Investing in South Carolina’s workforce infrastructure: Early care and education as economic development

Rob Grunewald
Community Development, Federal Reserve Bank of Minneapolis*
Rob.Grunewald@mpls.frb.org

*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.
Key takeaways

- Early years are a sensitive period for brain development.
- Early education and health investments can yield high public returns when reaching disadvantaged children.
- High-quality early care and education (ECE) supports child development and parental employment.
- ECE public policy: Provide resources to low- to moderate-income families to access a variety of high-quality ECE programs.
Federal Reserve System
Overview

[Map of the United States showing the Federal Reserve System regions in different colors, with states numbered from 01 to 12, and a legend indicating the cities associated with each region, such as Boston (01), New York (02), Philadelphia (03), Cleveland (04), Richmond (05), Atlanta (06), Chicago (07), St. Louis (08), Minneapolis (09), Kansas City (10), Dallas (11), and San Francisco (12).]
Federal Reserve System
Community Development

- Promote the economic resilience and mobility of low- to moderate-income (LMI) individuals and communities.

@MplsFedCMD

FedCommunities.org
Early Childhood Development: Economic Development with a High Public Return

Art Rolnick
Senior Vice President and Director of Research

Rob Grunewald
Regional Economic Analyst
Federal Reserve Bank of Minneapolis

Note: The following paper was developed in March 2003 with Minnesota audiences in mind. However, the authors subsequently discovered a high degree of interest throughout the country in their research on the economics of early childhood development and the universality of the issues discussed. This paper also motivated the October conference at the Minneapolis Fed.

University of Minnesota is not visible enough in the business community. And still others raise the broader concern that Minnesota’s citizens and policymakers have become too complacent and unwilling to make the public commitment to be competitive in a global economy.

Those who raise these concerns conclude that Minnesota and local governments need to take a more active role in promoting our economy. Often that implies that the state or local governments subsidize private activities that the market is not funding. Proponents of this view argue that without such subsidies, either well-deserving businesses will not get funded or other states will lure our businesses to greener pastures.
Human Brain Development

Synapse Formation Dependent on Early Experiences

- Sensory Pathways (Vision, Hearing)
- Language
- Higher Cognitive Function

First Year (Birth to 12 months):

-8 -7 -6 -5 -4 -3 -2 -1  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Birth (Months) (Years)

Human Brain...

At Birth  

At 6 Years Old  

At 14 Years Old  

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

Average reading scores of U.S. children by socio-economic status group (parent education)

Achievement Gap Widens

Source: Bradbury, Corak, Waldfogel, and Washbrook (2015)
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)
**Perry Preschool: Intergenerational Effects**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Children of nonparticipants</th>
<th>Children of Perry participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete high school without suspension</td>
<td>40%</td>
<td>67%</td>
</tr>
<tr>
<td>Never be suspended, addicted or arrested</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Be employed full-time or self-employed</td>
<td>42%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Source: Heckman & Karapakula (2019)
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

High return principles

- Invest in quality
- Engage parents
- Start early
- Bring to scale
- Match services to risk profile
Early childhood development investment opportunities

- Home visiting programs for families with pregnant women and young children
- Early health, nutrition, and dental care
- Access to high-quality early care and education programs
- Parent education
- Intersection between child protection system and early childhood services, including mental health services
## Early childhood investments by government jurisdiction

<table>
<thead>
<tr>
<th></th>
<th>Federal</th>
<th>State</th>
<th>County</th>
<th>City</th>
<th>School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home visiting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health &amp; nutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECE programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Rating and Improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent education (group)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child welfare system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Government cost savings or increased revenue associated with early childhood investments

<table>
<thead>
<tr>
<th></th>
<th>Federal</th>
<th>State</th>
<th>County</th>
<th>City</th>
<th>School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid and unpaid medical care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TANF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child welfare system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criminal justice system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased tax revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Early care and education market participants

- ECE providers
- Parents
- Businesses
- Government and taxpayers
Licensed ECE providers

- Home-based or family child care
- Center-based child care
- Private preschool
- Public preschool
- Head Start and Early Head Start

Non-licensed providers refer to informal arrangements with a family member, friend, or neighbor
Parents: Decision to trade off parental care for child care

- Work vs. parental care preferences
- Wages, benefits, and job conditions
- Quality child care threshold
- Cost of child care
South Carolina Children Under Age 6 Living with Two Parents, Mother, or Father

Total: 331,452

- Two Parents: 59%
- Mother: 34%
- Father: 7%

South Carolina Children Under Age 6, Percent of Parents in Labor Force by Living Arrangement

South Carolina Children Under Age 6 by Poverty Level

Total: 331,452

- Below 100% Poverty: 27%
- 100% to 200% Poverty: 25%
- Above 200% Poverty: 47%

Federal Poverty Levels (family of four):
- 100%: $25,750
- 200%: $51,500

Businesses: Decision to provide support for employees to access child care

- Availability of workers
- Costs to recruit and retain employees
- Employee productivity
Productivity and Performance at Work

As a result of child care (age 0-2) problems have you ever:

<table>
<thead>
<tr>
<th>Event</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had problems participating in work-related education/training</td>
<td>25%</td>
</tr>
<tr>
<td>Been reprimanded by a supervisor</td>
<td>20%</td>
</tr>
<tr>
<td>Had your pay or hours reduced</td>
<td>13%</td>
</tr>
<tr>
<td>Been let go or fired</td>
<td>8%</td>
</tr>
<tr>
<td>Been demoted or transferred to a less desirable position</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: Belfield (2018)
Career Pathways

As a result of child care (age 0-2) problems have you ever:

<table>
<thead>
<tr>
<th>Issues</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced your regular work hours</td>
<td>25%</td>
</tr>
<tr>
<td>Turned down further education/training</td>
<td>25%</td>
</tr>
<tr>
<td>Turned down a new job offer</td>
<td>25%</td>
</tr>
<tr>
<td>Turned down a promotion/reassignment</td>
<td>16%</td>
</tr>
<tr>
<td>Changed from full-time to part-time work</td>
<td>15%</td>
</tr>
<tr>
<td>Quit a job</td>
<td>13%</td>
</tr>
</tbody>
</table>

Source: Belfield (2018)
Based on the parent survey results, a model generates the following annual average cost estimates:

- Working parents lose $37 billion (lost earnings and extra costs of job search)
- Businesses lose $13 billion (lost revenues and extra costs to rehire)
- Taxpayers lose $7 billion (lower income tax and sales tax)

Source: Belfield (2018)
Minnesota Early Learning Scholarships

- $70 million annually
- Attend QRIS-rated providers
- Eligibility
  - Children ages 3 and 4 below 185% poverty and younger siblings
  - Children ages 0 to 2 who have a teen parent, homeless, child welfare services, or foster care
Key takeaways

- Early years are a sensitive period for brain development.
- Early education and health investments can yield high public returns when reaching disadvantaged children.
- High-quality early care and education (ECE) supports child development and parental employment.
- ECE public policy: Provide resources to low- to moderate-income families to access a variety of high-quality ECE programs.
Sources


