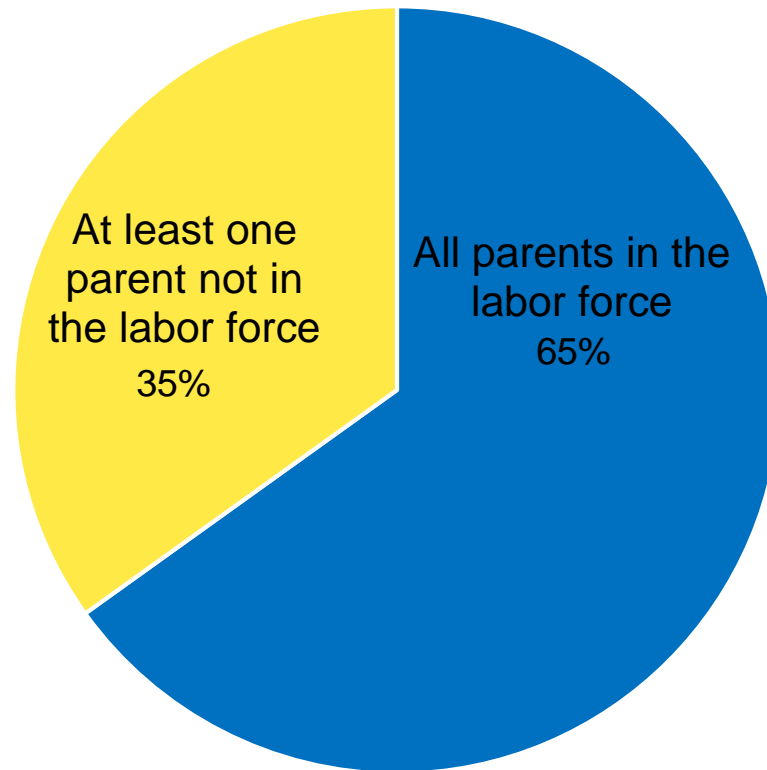
- Elmira Prenatal/Early Infancy Project
 - \$5 to \$1

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

Share of U.S. Children Under Age 6 by Their Parents' Labor Force Participation, 2016



Source: American Community Survey

Lessons Learned from Research

- Invest in quality
- Involve parents
- Start early
- Reach vulnerable children and families
- Bring to scale

Sources

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